VOLKSWAGEN GROUP

Annual Report 2022

Key Figures

VOLKSWAGEN GROUP

	2022	2021	%
Volume Data[1] in thousands			
Deliveries to customers (units)	8,263	8,882	–7.0
Vehicle sales (units)	8,481	8,576	–1.1
Production (units)	8,717	8,283	+5.2
Employees at Dec. 31	675.8	672.8	+0.4
Financial Data (IFRSs), € million			
Sales revenue	279,232	250,200	+11.6
Operating result before special items	22,523	20,026	+12.5
Operating return on sales before special items (%)	8.1	8.0	
Special items	–399	–751	–46.8
Operating result	22,124	19,275	+14.8
Operating return on sales (%)	7.9	7.7	
Earnings before tax	22,044	20,126	+9.5
Return on sales before tax (%)	7.9	8.0	
Earnings after tax	15,836	15,428	+2.6
Automotive Division[2]			
Total research and development costs	18,908	15,583	+21.3
R&D ratio (%)	8.1	7.6	
Cash flows from operating activities	29,865	32,402	–7.8
Cash flows from investing activities attributable to operating activities[3]	25,058	23,793	+5.3
of which: capex	12,731	10,496	+21.3
capex/sales revenue (%)	5.5	5.1	
Net cash flow	4,807	8,610	–44.2
Net liquidity at Dec. 31	43,015	26,685	+61.2
Return on investment (ROI) in %	12.0	10.4	
Financial Services Division			
Return on equity before tax[4] (%)	14.0	17.3	

VOLKSWAGEN AG

	2022	2021	%
Volume Data in thousands			
Employees at Dec. 31	116.7	117.6	–0.8
Financial Data (HGB), € million			
Sales revenue	79,491	70,917	+12.1
Net income for the fiscal year	12,477	4,041	x
Dividends (€)			
per ordinary share	8.70	7.50	
per preferred share	8.76	7.56	

1 Volume data including the unconsolidated Chinese joint ventures. These companies are accounted for using the equity method. Prior-year deliveries updated to reflect subsequent statistical trends.
2 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.
3 Excluding acquisition and disposal of equity investments: €22,061 (17,910) million.
4 Earnings before tax as a percentage of average equity.

This document is an English translation of the original annual report written in German. In case of discrepancies, the German version shall take precedence. All figures shown in the report are rounded, so minor discrepancies may arise from addition of these amounts. The figures from the previous fiscal year are shown in parentheses directly after the figures for the current reporting period. Specified vehicle ranges correspond to results obtained through the Worldwide Harmonized Light Vehicles Test Procedure (WLTP) on the chassis dynamometer. WLTP value ranges for series-produced vehicles may vary depending on the equipment. The actual range will deviate in practice depending on various other factors.

This annual report was published on the occasion of the Annual Media Conference on March 14, 2023.

This annual report contains forward-looking statements on the business development of the Volkswagen Group. These statements are based on assumptions relating to the development of the economic, political and legal environment in individual countries, economic regions and markets, and in particular for the automotive industry, which we have made on the basis of the information available to us and which we consider to be realistic at the time of going to press. The estimates given entail a degree of risk, and actual developments may differ from those forecast. Any changes in significant parameters relating to our key sales markets, or any significant shifts in exchange rates, energy and other commodities or the supply of parts relevant to the Volkswagen Group, or deviations in the actual effects of the Covid-19 pandemic from the scenario presented in this report will have a corresponding effect on the development of our business. In addition, there may be departures from our expected business development if the assessments of the factors influencing sustainable value enhancement and of risks and opportunities presented in this annual report develop in a way other than we are currently expecting, or if additional risks and opportunities or other factors emerge that affect the development of our business.

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TO OUR SHAREHOLDERS

Letter to our Shareholders

Dear Shareholders,

We continued our transformation toward electric, digital mobility and strengthened our financial resilience in fiscal year 2022. I am delighted with the remarkable effort made by our team of more than 675,000 employees. Our robust financial situation will enable us to make a strong investment in the future in 2023. The automotive industry will change more in the next five years than in the previous 50. In my new role as the Group's CEO, I want to make our company even more successful, even more sustainable and even more valuable in the new era of electric and digital mobility.

We are well prepared for this transformation both strategically and financially. The Volkswagen Group achieved a solid result in 2022 and improved its profitability. And it did so in a challenging environment. Our continued price and cost discipline and improvements in the mix contributed to this result. As a consequence, we increased our operating result before special items by €2.5 billion to €22.5 billion. Sales revenue rose by 11.6% to €279.2 billion thanks to improvements in the mix and in our price positioning.

We are pleased that we can also let you, our shareholders, share in this success. The Board of Management and Supervisory Board propose a dividend of €8.70 per ordinary share and €8.76 per preferred share, a year-over-year increase of €1.20 per ordinary and preferred share, respectively.

My personal highlight in fiscal year 2022 was Porsche's IPO. The IPO marked a historic day and Porsche is more independent and agile. Its new independence allows the brand to gain even more momentum. At the same time, the IPO brought in proceeds of around €16 billion for the Group. This means our Automotive Division closed fiscal year 2022 with net liquidity of €43 billion.

One priority in the past year was to strengthen the robustness of our global operations. In view of geopolitical developments such as nationalism or protectionism, we will further diversify our business globally.

We are the market leader in Europe and China and aim to hold this position. At the same time, we have expanded our business in the United States and have an ambitious growth plan. Local production of the Volkswagen ID.4 has started at the plant in Chattanooga. With our newly launched Scout project, we plan to enter the attractive US pickup and rugged SUV market. In Canada, we have started the search for a site for a battery gigafactory. Growing electrification of the US automotive industry is creating the biggest strategic growth opportunity for the Group in the market. In China, we will continue to invest in e-mobility and software. Together with Horizon Robotics, the Group will press ahead with developing driver assistance systems and highly automated driving in China.

Another priority in the past year was our company's financial robustness. The aim is to make more efficient use of our capital. We are sharpening our focus on return and net cash flow. I am determined to increase the value of our company in a sustainable manner. That is why last year we began creating virtual equity stories for our brands, brand groups and value drivers in the Group. In this way we aim to make the Group's strengths more visible and increase value in the long term. We will report on the initial results in the second quarter of 2023.

In 2022, we also took a major step forward in our transformation towards sustainable mobility, and increased the share of electric vehicles relative to total deliveries. Almost 7% of all the vehicles we delivered worldwide were powered by electricity alone. Overall, we sold 572,000 e-cars, a good 26% more than in the previous year. This year, we are aiming for electric vehicles to account for around 10% of our sales. TRATON will also continue to push forward with the electrification of its buses and trucks.

A faster ramp-up of e-mobility requires us to expand our battery capacities and charging networks. In 2022, we pooled our battery cell manufacturing activities within the newly established PowerCo battery unit. Following the groundbreaking ceremony last July, our very first battery cell factory is currently being built in Salzgitter, and we have already decided on the locations for three of the planned six battery factories in Europe. In the past fiscal year, we launched a joint venture with Enel in Italy and strengthened our partnership with bp in Europe in order to expand the charging network for our customers. Alongside progress with our Electrify America charging network in the USA and CAMS in China, this has brought us a step closer to our goal of creating 45,000 fast charging points worldwide by 2025.

Electric mobility is the greatest lever in achieving our objective of net carbon neutrality in 2050. A considerable difference is also made by a more intense use of green electricity, which we already employ for the entire external power supply at our European plants. Furthermore, I am delighted that the prestigious Science Based Targets Initiative has honored our more stringent CO_2 targets in production. We aim to reduce production-related CO_2 emissions from our passenger cars and light commercial vehicles by 50% by 2030, an improvement on the initial goal of 30%.

One of our most pressing issues last year was the reorganization of our software activities. Establishing our automotive software unit CARIAD was very clearly the right decision, and now we have taken CARIAD a step further: we have examined which core competencies we will cater for in house and where partnerships make more sense. We have redefined the interfaces to our brands and optimized processes and tools. Our long-term goal continues to be the development of uniform software for the Group that allows us to fully leverage the economies of scale.

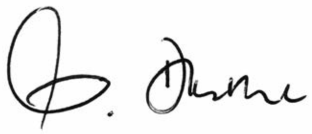
Last year, we also expanded our mobility solutions further in order to meet the mobility needs of our customers in the best way possible both now and in the future. Together with partners, we acquired Europcar and recently launched the pilot phase of our new mobility platform in Vienna. This app will cover the ecosystem of mobile services across all brands, from subscription models for several months, through leasing, to car sharing for a few minutes.

Together with my Board of Management team, I set out from day one to give the Volkswagen Group a new format. One that is strong, robust, resilient, digital and sustainable. In 2022, we took stock of the most important areas of action, tackled a large number of issues and made many decisions. The direction has been set with our new ten-point plan.

We will start implementing the plan this year and will report regularly on progress. Our goal is to play a leading role in the market for e-mobility, too, with first-class products and services that boast persuasive design and technology, and a convincing user experience. We continue to work on achieving a globally balanced presence in Europe, in China, and with a strong third pillar in North America. And we are controlling our brands and platforms by means of binding key performance indicators, while at the same time promoting entrepreneurship and sustainable value creation.

These are all tasks that we are tackling together as a team. I warmly invite you to join the Board of Management team and me as we implement our strategy in 2023.

Sincerely,



Oliver Blume

Together with my Board of Management team, I set out from day one to give the Volkswagen Group a new format. One that is strong, robust, resilient, digital and sustainable.

– Oliver Blume –

THE BOARD OF MANAGEMENT

of Volkswagen Aktiengesellschaft

Oliver Blume

Chairman of the Board of Management of Volkswagen AG and Dr. Ing. h.c. F. Porsche AG, Sport & Luxury brand group

Dr. Arno Antlitz

Finance

Ralf Brandstätter

Board Member at Volkswagen AG for China

Dr. Manfred Döss

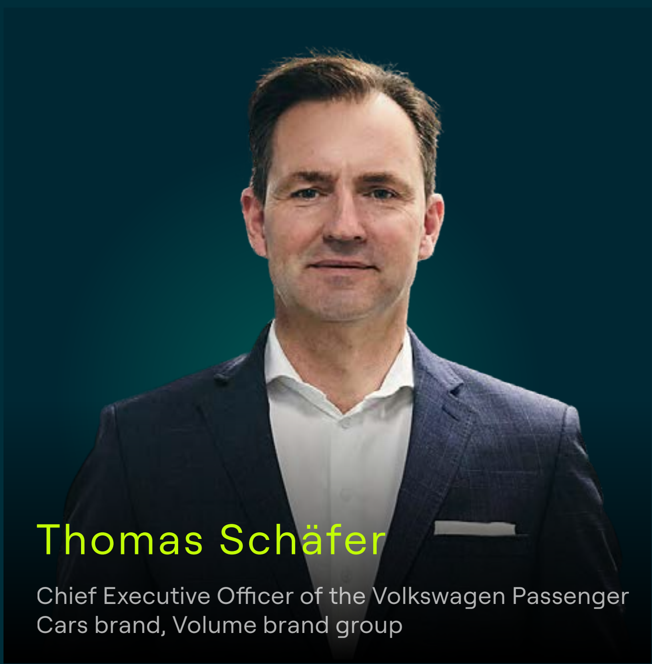
Integrity and Legal Affairs

Markus Duesmann

Premium brand group

Gunnar Kilian

Human Resources and Truck & Bus



Thomas Schäfer

Chief Executive Officer of the Volkswagen Passenger Cars brand, Volume brand group

Thomas Schmall-von Westerholt

Technology

Hauke Stars

IT

Report of the Supervisory Board

(in accordance with section 171(2) of the AktG)

Ladies and gentlemen,

In fiscal year 2022, the work of the Supervisory Board of Volkswagen AG and its committees focused on the Volkswagen Group's strategic direction. This included the IPO of Dr. Ing. h.c. F. Porsche AG and the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE. The Supervisory Board regularly deliberated on the Company's position and development in the reporting period. We supervised and supported the Board of Management in its running of the business and advised it on issues relating to the management of the Company, and particularly on sustainability issues, in accordance with our duties under the law, the Articles of Association and the rules of procedure. The Supervisory Board was directly involved in all decisions of fundamental importance to the Group. Additionally, we discussed strategic considerations with the Board of Management at regular intervals.

The Board of Management complied with its disclosure obligations, which are set out in the information policy adopted by the Supervisory Board in 2018. The Board of Management provided us with information regularly, promptly and comprehensively both in writing and orally, particularly on all matters of relevance to the Company relating to its strategy, business development and the Company's planning and position. This also included the risk situation and risk management. In this respect, the Board of Management also informed the Supervisory Board of further improvements to the internal control system and the risk and compliance management systems. In addition, the Supervisory Board received information about compliance and other topical issues from the Board of Management on an ongoing basis. We received the documents relevant to our decisions in good time for our meetings. At regular intervals, we also received a detailed report from the Board of Management on the current business position and the forecast for the current year. Any deviations in performance from the plans and targets previously drawn up were explained in detail by the Board of Management, either in person or in writing. Together with the Board of Management we analyzed the reasons for the deviations and determined corresponding countermeasures. In particular, the Board of Management reported in detail and in a timely manner on the impacts related to the Russia-Ukraine conflict and explained the measures that had been taken.

In addition, the Chair of the Supervisory Board consulted with the Chair of the Board of Management at regular intervals between meetings to discuss important current issues. These included the Group's strategy and planning, its business development, and the risk situation and risk management, including integrity and compliance issues in the Volkswagen Group. Within reason, the Chair of the Supervisory Board discusses Supervisory Board-specific topics with investors and, in consultation with the Board of Management, may also discuss non-Supervisory Board-specific topics. Governance issues were one focus of the discussions. The Chair of the Supervisory Board informed the Supervisory Board of such discussions after they had taken place.

The Supervisory Board held a total of 16 meetings in fiscal year 2022. Eight of the meetings were held face to face and eight as video or conference calls. In four meetings, the Supervisory Board solely discussed the IPO of Dr. Ing. h.c. F. Porsche AG and the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE. The Supervisory Board members who had indicated that they had a possible conflict of interest in this regard did not participate in these meetings. On this basis, the attendance rate (calculated for all meetings held during the fiscal year under review and for all Supervisory Board members in office) was 85.0%. Supervisory Board members who did not attend a meeting for reasons other than a possible conflict of interests were able to engage with the meeting topics using the preparatory documents and could participate in the resolutions by means of a written vote. Particularly urgent matters were decided in writing or using electronic means of communication.

COMMITTEE ACTIVITIES

In order to discharge the duties entrusted to it, the Supervisory Board has established four committees: the Executive Committee, the Nomination Committee, the Mediation Committee established in accordance with section 27(3) of the *Mitbestimmungsgesetz* (MitbestG – German Codetermination Act) and the Audit Committee. The Executive Committee is comprised of four shareholder representatives and four employee representatives. The shareholder representatives on the Executive Committee make up the Nomination Committee. The Mediation Committee is comprised of two shareholder representatives and two employee representatives, as was the Audit Committee until July 31, 2022. Since then, the Audit Committee has been comprised of three shareholder representatives and three employee representatives. The members of these committees as of December 31, 2022 are stated in the Group Corporate Governance Declaration.

The Executive Committee met 38 times in the reporting period. Sixteen of the meetings were held face to face and 22 as video or conference calls. In 22 meetings, the Executive Committee solely discussed the IPO of Dr. Ing. h.c. F. Porsche AG and the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE. At its other meetings, the Executive Committee meticulously prepared the resolutions of the Supervisory Board, discussed the allocation of responsibilities, size and composition of the Board of Management and took decisions on matters such as contractual issues concerning the Board of Management other than remuneration, and consent to ancillary activities by members of the Board of Management.

The Nomination Committee is responsible for proposing suitable candidates for the Supervisory Board to recommend for election to the Annual General Meeting. In doing so, it takes into account the targets set by the Supervisory Board for its composition, and the diversity concept for the composition of the Supervisory Board, and strives to fill the profile of skills and expertise prepared for the full Board. The Nomination Committee also particularly makes sure that there are no gaps in the skills and expertise of the full Board (Skill Gaps Assessment). No meetings of this committee took place in 2022.

The Mediation Committee established in accordance with section 27(3) of the MitbestG did not need to convene in the reporting year.

The Audit Committee held four meetings in 2022. All four of the meetings were held face to face; none were held as video or conference calls. It focused on the annual and consolidated financial statements, the Risk Management System including the effectiveness of the Internal Control System and the Internal Audit System, and the work performed by the Company’s Compliance organization. In addition, the Audit Committee concerned itself with the Volkswagen Group’s quarterly reports and the half-yearly financial report, as well as with current issues, the supervision of financial reporting and the financial reporting process, and the examination thereof by the auditors. The Audit Committee regularly evaluates the quality of the audit. In consultation with the auditors, it discusses the assessment of audit risk, the audit strategy and audit planning and the results of the audit.

Hans Dieter Pötsch

Furthermore, the shareholder and employee representatives generally met for separate preliminary discussions before each of the Supervisory Board meetings.

In connection with their seat on the Supervisory Board, members of the Supervisory Board receive support from the Company upon induction as well as with respect to education and training; the Company particularly supports the organization of seminars and bears the costs thereof. In the reporting year, for example, the Supervisory Board members received training on compliance and integrity, on new environmental, social and governance (ESG) developments and requirements, and on the EU Taxonomy. Supervisory Board members appointed for the first time are also provided with a detailed introduction to topics that apply specifically to the Supervisory Board of Volkswagen AG.

TOPICS DISCUSSED BY THE SUPERVISORY BOARD

The first Supervisory Board meeting in the reporting year took place on February 24, 2022 and discussed plans for the IPO of Dr. Ing. h.c. F. Porsche AG and the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE.

The next meeting of the Supervisory Board took place on March 4, 2022. Alongside the development and manufacture of a forward-looking electric vehicle from the Volkswagen Passenger Cars brand, the meeting's agenda primarily comprised formal topics.

The Supervisory Board convened for another meeting on March 11, 2022. Following a detailed examination, we approved the consolidated financial statements and the annual financial statements of Volkswagen AG for 2021 prepared by the Board of Management. We examined the combined management report, the combined separate nonfinancial report for 2021 and the precautionary Report by the Board of Management on Relationships of Volkswagen AG with Affiliated Companies in accordance with section

312 of the AktG (dependent company report). Upon completion of our examination of the dependent company report, we came to the conclusion that there were no objections to be raised to the concluding declaration by the Board of Management in the dependent company report. The other items on the agenda included the issue of the audit engagement for the 2022 annual and consolidated financial statements as well as the engagement for the review of the condensed consolidated interim financial statements and interim management reports for 2022, the engagement for the external audit of the content of the combined separate nonfinancial report for 2022 and of the remuneration report for 2022, and the agenda for and convening of the 62nd Annual General Meeting of Volkswagen AG.

At the next Supervisory Board meeting on April 7, 2022, the focus was on the composition of the Board of Management of Volkswagen AG and Audi's possible entry into the Formula 1 race series.

On May 11, 2022, the Supervisory Board held a meeting that, alongside the plans for the manufacture of all-electric models for the US market under the Scout brand, particularly discussed the IPO of Dr. Ing. h.c. F. Porsche AG and the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE, the composition of the Board of Management and Supervisory Board of Volkswagen AG, and preparations for the 62nd Annual General Meeting of Volkswagen AG.

The next meeting of the Supervisory Board took place following the Annual General Meeting of Volkswagen AG on May 12, 2022; we discussed the composition of the Supervisory Board of Volkswagen AG and analyzed the Annual General Meeting.

At the Supervisory Board meeting on July 8, 2022, we discussed, among other things, the composition of the Board of Management of Volkswagen AG and the plans relating to the IPO of Dr. Ing. h.c. F. Porsche AG and the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE. We also discussed the raw materials strategy.

The Supervisory Board meeting on July 22, 2022, focused on the composition of the Board of Management of Volkswagen AG. We resolved at this meeting to appoint Dr. Oliver Blume as the Chair of the Board of Management of Volkswagen AG effective September 1, 2022, and agreed with Dr. Herbert Diess that he would step down from this position at the same time.

The Supervisory Board held its next meeting on August 30, 2022, also to discuss the composition of the Board of Management of Volkswagen AG. We discussed changes to Group management and a new allocation of responsibilities on the Board of Management. In this context, the Board of Management was also slimmed down to nine members, and a number of Group Management functions were created as an extension to the board-level management functions.

At the Supervisory Board meetings on September 5, September 18 and September 28, 2022, we discussed the IPO of Dr. Ing. h.c. F. Porsche AG and the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE. Among other things, we decided, based on the rules on related-party transactions, to approve the conclusion of the share purchase agreement between Volkswagen AG and Porsche Automobil Holding SE regarding the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE.

The meeting of the Supervisory Board on September 30, 2022 focused particularly on strategic issues. Among other things, we discussed the plans of the Board of Management regarding a partnership in China in the field of artificial intelligence and the way forward with regard to the business activities of Scania and MAN in Russia.

On October 13, 2022, the Supervisory Board held a meeting in which we again looked at strategic issues.

At the Supervisory Board meeting on November 11, 2022, we discussed the composition of the Board of Management of Volkswagen AG. We also discussed with the Board of Management the status of the development and production of a forward-looking electric vehicle from the Volkswagen Passenger Cars brand as well as plans for the manufacture of all-electric models for the US market. In addition, we looked at the current status of the Volkswagen Group's investment and financial planning for the period from 2023 to 2027. Together with the Board of Management, we issued the annual declaration of conformity with the German Corporate Governance Code and resolved in this context to update the profile of skills and expertise for the Supervisory Board.

The final Supervisory Board meeting of the reporting year took place on December 15, 2022. At this meeting, we discussed preparations for the Extraordinary General Meeting on December 16, 2022 and redrafted the rules of procedure for the Board of Management.

In the reporting period, we voted in writing on, among other things, supporting the proposal by the shareholder Qatar Holding to elect Mr. Al-Mahmoud to the Supervisory Board, the election of Mr. Al-Mahmoud as Chair of the Audit Committee, HR-related matters, and consent to ancillary activities by members of the Board of Management.

The following table shows the number of meetings of the full Board and the committees as well as the individual participation of the members of the Supervisory Board in 2022:

	Meetings of the full Supervisory Board	Meetings of the Committees
Hans Dieter Pötsch	12 out of 16	16 out of 38
Jörg Hofmann	15 out of 16	38 out of 38
Dr. Hussain Ali Al Abdulla (until May 12, 2022)	5 out of 5	–
Dr. Hessa Sultan Al Jaber	11 out of 16	–
Mansoor Ebrahim Al-Mahmoud (since May 12, 2022)	7 out of 11	1 out of 1
Dr. Bernd Althusmann (until November 8, 2022)	11 out of 14	–
Harald Buck (since October 4, 2022)	3 out of 3	–
Matías Carnero Sojo	13 out of 16	–
Daniela Cavallo	16 out of 16	40 out of 40
Dr. Hans-Peter Fischer (until May 12, 2022)	5 out of 5	–
Julia Willie Hamburg (since November 8, 2022)	2 out of 2	–
Marianne Heiß	16 out of 16	4 out of 4
Dr. Arno Homburg (since May 12, 2022)	11 out of 11	–
Ulrike Jakob (until May 12, 2022)	5 out of 5	–
Dr. Louise Kiesling (until December 9, 2022)	8 out of 15	–
Simone Mahler (since May 12, 2022)	11 out of 11	–
Peter Mosch	16 out of 16	38 out of 40
Bertina Murkovic (until May 12, 2022)	5 out of 5	15 out of 15
Daniela Nowak (since May 12, 2022)	11 out of 11	–
Dr. Hans Michel Piëch	12 out of 16	16 out of 38
Dr. Ferdinand Oliver Porsche	11 out of 16	4 out of 4
Dr. Wolfgang Porsche	12 out of 16	16 out of 38
Jens Rothe	14 out of 16	23 out of 24
Conny Schönhardt	16 out of 16	4 out of 4
Stephan Weil	14 out of 16	35 out of 38
Werner Weresch (until September 30, 2022)	9 out of 13	–

CONFLICTS OF INTEREST

The Supervisory Board members who are also members of the Piëch or Porsche families or were involved in the transaction in a governing body of Porsche Automobil Holding SE or Dr. Ing. h.c. F. Porsche AG did not participate in the discussions and resolutions of the Supervisory Board regarding the IPO of Dr. Ing. h.c. F. Porsche AG and the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE. These Supervisory Board members had already indicated a possible conflict of interest before the Supervisory Board first discussed the plans for and implementation of the IPO and sale of ordinary shares. This was because the financial interests of Porsche Automobil Holding SE and Dr. Ing. h.c. F. Porsche AG, and indirectly those of the Piëch and Porsche families, may potentially have been affected by the matter concerned. This affected Dr. Kiesling, Dr. Piëch, Mr. Pötsch, Dr. Ferdinand Oliver Porsche, Dr. Wolfgang Porsche and Mr. Weresch. Ms. Heiß instead indicated that she would not participate in discussions or resolutions of the Supervisory Board of Porsche Automobil Holding SE, of which she is also a member, where these related to the plans for and implementation of the IPO and sale of ordinary shares. In early September 2022, when Qatar Holding was considering entering into an agreement with Volkswagen AG, Dr. Ing. h.c. F. Porsche AG and Porsche Holding Stuttgart GmbH as a cornerstone investor in relation to the preferred shares in Dr. Ing. h.c. F. Porsche AG, Dr. Al Jaber and Mr. Al-Mahmoud also indicated that they had a possible conflict of interest in connection with the plans for and implementation of the IPO and sale of ordinary shares and did not participate in the further discussions and resolutions of the Supervisory Board regarding the IPO and sale of ordinary shares. This particularly also involved the discussions and resolutions of the Supervisory Board regarding the conclusion of the cornerstone investor agreement with Qatar Holding.

As a precaution, Mr. Pötsch and Ms. Cavallo abstained from the resolutions of the Supervisory Board on September 30, 2022 concerning the way forward with regard to the business activities of Scania and MAN in Russia, which also involved the sale of equity investments by TRATON SE to Volkswagen AG. Mr. Pötsch and Ms. Cavallo are also members of the Supervisory Board of TRATON SE and had already discussed the relevant measures in the TRATON SE Supervisory Board.

No other conflicts of interest were reported or were discernible in the reporting period.

CORPORATE GOVERNANCE AND DECLARATION OF CONFORMITY

The Supervisory Board meeting on November 11, 2022 focused on the implementation of the recommendations and suggestions of the Code in the Volkswagen Group. We discussed the Code's requirements in detail and issued the annual declaration of conformity with the recommendations of the Code in accordance with section 161 of the AktG together with the Board of Management.

The joint declarations of conformity by the Board of Management and the Supervisory Board are permanently available at www.volkswagenag.com/en/InvestorRelations/corporate-governance/declaration-of-conformity.html. Additional information on the implementation of the recommendations and suggestions of the Code can be found in the Group Corporate Governance Declaration.

In 2020, the Audit Committee agreed on a suitable procedure with the Board of Management for ongoing monitoring of the Volkswagen Group's related-party transactions. As part of this process, the Board of Management ensures that related-party transactions are generally at arm's length using the "best price" principle. In addition, all transactions with the individual related parties are analyzed to determine whether transactions with the same related party cumulatively exceed the relevant threshold of 1.5% of the Volkswagen Group's total fixed and current assets, above which obligations under the rules on related-party transactions apply. In addition, the Procurement organization reports all transactions in which the volume of the contract exceeds the amount of €1 billion; in such cases, it is then checked separately whether the contractual partner is a related party within the meaning of the rules on related-party transactions. The Audit Committee continuously monitors the actions of the Board of Management. To this end, the Audit Committee commissioned Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft (EY), most recently in November 2022, to conduct spot checks of the related parties with whom Volkswagen AG or other Volkswagen Group companies were conducting transactions, the total financial value of which in fiscal year 2022 exceeded the relevant threshold of 1.5% of the Volkswagen Group's total fixed and current assets, above which obligations under the rules on related-party transactions apply. If and to the extent that the economic value of the related-party transactions exceeded the relevant threshold, these transactions were also checked to establish whether they were conducted at arm's length in accordance with proper business practice. On September 5, 2022, based on the rules on related-party transactions, the Supervisory Board approved the conclusion of the share purchase agreement between Volkswagen AG and Porsche Automobil Holding SE for the sale of 25% plus one ordinary share of Dr. Ing. h.c. F. Porsche AG to Porsche Automobil Holding SE. The share purchase agreement was concluded on September 18, 2022 and published in accordance with the rules on related-party transactions. No other disclosures or approval decisions on the part of the Supervisory Board regarding related-party transactions were required in the reporting period.

COMPOSITION OF THE SUPERVISORY BOARD AND BOARD OF MANAGEMENT

In the election of the employee representatives to the Supervisory Board of Volkswagen AG on April 29, 2022 in Wolfsburg, Ms. Simone Mahler, Chair of the Works Council of Volkswagen Financial Services AG in Braunschweig, Ms. Daniela Nowak, Chair of the Works Council of Volkswagen AG in Braunschweig, and Dr. Arno Homburg, Chair of the Board of Management of Volkswagen Management Association were elected as members of the Volkswagen AG Supervisory Board for the first time. They succeed Ms. Ulrike Jakob, Ms. Bertina Murkovic and Dr. Hans-Peter Fischer. The other employee representatives on the Supervisory Board were re-elected. Their term of office began at the close of the Annual General Meeting on May 12, 2022. Following the Annual General Meeting on May 12, 2022, the Supervisory Board of Volkswagen AG re-elected Mr. Hans Dieter Pötsch as the Chair and Mr. Jörg Hofmann as the Deputy Chair of the Supervisory Board.

With effect from the close of the Annual General Meeting on May 12, 2022, the Supervisory Board member Dr. Hussain Ali Al Abdulla stepped down from his post before the end of his term of office. As proposed by the shareholder Qatar Holding, the Annual General Meeting elected Mr. Mansoor Ebrahim Al-Mahmoud as his successor for the remainder of Dr. Al Abdulla's term of office, beginning from the close of the 2022 Annual General Meeting on May 12, 2022.

Mr. Harald Buck, member of the General and Group Works Council of Dr. Ing. h.c. F. Porsche AG, was court-appointed as a member of the Supervisory Board of Volkswagen AG effective from October 4, 2022. He succeeded Mr. Werner Weresch, who had stepped down from his post with effect from the close of September 30, 2022.

Effective from November 8, 2022, the State of Lower Saxony appointed the new Vice Minister President and Minister of Education and Cultural Affairs of Lower Saxony, Ms. Julia Willie Hamburg, to the Volkswagen AG Supervisory Board as Dr. Bernd Althusmann's successor.

Dr. Günther Horvath, Managing Director of Dr. Günther J. Horvath Rechtsanwalt GmbH and self-employed attorney at Dr. Günther J. Horvath Rechtsanwalt GmbH, was court-appointed as a member of the Supervisory Board of Volkswagen AG effective February 28, 2023. He succeeded Dr. Louise Kiesling, who passed away on December 9, 2022.

A new board-level management function – Volkswagen Passenger Cars – was established as of January 1, 2022, and was the responsibility of Mr. Ralf Brandstätter from that same date until June 30, 2022. Moreover, with effect from February 1, 2022, Ms. Hildegard Wortmann took over responsibility for the new Group Sales board-level management function, Dr. Manfred Döss the Integrity and Legal Affairs board-level management function (previously managed by Ms. Hiltrud Dorothea Werner), and Ms. Hauke Stars the IT board-level management function (previously managed on an interim basis by Dr. Arno Antlitz). Effective from July 1, 2022, Mr. Thomas Schäfer took over responsibility for the Volkswagen Passenger Cars function. Mr. Brandstätter, who was previously in this role, became the Board member responsible for China effective from August 1, 2022.

On July 22, 2022, the Supervisory Board of Volkswagen AG appointed Dr. Oliver Blume as the new Chair of the Board of Management of Volkswagen AG effective from September 1, 2022. Dr. Blume combines this role with his position as Chair of the Executive Board of Dr. Ing. h.c. F. Porsche AG. The previous Chair of the Board of Management of Volkswagen AG, Dr. Herbert Diess, left his position as member and Chair of the Board of Management of Volkswagen AG by mutual agreement with effect from the close of August 31, 2022.

As part of changes to Group management, the Board of Management was reduced from twelve to nine members with effect from the close of August 31, 2022. In the course of this change, Ms. Hildegard Wortmann and Mr. Murat Aksel moved from the Board of Management of Volkswagen AG to the Group Management functions newly created as an extension to the board-level management functions.

Our sincere thanks go out to all of the departing members of the Supervisory Board and the Board of Management for their work.

Dr. Louise Kiesling, member of the Supervisory Board of Volkswagen AG, passed away on December 9, 2022 at the age of 65. Dr. Kiesling had been a member of the Supervisory Board since 2015 and showed great personal commitment to the development of our Company during her term of office. We will always honor her memory.

Prof. Dr. Carl H. Hahn, former Chair of the Board of Management and member of the Supervisory Board of Volkswagen AG, passed away on January 14, 2023 at the age of 96. Prof. Dr. Hahn was at the Volkswagen Group from 1954 to 1972 and from 1982 to 1997 and decisively shaped the Company's development during this time. With his always tireless commitment, he played a major part in setting the course for the Volkswagen Group's success. The Company and its staff applaud his achievements with gratitude and respect. We will remember his life and work fondly.

AUDIT OF THE ANNUAL AND CONSOLIDATED FINANCIAL STATEMENTS

In line with our proposal, the Annual General Meeting of Volkswagen AG on May 12, 2022 elected EY as auditors and Group auditors for fiscal year 2022. The auditors confirmed the annual financial statements of Volkswagen AG, the consolidated financial statements of the Volkswagen Group and the combined management report by issuing unqualified audit reports in each case. The Audit Committee had also agreed with the auditor that the auditor would inform the Audit Committee if, while conducting the audit, matters were identified that constituted an inaccuracy in the Declaration on the Code submitted by the Board of Management and Supervisory Board. The auditor did not inform the Audit Committee of any such matters.

The Supervisory Board also commissioned EY to conduct an external limited assurance review of the content of the combined separate nonfinancial report for 2022.

In addition, the auditors analyzed the risk early warning and monitoring system that is integrated into the Risk Management System, concluding that the Board of Management had taken the measures required by section 91(2) of the AktG to ensure early detection of any risks endangering the continued existence of the Company. The Report on Relationships of Volkswagen AG with Affiliated Companies as per section 312 of the AktG (dependent company report) submitted by the Board of Management for the period from January 1 to December 31, 2022 was also audited by the auditors, who issued the following opinion: “In our opinion and in accordance with our statutory audit, we certify that the factual disclosures provided in the report are correct and that the Company’s consideration concerning legal transactions referred to in the report was not unduly high.”

The members of the Audit Committee and the members of the Supervisory Board were provided with the documentation relating to the annual and consolidated financial statements, including the dependent company report, the documentation relating to the combined management report, and also the audit reports prepared by the auditors and the report from EY on the external audit of the content of the combined separate nonfinancial report for 2022 in good time for their meetings both on March 2, 2023. The auditors reported extensively at both meetings on the material findings of their audit and were available to provide additional information. The Chair of the Audit Committee was also in close contact with the auditors, including between the meetings and during preparation for the Audit Committee meetings, about the progress of the audit and reported to the Audit Committee on this. The Audit Committee consulted regularly with the auditor, including without the Board of Management.

Taking into consideration the audit reports and the discussion with the auditors, and based on its own conclusions, the Audit Committee prepared the documents for the Supervisory Board’s examination of the consolidated financial statements, the annual financial statements of Volkswagen AG, the combined management report, the dependent company report and the combined separate nonfinancial report for 2022, and reported on these at the Supervisory Board meeting on March 3, 2023. Following this, the Audit Committee recommended that the Supervisory Board approve the annual and consolidated financial statements. We examined the documents in depth in the knowledge and on the basis of the report by the Audit Committee and the audit report, as well as in talks and discussions with the auditors. We came to the conclusion that the documents were drawn up in accordance with generally accepted accounting principles and that the assessment of the position of the Company and the Group presented by the Board of Management in the combined management report corresponds to the assessment by the Supervisory Board.

We therefore concurred with the auditors' findings and approved the annual financial statements and the consolidated financial statements prepared by the Board of Management at our meeting on March 3, 2023, which the auditors also attended for the agenda items relating to the annual and consolidated financial statements, the dependent company report and the combined management report. The annual financial statements are thus adopted. Upon completion of our examination of the dependent company report, there are no objections to be raised to the concluding declaration by the Board of Management in the dependent company report. We reviewed the proposal on the appropriation of net profit submitted by the Board of Management, taking into account in particular the interests of the Company and its shareholders, and endorsed the proposal. EY conducted an external audit of the content in the combined separate nonfinancial report for 2022 to attain limited assurance and issued an unqualified report. At our meeting on March 3, 2023, EY also took part in the discussions on the agenda items relating to the combined separate nonfinancial report for 2022. Upon completion of its own independent examination of the combined separate nonfinancial report for 2022, the Supervisory Board did not have any objections. We also resolved that, together with the Board of Management, we would prepare the remuneration report for fiscal year 2022. The Executive Committee prepared the resolution of the Supervisory Board concerning the preparation of the remuneration report. As well as reviewing whether the remuneration report contained all the disclosures required by law, EY went beyond statutory requirements to audit its content and issued an unqualified report.

We would like to offer our thanks and particular appreciation to the Board of Management, the Works Council, the management teams and all the employees of Volkswagen AG and its affiliated companies for their work in 2022. The year 2022 again brought many, in some cases major challenges to overcome – particularly the dramatic and far-reaching implications of the Russia-Ukraine conflict. With hard work and a high level of personal commitment, they all made a decisive contribution to what was a successful 2022 fiscal year for the Volkswagen Group.

Wolfsburg, March 3, 2023

Hans Dieter Pötsch
Chair of the Supervisory Board

2

DIVISIONS

Brands and Business Fields

In fiscal year 2022, the Volkswagen Group found itself confronted by the challenges of a difficult market environment worldwide, the limited availability of parts, and disruption in the logistics chain.

GROUP STRUCTURE

The Volkswagen Group consists of two divisions: the Automotive Division and the Financial Services Division. The Automotive Division comprises the Passenger Cars, Commercial Vehicles and Power Engineering business areas. Activities of the Automotive Division comprise in particular the development of vehicles, engines and vehicle software, and the production and sale of passenger cars, light commercial vehicles, trucks, buses and motorcycles, as well as businesses for genuine parts, large-bore diesel engines, turbomachinery and propulsion components. Mobility solutions are gradually being added to the range. The Ducati brand is allocated to the Audi brand and thus to the Passenger Cars Business Area. Navistar has supplemented the brands in the Commercial Vehicles Business Area since July 1, 2021. The Financial Services Division's activities comprise dealer and customer financing, vehicle leasing, direct banking and insurance activities, fleet management and mobility services. At the beginning of 2022, we aligned the reporting structure by brand and business field with the Group's current strategy and management structure.

VOLKSWAGEN GROUP REPORTING STRUCTURE

AUTOMOTIVE DIVISION			FINANCIAL SERVICES DIVISION
Passenger Cars Business Area	**Commercial Vehicles Business Area**	**Power Engineering Business Area**	Dealer and customer financing
Volkswagen Passenger Cars	TRATON Commercial Vehicles	MAN Energy Solutions	Leasing
ŠKODA			Direct bank
SEAT			Insurance
Volkswagen Commercial Vehicles			Fleet management
Tech. Components			Mobility services
Audi			
Porsche Automotive			
CARIAD			
Others			

In this chapter, we present the key volume and financial data relating to the Group brands and to Volkswagen Financial Services. In light of the considerable importance of the development of business in the world's largest single market for the Volkswagen Group, we also report on business developments and the results of our activities in China in this chapter.

The production figures and deliveries to customers are differentiated by vehicle brands and their models that carry the corresponding brand logo. Unit sales figures contain vehicles sold by respective brand companies, including models of other Group brands. In some cases, there are marked differences between delivery figures and unit sales as a result of our business development in China.

KEY FIGURES BY MARKET

The business of the Volkswagen Group and its brands was affected in 2022 by the difficult market environment worldwide, the limited availability of parts, and disruption in the logistics chain. The Volkswagen Group generated an operating result before special items of €22.5 (20.0) billion in the reporting period. Special items resulting from the diesel issue weighed on operating result in the amount of €–0.4 (–0.8) billion.

The Volkswagen Group's unit sales in the reporting year stood at 8.5 (8.6) million vehicles. Sales revenue increased by 11.6% to €279.2 billion. Improved price positioning and mix and exchange rate effects had a positive impact.

In the Europe/Other markets region, unit sales decreased by 6.2% year-on-year to 3.5 million vehicles. However, positive mix effects and improved price positioning helped to lift sales revenue to €154.5 (145.6) billion.

Unit sales in the North American markets increased by 7.8% to 868 thousand vehicles in 2022. Sales revenue increased to €60.1 (45.3) billion, due mainly to the inclusion of Navistar as of July 1, 2021, as well as exchange rate effects.

On markets in the South America region, we sold 487 thousand vehicles in 2022, a decrease of 3.2% compared with 2021. Sales revenue increased by 40.2% to €15.5 billion due to mix and exchange rate effects.

In the Asia-Pacific region, the Volkswagen Group's unit sales – including the Chinese joint ventures – increased to 3.6 (3.5) million vehicles in 2022. Sales revenue improved to €51.4 (48.7) billion. Negative effects resulting from lower volumes – not including the Chinese Joint Ventures – were offset by positive exchange rate effects. This figure does not include the sales revenue of our equity-accounted Chinese joint ventures.

Hedging transactions relating to sales revenue in foreign currency had a negative impact of €–2.3 (–0.4) billion on the sales revenue of the Volkswagen Group in the reporting year.

KEY FIGURES BY BRAND AND BUSINESS FIELD

Thousand vehicles/€ million	VEHICLE SALES 2022	VEHICLE SALES 2021	SALES REVENUE 2022	SALES REVENUE 2021	OPERATING RESULT 2022	OPERATING RESULT 2021
Volume brand group	4,069	4,133	113,762	101,858	4,045	3,488
Volkswagen Passenger Cars	2,594	2,719	73,773	67,856	2,647	2,160
ŠKODA	863	784	21,026	17,743	628	1,083
SEAT	468	494	10,941	9,614	33	–233
Volkswagen Commercial Vehicles	340	326	11,455	9,909	529	73
Tech. Components	–	–	17,966	16,386	130	329
Consolidation	–195	–190	–21,399	–19,650	78	76
Audi (Premium brand group)[1]	1,070	1,024	61,753	55,914	7,622	5,936
Porsche Automotive (Sport & Luxury brand group)[2]	314	297	34,591	30,289	6,423	5,006
TRATON Commercial Vehicles[3]	306	273	39,516	30,092	1,583	161
Equity-accounted companies in China[4]	3,122	3,042	–	–	–	–
MAN Energy Solutions	–	–	3,565	3,278	284	179
CARIAD	–	–	796	518	–2,068	–1,327
Volkswagen Financial Services	–	–	44,155	41,662	5,602	5,672
Other[5]	–400	–195	–18,907	–13,410	–966	913
Volkswagen Group before special items	**–**	**–**	**–**	**–**	**22,523**	**20,026**
Special items	–	–	–	–	–399	–751
Volkswagen Group	**8,481**	**8,576**	**279,232**	**250,200**	**22,124**	**19,275**
Automotive Division[6]	8,481	8,576	232,385	206,237	16,468	13,230
of which: Passenger Cars Business Area	8,175	8,303	189,304	172,868	14,600	13,051
Commercial Vehicles Business Area	306	273	39,516	30,092	1,588	134
Power Engineering Business Area	–	–	3,565	3,278	281	45
Financial Services Division	–	–	46,847	43,963	5,656	6,045

1 The previous year's figures were calculated by means of the simple addition of the figures for Bentley.
2 Porsche (including Financial Services): sales revenue €37,630 (33,138) million, operating result before special items €6,770 (5,286) million.
3 Includes Navistar as of July 1, 2021.
4 The sales revenue and operating result of the equity-accounted companies in China are not included in the consolidated figures; the share of the operating result generated by these companies amounted to €3,280 (3,026) million.
5 In the operating result, mainly intragroup items recognized in profit or loss, in particular from the elimination of intercompany profits; the figure includes depreciation and amortization of identifiable assets as part of purchase price allocation, as well as companies not allocated to the brands.
6 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

KEY FIGURES BY MARKET

Thousand vehicles/€ million	VEHICLE SALES 2022	VEHICLE SALES 2021	SALES REVENUE 2022	SALES REVENUE 2021
Europe/Other Markets	3,495	3,727	154,529	145,570
North America	868	805	60,077	45,305
South America	487	503	15,476	11,039
Asia-Pacific[1]	3,632	3,540	51,444	48,672
Hedges on sales revenue	–	–	–2,294	–386
Volkswagen Group[1]	**8,481**	**8,576**	**279,232**	**250,200**

1 The sales revenue of the joint venture companies in China is not included in the figures for the Group and the Asia-Pacific market.

In fiscal year 2022, the Volkswagen Passenger Cars brand celebrated the market debut of the ID.4 Pro 4Motion, the all-electric all-rounder for everyday and leisure use. The operating result improved year-on-year.

BUSINESS DEVELOPMENT

The Volkswagen Passenger Cars brand aims to move people. The centerpiece of the ACCELERATE 2030 strategy is a global initiative through which the brand aspires to transform itself into a technology and software business focused on customer needs.

In fiscal year 2022, the Volkswagen Passenger Cars brand launched the ID.4 Pro 4Motion, the all-electric all-rounder for everyday and leisure use. The powerful, assertive exterior features soft, gentle transitions, alternating with sharp, defined edges, and gives the all-rounder excellent aerodynamics. The powerful dual-motor all-wheel drive provides plenty of traction in virtually any everyday situation. Inside, the model impresses with open space and a calm design that emphasizes the airy feel. At the ID. Meet in Locarno, the Volkswagen Passenger Cars brand presented its offroad concept car “ID. XTREME”. The facelifted T-Roc models also celebrated their premiere in the reporting period. The new compact SUVs “Roc stars” boast fresh exterior design accents, improved controls and connectivity, and the latest generation of assistance systems. The popular Touareg and Golf R models also celebrated their 20th anniversary in the reporting period. The brand celebrated these birthdays with the Touareg “Edition 20” and Golf R “20 Years” special models.

The Volkswagen Passenger Cars brand delivered 4.6 million vehicles globally in fiscal year 2022. This was 6.8% fewer than in the previous year. The decline was mainly due to continued limited vehicle availability as a result of parts supply shortages.

The Volkswagen Passenger Cars brand sold 2.6 (2.7) million vehicles in the reporting year. ID. family models and the T-Roc were increasingly sought-after, and the new Taigo was also very popular. The difference between deliveries and unit sales is due mainly to the fact that the vehicle-producing joint ventures in China are not attributed to the companies in the Volkswagen Passenger Cars brand.

The Volkswagen Passenger Cars brand produced 4.8 (4.6) million vehicles worldwide in 2022. In May 2022, Volkswagen Slovakia celebrated 20 years of Volkswagen Touareg production.

SALES REVENUE AND EARNINGS

The Volkswagen Passenger Cars brand increased its sales revenue by 8.7% year-on-year to €73.8 billion in 2022. The operating result before special items improved to €2.6 (2.2) billion, which was attributable above all to improved price positioning, positive mix effects and reduced sales incentives. Increased commodity prices adversely affected earnings. Upfront expenditure for new products and technologies increased. The operating return on sales before special items amounted to 3.6 (3.2)%. The diesel issue gave rise to negative special items.

PRODUCTION

Units	2022	2021
Tiguan	604,536	598,656
Polo/Virtus/Nivus/Taigo	448,043	453,479
Passat/Magotan	447,246	379,614
Lavida	377,284	394,222
T-Roc	322,211	282,748
T-Cross/Tacqua/Taigun	315,036	295,101
Golf	300,090	267,352
Jetta/Sagitar	292,038	295,490
Atlas/Teramont	217,771	180,873
Tharu/Taos	216,397	206,789
Bora	210,896	242,022
ID.4, ID.5	207,934	134,319
JETTA	148,666	157,157
Gol	122,575	131,129
Santana	111,422	138,232
Lamando	99,966	58,551
ID.3	83,432	73,738
Arteon/CC	69,627	42,508
Saveiro	46,282	40,212
ID.6	38,846	20,461
up!	33,317	75,616
Touareg	31,254	34,957
Sharan/Viloran	30,888	16,806
Touran	27,403	30,603
Phideon	7,480	6,618
Fox/Suran	–	18,162
	4,810,640	**4,575,415**

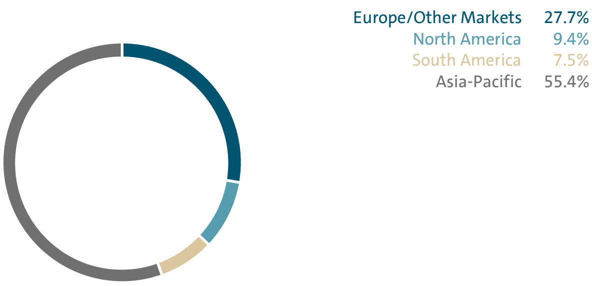
VOLKSWAGEN PASSENGER CARS BRAND

	2022	2021	%
Deliveries (thousand units)	4,563	4,897	–6.8
Vehicle sales	2,594	2,719	–4.6
Production	4,811	4,575	+5.1
Sales revenue (€ million)	73,773	67,856	+8.7
Operating result before special items	2,647	2,160	+22.5
Operating return on sales (%)	3.6	3.2	

ID.4 Pro 4Motion

DELIVERIES BY MARKET

in percent



FURTHER INFORMATION www.volkswagen.com

ŠKODA added a coupé and two RS versions to its all-electric Enyaq model range in 2022. The Czech brand also pushed ahead with its India 2.0 brand offensive with the Slavia notchback saloon.

BUSINESS DEVELOPMENT

The ŠKODA models are synonymous with smart understatement, featuring a superior spacious interior, the highest standards of functionality, excellent value for money and a distinctive design. Added to that are a number of “Simply Clever” ideas and new digital services, all aimed at making customers’ lives easier.

ŠKODA expanded its all-electric Enyaq iV range with a coupé and two RS versions in fiscal year 2022. The Enyaq Coupé iV has an exciting design and, thanks to its outstanding aerodynamics, even larger ranges than the SUV version. The exterior features a gently sloping roofline that merges seamlessly with the boot lid. The Enyaq RS models have added another two models to the Czech manufacturer’s RS range. With their two electric motors and a system output of 220 kW (299 PS), these are the two most powerful vehicles in the ŠKODA portfolio. The Enyaq Coupé RS iV was awarded the “Golden Steering Wheel 2022” in the mid-size SUV category in November 2022. ŠKODA also continued its India 2.0 brand offensive in 2022. Another model arrived on the Indian market in the form of the ŠKODA Slavia, which is based on the MQB. It offers generous space, extensive safety equipment, modern infotainment and two powerful and efficient TSI engines. Like the Kushaq, the Slavia impresses with a typical ŠKODA interior design and Indian design accents. Due to an intragroup restructuring, responsibility for the Russia region was transferred from the Volkswagen Passenger Cars brand to the ŠKODA brand in 2022.

The ŠKODA brand delivered 0.7 (0.9) million vehicles worldwide in the reporting period. Sales in India more than doubled again.

ŠKODA sold 0.9 (0.8) million vehicles in the past fiscal year. There was strong demand for the Kushaq SUV model, and the Enyaq iV was also very popular with customers.

The ŠKODA brand produced 0.8 million vehicles worldwide in fiscal year 2022. This was 4.6% fewer than in the previous year.

SALES REVENUE AND EARNINGS

The ŠKODA brand’s sales revenue increased by 18.5% to €21.0 billion in fiscal year 2022 due to volume effects. The Russia-Ukraine conflict weighed on the operating result with an amount in the mid-three-digit millions, bringing it down to €0.6 (1.1) billion. Positive mix effects could not offset the impact from product costs and exchange rates. The operating return on sales fell to 3.0 (6.1)%.

PRODUCTION

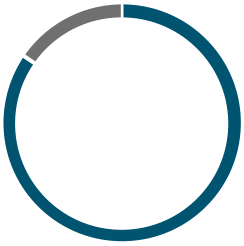
Units	2022	2021
Rapid/Scala	148,895	193,045
Octavia	141,499	172,077
Fabia	118,827	94,105
Karoq/Kamiq	106,811	127,470
Kodiaq	100,164	88,505
Superb	64,780	57,720
Enyaq iV	57,213	49,811
Kushaq	26,648	16,291
Citigo	–	2,886
	764,837	**801,910**

ŠKODA BRAND

	2022	2021	%
Deliveries (thousand units)	731	878	–16.7
Vehicle sales	863	784	+10.1
Production	765	802	–4.6
Sales revenue (€ million)	21,026	17,743	+18.5
Operating result	628	1,083	–42.0
Operating return on sales (%)	3.0	6.1	

Enyaq Coupé iV

DELIVERIES BY MARKET
in percent



FURTHER INFORMATION www.skoda-auto.com

SEAT S.A.

SEAT is one company with two complementary brands: SEAT and CUPRA. In 2022, CUPRA cemented its position as Europe's fastest growing automotive brand and increased deliveries by 93%, driving the financial turnaround of the company.

BUSINESS DEVELOPMENT

CUPRA is the unconventional challenger brand that brings together emotion, electrification and performance to inspire the world from Barcelona. In 2022, CUPRA presented three concept vehicles for a new era of its vision up to 2025: the CUPRA Tavascan, as the brand's first electric SUV, underscores the brand's aim of becoming more global and entering new markets. The CUPRA Terramar is a sporty SUV with a powerful and striking design. The third concept model, the CUPRA UrbanRebel, is designed to democratize sustainable urban mobility. CUPRA reached new heights in 2022, led by the bestselling CUPRA Formentor. The brand's first standalone model saw deliveries to customers of 98 thousand units. CUPRA's second most popular model, the all-electric CUPRA Born, marked its first full year on the market with 31 thousand units delivered and multiple awards from trade magazines.

SEAT is the Group brand with Europe's youngest customer profile. In 2022, SEAT enhanced its SUV flagship, the Tarraco, with the Xperience equipment package. The brand also reached a major milestone with the sale of the one millionth SUV.

Deliveries to customers from SEAT and CUPRA fell by 18.1% to 386 thousand vehicles in fiscal year 2022, mainly due to the challenges arising from the shortage of semiconductors. However, the CUPRA brand increased sales by 93% to 153 thousand vehicles, thereby driving the company's financial turnaround.

The company's unit sales amounted to 468 thousand units in the reporting year. This was 5.2% less than in the previous year. This figure also includes the A1 manufactured for Audi.

SEAT and CUPRA produced 420 thousand vehicles in the reporting period. This was 0.8% fewer than in the prior year.

SALES REVENUE AND EARNINGS

SEAT's sales revenue was up 13.8% to €10.9 billion in 2022. Positive mix effects, an improved price positioning and cost reductions drove SEAT's operating result significantly into the black, although one-off expenses for restructuring measures of €247 million ultimately led to a result of €33 (–233) million. The operating return on sales amounted to 0.3 (–2.4)%.

PRODUCTION

Units	2022	2021
SEAT		
Arona	85,717	98,656
Ibiza	60,385	83,710
Ateca	49,316	53,995
Leon	36,247	70,143
Tarraco	12,453	22,437
Alhambra	5,341	4,169
Mii	–	8,648
	249,459	**341,758**
CUPRA		
Formentor	105,568	58,863
Born	36,153	4,801
Leon	20,070	13,670
Ateca	8,841	4,505
	170,632	**81,839**
SEAT and CUPRA	**420,091**	**423,597**

SEAT

	2022	2021	%
Deliveries (thousand units)	386	471	–18.1
Vehicle sales	468	494	–5.2
Production	420	424	–0.8
Sales revenue (€ million)	10,941	9,614	+13.8
Operating result	33	–233	x
Operating return on sales (%)	0.3	–2.4	

CUPRA Formentor

DELIVERIES BY MARKET
in percent

FURTHER INFORMATION www.seat.com

Commercial Vehicles

The highlight at the Volkswagen Commercial Vehicles brand in the reporting period was the presentation and market launch of the all-electric ID. Buzz and ID. Buzz Cargo models. A second, completely new generation of the versatile Amarok pickup was also launched.

BUSINESS DEVELOPMENT

As a leading manufacturer of light commercial vehicles, Volkswagen Commercial Vehicles is making fundamental and sustainable changes to the way goods and services are distributed in cities in order to improve the quality of life, especially in inner city areas. In this way, the brand will continue to keep the world of tomorrow moving, with all of its requirements regarding clean, intelligent and sustainable mobility. This is what Volkswagen Commercial Vehicles stands for with its brand promise: We transport success, freedom and the future.

In fiscal year 2022, the Volkswagen Commercial Vehicles brand brought the highly acclaimed ID. Buzz to the market. The vehicle symbolizes the core elements of tomorrow's mobility: e-mobility, digitalization, and connectivity. The ID. Buzz and ID. Buzz Cargo contain seven decades of "Bulli" know-how and also – thanks to the Volkswagen Group's MEB platform – an electric drivetrain. The ID. Buzz is agile, efficient and dynamic and combines the attributes of the legendary T1: from the design to the tight overhangs of the bodywork and the effective use of space. The popularity of the ID. Buzz is reflected in the many awards it received in its debut year, including "German Car of the Year" and the "Golden Steering Wheel 2022". The ID. Buzz Cargo impresses as a spacious and versatile zero-emission van and was named "International Van of the Year 2023". The new generation of the Amarok was also presented in the reporting period. Among other things, the versatile pickup offers optimized features, numerous assistance systems (some completely new to the pickup segment), mobile online services, two all-wheel-drive systems and an efficient range of engines.

Deliveries by Volkswagen Commercial Vehicles amounted to 329 thousand units (–8.6%) in the reporting period. Sales in Germany developed particularly encouragingly (+8.3%).

Volkswagen Commercial Vehicles sold 340 thousand vehicles in the reporting period, representing an increase of 4.3% compared with the previous year. This was also thanks to the ID. Buzz, which was very positively received by the market.

In 2022, the Volkswagen Commercial Vehicles brand produced 351 thousand vehicles, 4.9% more than in the previous year.

SALES REVENUE AND EARNINGS

Volkswagen Commercial Vehicles increased sales revenue by 15.6% to €11.5 billion in fiscal year 2022. The operating result rose to €529 (73) million, due mainly to factors relating to price and mix. Lower excess CO_2 emissions premiums were taken into account compared with the previous year. The operating return on sales improved significantly to 4.6 (0.7)%.

PRODUCTION

Units	2022	2021
Caravelle/Multivan, Kombi, California	80,698	79,379
Transporter	67,508	80,122
Crafter, Grand California	60,326	58,739
Caddy Kombi	46,500	40,156
Amarok	42,806	42,755
Caddy, Caddy California	42,352	33,805
ID. Buzz	11,013	–
	351,203	**334,956**

VOLKSWAGEN COMMERCIAL VEHICLES BRAND

	2022	2021	%
Deliveries (thousand units)	329	360	–8.6
Vehicle sales	340	326	+4.3
Production	351	335	+4.9
Sales revenue (€ million)	11,455	9,909	+15.6
Operating result	529	73	x
Operating return on sales (%)	4.6	0.7	

ID. Buzz

DELIVERIES BY MARKET

in percent

FURTHER INFORMATION www.volkswagen-commercial-vehicles.com

Audi

The Audi brand continued its electrification campaign in 2022 despite a challenging supply and logistics situation. The operating result increased significantly year-on-year.

BUSINESS DEVELOPMENT

The Premium brand group combines four strong brands from the progressive premium and luxury segment: Audi, Bentley, Lamborghini and Ducati. “Vorsprung” is Audi’s global brand promise, and one which means the brand with the four rings is consistently focusing on the premium mobility of the future: connected, sustainable, electric, and autonomous. In developing and scaling up innovative technologies, Audi plays a leading role within the Group, not least with the Premium Platform Electric (PPE) for all-electric premium vehicles.

In the reporting period, the Audi brand presented the Audi Q8 e-tron, the successor to the successful Audi e-tron. The model impresses with its progressive design, optimized drive concept, improved aerodynamics, and higher charging and battery capacity. Audi also launched the new version of its Audi A8. The exterior impresses with even greater presence and athleticism. The feel-good interior offers passengers generous space. Audi gave a first preview of the Premium Platform Electric with the Audi A6 Avant e-tron concept. Furthermore, it outlined the mobility of the future with two further concept vehicles – the Audi urbansphere concept and Audi activesphere concept. The Bentley brand presented the Bentayga EWB and Flying Spur Speed in fiscal year 2022. The Bentayga EWB is 180 mm longer than the Bentayga. Its emphasis is on wellbeing and interior luxury. The dynamic Flying Spur Speed grand tourer rounds off the Bentley brand’s new portfolio.

In a difficult market environment, Audi (Premium brand group) delivered a total of 1.6 (1.7) million vehicles to customers in 2022. Increases were recorded in Germany (+18.7%), Italy (+1.6%), Spain (+1.4%) and Canada (+1.2%).

Unit sales at Audi (Premium brand group) amounted to 1.1 (1.0) million vehicles in the reporting period. There was particularly high demand for the all-electric Audi e-tron, Q4 e-tron and Audi e-tron GT models; the Audi A3 and Audi Q5 were also very popular. The Chinese joint ventures sold a further 599 (644) thousand locally produced Audi vehicles. Unit sales at the Lamborghini brand amounted to 9.2 (8.3) thousand vehicles. Bentley sold 15.5 (14.6) thousand vehicles and Ducati 65.0 (56.9) thousand motorcycles.

In 2022, Audi produced 1.7 (1.6) million units worldwide. Bentley produced 16.4 (14.8) thousand vehicles and Lamborghini 9.9 (8.3) thousand. Ducati produced 70.4 (59.2) thousand motorcycles.

SALES REVENUE AND EARNINGS

Sales revenue at Audi (Premium brand group) climbed to €61.8 (55.9) billion in fiscal year 2022. The operating result before special items improved to €7.6 (5.9) billion, mainly attributable to a strong performance in the new and used car market and solid results from the Lamborghini, Bentley and Ducati brands. The operating return on sales before special items climbed to 12.3 (10.6)%. The diesel issue resulted in low negative special items. The figures for the Bentley, Lamborghini and Ducati brands are included in the key financial indicators for the Audi brand.

AUDI PRODUCTION

Units	2022	2021
Q5	319,162	279,613
Q3	239,340	250,852
A4	234,395	199,628
A3	210,341	164,299
A6	208,729	227,237
Q2	88,372	103,046
A5	66,124	64,012
A1	58,777	60,158
Q4 e-tron	58,764	27,519
Q7	52,514	56,600
Q8 e-tron	51,545	44,962
Q8	37,330	35,406
A8	18,398	22,285
A7	17,437	16,533
e-tron GT	12,674	9,602
TT	8,126	8,489
Q5 e-tron	3,113	99
Q6	2,042	–
R8	1,097	1,679
	1,688,280	**1,572,019**

BENTLEY, LAMBORGHINI, DUCATI PRODUCTION

Units	2022	2021
Bentley		
Bentayga	7,346	5,838
Continental GT	4,793	5,003
Flying Spur	4,226	3,947
	16,365	**14,788**
Lamborghini		
Urus	5,751	5,240
Huracán	3,443	2,435
Aventador	661	628
	9,855	**8,303**
Ducati, motorcycles	**70,389**	**59,214**

AUDI (PREMIUM BRAND GROUP)

	2022	2021	%
Deliveries (thousand units)	1,639	1,704	−3.8
Audi	1,614	1,681	−3.9
Bentley	15	15	+3.5
Lamborghini	9	8	+9.9
Vehicle sales	1,070	1,024	+4.5
Production	1,715	1,595	+7.5
Sales revenue (€ million)	61,753	55,914	+10.4
Operating result before special items	7,622	5,936	+28.4
Operating return on sales (%)	12.3	10.6	

Q8 e-tron

DELIVERIES BY MARKET

in percent

FURTHER INFORMATION www.audi.com

PORSCHE

Porsche added the versatile Taycan Sport Turismo to its all-electric Taycan model range in fiscal year 2022. Unit sales, sales revenue and profit increased year-on-year.

BUSINESS DEVELOPMENT

Exclusivity and social acceptance, pioneering spirit and tradition, performance and sustainability, design and functionality – these are the brand values of the sports car manufacturer Porsche.

Porsche continued its path toward sustainable mobility in fiscal year 2022 and presented the Taycan Sport Turismo, the third model in its all-electric range. The Taycan Sport Turismo combines the everyday practicality of the Taycan Cross Turismo with the on-road dynamics of a sports saloon. It also impresses with state-of-the-art convenience and safety features, in addition to the latest infotainment. The addition of the new model means that the Porsche Taycan is now available in five variants. The most powerful variant is the Taycan Turbo S, which accelerates from 0 to 100 km/h in 2.8 seconds and can reach a top speed of 260 km/h. The Taycan 4S Sport Turismo boasts the largest range of all the variants, offering customers up to 498 km. Porsche also presented the 911 GT3 RS in the reporting period. The uncompromising model designed for maximum performance wows customers with features such as its modified central cooler concept and a significantly larger, swan neck-mounted rear wing. The model is available in the Clubsport or Weissach package. Back in January 2022, Porsche celebrated the 50th anniversary of Porsche Design and marked the occasion by releasing the exclusive anniversary model "911 Edition 50 Years Porsche Design", which is limited to 750 vehicles worldwide.

Porsche delivered 310 thousand sports cars to customers in the reporting period; this represented an increase of 2.6% compared with the previous year. Growth was achieved in particular in Western Europe (+11.7%) and Asia-Pacific (+1.2%). China remained the largest single market for Porsche with deliveries of 93 thousand vehicles.

In the reporting year, Porsche increased unit sales by 5.5% to 314 thousand vehicles. Demand for the 911, Panamera and Cayenne models was higher than in the previous year.

Porsche manufactured a total of 338 thousand vehicles in 2022. This was 19.2% more than in the previous year. The Leipzig factory celebrated 20 years of Porsche production.

SALES REVENUE AND EARNINGS

Porsche Automotive generated sales revenue of €34.6 (30.3) billion in the reporting period. The operating result (prior-year figure before special items) increased to €6.4 billion (+28.3%), which was primarily due to higher earnings contributions and positive exchange rate effects. The operating return on sales (prior-year figure before special items) improved to 18.6 (16.5)%.

PRODUCTION

Units	2022	2021
Cayenne	104,745	78,850
Macan	99,468	76,506
911 Coupé/Cabriolet	42,390	38,347
Taycan	37,577	37,720
Panamera	35,258	33,233
718 Boxster/Cayman	18,085	18,472
	337,523	**283,128**

PORSCHE AUTOMOTIVE[1]

	2022	2021	%
Deliveries (thousand units)	310	302	+2.6
Vehicle sales	314	297	+5.5
Production	338	283	+19.2
Sales revenue (€ million)	34,591	30,289	+14.2
Operating result before special items	6,423	5,006	+28.3
Operating return on sales (%)	18.6	16.5	

1 Porsche (Automotive and Financial Services): sales revenue €37,630 (33,138) million, operating profit (in the prior-year before special items) €6,770 (5,286) million.

Taycan Sport Turismo

DELIVERIES BY MARKET

in percent

FURTHER INFORMATION www.porsche.com

The TRATON Group recorded successes in all areas of the "TRATON Way Forward" corporate strategy in fiscal year 2022.

BUSINESS DEVELOPMENT

The "TRATON Way Forward" strategy focuses on the following areas: being a responsible company, value creation and "TRATON Accelerated!". Successes were recorded in all areas of the corporate strategy in fiscal year 2022.

For the TRATON Group (TRATON), the future is electric. A total of €2.6 billion is to be spent on research and development for e-mobility by 2026, whilst existing investments into the development of conventional drive systems is to decline to less than one fifth in 2026. The establishment of a joint venture with Daimler Truck and the Volvo Group completed in July 2022 to create a high-performance charging infrastructure for trucks and buses across Europe will kick-start battery-electric transport. TRATON already joined the UN Global Compact in 2021 and was followed by the Volkswagen Truck & Bus brand in March 2022. In addition, TRATON has identified "decarbonization and circular economy" as one of three strategic focus areas for changing the business model and product design to achieve a reduction in CO_2 emissions and resource consumption. TRATON is committed to the Paris Climate Agreement of the UN Climate Conference.

Stronger internationalization as a result of integrating Navistar enabled TRATON to counteract the significant fluctuations in the market in 2022. Moreover, Scania is set to become the first Western truck manufacturer to produce its vehicles completely independently in China; an important step for TRATON. By creating a Group-wide integrated business unit for financial services, TRATON is aiming to provide comprehensive customer financing services in future in order to meet the demand for new technologies and business fields.

In 2022, Scania was the first TRATON brand to introduce the Group-wide 13-liter powertrain in its Scania Super, allowing a reduction in fuel consumption in comparison to the predecessor model. In addition, Scania has set itself ambitious targets for decarbonizing the supply chain: by 2030, supply chain emissions arising from batteries, steel, aluminum and cast iron are to be reduced by 60% to 85%. Road tests for automated driving were expanded. The self-driving Scania trucks that have been upgraded to level 4 may now drive on all routes between the cities of Södertälje and Jönköping. A driver remains on board for safety reasons.

By digitalizing its vehicles, MAN wants to tap into new business fields. In 2022, it launched MAN SimplePay, making it the first vehicle manufacturer to develop a digital, transparent platform for all payment transactions involving commercial vehicles. In addition, a solution created with its partner BP for automated, contactless and safe payments for refueling went live. At IAA Transportation 2022, MAN unveiled the all-electric truck as a prototype that was almost ready for mass production.

In 2022, Navistar presented the International S13 integrated powertrain, with which a new level of efficiency, profitability and sustainability is expected to be reached. Based on the TRATON Group's 13-liter powertrain, the S13 enables fuel savings of up to 15% when combined with optimized aerodynamics. By opening a new factory in San Antonio, Texas, where electric vehicles can also be produced, Navistar is positioning itself as an e-mobility provider.

Volkswagen Truck & Bus expanded its importer network in Asia in 2022 and delivered the first vehicles to customers in the Philippines.

PRODUCTION

Units	2022	2021
Scania	**88,142**	**92,718**
Trucks	82,827	89,528
Buses	5,315	3,190
MAN	**88,952**	**90,286**
Trucks	62,009	64,883
Buses	4,675	4,240
Light Commercial Vehicles	22,268	21,163
Navistar	**82,071**	**28,669**
Trucks	69,488	23,267
Buses	12,583	5,402
Volkswagen Truck & Bus	**58,647**	**57,095**
Trucks	50,075	52,690
Buses	8,572	4,405
TRATON	**317,812**	**268,768**

TRATON GROUP

	2022	2021	%
Deliveries (thousand units)	305	271	+12.6
Vehicle sales	306	273	+12.4
Production	318	269	+18.2
Sales revenue (€ million)	39,516	30,092	+31.3
Operating result	1,583	161	x
Operating return on sales (%)	4.0	0.5	

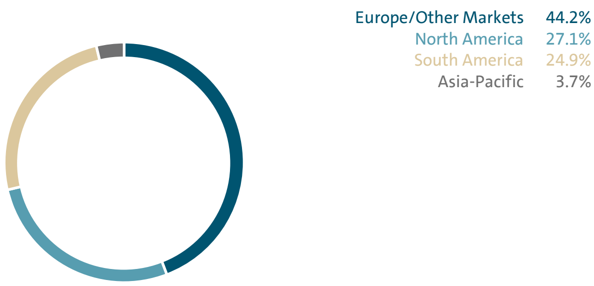
SALES REVENUE AND EARNINGS

Unit sales of TRATON Commercial Vehicles in 2022 went up to 306 (273) thousand vehicles and sales revenue of €39.5 billion was 31.3% higher than in the same period of 2021. Despite negative effects resulting from the Russia-Ukraine conflict, the operating result of €1.6 (0.2) billion was higher than in the previous year. The figure for the previous year had been mainly influenced by expenses of €0.7 billion for restructuring measures at MAN Truck & Bus plus expenses of €0.5 billion for provisions recognized at Scania Vehicles & Services in connection with the EU antitrust proceedings. Additionally, mix and exchange rate effects had a positive effect. The operating return on sales increased to 4.0 (0.5)%.

Strong brands

DELIVERIES BY MARKET

in percent



FURTHER INFORMATION www.traton.com

Volkswagen Group China

In fiscal year 2022, the Volkswagen Group made further progress with its ambitious transformation in China, achieving significant growth in deliveries of all-electric vehicles.

BUSINESS DEVELOPMENT

Despite the challenges arising from the Covid-19 pandemic and the shortage of semiconductors, Volkswagen Group China maintained its market leadership in China in 2022 with a market share of 15.1%, and continued to drive the ambitious transformation to fully connected e-mobility. With 206,500 vehicles delivered, sales of NEVs rose by 37.1% compared with the previous year, while BEV deliveries were up 68.2% year-on-year. The key driver of this electric momentum in China was the successful ID. family of the Volkswagen Passenger Cars brand. ID. family deliveries more than doubled compared with the previous year. Another family member, the ID. Aero concept car, is already in the starting blocks.

Together with the Chinese joint ventures, Volkswagen Group China delivered 3.2 (3.3) million vehicles (including imports) in the Chinese market in 2022 (–3.6%). The Volkswagen Passenger Cars brand, including JETTA, delivered 2.4 million vehicles (–1.3%) and, with a market share of 11.4 (11.7)%, remained number one with Chinese customers despite the challenging environment. This figure includes 180,600 NEV vehicles (+51.6%).

In the premium and sports segment, Audi delivered 642,548 vehicles to customers in China. The number of all-electric models delivered was up 9.8%. Under the new “Vorsprung 2030” strategy, the Audi brand forms a cornerstone of the advancing transformation of products in China in addition to production and development capacities. Audi has further expanded its portfolio of all-electric models with the roll out of the Audi Q4 e-tron, Q5 e-tron Roadjet and RS e-tron GT models. Moreover, the Audi FAW NEV Company began the construction of its plant in Changchun. Only all-electric models based on the PPE platform will roll off the production line at this location.

In the past year, Porsche delivered 93,286 vehicles in China, its largest individual market. The electrification strategy has made steady progress in China in terms of both product range and charging stations. Porsche had introduced a total of 21 NEV models in China by the end of 2022, nine of which are the Taycan and its derivatives. Bentley celebrated its 20th anniversary in China in 2022 with total deliveries of 3,655 vehicles. Lamborghini’s delivery of 1,018 vehicles represents a 8.9% increase compared with 2021.

Volkswagen Group China made considerable progress in its transformation in fiscal year 2022; the introduction of a new management model has facilitated rapid, autonomous decision-making and optimized cooperation among brands. CARIAD, the Group’s software company, has established its subsidiary in China, thus systematically driving software development and digitalization. Moreover, Volkswagen Group China has announced a collaboration with Horizon Robotics in order to implement local solutions for automated driving together. In December, the first pre-series vehicle rolled off the production line at Volkswagen’s ultramodern MEB plant in Anhui. Volkswagen Group China also drove the expansion of the energy supply network, creating, with the charging joint venture CAMS, more than 1,000 charging stations with over 9,000 charging points.

Thousand units	2022	2021	%
Deliveries	3,185	3,305	–3.6
Vehicle sales[1]	3,122	3,042	+2.6
Production	3,160	2,949	+7.2

1 Produced locally.

EARNINGS

€ million	2022	2021
Operating result (100%)	8,827	8,740
Operating result (proportionate)	3,280	3,026

Our joint ventures produced a total of 3.2 (2.9) million vehicles in fiscal year 2022. The joint ventures produce a mixture of established Group models and those specially modified for Chinese customers (e.g. with extended wheelbases), as well as vehicles developed exclusively for the Chinese market (such as the Volkswagen Lamando, Teramont, ID.6 X, or ID.6 CROZZ).

The proportionate operating result of the joint ventures in the reporting year stood at €3.3 (3.0) billion. The negative impacts of a highly competitive market environment and pandemic-related restrictions were offset by improvements in the mix and cost optimization.

The figures of the Chinese joint venture companies are not included in the operating profit of the Group as they are accounted for using the equity method. Their profits are included solely in the Group's financial result on a proportionate basis.

ID. Aero

LOCAL PRODUCTION

Units	2022	2021
Volkswagen Passenger Cars	2,513,613	2,288,021
Audi	604,439	606,509
ŠKODA	41,936	54,401
Total	**3,159,988**	**2,948,931**

VOLKSWAGEN FINANCIAL SERVICES

THE KEY TO MOBILITY

The business of Volkswagen Financial Services was robust in a demanding environment in 2022. Electrification and digitalization are increasingly reflected in the portfolio of service and mobility offerings.

STRUCTURE OF VOLKSWAGEN FINANCIAL SERVICES

Volkswagen Financial Services comprises dealer and customer financing, leasing, banking and insurance activities, fleet management and mobility services in 47 countries. The key companies are Volkswagen Financial Services AG and its affiliated companies such as Volkswagen Leasing GmbH, as well as Volkswagen Bank GmbH, Porsche Financial Services and the financial services companies in the United States and Canada, the only exceptions being the financial services business of the Scania and Navistar brands and of Porsche Holding Salzburg.

BUSINESS DEVELOPMENT

The NEW AUTO strategy sets out the Volkswagen Group's roadmap for the transformation into a software-oriented mobility provider and defines the creation and expansion of mobility solutions as an important core element. Volkswagen Financial Services has adopted a key role under this umbrella and incorporated the Group strategy as an integral part of its own MOBILITY2030 strategy. The core task of Volkswagen Financial Services in this context is to develop and provide a comprehensive mobility platform to give customers quick digital and flexible access to mobility – from classic financing and leasing offerings to car subscriptions (Auto-Abo). This marks an expansion of the existing business model from pure-play automotive financial services provider to mobility provider. Volkswagen Financial Services extends and optimizes the automotive value chain for its customers and the Group brand vehicles, thereby increasing vehicle lifetime values.

This is based on pooling resources on a central, Europe-wide marketing platform for used vehicles for all brands of the Volkswagen Group. The aim is to become one of Europe's largest providers of used vehicles and in this way to leverage synergies and tap into additional sources of revenue.

For example, the Europe-wide e-mobility program, "Electrification-as-a-Service" (EaaS), supports the electrification of fleet customers' vehicle pools. The program benefits customers by offering consistent advice and implementation from a single source. Alongside this program, fleet customers are offered new financing for charging infrastructure, which they can use to install the required wallboxes, charging stations, photovoltaic and buffer storage systems.

In the reporting period, partnered by the City of Braunschweig, Volkswagen Financial Services successfully completed a pilot project, unique to Germany, on the digital registration of vehicles by companies. The project is to be used in Germany as a model for a nationwide system and is aimed at allowing legal persons such as companies to register their fleet vehicles online using a specifically developed identification process.

The main refinancing sources for Volkswagen Financial Services are money market and capital market instruments, asset-backed securities (ABS) transactions, customer deposits from the direct banking business and bank credit lines.

In 2022, Volkswagen Financial Services AG issued two bonds with different terms and a total volume of €2.0 billion. Volkswagen Leasing GmbH did not issue any unsecured bonds. Risk premiums in fiscal year 2022 were heavily influenced by the macroeconomic downturn and the turnaround in central bank policies. Driven by gradual increases, premiums approximately doubled in the first half of the year. In the second half of the year, they remained stable or trended slightly downward.

Other bond transactions were conducted in currencies such as pounds sterling, Swedish kronor, Czech korunas, Hong Kong dollars and Japanese yen. In addition, bonds were issued in Australia, Poland, Brazil, Mexico and Türkiye on the basis of local documentation requirements. In addition to this, private placements were issued in various currencies.

Volkswagen Bank did not enter into any transactions with secured or unsecured bonds in the reporting period.

In fiscal year 2022, Volkswagen Leasing GmbH placed three ABS transactions secured by lease receivables with a total volume of €2.75 billion. The issuances met the quality criteria of the STS Securitization Regulation for particularly high-value securitizations and were oversubscribed several times.

Outside Germany, Volkswagen Financial Services issued a total of four ABS transactions in the United States, Canada, China and Japan.

E-Mobility Program

In fiscal year 2022, the number of new financing, leasing, service and insurance contracts from Volkswagen Financial Services signed amounted to 7.8 (7.8) million and was therefore similar to the prior-year figure. At the end of the reporting period, the total number of contracts stood at 22.0 (22.0) million. The number of contracts in the Customer Financing/Leasing area fell by 5.3% to 10.3 million. The Service/Insurance area accounted for 11.6 million contracts, 4.7% more than in the previous year. With credit eligibility criteria remaining unchanged, the penetration rate, expressed as the ratio of financed or leased vehicles to relevant Group delivery volumes – including the Chinese joint ventures – declined to 32.3 (35.8)%.

On December 31, 2022, Volkswagen Bank GmbH managed 1.3 (1.4) million deposit accounts. Volkswagen Financial Services employed 14,796 people worldwide, including 7,488 in Germany, as of year-end 2022.

SALES REVENUE AND EARNINGS

Volkswagen Financial Services generated sales revenue of €44.2 billion in the reporting period, 6.0% more than in the previous year. The operating result stood at €5.6 (5.7) billion. Strong demand for used vehicles had a positive effect, as did derivatives. However, expenses relating to loss allowances and risk provisions as a consequence of the direct impact of the Russia-Ukraine conflict weighed on the operating result.

VOLKSWAGEN FINANCIAL SERVICES

		2022	2021	%
Number of contracts	thousands	21,976	22,033	–0.3
Customer financing		5,557	6,151	–9.7
Leasing		4,783	4,770	+0.3
Service/Insurance		11,636	11,111	+4.7
Lease assets	€ million	57,906	57,276	+1.1
Receivables from	€ million			
Customer financing		70,266	71,305	–1.5
Dealer financing		19,868	14,135	+40.6
Leasing agreements		47,446	46,409	+2.2
Direct banking deposits	€ million	25,431	25,400	+0.1
Total assets	€ million	240,042	235,620	+1.9
Equity	€ million	38,257	33,381	+14.6
Liabilities[1]	€ million	190,477	192,407	–1.0
Equity ratio	%	15.9	14.2	+12.5
Return on equity before tax[2]	%	15.4	17.9	–14.0
Leverage[3]		5.0	5.8	–13.6
Operating result	€ million	5,602	5,672	–1.2
Earnings before tax	€ million	5,513	5,628	–2.0
Employees at Dec. 31		14,796	14,681	+0.8

1 Excluding provisions and deferred tax liabilities.
2 Earnings before tax as a percentage of average equity (continuing operations).
3 Liabilities as a percentage of equity.

ADDITIONAL INFORMATION
www.vwfs.com

3

CORPORATE GOVERNANCE

Group Corporate Governance Declaration

The following chapter contains the content of the Group Corporate Governance Declaration required by sections 289f and 315d of the HGB and the recommendations and principles of the German Corporate Governance Code.

THE GERMAN CORPORATE GOVERNANCE CODE – A BLUEPRINT FOR SUCCESSFUL CORPORATE GOVERNANCE

Corporate governance provides the regulatory framework for corporate management and supervision. This includes a company's organization and values, and the principles and guidelines for its business policy. The German Corporate Governance Code (the Code) contains principles, recommendations and suggestions for corporate management and supervision. Its principles, recommendations and suggestions were prepared by a dedicated government commission on the basis of the material provisions and nationally and internationally accepted standards of sound, responsible corporate governance. In the interests of best practice, the government commission regularly reviews the Code's relevance in light of current developments and updates it as necessary. The Board of Management and the Supervisory Board of Volkswagen AG base their work on the principles, recommendations and suggestions of the Code. We consider good corporate governance to be a key prerequisite for achieving a lasting increase in the Company's value. It helps strengthen the trust of our shareholders, customers, employees, business partners and investors in our work and enables us to meet the steadily increasing demand for information from national and international interest groups.

DECLARATION OF CONFORMITY

(valid as of the date of the declaration)

The Board of Management and the Supervisory Board of Volkswagen AG issued the annual declaration of conformity with the Code as required by section 161 of the *Aktiengesetz* (AktG – German Stock Corporation Act) on November 11, 2022 with the following wording:

"The Board of Management and the Supervisory Board declare the following:
The recommendations of the Government Commission of the German Corporate Governance Code in the version dated 16 December 2019 (the 2020 Code) that was published by the German Ministry of Justice in the official section of the Federal Gazette (Bundesanzeiger) on 20 March 2020 was complied with in the period from the last Declaration of Conformity dated 9 December 2021 until the entry into force of the revised Code in the version dated 28 April 2022 on 27 June 2022, with the exception of the sections and the stated reasons listed below.

- a) Recommendation B.3 (Duration of first-time appointments to the Management Board)
  As it has done in the past, the Supervisory Board will determine the duration of first-time appointments to the Board of Management as it deems fit for each individual case and for the good of the company.
- b) Recommendation C.5 (Mandate ceiling regarding Board of Management mandate)
  The Chair of the Supervisory Board is also Chair of the Supervisory Boards of two listed companies of the VOLKSWAGEN Group, namely VOLKSWAGEN AG and TRATON SE, as well as being on the Supervisory Board of Bertelsmann SE & Co. KGaA. He is also Chair of the Board of Management of Porsche Automobil Holding SE. Porsche Automobil Holding SE is not part of the same group as VOLKSWAGEN AG and TRATON SE within the meaning of German stock corporation law. We are, however, confident that the Chair of the Supervisory Board of VOLKSWAGEN AG has sufficient time at his disposal to fulfil the duties related to his mandates.
- c) Recommendation C.10 sentence 2 (Independence of the Chair of the Audit Committee)
  It is unclear from the wording of this recommendation whether the former Chair of the Audit Committee is independent from the controlling shareholder within the meaning of this recommendation. Such independence could be considered lacking in view of the fact that the former Chair of the Audit Committee, in addition to other members of the Porsche and Piëch families, who are also related to each other, have an indirect interest in Porsche Automobil Holding SE. However, it is our opinion that these relationships did not constitute a conflict of interest nor did they interfere with his duties as the Chair of the Audit Committee. This deviation was therefore declared purely as a precautionary measure.
- d) Recommendation C.13 (Disclosure regarding election proposals)
  The guidelines in the Code are vague and the definitions unclear with regard to this recommendation, according to which certain circumstances shall be disclosed when the Supervisory Board makes election proposals to the General Meeting. Purely as a precautionary measure, we therefore declare a deviation from the Code in this respect. Notwithstanding this, the Supervisory Board will make every effort to satisfy the requirements of the recommendation.
- e) Recommendation D.4 (Independence of the Chair of the Audit Committee)
  We refer to the statements made above pertaining to Recommendation C.10 sentence 2 as rationale. If the former Chair of the Audit Committee was not independent from the controlling shareholder, according to the definition of Recommendation C.6, sentence 2, he was also not independent within the meaning of Recommendation D.4 of the 2020 Code.

The recommendations of the Government Commission of the German Corporate Governance Code in the version dated 28 April 2022 (the 2022 Code), which was published by the German Ministry of Justice in the official section of the Federal Gazette (Bundesanzeiger) on 27 June 2022, had been complied with in the period since the entry into force of this version of the Code and will continue to be complied with, with the exception of the recommendations listed below along with their stated reasons and periods of validity.

- a) Recommendation B.3 (Duration of first-time appointments to the Management Board)
  The reasons for this deviation are listed above in the details under point 1 a).
- b) Recommendation C.1 sentence 3 (Sustainability in the profile of skills and expertise)
  This recommendation is a new addition to the 2022 Code. In accordance with that day's resolution, the Supervisory Board supplemented the profile of skills and expertise in line with Recommendation C.1 of the 2022 Code to include expertise relating to sustainability issues relevant to the company, which meant that this recommendation was now being fulfilled.
- c) Recommendation C.5 (Mandate ceiling regarding Board of Management mandate)
  The reasons for this deviation are listed above in the details under point 1 b). Furthermore, the Chair of the Supervisory Board is also a member of the Supervisory Board of Dr. Ing. h.c. F. Porsche AG, which has also been a listed company since 29 September 2022. Porsche Automobil Holding SE together with Dr. Ing. h.c. F. Porsche AG does not constitute a Group within the meaning of German stock corporation law.
- d) Recommendation C.10 sentence 2 (Independence of the Chair of the Audit Committee)
  The former Chair of the Audit Committee, Dr Ferdinand Oliver Porsche, resigned from his post with effect from the close of 30 July 2022. The Supervisory Board elected Mr. Mansoor Bin Ebrahim Al-Mahmoud to

succeed Dr. Ferdinand Oliver Porsche as Chair of the Audit Committee. The shareholder representatives deem Mr. Al-Mahmoud to be independent within the meaning of the Code both from the company and the Board of Management, as well as from the controlling shareholder. As such, the deviation from this recommendation that had been disclosed as a precautionary measure ceased to apply as of the close of 30 July 2022.

> e) Recommendation C.13 (Disclosure regarding election proposals)
The reasons for this deviation are listed above in the details under point 1 d).

> f) Recommendation G.6 (Predominance of long-term variable remuneration)
On 20 July 2022, Dr. Ing. h.c. F. Porsche AG (Porsche AG) agreed upon a so-called IPO bonus with Dr Oliver Blume in the event of the successful IPO of Porsche AG. Since an IPO of this nature is also in the interest of VOLKSWAGEN AG, we are, as a precaution, treating the IPO bonus agreed upon with Porsche AG as part of Mr. Blume's remuneration at VOLKSWAGEN AG (third-party remuneration arrangement). The Supervisory Board of VOLKSWAGEN AG approved the third-party remuneration arrangement for Dr Blume. The IPO bonus was awarded in the form of virtual shares. These virtual shares are converted into monetary sums in three tranches over periods of one, two, and three years depending on the development of the share price of Porsche AG shares during the relevant time period, and these monetary sums are then paid out to Dr Blume. As a precaution, the Supervisory Board assumes that the first one and two-year tranches of the IPO bonus will be allocated to the short-term variable remuneration of Dr Blume, whilst the last tranche of the IPO bonus will be allocated to the long-term variable remuneration. This means that the total target value of the short-term variable remuneration approved for Dr Blume for the 2022 fiscal year exceeds the target value of the long-term variable remuneration. As a precautionary measure, we therefore declare a deviation from Recommendation G.6 in this respect. Nevertheless, the Board of Management remuneration for Dr Blume on the whole continues to be oriented towards the company's sustainable and long-term development. The Supervisory Board deems the payment of the IPO bonus in three tranches over one, two, and three years to be a purposeful and appropriate incentive for Dr Blume, which is not limited solely to work carried out in preparation for the IPO but which also takes into account how sustained the success of the IPO is.

> g) Recommendation G.7 sentence 1 (Specification of performance criteria)
The performance criteria for the IPO bonus previously described under f) were specified before the point in time at which Dr Blume was assigned particular tasks both in preparation for and following the IPO in connection with the IPO bonus. Nevertheless, as a precautionary measure, we declare a deviation from Recommendation G.7 sentence 1, as it was not possible to specify the performance criteria before the start of the current fiscal year. This deviation is limited to the remuneration for the 2022 fiscal year. This recommendation will therefore be fulfilled once again in the following years.

> h) G.10 sentence 2 (Four-year commitment period)
Dr Blume can have access to the third tranche of the IPO bonus previously described under f) as part of the long-term variable remuneration after three years, and not only after four years. The Supervisory Board deems the payment of the IPO bonus in three tranches over one, two, and three years as described above under f) to be a purposeful and appropriate incentive for Dr Blume.

> i) Recommendation G.13 sentence 1 (Severance cap)
At the end of July 2022, the Supervisory Board of VOLKSWAGEN AG resolved by mutual agreement with Dr Diess to terminate his employment as member and as Chair of the Board of Management with effect from the close of 31 August 2022. According to the agreement reached with Dr Diess, his contract shall continue to run until the end of its regular term, i.e. until the close of 24 October 2025, even following the premature termination of his appointment, provided that Dr Diess does not resign at an earlier date. Dr Diess shall accordingly not receive a severance payment but shall potentially receive his contractual remuneration for a period of more than two years following his departure from the Board of Management. It is not clear to us whether this recommendation refers only to severance payments or also to payments to a retired member of the Board of Management due to a continuing contract of service. As a

precautionary measure, we therefore declare a deviation from Recommendation G.13 sentence 1 in this respect."

The current declaration of conformity and previous declarations of conformity are also published on our website shown hereafter.

Our listed indirect subsidiaries Dr. Ing. h.c. F. Porsche AG and TRATON SE also issued a declaration of conformity with the German Corporate Governance Code. These can be accessed at the websites shown below.

The suggestions of the Code are complied with.

DECLARATION OF CONFORMITY OF VOLKSWAGEN AG
https://www.volkswagenag.com/en/InvestorRelations/corporate-governance/declaration-of-conformity.html

DECLARATION OF CONFORMITY BY DR. ING. H.C. F. PORSCHE AG
https://investorrelations.porsche.com/en/corporate-governance/

DECLARATION OF CONFORMITY OF TRATON SE
https://ir.traton.com/websites/traton/English/5000/corporate-governance.html

BOARD OF MANAGEMENT

The Volkswagen AG Board of Management has sole responsibility for managing the Company in the Company's best interests, in accordance with the Articles of Association and the rules of procedure for the Board of Management issued by the Supervisory Board.

Accordingly, responsibilities were divided among eleven board-level management functions starting from January 1, 2022. In addition to the Chair of the Board of Management, a function which also included the Volume brand group, the other Board functions were Purchasing, Technology, Finance, Human Resources and Truck & Bus, Integrity and Legal Affairs, Premium, Sport & Luxury, IT, China and Volkswagen Passenger Cars. A new Group Sales function was created with effect from February 1, 2022.

As of September 1, 2022, the Volkswagen Group refined its Group management. The Board of Management was streamlined and the division of responsibilities was reorganized. As a result, the Purchasing and Group Sales Board functions were dissolved. Furthermore, the Volkswagen Passenger Cars function was renamed Volume. Since then, responsibilities have been divided among ten board-level management functions. In addition to the Chair of the Board of Management, the other Board functions are Technology, Finance, Human Resources and Truck & Bus, Integrity and Legal Affairs, Volume, Premium, Sport & Luxury, IT and China. The Chair of the Board of Management is also responsible for Sport & Luxury.

Directly attached to the Board are a number of Group Management functions that act as an extension to the board-level management functions. These comprise Group Sales, Group Production, Procurement and Technical Architecture functions.

Further information on the composition of the Board of Management can be found in the "Members of the Board of Management" section.

Working procedures of the Board of Management

In accordance with Article 6 of the Articles of Association, Volkswagen AG's Board of Management consists of at least three people, with the precise number determined by the Supervisory Board. As of December 31, 2022, there were nine members of the Board of Management.

The Board of Management generally meets weekly. Its rules of procedure require it to meet at least twice a month. Meetings of the Board of Management are convened by the Chair of the Board of Management. The Chair is required to convene a meeting if requested by any member of the Board of Management. The Chair of the Board of Management chairs the Board of Management meetings. The full Board of Management decides on all matters unless they have been assigned to a single member of the Board of Management by the rules of procedure for the Board of Management or by a resolution of the Board of Management, on matters assigned to the full Board of Management by law or by the Articles of Association, and on matters of general or fundamental importance. The Board of Management takes decisions after prior debate or – if no other Board of Management member objects – using the written circulation procedure. Resolutions of the Board of Management are adopted by a majority vote. In the event of a tie, the Chair of the Board of Management casts the deciding vote. The Board of Management is quorate if at least half of the members of the Board of Management participate in passing the resolution. Absent members of the Board of Management may participate in passing the resolution orally, in writing or via customary communications media (e.g. by e-mail). Details of the responsibilities of the full Board of Management and of meetings and resolutions of the Board of Management are governed by the rules of procedure for the Board of Management issued by the Supervisory Board and published on Volkswagen AG's website at https://www.volkswagenag.com/en/InvestorRelations/corporate-governance.html.

Each Board of Management member manages their area of responsibility independently, without prejudice to the collective responsibility of the Board of Management. All Board of Management members must inform each other of events within their remit.

All members of the Board of Management must immediately disclose conflicts of interest to the Chairman of the Supervisory Board and the Chair of the Board of Management and inform the other members of the Board of Management accordingly.

The Volkswagen Group companies are managed solely by their respective managements. The management of each individual company takes into account not only the interest of its own company but also the interests of the Group, the relevant brand group and the individual brands in accordance with the framework laid down by law.

Board of Management committees

Board of Management committees exist at Group level on the following areas: products, technologies, investments, digital transformation, integrity and compliance, risk management, human resources and management issues. Alongside the responsible members of the Board of Management, the relevant central departments and the relevant functions of the divisions are represented on the committees.

Cooperation with the Supervisory Board

The Supervisory Board advises and monitors the Board of Management with regard to the management of the Company. Through the requirement for the Supervisory Board to provide consent, it is directly involved, especially in decisions of fundamental importance to the Company. In addition, the Supervisory Board of Volkswagen AG and the Board of Management regularly discuss factors affecting the strategic orientation of the Volkswagen Group, including the sustainability strategy. The two bodies jointly assess, at regular intervals, the progress made in implementing the corporate strategy. The Board of Management reports to the Supervisory Board regularly, promptly and comprehensively in both written and oral form on all issues of relevance for the Company particularly with regard to strategy, planning, the development of the business, the risk situation, risk management and compliance.

The Chair of the Board of Management is responsible for dealings with the Supervisory Board. The Chair is in regular contact with the Chair of the Supervisory Board and reports to him on all matters of particular significance without delay.

The Supervisory Board has set out the Board of Management's obligations to provide detailed information and reports in a comprehensive information policy; the information policy has been published as Annex II to the rules of procedure for the Board of Management on Volkswagen AG's website at https://www.volkswagenag.com/en/InvestorRelations/corporate-governance.html. The Board of Management must report conscientiously and faithfully to the Supervisory Board or its committees. With the exception of the immediate reports from the Chair of the Board of Management to the Chair of the Supervisory Board on matters of particular importance, the Board of Management is required to report to the Supervisory Board in writing as a rule. Further information about the information provided to the Supervisory Board by the Board of Management can be found in the Report of the Supervisory Board.

For certain measures, especially transactions of fundamental importance, the Supervisory Board must provide its consent. The documents required for decision-making purposes must be provided to the Supervisory Board members in good time in advance of the meeting.

Diversity concept and succession planning for the Board of Management

The Supervisory Board has laid down the following diversity concept for the composition of the Board of Management (section 289f(2) no. 6 HGB):

The Supervisory Board must also take diversity into account when considering who would be the best persons to appoint to the Board of Management as a body. The Supervisory Board understands diversity, as an assessment criterion, to mean in particular different yet complementary specialist profiles and professional and general experience, also in the international domain, with both genders being appropriately represented. The Supervisory Board will also take the following aspects into account in this regard, in particular:

> Members of the Board of Management should have many years of management experience.
> Members of the Board of Management should, if possible, have experience based on different training and professional backgrounds.
> The Board of Management as a whole should have technical expertise, especially knowledge of and experience in the manufacture and sale of vehicles and engines of any kind as well as other technical products, and experience in the international domain.
> The Board of Management as a whole should have many years of experience in research and development, production, sales, finance and human resources management, as well as law and compliance.
> Efforts are made to achieve a higher proportion of women than the statutory minimum.
> The Board of Management should also have a sufficient mix of ages.

The aim of the diversity concept is for the Board of Management members to embody a range of expertise and perspectives. This diversity promotes a good understanding of Volkswagen AG's organizational and business affairs. Particularly, it enables the members of the Board of Management to be open to new ideas by avoiding groupthink. In this way, it contributes to the successful management of the Company. With regard to the participation of women and men on the Board of Management, a mandatory participation requirement now applies to Volkswagen AG.

In deciding who should be appointed to a specific Board of Management position, the Supervisory Board takes into account the interests of the Company and all the circumstances of the specific case. In taking this decision and in long-term succession planning, the Supervisory Board orients itself on the diversity concept. The Supervisory Board is of the view that the diversity concept is essentially reflected by the current composition of the Board of Management. The members of the Board of Management have many years of professional experience, particularly in an international context, and cover a broad spectrum of educational and professional backgrounds. The Board of Management collectively has excellent technical expertise and many years of collective experience in research and development, production, sales, finance and human resources management, as well as law and compliance. In addition, the Board of Management has a sufficient mix of ages that corresponds to the requirements set by the Supervisory Board. The gender balance meets the legal requirements (see "Disclosures required by the *Führungspositionen-Gesetz*" (Act on Equal Participation of Women and Men in Leadership positions)).

Long-term succession planning within the meaning of Recommendation B.2 of the Code is achieved through regular discussions between the Chair of the Board of Management and the Chair of the Supervisory Board as well as regular discussions in the Executive Committee. The contract terms for existing Board of Management members are discussed, along with potential extensions and potential successors. In particular, the discussions look at what knowledge, experience and professional and personal competencies should be represented on the Board of Management with regard to the corporate strategy and current challenges, and to what extent the current composition of the Board of Management already reflects this. Long-term succession planning is based on the corporate strategy and corporate culture and takes into account the diversity concept determined by the Supervisory Board. In 2022, the Supervisory

Board and Board of Management also worked intensively on long-term succession planning in connection with the restructuring of Group management.

As a rule, members of the Board of Management should be appointed for a term of office ending no later than their 65th birthday. Board of Management members may be appointed to serve beyond their 65th birthday until no later than their 68th birthday, provided this is agreed by a two-thirds majority of the Supervisory Board.

SUPERVISORY BOARD

The Volkswagen AG Supervisory Board performs its role through its members working together. It advises and monitors the Board of Management with regard to the management of the Company and, through the requirement for the Supervisory Board to provide consent, is directly involved in decisions of fundamental importance to the Company.

Information on the composition of the Supervisory Board and the Supervisory Board committees and their chairs as well as on the terms of office of the individual Supervisory Board members can be found in the “Members of the Supervisory Board and Composition of the Committees” section. Further information on the work of the Supervisory Board and the Chair of the Supervisory Board’s discussions with investors can be found in the “Report of the Supervisory Board”.

Overview

The Supervisory Board of Volkswagen AG consists of 20 members, half of whom are shareholder representatives. In accordance with Article 11(1) of the Articles of Association of Volkswagen AG, the State of Lower Saxony is entitled to appoint two of these shareholder representatives for as long as it directly or indirectly holds at least 15% of the Company’s ordinary shares. The remaining shareholder representatives on the Supervisory Board are elected by the Annual General Meeting.

The other half of the Supervisory Board consists of employee representatives elected by the employees in accordance with the *Mitbestimmungsgesetz* (MitbestG – German Codetermination Act). A total of seven of these employee representatives are Company employees elected by the workforce; the other three employee representatives are trade union representatives elected by the workforce.

The Chair of the Supervisory Board is generally a shareholder representative, and the Deputy Chair is generally an employee representative. Both are elected by the other members of the Supervisory Board.

The business of the Supervisory Board is managed by a dedicated office of the Supervisory Board Chair. The Chair of the Supervisory Board ensures the independence of the office of the Supervisory Board Chair and its staff and exercises the right to appoint and supervise staff in consultation with the responsible Board of Management members.

The Supervisory Board appoints the Board of Management members and, on the basis of the Executive Committee’s recommendations, decides on a clear and comprehensible system of remuneration for the Board of Management members. It presents this system to the Annual General Meeting for approval every time there is a material change, but at least once every four years.

Each member of the Supervisory Board of Volkswagen AG is obliged to act in the Company’s best interests. Supervisory Board members are not permitted to delegate their responsibilities to others.

Every Supervisory Board member is obliged to disclose any conflicts of interest to the Chair of the Supervisory Board without delay. In its report to the Annual General Meeting, the Supervisory Board informs the Annual General Meeting of any conflicts of interest that have arisen and how these were dealt with. Material and not merely temporary conflicts of interest on the part of a Supervisory Board member should result in a termination of the member’s mandate.

Supervisory Board members should not hold board or advisory positions at major competitors of Volkswagen AG or major competitors of a company dependent on Volkswagen AG and should not be in a personal relationship involving a major competitor.

Members of the Supervisory Board receive appropriate support from the Company upon induction as well as with respect to education and training. Education and training measures are outlined in the "Report of the Supervisory Board".

Working procedures of the Supervisory Board

As a rule, the Supervisory Board adopts its resolutions in meetings of all its members. It must hold at least two meetings in both the first and second halves of the calendar year. The precise number of meetings and the main topics discussed are outlined in the "Report of the Supervisory Board". Due to the pandemic, meetings were also held virtually.

The Chair of the Supervisory Board coordinates the work within the Supervisory Board. He represents the interests of the Supervisory Board externally and represents the Company to the Board of Management on behalf of the whole Supervisory Board. Within reason, the Chair of the Supervisory Board discusses Supervisory Board-specific topics with investors and, in consultation with the Board of Management, may also discuss non-Supervisory Board-specific topics. More details can be found in the "Report of the Supervisory Board".

To underline the importance of environmental sustainability, social responsibility and good corporate governance, the Supervisory Board has appointed an ESG (environmental, social and governance) officer. This role is currently performed by Mr. Hans Dieter Pötsch.

The Supervisory Board meets regularly also without the Board of Management. Each Supervisory Board meeting generally ends in a debate. Board of Management members are not present during this part of the meeting. The Chair of the Supervisory Board convenes and chairs the Supervisory Board meetings. If the Chair is unable to do so, the Deputy Chair performs these tasks. If the auditor is called to a meeting of the Supervisory Board or one of its committees as an expert, members of the Board of Management do not attend such a meeting if the Supervisory Board or the committee does not deem their attendance necessary.

The Supervisory Board is only quorate if at least ten members participate in passing the resolution. The Chair of the Supervisory Board or of the relevant committee decides the form of the meeting and the voting procedure for the Supervisory Board and its committees. Should the Chair so decide in individual cases, meetings may also be held using telecommunications technology, or members may participate in meetings using this technology. The Chair may also decide that members can participate in the Supervisory Board's or its committees' decision making in writing, by telephone or in another, similar form. Supervisory Board resolutions require a majority of votes cast, unless legislative provisions or the Articles of Association stipulate otherwise. Resolutions on consent to establishing or relocating production sites require a two-thirds majority of the Supervisory Board members. If a vote results in a tie on this item, the vote is repeated. If this vote is also tied, the Chair of the Supervisory Board casts two votes. Minutes must be taken of each meeting of the Supervisory Board and its committees. Minutes of a meeting must record the time and location of the meeting, the participants, the items on the agenda, the material content of the discussions and the resolutions adopted.

In individual cases, the Supervisory Board and its committees may decide to call upon experts and other appropriate individuals to advise on individual matters.

Further details on tasks, meetings, resolutions and working procedures of the Supervisory Board are governed by the rules of procedure for the Supervisory Board issued by the Supervisory Board and published on Volkswagen AG's website at https://www.volkswagenag.com/en/InvestorRelations/corporate-governance.html.

Supervisory Board committees

In order to discharge the duties entrusted to it, the Supervisory Board has established four committees: the Executive Committee, the Nomination Committee, the Mediation Committee established in accordance with section 27(3) of the MitbestG and the Audit Committee. The Executive Committee is currently comprised of four shareholder representatives and four employee representatives. The shareholder representatives on the Executive Committee make up the Nomination Committee. The Mediation Committee is comprised of two shareholder representatives and two employee representatives, as was the Audit Committee until July 31, 2022. Since then, the Audit Committee has been comprised of three shareholder representatives and three employee representatives.

Which tasks the Supervisory Board has generally transferred to the respective committees is described below. This does not rule out that the Supervisory Board will not transfer other tasks to committees in individual cases, where legally admissible.

At its meetings, the Executive Committee meticulously prepares the resolutions of the Supervisory Board, discusses the composition of the Board of Management and takes decisions on matters such as contractual issues concerning the Board of Management other than remuneration and consent to ancillary activities by members of the Board of Management. The Executive Committee supports and advises the Chair of the Supervisory Board. It works with the Chair of the Board of Management to ensure long-term succession planning for the Board of Management.

The Nomination Committee proposes suitable candidates for the Supervisory Board to recommend to the Annual General Meeting for election. Before presenting such proposals, it ensures that the candidates can commit the expected time to their role and identifies the personal and business relationships of the candidates to Volkswagen AG and its Group companies, to Volkswagen AG’s corporate bodies and to shareholders who directly or indirectly hold more than 10% of the voting shares in Volkswagen AG. In its proposals to the Supervisory Board, the Nomination Committee also takes into account the requirement for the Supervisory Board to adhere, in its proposals to the Annual General Meeting, to the specific targets it has set for the composition of the Supervisory Board and to the profile of skills and expertise it has decided on for the Board as a whole; in so doing, the Nomination Committee also particularly makes sure that there are no gaps in the Board's skills and expertise as a whole (Skill Gaps Assessment). The Nomination Committee furthermore takes into account the diversity concept for the composition of the Supervisory Board.

The Mediation Committee has the task of submitting proposals to the Supervisory Board for an appointment or revocation of appointment of Board of Management members if there is no majority for the relevant measure on the Supervisory Board in the first vote. The majority involves at least two-thirds of all Supervisory Board members.

Among other things, the Audit Committee discusses the auditing of financial reporting, including the annual and consolidated financial statements, the group management report and the separate non-financial statement, including the sustainability report. In addition, the Audit Committee concerns itself with supervising the financial reporting process, the audit of the financial statements, in particular the selection and independence of the auditor, the quality of the audit, and any additional services provided by the auditor. Moreover, the Audit Committee concerns itself with compliance, the appropriateness and effectiveness of the risk management system and internal control system, including the compliance management system and the internal audit system; it also concerns itself with internal processes within the meaning of section 111a (2) of the AktG for regularly assessing whether related party transactions were conducted in the ordinary course of business and at arm’s length. In addition, the Audit Committee particularly concerns itself with the Volkswagen Group’s quarterly financial reports and half-yearly financial report.

Further details on tasks, meetings, resolutions and working procedures of the Supervisory Board committees are governed by the rules of procedure issued by the Supervisory Board for the respective Supervisory Board committees and published on Volkswagen AG’s website at https://www.volkswagenag.com/en/InvestorRelations/corporate-governance.html.

Objectives for the composition of the Supervisory Board, profile of skills and expertise and diversity concept

In view of the Company’s specific situation, its purpose, its size and the extent of its international activities, the Supervisory Board of Volkswagen AG strives to achieve a composition that takes the Company's ownership structure and the following aspects into account:

- At least three members of the Supervisory Board should be persons who embody the criterion of internationality to a particularly high degree.
- In addition, at least four of the shareholder representatives should be persons who, in line with the criteria of Recommendations C.7 to C.9 of the Code, are independent within the meaning of Recommendation C.6 of the Code.
- At least three of the seats on the Supervisory Board should be held by people who make a special contribution to the diversity of the Board.
- Proposals for election should not normally include persons who have reached the age of 75 on the date of the election.

The Supervisory Board is of the view that the above criteria have been met. Numerous members of the Supervisory Board embody the criterion of internationality to a particularly high degree; various nationalities are represented on the Supervisory Board and numerous members have international professional experience. Several members of the Supervisory Board contribute to the Board's diversity to a particularly high degree, especially Ms. Hessa Sultan Al Jaber, Ms. Daniela Cavallo, Ms. Julia Willie Hamburg, Ms. Marianne Heiß, Mr. Mansoor Ebrahim Al-Mahmoud and Mr. Matías Carnero Sojo. The Supervisory Board comprises members of various generations. Independent Supervisory Board members within the meaning of Recommendation C.6 of the Code currently comprise at least the following: Ms. Hessa Sultan Al Jaber, Ms. Julia Willie Hamburg, Mr. Mansoor Ebrahim Al-Mahmoud and Mr. Stephan Weil.

With regard to the shareholder representatives' independence from the Company and its Board of Management, the shareholder representatives have come to the following assessment in accordance with C.7, 8 of the Code:

Supervisory Board members Mr. Hans Michel Piëch, Mr. Ferdinand Oliver Porsche and Mr. Wolfgang Porsche have been members of the Supervisory Board for more than 12 years and therefore fulfill one of the indicators set out in C.7 of the Code regarding a lack of independence from the Company and its Board of Management. However, considering all the circumstances of the case in hand, the shareholder representatives are of the opinion that the aforementioned Supervisory Board members are nevertheless independent from the Company and its Board of Management. This opinion is based in particular on the following reasons:

- Mr. Hans Michel Piëch, Mr. Ferdinand Oliver Porsche and Mr. Wolfgang Porsche, together with other family shareholders, are indirectly controlling shareholders of Porsche Automobil Holding SE, which is the largest single shareholder of Volkswagen AG. The management by the Board of Management of Volkswagen AG therefore economically affects the personal assets of Mr. Hans Michel Piëch, Mr. Ferdinand Oliver Porsche and Mr. Wolfgang Porsche.
- The composition of the Board of Management has changed fundamentally several times during the tenure of Mr. Hans Michel Piëch, Mr. Ferdinand Oliver Porsche and Mr. Wolfgang Porsche. The incumbent Board of Management members have been in office for a maximum of just under five years. There are therefore no indications that Mr. Hans Michel Piëch, Mr. Ferdinand Oliver Porsche and Mr. Wolfgang Porsche would stop behaving in an impartial manner towards incumbent members of the Board of Management as a result of a long period of collaboration. There is also no other evidence of "tunnel vision" on the part of Mr. Hans Michel Piëch, Mr. Ferdinand Oliver Porsche and Mr. Wolfgang Porsche.
- Mr. Hans Michel Piëch, Mr. Ferdinand Oliver Porsche and Mr. Wolfgang Porsche are not financially dependent on their remuneration as members of the Supervisory Board.

Aside from their Supervisory Board appointments, Mr. Hans Michel Piëch, Mr. Ferdinand Oliver Porsche and Mr. Wolfgang Porsche have no personal relationship with the Company or the Board of Management that could give rise to a material and not merely temporary conflict of interest. The Supervisory Board work of Mr. Hans Michel Piëch, Mr. Ferdinand Oliver Porsche and Mr. Wolfgang Porsche of previous years has also not given rise to any conflicts of interest.

The Supervisory Board member Mr. Hans Dieter Pötsch moved directly from the Board of Management to the Supervisory Board upon his appointment by the court in autumn 2015. This move was less than two years prior to his election as a Supervisory Board member by the subsequent Annual General Meeting in 2016, meaning that one of the indicators of a lack of independence from the Company and Board of Management, set out in C.7 of the Code, applies to Mr. Pötsch. However, considering all the circumstances of the case in hand, the shareholder representatives are of the opinion that Mr. Pötsch is nevertheless independent from the Company and its Board of Management: it is now more than seven years since Mr. Pötsch's move from the Board of Management to the Supervisory Board. Mr. Pötsch has already been elected as a member of the Supervisory Board for a second time by the Annual General Meeting in July 2021. Since his transfer from the Board of Management to the Supervisory Board in October 2015, the composition of the Board of Management has also fundamentally changed.

In addition, the Supervisory Board adopted the following revised profile of skills and expertise for the full Board on November 11, 2022 – the profile of skills previously in force can be found in the Corporate Governance Declaration for fiscal year 2021: to properly perform its supervisory and advisory duties, the Supervisory Board as a whole must collectively have the required expertise, i.e. knowledge, skills and professional experience. For this, the members of the Supervisory Board must collectively be familiar with the sector in which the Company operates – i.e. the automotive industry – and be able to assess the business conducted by the Company. In addition, the Supervisory Board members as a whole must collectively have expertise relating to sustainability issues relevant to the Company.

The key skills and expertise that the Supervisory Board must have collectively as a whole are, in particular, knowledge, skills and professional experience

- in the manufacture and sale of all types of vehicles and engines or other technical products
(vehicles – manufacture/sale)
- in the automotive industry and its transformation, particularly with regard to the topics of e-mobility and mobility services, the business model and the markets, customer needs and product expertise
(automotive industry)
- in the field of research and development, particularly of technologies with relevance for the Company
(research/development)
- in the fields of digitalization and digital transformation, software, artificial intelligence, automation, information technology and security
(digitalization/IT)
- in management positions and supervisory bodies of companies, including holding companies and start-ups, or large organizations
(management/supervision)
- in the fields of law and compliance
(law/compliance)
- in the field of sustainability, particularly with regard to environmental, social and governance aspects (ESG), e.g. in resources, supply chains, energy supply, corporate social responsibility, sustainable technologies and corresponding business models
(sustainability/ESG)
- in finance, accounting and auditing, above all special knowledge and experience of the application of accounting principles and internal control and risk management systems, sustainability reporting, the audit of financial statements and the audit and assurance of sustainability reporting (financial experts)
(finance/accounting/auditing)
- in human resources (particularly the search for and selection of members of the Board of Management and the succession process) and knowledge of incentive and remuneration systems for the Board of Management
(human resources)
- in codetermination, employee matters and the working environment in the Company
(employee matters).

The Supervisory Board has also specified the following diversity concept for its composition:

> The Supervisory Board must be comprised such that its members collectively have the knowledge, skills, and professional experience needed to properly perform their duties.

> It has therefore set targets for its composition that also take into account the recommendations of the German Corporate Governance Code. The targets set by the Supervisory Board for its composition also describe the concept through which the Supervisory Board as a whole strives to achieve a diverse composition (diversity concept in accordance with section 289f(2) no. 6 of the HGB). Attention should also be generally paid to diversity when seeking qualified individuals to best strengthen the specialist and managerial expertise of the Supervisory Board as a whole in line with these targets. In preparing proposals for appointments to the Supervisory Board, it should be considered in each case how the work of the Supervisory Board will benefit from a diversity of expertise and perspectives among its members, from professional profiles, professional and general experience that complement one another (including in the international domain) and from an appropriate gender balance. A wide range of experience and specialist knowledge should be represented on the Supervisory Board. In addition, the Supervisory Board should collectively have an extensive range of opinions and knowledge in order to develop a good understanding of the status quo and the longer-term opportunities and risks in connection with the Company's business activities.

> In proposing candidates to the Annual General Meeting for the election of shareholder representatives to the Supervisory Board, the Supervisory Board should take its diversity concept into account in such a way that the corresponding election of these candidates by the Annual General Meeting would contribute to the implementation of this concept. However, the Annual General Meeting is not obliged to accept the candidates nominated.

> The aim of the diversity concept is for the Supervisory Board members to embody a range of expertise and perspectives. This diversity promotes a good understanding of Volkswagen AG's organizational and business affairs. It also enables the Supervisory Board members to challenge the Board of Management's decisions constructively and to be open to new ideas by avoiding groupthink. In this way, it contributes to the effective supervision of the management.

> The Supervisory Board and Nomination Committee, in particular, are called upon to implement the profile of skills and expertise and the diversity concept within the context of their candidate proposals to the Annual General Meeting. The Supervisory Board also recommends to employee representatives and unions (which have the right to submit proposals in employee representative elections) and the State of Lower Saxony (which has a right to appoint Supervisory Board members) that the diversity concept, composition targets and profile of skills and expertise should be taken into account. The same applies to individuals entitled to make proposals should a court-appointed replacement be necessary.

The current composition of the Supervisory Board implements both the diversity concept and the profile of skills and expertise. The qualification matrix below shows the extent to which the profile of skills and expertise has been implemented, and indicates which Supervisory Board member has which skills and expertise.

QUALIFICATION MATRIX[1]

	Vehicles – manufacture/ sale	Automotive industry	Research/ development	Digitalization/ IT	Management/ supervision	Law/ compliance	Sustainability/ ESG	Finance/ accounting/ auditing	Human resources	Employee matters
Hessa Sultan Al Jaber	x	x	x	x	x	x		x		
Mansoor Ebrahim Al-Mahmoud		x			x		x	x	x	
Harald Buck	x	x							x	x
Daniela Cavallo		x			x				x	x
Matías Carnero Sojo	x	x			x	x			x	x
Julia Willie Hamburg					x		x			
Marianne Heiß	x	x		x	x	x	x	x	x	
Jörg Hofmann		x			x		x		x	x
Arno Homburg	x	x	x		x	x	x		x	x
Günther Horvath		x			X	X			X	
Simone Mahler		x		x					x	x
Peter Mosch	x				x				x	x
Daniela Nowak	x	x								x
Hans Michel Piëch	x	x			x	x			x	
Ferdinand Oliver Porsche	x	x			x	x		x	x	
Wolfgang Porsche	x	x			x				x	
Hans Dieter Pötsch	x	x			x	x	x	x	x	
Jens Rothe	x	x			x				x	x
Conny Schönhardt	x	x			x	x		x		x
Stephan Weil		x			x	x	x		x	

1 The skills, knowledge and professional experience associated with the respective key words can be found in the profile of skills. A skill can be attributed to a Supervisory Board member even if they have expertise in just one subsection of the skill, i.e. for skill in vehicles, for example, either in the area of manufacture or in sales.

In addition, several Supervisory Board members, including Mr. Mansoor Al-Mahmoud, Ms. Marianne Heiß, Mr. Ferdinand Oliver Porsche and Mr. Hans Dieter Pötsch, have expertise in both financial reporting, including sustainability reporting, and auditing, including the audit and assurance of sustainability reporting.

As the long-standing CEO of the Qatar Investment Authority and its former Head of Risk Management, and from his management roles at a bank and stock exchange, Mr. Al-Mahmoud has gained particular knowledge and experience in the application of accounting principles and internal control and risk management systems as well as in the field of auditing. This knowledge and experience also relate to sustainability reporting and the auditing and assurance thereof: at the Qatar Investment Authority, Mr. Al-Mahmoud has reoriented the investment strategy toward investments with ESG goals and implemented a sustainability agenda, which was also included in the Qatar Investment Authority's sustainability reporting. Mr. Al-Mahmoud therefore also studies companies' sustainability reports in detail with a view to whether they fit the Qatar Investment Authority's sustainability strategy.

Ms. Heiß worked as a CFO for a long time and, prior to that, worked for audit and tax consulting firms for several years; Mr. Ferdinand Oliver Porsche is a long-standing member of audit committees and worked for an audit firm for several years; Mr. Pötsch is a long-standing member and chair of audit committees and worked for many years as CFO of Volkswagen AG and previously as Head of Controlling at BMW AG. As part of their long-standing work in audit committees, Ms. Heiß, Mr. Ferdinand Oliver Porsche and Mr. Pötsch have also been involved in the auditing and assurance of nonfinancial statements, which relate to sustainability in the form of important environmental and social issues. Ms. Heiß and Mr. Pötsch are also involved in sustainability reporting and the auditing and assurance thereof as part of their activities at BBDO Group Germany GmbH and Porsche Automobil Holding SE, respectively. Ms. Heiß is also a member of the ESG-Board of Omnicom Group Inc. and an ESG expert in the Supervisory Board of Porsche Automobil Holding SE. Ms. Heiß, Mr. Al-Mahmoud, Mr. Pötsch and Dr. Ferdinand Oliver Porsche track and monitor the latest developments in the area of sustainability reporting and the auditing thereof and contribute their expertise to Volkswagen AG's Audit Committee.

Further details on the expertise of the Supervisory Board members can be found in their curricula vitae. The curricula vitae of the members of the Supervisory Board, which are updated annually, are available online at www.volkswagenag.com/en/group/executive-bodies.html.

The Nomination Committee and Supervisory Board took into account the diversity concept, specific composition targets and profile of skills and expertise (in their latest valid versions) when supporting the proposal by Qatar Holding Germany GmbH to the Annual General Meeting in fiscal year 2022 for the election of a Supervisory Board member. The composition targets, diversity concept and profile of skills and expertise were also taken into account in the elections for the employee representatives by the employees and in the court appointment of another new Supervisory Board member as an employee representative in fiscal year 2022.

Self-evaluation of the Supervisory Board

On a regular basis every two years, the Supervisory Board internally evaluates how effectively the Board and its committees are performing their tasks. This initially involves distributing a questionnaire to all Supervisory Board members, in which they are able to give their view of the effectiveness of the work of the Supervisory Board and its committees and suggest possible improvements. Following analysis of the questionnaires, the findings and potential improvements are usually discussed at the next regular meeting of the full Board. The most recent internal self-evaluation took place from late 2021 to early 2022.

DISCLOSURES REQUIRED BY THE FÜHRUNGSPOSITIONEN-GESETZ

The statutory quota of at least 30% women and at least 30% men has applied to new appointments to the Supervisory Board of Volkswagen AG since January 1, 2016 as required by the *Gesetz für die gleichberechtigte Teilhabe von Frauen und Männern an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst* (*Führungspositionen-Gesetz*, FüPoG – German Act on the Equal Participation of Women and Men in Leadership Positions in the Private and Public Sectors). Shareholder and employee representatives have resolved that each side will meet this quota separately. The shareholder representatives have met the quota of at least 30% women and at least 30% men since the 56th Annual General Meeting on June 22, 2016. The employee representatives have met the quota since the end of the 57th Annual General Meeting on May 10, 2017. Both the shareholder and the employee representatives fulfilled the quota on December 31, 2022.

In line with the *Gesetz zur Ergänzung und Änderung der Regelungen für die gleichberechtigte Teilhabe von Frauen an Führungspositionen in der Privatwirtschaft und im öffentlichen Dienst* (*Führungspositionen-Gesetz II*, FüPoG II – Second Act on Equal Participation of Women and Men in Leadership Positions in the Private and Public Sector), Volkswagen AG is subject to a mandatory participation requirement under which the Board of Management must have at least one woman and at least one man. The participation requirement has applied to the appointment of one or more members of the Board of Management since August 1, 2022. Volkswagen AG complies with this participation requirement.

For the proportion of women in management in accordance with the *Führungspositionen-Gesetz*, Volkswagen AG has set itself the target of 16.5% women in the first level of management and 23.4% women in the second level of management, each as a proportion of the active workforce, to be achieved by the end of 2025. As of December 31, 2022, the proportion of women in the active workforce at the first level of management was 14.2 (13.5)% and at the second level of management it was 19.7 (18.3)%.

REMUNERATION REPORT

The remuneration systems for the members of the Board of Management and Supervisory Board and the Remuneration Report for fiscal year 2022 are available on the website www.volkswagenag.com/en/InvestorRelations/corporate-governance/Remuneration.html. Previous years' remuneration reports can also be found at this address. The remuneration reports contain both extensive explanations and descriptions of the remuneration systems for the members of the Board of Management and Supervisory Board as well as information on and explanations of the individual remuneration of members of the Board of Management and Supervisory Board.

CORPORATE PRACTICES APPLIED IN ADDITION TO STATUTORY REQUIREMENTS

Code of Conduct and Volkswagen Group Essentials

The Volkswagen Group's Code of Conduct is the key instrument for reinforcing employees' awareness of responsible action and decision making. The Group's underlying values and the foundation for its shared corporate culture are defined by the seven Volkswagen Group Essentials: responsibility, honesty, bravery, diversity, pride, solidarity and reliability.

Compliance and risk management

For the Volkswagen Group's lasting success, we use forward-looking risk management and a uniform Group-wide framework based on the compliance management system. This includes:

> Compliance. Adherence to statutory provisions, internal company policies, ethical principles and our own values in order to protect the Company and its brands.
> Whistleblower system. The Volkswagen whistleblower system is the central point of contact for reporting potential cases of serious rule-breaking in the Volkswagen Group. It focuses on investigating serious infringements that could cause major damage to the Company's reputation or financial interests or that involve major breaches of the Volkswagen Group's ethical principles.

- Business and human rights. Volkswagen fully recognizes its corporate responsibility for human rights. We essentially orient ourselves on the UN (United Nations) Guiding Principles on Business and Human Rights that are available on the website of the UN (United Nations Global Compact), the content of which particularly relates to the Universal Declaration of Human Rights and the core conventions of the ILO (International Labor Organization) that can be accessed on the website of the ILO.
- Anti-Corruption. The Volkswagen Group has a zero-tolerance policy on active or passive corruption. This is anchored in both the Group's internal Code of Conduct and its Code of Conduct for Business Partners.
- Risk management and internal control system. A comprehensive risk management and internal control system (RMS/ICS) helps the Volkswagen Group deal with risks in a responsible manner. The organizational design of the Volkswagen Group's RMS/ICS is based on the internationally recognized COSO framework for enterprise risk management (COSO: Committee of Sponsoring Organizations of the Treadway Commission) and can be accessed on the COSO website. Uniform Group principles are used as the basis for managing risks in a transparent and appropriate manner.

Voluntary commitments and principles

The Volkswagen Group has committed itself to sustainable, transparent and responsible corporate governance.

We coordinate our sustainability activities across the entire Group and have put in place a forward-looking system of risk management and a clear framework for dealing with environmental issues in a future-oriented manner, for employee responsibility and for social commitment across our brands and in the regions in which we operate.

Voluntary commitments and principles that apply across the Group are the basis and backbone of our sustainability management. These documents are publicly accessible on the Volkswagen Group's website in the section entitled "Sustainability."

Code of Collaboration and Together4Integrity

The Code of Collaboration, along with our integrity and compliance program Together4Integrity (T4I), is a central pillar of the NEW AUTO Group strategy. This Code describes how collaboration is to take place within the Group and between individuals in their day-to-day work. Its core values are encapsulated in the terms "genuine", "straightforward", "open-minded", "as equals" and "united". T4I brings together all activities relating to integrity, culture, compliance, risk management and human resources, creating a common path toward a new corporate culture.

MEMBERS OF THE BOARD OF MANAGEMENT

(Appointments: as of December 31, 2022 or the leaving date from the Board of Management of Volkswagen AG)

DR. OLIVER BLUME (*1968)

Chair (since September 1, 2022),
Sport & Luxury brand group,
Chair of the Executive Board of
Dr. Ing. h.c. F. Porsche AG,
April 13, 2018[1], appointed until 2028
Nationality: German

Appointments:

○ CARIAD SE, Wolfsburg (Chair)[3]

MURAT AKSEL (*1972)

Purchasing (until August 31, 2022),
January 1, 2021 to August 31, 2022[1]
Nationality: German

Appointments (as of August 31, 2022):

⊙ ŠKODA Auto a.s., Mladá Boleslav[3]
⊙ VfL Wolfsburg-Fußball GmbH, Wolfsburg[3]

DR. ARNO ANTLITZ (*1970)

Finance,
IT (until January 31, 2022),
April 1, 2021[1], appointed until 2027
Nationality: German

Appointments:

○ Dr. Ing. h.c. F. Porsche AG, Stuttgart[3, 4]
○ PowerCo SE, Salzgitter[3]
○ Volkswagen Financial Services AG, Braunschweig (Chair)[3]
⊙ Porsche Austria GmbH, Salzburg (Deputy Chair)[3]
⊙ Porsche Holding Gesellschaft m.b.H., Salzburg (Deputy Chair)[3]
⊙ Porsche Retail GmbH, Salzburg[3]
⊙ Volkswagen (China) Investment Co., Ltd., Beijing[3]
⊙ Volkswagen Group of America, Inc., Herndon, VA (Chair)[3]

RALF BRANDSTÄTTER (*1968)

Volkswagen Passenger Cars (until June 30, 2022),
Chair of the Board of Management of the
Volkswagen Passenger Cars brand
(until June 30, 2022),
China (since August 1, 2022),
Chair of the Board of Management of Volkswagen
(China) Investment Co. Ltd. (since August 1, 2022)
January 1, 2022[1], appointed until 2026
Nationality: German

Appointments:

○ CARIAD SE, Wolfsburg[3]
⊙ Audi (China) Enterprise Management Co., Ltd., Beijing[3]
⊙ FAW-Volkswagen Automotive Co., Ltd., Changchun (Deputy Chair)[2]
⊙ Mobility Asia Smart Technology Co. Ltd., Beijing[3]
⊙ SAIC Volkswagen Automotive Co., Ltd., Shanghai (Deputy Chair)[2]
⊙ Volkswagen (Anhui) Automotive Co., Ltd., Hefei (Chair)[3]
⊙ Volkswagen (China) Investment Co., Ltd., Beijing (Chair)[3]

DR.-ING. HERBERT DIESS (*1958)

Chair (until August 31, 2022),
Volume brand group (until August 31, 2022),
China (until July 31, 2022)
July 1, 2015 to August 31, 2022[1]
Nationality: Austrian

Appointments (as of August 31, 2022):

○ AUDI AG, Ingolstadt (Chair)[3]
○ CARIAD SE, Wolfsburg (Chair)[3]
⊙ FAW-Volkswagen Automotive Co., Ltd., Changchun[2]
⊙ Porsche Austria GmbH, Salzburg (Deputy Chair)[3]
⊙ Porsche Holding Gesellschaft m.b.H., Salzburg (Deputy Chair)[3]
⊙ Porsche Retail GmbH, Salzburg[3]
⊙ SAIC Volkswagen Automotive Co., Ltd., Shanghai (Deputy Chair)[2]
⊙ Volkswagen (China) Investment Co., Ltd., Beijing (Chair)[3]

DR. JUR. MANFRED DÖSS (*1958)

Integrity and Legal Affairs (since February 1, 2022)
February 1, 2022[1], appointed until 2025
Nationality: German

Appointments:

○ AUDI AG, Ingolstadt (Chair)[3]
○ TRATON SE, Munich[3, 4]
⊙ Grizzlys Wolfsburg GmbH, Wolfsburg[2]

○ Membership of statutory supervisory boards in Germany.
⊙ Comparable appointments in Germany and abroad.

1 Beginning or period of membership in the Board of Management.
2 Appointment outside the Group.
3 Appointment within the Group.
4 Listed company.

MARKUS DUESMANN (*1969)

Premium brand group,

Chair of the Board of Management of AUDI AG

April 1, 2020[1], appointed until 2025

Nationality: German

Appointments:

○ FC Bayern München AG, Munich (Deputy Chair)[2]
⊙ Audi (China) Enterprise Management Co., Ltd., Beijing (Chair)[3]
⊙ Automobili Lamborghini S.p.A., Sant´Agata Bolognese (Chair)[3]
⊙ Bentley Motors Ltd., Crewe[3]
⊙ Ducati Motor Holding S.p.A., Bologna[3]
⊙ FAW-Volkswagen Automotive Co., Ltd., Changchun[3]
⊙ SAIC Volkswagen Automotive Co., Ltd., Shanghai[3]
⊙ Volkswagen (China) Investment Co., Ltd., Beijing[3]

GUNNAR KILIAN (*1975)

Human Resources and Truck & Bus

April 13, 2018[1], appointed until 2026

Nationality: German

Appointments:

○ AUDI AG, Ingolstadt[3]
○ MAN Energy Solutions SE, Augsburg (Chair)[3]
○ MAN Truck & Bus SE, Munich[3]
○ PowerCo SE, Salzgitter[3]
○ TRATON SE, Munich[3, 4]
○ Volkswagen Group Services GmbH, Wolfsburg (Chair)[3]
○ Wolfsburg AG, Wolfsburg (Chair)[2]
⊙ Allianz für die Region GmbH, Braunschweig[2]
⊙ Autostadt GmbH, Wolfsburg (Chair)[3]
⊙ FAW-Volkswagen Automotive Co., Ltd., Changchun[3]
⊙ Scania AB, Södertälje[3]
⊙ Scania CV AB, Södertälje[3]
⊙ Volkswagen Immobilien GmbH, Wolfsburg (Chair)[3]

THOMAS SCHÄFER (*1970)

Volume brand group (since September 1, 2022),

Chair of the Board of Management of the

Volkswagen Passenger Cars brand (since July 1, 2022)

July 1, 2022[1], appointed until 2025

Nationality: German

Appointments:

⊙ FAW-Volkswagen Automotive Co., Ltd., Changchun[2]
⊙ SAIC Volkswagen Automotive Co., Ltd., Shanghai[2]
⊙ SEAT, S.A., Martorell (Chair)[3]
⊙ ŠKODA Auto a.s., Mladá Boleslav (Chair)[3]

THOMAS SCHMALL-VON WESTERHOLT (*1964)

Technology,

Chair of the Board of Management of

Volkswagen Group Components,

January 1, 2021[1], appointed until 2023

Nationality: German, Brazilian

Appointments:

○ PowerCo SE, Salzgitter (Chair)[3]
○ Volkswagen Group Services GmbH, Wolfsburg[3]
○ Wolfsburg AG, Wolfsburg[2]
⊙ Brose Sitech Sp. Z o.o., Polkowice[2]

HAUKE STARS (*1967)

IT (since February 1, 2022)

February 1, 2022[1], appointed until 2025

Nationality: German

Appointments:

○ AUDI AG, Ingolstadt[3]
○ CARIAD SE, Wolfsburg[3]
○ Dr. Ing. h.c. F. Porsche AG, Stuttgart[3, 4]
○ PowerCo SE, Salzgitter[3]
○ RWE AG, Essen[2, 4]
⊙ Kühne + Nagel International AG, Schindellegi[2, 4]

HILTRUD DOROTHEA WERNER (*1966)

Integrity and Legal Affairs (until January 31, 2022)

February 1, 2017 to January 31, 2022[1]

Nationality: German

Appointments (as of January 31, 2022):

○ AUDI AG, Ingolstadt[3]
○ CARIAD SE, Wolfsburg[3]
○ Dr. Ing. h.c. F. Porsche AG, Stuttgart[3,]
○ MAN Energy Solutions SE, Augsburg[3]
○ Mitteldeutsche Flughafen AG, Leipzig (Chair)[2]

HILDEGARD WORTMANN (*1966)

Sales (until August 31, 2022)

February 1, 2022 to August 31, 2022[1]

Nationality: German

Appointments (as of August 31, 2022):

○ CARIAD SE, Wolfsburg[3]
○ Volkswagen Financial Services AG, Braunschweig[3]
⊙ Audi (China) Enterprise Management Co., Ltd., Beijing[3]
⊙ Audi of America, LLC, Herndon, VA (Chair)[3]
⊙ FAW-Audi Sales Co., Ltd., Hangzhou[3]
⊙ Ferrovial S.A., Madrid[2, 4]
⊙ Porsche Austria Gesellschaft m.b.H., Salzburg[3]
⊙ Porsche Holding Gesellschaft m.b.H., Salzburg[3]
⊙ Porsche Retail GmbH, Salzburg[3]

○ Membership of statutory supervisory boards in Germany.
⊙ Comparable appointments in Germany and abroad.

1 Beginning or period of membership in the Board of Management.
2 Appointment outside the Group.
3 Appointment within the Group.
4 Listed company.

MEMBERS OF THE SUPERVISORY BOARD AND COMPOSITION OF THE COMMITTEES

(Appointments: as of December 31, 2022 or the leaving date from the Supervisory Board of Volkswagen AG or the start date after December 31, 2022)

HANS DIETER PÖTSCH (*1951)

Chair (since October 7, 2015),
Chair of the Board of Management of
Porsche Automobil Holding SE
October 7, 2015[1], elected until 2026
Nationality: Austrian

Appointments:

- ○ AUDI AG, Ingolstadt[3]
- ○ Bertelsmann Management SE, Gütersloh[2]
- ○ Bertelsmann SE & Co. KGaA, Gütersloh[2]
- ○ Dr. Ing. h.c. F. Porsche AG, Stuttgart[3, 4]
- ○ TRATON SE, Munich (Chair)[3, 4]
- ○ Wolfsburg AG, Wolfsburg[2]
- ⊙ Autostadt GmbH, Wolfsburg[3]
- ⊙ Porsche Austria Gesellschaft m.b.H., Salzburg (Chair)[3]
- ⊙ Porsche Holding Gesellschaft m.b.H., Salzburg (Chair)[3]
- ⊙ Porsche Retail GmbH, Salzburg (Chair)[3]
- ⊙ VfL Wolfsburg-Fußball GmbH, Wolfsburg (Deputy Chair)[3]

JÖRG HOFMANN (*1955)

Deputy Chair (since November 20, 2015),
First Chair of IG Metall
November 20, 2015[1], appointed until 2027
Nationality: German

Appointments:

- ○ Robert Bosch GmbH, Stuttgart[2]

DR. HUSSAIN ALI AL ABDULLA (*1957)

Minister of State
April 22, 2010 to May 12, 2022[1]
Nationality: Qatari

Appointments (as of May 12, 2022):

- ⊙ Gulf Investment Corporation, Safat/Kuwait (Board member)[2]
- ⊙ Qatar Supreme Council for Economic Affairs and Investment, Doha (Board member)[2]

DR. HESSA SULTAN AL JABER (*1959)

Former Minister of Information and Communications Technology, Qatar
June 22, 2016[1], elected until 2024
Nationality: Qatari

Appointments:

- ⊙ Malomatia, Doha (Chair)[2]
- ⊙ MEEZA, Doha[2]
- ⊙ Qatar Satellite Company (Es'hailSat), Doha (Chair)[2]
- ⊙ Trio Investment, Doha (Chair)[2]

MANSOOR EBRAHIM AL-MAHMOUD (*1974)

Chief Executive Officer of
Qatar Investment Authority
May 12, 2022[1], elected until 2025
Nationality: Qatari

Appointments:

- ⊙ Harrods Ltd., London (Board member)[2]
- ⊙ Harrods Group (Holding) Ltd., London (Chair)[2]
- ⊙ Qatar Airways, Doha (Deputy Chair)[2]
- ⊙ Qatar National Bank, Doha (Board member)[2]
- ⊙ Qatar Stock Exchange, Doha (Deputy Chair)[2]
- ⊙ Qatari Diar Real Estate Investment Company, Doha (Board member)[2]

DR. BERND ALTHUSMANN (*1966)

Minister of Economic Affairs, Labor, Transport and Digitalization for the Federal State of Lower Saxony
December 14, 2017 to November 8, 2022[1]
Nationality: German

Appointments (as of November 8, 2022):

- ○ Deutsche Messe AG, Hanover (Deputy Chair)[2]
- ⊙ Container Terminal Wilhelmshaven JadeWeserPort-Marketing GmbH & Co. KG, Wilhelmshaven (Chair)[2]
- ⊙ JadeWeserPort Realisierungs GmbH & Co. KG, Wilhelmshaven (Chair)[2]
- ⊙ JadeWeserPort Realisierungs-Beteiligungs-GmbH, Wilhelmshaven (Chair)[2]
- ⊙ Niedersachsen Ports GmbH & Co. KG, Oldenburg (Chair)[2]
- ⊙ Transformationsagentur Niedersachsen GmbH, Hanover[2]

HARALD BUCK (*1962)

Chair of the General and Group Works Councils of
Dr. Ing. h.c. F. Porsche AG
October 4, 2022[1], appointed until 2027
Nationality: German

Appointments:

- ○ Dr. Ing. h.c. F. Porsche AG, Stuttgart[3, 4]

MATÍAS CARNERO SOJO (*1968)

Chair of the General Works Council of SEAT
April 1, 2021[1], appointed until 2027
Nationality: Spanish

○ Membership of statutory supervisory boards in Germany.
⊙ Comparable appointments in Germany and abroad.

1 Beginning or period of membership in the Supervisory Board.
2 Appointment outside the Group.
3 Appointment within the Group.
4 Listed company.

DANIELA CAVALLO (*1975)

Chair of the General and Group Works Councils of Volkswagen AG

May 11, 2021[1], appointed until 2027

Nationality: Italian, German

Appointments:

- ○ PowerCo SE, Salzgitter[3]
- ○ TRATON SE, Munich[3, 4]
- ○ Volkswagen Financial Services AG, Braunschweig (Deputy Chair)[3]
- ○ Wolfsburg AG, Wolfsburg[2]
- ⊙ Allianz für die Region GmbH, Braunschweig[2]
- ⊙ Brose Sitech Sp. Z o.o., Polkowice[2]
- ⊙ Porsche Holding Gesellschaft m.b.H., Salzburg[3]
- ⊙ SEAT, S.A., Martorell[3]
- ⊙ ŠKODA Auto a.s., Mladá Boleslav[3]
- ⊙ VfL Wolfsburg-Fußball GmbH, Wolfsburg[3]
- ⊙ Volkswagen Group Services GmbH[3]

DR. JUR. HANS-PETER FISCHER (*1959)

Chair of the Board of Management of Volkswagen Management Association e.V.

January 1, 2013 to May 12, 2022[1]

Nationality: German

Appointments (as of May 12, 2022):

- ⊙ Volkswagen Pension Trust e.V., Wolfsburg[3]

JULIA WILLIE HAMBURG (*1986)

Minister of Education and Cultural Affairs for the Federal State of Lower Saxony

November 8, 2022[1], delegated until 2023

Nationality: German

MARIANNE HEIß (*1972)

Chief Executive Officer of BBDO Group Germany GmbH, Düsseldorf

February 14, 2018[1], elected until 2023

Nationality: Austrian

Appointments:

- ○ AUDI AG, Ingolstadt[3]
- ○ Porsche Automobil Holding SE, Stuttgart[2, 4]

DR.-ING. ARNO HOMBURG (*1968)

Chair of the Board of Management of Volkswagen Management Association e.V.

May 12, 2022[1], appointed until 2027

Nationality: German

Appointments:

- ⊙ Volkswagen Pension Trust e.V., Wolfsburg[3]

DR. GÜNTHER HORVATH (*1952)

Managing Director of Dr. Günther J. Horvath Rechtsanwalt GmbH and self-employed attorney at Dr. Günther J. Horvath Rechtsanwalt GmbH

February 28, 2023[1]

Nationality: Austrian

Appointments (as of February 28, 2023):

- ○ Porsche Automobil Holding SE, Stuttgart[2, 4]

ULRIKE JAKOB (*1960)

Deputy Chair of the Works Council of Volkswagen AG Kassel plant (until May 4, 2022)

May 10, 2017 to May 12, 2022[1]

Nationality: German

DR. LOUISE KIESLING (*1957)

Entrepreneur

April 30, 2015 to December 9, 2022[1]

Nationality: Austrian

SIMONE MAHLER (*1971)

Chair of the Joint Works Council of VW Financial Services AG and Volkswagen Bank GmbH

May 12, 2022[1], appointed until 2027

Nationality: German

Appointments:

- ○ EURO-Leasing GmbH, Sittensen[3]
- ○ Volkswagen Financial Services AG, Braunschweig[3]
- ⊙ Volkswagen Pension Trust e.V., Wolfsburg[3]

PETER MOSCH (*1972)

Chairman of the General Works Council of AUDI AG

January 18, 2006[1], appointed until 2027

Nationality: German

Appointments:

- ○ AUDI AG, Ingolstadt (Deputy Chair)[3]
- ○ Audi Pensionskasse – Altersversorgung der AUTO UNION GmbH, VVaG, Ingolstadt[3]
- ○ CARIAD SE, Wolfsburg (Deputy Chair)[3]
- ⊙ Audi Stiftung für Umwelt GmbH, Ingolstadt[3]

BERTINA MURKOVIC (*1957)

Chair of the Works Council of Volkswagen Commercial Vehicles

May 10, 2017 to May 12, 2022[1]

Nationality: German

Appointments (as of May 12, 2022):

- ⊙ MOIA GmbH, Berlin[3]

DANIELA NOWAK (*1970)

Chair of the Works Council of Volkswagen AG, Braunschweig plant

May 12, 2022[1], appointed until 2027

Nationality: German

Appointments:

- ⊙ Volkswagen Pension Trust e.V., Wolfsburg[3]

DR. JUR. HANS MICHEL PIËCH (*1942)

Lawyer

August 7, 2009[1], elected until 2024

Nationality: Austrian

Appointments:

- ○ AUDI AG, Ingolstadt[3]
- ○ Dr. Ing. h.c. F. Porsche AG, Stuttgart[3, 4]
- ○ Porsche Automobil Holding SE, Stuttgart (Deputy Chair)[2, 4]
- ⊙ Porsche Holding Gesellschaft m.b.H., Salzburg[3]
- ⊙ Schmittenhöhebahn AG, Zell am See[2]

○ Membership of statutory supervisory boards in Germany.
⊙ Comparable appointments in Germany and abroad.

1 Beginning or period of membership in the Supervisory Board.
2 Appointment outside the Group.
3 Appointment within the Group.
4 Listed company.

DR. JUR. FERDINAND OLIVER PORSCHE (*1961)

Member of the Board of Management of Familie Porsche AG Beteiligungsgesellschaft

August 7, 2009[1], elected until 2024

Nationality: Austrian

Appointments:

- ○ AUDI AG, Ingolstadt[3]
- ○ Dr. Ing. h.c. F. Porsche AG, Stuttgart[3, 4]
- ○ Porsche Automobil Holding SE, Stuttgart[2, 4]
- ⦿ Porsche Holding Gesellschaft m.b.H., Salzburg[3]
- ⦿ Porsche Lifestyle GmbH & Co. KG, Ludwigsburg[3]

DR. RER. COMM. WOLFGANG PORSCHE (*1943)

Chair of the Supervisory Board of Porsche Automobil Holding SE;
Chair of the Supervisory Board of Dr. Ing. h.c. F. Porsche AG

April 24, 2008[1], elected until 2023

Nationality: Austrian

Appointments:

- ○ AUDI AG, Ingolstadt[3]
- ○ Dr. Ing. h.c. F. Porsche AG, Stuttgart (Chair)[3, 4]
- ○ Porsche Automobil Holding SE, Stuttgart (Chair)[2, 4]
- ⦿ Familie Porsche AG Beteiligungsgesellschaft, Salzburg (Chair)[2]
- ⦿ Porsche Holding Gesellschaft m.b.H., Salzburg[3]
- ⦿ Schmittenhöhebahn AG, Zell am See[2]

JENS ROTHE (*1970)

Chair of the General Works Council of Volkswagen Sachsen GmbH

October 22, 2021[1], appointed until 2027

Nationality: German

Appointments:

- ○ Volkswagen Sachsen GmbH, Zwickau (Deputy Chair)[3]

CONNY SCHÖNHARDT (*1978)

Union Secretary and Head of the Mobility and Vehicle Construction Unit attached to the IG Metall Board

June 21, 2019[1], appointed until: 2027

Nationality: German

Appointments:

- ○ CARIAD SE, Wolfsburg[3]
- ○ PowerCo SE, Salzgitter[3]
- ○ Volkswagen Bank GmbH, Braunschweig[3]

STEPHAN WEIL (*1958)

Minister-President of the Federal State of Lower Saxony

February 19, 2013[1], delegated until 2023

Nationality: German

WERNER WERESCH (*1961)

Member of the Executive Committee of the Works Council of Porsche Automobil Holding SE and Chairman of the General and Group Works Councils of Dr. Ing. h.c. F. Porsche AG

February 21, 2019 to September 30, 2022[1]

Nationality: German

COMMITTEES OF THE SUPERVISORY BOARD AS OF DECEMBER 31, 2022

Members of the Executive Committee

Hans Dieter Pötsch (Chair)
Jörg Hofmann (Deputy Chair)
Daniela Cavallo
Peter Mosch
Dr. Hans Michel Piëch
Dr. Wolfgang Porsche
Jens Rothe
Stephan Weil

Members of the Mediation Committee established in accordance with section 27(3) of the *Mitbestimmungsgesetz* (German Codetermination Act)

Hans Dieter Pötsch (Chair)
Jörg Hofmann (Deputy Chair)
Daniela Cavallo
Stephan Weil

Members of the Audit Committee

Mansoor Ebrahim Al-Mahmoud (Chair)
Daniela Cavallo (Deputy Chair)
Marianne Heiß
Dr. Ferdinand Oliver Porsche
Jens Rothe
Conny Schönhardt

Members of the Nomination Committee

Hans Dieter Pötsch (Chair)
Dr. Hans Michel Piëch
Dr. Wolfgang Porsche
Stephan Weil

○ Membership of statutory supervisory boards in Germany.
⦿ Comparable appointments in Germany and abroad.

1 Beginning or period of membership in the Supervisory Board.
2 Appointment outside the Group.
3 Appointment within the Group.
4 Listed company.

Remuneration Report 2022

The Board of Management and Supervisory Board of Volkswagen AG must prepare a clear and understandable remuneration report in accordance with section 162 of the *Aktiengesetz* (AktG – German Stock Corporation Act). In this report, we explain the main features of the remuneration system for the members of the Board of Management and Supervisory Board. The remuneration report also contains an individualized breakdown of the remuneration components provided to current and former members of the Board of Management and Supervisory Board.

A. REMUNERATION OF THE MEMBERS OF THE BOARD OF MANAGEMENT

In the reporting year, which was overshadowed by the Russia-Ukraine conflict, the Volkswagen Group's business was impacted by the global economic slowdown, the limited availability of parts and disruptions in the logistics chain. In this environment, the Volkswagen Group's deliveries declined year-on-year, while the operating result improved due to improvements in the mix and price positioning. The Board of Management members also benefited from this in their remuneration.

I. Principles of Board of Management remuneration

The remuneration of the Board of Management is based on the remuneration system developed by the Supervisory Board and adopted on December 14, 2020 with effect from January 1, 2021. The remuneration system for the members of the Board of Management implements the requirements of the AktG as amended by the *Gesetz zur Umsetzung der zweiten Aktionärsrechterichtlinie* (ARUG II – German Act on the Implementation of the Second Shareholder' Rights Directive) and takes into account the recommendations of the German Corporate Governance Code (the Code). The Annual General Meeting approved the remuneration system on July 22, 2021 with 99.61% of the votes cast.

The new remuneration system has applied since January 1, 2021 to all Board of Management members with service contracts newly concluded or renewed after the Supervisory Board resolution of December 14, 2020. For the Board of Management members already appointed at the time of the resolution by the Supervisory Board on December 14, 2020, the new remuneration system also applies in principle since January 1, 2021. Until such time as their contracts are renewed, however, the following exceptions apply: the performance share plan of the Board of Management members already appointed continues to have only a three-year performance period but otherwise corresponds to the performance share plan described in the remuneration system. Penalty and clawback rules will only apply to Board of Management members already appointed on renewal of their contracts.

The level of the Board of Management remuneration should be appropriate and attractive in the context of the Company's national and international peer group. Criteria include the tasks of the individual Board of Management member, their personal performance, the economic situation, and the performance of and outlook for the Volkswagen Group, as well as how customary the remuneration is when measured against the peer group and the remuneration structure that applies to other areas of the Volkswagen Group. In this context, comparative studies on remuneration are conducted on a regular basis.

In the Remuneration Report for fiscal year 2021, the Board of Management and Supervisory Board reported in detail on the remuneration paid to members of the Board of Management in fiscal year 2021. The Annual General Meeting on May 12, 2022 approved the Remuneration Report for fiscal year 2021 with a majority of 99.78% of the votes. Comments by investors were taken into account in the preparation of the Remuneration Report for fiscal year 2022, for example by adding an explanation of the composition of the peer group.

In this chapter, we provide an overview of the remuneration system for the Board of Management members in fiscal year 2022 before going into the components of the remuneration in fiscal year 2022.

II. Overview of the remuneration components

The table below provides an overview of the components of the remuneration system applicable for fiscal year 2022 for the members of the Board of Management. The table also outlines the composition of the individual remuneration components and explains their targets, particularly in respect of how the remuneration will promote the Company's long-term performance. A more detailed description of the remuneration system applicable for fiscal year 2022 for the members of the Board of Management is available at www.volkswagenag.com/en/InvestorRelations/corporate-governance/Remuneration.html.

REMUNERATION SYSTEM FOR 2022

Component	Composition	Target
Fixed remuneration components		
Base salary	• Twelve equal installments payable at month-end • Chair of the Board of Management: €2,235,000; Board of Management member: €1,420,000	The basic remuneration and fringe benefits are intended to reflect the tasks and responsibility of the Board of Management members, provide a basic income and prevent them from taking inappropriate risks
Fringe benefits	• Fringe benefit allowance (€175,000) covers certain benefits at the discretion of the Board of Management member, for example: o Company cars o Preventive medical check-ups o Allowances for health and long-term care insurance o Accident insurance • Crediting of benefits against the fringe benefit allowance where these are subject to payroll tax • Payment of the remaining amount	
Occupational retirement provision	• Defined contribution plan by means of direct commitments to retirement, disability and surviving dependents' benefits • Normally, when the members reach the age of 65 (or 63 in the case of Board of Management members who took office before January 1, 2020) • Annual pension contribution of 40% of the contractually agreed base salary (or 50% in the case of Board of Management members who took office before January 1, 2018)	The occupational retirement provision is intended to provide Board of Management members with an adequate pension when they retire
Variable remuneration components		
Annual bonus	• Plan type: Target bonus • Chair of the Board of Management: €3,045,000; Board of Management member: €1,350,000 • Cap: 180% of the target amount • Assessment period: fiscal year • Performance criteria: o Financial subtargets: ▪ Operating result (OR) incl. Chinese joint ventures[1] (proportionate) (50%) and operating return on sales (50%) ▪ The Supervisory Board defines minimum, target and maximum values for the financial subtargets for each fiscal year. The minimum corresponds to subtarget achievement of 0% of the OR including Chinese joint ventures (proportionate) or 50% of the operating return on sales, while the target corresponds to a subtarget achievement of 100% in each case and the maximum to subtarget achievement of 150%; interim values are interpolated on a linear basis ▪ Overall financial target achievement = subtarget achievement "operating result including Chinese joint ventures (proportionate)" x 50% + "subtarget achievement operating return on sales" x 50% o ESG factor ▪ Subtargets of 50% each for the Environment (decarbonization index) and Social (sentiment and diversity index) as well as the Governance factor of between 0.9 and 1.1 (compliance and integrity, standard value of 1.0) ▪ The Supervisory Board defines minimum, target and maximum values for the Environment and Social subtargets for each fiscal year. The minimum, target and maximum values correspond to subtarget achievement of 0.7, 1.0 and 1.3 respectively; interim values are interpolated on a linear basis ▪ The Supervisory Board sets the Governance factor after the end of the fiscal year taking into account the collective performance of the Board of Management as a whole and the performance of each Board of Management member individually ▪ Calculation of the ESG factor: (Environment subtarget achievement x 50% + Social subtarget achievement x 50%) x Governance factor (0.9–1.1) • Annual bonus payment amount = individual target amount x financial target achievement x ESG factor • Payment: In cash in the month following approval of the consolidated financial statements for the fiscal year in question	The annual bonus is designed to motivate Board of Management members to pursue ambitious targets The financial performance targets support the strategic target of achieving competitive profitability Integration of the sustainability targets takes the importance of ESG factors into account.

1 Equity-accounted companies in China.

Component	Composition	Target
Long-term incentive (LTI)	• Plan type: Phantom performance share plan • Performance period: measured forward over four years[1] • Chair of the Board of Management: €3,830,000; Board of Management member: €1,800,000 • Cap: 200% of the target amount • The phantom performance shares are a purely mathematical construct and do not confer any ownership or dividend rights in Volkswagen AG • Allocation of performance shares: At the start of each fiscal year, the individually agreed target amount is divided by the arithmetic mean of the closing prices of Volkswagen's preferred shares (German Securities Identification Number: 766403) in the Xetra trading system of Deutsche Börse AG on the last 30 trading days prior to January 1 in the respective performance period (initial reference price) • Target-setting: At the start of the performance period, the Supervisory Board defines minimum, target and maximum values for EPS as presented in the annual report as audited, fully diluted earnings per Volkswagen preferred share from the Company's continuing and discontinued operations; the EPS minimum corresponds to target achievement of 50%, the EPS target corresponds to target achievement of 100% and the EPS maximum corresponds to target achievement of 150% • Determination of one-quarter of the allocated performance shares at the end of each fiscal year depending on EPS target achievement • Calculation of the payment amount: fixed performance shares are multiplied by the arithmetic mean of the closing prices of Volkswagen's preferred shares in the Xetra trading system of Deutsche Börse AG on the last 30 trading days prior to the end of the performance period ("closing reference price") and the dividends paid out per Volkswagen preferred share during the performance period ("dividend equivalent") • Payment: In cash in the month following approval of the consolidated financial statements for the last fiscal year of the respective performance period • If the service contract ends before the end of the performance period due to a bad leaver case (extraordinary termination for cause or a breach of a contractual or post-contractual restraint on competition), all performance shares will be forfeited	The long-term incentive serves to align the remuneration of the Board of Management members with the Company's long-term performance. The EPS (earnings per share) financial performance target in conjunction with share price performance and the dividends paid, measured over four years, ensures the long-term effect of the behavioral incentives and supports the strategic target of achieving competitive profitability.
Other benefits		
Special payment	• Only on the basis of a separate contractual agreement with the Board of Management member • The agreement is made in advance for the fiscal year and defines performance criteria for the special payment • There are currently no special payment agreements with Board of Management members	Special payments are intended to reward outstanding and exceptional performance and may only be granted if they are in the Company's interest and are associated with future benefits for the Company
Benefits agreed with new Board of Management members for a defined period of time or for the entire term of their service contracts	• Only on the basis of a separate contractual agreement with the new Board of Management member • Payments to compensate for declining variable remuneration or other financial disadvantages • Benefits in connection with a relocation • Minimum remuneration guarantee • New Board of Management members did not receive any special benefits in the past fiscal year	(Compensation) payments are designed to attract qualified candidates

1 For the Board of Management members already appointed prior to December 14, 2020, a three-year performance period continues to apply until their contracts are renewed. In all other respects, the performance share plan corresponds mutatis mutandis to that described for fiscal year 2022.

Component	Composition	Target
Other remuneration provisions		
Penalty and clawback rules[1]	• The Supervisory Board can reduce or request repayment of the annual bonus and LTI by up to 100% in the event of relevant misconduct during the assessment period • A clawback is not permissible if more than three years have elapsed since the bonus was paid	Penalty and clawback rules are intended to counteract individual misconduct and negligence on the part of the organization
Maximum remuneration	• The relevant components are the base salary paid for the respective year, the fringe benefits granted, the service cost for the occupational retirement provision, the annual bonus granted for the respective fiscal year and paid out in the following year, the performance share plan paid out in the respective fiscal year and for which the performance period ended immediately before the respective fiscal year, any special payment granted for the respective fiscal year and any benefits granted to new Board of Management members • For Board of Management members € 7,000,000 (gross) per fiscal year and for the Chair of the Board of Management € 12,000,000 (gross) per fiscal year • If the maximum remuneration is exceeded, the annual bonus will be reduced; if a reduction is not sufficient, the Supervisory Board may, at its discretion, reduce other remuneration components or request repayment of remuneration paid out	The aim of the maximum remuneration is to ensure that the remuneration of Board of Management members is not inappropriately high when measured against the peer group
Cap on cash remuneration	• Paid in addition to maximum remuneration • The cash remuneration includes the base salary paid in the respective fiscal year, the annual bonus granted for the respective fiscal year and paid out in the following year, the performance share plan paid in the respective fiscal year and for which the performance period ended immediately before the respective fiscal year, and any special payment granted for the respective fiscal year • For Board of Management members € 5,500,000 (gross) per fiscal year and for the Chair of the Board of Management € 10,000,000 (gross) per fiscal year	The cap on cash remuneration is intended to prevent unacceptably high disbursements in the individual fiscal year

1 For the Board of Management members already appointed prior to December 14, 2020, penalty and clawback rules only apply once their contracts have been renewed.

III. Remuneration of the Board of Management members appointed in fiscal year 2022

1. Board of Management members in fiscal year 2022

The members of the Volkswagen AG Board of Management in fiscal year 2022 were as follows:

> Oliver Blume, member of the Board of Management since April 13, 2018, Chair of the Board of Management since September 1, 2022, also Chair of the Executive Board of Dr. Ing. h.c. F. Porsche AG
> Arno Antlitz, member of the Board of Management since April 1, 2021
> Markus Duesmann, member of the Board of Management since April 1, 2020, also Chair of the Board of Management of AUDI AG
> Gunnar Kilian, member of the Board of Management since April 13, 2018
> Ralf Brandstätter, member of the Board of Management since January 1, 2022, also CEO of Volkswagen (China) Investment Company Limited
> Hauke Stars, member of the Board of Management since February 1, 2022
> Manfred Döss, member of the Board of Management since February 1, 2022
> Thomas Schäfer, member of the Board of Management since July 1, 2022
> Thomas Schmall-von Westerholt, member of the Board of Management since January 1, 2021
> Herbert Diess, member of the Board of Management from July 1, 2015 and Chair of the Board of Management from April 13, 2018, left the Board effective August 31, 2022
> Murat Aksel, member of the Board of Management from January 1, 2021, left the Board effective August 31, 2022
> Hiltrud Dorothea Werner, member of the Board of Management from February 1, 2017, left the Board effective January 31, 2022
> Hildegard Wortmann, member of the Board of Management from February 1, 2022, left the Board effective August 31, 2022

For their work on the Board of Management, its members do not receive additional remuneration for discharging other mandates on management bodies, supervisory boards or similar, especially in other companies of the Volkswagen Group. If such remuneration is nevertheless granted, it is counted toward the remuneration for their work as a member of the Board of Management of Volkswagen AG.

A different arrangement has been reached with Mr. Brandstätter for his work at Volkswagen (China) Investment Company Limited: Mr. Brandstätter receives a separate remuneration for his work as CEO of Volkswagen (China) Investment Company Limited. Mr. Brandstätter's contractual remuneration under his contract of employment with Volkswagen AG is reduced accordingly for the duration of his work at Volkswagen (China) Investment Company Limited.

2. Remuneration granted and owed in fiscal year 2022

In accordance with section 162(1) sentence 1 of the AktG, the remuneration report must report on the remuneration granted and owed to each individual member of the Board of Management in the last fiscal year. These terms are understood as follows:

> The term "granted" (*gewährt*) refers to the actual receipt (*Zufluss*) of the remuneration component.

> The term "owed" (*geschuldet*) refers to all legally existing liabilities for remuneration components that are due but have not yet been fulfilled.

> This understanding differs from the terms "benefits granted" and "benefits received" used in remuneration reports up to and including December 31, 2020. As per the 2017 version of the Code, "benefits granted" included, regardless of when they were to be paid out, all remuneration components that had been agreed at least in principle for a member of the Board of Management in the fiscal year and for which the amount could be estimated. With the introduction of section 162 of the AktG, it is no longer possible to maintain the distinction between "granted" and "received" as previously understood. Instead, the meaning of the term "granted" in section 162 of the AktG corresponds to the previous understanding of "received".

2.1. Overview in the tables

The following tables show the remuneration actually received by members of the Board of Management in fiscal year 2022. The time of actual payment is not relevant. The remuneration reported as granted in fiscal year 2022 thus consists of the base salary paid out in fiscal year 2022, the fringe benefits, the annual bonus paid in the month following the approval of the Company's consolidated financial statements for fiscal year 2022 and the LTI for the performance period 2019 to 2021 paid in fiscal year 2022. As the Company was not in default on the payment of remuneration components, no remuneration owed is reported in the tables.

The relative shares shown in the tables relate to the remuneration components granted and owed in the respective fiscal year in accordance with section 162(1) sentence 1 of the AktG. They thus include all benefits actually received in the respective fiscal year, regardless of the fiscal year for which the Board of Management members received them. The relative shares indicated here are thus not comparable with the respective relative shares of fixed and variable remuneration components as part of total remuneration in the description of the remuneration system according to section 87a(1) sentence 2 no. 3 of the AktG. The shares indicated in the remuneration system relate to the targets agreed for the relevant fiscal year, irrespective of the time at which the respective remuneration component was paid out.

Pension expense is reported as service cost within the meaning of IAS 19. The service cost in accordance with IAS 19 does not constitute remuneration granted or owed within the meaning of section 162(1) sentence 1 of the AktG as it is not actually received by the Board of Management member in the reporting year.

Maximum remuneration corresponds to maximum remuneration within the meaning of section 87a(1) sentence 2 no. 1 of the AktG in accordance with the remuneration system adopted by the Supervisory Board and approved by the Annual General Meeting. As in the past, in addition to maximum remuneration, a limit on cash remuneration, which includes the base salary paid out for the relevant fiscal year, the annual bonus granted for the relevant fiscal year and paid out in the subsequent year, the performance share plan paid out in the relevant fiscal year and for which the performance period ended immediately before the respective fiscal year, and any special payment granted for the relevant fiscal year, has been agreed with the members of the Board of Management.

Board of Management service contracts that are new or have been renewed since the Supervisory Board adopted the new remuneration system for the members of the Board of Management on December 14, 2020 also contain the penalty and clawback rules provided for in this remuneration system. As such, the service contract of the Board of Management member Mr. Duesmann, who was already appointed at the time of the Supervisory Board resolution of December 14, 2020, does not contain penalty or clawback rules, nor did Ms. Werner's service contract, which ended on January 31, 2022. For Mr. Blume, the penalty and clawback rules apply starting from his new appointment, i.e. from September 1, 2022. Volkswagen AG did not make use of the existing penalty and clawback rules in fiscal year 2022.

	OLIVER BLUME Chair (since September 1, 2022) Sport & Luxury brand group Chair of the Executive Board of Dr. Ing. h.c. F. Porsche AG	
	2022	
	€	%
Fixed remuneration components		
Base salary	1,691,666.64	26.4
Fringe benefits	186,181.00	2.9
Total	**1,877,847.64**	**29.3**
Variable remuneration components		
One-year variable remuneration/annual bonus	3,138,685.00	49.0
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	1,392,871.72	21.7
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**6,409,404.36**	**100.0**
Pension expenses	977,063.00	x
Total remuneration including pension expenses	**7,386,467.36**	**x**
Maximum remuneration	8,666,666.67	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

	MURAT AKSEL	
	Purchasing (until August 31, 2022)	
	2022	
	€	%
Fixed remuneration components		
Base salary	946,666.64	36.6
Fringe benefits	166,201.00	6.4
Total	**1,112,867.64**	**43.0**
Variable remuneration components		
One-year variable remuneration/annual bonus	1,473,079.31	57.0
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	–	–
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**2,585,946.95**	**100.0**
Pension expenses	709,917.51	x
Total remuneration including pension expenses	**3,295,864.46**	**x**
Maximum remuneration	4,666,666.67	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

	ARNO ANTLITZ	
	Finance, IT (IT until January 31, 2022)	
	2022	
	€	%
Fixed remuneration components		
Base salary	1,420,000.00	37.2
Fringe benefits	180,689.00	4.7
Total	**1,600,689.00**	**42.0**
Variable remuneration components		
One-year variable remuneration/annual bonus	2,212,650.00	58.0
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	–	–
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**3,813,339.00**	**100.0**
Pension expenses	1,008,397.00	x
Total remuneration including pension expenses	**4,821,736.00**	**x**
Maximum remuneration	7,000,000.00	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

	RALF BRANDSTÄTTER Volkswagen Passenger Cars (until June 30, 2022), Chair of the Board of Management of the Volkswagen Passenger Cars brand (until June 30, 2022) China (since August 1, 2022) Chair of the Board of Management of Volkswagen (China) Investment Co. Ltd. (since August 1, 2022)	
	2022	
	€	%
Fixed remuneration components		
Base salary		
Volkswagen	887,499.98	21.9
VCIC[1]	532,499.99	13.1
Fringe benefits		
Volkswagen	115,363.00	2.8
VCIC[2]	311,601.00	7.7
Total	**1,846,963.96**	**45.5**
Variable remuneration components		
One-year variable remuneration/annual bonus		
Volkswagen	1,382,906.25	34.1
VCIC[1]	829,743.75	20.4
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	–	–
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**4,059,613.96**	**100.0**
Pension expenses	696,524.00	x
Total remuneration including pension expenses	**4,756,137.96**	**x**
Maximum remuneration	7,000,000.00	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

1 Mr. Brandstätter receives 90% of the remuneration of a regular Board of Management member of Volkswagen AG from Volkswagen (China) Investment Company Limited (VCIC) for his work as CEO of VCIC. VCIC accounts for Mr. Brandstätter as if he received his remuneration from Volkswagen AG in Germany. These amounts are disclosed here. The actual gross expense incurred by VCIC may differ on account of Chinese tax law.

2 The fringe benefits presented by VCIC include, in particular, the benefits paid by VCIC for Mr. Brandstätter's assignment to China (such as housing, flight expenses). Assignment-specific fringe benefits are not counted against the fringe benefit allowance provided by VCIC.

	HERBERT DIESS Chair (until August 31, 2022), Volume brand group (until August 31, 2022), China (until July 31, 2022) 2022	
	€	%
Fixed remuneration components		
Base salary	1,490,000.00	21.8
Fringe benefits	166,201.00	2.4
Total	**1,656,201.00**	**24.2**
Variable remuneration components		
One-year variable remuneration/annual bonus	1,158,419.71	17.0
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	4,018,246.96	58.8
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**6,832,867.67**	**100.0**
Pension expenses	1,069,163.33	x
Total remuneration including pension expenses	**7,902,031.00**	**x**
Maximum remuneration	8,000,000.00	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

	MANFRED DÖSS[1] Integrity and Legal Affairs (since February 1, 2022) 2022	
	€	%
Fixed remuneration components		
Base salary	976,250.00	37.3
Fringe benefits	120,892.00	4.6
Total	**1,097,142.00**	**41.9**
Variable remuneration components		
One-year variable remuneration/annual bonus	1,521,196.88	58.1
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	–	–
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**2,618,338.88**	**100.0**
Pension expenses	665,163.00	x
Total remuneration including pension expenses	**3,283,501.88**	**x**
Maximum remuneration	4,812,500.00	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

1 Mr. Döss receives remuneration in the amount of 75% of the remuneration of a regular member of the Board of Management of Volkswagen AG.

	MARKUS DUESMANN Premium brand group, Chair of the Board of Management of AUDI AG 2022	
	€	%
Fixed remuneration components		
Base salary	1,420,000.00	37.1
Fringe benefits	197,300.00	5.2
Total	**1,617,300.00**	**42.2**
Variable remuneration components		
One-year variable remuneration/annual bonus	2,212,650.00	57.8
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	–	–
Other remuneration		**–**
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed [1]	**3,829,950.00**	**100.0**
Pension expenses	993,152.00	x
Total remuneration including pension expenses	**4,823,102.00**	**x**
Maximum remuneration	7,000,000.00	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

1 Mr. Duesmann received remuneration of €99,860 from FC Bayern München AG for a Supervisory Board appointment. This remuneration was offset in full against the reported variable remuneration granted by Volkswagen AG for fiscal year 2022.

	GUNNAR KILIAN Human Resources and Truck & Bus 2022	
	€	%
Fixed remuneration components		
Base salary	1,420,000.00	25.0
Fringe benefits	182,139.00	3.2
Total	**1,602,139.00**	**28.2**
Variable remuneration components		
One-year variable remuneration/annual bonus	1,247,128.28	21.9
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	2,832,871.72	49.9
Other remuneration		**–**
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**5,682,139.00**	**100.0**
Pension expenses	1,137,688.00	x
Total remuneration including pension expenses	**6,819,827.00**	**x**
Maximum remuneration	7,000,000.00	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

	THOMAS SCHÄFER	
	Volume brand group (since September 1, 2022), Chair of the Board of Management of the Volkswagen Passenger Cars brand (since July 1, 2022)	
	2022	
	€	%
Fixed remuneration components		
Base salary	709,999.98	37.2
Fringe benefits	91,089.00	4.8
Total	**801,088.98**	**42.0**
Variable remuneration components		
One-year variable remuneration/annual bonus	1,106,325.00	58.0
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	–	–
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**1,907,413.98**	**100.0**
Pension expenses	388,544.00	x
Total remuneration including pension expenses	**2,295,957.98**	**x**
Maximum remuneration	3,500,000.00	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

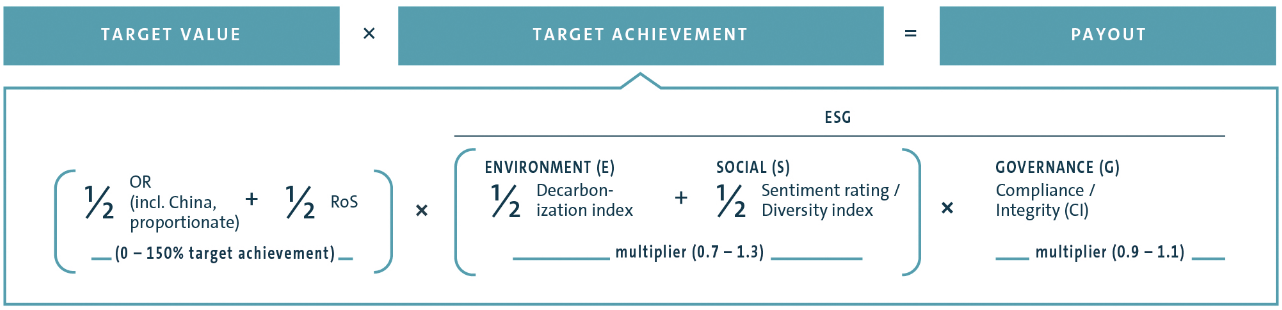
	THOMAS SCHMALL-VON WESTERHOLT	
	Technology, Chair of the Board of Management of Volkswagen Group Components	
	2022	
	€	%
Fixed remuneration components		
Base salary	1,420,000.00	37.2
Fringe benefits	182,040.00	4.8
Total	**1,602,040.00**	**42.0**
Variable remuneration components		
One-year variable remuneration/annual bonus	2,212,650.00	58.0
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	–	–
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**3,814,690.00**	**100.0**
Pension expenses	885,829.00	x
Total remuneration including pension expenses	**4,700,519.00**	**x**
Maximum remuneration	7,000,000.00	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

	HAUKE STARS	
	IT (since February 1, 2022)	
	2022	
	€	%
Fixed remuneration components		
Base salary	1,301,666.63	37.2
Fringe benefits	166,031.00	4.7
Total	**1,467,697.63**	**42.0**
Variable remuneration components		
One-year variable remuneration/annual bonus	2,028,262.50	58.0
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	–	–
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**3,495,960.13**	**100.0**
Pension expenses	542,174.00	x
Total remuneration including pension expenses	**4,038,134.13**	**x**
Maximum remuneration	6,416,666.67	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

	HILTRUD DOROTHEA WERNER	
	Integrity and Legal Affairs (until January 31, 2022)	
	2022	
	€	%
Fixed remuneration components		
Base salary	118,333.33	25.1
Fringe benefits	30,328.00	6.4
Total	**148,661.33**	**31.5**
Variable remuneration components		
One-year variable remuneration/annual bonus	86,768.36	18.4
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	236,072.64	50.1
Other remuneration		**–**
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**471,502.33**	**100.0**
Pension expenses	111,831.00	x
Total remuneration including pension expenses	**583,333.33**	**x**
Maximum remuneration	583,333.33	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

	HILDEGARD WORTMANN	
	Sales (February 1 to August 31, 2022)	
	2022	
	€	%
Fixed remuneration components		
Base salary	828,333.31	36.2
Fringe benefits	172,870.00	7.6
Total	**1,001,203.31**	**43.8**
Variable remuneration components		
One-year variable remuneration/annual bonus	1,285,155.62	56.2
Multi-year variable remuneration/long-term incentive (LTI)		
LTI (performance share plan) 2019 – 2021	–	–
Other remuneration		
Special payments	–	–
Special benefits paid to new Board of Management members	–	–
Total remuneration granted and owed	**2,286,358.93**	**100.0**
Pension expenses	291,581.90	x
Total remuneration including pension expenses	**2,577,940.82**	**x**
Maximum remuneration	4,083,333.33	x
Clawback in accordance with section 162(1) sentence 2 no. 4 of the AktG	–	x

ANNUAL BONUS



2.2 Explanation

2.2.1 Performance criteria for the variable remuneration

a) Performance criteria for the annual bonus

aa) Financial subtargets

The following overviews show the threshold values, target values and maximum values set by the Supervisory Board for fiscal year 2022 for the financial subtargets operating result, including Chinese joint ventures (proportionate), and operating return on sales (RoS), along with the actual figures and target achievement levels in percent in fiscal year 2022.

COMPONENT 1: OPERATING RESULT INCLUDING CHINESE JOINT VENTURES (PROPORTIONATE)

€ billion	2022
Maximum value	25.0
100% target level	17.0
Threshold value	9.0
Actual	25.4
Target achievement (in %)	150

COMPONENT 2: OPERATING RETURN ON SALES

%	2022
Maximum value	8.0
100% target level	6.0
Threshold value	4.0
Actual	7.9
Target achievement (in %)	148

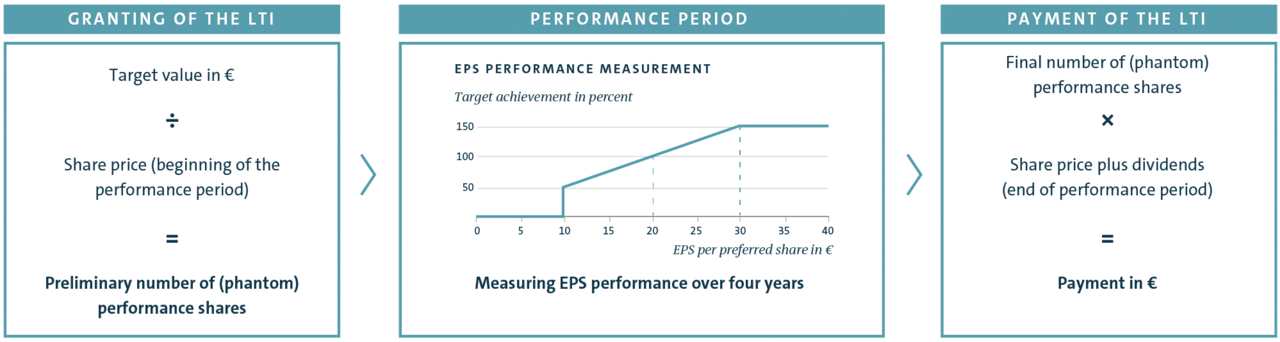
bb) ESG factor

The following overview shows the minimum values, target values and maximum values set by the Supervisory Board for fiscal year 2022 for the environmental (decarbonization index) and social (sentiment rating and diversity index) subtargets along with the actual figures and target achievement levels in fiscal year 2022. The decarbonization index measures the emissions of CO_2 and CO_2 equivalents by the passenger car- and light commercial vehicle-producing brands over the entire life cycle and documents the progress in improving our carbon footprint. The sentiment rating is an important parameter of the opinion survey – an employee poll with which the Group regularly gathers information regarding employee satisfaction. The diversity index is used worldwide to determine the development of the proportion of women in management and the internationalization of top management. The indicator provides incentives for an exemplary leadership and corporate culture. The governance factor is a means for the Supervisory Board to express its satisfaction with the expected and actual behavior of the Board of Management with regard to the criteria of integrity and compliance. As a rule, the governance factor should be 1.0 and may only be reduced to 0.9 or raised to 1.1 in exceptional circumstances based on a professional judgment of the Supervisory Board. For fiscal year 2022, the Supervisory Board has set the governance factor at the standard value of 1.0 for all Board of Management members; it takes into account and assesses the collective performance of the Board of Management as a whole and the performance of each Management Board member individually.

	ENVIRONMENTAL		SOCIAL	
	Decarbonization index[1]		Sentiment rating	Diversity index
in tCO_2e/vehicle	2022	Points	2022	2022
Maximum value	42.7	Maximum value	82.2	136.0
100% target level	43.1	100% target level	78.2	131.0
Minimum value	47.7	Minimum value	74.2	126.0
Actual	44.6	Actual	82.4	140
Target achievement (factor)	0.9	Target achievement (factor)	1.3	1.3

1 The methodology used for the decarbonization index as reported in the 2022 management report and the 2022 sustainability report was changed in fiscal year 2022. Contrary to this, the decarbonization index is used for Board of Management remuneration in accordance with the methodology that the Supervisory Board used to determine the target values for fiscal year 2022.

LONG-TERM INCENTIVE (LTI): (PHANTOM) PERFORMANCE SHARE PLAN (PSP)



b) Performance criteria for the long-term incentive (LTI)

The four-year performance share plan has applied since January 1, 2021 to all Board of Management members with service contracts newly concluded or renewed after the Supervisory Board resolution of December 14, 2020. For the Board of Management members already appointed at the time of the Supervisory Board resolution of December 14, 2020, a three-year performance period continues to apply until their contracts are renewed. This is the case for Ms. Werner and Mr. Duesmann. For fiscal year 2022, the four-year performance share plan applies pro rata to Mr. Blume starting from September 1, 2022.

aa) Information on the performance shares

	PERFORMANCE PERIOD 2019 – 2021	PERFORMANCE PERIOD 2020 – 2022	PERFORMANCE PERIOD 2021 – 2023	PERFORMANCE PERIOD 2021 – 2024	PERFORMANCE PERIOD 2022 – 2024	PERFORMANCE PERIOD 2022 – 2025
€	Number of performance shares allocated at the grant date	Number of performance shares allocated at the grant date	Number of performance shares allocated at the grant date	Number of performance shares allocated at the grant date	Number of performance shares allocated at the grant date	Number of performance shares allocated at the grant date
Oliver Blume	12,238	10,144	12,069	–	6,828	7,264
Murat Aksel (until August 31, 2022)	–	–	–	12,069	–	10,242
Arno Antlitz	–	–	–	9,052	–	10,242
Ralf Brandstätter (since January 1, 2022)	–	–	–	–	–	10,242
Herbert Diess (until August 31, 2022)	26,040	21,585	13,368	12,313	–	21,792
Manfred Döss (since February 1, 2022)	–	–	–	–	–	7,041
Markus Duesmann	–	7,608	12,069	–	10,242	–
Gunnar Kilian	12,238	10,144	11,342	727	–	10,242
Thomas Schäfer (since July 1, 2022)	–	–	–	–	–	5,121
Thomas Schmall-von Westerholt (since January 1, 2021)	–	–	–	12,069	–	10,242
Hauke Stars (since February 1, 2022)	–	–	–	–	–	9,388
Hiltrud Dorothea Werner (until January 31, 2022)	12,238	10,144	12,069	–	853	–
Hildegard Wortmann (February 1 to August 31, 2022)	–	–	–	–	–	9,388
Total	**62,754**	**59,625**	**60,917**	**46,230**	**17,923**	**111,204**

bb) EPS performance

The following overview shows the minimum value, target value and maximum value set by the Supervisory Board at the beginning of the performance period for the performance share plan 2019–2021, which was paid out in fiscal year 2022, along with the actual figure and target achievement level in percent.

PERFORMANCE PERIOD 2019 – 2021

€	2019	2020	2021
Maximum value	30.0	30.0	30.0
100% target level	20.0	20.0	20.0
Minimum value	10.0	10.0	10.0
Actual	26.66	16.66	29.65
Target achievement (in %)	133	83	148

The following overviews show the minimum values, target values and maximum values set by the Supervisory Board at the beginning of the performance periods 2020–2022, 2021–2023 or 2021–2024 and 2022–2024 or 2022–2025 along with the actual figures and target achievement levels attained in percent so far for the individual years of the assessment period up to and including 2022. The performance share plans for the performance periods 2020–2022, 2021–2023 or 2021–2024 and 2022–2024 or 2022–2025 were not due in fiscal year 2022 and have not yet been paid out; they therefore do not constitute remuneration granted or owed in fiscal year 2022.

PERFORMANCE PERIOD 2020 – 2022

€	2020	2021	2022
Maximum value	30.0	30.0	30.0
100% target level	20.0	20.0	20.0
Minimum value	10.0	10.0	10.0
Actual	16.66	29.65	29.69
Target achievement (in %)	83	148	148

PERFORMANCE PERIOD 2021 – 2023

€	2021	2022
Maximum value	30.0	30.0
100% target level	20.0	20.0
Minimum value	10.0	10.0
Actual	29.65	29.69
Target achievement (in %)	148	148

PERFORMANCE PERIOD 2021 – 2024

€	2021	2022
Maximum value	30.0	30.0
100% target level	20.0	20.0
Minimum value	10.0	10.0
Actual	29.65	29.69
Target achievement (in %)	148	148

PERFORMANCE PERIOD 2022 – 2024

€	2022
Maximum value	30.0
100% target level	20.0
Minimum value	10.0
Actual	29.69
Target achievement (in %)	148

PERFORMANCE PERIOD 2022 – 2025

€	2022
Maximum value	30.0
100% target level	20.0
Minimum value	10.0
Actual	29.69
Target achievement (in %)	148

cc) Reference prices/dividend equivalent for the performance periods

The relevant initial reference price, closing reference price and dividend equivalent for the performance period 2019–2021 can be found in the following overview.

	PERFORMANCE PERIOD 2019 – 2021
Initial reference price	147.08
Closing reference price	175.75
Dividend equivalent	
2019	4.86
2020	4.86
2021	4.86

The following overview shows the initial reference price, closing reference price and dividend equivalent for the performance share plans not yet due and not yet paid out for the performance periods 2020–2022, 2021–2023 or 2021–2024 and 2022–2024 or 2022–2025.

	PERFORMANCE PERIOD				
	2020 – 2022	2021 – 2023	2021 – 2024	2022 – 2024	2022 – 2025
Initial reference price	177.44	149.14	149.14	175.75	175.75
Closing reference price	131.74	– [1]	– [1]	– [1]	– [1]
Dividend equivalent					
2020	4.86	–	–	–	–
2021	4.86	4.86	4.86	–	–
2022	7.56	7.56	7.56	7.56	7.56

1 Determined at the end of the performance period.

dd) Advances
In the introductory phase of the performance share plan, the members of the Board of Management received advances of 80% of their target amount. Mr. Blume received a corresponding advance from the performance period 2019 to 2021. The advance was paid after the first year of the relevant performance period. Final settlement in 2022 was based on actual achievement of targets at the end of the three-year performance period.

2.2.2 Conformity with the remuneration system
The remuneration granted and owed to the Board of Management members in fiscal year 2022 meets the requirements of the remuneration system for the members of the Board of Management. There was no deviation from the applicable remuneration system in fiscal year 2022. There was no need to reduce the payments related to the annual bonus and performance share plan based on the maximum values of the individual remuneration components being exceeded, as they did not exceed 180% of the target amount for the annual bonus or 200% of the target amount for the performance share plan. The total remuneration granted and owed to the Board of Management members in fiscal year 2022 did not exceed the maximum remuneration envisaged by the remuneration system. Due to the base salary paid out for fiscal year 2022, the annual bonus granted for fiscal year 2022 and paid out at the beginning of fiscal year 2023, and the performance share plan paid out in fiscal year 2022 for the 2019 to 2021 performance period, Board of Management members Mr. Diess, Ms. Werner and Mr. Kilian would have each received total cash remuneration above the agreed cash remuneration cap of €10.0 million (Mr. Diess), €5.5 million (Mr. Kilian) and pro rata €458,333.33 (Ms. Werner) in fiscal year 2022. Against this background, the payment amount from the annual bonus was reduced by the excess amount of €3,253,125.44 in the case of Mr. Diess and €965,521.72 in the case of Mr. Kilian. The (pro rata) maximum remuneration of €583,333.33 agreed for fiscal year 2022 was also exceeded for Ms. Werner. Against this background, Ms. Werner's annual bonus was reduced by a total of €97,619.14. The tables detailing remuneration granted and owed therefore show the reduced amounts of the annual bonus for Mr. Diess, Ms. Werner and Mr. Kilian.

The Supervisory Board of Volkswagen AG extended the appointment of Mr. Blume in fiscal year 2022 and appointed Mr. Blume as Chair of the Board of Management with effect from the beginning of September 1, 2022. A new service contract with effect from September 1, 2022 was concluded in this context, the terms of which correspond to the remuneration system applicable to members of the Volkswagen AG Board of Management from January 1, 2021. A four-year performance share plan has thus applied to Mr. Blume since September 1, 2022. For fiscal year 2022, the LTI was therefore based pro rata on a three-year performance share plan up to and including August 31, 2022 and a four-year performance share plan from

September 1, 2022. The penalty and clawback rules were only applicable as from September 1, 2022. Mr. Blume is also Chair of the Executive Board of Dr. Ing. h.c. F. Porsche AG. In preparation for the IPO completed on September 29, 2022, Dr. Ing. h.c. F. Porsche AG agreed on an IPO bonus for Mr. Blume. This IPO bonus is structured as a share plan with a one-, two- and three-year term, in each case starting from the time of the IPO. Mr. Blume was allocated a total of 19,290 phantom preferred shares in Dr. Ing h.c. F. Porsche AG in fiscal year 2022, divided into three tranches of 6,430 phantom preferred shares each. Any remuneration granted and owed from this IPO bonus will be reported in the remuneration report for the fiscal year in which the respective tranche is paid out to Mr. Blume. Volkswagen AG approved this remuneration from Dr. Ing. h.c. F. Porsche AG as a third-party remuneration arrangement.

PENSIONS OF THE MEMBERS OF THE BOARD OF MANAGEMENT IN 2022 IN ACCORDANCE WITH IAS 19

€	Present value	Pension expenses in fiscal year 2022
Oliver Blume	2,938,205.00	977,063.00
Murat Aksel (until August 31, 2022)	–	709,917.51
Arno Antlitz	1,098,569.00	1,008,397.00
Ralf Brandstätter (since January 1, 2022)	696,524.00	696,524.00
Herbert Diess (until August 31, 2022)	–	1,069,163.33
Manfred Döss (since February 1, 2022)	665,163.00	665,163.00
Markus Duesmann	1,568,879.00	993,152.00
Gunnar Kilian	2,826,340.00	1,137,688.00
Thomas Schäfer (since July 1, 2022)	388,544.00	388,544.00
Thomas Schmall-von Westerholt	1,308,975.00	885,829.00
Hauke Stars (since February 1, 2022)	542,174.00	542,174.00
Hiltrud Dorothea Werner (until January 31, 2022)	–	111,831.00
Hildegard Wortmann (February 1 to August 31, 2022)	–	291,581.90
Total	**12,033,373.00**	**9,477,027.74**

2.2.3 Benefits and pension commitments in connection with termination

a) Benefits and pension commitments to Board of Management members for early termination

The remuneration system for the members of the Board of Management and the service contracts of the Board of Management members provide for severance payments in the event that an appointment as member of the Board of Management is revoked. In such cases – except where there is good cause entitling the Company to terminate the service contract prematurely or where the appointment is revoked due to a gross breach of duty – the Board of Management member receives a gross severance payment in the amount of the total remuneration of the past financial year up to the end of the regular term of the appointment, for a maximum of two years, calculated as of the date of the termination of the appointment as member of the Board of Management. Any special payment will not be taken into account for the calculation. Should a Board of Management member leave during the course of the first fiscal year of the appointment, the calculation will by way of exception be based on the expected total remuneration for the current fiscal year. The severance payment will be paid in a maximum of 24 monthly installments from the time of the termination of the appointment as a member of the Company's Board of Management. Contractual remuneration paid by the Company for the period from the termination of the appointment until the end of the service contract will be offset against the severance payment. Should Board of Management members take up other work after the termination of their appointment, the amount of the severance payment will be reduced by the amount of the income earned from that work. Should a post-contractual non-compete covenant be agreed, the severance payment will be offset against the compensation received for observing the post-contractual non-compete covenant.

The members of the Board of Management are also entitled to a pension and to a surviving dependents' pension as well as the use of company cars for the period in which they receive their pension in the event of early termination of their service on the Board of Management.

In line with the recommendation under G.14 of the 2022 Code, the service contracts do not provide for change of control clauses.

b) Pension commitments to Board of Management members for regular termination of service

In the event of regular termination of their service on the Board of Management, the members of the Board of Management are entitled to a pension, including a surviving dependents' pension, as well as the use of company cars for the period in which they receive their pension. The agreed benefits are paid or made available when the Board of Management member reaches the age of 65, or in Mr. Blume's, Mr. Diess's, Mr. Kilian's and Ms. Werner's case, when they reach the age of 63.

The Board of Management members received a defined contribution plan, which is based in principle on a works agreement that also applies to the employees of Volkswagen AG covered by collective agreements and includes retirement, invalidity and surviving dependents' benefits. A pension contribution in the amount of 40% of the base salary, and for Ms. Werner and Mr. Diess in the amount of 50% of the base salary, is paid to Volkswagen Pension Trust e.V. at the end of the calendar year for each year they are appointed to the Board of Management. The annual pension contributions result in modules of what is, in principle, a lifelong pension in line with the arrangements that also apply to employees covered by collective agreements.

The individual pension modules vest immediately upon payment to Volkswagen Pension Trust e.V. Instead of a lifelong pension, benefits can optionally be paid out as a lump sum or in installments when the beneficiary reaches retirement age.

There were no changes to these commitments in fiscal year 2022.

The overview on the previous page shows the pensions for the individual members of the Board of Management in fiscal year 2022, indicating the present value and the pension expense for the Company during the last fiscal year.

c) Benefits and pension commitments to Board of Management members who left in fiscal year 2022

Ms. Werner, Mr. Diess, Ms. Wortmann and Mr. Aksel left the Board of Management in fiscal year 2022.

Mr. Diess was originally appointed as a member of the Volkswagen AG Board of Management until the close of October 24, 2025 and had been appointed Chair of the Board of Management. Mr. Diess's appointment to the Board of Management of Volkswagen AG was terminated early by mutual agreement with effect from the close of August 31, 2022. Due to this termination, Volkswagen AG concluded a termination agreement with Mr. Diess. The subject of this termination agreement included the continuation of his service contract until its regular termination date, i.e. until the close of October 24, 2025. Volkswagen AG agreed to continue paying Mr. Diess his remuneration until the termination date of his service contract. Variable remuneration components will be paid at the contractually agreed time; there will be no early calculation and payout. The annual bonus will be based in each case on a Governance factor of 1.0. Mr. Diess is entitled to fringe benefits and will be available to Volkswagen AG in an advisory capacity until the end of his service contract. He is not receiving a severance payment from Volkswagen AG in the form of a one-off payment.

Ms. Wortmann was originally appointed as a member of the Board of Management until the close of January 31, 2025. As part of changes to Group management, Ms. Wortmann's appointment to the Board of Management of Volkswagen AG and her service contract were terminated by mutual agreement with effect from the close of August 31, 2022. Since that time, Ms. Wortmann has been a member of extended Group Management. In this context, Volkswagen AG and Ms. Wortmann have concluded a termination agreement, under which Ms. Wortmann's remuneration for fiscal year 2022 is paid pro rata. Variable remuneration components will be paid at the contractually agreed time; there will be no early calculation and payout. Since September 1, 2022, a temporary employment contract for membership of extended Group Management has been in place between Ms. Wortmann and Volkswagen AG with an end date of January 31, 2025; the remuneration-related provisions of the Board of Management service contract will continue to apply for the duration of this employment contract. The appointment of Ms. Wortmann as a member of the Board of Management of AUDI AG – currently until the close of June 30, 2027 – remains unaffected by her move to extended Group Management.

Mr. Aksel was originally appointed as a member of the Board of Management until the close of December 31, 2023. As part of changes to Group management, Mr. Aksel's appointment to the Board of Management of Volkswagen AG and his service contract were terminated by mutual agreement with effect from the close of August 31, 2022. In this context, Volkswagen AG and Mr. Aksel have concluded a termination agreement, under which Mr. Aksel's remuneration for fiscal year 2022 is paid pro rata. Variable remuneration components will be paid at the contractually agreed time; there will be no early calculation and payout. From September 1, 2022, an employment contract for membership of extended Group Management was in place between Mr. Aksel and Volkswagen AG with an end date of December 31, 2022; the remuneration-related provisions of the Board of Management service contract continued to apply for that period. Mr. Aksel took over responsibility for Procurement on the MAN Truck & Bus Executive Board effective January 1, 2023.

2.2.4 No clawback claims in fiscal year 2022

Volkswagen AG did not seek to claw back any variable remuneration components from individual Board of Management members in fiscal year 2022. The prerequisites for a clawback claim did not apply.

IV. Remuneration of former Board of Management members

In accordance with section 162(1) sentence 1 of the AktG, the remuneration granted and owed to former members of the Board of Management must also be reported.

1. Remuneration granted and owed in fiscal year 2022 (individualized)

Under section 162(5) sentence 2 of the AktG, the obligation to report individually on the remuneration granted and owed to former Board of Management members also extends to remuneration granted and owed in the ten years after their most recent term of office on the Board of Management or Supervisory Board at Volkswagen AG.

The following tables show the remuneration granted and owed in fiscal year 2022 to the individual former members of the Board of Management who left after fiscal year 2012. As with the current Board of Management members, the annual bonus paid at the beginning of 2023 to former Board of Management members for the 2022 fiscal year is counted as remuneration granted in fiscal year 2022.

2. Total remuneration granted to former Board of Management members

Section 162(5) sentence 2 of the AktG does not require the Company to report individually on the remuneration granted and owed in 2022 to former members of the Board of Management whose most recent term of office on the Board of Management or Supervisory Board at Volkswagen AG came to an end before the beginning of 2013 and who were then granted and owed remuneration for more than ten years after leaving Volkswagen AG. A total of €9.2 million was granted and owed to such former Board of Management members and their surviving dependents in fiscal year 2022. Obligations for pensions for this group of persons measured in accordance with IAS 19 amounted to €91.6 million.

	KARLHEINZ BLESSING	
	2022	
	€	%
Pension payments	183,327.72	6.1
Base salary	–	–
Fringe benefits	6,339.00	0.2
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	2,832,871.72	93.7
Severance payments	–	–
Total remuneration granted and owed	**3,022,538.44**	**100.0**

	HERBERT DIESS[1]	
	2022	
	€	%
Pension payments	–	–
Base salary	745,000.00	22.0
Fringe benefits	59,525.00	1.8
One-year variable remuneration/annual bonus	579,209.85	17.1
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	2,009,123.48	59.2
Severance payments	–	–
Total remuneration granted and owed	**3,392,858.33**	**100.0**
Pension expenses	534,581.67	x
Total remuneration including pension expenses	**3,927,440.00**	**x**
Maximum remuneration	4,000,000.00	x

1 Mr. Diess was an active Board of Management member until August 31, 2022. The table shows his remuneration in fiscal year 2022 after his departure from the Board of Management.

	FRANCISCO JAVIER GARCIA SANZ	
	2022	
	€	%
Pension payments	729,600.00	37.7
Base salary	–	–
Fringe benefits	24,882.00	1.3
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	1,180,236.33	61.0
Severance payments	–	–
Total remuneration granted and owed	**1,934,718.33**	**100.0**

	JOCHEM HEIZMANN	
	2022	
	€	%
Pension payments	757,200.00	88.5
Base salary	–	–
Fringe benefits	20,737.50	2.4
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	77,464.31	9.1
Severance payments	–	–
Total remuneration granted and owed	**855,401.81**	**100.0**

	CHRISTINE HOHMANN-DENNHARDT	
	2022	
	€	%
Pension payments	108,201.36	74.9
Base salary	–	–
Fringe benefits	36,258.00	25.1
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	–	–
Severance payments	–	–
Total remuneration granted and owed	**144,459.36**	**100.0**

	MICHAEL MACHT	
	2022	
	€	%
Pension payments	739,200.00	97.1
Base salary	–	–
Fringe benefits	22,080.00	2.9
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	–	–
Severance payments	–	–
Total remuneration granted and owed	**761,280.00**	**100.0**

	MATTHIAS MÜLLER	
	2022	
	€	%
Pension payments	1,135,200.00	15.8
Base salary	–	–
Fringe benefits	15,464.50	0.2
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	6,027,370.44	84.0
Severance payments	–	–
Total remuneration granted and owed	**7,178,034.94**	**100.0**

	HORST NEUMANN	
	2022	
	€	%
Pension payments	675,224.55	97.1
Base salary	–	–
Fringe benefits	20,298.00	2.9
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	–	–
Severance payments	–	–
Total remuneration granted and owed	**695,522.55**	**100.0**

	LEIF ÖSTLING	
	2022	
	€	%
Pension payments	246,287.16	100.0
Base salary	–	–
Fringe benefits	–	–
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	–	–
Severance payments	–	–
Total remuneration granted and owed	**246,287.16**	**100.0**

	HANS DIETER PÖTSCH	
	2022	
	€	%
Pension payments	834,000.00	96.6
Base salary	–	–
Fringe benefits	28,944.00	3.4
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	–	–
Severance payments	–	–
Total remuneration granted and owed	**862,944.00**	**100.0**

	ANDREAS RENSCHLER	
	2022	
	€	%
Pension payments	168,267.70	3.0
Base salary	–	–
Fringe benefits	51,574.00	0.9
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	2,832,871.72	50.9
Severance payments	2,518,126.50	45.2
Total remuneration granted and owed	**5,570,839.92**	**100.0**

	ABRAHAM SCHOT	
	2022	
	€	%
Pension payments	–	–
Base salary	–	–
Fringe benefits	–	–
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	2,832,871.72	100.0
Severance payments	–	–
Total remuneration granted and owed	**2,832,871.72**	**100.0**

	RUPERT STADLER	
	2022	
	€	%
Pension payments	–	–
Base salary	–	–
Fringe benefits	787.30	100.0
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	–	–
Severance payments	–	–
Total remuneration granted and owed	**787.30**	**100.0**

	HILTRUD DOROTHEA WERNER[1]	
	2022	
	€	%
Pension payments	–	–
Base salary	–	–
Fringe benefits	–	–
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	2,596,799.08	100.0
Severance payments	–	–
Total remuneration granted and owed	**2,596,799.08**	**100.0**
Pension expenses	–	x
Total remuneration including pension expenses	**2,596,799.08**	**x**

1 Ms. Werner was an active Board of Management member until January 31, 2022. The table shows her remuneration in fiscal year 2022 after her departure from the Board of Management.

	MARTIN WINTERKORN	
	2022	
	€	%
Pension payments	1,208,400.00	97.7
Base salary	–	–
Fringe benefits	28,710.00	2.3
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	–	–
Severance payments	–	–
Total remuneration granted and owed	**1,237,110.00**	**100.0**

	FRANK WITTER	
	2022	
	€	%
Pension payments	443,413.72	13.5
Base salary	–	–
Fringe benefits	10,480.61	0.3
One-year variable remuneration/annual bonus	–	–
Multi-year variable remuneration/long-term incentive (LTI, performance share plan 2019 – 2021)	2,832,871.72	86.2
Severance payments	–	–
Total remuneration granted and owed	**3,286,766.05**	**100.0**

V. Comparative presentation

The following table shows a comparison of the year-on-year percentage change in the remuneration of current and former Board of Management members with the earnings performance of Volkswagen AG and with the average remuneration of employees on a full time equivalent basis. For members of the Board of Management, the remuneration granted and owed in the reporting year is placed in relation to the equivalent figure for the previous year.

Earnings performance is shown on the basis of Volkswagen AG's net income or loss for the year. However, the remuneration of the Board of Management members is based on Group KPIs. In order to demonstrate more transparently how the remuneration of the Board of Management members has changed compared with earnings performance, the earnings after tax, operating result and operating return on sales of the Volkswagen Group, as reported in the consolidated financial statements, are also used in determining earnings performance. This means that Group KPIs are not only applied in calculating the remuneration of the Board of Management members but also in determining earnings performance. The Group KPIs used in determining earnings performance show the overall effect of the business activities for which the Board of Management is responsible.

The comparison with the growth in average employee remuneration is based on the personnel expenses of Volkswagen AG reported in the notes to the annual financial statements of Volkswagen AG, adjusted for the remuneration of the members of the Board of Management. These adjusted personnel expenses are divided by the number of full time equivalent employees of Volkswagen AG as of December 31, 2022, excluding the members of the Board of Management.

VI. Peer group

The Supervisory Board regularly reviews and, if necessary, adjusts the level of the remuneration, the total remuneration cap and the individual targets. Among other things, the Supervisory Board performs a vertical comparison with the remuneration and employment terms of the Company's employees and a horizontal comparison with the remuneration and employment terms of other companies' management board members. The Supervisory Board conducts a comparison with what it considers to be a suitable peer group to assess whether the specific total remuneration paid to the members of the Board of Management is customary when measured against that paid in other companies. This peer group is regularly reviewed – most recently in December 2022 – and adjusted if necessary. The peer group currently comprises the following companies: BMW, Mercedes-Benz Group, Ford, General Motors, Stellantis, Nissan Motor Corporation, Toyota, BYD, Tesla (excluding CEO), hp, IBM, Uber, SAP, Samsung, General Electric, Siemens, Hitachi and Boeing. The companies in the peer group were chosen to reflect the Volkswagen Group's strategic business fields. The peer group used up to and including 2020 was revised and last adjusted following the adoption of the "Together 2025" strategy. To take proper account of the evolution of the Group's business model, in the view of the Supervisory Board, technology and services companies, especially in the battery/electronics, IT/software and mobility services segments, have also been included in the peer group along with the global automotive manufacturers. In addition, the peer group includes selected global industrial corporations that, in the view of the Supervisory Board, appear comparable with the Volkswagen Group in terms of their development focus, vertical integration, global orientation and level of complexity. In the view of the Supervisory Board, the composition of this peer group is representative of the Volkswagen Group's specific competitive environment in the sales market and in the recruitment market for top executives.

Annual change in %	2022 compared with 2021[1]	2021 compared with 2020[1]
Board of Management remuneration[2]		
Oliver Blume	+ 49.1 %	+ 74.8 %
Arno Antlitz	+ 28.8 %	–
Ralf Brandstätter (since January 1, 2022)	–	–
Markus Duesmann	–3.5 %	–56.6 %
Manfred Döss (since February 1, 2022)	–	–
Gunnar Kilian	+ 6.6 %	+ 128.3 %
Thomas Schäfer (since July 1, 2022)	–	–
Thomas Schmall-von Westerholt	–3.4 %	–
Hauke Stars (since February 1, 2022)	–	–
Murat Aksel (until August 31, 2022)	–34.5 %	–
Karlheinz Blessing	+ 346.3 %	–83.0 %
Herbert Diess (until August 31, 2022)[3]	+ 19.0 %	+ 40.1 %
Francisco Javier Garcia Sanz	+ 56.5 %	–43.8 %
Jochem Heizmann	–31.4 %	–50.7 %
Christine Hohmann-Dennhardt	+ 2.0 %	+ 2.7 %
Michael Macht	–1.4 %	+ 0.6 %
Matthias Müller	+ 408.4 %	–71.4 %
Horst Neumann	+ 0.3 %	+ 0.1 %
Leif Östling	+ 1.0 %	+ 1.0 %
Hans Dieter Pötsch	+ 2.5 %	–1.5 %
Andreas Renschler	–0.5 %	–0.2 %
Abraham Schot	–	–
Rupert Stadler	–99.8 %	–73.7 %
Hiltrud Dorothea Werner (until January 31, 2022)	–46.0 %	+ 6.6 %
Martin Winterkorn	+ 2.3 %	+ 0.2 %
Frank Witter	+ 22.2 %	–34.5 %
Hildegard Wortmann (February 1 to August 31, 2022)	–	–
Earnings performance		
Net income or loss for the year of Volkswagen AG	+ 208.8 %	–36.2 %
Earnings after tax of the Volkswagen Group	+ 2.6 %	+ 74.8 %
Operating result of the Volkswagen Group	+ 14.8 %	+ 99.2 %
Operating return on sales of the Volkswagen Group	+ 2.6 %	+ 79.1 %
Employees		
Volkswagen AG employees	+ 26.9 %	+ 9.2 %

1 Under the transitional provision of section 26j(2) sentence 2 of the *Einführungsgesetz zum Aktiengesetz* (EGAktG – Introductory Act to the German Stock Corporation Act), the comparative presentation is to be based on the average remuneration in the period since fiscal year 2020 only, rather than the average remuneration for the last five fiscal years; this provision applies until the end of fiscal year 2025.

2 Remuneration “granted and owed” within the meaning of section 162(1) sentence 1 of the AktG.

3 Remuneration “granted and owed” for the full fiscal year 2022 as an active Board of Management member and after his departure from the Board of Management.

B. REMUNERATION OF THE MEMBERS OF THE SUPERVISORY BOARD

I. Principles of Supervisory Board remuneration

Following its regular review of Supervisory Board remuneration, the Supervisory Board proposed a revision of the remuneration for the members of the Supervisory Board to the 2017 Annual General Meeting. The proposed revision to the Supervisory Board remuneration system was approved by the Annual General Meeting on May 10, 2017 with 99.98% of the votes cast. The remuneration of the members of the Supervisory Board is governed by Article 17 of the Articles of Association of Volkswagen Aktiengesellschaft. Section 113(3) of the AktG, as amended by ARUG II, requires the Annual General Meeting of listed companies to pass a resolution on the remuneration of Supervisory Board members at least every four years, whereby a resolution confirming the existing remuneration is also permissible. Information on the system in place for the remuneration of the Supervisory Board members must also be provided in this process. At the Annual General Meeting on July 22, 2021, the Supervisory Board and Board of Management presented the existing remuneration of the members of the Supervisory Board for confirmation and the remuneration system for approval. The Annual General Meeting on July 22, 2021 confirmed the remuneration and approved the remuneration system with 99.99% of the votes cast.

The remuneration of the members of the Supervisory Board of Volkswagen AG is comprised entirely of non-performance-related remuneration components. Until August 14, 2022, remuneration for supervisory board work at subsidiaries was comprised partly of non-performance-related and partly of performance-related components. Since August 15, 2022, remuneration for supervisory board work at subsidiaries has also been comprised entirely of non-performance-related remuneration components.

II. Overview of remuneration

The members of the Supervisory Board of Volkswagen AG receive fixed remuneration of €100,000 per fiscal year. The Chair of the Supervisory Board receives fixed remuneration of €300,000; the Deputy Chair receives fixed remuneration of €200,000.

For their work in the Supervisory Board committees, the members of the Supervisory Board also receive additional fixed remuneration of €50,000 per committee and fiscal year provided the committee met at least once that year for the performance of its duties. Memberships of the Nomination and Mediation Committees established in accordance with section 27(3) of the *Mitbestimmungsgesetz* (MitbestG – German Codetermination Act) are not taken into account. Committee chairs receive double this amount, while the deputy chairs receive one-and-a-half times the committee remuneration listed previously. Remuneration is paid for work on a maximum of two committees, whereby the two most highly remunerated functions are taken into account if this maximum is exceeded. Supervisory Board members who belonged to the Supervisory Board or one of its committees for only part of the fiscal year receive remuneration on a pro rata temporis basis. Any value-added tax incurred on the remuneration is reimbursed by the Company.

Supervisory Board members receive an attendance fee of €1,000 for attending a meeting of the Supervisory Board or one of its committees; if several meetings take place on the same day, the attendance fee is paid only once.

The remuneration and attendance fees are each payable after the end of the fiscal year.

The remuneration enables suitable, qualified candidates to be recruited to the Supervisory Board. As such, the remuneration of the members of the Supervisory Board contributes to the ability of the Supervisory Board as a whole to properly and competently perform its duties of monitoring and advising the Board of Management. Restricting the payment to fixed remuneration is also appropriate to the duties of the Supervisory Board. The restriction provides the Supervisory Board members with an incentive in their monitoring and advisory duties to properly scrutinize the activities of the Board of Management without being guided primarily by the performance of key operating ratios.

Former members of the Supervisory Board of Volkswagen AG do not receive any remuneration for the period following the termination of office.

III. Other remuneration

Volkswagen AG reimburses Supervisory Board members for the expenses they incur in the course of their work. In accordance with Article 17(7) sentence 2 of the Articles of Association of Volkswagen AG, the members of the Supervisory Board were also covered in the reporting year by the directors and officers (D&O) insurance taken out by the Company in their interest. The Company paid the premiums for the D&O insurance. There was a deductible of at least 10% of the damage up to at least one-and-a-half times the fixed remuneration of the relevant Supervisory Board member. There is no voluntary commitment by members of the Supervisory Board to buy and hold shares of Volkswagen AG.

IV. Remuneration to Supervisory Board members in fiscal year 2022

1. Supervisory Board members in fiscal year 2022

The members of the Volkswagen AG Supervisory Board in office during the 2022 fiscal year are listed in the table below.

2. Remuneration granted and owed

The following table shows the remuneration individually granted and owed to each of the Supervisory Board members in fiscal year 2022. This is based on the same understanding of the term “granted and owed” as set out on page 6 of this remuneration report. The remuneration reported in the table therefore reflects the amounts actually received in fiscal year 2022.

€ (%)	FIXED REMUNERATION 2022	WORK IN THE COMMITTEES 2022	MEETING ATTENDANCE FEES 2022	TOTAL 2022	REMUNERATION FOR SERVING ON THE BOARDS OF OTHER GROUP COMPANIES[1] 2022
Hans Dieter Pötsch	300,000.00 (71.4 %)	100,000.00 (23.8 %)	20,000.00 (4.8 %)	**420,000.00**	512,605.48
Jörg Hofmann[2]	200,000.00 (64.1 %)	75,000.00 (24.0 %)	37,000.00 (11.9 %)	**312,000.00**	–
Hussain Ali Al Abdulla (until May 12, 2022)	36,164.38 (87.9 %)	–	5,000.00 (12.1 %)	**41,164.38**	–
Hessa Sultan Al Jaber	100,000.00 (90.1 %)	–	11,000.00 (9.9 %)	**111,000.00**	–
Mansoor Ebrahim Al-Mahmoud (since May 12, 2022)	63,835.62 (56.1 %)	41,917.81 (36.8 %)	8,000.00 (7.0 %)	**113,753.43**	–
Bernd Althusmann (until November 8, 2022)[3]	85,479.45 (88.6 %)	–	11,000.00 (11.4 %)	**96,479.45**	–
Harald Buck (since October 4, 2022)[2]	24,109.59 (88.9 %)	–	3,000.00 (11.1 %)	**27,109.59**	175,936.73
Matías Carnero Sojo[4]	–	–	–	**–**	–
Daniela Cavallo[2]	100,000.00 (42.2 %)	97,876.71 (41.3 %)	39,000.00 (16.5 %)	**236,876.71**	137,671.23
Hans-Peter Fischer (until May 12, 2022)[2]	36,164.38 (87.9 %)	–	5,000.00 (12.1 %)	**41,164.38**	–
Julia Willie Hamburg (since November 8, 2022)[3]	14,520.55 (87.9 %)	–	2,000.00 (12.1 %)	**16,520.55**	–
Marianne Heiß	100,000.00 (59.2 %)	50,000.00 (29.6 %)	19,000.00 (11.2 %)	**169,000.00**	75,000.00
Arno Homburg (since May 12, 2022)[2]	63,835.62 (85.3 %)	–	11,000.00 (14.7 %)	**74,835.62**	–
Ulrike Jakob (until May 12, 2022)[2]	36,164.38 (87.9 %)	–	5,000.00 (12.1 %)	**41,164.38**	–
Louise Kiesling (until December 9, 2022)	93,972.60 (92.2 %)	–	8,000.00 (7.8 %)	**101,972.60**	–
Simone Mahler (since May 12, 2022)[2]	63,835.62 (85.3 %)	–	11,000.00 (14.7 %)	**74,835.62**	–
Peter Mosch[2]	100,000.00 (46.7 %)	77,123.29 (36.0 %)	37,000.00 (17.3 %)	**214,123.29**	186,250.00
Bertina Murkovic (until May 12, 2022)[2]	36,164.38 (53.0 %)	18,082.19 (26.5 %)	14,000.00 (20.5 %)	**68,246.57**	–
Daniela Nowak (since May 12, 2022)[2]	63,835.62 (85.3 %)	–	11,000.00 (14.7 %)	**74,835.62**	–
Hans Michel Piëch	100,000.00 (58.8 %)	50,000.00 (29.4 %)	20,000.00 (11.8 %)	**170,000.00**	206,105.48
Ferdinand Oliver Porsche	100,000.00 (51.8 %)	79,041.10 (40.9 %)	14,000.00 (7.3 %)	**193,041.10**	204,804.11
Wolfgang Porsche	100,000.00 (58.8 %)	50,000.00 (29.4 %)	20,000.00 (11.8 %)	**170,000.00**	300,680.83
Jens Rothe[2]	100,000.00 (55.3 %)	52,876.71 (29.2 %)	28,000.00 (15.5 %)	**180,876.71**	–
Conny Schönhardt[2]	100,000.00 (59.2 %)	50,000.00 (29.6 %)	19,000.00 (11.2 %)	**169,000.00**	–
Stephan Weil[3]	100,000.00 (54.1 %)	50,000.00 (27.0 %)	35,000.00 (18.9 %)	**185,000.00**	–
Werner Weresch (until September 30, 2022)[2]	74,794.52 (89.3 %)	–	9,000.00 (10.7 %)	**83,794.52**	84,528.76
Total	**2,192,876.71**	**791,917.81**	**402,000.00**	**3,386,794.52**	**1,883,582.62**

1 The remuneration for membership of other Group bodies includes variable remuneration components for the following members of the Supervisory Board: Hans Dieter Pötsch (€150,427.40), Harald Buck (€110,950.43), Daniela Cavallo (€45,000.00), Marianne Heiß (€5,000.00), Peter Mosch (€46,250.00), Hans Michel Piëch (€68,927.40), Ferdinand Oliver Porsche (€67,626.03), Wolfgang Porsche (€96,324.66), Werner Weresch (€34,158.90).

2 These employee representatives have stated that they will transfer their Supervisory Board remuneration to the Hans Böckler Foundation in accordance with the guidelines issued by the *Deutscher Gewerkschaftsbund* (DGB –German Confederation of Trade Unions).

3 Under section 5(3) of the *Niedersächsisches Ministergesetz* (German Act Governing Ministers of the State of Lower Saxony), these members of the Supervisory Board are obliged to transfer their Supervisory Board remuneration to the State of Lower Saxony as soon as and in so far as it exceeds €6,200 per annum. Remuneration is defined for this purpose as Supervisory Board remuneration and attendance fees exceeding the amount of €200.

4 Mr. Carnero Sojo waived his remuneration for fiscal year 2022 in its entirety.

V. Comparative presentation

The following table compares the year-on-year percentage change in the remuneration of the Supervisory Board members with the earnings performance of Volkswagen AG and with the average remuneration of employees on a full time equivalent basis.

Earnings performance is shown on the basis of Volkswagen AG's net income or loss for the year. The Volkswagen Group's earnings after tax are also used as a Group KPI.

The comparison with the growth in average employee remuneration is based on the personnel expenses of Volkswagen AG reported in the notes to the annual financial statements of Volkswagen AG, adjusted for the remuneration of the members of the Board of Management. These adjusted personnel expenses are divided by the number of full time equivalent employees of Volkswagen AG as of December 31, 2022, excluding the members of the Board of Management.

Annual change in %	2022 compared with 2021[1]	2021 compared with 2020[1]
Supervisory Board remuneration[2]		
Hans Dieter Pötsch	+ 2.0 %	+ 1.5 %
Jörg Hofmann	+ 7.6 %	–3.0 %
Hussain Ali Al Abdulla (until May 12, 2022)	–60.4 %	+ 1.0 %
Hessa Sultan Al Jaber	+ 4.7 %	–2.8 %
Mansoor Ebrahim Al-Mahmoud (since May 12, 2022)	–	–
Bernd Althusmann (until November 8, 2022)	–39.3 %	–2.5 %
Harald Buck (since October 4, 2022)	–	–
Matías Carnero Sojo	–	–
Daniela Cavallo	+ 67.9 %	–
Hans-Peter Fischer (until May 12, 2022)	–62.6 %	–2.7 %
Julia Willie Hamburg (since November 8, 2022)	–	–
Marianne Heiß	–0.7 %	+ 2.6 %
Arno Homburg (since May 12, 2022)	–	–
Ulrike Jakob (until May 12, 2022)	–62.6 %	–2.7 %
Louise Kiesling (until December 9, 2022)	–5.6 %	–4.4 %
Simone Mahler (since May 12, 2022)	–	–
Peter Mosch	+ 6.4 %	+ 2.1 %
Bertina Murkovic (until May 12, 2022)	–68.4 %	+ 7.8 %
Daniela Nowak (since May 12, 2022)	–	–
Hans Michel Piëch	+ 5.4 %	+ 13.5 %
Ferdinand Oliver Porsche	–6.8 %	+ 3.1 %
Wolfgang Porsche	–2.3 %	+ 8.9 %
Jens Rothe	+ 754.5 %	–
Conny Schönhardt	+ 4.3 %	–3.0 %
Stephan Weil	+ 13.5 %	–4.1 %
Werner Weresch (until September 30, 2022)	–17.3 %	+ 9.1 %
Earnings performance		
Net income or loss for the year of Volkswagen AG	+ 208.8 %	–36.2 %
Earnings after tax of the Volkswagen Group	+ 2.6 %	+ 74.8 %
Employees		
Volkswagen AG employees	+ 26.9 %	+ 9.2 %

1 Under the transitional provision of section 26j(2) sentence 2 of the *Einführungsgesetz zum Aktiengesetz* (EGAktG – Introductory Act to the German Stock Corporation Act), the comparative presentation is to be based on the average remuneration in the period since fiscal year 2020 only, rather than the average remuneration for the last five fiscal years; this provision applies until the end of fiscal year 2025.

2 Remuneration "granted and owed" within the meaning of section 162(1) sentence 1 of the AktG.

4

GROUP MANAGEMENT REPORT

(Combined Management Report of the Volkswagen Group and Volkswagen AG)

Goals and Strategies

With the Group strategy NEW AUTO – Mobility for generations to come, we are preparing ourselves for the global changes in mobility and thus playing a substantial role in driving Volkswagen's transformation into a software-oriented company.

In the context of the fast-changing environment and the challenges resulting from it, the Group Board of Management adopted the Group strategy NEW AUTO – Mobility for generations to come in May 2021 with the approval of the Supervisory Board. The strategy's focus is the world of mobility in 2030.

As technology advances, the automotive industry is rapidly forging ahead with its transformation toward e-mobility and digitalization. We therefore expect the market for electric vehicles to grow strongly in the next few years, meaning that the cost-efficient and sustainable production of battery systems and the expansion of the charging infrastructure will be crucial to success.

The shift to connected, intelligent and eventually self-driving vehicles will, however, bring more wide-reaching changes for the automotive industry. Autonomous driving will change the customer's mobility experience forever and lay the ground for new business models. Sources of revenue will gradually shift and will expand beyond the core product of the automobile. Increasing software development capabilities in order to excite customers with constantly improving digital functionality is the prerequisite for this.

In equal measure to technological trends, the global economic and geopolitical environment is also posing increased challenges for the automotive industry. These include, for example, the economic influence of the largest mobility markets, China, the USA and Europe, and their diverging development.

Sustainability will continue to be a recurring theme in the business world and will gain further pertinence, driven by the increasingly noticeable consequences of climate change, a greater consciousness of sustainable lifestyles on the part of the customer and, not least, underlying factors such as the Paris Climate Agreement. As we transition from automotive manufacturer to mobility group, we are resetting our priorities with NEW AUTO and positioning ourselves for the future. We are keeping our aim of being a world-leading provider of sustainable mobility firmly in our sights and making the Group more focused, efficient, innovative, customer-oriented and sustainable, as well as systematically gearing it toward profitable growth.

To this end, we have established 12 Group initiatives across the brand groups. We will use these to develop the competences needed to implement the strategy. The focus is on the main multidisciplinary areas addressed by our technology platforms – mechatronics, software, battery & charging, and mobility solutions – on which the five tech initiatives described below are based. A further seven base initiatives form the foundation for the Volkswagen Group's strategic realignment.

THE 12 GROUP INITIATIVES OF THE NEW AUTO STRATEGY

These are ESG, Decarbonization & Integrity, Business Model 2.0, North America (NAR) Region, China Region, Group Steering Model, People & Transformation and Financing the Transformation.

To make the progress in the relevant Group initiatives of our strategy as transparent as possible for management and employees, the Group Board of Management decided to structure and regularly measure the strategic goals and milestones using the OKR (Objectives and Key Results) method. Accordingly, achievable strategic objectives and envisaged key results are defined for each Group initiative. These are to be realized largely through time-limited projects and work packages, each of which is measured by specific key performance indicators. The degree of achievement is discussed three times a year with the Board of Management. As such, the relevance of the initiatives, and their objectives, milestones, projects and work packages, are regularly reviewed at Group level. Their focus is continuously monitored and adjusted as necessary or integrated into standard operations.

The current Group initiatives covered by the strategy are described below. We report on the main strategic objectives and interim results achieved in the reporting period in the chapters “Internal Management System and Key Performance Indicators”, “Structure and Business Activities” and “Sustainable Value Enhancement”.

MECHATRONICS – BACKBONE AND SCALABLE SYSTEMS PLATFORM

A future-oriented mechatronics platform will form the backbone for innovations, technology and lasting competitiveness at Volkswagen. With the Scalable Systems Platform (SSP), we are creating the next generation of an all-electric, fully digital and highly scalable mechatronics platform based on a standardized software architecture. With this standardized platform, which can be scaled from the smallest vehicles all the way up to the premium segment, the Volkswagen Group aims to rapidly and efficiently provide its customers with innovative functions and technologies in their vehicles, across all brands. By reducing complexity and the number of versions, the SSP will offer maximum synergies and make fast, regular technology updates possible, while lowering investment costs and ensuring the necessary differentiation between the products of the individual brands in the Group’s portfolio.

SOFTWARE – CARIAD: ONE E^3 PLATFORM AND AUTONOMOUS DRIVING (AD) STACK

The purpose of the Group's own software and technology company CARIAD is to create the technical basis for data-based business models, new mobility services and automated driving (Level 4), and to leverage cross-brand synergies. Our aim is to increase the proportion of software in the vehicle that is developed in house.

CARIAD is already working with the Porsche and Audi brands to introduce the new E^3 1.2 platform, which optimizes the harmonization of the hardware with the vehicle software from CARIAD. This facilitates the deployment of over-the-air updates and is a key lever for introducing new services even after vehicle production has begun.

In the long term, the standardized E^3 software architecture that is already being developed, together with the VW.OS software platform and the Volkswagen Automotive Cloud, will form the basis of a complete digital ecosystem, offering customers a wide range of software-based services throughout the product life-cycle. The aim is for every function that is needed or requested and every service to be customized for the users in the various markets and to be available for download at any time. This will also open up new sources of revenue for us.

Applications at various levels of automated driving (up to Level 4) will be gradually introduced to the new vehicle models in the Group brands.

BATTERY & CHARGING – CELL AND BATTERY STRATEGY

The battery is a key component in an electric vehicle, and an important cost factor. The appeal and market success of e-mobility is determined not only by the price, but also by the vehicle´s range and the charging speed. We must become a profit-generating expert across the entire battery life cycle to achieve our objective of transforming into a world-leading provider of sustainable mobility. To this end, the Cell and Battery Strategy tech initiative pools expertise across the Group and is driving the transformation process in cooperation with our strategic partners. The aspects covered include battery management, cell production and recycling. Our aim is to develop battery cell technology into a core competence in the Group, and we are also working with partners to achieve this. At the heart of this strategy is the new unified cell, which can contain different chemistries and will be used in up to 80% of Group models by 2030. The excellent economies of scale this generates will reduce costs by up to 50% and put us in a leading cost position. To cover the high demand for battery cells, Volkswagen plans to build six gigafactories in Europe alone, with a production capacity totaling 240 GWh.

BATTERY & CHARGING – CHARGING AND ENERGY SERVICES

Charging, energy and a sustainable energy supply infrastructure for all-electric vehicles are key prerequisites for accelerating the transition to the battery-electric mobility of the future. It is therefore our intention also to become a comprehensive charging and energy services provider in the future and we are investing heavily in building an open fast-charging network worldwide. By 2025, we and our partners plan to create around 45,000 high-power charging points in Europe, China and the USA. The product portfolio also includes the full range of charging solutions for private customers and companies. In addition to our own wallbox and flexible fast-charging station, the focus is particularly on contract-based charging services and smart green electricity tariffs. Charging processes will then systematically use renewable energy and reduce pressure on power grids. In a next step, Volkswagen intends to develop the electric vehicle as a mobile power bank, thus helping electric vehicles to act as storage units and thus become an active part of the energy system in the future. In this way, Volkswagen wishes to enable its customers to participate in one of the leading smart-charging and energy ecosystems for decarbonized mobility.

MOBILITY SOLUTIONS

In keeping with its mission statement, “Mobility for generations to come”, the Volkswagen Group is developing mobility solutions for the future, taking into account global trends and changes in customer needs. The Group plans to bring together all of its brands’ mobility services on one mobility platform over the coming years. Autonomous driving combined with new mobility solutions is expected to mark Volkswagen’s transformation into a leading provider of sustainable mobility. A vehicle fleet covering all of the many services, from vehicle rental to car subscription and ride pooling, will ensure high availability, usage and profitability. With these solutions, we plan to gain market shares and generate long-term competitive and attractive margins.

ESG, DECARBONIZATION AND INTEGRITY

ESG (Environmental, Social, and Governance) refers to the basic principles of doing business sustainably. The Group’s stakeholders (e.g. investors, employees, customers and non-profit organizations) have high expectations of the Company’s ESG performance, including in areas such as decarbonization and integrity, and also of its conduct as an employer and as part of society. The Group's ESG performance therefore directly affects its market capitalization, cost of capital and investing activities. We aim for a top position relative to our competitors in sustainability ratings. We are committed to the Paris Climate Agreement and align our own activities with the 1.5-degree target. We aim to achieve net carbon neutrality by 2050. By 2030, we have also set ourselves the target of reducing CO_2 emissions from passenger cars and light commercial vehicles over the total life cycle by 30% compared with 2018. As part of this effort, we are looking for ways to increase the proportion of recyclable materials in our vehicles. We also wish to become the benchmark for ethical corporate conduct. Volkswagen sees itself as an equal opportunities employer. The intention is therefore for at least a fifth of Company management positions to be held by women by 2025, and for at least a quarter to be held by international managers.

BUSINESS MODEL 2.0

The Business Model 2.0 base initiative is developing a Group-wide portfolio of services, the purpose of which is to create a seamless and innovative product experience to connect brands, customers, dealerships, our partners and whole markets. The aim is for the key technologies needed for this to be integrated into a majority of the platform-based vehicles by 2030. Using connected vehicles, the Group’s brands are to be able in future to remain in contact with their customers throughout the entire vehicle life cycle and thus to offer them services and functions for their individual needs. This will allow us to build a competitive, data-driven service portfolio that also maintains our leading position in the automotive market in future.

NORTH AMERICA (NAR) REGION

For the Volkswagen Group, North America, and particularly the USA, is the region with the greatest growth potential, especially where e-mobility is concerned. We intend North America to become our third core region alongside Europe and China by 2030. Our aim there is to achieve a very strong increase in total market share for the Volkswagen Group by then.

We aspire to further expand our presence in the region with strong brands and prepare ourselves for the future with market-specific products.

We also wish to participate to a disproportionately high extent in the growth of the increasingly electrified markets in the USA and Canada. We will therefore substantially expand our range of all-electric models across the Group and develop models specifically for these markets. The proportion of battery-electric vehicles in our sales in the USA and Canada is to increase to 55% by 2030.

In addition, we wish to maximize the potential for synergies in the region and build significantly more expertise, industrial capacity and vertical value chains in the North America region.

CHINA REGION

China is of major strategic significance to the Volkswagen Group as its largest single market, and we expect it to continue growing in the future. All key measures are therefore brought together in this strategic base initiative in order to continue Volkswagen’s success story in China. The activities include a comprehensive program of measures with a focus on cost, long-term technological competitiveness, localized development activities that are tailored to the market, and the further consolidation of our existing partnerships.

Our aim is to achieve high market shares in the electric vehicle segment and establish ourselves as a leading provider. For vehicles with combustion engines, our aim is to maintain our share of the market, as these will also make a contribution to profit in future with high unit sales. We are therefore continuing to accelerate our Group-wide localization strategy in China so as to offer our Chinese customers tailor-made products, and we are using not only global platform technologies (hardware and software), but are increasingly employing platform technologies that have been developed locally. In this way, we wish to stand our ground against the constantly growing competition in the new intelligent connected vehicle (ICV) segment.

GROUP STEERING MODEL

To achieve the objectives of the Group strategy and thereby safeguard the Volkswagen Group’s long-term success, we are extensively optimizing our Group steering model. It is essential that we establish a consistently high level of mechanisms that facilitate swift decision-making, the development and use of platform technologies and the exploitation of synergies, and that we constantly enhance these. The updated Group Steering Model places the brand groups and technology platforms center stage in order to scale up the latter while maximizing synergies across the entire Group product portfolio. A new strategy and product planning process that has been optimized for efficiency is being developed on the basis of this approach. The package of measures for this initiative hones the definition of roles and responsibilities in the Group and improves transparency in this respect both inside and outside the Company. It also promotes the entrepreneurship of the independent units and brands and at the same time strengthens collaboration across the Group.

PEOPLE & TRANSFORMATION

As it becomes a global tech company, the Volkswagen Group will see the biggest transformation of its workforce in its corporate history. To ensure the Group remains competitive in future, we need to attract top talent and support existing employees by providing extensive training where required. Our aim is to retain staff for the long term. It is therefore fundamental that we address the changing needs of our employees and offer them an outstanding employee experience. To achieve our Group’s ambitious objectives, we must also create and promote an environment for productive teams, resulting in a strong, sustainable and socially responsible corporate culture that fosters a sense of belonging and loyalty to the Company. A further focus is on aligning the Company with society and the environment.

FINANCING THE TRANSFORMATION

The transformation being driven by digitalization and electrification will require extensive investment. To meet this need for financing, the Financing the Transformation base initiative aims to leverage even more Group-wide synergies across all functional areas along the value chain, focusing on costs and efficiency. The Group has therefore set itself the objective of lasting improvements to its fixed-cost structure, plant productivity, procurement costs, distribution expenses and working capital management.

STRATEGIC FINANCIAL KEY PERFORMANCE INDICATORS[1]

	2015	Target 2025
Operating return on sales[2]	6.0%	8 to 9%
Research and development ratio (R&D ratio) in the Automotive Division	7.4%	~6%
Ratio of capex to sales revenue in the Automotive Division	6.9%	~5%
Net cash flow in the Automotive Division	€8,887 million	>€10 billion
Distribution ratio	negative	≥30%
Net liquidity in the Automotive Division	€24,522 million, 11.5%	~10% of consolidated sales revenue
Return on investment (ROI) in the Automotive Division	–0.2%	>15%

1 The design of the strategic financial key performance indicators is currently under revision.
2 2015 before special items.

Internal Management System and Key Performance Indicators

This chapter describes how the Volkswagen Group is managed and the key performance indicators used for this purpose. In addition to financial measures, our management system also contains nonfinancial key performance indicators.

The Volkswagen Group's performance and success are expressed in both financial and nonfinancial key performance indicators.

In the following, we first describe the internal management process and then explain the Volkswagen Group's most significant performance indicators, known as the core performance indicators.

INTERNAL MANAGEMENT PROCESS IN THE VOLKSWAGEN GROUP

Consistent, close integration of the Group and brand strategies with the operational planning process ensures transparency at the Volkswagen Group when it comes to the financial assessment and evaluation of strategic decisions. The operational medium-term planning that is conducted once a year and generally covers a period of five years is incorporated into the strategic planning as a key management element of the Group.

Medium-term planning forms the core of our operational planning and is used to formulate and safeguard the requirements for realizing strategic projects designed to meet Group targets in both technical and economic terms – and particularly in relation to earnings, cash flow and liquidity effects. In addition, it is used to coordinate all business areas with respect to the strategic action areas concerned, namely functions/processes, products and markets.

When planning the Company's future, the individual planning components are determined on the basis of the timescale involved:

- The long-term unit sales plan, which sets out market and segment growth and then derives the Volkswagen Group's delivery volumes from this
- The product program as the strategic, long-term factor determining corporate policy
- Capacity and utilization planning for the individual site.

The coordinated results of the upstream planning processes are used as the basis for the medium-term financial planning: the Group's financial planning, including the brands and business fields, comprises the income statement, cash flow and balance sheet planning, profitability and liquidity, as well as the upfront investments needed for alternative products and the implementation of strategic options in the future. The first year of the medium-term planning period is fixed and a budget drawn up for the individual months. This is planned in detail down to the level of the operating cost centers.

The budget is reviewed each month to establish the target achievement level. Key internal management instruments comprise target/actual comparisons, prior-year comparisons, variance analyses and, where necessary, action plans to ensure targets are met. For the current fiscal year, detailed revolving monthly forecasts are prepared for the coming three months and the full year, taking into account the current risks and opportunities. The focus of intrayear internal management is therefore on adapting ongoing activities. The current forecast serves as a corrective to the medium-term and budget planning that follows on from it.

CORE PERFORMANCE INDICATORS IN THE VOLKSWAGEN GROUP

Based on our management process, the Volkswagen Group has defined nine core performance indicators:
- Deliveries to customers
- Sales revenue
- Operating result
- Operating return on sales
- Research and development ratio (R&D ratio) in the Automotive Division
- Ratio of capex to sales revenue in the Automotive Division
- Net cash flow in the Automotive Division
- Net liquidity in the Automotive Division
- Return on investment (ROI) in the Automotive Division

Deliveries to customers are defined as handovers of new vehicles to the end customer. This figure shows the popularity of our products and is the measure we use to determine our competitive position in the various markets. Deliveries are closely related to our goal of transforming the Volkswagen Group into a world-leading, software-oriented mobility provider. One of the most important prerequisites for the Company's long-term success is a strong brand portfolio that – on the basis of outstanding quality – offers tailor-made mobility solutions with safe, connected, resource-efficient and thus largely emission-free vehicles that meet the diverse needs of customers. Demand for our products and mobility services guarantees not only unit sales and production, but also full utilization of our sites and the jobs of our employees. The goals we are striving for cannot be achieved without a skilled, flexible and dedicated workforce and a consensus on shared values.

Sales revenue, which does not include the figures for our equity-accounted Chinese joint ventures, reflects our market success in financial terms. Following adjustment for our use of resources, the operating result reflects the Company's actual business activity and documents the economic success of our core business. The operating return on sales is the ratio of the operating result to sales revenue.

The research and development ratio (R&D ratio) in the Automotive Division shows total research and development costs in relation to sales revenue. Research and development costs comprise a range of expenses, from futurology through to the development of marketable products. Particular emphasis is placed on the environmentally friendly orientation and digitalization of our product portfolio, the expansion of our battery expertise, the development of software and new platforms and the creation of new technologies. The R&D ratio reflects our activities undertaken to safeguard the Company's future viability.

The ratio of capex (investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs) to sales revenue in the Automotive Division reflects both our innovative power and our future competitiveness. It shows our capital expenditure – largely for modernizing, expanding, electrifying and digitalizing our product range and for environmentally friendly drivetrains, as well as for adjusting production capacities and improving production processes – in relation to the Automotive Division's sales revenue.

Net cash flow in the Automotive Division represents the excess funds from operating activities available for dividend payments, for example. It is calculated as cash flows from operating activities less cash flows from investing activities attributable to operating activities.Net liquidity in the Automotive Division is the total of cash, cash equivalents, securities, time deposits and loans not financed by third-party borrowings. To safeguard our business activities, we have formulated the strategic target that net liquidity in the Automotive Division should amount to approximately 10% of the consolidated sales revenue.

We use the return on investment (ROI) to calculate the return on invested capital for a particular period in the Automotive Division, including the equity-accounted Chinese joint ventures on a proportionate basis, by calculating the ratio of the operating result after tax to average invested capital. If the return on investment (ROI) exceeds the market cost of capital, the value of the Company has increased. This is how we measure the financial success of our brands, locations and vehicle projects.

To achieve our strategic goals, we are pursuing the Financing the Transformation base initiative. In fiscal year 2022, we further stepped up our activities and concentrated on optimizing working capital management.

Structure and Business Activities

This chapter describes the legal and organizational structure of the Volkswagen Group and explains the material changes in 2022 with respect to equity investments.

OUTLINE OF THE LEGAL STRUCTURE OF THE GROUP

Volkswagen AG is the parent company of the Volkswagen Group. It develops vehicles and components for the Group brands, but also produces and sells vehicles, in particular passenger cars and light commercial vehicles for the Volkswagen Passenger Cars and Volkswagen Commercial Vehicles brands. In its capacity as parent company, Volkswagen AG holds direct or indirect interests in AUDI AG, SEAT S.A., ŠKODA AUTO a.s., Dr. Ing. h.c. F. Porsche AG, TRATON SE, Volkswagen Financial Services AG, Volkswagen Bank GmbH and a large number of other companies in Germany and abroad. More detailed disclosures are contained in the list of shareholdings in accordance with sections 285 and 313 of the *Handelsgesetzbuch* (HGB – German Commercial Code), which can be accessed at www.volkswagenag.com/en/InvestorRelations.html and is part of the annual financial statements.

Volkswagen AG is a vertically integrated energy supply company as defined by section 3 no. 38 of the *Energiewirtschaftsgesetz* (EnWG – German Energy Industry Act) and is therefore subject to the provisions of the EnWG. In the electricity sector, Volkswagen AG generates, sells and distributes electricity as a group together with its subsidiaries.

The Volkswagen AG Board of Management has sole responsibility for managing the Company. The Supervisory Board appoints, monitors and advises the Board of Management; it is consulted directly on decisions that are of fundamental significance for the Company.

ORGANIZATIONAL STRUCTURE OF THE GROUP

The Volkswagen Group is one of the leading multibrand groups in the automotive industry. The Company's business activities comprise the Automotive and Financial Services divisions. Our core brands within the Automotive Division – with the exception of the Volkswagen Passenger Cars and Volkswagen Commercial Vehicles brands – are independent legal entities.

The Automotive Division comprises the Passenger Cars, Commercial Vehicles and Power Engineering business areas.

The Passenger Cars Business Area primarily consolidates the Volkswagen Group's passenger car brands and the Volkswagen Commercial Vehicles brand. Activities focus on the development of vehicles, engines and vehicle software, the production and sale of passenger cars and light commercial vehicles, and the genuine parts business. The product portfolio ranges from compact cars to luxury vehicles and also includes motorcycles, and is supplemented by mobility solutions.

The Commercial Vehicles Business Area primarily comprises the development, production and sale of trucks and buses, the corresponding genuine parts business and related services. The commercial vehicles portfolio ranges from light vans to heavy trucks and buses. The collaboration between the commercial vehicle brands is coordinated within TRATON SE.

The Power Engineering Business Area combines the large-bore diesel engines, turbomachinery and propulsion components businesses.

The Financial Services Division's activities comprise dealer and customer financing, vehicle leasing, direct banking and insurance activities, fleet management and mobility services.

With its brands, the Volkswagen Group is present in all relevant markets around the world. The key sales markets currently include Western Europe, China, the USA, Brazil, Poland, Mexico, Türkiye and Czech Republic.

Volkswagen AG and the Volkswagen Group are managed by the Volkswagen AG Board of Management in accordance with the Volkswagen AG Articles of Association and the rules of procedure for Volkswagen AG's Board of Management issued by the Supervisory Board.

Accordingly, responsibilities were divided among eleven board-level management functions starting from January 1, 2022. In addition to the "Chair of the Board of Management", a function which also includes the "Volume" brand group, the other Board functions were "Purchasing", "Technology", "Finance", "Human Resources and Truck & Bus", "Integrity and Legal Affairs", "Premium", "Sport & Luxury", "IT", "China" and "Volkswagen Passenger Cars". A new "Group Sales" function was created with effect from February 1, 2022.

As of September 1, 2022, the Volkswagen Group refined its Group management. The Board of Management was streamlined and the division of responsibilities was reorganized. As a result, the "Purchasing" and "Group Sales" Board functions were dissolved. Furthermore, the "Volkswagen Passenger Cars" function was renamed "Volume". Since then, responsibilities have been divided among ten board-level management functions. In addition to the "Chair of the Board of Management", the other Board functions are "Technology", "Finance", "Human Resources and Truck & Bus", "Integrity and Legal Affairs", "Volume", "Premium", "Sport & Luxury", "IT" and "China". The Chair of the Board of Management is also responsible for "Sport & Luxury".

Directly attached to the Board are a number of Group Management functions that act as an extension to the board-level management functions. These comprise "Group Sales", "Group Production", "Procurement" and "Technical Architecture" functions.

The allocation of responsibilities on the Board of Management is based on the schedule of responsibilities decided by the Supervisory Board, which takes into account the changes in management during the reporting period. The way this is structured helps the Board of Management to focus on key tasks such as strategy, central decisions on the Company's direction, capital allocation and financial requirements. The task of the extended board-level management functions is to leverage synergies in the Group and to connect the brands and divisions.

In addition, at Group level, Board of Management committees address key strategic issues relating to products, technologies, investments, digital transformation, integrity and compliance, risk management, human resources and management issues. We are continually revising and optimizing the committees in order to verify that they still align with our corporate strategy and to further increase the efficiency of their decision making. This reduces complexity and reinforces governance within the Group.

The matrix of brand groups and technology platforms created under the Group Steering Model base initiative from the NEW AUTO Group strategy was enhanced in both dimensions during the reporting period. This involved both strengthening the brand groups and creating new units for key technology areas of the future within our strategic technology platforms. The Group steering model will be further refined in future on this basis.

The Volume brand group comprises the Volkswagen Passenger Cars, ŠKODA, SEAT/CUPRA and Volkswagen Commercial Vehicles brands. The Premium brand group comprises the Audi, Lamborghini, Bentley and Ducati brands. The Sport & Luxury brand group consists of the Porsche brand. The company responsible for this brand, Dr. Ing. h.c. F. Porsche AG, has been listed on the stock market since the end of September 2022. In the Truck & Bus brand group, TRATON SE acts as the umbrella for the Scania, MAN, Volkswagen Truck & Bus and Navistar commercial vehicles brands. TRATON SE is also a listed company.

As well as strengthening the brand groups, the reorganization and creation of new units enabled substantial progress with the Software, Battery & Charging and Mobility Solutions technology platforms in the reporting period. The software subsidiary CARIAD was further expanded, getting a subsidiary of its own in China, among other things.

In addition to this, Volkswagen founded PowerCo SE in the reporting period as part of the Battery & Charging technology platform. This company will be responsible for the Group's global battery business. In addition to producing battery cells, it will also take on other activities along the battery value chain in future.

In the Mobility Solutions technology platform, Volkswagen strengthened the Group's expertise in advanced fleet management through the equity investment in the Europcar Mobility Group in the reporting period. The aim is to be able to achieve even better coverage of all customers' mobility needs based on a new mobility platform.

We are convinced that our corporate structure, which efficiently connects not only the brand groups but also the technology platforms, will enable us to make better use of existing expertise and economies of scale, leverage synergies more systematically and accelerate decision making. Clear responsibilities and a high degree of business responsibility in the brand groups and technology platforms will enable comprehensive implementation of the Group's NEW AUTO strategy.

Each brand within the Volkswagen Group is managed by a brand board of management, which is responsible for the brand's independent and self-contained development and business operations. To the extent permitted by law, the board adheres to the Group targets and requirements laid down by the Board of Management of Volkswagen AG, as well as with the agreements in the brand groups. This allows Group-wide interests to be pursued, while at the same time safeguarding and reinforcing each brand's specific characteristics. Matters that are of importance to the Group as a whole are submitted to the Volkswagen AG Board of Management to be agreed upon, to the extent permitted by law. The rights and obligations of the statutory bodies of the relevant brand company thereby remain unaffected.

The Volkswagen Group companies are managed solely by their respective managements. The management of each individual company takes into account not only the interest of its own company but also the interests of the Group, the relevant brand group and the individual brands in accordance with the framework laid down by law.

MATERIAL CHANGES IN EQUITY INVESTMENTS

In 2021, together with investment firm Attestor Limited and Pon Holdings B.V., Volkswagen made a joint public takeover offer for the shares of Europcar Mobility Group S.A., Paris/France through the consortium company Green Mobility Holding S.A. (GMH) based in Strassen/Luxembourg. The European Commission issued final antitrust approval at the end of May 2022. During the extended offer period, the French Financial Markets Authority gave Europcar shareholders the opportunity to tender their shares to the consortium company. In total, 93.6% of Europcar's shareholders accepted the offer. The consortium jointly assumed control of Europcar in mid-June 2022. Because the acceptance rate was over 90%, a squeeze-out was initiated for the remaining Europcar shares in July 2022, and the company was delisted. Since July 13, 2022, the consortium company has held 100% of the shares in Europcar. The purchase price was 51 cents per Europcar share. In addition, Volkswagen is the writer of put options held by the other members of the consortium, and the other members have granted Volkswagen call options on their shares in the consortium company. The options with Attestor were extended on a long-term basis in December 2022.

Since joint control has been contractually agreed, the company, in which Volkswagen holds 66% of the shares, will be accounted for using the equity method in the Volkswagen consolidated financial statements.

Following the fulfillment of all closing conditions, Brose Fahrzeugteile SE & Co. Kommanditgesellschaft (Brose) and Volkswagen Finance Luxemburg S.A., a subsidiary of Volkswagen AG, created a jointly operated company in early 2022 for the development and manufacture of complete seat units, seat structures and components, and solutions for vehicle interiors. As part of this arrangement, Brose acquired half of the shares in the previous Volkswagen Group company SITECH Sp. z o.o., Polkowice/Poland. Brose and Volkswagen each hold 50% of the jointly operated company – Brose Sitech Sp. z o.o. – with Brose taking the industrial lead and controlling the company.

Since late September 2022, non-voting preferred shares of Dr. Ing. h.c. F. Porsche AG (Porsche AG) have been traded in the Regulated Market of the Frankfurt Stock Exchange. The no-par value bearer shares came from the portfolio of Porsche Holding Stuttgart GmbH, Stuttgart – a wholly owned subsidiary of Volkswagen AG. Following the early termination of the stabilization period, the total number of preferred shares issued in the IPO equated to 24.2% and comprised 110,080,801 preferred shares. The control and profit and loss transfer agreement between Volkswagen AG and Porsche AG ended in accordance with section 307 of the *Aktiengesetz* (AktG – German Stock Corporation Act) on December 31, 2022.

In connection with the IPO, Volkswagen additionally sold an interest of 25% of Porsche's ordinary shares plus one ordinary share to Porsche Automobil Holding SE, Stuttgart. As of the reporting date, Volkswagen held 75.4 % of the total capital.

i VOLKSWAGEN AG SHAREHOLDINGS
www.volkswagenag.com/en/InvestorRelations.html

LEGAL FACTORS INFLUENCING BUSINESS

Like other international companies, the business of Volkswagen companies is affected by numerous laws in Germany and abroad. In particular, there are legal requirements relating to services, development, products, production and distribution, as well as supervisory, data protection, financial, company, commercial, capital market, anti-trust and tax regulations and regulations relating to labor, banking, state aid, energy, environmental and insurance law.

GROUP CORPORATE GOVERNANCE DECLARATION

The Group Corporate Governance Declaration can be found in this annual report and is permanently available on our website at www.volkswagenag.com/en/InvestorRelations/corporate-governance/declaration-of-conformity.html.

i GROUP CORPORATE GOVERNANCE DECLARATION
www.volkswagenag.com/en/InvestorRelations/corporate-governance/declaration-of-conformity.html

Disclosures Required under Takeover Law

This chapter contains the Volkswagen Group's disclosures relating to takeover law required by sections 289a and 315a of the HGB.

CAPITAL STRUCTURE

Volkswagen AG's share capital amounted to €1,283,315,873.28 (€1,283,315,873.28) on December 31, 2022. It was composed of 295,089,818 ordinary shares and 206,205,445 preferred shares. Each share conveys a notional interest of €2.56 in the share capital.

SHAREHOLDER RIGHTS AND OBLIGATIONS

The shares convey pecuniary and administrative rights. The pecuniary rights include in particular the shareholders' right to participate in profits (section 58(4) of the *Aktiengesetz* (AktG – German Stock Corporation Act)), the right to participate in liquidation proceeds (section 271 of the AktG) and preemptive rights to shares in the event of capital increases (section 186 of the AktG), which can be disapplied by the Annual General Meeting with the approval of the Special Meeting of Preferred Shareholders, where appropriate. Administrative rights include the right to attend the Annual General Meeting, to speak there, to ask questions, to propose motions and to exercise voting rights. When virtual Annual General Meetings were held to avoid risks during the Covid-19 pandemic, these rights were partially restricted. Shareholders can enforce their pecuniary and administrative rights in particular through actions seeking disclosure and actions for avoidance.

Each ordinary share grants the holder one vote at the Annual General Meeting. The Annual General Meeting elects shareholder representatives to the Supervisory Board and elects the auditors; in particular, it resolves on the appropriation of net profit, formally approves the actions of the Board of Management and the Supervisory Board, and resolves on amendments to the Articles of Association of Volkswagen AG, capital measures and authorizations to purchase treasury shares; if required, it also resolves on the performance of a special audit, the removal before the end of their term of office of Supervisory Board members elected at the Annual General Meeting and the winding-up of the Company.

Preferred shareholders generally have no voting rights. However, in the exceptional case that they are granted voting rights by law (for example, when preferred share dividends were not paid in one year and not compensated for in full in the following year), each preferred share also grants the holder one vote at the Annual General Meeting. Furthermore, preferred shares entitle the holder to a €0.06 higher dividend than ordinary shares (further details on this right to preferred and additional dividends are specified in Article 27(2) of the Articles of Association of Volkswagen AG).

The *Gesetz über die Überführung der Anteilsrechte an der Volkswagenwerk Gesellschaft mit beschränkter Haftung in private Hand* (VW-Gesetz – Act on the Privatization of Shares of Volkswagenwerk Gesellschaft mit beschränkter Haftung) of July 21, 1960, as amended on July 30, 2009, includes various provisions in derogation of the German Stock Corporation Act, for example on the exercising of voting rights by proxy (section 3 of the VW-Gesetz) and on majority voting requirements at the Annual General Meeting (section 4(3) of the VW-Gesetz).

In accordance with the Volkswagen AG Articles of Association (Article 11(1)), the State of Lower Saxony is entitled to appoint two members of the Supervisory Board of Volkswagen AG for as long as it directly or indirectly holds at least 15% of Volkswagen AG's ordinary shares. In addition, resolutions by the Annual General Meeting that are required by law to be adopted by a qualified majority require a majority of more than four-fifths of the share capital of the Company represented when the resolution is adopted (Article 25(2)), regardless of the provisions of the VW-Gesetz.

SHAREHOLDINGS EXCEEDING 10% OF VOTING RIGHTS

Shareholdings in Volkswagen AG that exceed 10% of voting rights are shown in the notes to the annual financial statements of Volkswagen AG, which are available online at https://www.volkswagenag.com/en/InvestorRelations.html. The current notifications regarding changes in voting rights in accordance with the *Wertpapierhandelsgesetz* (WpHG – German Securities Trading Act) are also published on this website.

COMPOSITION OF THE SUPERVISORY BOARD

The Supervisory Board consists of 20 members, half of whom are shareholder representatives. In accordance with Article 11(1) of the Articles of Association of Volkswagen AG, the State of Lower Saxony is entitled to appoint two of these shareholder representatives for as long as it directly or indirectly holds at least 15% of the Company's ordinary shares. The remaining shareholder representatives on the Supervisory Board are elected by the Annual General Meeting.

The other half of the Supervisory Board consists of employee representatives elected by the employees in accordance with the *Mitbestimmungsgesetz* (MitbestG – German Codetermination Act). A total of seven of these employee representatives are Company employees elected by the workforce; the other three employee representatives are trade union representatives elected by the workforce.

The Chairman of the Supervisory Board is generally a shareholder representative elected by the other members of the Supervisory Board. In the event that a Supervisory Board vote is tied, the Chairman of the Supervisory Board has a casting vote in accordance with the MitbestG.

The goals for the composition of the Supervisory Board and information about its composition are described in the Group Corporate Governance Declaration.

STATUTORY REQUIREMENTS AND REQUIREMENTS OF THE ARTICLES OF ASSOCIATION WITH REGARD TO THE APPOINTMENT AND REMOVAL OF BOARD OF MANAGEMENT MEMBERS AND TO AMENDMENTS TO THE ARTICLES OF ASSOCIATION

The appointment and removal of members of the Board of Management are governed by sections 84 and 85 of the AktG, which specify that members of the Board of Management are appointed by the Supervisory Board for a maximum of five years. Board of Management members may be reappointed or have their term of office extended for a maximum of five years in each case. In addition, Article 6 of the Articles of Association of Volkswagen AG states that the number of Board of Management members is stipulated by the Supervisory Board and that the Board of Management must consist of at least three persons. The members of the Volkswagen AG Board of Management must include at least one woman and at least one man.

The Annual General Meeting resolves amendments to the Articles of Association (section 119(1) of the AktG). In accordance with section 4(3) of the VW-Gesetz as amended on July 30, 2009 and Article 25(2) of the Articles of Association of Volkswagen AG, Annual General Meeting resolutions to amend the Articles of Association require a majority of more than four-fifths of the share capital represented.

POWERS OF THE BOARD OF MANAGEMENT, IN PARTICULAR CONCERNING THE ISSUE OF NEW SHARES AND THE REPURCHASE OF TREASURY SHARES

According to German stock corporation law, the Annual General Meeting can authorize the Board of Management, for a maximum period of five years, to issue new shares. It can also authorize the Board of Management, for a maximum period of five years, to issue bonds on the basis of which new shares are to be issued. The Annual General Meeting also decides the extent to which shareholders have preemptive rights to the new shares or bonds. The maximum amount of authorized share capital or contingent capital available for these purposes is determined by Article 4 of the Articles of Association of Volkswagen AG, as amended.

At the Annual General Meeting on May 14, 2019, a resolution was passed authorizing the Board of Management, with the consent of the Supervisory Board, to increase the Company's share capital by a total of up to €179.2 million (corresponding to 70 million shares) on one or more occasions up to May 13, 2024 by issuing new nonvoting preferred shares against cash contributions.

Further details of the authorization to issue new shares and their permitted uses may be found in the notes to the consolidated financial statements.

MATERIAL AGREEMENTS OF THE PARENT COMPANY IN THE EVENT OF A CHANGE OF CONTROL FOLLOWING A TAKEOVER BID

At the end of fiscal year 2019, a banking syndicate granted Volkswagen AG a syndicated line of credit amounting to €10.0 billion, which currently runs until December 2026. With the line of credit, the syndicate members were granted the right to call their portion of the syndicated line of credit in the two forms of a Change of Control described below. A call right exists if one individual or several individuals acting jointly who as of the date of this agreement exercise control over the Company have legal or economic ownership of shares that together make up more than 90% of the voting rights of the Company. However, a call right also exists if one individual or several individuals acting jointly who as of the date of this agreement do not exercise control over the Company obtain control over the Company. Such a call right does not exist, however, if one shareholder or several shareholders of Porsche Automobil Holding SE or one or several legal entities from the Porsche or Piëch family directly or indirectly obtain control over the Company.

Volkswagen AG and the Ford Motor Company entered into a Master Collaboration Agreement in January 2019. This agreement sets out a framework of obligations, which are to apply to the further co-operation agreements entered into between the parties, including those entered into in fiscal year 2021. It also covers the Development Agreement concluded in January 2019 for the development of the next-generation Amarok. The Master Collaboration Agreement provides for a right of termination with immediate effect in the event of a Change of Control. A Change of Control has been defined to mean a change affecting more than 50% of the voting capital of one of the companies or a change in the ability to directly or indirectly control the management of a company through its decision-making bodies. The right of termination must be exercised within 90 days of the company becoming aware of a Change of Control.

Business Development

The world economy recorded positive growth in fiscal year 2022. Global demand for vehicles was on a level with the previous year. In a market that continued to be challenging, the Volkswagen Group delivered 8.3 million vehicles to customers.

DEVELOPMENTS IN THE GLOBAL ECONOMY

In the reporting period, the Russia-Ukraine conflict led to a humanitarian crisis and global market upheaval. Prices rose substantially, particularly on the energy and commodity markets. Parts supply shortages also intensified in this context. The Russia-Ukraine conflict led to increased uncertainty in respect of developments in the global economy and prompted large sections of the community of Western states to impose sanctions on Russia, ranging from extensive trade embargoes to the partial exclusion of Russia from the global financial system. Russia itself, in its role as an energy exporter, restricted gas deliveries to Europe. The resulting increase in energy prices and intensified supply shortages had a sustained impact on inflation in Europe particularly.

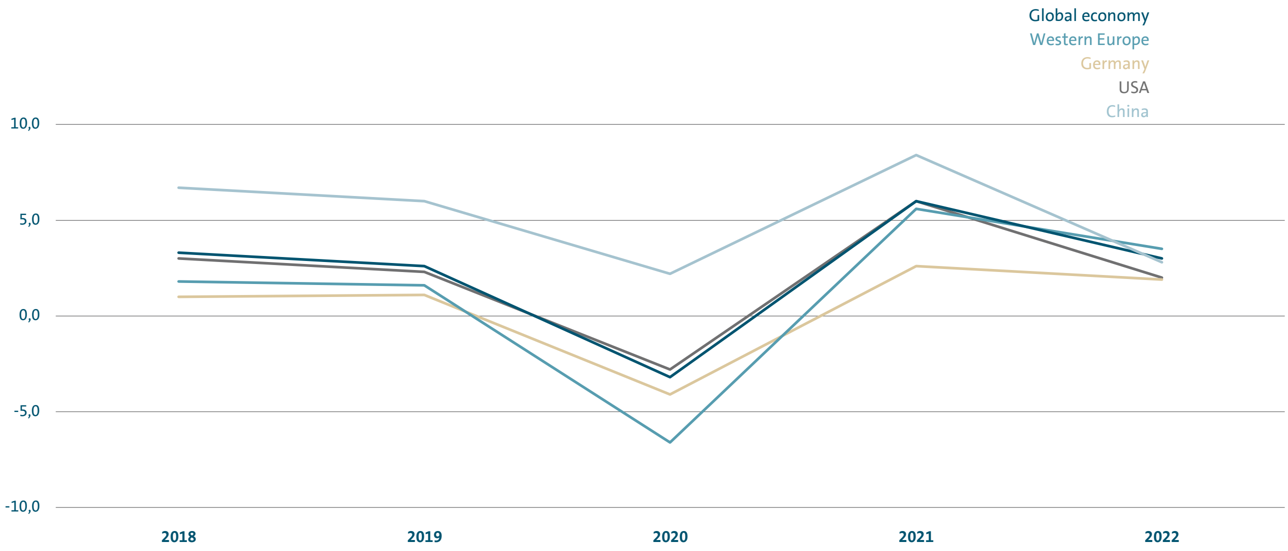
During 2022, the restrictive measures put in place to protect the population from the SARS-CoV-2 virus were lifted to a large extent in many countries. The progress made in administering vaccines to the public had a positive effect, while the emergence of the new Omicron variant and its subvariants led to a renewed sharp rise in infections on a national scale, mostly causing milder symptoms but increased rates of sick leave. In China particularly, local outbreaks of infection in the course of 2022 led to tight restrictions under the zero-Covid strategy being pursued there, resulting in economic constraints and disruption to international supply chains. The departure from this strategy led to a rapid increase in infection rates in China at the end of the year.

Following the slump in global economic output in 2020 and the incipient recovery due to baseline and catch-up effects in 2021, the global economy recorded positive overall growth of +3.0 (+6.0)% in 2022. Both the advanced economies and the emerging markets continued to recover on average, albeit with diminishing momentum and slower growth overall than in the prior year.

At national level, developments depended on the one hand on the scale of the negative impact of the Covid-19 pandemic and the intensity with which measures were taken to contain it, and on the other the extent to which national economies were affected by the consequences of the Russia-Ukraine conflict. In response to the further rise of inflation rates around the world, many countries shifted to a more restrictive monetary policy, which led central banks to increase their key interest rates and reduce bond purchases during the reporting period. The gloomier economic outlook resulted in large losses on major stock markets. On average, prices for energy and other commodities rose significantly in some cases year-on-year and shortages of certain intermediates and commodities remained high. Global trade in goods increased in 2022.

ECONOMIC GROWTH

Percentage change in GDP



Europe/Other Markets

The economy in Western Europe recorded positive overall growth of +3.6 (+5.6) % in 2022. The reasons for this included increased economic resilience in the face of high infection rates in many countries, and the associated easing of the measures taken to contain the pandemic. However, significantly rising inflation rates, among other things, resulted in a slowdown in economic momentum. This trend was seen in almost all countries in Northern and Southern Europe.

At +0.7 (+6.4) %, the economies in Central and Eastern Europe recorded low real growth in absolute gross domestic product (GDP) overall in the reporting period. While economic output in Central Europe saw positive, albeit somewhat less dynamic growth of +4.4 (+7.8) %, GDP in the Eastern Europe region fell significantly compared with the prior year as a consequence of the Russia-Ukraine conflict, with a negative growth rate of –3.8 (+4.7) %. The sanctions imposed against Russia had a substantial impact in this region from March 2022 onwards, causing Russian economic output to contract from the second quarter. Russia saw a negative average growth rate for the year of –2.8 (+4.7) %. Inflation rates rose, in some cases sharply, across the entire Central and Eastern Europe region.

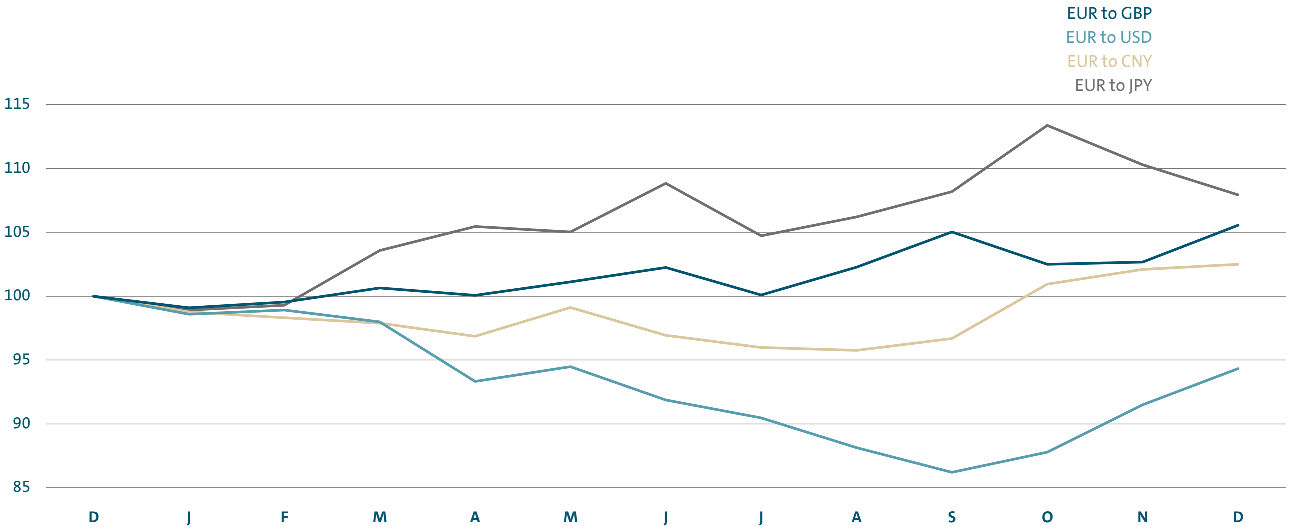
In Türkiye, economic output for the year 2022 as a whole rose by +5.1 (+11.6) % amid very high inflation and a fall in the value of the local currency. South Africa saw slight GDP growth of +2.2 (+4.9) % in the reporting period, amid persistent structural deficits and political challenges.

Germany

Germany's economic output recorded a positive growth rate of +1.9 (+2.6) % in the 2022 reporting year, with declining momentum. The situation on the labor market improved compared with the previous year, with the unemployment rate and notices of *Kurzarbeit* (short-time working) for economic reasons falling on average. At the same time, monthly inflation rates reached the highest level in the history of the Federal Republic of Germany, while at the same time historic lows were registered in consumer confidence.

EXCHANGE RATE MOVEMENTS FROM DECEMBER 2021 TO DECEMBER 2022

Index based on month-end prices: as of December 31, 2021 = 100



North America

US economic output grew by +2.1 (+5.9)% in the reporting period. Given rising inflation and the tight labor market, the US Federal Reserve consistently maintained its restrictive monetary policy and raised its key interest rate seven times over the course of the reporting year. Unemployment declined further in 2022 from the high level seen in the prior year. GDP rose by +3.6 (+5.0)% in neighboring Canada and by +3.1 (+4.9)% in Mexico.

South America

Brazil's economy posted GDP growth of +2.9 (+5.3)% in 2022. Argentina registered a positive economic performance with year-on-year growth of +4.6 (+10.4)% amid very high inflation and continued depreciation of the local currency.

Asia-Pacific

At the beginning of the Covid-19 pandemic, China was exposed to the negative effects at an earlier stage than other economies and, due to the strict zero-Covid strategy pursued there, benefited from a relatively low number of new infections as the pandemic progressed. This strategy resulted in temporary local lockdowns in the reporting period in connection with the spread of the Omicron variant. The departure from this strategy led to a rapid increase in infection rates in China at the end of the year. The Chinese economy grew by only +3.0 (+8.5)% overall. India registered strong growth of +7.0 (+8.7)%. Japan recorded positive growth of +1.0 (+2.2)% year-on-year.

TRENDS IN THE MARKETS FOR PASSENGER CARS AND LIGHT COMMERCIAL VEHICLES

In fiscal year 2022, the volume of the passenger car market worldwide remained on a level with the prior year at 69.6 million vehicles. Gains and losses in individual markets were very uneven, since shortages and disruption in global supply chains, the effects of the Russia-Ukraine conflict and the further consequences of the Covid-19 pandemic varied around the world in terms of the strength of their impact. Shortages of semiconductors and other intermediates, which already occurred in the second half of 2021, and the resulting supply bottlenecks, could also not be fully resolved in 2022.

Slight or noticeable growth was recorded in the overall markets of the Asia-Pacific and Middle East regions respectively, while South America and Africa were on a level with the previous year. Sales fell in the remaining regions: while market volume was slightly down in Western Europe and noticeably down in North America, Central and Eastern Europe recorded a very strong decline.

In the reporting period, the global volume of new registrations for light commercial vehicles was slightly (–3.0%) lower than in the previous year.

Sector-specific environment

Along with fiscal policy measures, factors substantially affecting the sector-specific environment were shortages and disruption in global supply chains, the Covid-19 pandemic and the impacts of the Russia-Ukraine conflict. This contributed considerably to the mixed trends in unit sales in the markets in 2022. As a result of the Russia-Ukraine conflict, sanctions were imposed that restricted the production and sale of vehicles, particularly in Russia. The fiscal policy measures included tax cuts or increases, incentive programs and sales incentives, as well as import duties. In addition, non-tariff trade barriers to protect the respective domestic automotive industries made the movement of vehicles, parts and components more difficult.

Europe/Other Markets

In Western Europe, the number of new passenger car registrations in the reporting period was slightly down on the previous year's weak level, declining by 4.3% to 10.2 million vehicles. While the first half of the reporting year fell significantly short of the comparison period, the number of new registrations in the subsequent months were up again on the – in some cases substantially weaker – prior-year figures. The performance of the large individual passenger car markets was negative in fiscal year 2022: France (–7.7%), the United Kingdom (–2.0%), Italy (–9.8%) and Spain (–7.1%) did not achieve their respective prior-year levels.

The volume of new registrations for light commercial vehicles in Western Europe was sharply lower than in the previous year, falling by –20.7%.

After the slight recovery in the prior year, the volume of the passenger car market in the Central and Eastern Europe region fell very sharply in the 2022 fiscal year and was down by 37.2% at 1.8 million vehicles. The number of sales was also on an overall downtrend in the individual markets. The Russian passenger car market in particular saw substantial losses and more than halved in the period under review (–60.9%). In Central Europe, the decline in new registrations was smaller at –6.0% in Poland and –7.1% in the Czech Republic.

The market volume of light commercial vehicles in Central and Eastern Europe was sharply below the prior-year level (–28.6%). In Russia, the number of vehicles sold in the reporting period fell by 45.2% compared with the previous year.

The volume of the passenger car market in Türkiye in the reporting period was slightly up on the weak prior-year level. In South Africa, the growth trend in passenger car sales that began in 2021 continued strongly with a rise of 20.4%.

The volume of new registrations of light commercial vehicles in Türkiye in the reporting period was on a level (+0.5%) with 2021, while South Africa recorded slight growth (+3.6%).

Germany

At 2.7 million, the total number of new passenger car registrations in Germany in the 2022 fiscal year was similar to the weak prior-year level (+1.1%). Shortages and disruption in global supply chains continued to restrict vehicle availability. With delays in semiconductor deliveries persisting, and the associated measures such as cutbacks in production and production shutdowns therefore continuing too, domestic production and exports remained at a low level in the reporting period: passenger car production increased by 10.8% to 3.4 million vehicles and passenger car exports grew by 10.1% to 2.6 million units.

The number of sales of light commercial vehicles in Germany in the reporting period was sharply down on the 2021 figure (–21.1%).

North America

At 16.4 million vehicles, sales of passenger cars and light commercial vehicles (up to 6.35 tonnes) in the North America region in fiscal year 2022 were noticeably lower compared with the prior-year (–7.3%). At 13.9 million units, the market volume in the USA declined by more than the average for this region (–8.0%). The Canadian automotive market registered a noticeable fall in sales figures to 1.5 million units (–9.7%) in the reporting period, while new registrations of passenger cars and light commercial vehicles in Mexico saw a noticeable rise of 7.0% compared with the prior year to 1.1 million vehicles.

South America

In the South America region, the volume of new passenger car and light commercial vehicle registrations in the reporting period was on a level with the prior year at 3.6 million units (+1.8%). This continued the positive growth trend that began in the previous year, albeit at a slower pace. In Brazil, the number of new registrations was also on the same level as the previous year at 2.0 million units (–0.8%). Total exports of vehicles manufactured in Brazil increased by 28.9% to 450 thousand passenger cars and light commercial vehicles. In the Argentinian market, demand for passenger cars and light commercial vehicles in the 2022 reporting period rose noticeably by 7.0% to 380 thousand units.

Asia-Pacific

In the Asia-Pacific region, the volume of the passenger car market in fiscal year 2022 was slightly higher than the previous year's figure at 33.8 million units (+3.6%). The absolute rise in demand for passenger cars in the region was again primarily attributable to the positive trend in the Chinese passenger car market. Here, the recovery seen in 2021 continued but was affected by the semiconductor shortage and local lockdowns in connection with the spread of the Omicron variant of the SARS-CoV-2 virus. Overall, the volume of demand in China totaled 21.0 million units (+1.6%), putting it on a level with the previous year. In India, passenger car sales again rose strongly by 23.2% compared with the prior year to 3.6 million units. New registrations in the Japanese passenger car market in the reporting period were noticeably down on the already weak prior-year level at 3.5 million units (–6.9%).

The volume of demand for light commercial vehicles in the Asia-Pacific region in 2022 was slightly above the previous year's level (+2.1%). Registration volumes in China, the region's dominant market and the largest market worldwide, were slightly lower, falling 3.1% short of the prior-year figure. The number of new vehicle registrations in India was strongly up on the prior-year level; in Japan this figure was slightly lower than in the previous year.

TRENDS IN THE MARKETS FOR COMMERCIAL VEHICLES

Since July 1, 2021, Navistar has been a TRATON GROUP brand, making it part of the Volkswagen Group's Commercial Vehicles Business Area. This has expanded the relevant markets in the commercial vehicles business to include North America (consisting of USA, Canada and Mexico).

In the markets that are relevant for the Volkswagen Group, global demand for mid-sized and heavy trucks with a gross weight of more than six tonnes experienced noticeable growth in fiscal year 2022 versus the comparison period (+5.5%). Global truck markets declined sharply. This was due to upheaval on the Chinese market, which slumped dramatically on the back of purchases brought forward to 2021 prior to the introduction of the new emission level and due to the zero-Covid strategy pursued there.

In the 27 EU states excluding Malta, but including the United Kingdom, Norway and Switzerland (EU27+3), the number of new truck registrations was noticeably up on the prior-year level, increasing by 5.1% to a total of 337 thousand vehicles. Growth could be observed in many truck markets in the region, albeit to differing degrees. The substantial market recovery seen in 2021 slowed during the reporting period to a noticeable level of growth. New registrations in Germany, the largest market in this region, were on a level with the previous year (–1.7%). The United Kingdom recorded a noticeable increase of 9.8%, while demand in France was on a level with the previous year (–0.3%). The Russian market declined sharply as a result of the Russia-Ukraine conflict. Türkiye, by contrast, recorded a strong rise in new registrations of

24.7%. In the South African market, demand rose significantly (+12.3%). The truck market in North America is divided into weight classes 1 to 8. In the segments relevant for Volkswagen – Class 6 to 8 (8.85 tonnes or heavier) – new registrations were significantly higher (+13.6%) than the previous year's figure. In Brazil, the largest market in the South America region, demand for trucks in the reporting period was slightly lower year-on-year (–2.5%).

Demand in the bus markets relevant for the Volkswagen Group was on a level with the previous year (+0.3%). Demand for buses in the EU27+3 markets in the reporting period was slightly down overall on the level of the previous year (–3.8%), with the picture varying from country to country. The school bus segment in the USA and Canada recorded a noticeable decline (–6.8%) compared with the prior year. Demand for buses in Mexico also declined noticeably year-on-year (–7.4%). In Brazil, by contrast, demand for buses increased and was strongly up on the previous year's level (+23.4%).

TRENDS IN THE MARKETS FOR POWER ENGINEERING

The markets for power engineering are subject to differing regional and economic factors. Consequently, their business growth trends are mostly independent of each other.

The marine market remained below the prior-year level in 2022. This is especially attributable to the fact that the demand in merchant shipping declined. In this sub-market, there was a decline particularly in the segment for container ships, tankers and bulk cargo carriers compared with the previous year's high level. The segment for gas tankers, in contrast, recorded a stable trend. Slightly positive development was evident in the sub-market for cruise ships and passenger ferries. Here, the easing of Covid-19-related restrictions enabled business activity to grow again. The special market for government vessels, which is supported by state investment, was active due to the current geopolitical situation. In the offshore sector, the existing overcapacity continued to curb investment in offshore oil production despite the sharp rise in oil and gas prices. In contrast, demand for offshore special ships for wind turbines developed positively. The uncertainty regarding future fuel and emissions regulations persisted once again in the overall market in 2022.

The market for power generation improved in 2022 compared with the previous year. Overall, a significant market recovery was evident despite inflation and challenges in supply chains. The trend away from oil-fired power plants towards dual-fuel and gas-fired power plants continued, underpinned by the resolution at the UN Climate Change Conference (COP26) and the resulting difficulties in financing oil-fired power plants. However, the Russia-Ukraine conflict also had a noticeable impact in the form of increasing gas and commodity prices, as well as a delayed availability of core components. There was still strong demand for new energy solutions such as hydrogen and long-term energy storage, with an ongoing clear trend towards greater flexibility and decentralized availability.

The market for turbomachinery improved again year-on-year. Prices for raw materials remained at a very high level, resulting in an increased demand for production facilities with turbo compressors, in both the raw materials and processing industry as well as the oil and gas business. The market of the new business fields for turbomachinery used in the area of decarbonization improved further compared with the prior year and was driven by persistently high but volatile prices for carbon dioxide certificates in European trading and by favorable changes in US tax law. However, demand for steam turbines for power generation improved only marginally, while demand for gas turbines declined slightly over the course of 2022.

The after-sales markets for engines in the marine and power plant business and for turbomachinery experienced significantly stronger growth in the 2022 reporting period than in the prior-year period, in which demand was hit by the Covid-19 pandemic.

TRENDS IN THE MARKETS FOR FINANCIAL SERVICES

Demand for automotive financial services was at a high level in the first quarters of 2022 due, among other things, to persistently low key interest rates in the main currency areas. In combination with the Covid-19 pandemic and continuing limits on vehicle availability, the rise in interest rates that began in the second half of the year put pressure on demand for financial services in almost all regions.

The European passenger car market was still affected by parts supply shortages in the reporting period; vehicle deliveries were down on the prior-year period. By contrast, the share of financial services products in the new vehicle business grew positively and exceeded the 2021 figure. The main drivers of this trend were positive changes in the sales mix that benefited the private customer business, which lends itself particularly to financing, and an increased share of leasing contracts in the fleet business. The positive trend in the financing of used vehicles continued in 2022; in particular, the sale of after-sales products such as servicing, maintenance and spare parts agreements increased. Financial services activities in Russia were negatively affected by the Russia-Ukraine conflict and the impact of the international sanctions.

In Germany, the continuing challenges presented by the faltering parts supply in vehicle production impacted on vehicle sales and the financial services business. The decrease in deliveries of new vehicles led to fewer new leasing and financing contracts being concluded in the reporting period than a year earlier. New vehicle penetration was down slightly on 2021. Overall, the level of new contracts for used vehicles continued to be similar to that of the previous year. The number of new after-sales contracts was up in the second half of the year and ended the reporting period only slightly down on 2021 levels. With few exceptions, the number of new contracts in the insurance business fell short of the figures achieved a year earlier.

In South Africa, demand for financing and insurance products for new and used cars remained subdued in 2022. Coordinated campaigns to promote such products were scaled back due to limited vehicle availability. To counter rising inflation, the South African Reserve Bank has begun to raise interest rates.

In the North America region, supply bottlenecks meant that vehicle deliveries in 2022 were down on the previous year. The US and Canadian markets also saw declining demand for leasing and financing contracts because of interest rate hikes. In the Mexican market, the percentage of new leasing and financing contracts remained on a level with the previous year and new contracts for after-sales products were up year-on-year.

In the South America region, there was excess demand for vehicles in a volatile environment, exacerbated in Argentina by restrictions on imports. The rise in interest rates kept the number of cash purchases at a high level. In Brazil, there was an increase in the number of new financing contracts.

In the Chinese market, passenger car sales were impacted by parts supply shortages and local restrictions due to the pandemic. Both the proportion of credit-financed vehicle purchases and growth in new contracts declined. The comparative prior-year figures were not achieved in the reporting period.

In fiscal year 2022, the financial services business in the market for heavy commercial vehicles was slightly up on the comparative prior-year level, also affecting financing and leasing contracts in Europe and Brazil.

NEW GROUP MODELS IN 2022

The Volkswagen Group offers a broad portfolio of products covering almost all key segments and body types so that its customers can choose the right vehicle for their needs. In fiscal year 2022, we added further attractive vehicles, not only systematically expanding our portfolio of all-electric and hybrid vehicles, but also bringing compelling new products with conventional combustion engines onto the market.

The Volkswagen Passenger Cars brand upgraded its best-selling T-Roc, among others, in 2022. The T-Roc Cabriolet and the sporty R model also benefited from a design and technology update. The brand continued its transformation to e-mobility with the new ID.5, which is also available as a particularly sporty GTX model. In 2022, China saw the launch of the Tavendor, a new SUV in the upper range segment tailored to the Chinese market. Other SUV models such as the Tayron, Tayron X and Teramont X were updated. In the traditional MPV and notchback segments, the Viloran, Bora, Lavida and Sagitar models were updated. The Lamando received a redesigned successor. The transformation also made great strides in the United States: the ID.4 is now manufactured locally and has been customized further for the US market. The high-volume Jetta received an update. In South America, there were product upgrades in the Polo and Jetta series.

The era of state-of-the-art electric mobility based on the MEB dawned at ŠKODA in 2021 with the rollout of the Enyaq iV. An independent coupé version and the particularly sporty RS iV variants were added to the series in 2022. ŠKODA underscored its growth plans in India with the market launch of the independent Slavia on the modern MQB platform.

At Volkswagen Commercial Vehicles, 2022 was devoted to the all-electric ID. Buzz, which proved to be a global sensation. The cooperation with Ford produced the next generation of the Amarok.

Audi updated its best-selling A8 model in 2022, expanding the series to include an especially luxurious version tailored to the Chinese market. In China, the completely new A7L, the first vehicle produced with the new joint venture partner SAIC, further underpins Audi’s premium positioning. Two SUVs adapted for the local market were also launched, the all-electric Q5 e-tron and the Q6.

Bentley expanded its important Bentayga range by adding a particularly exclusive model with a long wheelbase. A hybrid version of the Flying Spur came onto the market, while the Flying Spur Speed with its impressive 12-cylinder engine rounds off the series at the upper end of the scale.

In 2022, Lamborghini brought out the Urus Performante, a new top-of-the-range model from its successful SUV range. The new top-of-the line Tecnica version of the Huracan was also launched.

Porsche extended its Taycan range in 2022, adding the Taycan Sport Turismo and particularly attractive GTS derivatives. The line of classic sports cars was also expanded: the 718 and 911 series received their most sporty variants to date with the GT4 RS and GT3 RS, respectively. The 911 Sport Classic was also added to the portfolio.

Scania was the first brand of the TRATON GROUP to introduce the integrated 13-liter drive in its models in 2022. It offers fuel savings over the predecessor model and will also be introduced gradually in the other brands of the TRATON GROUP.

MAN presented a new electric truck for long-distance transport in 2022.

Navistar rolled out the eMV International mid-sized electric truck and the IC Bus Electric CE Series school bus in 2022.

Since 2022, Volkswagen Truck & Bus has offered customers a product for electric distribution transport with its e-Delivery.

The motorcycles launched by Ducati in 2022 include the new Multistrada V2 and the Multistrada V4 Pikes Peak. The Streetfighter family was enhanced by the new Streetfighter V2 and Streetfighter V4 SP models. In addition, the Scrambler 1100 Tribute PRO and the Scrambler Urban Motard were launched along with the Panigale V4. The brand new Ducati Desert X also came on the market.

VOLKSWAGEN GROUP DELIVERIES

The Volkswagen Group delivered 8,262,776 vehicles to customers worldwide in fiscal year 2022. This was 7.0% or 619,116 units less than in the previous year. While sales figures for the Passenger Cars Business Area fell short of the prior-year figure, commercial vehicle deliveries to customers rose year-on-year, mainly due to the inclusion of Navistar as from July 1, 2021. The chart in this section shows the trend in deliveries worldwide for the individual months compared with the previous year. In the following, we report separately on deliveries in the Passenger Cars Business Area and the Commercial Vehicles Business Area.

VOLKSWAGEN GROUP DELIVERIES[1]

	2022	2021	%
Passenger Cars	7,957,288	8,610,702	–7.6
Commercial Vehicles	305,488	271,190	+12.6
Total	**8,262,776**	**8,881,892**	**–7.0**

1 Prior-year deliveries have been updated to reflect subsequent statistical trends. The figures include the Chinese joint ventures. As of July 1, 2021, the figures include Navistar.

GLOBAL DELIVERIES BY THE PASSENGER CARS BUSINESS AREA

With its passenger car brands, the Volkswagen Group is present in all relevant automotive markets around the world. The key sales markets currently include Western Europe, China, the USA, Brazil, Poland, Mexico, Türkiye and the Czech Republic.

Sales of Volkswagen Group passenger cars and light commercial vehicles worldwide declined by 7.6% in fiscal year 2022 to 7,957,288 units. In the reporting period, limited vehicle availability as a result of the Covid-19 pandemic and bottlenecks in the supply of parts caused by the shortage of semiconductors and the Russia-Ukraine conflict had a negative impact. In addition, disruptions in logistics resulted in delays. While Porsche, Lamborghini and Bentley delivered a higher number of vehicles to customers, none of the other Volkswagen Group brands reached their prior-year figures. We registered a year-on-year decline in sales in all regions.

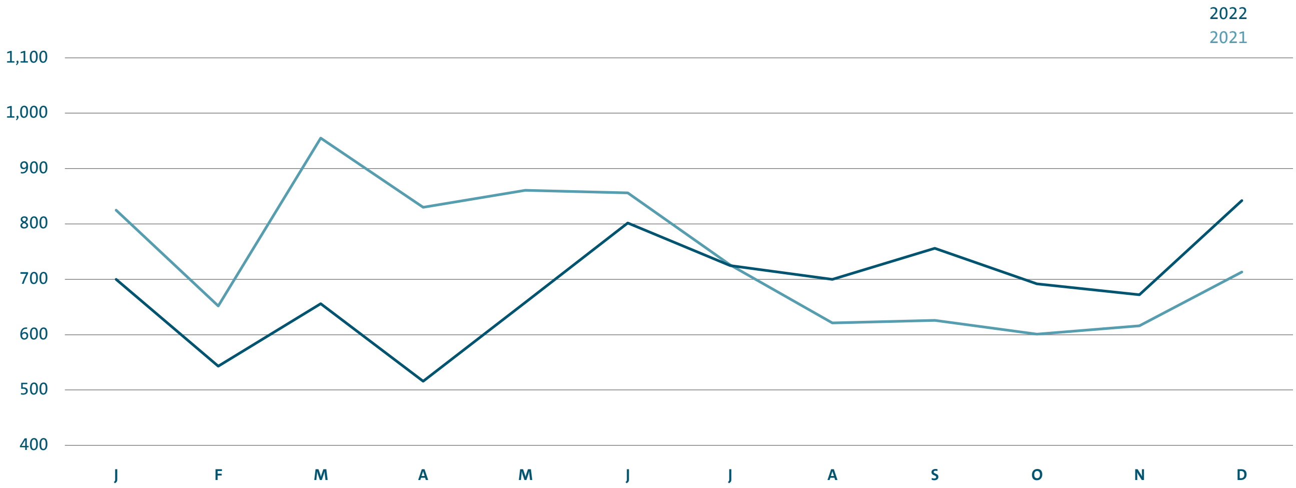
With additional model launches as part of the Group's e-mobility campaign, sales increased in the reporting period, bringing deliveries of all-electric vehicles to 572,110 units worldwide. This was 119,267 or 26.3% more units than in the previous year. Their share of the Group's total deliveries rose to 6.9 (5.1)%. A total of 245,174 of our plug-in hybrid models were delivered (–21.2%). Total electric vehicle deliveries went up by 7.0% and their share of total Group deliveries rose year-on-year to 9.9 (8.6)%. The Group's most successful all-electric vehicles included the ID.4 and ID.3 from Volkswagen Passenger Cars, the ŠKODA Enyaq iV, the CUPRA Born, the ID. Buzz from Volkswagen Commercial Vehicles, the Audi Q4 e-tron and Audi e-tron, as well as the Porsche Taycan and Taycan Cross Turismo.

In an overall global market that was on a level with the previous year, we achieved a passenger car market share of 11.0 (11.7)%.

The table at the end of this section gives an overview of passenger car deliveries to customers of the Volkswagen Group in the regions and the key individual markets. The sales figures for Group models in these markets and regions are explained below.

VOLKSWAGEN GROUP DELIVERIES BY MONTH

Vehicles in thousands



Deliveries in Europe/Other Markets

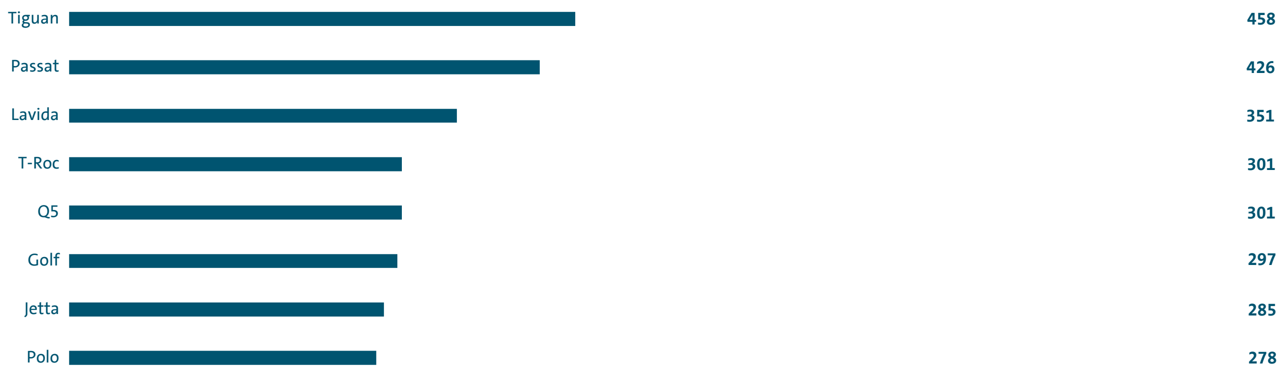
In Western Europe, the Volkswagen Group delivered 2,615,864 vehicles to customers in 2022 in an overall market experiencing a slight contraction. Deliveries were thus down 5.3% on the already weak previous year. In the reporting period, limited vehicle availability as a result of the Covid-19 pandemic and bottlenecks in the supply of parts caused by the shortage of semiconductors and the Russia-Ukraine conflict had a negative impact. In addition, disruptions in logistics resulted in delays.

Customer interest in the Volkswagen Group's electrified vehicles was strongest in Western Europe, where we delivered almost three-quarters of our plug-in hybrids and more than half of our all-electric models to customers in fiscal year 2022. In this region, electrified vehicles accounted for 19.1 (18.6) % of the Group's total deliveries; the share of all-electric vehicles stood at 12.6 (10.5) %. The Group models with the highest sales volume were the T-Roc, Golf, Tiguan and Polo from the Volkswagen Passenger Cars brand. The ID.4 and Tiguan Allspace from Volkswagen Passenger Cars, the Audi Q3 and Q3 Sportback, the ŠKODA Kodiaq, the CUPRA Formentor and the Porsche 911 were among the models that saw positive demand. In addition, the following new or successor models introduced to the market during the previous year proved very popular with customers: the Taigo from Volkswagen Passenger Cars, the ŠKODA Fabia and Enyaq iV, the CUPRA Born, the Multivan from Volkswagen Commercial Vehicles, the Audi Q4 e-tron, Q4 Sportback e-tron and Q5 Sportback, as well as the Porsche Macan and Porsche Taycan Cross Turismo. Among others, the T-Roc, T-Roc Cabriolet and ID.5 models from Volkswagen Passenger Cars, the ŠKODA Karoq, the ID. Buzz and Amarok from Volkswagen Commercial Vehicles, the Audi A8 and the Porsche Taycan Sport Turismo were successfully launched on the market during the reporting period as new or successor models. The Volkswagen Group's share of the passenger car market in Western Europe amounted to 23.3 (23.5) %.

In the Central and Eastern Europe region, the number of vehicles handed over to customers in 2022 was down 33.0% year-on-year. This was due in particular to the slump in sales in the Russian market as a consequence of the sanctions imposed in connection with the Russia-Ukraine conflict. The market as a whole also recorded a very sharp decline in volumes at the same time. Demand developed encouragingly for a number of models, including the Taigo and T-Roc from Volkswagen Passenger Cars, as well as for the ŠKODA Superb, the CUPRA Formentor and the Audi Q5 Sportback.

The Volkswagen Group's share of the passenger car market in the Central and Eastern Europe region amounted to 21.7 (20.4) %.

WORLDWIDE DELIVERIES OF THE MOST SUCCESSFUL GROUP MODEL RANGES IN 2022
Vehicles in thousands



In Türkiye, where the overall passenger car market expanded slightly, the Volkswagen Group delivered 15.7% fewer vehicles to customers than in 2021. The T-Roc from Volkswagen Passenger Cars was the most sought-after Group model. In the South African market, the number of Group models sold decreased by 1.9%, while the overall market recorded strong growth. The Polo from the Volkswagen Passenger Cars brand was the most sought-after Group model in this region.

Deliveries in Germany

In Germany, the number of Volkswagen Group vehicles handed over to customers in 2022 was up 4.0% on the weak previous year in an overall market that was at prior-year levels. In the reporting period, limited vehicle availability as a result of the Covid-19 pandemic and bottlenecks in the supply of parts caused by the shortage of semiconductors and the Russia-Ukraine conflict had a negative impact. In addition, disruptions in the logistics chain resulted in delays.

The Group models with the highest sales volume were the Golf and T-Roc from the Volkswagen Passenger Cars brand. Demand also increased for the Tiguan, ID.4 and Arteon Shooting Brake from Volkswagen Passenger Cars, the CUPRA Formentor and the ŠKODA Karoq as well as the Audi A3, Q3, Q3 Sportback, A4 Avant and Q5, among other models. In addition, the following new or successor models introduced to the market during the previous year proved very popular with customers: the Taigo from Volkswagen Passenger Cars, the ŠKODA Fabia, the CUPRA Born, the Multivan from Volkswagen Commercial Vehicles, the Audi Q4 e-tron, Q4 Sportback e-tron and Q5 Sportback, as well as the Porsche Macan and Taycan Cross Turismo. Seven Group models led the *Kraftfahrt-Bundesamt* (KBA – German Federal Motor Transport Authority) registration statistics in their respective segments: the Golf, T-Roc, Tiguan, Passat, Audi A6, Porsche 911 and Multivan/Transporter. The Golf was again the most popular passenger car in Germany in terms of registrations in 2022.

Deliveries in North America

In North America, the number of Volkswagen Group models delivered to customers in the reporting period was down by 13.3% year-on-year in an overall market that saw a noticeable decline. The Group's share of the market in this region amounted to 4.6 (4.9)%. The Tiguan Allspace and Taos from Volkswagen Passenger Cars as well as the Audi Q5 were the most sought-after Group models in North America.

In the US market, which witnessed a noticeable decline, the Volkswagen Group delivered 12.8% fewer vehicles to customers in fiscal year 2022 than in the previous year. The volume of all-electric vehicles delivered in the United States went up by 18.8% year-on-year to 44,173 units. Here, too, parts supply shortages acted as a drag on the Group's sales figures. The Group models to record the greatest increases in absolute terms included the Taos and ID.4 from Volkswagen Passenger Cars, the A3 saloon and Q5 Sportback from Audi and the Porsche Cayenne. Sales of the Porsche Taycan Cross Turismo also developed encouragingly. The ID.4 and Jetta from Volkswagen Passenger Cars, the Audi Q4 e-tron, the Audi Q4 e-tron Sportback and the Porsche Macan were successfully launched on the market during the reporting period as new or successor models.

In Canada, the number of vehicles delivered to Volkswagen Group customers was down 13.1% in the reporting period compared with 2021. The overall market experienced a noticeable decline during this period. The Taos and ID.4 from Volkswagen Passenger Cars, the Audi A3 saloon, Audi Q5 Sportback and the Porsche Cayenne were some of the models that saw encouraging growth in demand.

In Mexico, where the market as a whole saw noticeable growth, we sold 16.1% fewer vehicles to customers in the past fiscal year than in the year before. Demand developed encouragingly for a number of models, including the Saveiro, Taigun and Nivus from Volkswagen Passenger Cars.

Deliveries in South America

In the South American market for passenger cars and light commercial vehicles, which was on a level with the previous year, the number of Group models handed over to customers in 2022 was down 9.0% on the prior-year figure. The Gol, T-Cross and Nivus from Volkswagen Passenger Cars were the Group models with the highest sales volumes. The Group's share of the market in South America amounted to 11.1 (12.4) %.

In the Brazilian market, which performed at the prior-year level, the Volkswagen Group delivered 10.8% fewer vehicles to customers in the reporting period than in the previous year. Sales of the Gol, T-Cross and Nivus models from Volkswagen Passenger Cars developed particularly encouragingly.

In Argentina, the number of Volkswagen Group vehicles handed over to customers in 2022 decreased by 14.1% year-on-year in an overall market exhibiting noticeable growth. Group models with the highest sales volume were the Taos from Volkswagen Passenger Cars and the Amarok from Volkswagen Commercial Vehicles.

Deliveries in the Asia-Pacific region

In the past fiscal year, the Volkswagen Group saw deliveries to customers in the Asia-Pacific region drop by 2.7% compared with 2021 in a market that experienced slight growth overall. Parts supply shortages, especially for semiconductors, affected this region as well, and in addition, local lockdowns in China in connection with the spread of the Omicron variant of the SARS-CoV-2 virus resulted in restrictions. The Group's share of the passenger car market in this region amounted to 10.3 (11.0) %.

In China, the recovery of the market as a whole continued at a slower pace in 2022. The Volkswagen Group delivered 3.6% fewer vehicles to customers there than in the preceding year. By contrast, the number of all-electric vehicles delivered to customers in China was up by more than two thirds year-on-year to 155,723 units. The ID.3, ID.4 X, ID.4 CROZZ, ID.6 X, ID.6 CROZZ, Passat and Talagon models from Volkswagen Passenger Cars, the Audi A3 L saloon and the Porsche Panamera, among others, introduced to the market as new or successor models during the previous year, showed a positive trend. Some of the models that saw encouraging demand were the Golf, T-Roc, CC and Magotan from Volkswagen Passenger Cars and the Audi A4 saloon and Audi Q5. The T-Roc, Bora, Lamando, Lavida, Sagitar, Tayron, Tavendor, Teramont and Viloran from Volkswagen Passenger Cars, the ŠKODA Kodiaq and the Q2L e-tron, Q4 e-tron, Q5 e-tron, Q6, e-tron GT and Audi A7L saloon from Audi were successfully launched on the market during the reporting period as new or successor models.

In the Indian passenger car market, which recorded strong growth, the Volkswagen Group registered a surge in demand of over 80% in fiscal year 2022 compared with the weak previous year. The new Taigun from the Volkswagen Passenger Cars brand as well as the new Kushaq from ŠKODA, which was introduced in the previous year, were the most sought-after Group models there. The Virtus from Volkswagen Passenger Cars, the Kodiaq and the Slavia from ŠKODA and the Porsche Taycan saloon were successfully launched on the market during the reporting period as new or successor models.

In Japan, the number of Group vehicles delivered to customers in 2022 was down 6.8% year-on-year in an overall market experiencing a noticeable decline. Among other models, sales figures for the Golf from Volkswagen Passenger Cars and the Audi Q5 Sportback developed encouragingly.

PASSENGER CAR DELIVERIES TO CUSTOMERS BY MARKET[1]

	DELIVERIES (UNITS)		CHANGE
	2022	2021	(%)
Europe/Other Markets	**3,297,402**	**3,698,948**	**–10.9**
Western Europe	**2,615,864**	**2,761,629**	**–5.3**
of which: Germany	998,000	959,748	+4.0
France	211,430	238,365	–11.3
United Kingdom	377,449	422,594	–10.7
Italy	223,864	248,414	–9.9
Spain	192,311	220,151	–12.6
Central and Eastern Europe	**418,513**	**624,801**	**–33.0**
of which: Czech Republic	103,223	114,250	–9.7
Russia	41,864	204,772	–79.6
Poland	112,389	120,831	–7.0
Other Markets	**263,025**	**312,518**	**–15.8**
of which: Türkiye	102,735	121,885	–15.7
South Africa	71,437	72,847	–1.9
North America	**759,791**	**876,558**	**–13.3**
of which: USA	564,705	647,521	–12.8
Canada	85,860	98,829	–13.1
Mexico	109,226	130,208	–16.1
South America	**397,539**	**436,852**	**–9.0**
of which: Brazil	277,806	311,519	–10.8
Argentina	48,263	56,186	–14.1
Asia-Pacific	**3,502,556**	**3,598,344**	**–2.7**
of which: China	3,182,428	3,301,334	–3.6
India	97,610	52,481	+86.0
Japan	61,112	65,549	–6.8
Worldwide	**7,957,288**	**8,610,702**	**–7.6**
Volkswagen Passenger Cars	4,563,340	4,896,874	–6.8
ŠKODA	731,262	878,202	–16.7
SEAT	385,592	470,531	–18.1
Volkswagen Commercial Vehicles	328,572	359,541	–8.6
Audi	1,614,231	1,680,512	–3.9
Lamborghini	9,233	8,405	+9.9
Bentley	15,174	14,659	+3.5
Porsche	309,884	301,915	+2.6
Bugatti[2]	–	63	x

1 Prior-year deliveries have been updated to reflect subsequent statistical trends. The figures include the Chinese joint ventures.
2 Until October 31, 2021.

COMMERCIAL VEHICLE DELIVERIES

In fiscal year 2022, the Volkswagen Group delivered 12.6% more commercial vehicles to customers worldwide than in the previous year. We delivered a total of 305,488 commercial vehicles to customers. Trucks accounted for 254,313 units (+10.5%) and buses for 29,591 units (+56.8%). A total of 21,584 (–2.8%) vehicles from the MAN TGE van series were delivered. The American commercial vehicle manufacturer Navistar became a TRATON GROUP brand on July 1, 2021. Navistar's sales totaled 81,888 units in the reporting period.

In the 27 EU states excluding Malta, but plus the United Kingdom, Norway and Switzerland (EU27+3), sales in the reporting period were down by 2.9% on the previous year to a total of 115,532 units, of which 89,061 were trucks and 5,041 were buses. Here, the MAN brand delivered 21,430 vehicles from the MAN TGE van series.

As a result of the sanctions imposed in connection with the Russia-Ukraine conflict, sales in Russia fell year-on-year to 1,557 (11,293) units, comprising 1,550 trucks and 7 buses. Since the conflict began, no orders for new vehicles have been accepted in Russia.

In fiscal year 2022, deliveries in Türkiye were on a level with the previous year, at 4,413 (4,398) vehicles. Trucks accounted for 4,122 units and buses for 201 units, while 90 vehicles from the MAN TGE van series were sold. In South Africa, deliveries of Volkswagen Group commercial vehicles decreased by 6.6% year-on-year to a total of 3,681 units; of this figure 3,204 were trucks and 477 were buses.

Sales in North America rose to 82,824 (31,869) vehicles in the reporting year; this included 68,903 trucks and 13,921 buses. From July 1, 2021, the figures also include Navistar's sales (78,988) whose vehicles were above all handed over to customers in the United States.

Deliveries in South America decreased to a total of 76,152 vehicles (–2.1%) in 2022, of which 68,211 were trucks and 7,941 were buses. Sales in Brazil were down by 8.3%. Of the units delivered, 53,704 were trucks and 5,926 were buses.

In the Asia-Pacific region, the Volkswagen Group sold 11,446 vehicles in the reporting year; among these, 10,528 were trucks and 911 were buses. Overall, this was 5.7% less than in the previous year.

COMMERCIAL VEHICLE DELIVERIES TO CUSTOMERS BY MARKET[1]

	DELIVERIES (UNITS)		CHANGE
	2022	2021	(%)
Europe/Other Markets	**135,066**	**149,407**	**–9.6**
of which: EU27+3	115,532	119,029	–2.9
of which: Germany	31,623	32,130	–1.6
Russia	1,557	11,293	–86.2
Türkiye	4,413	4,398	+0.3
South Africa	3,681	3,942	–6.6
North America	**82,824**	**31,869**	**x**
of which: USA	66,405	24,234	x
Mexico	11,131	5,375	x
South America	**76,152**	**77,774**	**–2.1**
of which: Brazil	59,630	65,005	–8.3
Asia-Pacific	**11,446**	**12,140**	**–5.7**
Worldwide	**305,488**	**271,190**	**+12.6**
Scania	85,232	90,366	–5.7
MAN[2]	84,377	93,578	–9.8
Navistar	81,888	29,876	x
Volkswagen Truck & Bus[2]	53,991	57,370	–5.9

1 Prior-year deliveries have been updated to reflect subsequent statistical trends. As of July 1, 2021, the figures include Navistar.
2 Until the first quarter of 2022, deliveries for Volkswagen Truck & Bus were reported within MAN.

DELIVERIES IN THE POWER ENGINEERING SEGMENT

Orders in the Power Engineering segment are usually part of major investment projects. Lead times typically range from just under one year to several years, and partial deliveries as construction progresses are common. Accordingly, there is a time lag between incoming orders and sales revenue from the new construction business.

In 2022, sales revenue in the Power Engineering segment was largely driven by Engines & Marine Systems and Turbomachinery, which together generated more than three quarters of overall sales revenue.

ORDERS RECEIVED IN THE PASSENGER CARS SEGMENT IN WESTERN EUROPE

In the reporting period, orders received in Western Europe decreased by 14.2% compared with the previous year. All key markets fell short of their respective prior-year level. The extent of the declines varied from country to country: while Germany saw a single-digit decline, the figures for the United Kingdom, France, Italy and Spain were down by more than 10%.

ORDERS RECEIVED FOR COMMERCIAL VEHICLES

Orders received for mid-sized and heavy trucks, for buses and for commercial vehicles from the MAN TGE van series declined by 7.1% year-on-year to 334,583 vehicles in 2022. This trend is mainly attributable to continuing restrictive order acceptance. In addition, no further orders for new vehicles were accepted from Russia owing to the Russia-Ukraine conflict. While order intake in the bus markets increased very sharply, truck markets saw a noticeable decline, while the MAN TGE van series segment even recorded a significant downturn. In the prior-year period, the truck and MAN TGE business received a particularly high level of orders due to a Covid-19 catch-up effect. A higher order intake was recorded in the second half of 2022 in particular.

Order intake in the bus business recorded a very sharp increase year-on-year across all commercial vehicle brands. In the EU27+3 region, this was attributable, among other factors, to the slow recovery in the coach market.

ORDERS RECEIVED IN THE POWER ENGINEERING SEGMENT

The long-term performance of the Power Engineering business is determined by the macroeconomic environment. Individual major orders lead to fluctuations in incoming orders during the year that do not correlate with these long-term trends.

Orders received in the Power Engineering segment in 2022 amounted to €4.3 (3.8) billion. Engines & Marine Systems and Turbomachinery generated more than two-thirds of the order volume in a persistently difficult market environment.

In the marine business, for example, deliveries of 20V32/44CR engines were ordered for four ships in 2022 (two engines per ship). In the power plant business, orders were won for 48 engines and component sets for 11 completely knocked down engines of different types with an aggregate output of 865 MW. For turbomachinery, we received several orders for new applications which were driven by the energy transition and decarbonization such as carbon capture and storage in Europe and in the USA, as well as an expansion of an energy storage facility in England. We also received a significant number of orders for gas production in West Africa and the North Sea.

VOLKSWAGEN GROUP FINANCIAL SERVICES

The activities in the Financial Services Division cover the Volkswagen Group's dealer and customer financing, leasing, banking and insurance activities, fleet management and mobility services. The division comprises Volkswagen Financial Services and the financial services activities of Scania and Porsche Holding

Salzburg and also extends to the contracts concluded by our international joint ventures. As of July 1, 2021, it also includes the financial services business of Navistar.

The Financial Services Division's products and services were popular in fiscal year 2022. However, demand was affected to varying degrees by the Covid-19 pandemic. Limited vehicle availability caused by parts supply shortages, and exacerbated by the Russia-Ukraine conflict, also weighed on demand. The number of new financing, leasing, service and insurance contracts signed worldwide fell by 0.7% to 8.5 million. The ratio of leased and financed vehicles to Group deliveries (penetration rate) in the Financial Services Division’s markets stood at 32.6 (36.4) % in the reporting period. The total number of contracts on December 31, 2022 was 24.5 (24.5) million.

In fiscal year 2022, the financial services business in the Europe/Other Markets region was impacted by the Covid-19 pandemic and by limited vehicle availability caused by parts supply shortages, as well as by the Russia-Ukraine conflict. At 6.1 million, the number of new contracts signed in the reporting period was down 1.7% on the previous year’s figure. The total number of contracts at the end of December 2022 was on a level with December 31, 2021 at 18.1 (18.0) million. The customer financing/leasing area was responsible for 7.2 (7.4) million of these contracts.

The number of new contracts signed in North America in the reporting period decreased year-on-year to 805 (983) thousand owing to the decline in vehicle deliveries. The total number of contracts came to 3.0 million on December 31, 2022, a 7.6% fall on the level reported at the end of 2021. The customer financing/leasing area recorded 1.7 (1.9) million contracts.

In the South America region, 360 (332) thousand new contracts were concluded in the past fiscal year. Compared with December 31, 2021, the total number of contracts at the end of the reporting period rose to 828 (723) thousand. The contracts mainly related to the customer financing/leasing area.

The number of new contracts signed in the Asia-Pacific region in fiscal year 2022 increased to 1.2 (1.0) million, exceeding the comparative prior-year figure. The total number of contracts stood at 2.6 (2.6) million on December 31, 2022. The customer financing/leasing area recorded 1.6 (1.8) million contracts.

SALES TO THE DEALER ORGANIZATION

The Volkswagen Group’s unit sales to the dealer organization decreased in the reporting period by 1.1% to 8,481,278 units (including the equity-accounted companies in China). In the reporting period, limited vehicle availability as a result of the Covid-19 pandemic and bottlenecks in the supply of parts caused by the shortage of semiconductors and the Russia-Ukraine conflict had a negative impact. In addition, disruptions in the logistics chain resulted in delays. Unit sales outside Germany fell by 1.7% to 7,476,003 vehicles. The United Kingdom, Brazil and France were particularly affected, as was Russia, since vehicle exports to this region had been halted. Growth was recorded, however, in the USA, China and India. Unit sales in Germany increased by 3.3% year-on-year. The proportion of the Group’s total unit sales attributable to Germany increased to 11.9 (11.3) %.

The Tiguan, Passat, Polo, Golf, T-Roc, Jetta and T-Cross from the Volkswagen Passenger Cars brand were our biggest sellers last year. The largest increases in unit sales were recorded for the Taigo, ID.4, Passat and Tharu models from the Volkswagen Passenger Cars brand, the Q4 e-tron, A3 and e-tron from Audi, the CUPRA Formentor and the ŠKODA Fabia. The Porsche Cayenne and Bentley Bentayga also achieved a strong growth rate.

PRODUCTION

The Volkswagen Group produced 8,716,606 vehicles (including the equity-accounted companies in China) from January to December 2022, 5.2% more than in the prior-year period. The shortage of semiconductors and the disruption of supply chains caused by the Russia-Ukraine conflict and the Covid-19 pandemic restricted production in the Volkswagen Group; the supply and production situation eased toward the end of the reporting period. Against the backdrop of the Russia-Ukraine conflict and the resulting consequences, Volkswagen decided to suspend the start of vehicle production in Russia until further notice. Production in Germany increased by 11.1% to 1,647,611 vehicles in fiscal year 2022. The proportion of the Group's total production accounted for by Germany increased to 18.9 (17.9) %.

INVENTORIES

Global inventories of new vehicles at Group companies and in the dealer organization were higher at the end of the reporting period than at year-end 2021. Disruptions in the logistics chain, among other factors, had a negative impact in the reporting period.

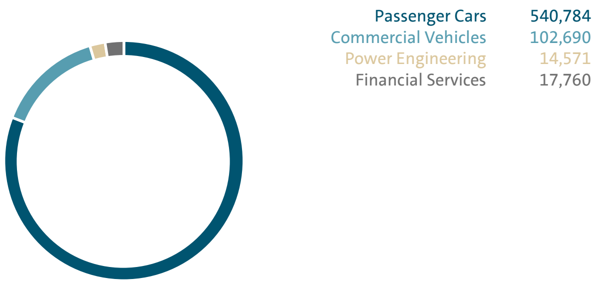
EMPLOYEES

Including the Chinese joint ventures, the Volkswagen Group employed an average of 669,275 people in fiscal year 2022, an increase of 0.2% year-on-year. In Germany, we employed 289,499 people on average; at 43.3 (44.1) %, their share of the total headcount was below the level of the previous year.

The number of active employees in the Volkswagen Group rose by 0.6% to 646,837 as of December 31, 2022. In addition, 12,378 employees were in the passive phase of their partial retirement and 16,590 young people were in vocational traineeships. At the end of the reporting period, the Volkswagen Group had a total of 675,805 employees worldwide. This represented an increase of 0.4% since the end of 2021. A total of 293,862 people were employed in Germany (–0.4%) and 381,943 outside Germany (+1.1%).

EMPLOYEES BY DIVISION/BUSINESS AREA

as of December 31, 2022



Shares and Bonds

During the reporting period, Volkswagen AG's ordinary and preferred shares followed the negative trend on the stock markets, where some automotive stocks dropped at above-average rates.

EQUITY MARKETS AND PERFORMANCE OF THE PRICE OF VOLKSWAGEN'S SHARES

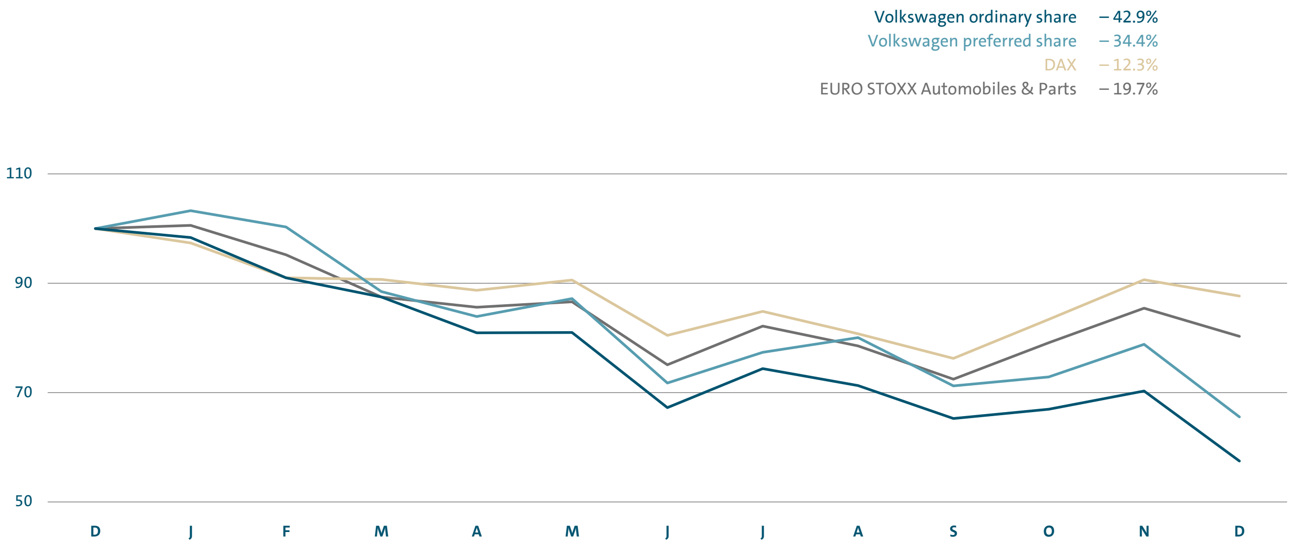
The trend in the international stock markets in fiscal year 2022 was initially overshadowed by investors' concerns about possible interest rate hikes in the face of rising inflation rates and about the spread of the Omicron variant of the SARS-CoV-2 virus. Following the outbreak of the Russia-Ukraine conflict in February 2022, the imposing of sanctions against Russia and the rise in commodity and energy prices that drove up inflation, the international stock markets came under pressure. In addition, the tight restrictions under the zero-Covid strategy being pursued in China placed further strain on international supply chains. The downward trend in stock prices intensified in the further course of the reporting period due to the continuing confrontations in Ukraine, increasing concerns about a sufficient supply of energy, rising material costs, persistently high inflation and the resulting tighter monetary policy of the central banks.

The German stock market index (DAX) began the year marginally up on its previous record achieved in November 2021. After that, apprehension about the tightening of monetary policy in the USA dominated investor sentiment. The Russia-Ukraine conflict and the fears this triggered of an energy crisis and its economic fallout provoked uncertainty among market participants and strained the capital market. In view of high inflation, the European Central Bank initiated an interest rate turnaround that, combined with fears of recession, resulted in a further fall in the DAX. Stock prices rose significantly in the fourth quarter; however, the DAX ended 2022 12% below the previous year's level, primarily under the impact of the high coronavirus infection rates in China.

Volkswagen AG's preferred and ordinary shares followed the trend on the stock markets, where cyclical automotive stocks dropped at above-average rates in some cases. With the announcement of the IPO of Porsche AG, Volkswagen's shares managed to temporarily detach themselves from the general trend. Although the good operating results were received positively by the market, the 2022 year-end closing price – after correcting for the special dividend of €19.06 per share – was down 34% for the preferred share and 43% for the ordinary share compared with the prior year figure.

PRICE DEVELOPMENT FROM DECEMBER 2021 TO DECEMBER 2022

Index based on month-end prices: December 31, 2021 = 100



VOLKSWAGEN SHARE KEY FIGURES AND MARKET INDICES FROM JANUARY 1 TO DECEMBER 31, 2022

		High	Low	Closing
Ordinary share	Price (€)	279.40	145.00	147.65
	Date	Jan. 5	Dec. 28	Dec. 30
Preferred share	Price (€)	193.10	114.88	116.42
	Date	Jan. 14	Dec. 22	Dec. 30
DAX	Price	16,272	11,976	13,924
	Date	Jan. 5	Sep. 29	Dec. 30
ESTX Auto & Parts	Price	684	453	506
	Date	Jan. 5	Jul. 5	Dec. 30

EXTRAORDINARY GENERAL MEETING

On December 16, 2022, an Extraordinary General Meeting of Volkswagen AG took place in the CityCube Berlin. The meeting was held in connection with the IPO of Dr. Ing. h.c. F. Porsche AG, where 25% of Porsche AG's preferred shares were placed on the capital market. At the same time, Porsche SE indirectly acquired 25% of the ordinary shares in Porsche AG plus one ordinary share from Volkswagen AG. To enable its shareholders to participate in the success of the entire transaction, Volkswagen AG proposed to the Extraordinary General Meeting an amendment to the resolution on the appropriation of earnings already adopted by the Annual General Meeting on May 12, 2022. The aim of this was to pay a special dividend to ordinary and preferred shareholders of Volkswagen AG for fiscal year 2021 in addition to the dividends already paid to shareholders in May 2022 of €7.50 per dividend-bearing ordinary share and €7.56 per dividend-bearing preferred share.

94.02% of the ordinary share capital was present at the Extraordinary General Meeting. With a majority of 99.9974% of the votes cast, the shareholders approved the payment of a special dividend of €19.06 per dividend-bearing ordinary share and dividend-bearing preferred share. The special dividend was paid on January 9, 2023.

DIVIDEND POLICY

Our dividend policy matches our financial strategy. In the interests of all stakeholders, we aim for continuous dividend growth that allows our shareholders to participate appropriately in our business success. The proposed dividend therefore reflects our financial management objectives – in particular, ensuring a solid financial foundation as part of the implementation of our strategy.

The current dividend proposal can be found in the chapter entitled “Volkswagen AG (condensed, in accordance with the German Commercial Code)” of this annual report. The Board of Management and Supervisory Board of Volkswagen AG are proposing a dividend of €8.70 per ordinary share and €8.76 per preferred share for fiscal year 2022. On this basis, the total dividend amounts to €4.4 (3.8) billion, excluding the special dividend due to the Porsche IPO. The payout ratio is based on the Group’s earnings after tax attributable to Volkswagen AG shareholders. This amounts to 29.4% for the reporting period and stood at 25.4% in the previous year, excluding the special dividend due to the Porsche IPO. A payout ratio of at least 30% is one of our strategic goals.

DIVIDEND YIELD

Based on the dividend proposal for the reporting period, the dividend yield on Volkswagen ordinary shares is 5.9 (2.9) %, excluding the special dividend due to the Porsche IPO, measured by the closing price on the last trading day in 2022. The dividend yield on preferred shares is 7.5 (4.3) %, excluding the special dividend due to the Porsche IPO.

EARNINGS PER SHARE

Basic earnings per ordinary share were €29.63 (29.59) in fiscal year 2022. Basic earnings per preferred share were €29.69 (29.65). In accordance with IAS 33, the calculation is based on the weighted average number of ordinary and preferred shares outstanding in the reporting period. Since the number of basic and diluted shares is identical, basic earnings per share correspond to diluted earnings per share.

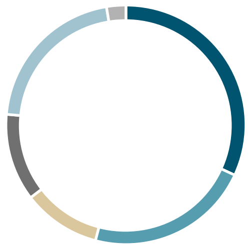
See also “Earnings per share” in the notes to the 2022 consolidated financial statements for the calculation of earnings per share.

SHAREHOLDER STRUCTURE AS OF DECEMBER 31, 2022

At the end of the reporting period, Volkswagen AG's subscribed capital amounted to €1,283,315,873.28. The shareholder structure of Volkswagen AG as of December 31, 2022 is shown in the following chart.

SHAREHOLDER STRUCTURE AS OF DECEMBER 31, 2022

as a percentage of subscribed capital



The distribution of voting rights for the 295,089,818 ordinary shares was as follows at the reporting date: Porsche Automobil Holding SE, Stuttgart, held 53.3% of the voting rights. The second-largest shareholder was the State of Lower Saxony, which held 20.0% of the voting rights. Qatar Holding LLC was the third-largest shareholder with 17.0%. The remaining 9.7% of ordinary shares were in free float.

Notifications of changes in voting rights in accordance with the *Wertpapierhandelsgesetz* (WpHG – German Securities Trading Act) are published on our website at https://www.volkswagenag.com/en/InvestorRelations/news-and-publications/Voting_Rights.html

VOLKSWAGEN SHARE DATA

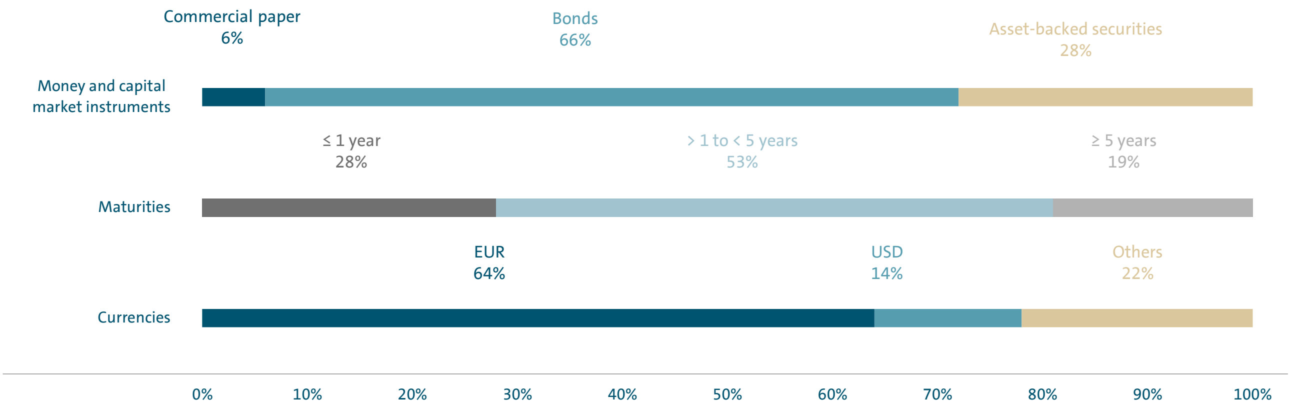
	Ordinary shares	Preferred shares
ISIN	DE0007664005	DE0007664039
WKN	766400	766403
Deutsche Börse/Bloomberg	VOW	VOW3
Reuters	VOWG.DE	VOWG_p.DE
Primary market indices	CDAX, Prime All Share, MSCI Euro, S&P Global 100 Index	DAX, CDAX, EURO STOXX, EURO STOXX 50, EURO STOXX Automobiles & Parts, Prime All Share, MSCI Euro
Exchanges	Berlin, Dusseldorf, Frankfurt, Hamburg, Hanover, Munich, Stuttgart, Xetra	

VOLKSWAGEN SHARE KEY FIGURES

Dividend development		2022	2021	2020	2019	2018
Number of no-par value shares at Dec. 31						
Ordinary shares	thousands	295,090	295,090	295,090	295,090	295,090
Preferred shares	thousands	206,205	206,205	206,205	206,205	206,205
Dividend[1]						
per ordinary share	€	8.70	7.50	4.80	4.80	4.80
per preferred share	€	8.76	7.56	4.86	4.86	4.86
Dividend paid[1]	€ million	4,374	3,772	2,419	2,419	2,419
on ordinary shares	€ million	2,567	2,213	1,416	1,416	1,416
on preferred shares	€ million	1,806	1,559	1,002	1,002	1,002
Share price development[2]		**2022**	**2021**	**2020**	**2019**	**2018**
Ordinary share						
Closing	€	147.65	258.40	170.10	173.25	139.10
Price performance	%	−42.9	+51.9	−1.8	+24.6	−17.5
Annual high	€	279.40	327.20	183.10	182.50	188.00
Annual low	€	145.00	165.70	101.50	135.60	131.10
Preferred share						
Closing	€	116.42	177.48	152.42	176.24	138.92
Price performance	%	−34.4	+16.4	−13.5	+26.9	−16.5
Annual high	€	193.10	246.55	185.52	184.24	188.50
Annual low	€	114.88	144.80	87.20	134.76	133.70
Beta factor[3]	factor	1.55	1.16	1.26	1.17	1.17
Market capitalization at Dec. 31	€ billion	67.6	112.8	81.6	87.5	69.7
Equity attributable to Volkswagen AG share-holders and hybrid capital investors at Dec. 31	€ billion	165.4	144.4	127.0	121.8	117.1
Ratio of market capitalization to equity	factor	0.41	0.78	0.64	0.72	0.60
Key figures per share		**2022**	**2021**	**2020**	**2019**	**2018**
Earnings per ordinary share[4]						
basic	€	29.63	29.59	16.60	26.60	23.57
diluted	€	29.63	29.59	16.60	26.60	23.57
Equity attributable to Volkswagen AG share-holders and hybrid capital investors at Dec. 31	€	329.90	288.15	253.44	242.93	233.63
Price/earnings ratio[5]						
Ordinary share	factor	5.0	8.7	10.2	6.5	5.9
Preferred share	factor	3.9	6.0	9.1	6.6	5.9
Dividend yield[6]						
Ordinary share	%	5.9	2.9	2.8	2.8	3.5
Preferred share	%	7.5	4.3	3.2	2.8	3.5
Stock exchange turnover[7]		**2022**	**2021**	**2020**	**2019**	**2018**
Turnover of Volkswagen ordinary shares	€ billion	2.7	6.1	3.1	3.3	4.3
	million shares	13.5	23.3	21.6	20.9	28.0
Turnover of Volkswagen preferred shares	€ billion	44.9	58.8	49.8	41.0	54.1
	million shares	302.2	300.4	361.2	266.0	346.6
Volkswagen share of total DAX turnover	%	4.7	6.6	4.7	4.6	5.4

1 Figures for the years 2018 to 2021 relate to dividends paid in the following year. For 2021, the figures exclude the special dividend due to the Porsche IPO. For 2022, the figures relate to the proposed dividend.
2 Xetra prices.
3 For the calculation see chapter "Results of Operations, Financial Position and Net Assets" of this annual report.
4 For the calculation see "Earnings per share" in the notes to the consolidated financial statements.
5 Ratio of year-end-closing price to earnings per share.
6 Dividend per share based on the year-end-closing price.
7 Order book turnover on the Xetra electronic trading platform (Deutsche Börse).

REFINANCING STRUCTURE OF THE VOLKSWAGEN GROUP
as of December 31, 2022



REFINANCING

The Volkswagen Group carried out several successful transactions in the international capital markets in 2022 despite volatile and difficult market conditions.

In February 2022, the hybrid note issued in March 2015 with a principal amount of €1.1 billion was canceled with effect from March 20, 2022.

In March 2022, Volkswagen International Finance N.V. placed two hybrid notes with a total volume of €2.25 billion. Some of the proceeds from this transaction were used to refinance the hybrid note issued in 2017, which had been duly canceled in November with effect from December 14, 2022. A second green bond was issued in June 2022 under the Green Finance Framework presented in 2020. At €1.5 billion, this was sufficient to almost completely refinance the expenses arising from the Green Project Portfolio for the years 2017 to 2020. The Volkswagen Group unveiled a new Green Finance Framework in November 2022. This allows the Company to finance capital expenditures that are aligned with the EU Taxonomy, whereby Volkswagen will voluntarily limit itself to all-electric vehicles. On the basis of the new framework, an amount of €2.5 billion was placed in the same month by way of three green bonds.

Volkswagen Group of America Finance, LLC, raised USD3 billion from investors over the US refinancing market in May 2022. Notes with a volume of CAD750 million were issued in Canada in November 2022.

Official euro benchmark bonds with an aggregate volume of €2 billion were issued for the Financial Services Division. In addition to this, securities were issued in various currencies and regions.

Alongside the placement of senior, unsecured bonds, asset-backed securities (ABS) transactions were another element of our refinancing activities. In Europe, public ABS transactions with a total volume of €2.75 billion were placed. Public ABS transactions were also issued in Japan and China.

The Volkswagen Group was also actively involved in the commercial paper market with several issuing companies.

The proportion of fixed-rate instruments in the past year was about three times as high as the proportion of floating-rate instruments.

In our refinancing arrangements, we generally aim to exclude interest rate and currency risk as far as possible with the simultaneous use of derivatives.

The following table shows which financial instruments were utilized on the money and capital markets as of December 31, 2022 and illustrates the financial flexibility of the Volkswagen Group:

Financial instruments	Authorized volume € billion	Amount utilized on Dec. 31, 2022 € billion
Commercial paper	42.0	8.7
Bonds	194.3	95.7
of which hybrid issues		13.9
Asset-backed securities	104.9	41.3

Volkswagen AG's syndicated credit line of €10.0 billion agreed in December 2019 was unused at the end of 2022.

Of the syndicated credit lines with a total of €12.4 billion at other Group companies, €0.4 billion has been drawn down. The Volkswagen Group continued to have bilateral confirmed credit lines with national and international banks in various countries for a total of €4.9 billion, of which €0.6 billion was drawn down.

RATINGS

	VOLKSWAGEN AG		VOLKSWAGEN FINANCIAL SERVICES AG		VOLKSWAGEN BANK GMBH		TRATON SE	
	2022	2021	2022	2021	2022	2021	2022	2021
Standard & Poor's								
short-term	A–2	A–2	A–2	A–2	A–2	A–2	–	–
long-term	BBB+	BBB+	BBB+	BBB+	BBB+	BBB+	BBB	BBB
outlook	stable	stable	stable	stable	stable	stable	stable	stable
Moody's Investors Service								
short-term	P–2	P–2	P–2	P–2	P–1	P–1	–	–
long-term	A3	A3	A3	A3	A1	A1	Baa2	Baa1
outlook	stable	stable	stable	stable	stable	stable	stable	negative

In October and November of 2022, rating agency Standard & Poor's confirmed its short-term and long-term ratings for Volkswagen AG, Volkswagen Financial Services AG and Volkswagen Bank GmbH at A–2 and BBB+, respectively. In July 2022, the long-term rating of BBB for TRATON SE was also confirmed. The outlook for all companies remains unchanged at "stable".

In June and December 2022, Moody's Investors Service confirmed the short-term and long-term ratings for Volkswagen AG and Volkswagen Financial Services AG at P–2 and A3, respectively, and those for Volkswagen Bank GmbH at P–1 and A1. The outlook was left unchanged at "stable". For TRATON SE, the long-term rating was lowered one notch from Baa1 to Baa2. The reason given was the higher level of debt in connection with the acquisition of Navistar, the squeeze-out at MAN SE and the provisions in the EU antitrust proceedings. The outlook was raised to "stable".

ESG RATINGS

Analysts and investors are referring increasingly to companies' sustainability profiles when making their recommendations and decisions. They draw on ESG ratings, among other things, to evaluate a company's environmental, social and governance performance. At the same time, these ratings are instrumental in determining whether we are meeting our goal in relation to the Group's NEW AUTO strategy, and they are used to establish internal measures.

After the diesel issue became public knowledge, the Volkswagen Group was downgraded significantly in numerous ESG ratings. With the successful completion of the Monitorship and reinstatement of the Group in the UN Global Compact, an improvement in ESG performance was achieved. Compared with the previous year, our score in the Sustainalytics ESG rating improved from 29.6 to 26.1 in 2022. Our MSCI score remained at B and the ISS score continued to be C. Volkswagen is also listed in the Dow Jones Sustainability Index Europe. In addition, Volkswagen maintained its score of A– in the CDP climate rating in fiscal year 2022 and its rating of A in the Water Disclosure Project (WDP).

Results of Operations, Financial Position and Net Assets

Against the backdrop of the global market slowdown and continued limited vehicle availability due to parts supply shortages, the Volkswagen Group generated significantly higher sales revenue and a higher operating result in the reporting year.

The Volkswagen Group's segment reporting comprises the four reportable segments of Passenger Cars and Light Commercial Vehicles, Commercial Vehicles, Power Engineering and Financial Services, in compliance with IFRS 8 and in line with the Group's internal financial management and reporting structures.

The reconciliation contains activities and other operations that do not, by definition, constitute segments. These include the unallocated Group financing activities. Consolidation adjustments between the segments (including the holding company functions) are also contained in the reconciliation. The purchase price allocations for Porsche Holding Salzburg and Porsche, Scania, MAN and, since July 2021, Navistar are allocated to their corresponding segments.

The Automotive Division comprises the Passenger Cars and Light Commercial Vehicles segment, the Commercial Vehicles segment and the Power Engineering segment, as well as the figures from the reconciliation. The Passenger Cars and Light Commercial Vehicles segment is combined with the reconcileation to form the Passenger Cars Business Area, while the Commercial Vehicles and Power Engineering segments are identical to the business areas of the same name. The Financial Services Division corresponds to the Financial Services segment.

At Volkswagen, segment profit or loss is measured on the basis of the operating result.

KEY FIGURES FOR 2022 BY SEGMENT

€ million	Passenger Cars and Light Commercial Vehicles	Commercial Vehicles	Power Engineering	Financial Services	Total segments	Reconciliation	Volkswagen Group
Sales revenue	210,371	39,516	3,565	46,847	300,299	−21,067	279,232
Segment profit or loss (operating result)	17,153	1,588	281	5,656	24,677	−2,553	22,124
as a percentage of sales revenue	8.2	4.0	7.9	12.1			7.9
Capex, including capitalized development costs	20,125	1,907	84	217	22,334	338	22,672

IPO OF PORSCHE AG

On September 28, 2022, as part of the IPO of Dr. Ing. h.c. F. Porsche AG, Stuttgart (Porsche AG), a total of 113,875,000 preferred shares of Porsche AG were successfully placed with investors at a placement price of €82.50 per preferred share, totaling around €9.4 billion – including 14,853,260 preferred shares to cover potential additional allocations. The non-voting no-par value bearer shares came from the portfolio of Porsche Holding Stuttgart GmbH, Stuttgart – a wholly owned subsidiary of Volkswagen AG. The total number of preferred shares offered in the IPO corresponded to up to 25% of the preference share capital of Porsche AG (including additional allocations). The non-voting preferred shares of Porsche AG have been traded on the Regulated Market of the Frankfurt Stock Exchange since September 29, 2022. Up to the early termination of the stabilization period on October 11, 2022, a total of 3,794,199 preferred shares had been bought back on the market. The free float of the preferred shares after the end of the stabilization period is therefore 24.2% and comprises 110,080,801 preferred shares.

In connection with the IPO, Volkswagen additionally sold an interest of 25% of Porsche AG's ordinary shares plus one ordinary share to Porsche Automobil Holding SE, Stuttgart (Porsche SE). As consideration, Porsche SE has undertaken to pay a purchase price of around €10.1 billion to Volkswagen; this purchase price includes a premium of 7.5% on the placement price of the preferred shares per share. The purchase of the ordinary shares will be completed in two tranches of 79,712,501 and 34,162,500 shares respectively.

As a result of the transactions, the Volkswagen Group's equity increased by €19.1 billion, net of bank commissions and fees in the amount of €0.1 billion taken directly to equity; of this amount, €10.8 billion is reported as noncontrolling interests. The cash inflow for the preferred shares and the first tranche of the ordinary shares occurred at the beginning of the fourth quarter of 2022.

The resolution of the extraordinary General Meeting of Volkswagen AG on December 16, 2022 gave rise to the obligation to pay a dividend, which was increased by €19.06 per ordinary and preferred share ("Special Dividend") and led to a total obligation to the shareholders of Volkswagen AG amounting to €9.6 billion. Taking into account the offsetting transaction described below, a corresponding liability was recognized for this payment as of the balance sheet date. The cash outflow was scheduled for January 9, 2023 and occurred on that day.

Volkswagen AG and Porsche SE agreed to offset the obligation to pay a special dividend to Porsche SE against Volkswagen AG's claim to the payment of the purchase price still outstanding for the second tranche of ordinary shares. In the consolidated financial statements as of December 31, 2022, the purchase price receivable of €3.0 billion for the second tranche and the dividend liability of €3.1 billion were therefore presented on a net basis. Upon payment of the special dividend on January 9, 2023, the netting process was completed.

The employees of Volkswagen AG and Volkswagen Sachsen GmbH are to participate in the economic success of the placement of the preferred shares and the sale of ordinary shares in Porsche AG by way of a one-off payment of up to €2,000 per employee. A liability of €0.3 billion was recognized to this end as of the balance sheet date. On October 17, 2022, the Board of Management and the Works Council of Porsche AG communicated a special payment to employees to mark the successful IPO; the payment was made and recognized in profit or loss in the fourth quarter of 2022. The total bonus for employees in connection with the IPO of Porsche AG amounted to €0.5 billion in the Volkswagen Group as of the balance sheet date.

TAKEOVER OF EUROPCAR

In 2021, together with investment firm Attestor Limited and Pon Holdings B.V., Volkswagen made a joint public takeover offer for the shares of Europcar Mobility Group S.A., Paris/France (Europcar) through the consortium company Green Mobility Holding S.A. (GMH) based in Strassen/Luxembourg. The European Commission issued final antitrust approval at the end of May 2022. During the extended offer period, the French Financial Markets Authority gave Europcar shareholders the opportunity to tender their shares to the consortium company. In total, 93.6% of Europcar's shareholders accepted the offer. The consortium jointly assumed control of Europcar in mid-June 2022. Because the acceptance rate was over 90%, a squeeze-out was initiated for the remaining Europcar shares in July 2022, and the company was delisted. Since July 13, 2022, the consortium company has held 100% of the shares in Europcar. The purchase price was 51 cents per Europcar share.

At the end of June 2022, the entire portion of the purchase price attributable to Volkswagen, amounting to €1.7 billion, was contributed to GMH. Since joint control has been contractually agreed, the company, in which Volkswagen holds 66% of the shares, will be accounted for using the equity method in the Volkswagen consolidated financial statements. In addition, Volkswagen is the writer of put options held by the other members of the consortium, and the other members have granted Volkswagen call options on their shares in the consortium company. The options with Attestor were extended on a long-term basis in December 2022. The measurement of the options led to a total non-cash expense of €0.3 billion in the reporting year, which was recognized in the financial result.

BROSE SITECH SP. Z O.O. TRANSACTION

Following the fulfillment of all closing conditions, Brose Fahrzeugteile SE & Co. Kommanditgesellschaft (Brose) and Volkswagen Finance Luxemburg S.A., a subsidiary of Volkswagen AG, created a jointly operated company in early 2022 for the development and manufacture of complete seat units, seat structures and components, and solutions for vehicle interiors. As part of this arrangement, Brose acquired half of the shares in the previous Volkswagen Group company SITECH Sp. z o.o., Polkowice/Poland. Brose and Volkswagen each hold 50% of the jointly operated company – Brose Sitech Sp. z o.o. – with Brose taking the industrial lead and controlling the company. Given its significant influence, Volkswagen accounts for Brose Sitech as an associate using the equity method. The change in the accounting policy did not have any material effect on the Volkswagen Group's profit or loss.

ACQUISITION OF NAVISTAR

On July 1, 2021, a TRATON GROUP company acquired all of the outstanding shares in Navistar International Corporation (Navistar), a US manufacturer of commercial vehicles based in Lisle, Illinois/USA. Due to the size of the transaction, it was not possible to complete the in-house reviews of the information underlying the purchase price allocation until the current fiscal year. The update to the purchase price allocation did not materially affect the results of operations, financial position and net assets of the Volkswagen Group.

IMPAIRMENT OF ARGO AI

In the third quarter of 2022, Volkswagen took the strategic decision not to make further investments in Argo AI, LLC Pittsburgh/USA (Argo AI) to develop autonomous driving. Since Argo AI had previously been unable to win new investors and no returns were consequently expected, an impairment loss on the entire interest was therefore recognized. This resulted in an expense of €1.9 billion in fiscal year 2022, which is recognized in the other financial result. There are plans to liquidate Argo AI.

RUSSIA-UKRAINE CONFLICT

In the reporting year, the ongoing Russia-Ukraine conflict, Russia’s partial mobilization and additional, more stringent sanctions imposed on Russia by the community of Western states led to the risk assessment of the situation in Russia being adjusted.

This cemented the Volkswagen Group's decision to discontinue business activities in Russia. In this context, a number of individual companies have already been sold and further sales negotiations have been initiated. On the basis of this reassessment, comprehensive loss allowances on assets of production facilities and financial services companies were recognized in the reporting period, as were risk provisions, especially for third-party expenses expected from the discontinuation of activities in Russia.

Overall, total expenses of around €2 billion were recognized in the reporting year as a direct result of the Russia-Ukraine conflict, which are reported in cost of sales and in the other operating result. Of this amount, €1.5 billion was charged to the Automotive Division and €0.5 billion to the Financial Services Division.

EQUITY INVESTMENTS HELD FOR SALE

In December, Porsche AG entered into an agreement with an independent, non-Group investor for the sale of two Russian sales companies in the Passenger Cars and Light Commercial Vehicles segment, OOO Porsche Russland, Moscow/Russia, and OOO Porsche Center Moscow, Moscow/Russia, as well as one company assigned to the Financial Services segment, OOO Porsche Financial Services Russland, Moscow/Russia. Moreover, a repurchase option was agreed with this investor, which can be exercised at the earliest five years and at the latest ten years after the sale. As of the reporting date, the legal transfer of ownership of the Russian subsidiaries of Porsche AG was still subject to approval by the Russian authorities. It is currently expected that ownership will be legally transferred and the purchase price finally determined in the course of the first quarter of 2023.

It was resolved in the fourth quarter of 2022 to sell the following fully consolidated subsidiaries allocated to the Financial Services segment: OOO Volkswagen Bank RUS, Moscow/Russia, OOO Volkswagen Group Finanz, Moscow/Russia, and OOO Volkswagen Financial Services RUS, Moscow/Russia. The resolution by the competent governing body was immediately followed by the implementation of a disposal plan, which is expected to be completed in the first half of 2023.

On December 15, 2022, the Supervisory Board of Volkswagen AG resolved to sell the MAN ES gas turbine business of MAN Energy Solutions SE, Augsburg, and MAN Energy Solutions Schweiz AG, Zurich/Switzerland, by way of an asset deal to CSIC Longjiang GH Gas Turbine Co. Ltd., Harbin/China, and its subsidiaries, which are still to be established under German and Swiss law. The transaction is expected to be completed within the next 12 months.

In accordance with IFRS 5, the assets and liabilities held for sale were recognized at the lower of their carrying amount and fair value less expected costs of disposal.

SPECIAL ITEMS

Special items consist of certain items in the financial statements whose separate disclosure the Board of Management believes can enable a better assessment of our economic performance.

In fiscal year 2022, the operating result in the Passenger Cars Business Area was affected by negative special items of €–0.4 (–0.8) billion in connection with the diesel issue. These special items were mainly attributable to additional expenses for legal risks.

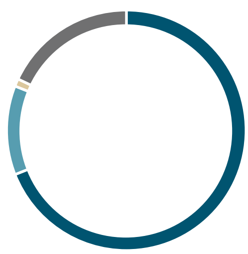
INCOME STATEMENT BY DIVISION

€ million	VOLKSWAGEN GROUP 2022	VOLKSWAGEN GROUP 2021	AUTOMOTIVE[1] 2022	AUTOMOTIVE[1] 2021	FINANCIAL SERVICES 2022	FINANCIAL SERVICES 2021
Sales revenue	**279,232**	**250,200**	**232,385**	**206,237**	**46,847**	**43,963**
Cost of sales	−227,005	−202,959	−189,567	−167,645	−37,437	−35,314
Gross profit	**52,228**	**47,241**	**42,818**	**38,592**	**9,410**	**8,649**
Distribution expenses	−19,840	−19,228	−18,794	−18,068	−1,046	−1,160
Administrative expenses	−11,689	−10,420	−9,074	−7,964	−2,616	−2,456
Net other operating result	1,426	1,682	1,518	670	−92	1,012
Operating result	**22,124**	**19,275**	**16,468**	**13,230**	**5,656**	**6,045**
Operating return on sales (%)	**7.9**	**7.7**	**7.1**	**6.4**	**12.1**	**13.8**
Share of profits and losses of equity-accounted investments	2,395	2,321	2,287	2,232	109	89
Interest result and Other financial result	−2,476	−1,470	−2,292	−1,316	−184	−154
Financial result	**−81**	**851**	**−6**	**915**	**−75**	**−64**
Earnings before tax	**22,044**	**20,126**	**16,463**	**14,146**	**5,581**	**5,981**
Income tax expense	−6,208	−4,698	−4,247	−3,179	−1,961	−1,519
Earnings after tax	**15,836**	**15,428**	**12,216**	**10,967**	**3,620**	**4,462**
Noncontrolling interests	393	46	268	−42	125	87
Earnings attributable to Volkswagen AG hybrid capital investors	576	539	576	539	0	0
Earnings attributable to Volkswagen AG shareholders	**14,867**	**14,843**	**11,371**	**10,469**	**3,495**	**4,374**

1 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.

SHARE OF SALES REVENUE BY MARKET 2022
in percent

SHARE OF SALES REVENUE BY DIVISION/BUSINESS AREA 2022
in percent



RESULTS OF OPERATIONS

Results of operations of the Group

In the period from January to December 2022, the Volkswagen Group generated sales revenue of €279.2 billion, up 11.6% on the prior-year figure. Improvements, above all in the price positioning, the product mix and exchange rate trends, as well as healthy business performance in the Financial Services Division had a positive effect, while lower vehicle sales due to parts supply shortages had an adverse impact. Navistar, which has been consolidated since July 1, 2021, is included in the Group's sales revenue in an amount of €10.7 (3.6) billion. In fiscal year 2022, 82.6 (82.3)% of the Volkswagen Group's sales revenue originated abroad. Gross profit improved by €5.0 billion to €52.2 billion. The gross margin was 18.7 (18.9)%.

The Volkswagen Group's operating result before special items increased by €2.5 billion to €22.5 billion in the reporting year. The operating return on sales before special items amounted to 8.1 (8.0)%. The rise in the operating result was mainly attributable to improved price positioning and the product mix. Positive effects amounting to €3.7 (2.7) billion from derivatives to which hedge accounting is not applied (in particular commodity, currency and interest rate hedges) boosted the Group's earnings. These factors were offset by increased product costs, especially for commodities, and expenses of around €2 billion relating to loss allowances and risk provisions as a consequence of the direct impact of the Russia-Ukraine conflict. In the reporting period, the Passenger Cars Business Area reported one-off expenses for restructuring measures at SEAT in an amount of €0.2 billion. In the previous year, one-off expenses had been incurred for restructuring measures in the Commercial Vehicles Business Area (€0.7 billion) as well as expenses in connection with the EU antitrust proceedings against Scania (€0.5 billion). An expense of €0.1 billion was recognized for transaction costs in connection with the IPO of Porsche AG. In addition, employees of Volkswagen AG, Volkswagen Sachsen GmbH and the Porsche AG Group participated in the economic success of the sale of shares in Porsche AG by way of a one-off payment; to this end, an amount of €0.5 billion was recognized in personnel costs.

Special items in connection with the diesel issue reduced the operating result, which amounted to €–0.4 (–0.8) billion. In the period from January to December 2022, the Volkswagen Group's operating result amounted to €22.1 billion, up €2.8 billion on the prior-year figure. The operating return on sales increased to 7.9 (7.7)%.

The financial result amounted to €–0.1 (0.9) billion. The interest expenses included in this item decreased due to measurement-related factors resulting primarily from a change in the discount rates used in the measurement of provisions. The other financial result was negatively impacted by the impairment loss of €1.9 billion recognized on the equity investment in Argo AI, which weighed on net other investment income, and by changes in share prices, mainly as a result of the Russia-Ukraine conflict, which affected net income from securities and funds. Both factors were offset by favorable exchange rate effects. The measurement of forward purchase agreements for new shares in QuantumScape had additionally weighed on the previous year. The share of the result of equity-accounted investments of the Chinese joint ventures was up on the previous year.

The Volkswagen Group's earnings before tax were up €1.9 billion to €22.0 billion in fiscal year 2022. The return on sales before tax amounted to 7.9 (8.0)%. Income taxes resulted in an expense of €6.2 (4.7) billion in the reporting year, which in turn led to a tax rate of 28.2 (23.3)%. Earnings after tax rose by €0.4 billion year-on-year to €15.8 billion.

Results of operations in the Automotive Division

The Automotive Division recorded sales revenue of €232.4 (206.2) billion in fiscal year 2022. Favourable price positioning, product mix and exchange rate trends were set against the fact that vehicle availability continued to be limited due to parts supply shortages. In the period from January to December 2022, sales revenue in the Passenger Cars Business Area went up noticeably, by 9.5%. In the Commercial Vehicles Business Area, sales revenue rose very sharply by 31.3% compared with the previous year; it should, however, be noted that the prior-year figure had included the Navistar business only from July 2021 onward. The Power Engineering Business Area's sales revenue was noticeably higher than in 2021. As our Chinese joint ventures are accounted for using the equity method, the Group's business performance in the Chinese passenger car market is essentially reflected in the Group's sales revenue only through deliveries of vehicles and vehicle parts.

RESULTS OF OPERATIONS IN THE PASSENGER CARS, COMMERCIAL VEHICLES AND POWER ENGINEERING BUSINESS AREAS FROM JANUARY 1 TO DECEMBER 31

€ million	2022	2021
Passenger Cars		
Sales revenue	189,304	172,868
Operating result	14,600	13,051
Operating return on sales (%)	7.7	7.5
Commercial Vehicles[1]		
Sales revenue	39,516	30,092
Operating result	1,588	134
Operating return on sales (%)	4.0	0.4
Power Engineering		
Sales revenue	3,565	3,278
Operating result	281	45
Operating return on sales (%)	7.9	1.4

1 From July 1, 2021, the figures include Navistar.

Cost of sales increased for reasons that included higher product costs (especially for commodities) and higher research and development costs recognized in profit or loss. Its share of sales revenue was on a level with the previous year. Driven by a sharp rise in total research and development costs, the research and development ratio (R&D ratio), defined as total research and development costs as a percentage of the Automotive Division's sales revenue, was higher than in the previous year, at 8.1 (7.6)% for the reporting year. In addition to new models, our activities focused above all on the electrification of our vehicle portfolio, digitalization, new technologies and enhancements of our modular and electric toolkits and platforms.

There was a year-on-year increase in both distribution and administrative expenses in fiscal year 2022. The ratio of distribution expenses to sales revenue went down, while the ratio of administrative expenses remained virtually unchanged. The other operating result stood at €1.5 (0.7) billion. Positive factors included, at €2.9 (2.4) billion, the fair value measurement and realization of derivatives to which hedge accounting is not applied, offset by negative special items in connection with the diesel issue and one-off expenses for restructuring measures in both periods. The prior-year period had, moreover, been influenced by expenses in connection with the EU antitrust proceedings against Scania in the Commercial Vehicles Business Area.

In the period from January to December 2022, the Automotive Division's operating result improved by €3.2 billion to €16.5 billion. The operating return on sales of the Automotive Division climbed to 7.1 (6.4)%. The main contributing factors were improvements in price positioning and in the product mix. Compared with the previous year, the decline in unit sales as a result of parts supply shortages, higher product costs (especially for commodities), charges incurred because of the Russia-Ukraine conflict, and expenses in connection with the IPO of Porsche AG had an adverse effect. The negative special items recognized in fiscal year 2022 were lower than in the year before.

The operating result before special items increased by €2.9 billion to €16.9 billion, while the operating return on sales before special items went up to 7.3 (6.8)%.

Our operating result largely benefits from the business performance of our equity-accounted Chinese joint ventures only through deliveries of vehicles and vehicle parts and through license income, as these joint ventures are included in the financial result.

Results of operations in the Financial Services Division

At €46.8 billion, the sales revenue reported by the Financial Services Division in 2022 was 6.6% higher than in the prior-year period. Cost of sales increased proportionately.

The Financial Services Division’s operating result of €5.7 billion was €0.4 billion down on the previous year. The decline was caused mainly by expenses relating to loss allowances and risk provisions due to the direct impact of the Russia-Ukraine conflict; they were recognized in the other operating result. Continued strong demand for used vehicles and positive effects from derivatives to which hedge accounting is not applied (interest rate hedges) had a beneficial effect. The operating return on sales decreased to 12.1 (13.8)%. The return on equity before tax was 14.0 (17.3)%.

Principles and goals of financial management

Financial management in the Volkswagen Group covers liquidity management, the management of currency, interest rate and commodity price risks, and credit and country risk management. It is performed centrally for all Group companies by Group Treasury, based on internal guidelines and risk parameters. Some functions of the MAN Energy Solutions, Porsche AG, Porsche Holding Salzburg and TRATON GROUP subgroups and of the Financial Services Division are included in the financial management and, in addition, have their own financial management structures.

The goal of financial management is to ensure that the Volkswagen Group remains solvent at all times and, at the same time, to generate an adequate return from the investment of surplus funds. We use a liquidity pooling system to optimize the use of existing liquidity between the significant companies. Among other features of this system, the balances, either positive or negative, accumulating in cash pooling accounts are swept daily into a regional target account and thus pooled. The overriding aim of currency, interest rate and commodity risk management is to hedge, using derivative financial instruments and commodity forwards, the prices on which investment, production and sales plans are based when making planning assumptions and to mitigate interest rate risks incurred in financing transactions. In the management of credit and country risk, diversification is used to limit the Volkswagen Group’s exposure to the so-called counterparty risk. To achieve this, counterparty risk management imposes internal limits on the volume of business allowed per counterparty when financial transactions are entered into. Various credit rating criteria are applied in this process. These focus primarily on the capital resources of potential counterparties, as well as the ratings awarded by independent agencies. The relevant risk limits and the authorized financial instruments, hedging methods and hedging horizons are approved by the Group Board of Management Committee for Risk Management. For additional information on the principles and goals of financial management, please refer to the chapter on “Financial risk management and financial instruments” in the notes to the consolidated financial statements.

FINANCIAL POSITION

Financial position of the Group

In the reporting year, the Volkswagen Group's gross cash flow went up to €49.3 (43.7) billion for earnings-related reasons. The change in working capital amounted to €–20.8 (–5.1) billion. A smaller rise in lease assets and a higher rise in liabilities were unable to offset an increase in inventories and receivables and a reduction in other provisions compared to the prior year. Cash outflows resulting from the diesel issue were higher than in 2021. The payment of the fine arising from the EU antitrust proceedings against Scania led to a cash outflow of €0.9 billion in fiscal year 2022. As a result, cash flows from operating activities went down by €10.1 billion to €28.5 billion.

The Volkswagen Group's investing activities attributable to operating activities grew by €1.3 billion to €25.5 billon in fiscal year 2022. This also includes the full portion of the purchase price payable by Volkswagen for the acquisition of Europcar, amounting to €1.7 billion, which was contributed to Green Mobility Holding.

Financing activities resulted in a cash inflow of €4.2 billion, compared with an outflow of €7.8 billion in the previous year. Financing activities related primarily to the issuance and redemption of bonds and other financial liabilities, the redemption of the hybrid notes called in February and November 2022, the issuance of the hybrid notes successfully placed in March 2022, the payment of the €3.8 billion dividend to the shareholders of Volkswagen AG from the appropriation of net profit for fiscal year 2021, and the cash inflow of €16.1 billion from the IPO of Porsche AG (partial cash inflow from the sale of the ordinary and preferred shares). At the end of the fiscal year, the Volkswagen Group reported cash and cash equivalents of €29.7 (39.1) billion in its cash flow statement.

At the end of December 2022, the Volkswagen Group's net liquidity stood at €–125.8 billion, compared with €–136.6 billion on December 31, 2021.

Financial position of the Automotive Division

In the period from January to December 2022, the Automotive Division's gross cash flow of €33.2 billion exceeded the prior-year figure by €4.1 billion. The increase was mainly attributable to improved earnings. The change in working capital amounted to €–3.3 (3.4) billion, resulting mainly from higher inventories and lower other provisions, offset by a larger increase in liabilities compared to the prior year.

Cash outflows resulting from the diesel issue were higher than in the prior-year period. The payment of the fine arising from the EU antitrust proceedings against Scania led to a cash outflow in fiscal year 2022. Consequently, cash flows from operating activities decreased by €2.5 billion to €29.9 billion.

CASH FLOW STATEMENT BY DIVISION

€ million	VOLKSWAGEN GROUP 2022	VOLKSWAGEN GROUP 2021	AUTOMOTIVE[1] 2022	AUTOMOTIVE[1] 2021	FINANCIAL SERVICES 2022	FINANCIAL SERVICES 2021
Cash and cash equivalents at beginning of period	**39,123**	**33,432**	**24,899**	**23,758**	**14,224**	**9,674**
Earnings before tax	22,044	20,126	16,463	14,146	5,581	5,981
Income taxes paid	−4,415	−4,216	−3,561	−3,329	−854	−887
Depreciation and amortization expense[2]	30,670	27,473	20,854	18,378	9,816	9,094
Change in pension provisions	898	992	857	947	41	45
Share of the result of equity-accounted investments	575	787	639	839	−64	−52
Other noncash income/expense and reclassifications[3]	−511	−1,473	−2,089	−1,938	1,578	465
Gross cash flow	**49,261**	**43,690**	**33,163**	**29,044**	**16,097**	**14,646**
Change in working capital	**−20,765**	**−5,056**	**−3,299**	**3,358**	**−17,466**	**−8,415**
Change in inventories	−8,385	2,110	−8,262	624	−123	1,486
Change in receivables	−3,207	1,888	−529	421	−2,678	1,466
Change in liabilities	8,586	1,856	8,179	2,009	407	−153
Change in other provisions	−2,754	951	−2,934	938	180	14
Change in lease assets (excluding depreciation)	−8,711	−16,205	406	−536	−9,117	−15,669
Change in financial services receivables	−6,294	4,345	−158	−97	−6,136	4,442
Cash flows from operating activities	**28,496**	**38,633**	**29,865**	**32,402**	**−1,369**	**6,231**
Cash flows from investing activities attributable to operating activities	**−25,454**	**−24,181**	**−25,058**	**−23,793**	**−396**	**−388**
of which: investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs	−12,948	−10,655	−12,731	−10,496	−217	−159
capitalized development costs	−9,723	−7,843	−9,723	−7,843	0	0
acquisition and disposal of equity investments	−3,219	−6,151	−2,997	−5,882	−222	−268
Net cash flow[4]	***3,042***	***14,453***	***4,807***	***8,610***	***−1,765***	***5,843***
Change in investments in securities and time deposits, as well as in loans	−16,368	−1,948	−15,052	−933	−1,316	−1,015
Cash flows from investing activities	**−41,822**	**−26,128**	**−40,110**	**−24,726**	**−1,712**	**−1,403**
Cash flows from financing activities	**4,225**	**−7,754**	**8,621**	**−7,375**	**−4,396**	**−380**
of which: capital transactions with noncontrolling interests	16,198	−590	16,198	−590	0	0
capital contributions/capital redemptions	−235	−1,071	−235	−1,575	−0	504
Effect of exchange rate changes on cash and cash equivalents	−285	942	−233	839	−52	102
Change of loss allowance within cash and cash equivalents	1	−1	1	−1	−0	−0
Net change in cash and cash equivalents	**−9,385**	**5,691**	**−1,856**	**1,141**	**−7,529**	**4,550**
Cash and cash equivalents at Dec. 31[5]	**29,738**	**39,123**	**23,042**	**24,899**	**6,695**	**14,224**
Securities and time deposits, as well as loans	49,771	34,515	30,891	16,200	18,880	18,314
Gross liquidity	**79,509**	**73,637**	**53,934**	**41,099**	**25,575**	**32,539**
Total third-party borrowings	−205,312	−210,213	−10,919	−14,413	−194,393	−195,800
Net liquidity[6]	**−125,803**	**−136,576**	**43,015**	**26,685**	**−168,818**	**−163,261**

1 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.
2 Net of impairment reversals.
3 These relate mainly to the fair value measurement of financial instruments and the reclassification of gains/losses on disposal of noncurrent assets and equity investments to investing activities.
4 Net cash flow: cash flows from operating activities, net of cash flows from investing activities attributable to operating activities (investing activities excluding change in investments in securities, time deposits and loans).
5 Cash and cash equivalents comprise cash at banks, checks, cash-in-hand and call deposits.
6 The total of cash, cash equivalents, securities and time deposits, as well as loans to affiliates and joint ventures net of third-party borrowings (noncurrent and current financial liabilities).

FINANCIAL POSITION IN THE PASSENGER CARS, COMMERCIAL VEHICLES AND POWER ENGINEERING BUSINESS AREAS FROM JANUARY 1 TO DECEMBER 31

€ million	2022	2021
Passenger Cars		
Gross cash flow	28,740	26,221
Change in working capital	−444	3,439
Cash flows from operating activities	28,296	29,659
Cash flows from investing activities attributable to operating activities	−23,060	−19,266
Net cash flow	5,236	10,393
Commercial Vehicles[1]		
Gross cash flow	4,079	2,491
Change in working capital	−2,877	−109
Cash flows from operating activities	1,201	2,382
Cash flows from investing activities attributable to operating activities	−1,953	−4,453
Net cash flow	−752	−2,071
Power Engineering		
Gross cash flow	345	333
Change in working capital	23	29
Cash flows from operating activities	368	362
Cash flows from investing activities attributable to operating activities	−44	−74
Net cash flow	323	287

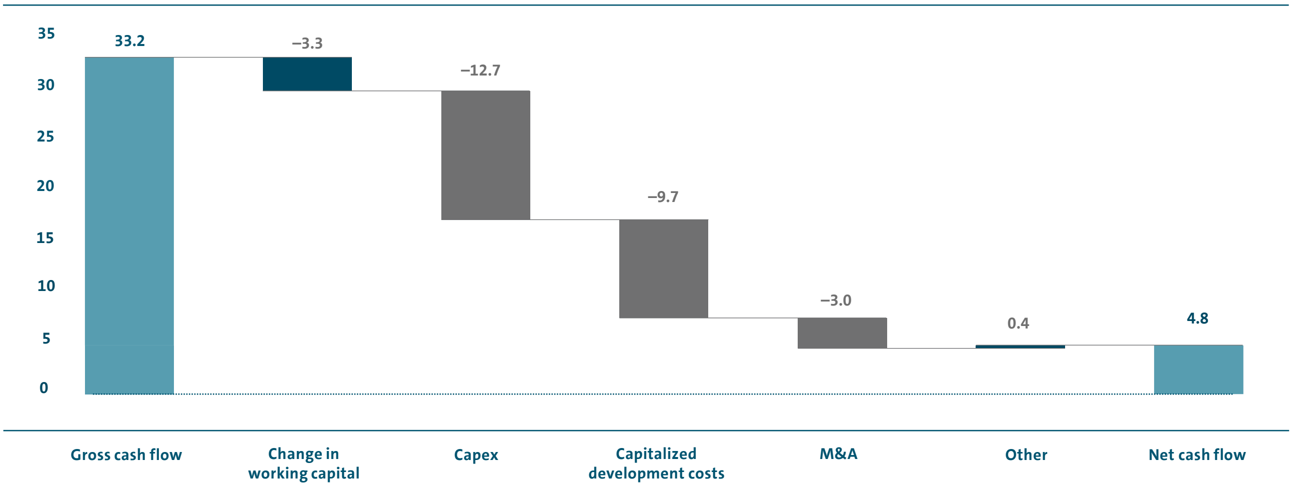
1 From July 1, 2021, the figures include Navistar.

Investing activities attributable to operating activities increased by €1.3 billion to €25.1 billion. Within this figure, investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs (capex) increased by €2.2 billion to €12.7 billion. The ratio of capex to sales revenue was 5.5 (5.1)%. A considerable portion of capex was above all allocated to our production facilities and to models that we launched in 2022 or are planning to launch in 2023, or for which production is set to start. This expenditure relates mainly to vehicles in the ID. family (ID. Buzz, ID.3, ID.7) and product upgrades for the T-Roc, Amarok and Tiguan. Other vehicles in the volume segment are the ŠKODA Enyaq Coupé and upgrades to the Scala, Kamiq and Superb Combi models. The Bentley Bentayga, the facelift of the Audi Q8 e-tron and the Q6 e-tron expand the range of models in the Premium segment, among others. In the sports segment, the Cayman, Panamera, Cayenne, 911 and Taycan are among the models being updated, and the Macan is being electrified. Other investment priorities include the electrification and digitalization of our products and enhancements to the modular and all-electric toolkits and platforms. Additions to capitalized development costs rose to €9.7 (7.8) billion in the reporting period. The "Acquisition and disposal of equity investments" (M&A) item amounted to €–3.0 (–5.9) billion. It included strategic investments in a variety of companies, especially Europcar. The sale of Sitech Sp. z o.o. in the fiscal year under review had an offsetting effect. The prior-year period had included, among other items, the acquisition of Navistar and the investment in the associate Gotion High-Tech.

In the period from January to December 2022, the Automotive Division's net cash flow of €4.8 billion was €3.8 billion down on the prior-year figure.

In fiscal year 2022, the Automotive Division's financing activities led to a cash inflow of €8.6 billion, compared with a cash outflow of €7.4 billion in the previous year. Hybrid notes with a total nominal

AUTOMOTIVE DIVISION NET CASH FLOW 2022
€ billion



amount of €2.25 billion, which were successfully issued via Volkswagen International Finance N.V. in March 2022, led to a cash inflow. They comprise a €1.0 billion note with a coupon of 3.748%, which is noncallable for five years and nine months, and a €1.25 billion note with a coupon of 4.375%, which is noncallable for nine years. Both notes are perpetual and increase net liquidity and equity by the nominal amount less transaction and other costs. The repayment of the hybrid notes called in February and November 2022 resulted in a cash outflow totaling €2.6 billion in the reporting year. The dividend payment to shareholders of Volkswagen AG was made in May 2022 from the appropriation of net profits for fiscal year 2021. It was set against cash inflows from the dividends paid by the financial services companies. The "capital transactions with noncontrolling interests" item includes the cash inflow from the sale of the shares of Porsche AG related to that company's IPO. In the prior-year period, this item had included the present value of the cash settlement for MAN noncontrolling interest shareholders in connection with the merger of MAN SE and TRATON SE. In addition, the prior-year figure had included the repayment of a hybrid note. Financing activities also include the issuance and redemption of bonds and changes in other financial liabilities.

At the end of 2022, the Automotive Division's net liquidity stood at €43.0 billion, compared with €26.7 billion at the end of 2021. The Automotive Division's net liquidity as a proportion of consolidated sales revenue increased to 15.4 (10.7)% in the reporting year, mainly because of cash inflows from the IPO.

Financial position in the Financial Services Division

In fiscal year 2022, the Financial Services Division generated gross cash flow of €16.1 (14.6) billion. The change in working capital amounted to €–17.5 (–8.4) billion, leading to higher funds tied up in working capital than in the previous year because of an increase in receivables and inventories, which could not be offset by a smaller rise in lease assets. As a result, cash flows from operating activities went down by €7.6 billion to €–1.4 billion.

Investing activities attributable to operating activities were on a level with the previous year, at €0.4 (0.4) billion. The Financial Services Division's financing activities resulted in a cash outflow of €–4.4 (–0.4) billion in the period from January to December 2022. This figure relates primarily to the issuance and redemption of bonds and to other financial liabilities, as well as dividend payments by the financing companies.

On December 31, 2022, the Financial Services Division's negative net liquidity, which is common in the industry, was €–168.8 billion as against €–163.3 billion at the end of 2021.

NET ASSETS

Consolidated balance sheet structure

On December 31, 2022, the Volkswagen Group had total assets of €564.8 billion, 6.8% more than at the end of 2021. The increase was mainly attributable to the proceeds of the successful IPO of Porsche AG, higher earnings and changes in exchange rates. A chart showing the structure of the consolidated balance sheet as of the reporting date can be found in this chapter. The Volkswagen Group's equity rose by €32.2 billion to €178.3 billion. The IPO of Porsche AG led to a €19.1 billion rise in equity, of which €10.8 billion is reported as noncontrolling interests. The equity ratio increased to 31.6 (27.6)%.

As of the end of fiscal year 2022, the Group had off-balance-sheet commitments in the form of contingent liabilities in the amount of €10.6 (9.7) billion and in the form of financial guarantees in the amount of €1.2 (1.4) billion. In addition, there were other financial obligations of €35.4 (34.7) billion. The contingent liabilities relate primarily to legal risks in connection with the diesel issue, as well as to potential liabilities from tax risks in the Commercial Vehicles Business Area in Brazil. Other financial obligations primarily result from purchase commitments for property, plant and equipment, irrevocable credit commitments to customers and from development and supply contracts. They also include commitments to invest in the infrastructure for zero-emission vehicles and in initiatives to promote access to and awareness of this technology. These commitments were made as part of the settlement agreements in the USA in connection with the diesel issue. The other financial obligations include an amount of €0.5 (0.7) billion for this purpose. In addition to the other financial obligations, there are purchase commitments for inventories with a short turnover period, which arise primarily from the Master Collaboration Agreement with Ford Motor Company for the joint development of vans and mid-sized pickups for the global market.

Automotive Division balance sheet structure

As of December 31, 2022, intangible assets in the Automotive Division were up on the previous year, driven primarily by a rise in capitalized development costs. Property, plant and equipment was on a level with the previous year. Equity-accounted investments were likewise virtually unchanged compared to the previous year's balance sheet date. The increase attributable to capital increases, in particular at Green Mobility Holding, and the positive results of the Chinese joint venture companies were offset by the dividends of the joint ventures resolved in fiscal year 2022 and the impairment loss recognized on the equity investment in Argo AI. Noncurrent other receivables and financial assets increased, due mainly to positive effects from the measurement of derivatives. In total, noncurrent assets ended the year at €178.7 (170.4) billion and therefore higher than at the end of 2021.

Current assets rose by €21.2 billion compared with the figure at the end of 2021, to €122.8 billion. The inventories included in this figure increased, primarily for production-related reasons, and were attributable, among other factors, to disruptions in the logistics chain. Current other receivables and financial assets stood at €18.8 billion – €0.5 billion more than at the end of 2021. The figure included higher trade receivables and positive effects from the measurement of derivatives.

The Automotive Division's cash and cash equivalents contracted by €2.5 billion to €23.0 billion. Total securities amounted to €32.9 billion, thus exceeding the figure as of December 31, 2021 by €15.2 billion.

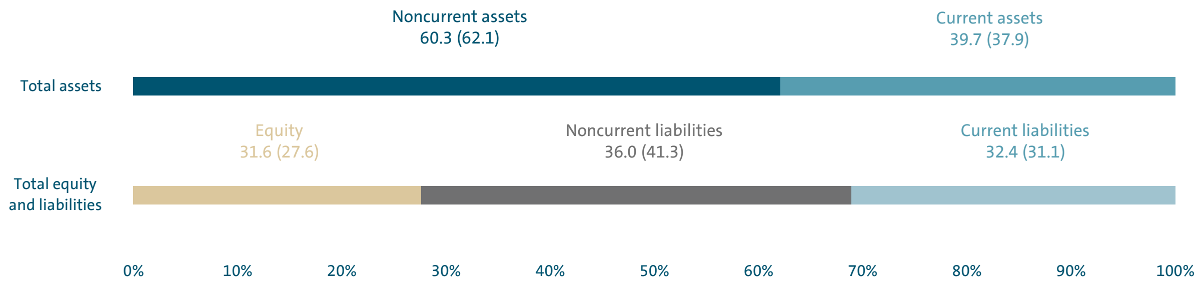
The "Assets held for sale" item comprises primarily the carrying amounts of the assets intended for derecognition of subsidiaries of Volkswagen Financial Services and Porsche in Russia that are planned to be divested as well as assets of MAN Energy Solutions. The "Liabilities held for sale" item comprises the carrying amount of the corresponding liabilities intended for derecognition.

CONSOLIDATED BALANCE SHEET BY DIVISION AS OF DECEMBER 31

€ million	VOLKSWAGEN GROUP 2022	VOLKSWAGEN GROUP 2021	AUTOMOTIVE[1] 2022	AUTOMOTIVE[1] 2021	FINANCIAL SERVICES 2022	FINANCIAL SERVICES 2021
Assets						
Noncurrent assets	**340,464**	**328,261**	**178,667**	**170,391**	**161,797**	**157,871**
Intangible assets	83,241	77,689	82,846	77,290	394	399
Property, plant and equipment	63,890	63,695	62,908	62,684	982	1,011
Lease assets	59,380	59,699	1,279	2,316	58,100	57,383
Financial services receivables	86,944	84,954	−767	−781	87,711	85,735
Investments, equity-accounted investments and other equity investments, other receivables and financial assets	47,009	42,224	32,400	28,882	14,609	13,342
Current assets	**224,309**	**200,347**	**122,751**	**101,539**	**101,557**	**98,808**
Inventories	52,274	43,725	48,768	40,361	3,506	3,363
Financial services receivables	61,549	56,498	−799	−936	62,348	57,434
Other receivables and financial assets	43,375	37,195	18,786	18,275	24,589	18,921
Marketable securities and time deposits	37,206	22,532	32,867	17,674	4,338	4,858
Cash and cash equivalents	29,172	39,723	23,034	25,491	6,137	14,232
Assets held for sale	733	674	95	674	638	0
Total assets	**564,772**	**528,609**	**301,418**	**271,930**	**263,354**	**256,679**
Equity and liabilities						
Equity	**178,327**	**146,154**	**135,936**	**109,022**	**42,392**	**37,131**
Equity attributable to Volkswagen AG shareholders	151,257	130,009	109,549	93,592	41,707	36,417
Equity attributable to Volkswagen AG hybrid capital investors	14,121	14,439	14,121	14,439	0	0
Equity attributable to Volkswagen AG shareholders and hybrid capital investors	165,378	144,449	123,670	108,031	41,707	36,417
Noncontrolling interests	12,950	1,705	12,265	991	684	714
Noncurrent liabilities	**203,453**	**218,062**	**88,321**	**98,923**	**115,132**	**119,139**
Financial liabilities	121,737	131,618	21,871	24,639	99,866	106,978
Provisions for pensions	27,553	41,550	27,104	40,769	449	781
Other liabilities	54,163	44,894	39,346	33,515	14,816	11,379
Current liabilities	**182,992**	**164,393**	**77,161**	**63,984**	**105,831**	**100,409**
Financial liabilities	83,448	78,584	−10,953	−10,237	94,401	88,821
Trade payables	28,748	23,624	26,106	20,977	2,641	2,647
Other liabilities	70,639	61,948	61,995	53,007	8,643	8,940
Liabilities associated with assets held for sale	158	238	12	238	146	0
Total equity and liabilities	**564,772**	**528,609**	**301,418**	**271,930**	**263,354**	**256,679**

1 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions, primarily intragroup loans.

CONSOLIDATED BALANCE SHEET STRUCTURE 2022
in percent



At the end of December 2022, the Automotive Division’s equity of €135.9 billion was 24.7% up on the end of 2021. The proceeds from the successful IPO of Porsche AG, healthy earnings performance, lower actuarial losses from the remeasurement of pension plans and the hybrid notes issued in March 2022 pushed equity higher. The dividend payment in May 2022 and the special dividend to shareholders of Volkswagen AG resolved by the extraordinary General Meeting as well as the redemption of the hybrid notes called in February and November 2022 reduced the Automotive Division's equity. Noncontrolling interests went up as a result of the sale of shares in Porsche AG. They are now primarily held by the noncontrolling interest shareholders of the Porsche AG Group and the TRATON Group. The equity ratio was 45.1 (40.1)%.

Noncurrent liabilities decreased by €10.6 billion to €88.3 billion. The noncurrent financial liabilities included in this item were lower than at the end of 2021, mainly because of reclassifications from noncurrent to current liabilities reflecting shorter remaining maturities. Pension provisions decreased, driven primarily by actuarial remeasurement following a change in the discount rate. Noncurrent other liabilities went up, due among other things to the effects of the measurement of derivatives.

Current liabilities increased by €13.2 billion to €77.2 billion. Current financial liabilities amounted to €–11.0 (–10.2) billion. The figures for the Automotive Division also contain the elimination of intragroup transactions between the Automotive and Financial Services divisions. As the current financial liabilities for the primary Automotive Division were lower than the loans granted to the Financial Services Division, a negative amount was disclosed in both periods. Trade payables were up by 24.5% compared with the end of 2021. Current other liabilities exceeded the figure as of December 31, 2021, driven primarily by the special dividend, which was resolved in December 2022 and paid in January 2023. An offsetting transaction was the netting of the payment claim from the second tranche of the ordinary shares of Porsche AG.

At the end of the reporting year, the Automotive Division reported total assets of €301.4 billion, 10.8% more than at the end of 2021.

BALANCE SHEET STRUCTURE OF THE PASSENGER CARS, COMMERCIAL VEHICLES AND POWER ENGINEERING BUSINESS AREAS

€ million	Dec. 31, 2022	Dec. 31, 2021
Passenger Cars		
Noncurrent assets	142,467	133,857
Current assets	105,077	86,362
Total assets	**247,544**	**220,218**
Equity	119,637	93,894
Noncurrent liabilities	71,637	80,621
Current liabilities	56,270	45,704
Commercial Vehicles[1]		
Noncurrent assets	34,620	34,730
Current assets	14,184	12,264
Total assets	**48,804**	**46,994**
Equity	13,804	12,807
Noncurrent liabilities	16,252	17,778
Current liabilities	18,748	16,409
Power Engineering		
Noncurrent assets	1,579	1,804
Current assets	3,491	2,914
Total assets	**5,070**	**4,718**
Equity	2,495	2,322
Noncurrent liabilities	432	524
Current liabilities	2,143	1,872

1 From July 1, 2021, the figures include Navistar.

Financial Services Division balance sheet structure

At €263.4 billion, the Financial Services Division’s total assets on December 31, 2022 were 2.6% higher than a year earlier.

Noncurrent assets rose to €161.8 billion, up 2.5% compared with the end of 2021; the lease assets included in this item expanded mainly due to exchange rate movements. Noncurrent financial services receivables increased, driven by business growth; noncurrent other receivables were also up on the previous year.

Current assets climbed by 2.8% to €101.6 billion. The current financial services receivables included in this item went up, as did current other receivables and financial assets, buoyed among other factors by the rise in trade receivables. The Financial Services Division’s cash and cash equivalents stood at €6.1 (14.2) billion on December 31, 2022. Total securities were €0.5 billion lower, at €4.3 billion.

On December 31, 2022, the Financial Services Division accounted for 46.6 (48.6)% of the Volkswagen Group’s assets.

The Financial Services Division’s equity at the end of 2022 was €42.4 billion, exceeding the figure on the 2021 reporting date by 14.2%. The equity ratio increased to 16.1(14.5)%.

The Financial Services Division’s noncurrent liabilities were down 3.4% as of the balance sheet date. The noncurrent financial liabilities included in this item saw a noticeable decline, while noncurrent other liabilities rose sharply, driven by adverse effects from the measurement of derivatives. Current liabilities were higher, driven above all by noticeable growth in current financial liabilities.

Deposits from the direct banking business amounting to €26.7 (26.7) billion were on a level with the previous year.

RETURN ON INVESTMENT (ROI) AND VALUE CONTRIBUTION

The central focus of the Volkswagen Group's financial target system is to continuously and sustainably increase the value of the Company. In order to make efficient use of resources in the Automotive Division and to measure the success of this, we have been using a value-based management system for a number of years, with return on investment (ROI) as a relative indicator and value contribution[1], a key performance indicator linked to the cost of capital, as an absolute performance measure.

The return on investment serves as a constant target in strategic and operational management. If the return on investment exceeds the market cost of capital, there is an increase in the value of the invested capital and a positive value contribution. The concept of value-based management makes it possible to assess the success of the Automotive Division and individual business units. It also enables the earning power of our products, product lines and projects – such as new plants – to be measured.

Components of value contribution

Value contribution is calculated on the basis of the operating result after tax and the opportunity cost of invested capital.

The operating result shows the economic performance of the Automotive Division and is initially a pre-tax figure. Based on our companies' income tax rates, which vary from country to country, we assume an overall average tax rate of 30% when calculating the operating result after tax.

The cost of capital is multiplied by the average invested capital to give the opportunity cost of capital. Invested capital is calculated as total operating assets reported in the balance sheet (property, plant and equipment, intangible assets, lease assets, inventories and receivables) less non-interest-bearing liabilities (trade payables and payments on account received). Average invested capital is derived from the balance at the beginning and the end of the reporting period.

As the concept of value-based management only comprises our operating activities, assets relating to investments in subsidiaries and associates and the investment of cash funds are not included when calculating invested capital. Interest charged on these assets is reported in the financial result.

1 The value contribution corresponds to the Economic Value Added (EVA®). EVA® is a registered trademark of the consulting firm Stern Value Management.

Determining the current cost of capital

The cost of capital is the weighted average of the required rates of return on equity and debt.

The cost of equity is determined using the Capital Asset Pricing Model (CAPM). This model uses the yield on long-term risk-free Bunds, increased by the risk premium attaching to investments in the equity market. The risk premium comprises a general market risk and a specific business risk. The general risk premium of 7.5% reflects the general risk of a capital investment in the equity market. The specific business risk – price fluctuations in Volkswagen preferred shares – is modeled in comparison to the MSCI World Index when calculating the beta factor. The MSCI World Index is a global capital market benchmark for investors.

The analysis period for the beta factor calculation spans five years with annual beta figures calculated on a weekly basis followed by the subsequent calculation of the average. A beta factor of 1.55 (1.16) was determined for 2022.

The cost of debt is based on the average yield for long-term corporate bonds. As borrowing costs are tax-deductible, the cost of debt is adjusted to account for the tax rate of 30%.

A weighting on the basis of a fixed ratio for the fair values of equity and debt results in an effective cost of capital for the Automotive Division of 8.3 (6.2) % for 2022.

COST OF CAPITAL AFTER TAX IN THE AUTOMOTIVE DIVISION

%	2022	2021
Risk-free rate	2.0	0.1
Market risk premium	7.5	7.5
Volkswagen-specific risk premium	1.1	1.2
(Volkswagen beta factor)	(1.55)	(1.16)
Cost of equity after tax	**10.7**	**8.8**
Cost of debt	5.0	1.3
Tax	–1.5	–0.4
Cost of debt after tax	**3.5**	**0.9**
Proportion of equity	66.7	66.7
Proportion of debt	33.3	33.3
Cost of capital after tax	**8.3**	**6.2**

Return on investment (ROI) and value contribution in the reporting period

The operating result after tax for the Automotive Division, including the proportionate operating result of the equity-accounted Chinese joint ventures, increased to €14,078 (11,740) million in fiscal year 2022. The year-on-year improvement resulted primarily from favorable price positioning and positive changes in the product mix. Negative impacts during the reporting period arose primarily from a decline in unit sales as a result of parts supply shortages, higher product costs (especially for commodities), negative impacts from the Russia-Ukraine conflict, and the recognition of negative special items in the reporting period. The effect of purchase price allocation on earnings and assets is not taken into account as this cannot be influenced by management in the course of business operations.

At €117,412 (113,386) million, invested capital increased slightly in the reporting year compared with the prior year.

The return on investment (ROI) is the return on invested capital for a particular period based on the operating result after tax. Due to the improved operating result, the ROI of 12.0 (10.4) % exceeded both the prior-year figure and our minimum required rate of return on invested capital of 9%.

At €9,702 (6,984) million, the opportunity cost of capital – invested capital multiplied by the cost of capital – was strongly up on the previous year. Improvements in the operating result after tax, net of the opportunity cost of invested capital, led to a positive value contribution of €4,376 (4,756) million, which fell short of the prior-year figure, mainly because of the increased cost of capital.

More information on value-based management is contained in our publication entitled “Financial Control System of the Volkswagen Group”, which can be downloaded from our Investor Relations website: www.volkswagenag.com/en/InvestorRelations/news-and-publications/More_Publications.html.

RETURN ON INVESTMENT (ROI) AND VALUE CONTRIBUTION IN THE AUTOMOTIVE DIVISION[1]

€ million	2022	2021
Operating result after tax	**14,078**	**11,740**
Invested capital (average)	117,412	113,386
Return on investment (ROI) in %	**12.0**	**10.4**
Cost of capital in %	8.3	6.2
Cost of invested capital	**9,702**	**6,984**
Value contribution	**4,376**	**4,756**

1 Including proportionate inclusion of the Chinese joint ventures (including the relevant sales and component companies) and allocation of consolidation adjustments between the Automotive and Financial Services Divisions.

SUMMARY OF BUSINESS DEVELOPMENT AND ECONOMIC POSITION

In view of the political and economic developments in 2022 and the transformation of the industry, the Board of Management of Volkswagen AG considers business development and the economic position challenging, but positive overall.

In the reporting period, the Volkswagen Group's business was impacted by the global economic slowdown, the limited availability of parts and disruptions in the logistics chain. As a result, we had to adjust some aspects of our forecast. In this environment, we consequently delivered 8.3 million vehicles in the past fiscal year to customers and thereby fewer than planned.

The Group's sales revenues rose – in line with our expectations – by 11.6%, which was primarily due to prices, product mix and exchange rate effects as well as the good performance in the Financial Services Division.

The operating result before special items increased to €22.5 billion. The operating return on sales before and after special items was 8.1% and 7.9% respectively, and thus within the forecast range.

Research and development costs reflect our activities undertaken to safeguard the Company's future viability. The R&D ratio in the Automotive Division met our adjusted expectations at 8.1%.

The ratio of capex to sales for the Automotive Division was on a level with the forecast at 5.5%.

Net cash flow amounted to €4.8 billion and therefore fell short of the previous year's level; this was mainly attributable to cash tied up in working capital, caused in particular by disruptions in the supply chain.

Net liquidity stood at €43.0 billion at the end of fiscal year 2022, exceeding the originally expected range thanks to the cash inflow from the successful IPO of Porsche AG.

Return on investment (ROI) in the Automotive Division improved to 12.0% and was therefore, as anticipated, above our minimum required rate of return on invested capital.

FORECAST VERSUS ACTUAL FIGURES

	Actual 2021	Original Forecast for 2022	Adjusted Forecast for 2022	Actual 2022
Deliveries to customers (units)	8.9 million	5–10% increase	around the prior-year level	8.3 million
Volkswagen Group				
Sales revenue	€250.2 billion	8–13% increase	8–13% increase	€279.2 billion
Operating return on sales before special items	8.0%	7.0 – 8.5%	7.0 – 8.5%	8.1%
Operating return on sales	7.7%	7.0 – 8.5%	7.0 – 8.5%	7.9%
Operating result before special items	€20.0 billion	in forecast range	in forecast range	€22.5 billion
Operating result	€19.3 billion	in forecast range	in forecast range	€22.1 billion
Passenger Cars Business Area				
Sales revenue	€172.9 billion	8–13% increase	5 – 10% increase	€189.3 billion
Operating return on sales before special items	8.0%	7.0 – 8.5%	8.0 – 9.0%	7.9%
Operating return on sales	7.5%	7.0 – 8.5%	8.0 – 9.0%	7.7%
Operating result before special items	€13.8 billion	in forecast range	in forecast range	€15.0 billion
Operating result	€13.1 billion	in forecast range	in forecast range	€14.6 billion
Commercial Vehicles Business Area				
Sales revenue	€30.1 billion	strong increase	strong increase	€39.5 billion
Operating return on sales	0.4%	5.0 – 7.0%	4.0–5.0%	4.0%
Operating result	€134 million	in forecast range	in forecast range	€1.6 billion
Power Engineering Business Area				
Sales revenue	€3.3 billion	moderate increase	moderate increase	€3.6 billion
Operating result	€45 million	low positive triple-digit million euro range	low positive triple-digit million euro range	€281 million
Financial Services Division				
Sales revenue	€44.0 billion	noticeable increase	noticeable increase	€46.8 billion
Operating result	€6.0 billion	~€4.5 billion	~€5 billion	€5.7 billion
R&D ratio in the Automotive Division	7.6%	~7.0%	~8.0%	8.1%
Capex/sales revenue in the Automotive Division	5.1%	~5.5%	~5.5%	5.5%
Net cash flow in the Automotive Division	€8.6 billion	around the prior-year level	around the prior-year level	€4.8 billion
Net liquidity in the Automotive Division	€26.7 billion	up to 15% increase	up to 15% increase	€43.0 billion
Return on investment (ROI) in the Automotive Division	10.4%	12–15%	12–15%	12.0%

Volkswagen AG

(Condensed, in accordance with the German Commercial Code)

The year 2022 was impacted by the global market slowdown, the limited availability of parts and disruptions in the logistics chain.

ANNUAL RESULT

Special items in connection with the diesel issue were recognized in 2022 and amounted to €0.3 (0.7) billion. These related in particular to further provisions for legal risks. Special items had an impact of €–0.3 (–0.7) billion on net other operating result.

In the fiscal year under review, the Russia-Ukraine conflict negatively affected Volkswagen AG in an amount of approximately €1 billion. This was due to write-downs on the shares in OOO Volkswagen Group Rus, Kaluga, as well as loss allowances and risk provisions following the discontinuation of business activities in Russia.

Sales revenue increased by 12.1% year-on-year to €79.5 billion in the reporting year, driven mainly by higher sales volumes and a more favorable price-product mix. Sales generated abroad accounted for a share of €46.3 billion or 58.2%. Cost of sales increased faster than sales revenue, rising by 17.9% to €79.5 billion, mainly because of higher commodity prices for vehicle production.

Gross profit on sales fell accordingly to €–0.0 (3.5) billion.

INCOME STATEMENT OF VOLKSWAGEN AG

€ millon	2022	2021
Sales	79,491	70,917
Cost of Sales	–79,499	–67,424
Gross profit on sales	**–8**	**3,494**
Distribution, general and administrative expenses	–7,292	–6,973
Net other operating result	1,997	66
Financial result[1]	16,825	8,545
Taxes on income	955	–1,091
Earnings after tax	**12,477**	**4,041**
Net income for the fiscal year	**12,477**	**4,041**
Retained profits brought forward	5,774	1,609
Release of/appropriation to revenue reserves	–6,230	13,450
Net retained profits	**12,021**	**19,101**

1 Including write-downs of financial assets.

The other operating result amounted to €2.0 billion, up €1.9 billion on the previous year, driven in particular by a decline in expenses for legal and litigation risks, positive effects from the measurement and settlement of hedging transactions and foreign currency translation.

The financial result went up by €8.3 billion to €16.8 billion, mainly because of a rise in income from profit transfers, which resulted primarily from higher profit transferred by Porsche Holding Stuttgart GmbH, Stuttgart, in connection with the IPO of Dr. Ing. h.c. F. Porsche AG, Stuttgart (Porsche AG).

Taxes on income amounted to €1.0 (–1.1) billion, particularly due to higher tax expenses for prior years. Net income for fiscal year 2022 thus amounted to €12.5 (4.0) billion.

NET ASSETS AND FINANCIAL POSITION

Total assets amounted to €225.2 billion on December 31, 2022, up €38.9 billion on the comparative 2021 figure. Intangible assets and property, plant and equipment were up by €0.3 billion, with capital expenditure exceeding depreciation and amortization charges. Financial assets rose to €138.9 (127.6) billion as a result of a number of capital increases, including a capital increase at Porsche Holding Stuttgart GmbH, Stuttgart, in the amount of €2.8 billion in connection with the IPO of Dr. Ing. h.c. F. Porsche AG, Stuttgart. To finance the acquisition of Europcar by Green Mobility Holding S.A., Strassen, Volkswagen AG paid contributions of €1.7 billion to the capital reserves of Volkswagen Finance Luxemburg S.A., Strassen (VFL). In addition, Volkswagen AG paid contributions of €0.9 billion to finance several capital increases by VFL at Volkswagen do Brasil Indústria de Veículos Automotores Ltda., São Bernardo do Campo. In addition, a capital increase of €1.7 billion was implemented at Porsche Siebte Vermögensverwaltung GmbH, Wolfsburg, to finance the creation of battery cell production by PowerCo SE, Salzgitter.

Fixed assets accounted for a share of 65.9 (73.5) % of total assets.

Current assets (including prepaid expenses) amounted to €76.7 (49.4) billion as of December 31, 2022. Inventories went up by €0.9 billion to €7.8 billion. In particular finished goods and merchandise were higher than in the previous year because of a shortage of transport capacity. Receivables and other assets rose to €59.7 (32.3) billion. Their rise is attributable to higher receivables from profit transfers from subsidiaries and an increase in time deposits with maturities of more than three months without call right. Cash instruments were down, driven particularly by the decrease in restricted short-term time deposits.

BALANCE SHEET OF VOLKSWAGEN AG AS OF DECEMBER 31

€ million	2022	2021
Fixed assets	148,516	136,892
Inventories	7,816	6,921
Receivables[1]	59,773	32,355
Cash-in-hand and bank balances	9,122	10,168
Total assets	**225,227**	**186,336**
Equity	40,323	41,172
Special tax-allowable reserves	17	17
Long-term debt	33,717	40,748
Medium-term debt	38,647	38,087
Short-term debt	112,523	66,312

1 Including prepaid expenses.

Equity at the end of the reporting year was €40.3 billion; the decrease was primarily due to earnings-related factors. The equity ratio was 17.9 (22.1) %.

Other provisions decreased by €1.6 billion to €17.7 (19.2) billion, due mainly to the reduction in provisions for litigation risks and sales-related provisions. Provisions for pensions rose by €4.0 billion to €25.3 billion, particularly as a result of a change in measurement inputs, while provisions for taxes decreased by €1.4 billion to €3.4 billion.

The €38.8 billion increase in liabilities, including deferred income, to €138.6 billion was mainly the result of higher loan liabilities to affiliated companies and of liabilities for the special dividend in connection with the IPO of Dr. Ing. h.c. F. Porsche AG, Stuttgart.

Volkswagen AG's cash funds, comprising cash instruments with a maturity of less than three months, less bank liabilities repayable on demand and cash pooling liabilities, improved year-on-year from €–2.1 billion to €–1.0 billion. The interest-bearing portion of debt amounted to €107.7 (84.3) billion. In our assessment, given the context created by political and economic developments in 2022, the limited parts availability and disruptions in the logistics chain, the economic position of Volkswagen AG is challenging, but just as positive overall as that of the Volkswagen Group.

DIVIDEND POLICY

Our dividend policy matches our financial strategy. In the interests of all stakeholders, we aim for continuous dividend growth that allows our shareholders to participate appropriately in our business success. The proposed dividend therefore reflects our financial management objectives – in particular, ensuring a solid financial foundation as part of the implementation of our strategy.

In our Group strategy, we have set ourselves the goal of achieving a payout ratio of at least 30%. The payout ratio is based on the Group's earnings after tax attributable to Volkswagen AG shareholders. This amounts to 29.4% for the reporting period and stood at 25.4% in the previous year.

SPECIAL DIVIDEND FOLLOWING PORSCHE AG IPO

The resolution of the extraordinary General Meeting of Volkswagen AG on December 16, 2022 gave rise to the obligation to pay a dividend, which was increased by €19.06 per ordinary and preferred share and led to a total obligation to the shareholders of Volkswagen AG amounting to €9.6 billion. A corresponding liability was recognized for this payment as of the balance sheet date. The cash outflow was scheduled for January 9, 2023 and occurred on that day.

DIVIDEND PROPOSAL

In fiscal year 2022, net retained profits amounted to €12.0 billion. The Board of Management and Supervisory Board are proposing to pay a total dividend of €4.4 billion, i.e. €8.70 per ordinary share and €8.76 per preferred share.

PROPOSAL ON THE APPROPRIATION OF NET PROFIT

€	2022
Dividend payout on subscribed capital (€1,283 million)	4,373,641,114.80
of which: ordinary shares	2,567,281,416.60
preferred shares	1,806,359,698.20
Appropriation to other revenue reserves	7,645,000,000.00
Balance (carried forward to new account)	2,390,656.18
Net retained profits	**12,021,031,770.98**

EMPLOYEE PAY AND BENEFITS AT VOLKSWAGEN AG

€ million	2022	%	2021	%
Direct pay including cash benefits	8,231	56.7	7,816	67.5
Social security contributions	1,510	10.4	1,340	11.6
Compensated absence	1,208	8.3	1,084	9.4
Retirement benefits	3,557	24.5	1,345	11.6
Total expense	**14,506**	**100.0**	**11,585**	**100.0**

VEHICLE SALES

Volkswagen AG sold a total of 1,882,535 (1,775,556) vehicles in fiscal year 2022. During the reporting period, demand recovered from the declines in sales in the prior-year period precipitated by the Covid-19 pandemic. However, the limited vehicle availability due to bottlenecks in the supply of parts caused by the shortage of semiconductors and the Russia-Ukraine conflict had a detrimental impact. In addition, disrupttions in the supply chain resulted in delays. Vehicles sold abroad accounted for a share of 64.1 (66.3)%.

PRODUCTION

Volkswagen AG manufactured a total of 666,722 vehicles (+5.6%) in the reporting year at its vehicle production plants in Wolfsburg, Hanover and Emden. In fiscal year 2022, supply shortages, especially for semiconductors, continued to limit production.

EMPLOYEES

As of December 31, 2022, a total of 116,677 (117,633) people were employed at the sites of Volkswagen AG, excluding staff employed at subsidiaries; of this figure, 4,452 (4,635) were vocational trainees. 7,528 (7,235) employees were in the passive phase of their partial retirement.

Female employees accounted for 18.3 (17.9)% of the workforce. Volkswagen AG employed 7,908 (7,227) part-time workers. The percentage of foreign employees was 6.5 (6.5)%. In the reporting period, 83.3 (83.3)% of the employees in Volkswagen AG's production area had completed vocational or additional training. The proportion of graduates was 21.9 (21.4)% in the same period. The average age of employees in fiscal year 2022 was 45.1 (44.8) years.

RESEARCH AND DEVELOPMENT

Volkswagen AG's research and development costs as defined in the German Commercial Code amounted to €4.6 (3.5) billion in the reporting period. 15,053 (+11.5%) people were employed in this area at the end of the reporting period. The year-on-year rise is attributable, among other factors, to a change in the data collection method.

BUSINESS DEVELOPMENT OF VOLKSWAGEN AG

As the parent of the Volkswagen Group, Volkswagen AG is fundamentally subject to the same expected developments and risks and opportunities. The forecast is explained in the chapter entitled "Report on Expected Developments" and the risks and opportunities in the chapter entitled "Report on Risks and Opportunities" of this annual report.

RISKS ARISING FROM FINANCIAL INSTRUMENTS

Risks for Volkswagen AG arising from the use of financial instruments are generally the same as those to which the Volkswagen Group is exposed. An explanation of these risks can be found in the chapter "Report on Risks and Opportunities" of this annual report.

DEPENDENT COMPANY REPORT

The Board of Management of Volkswagen AG has submitted to the Supervisory Board the report required by section 312 of the *Aktiengesetz* (AktG – German Stock Corporation Act) and issued the following concluding declaration:

"We declare that, based on the circumstances known to us at the time when the transactions with affiliated companies within the meaning of section 312 of the AktG were entered into, our Company received appropriate consideration for each transaction. No transactions with third parties or measures were either undertaken or omitted on the instructions of or in the interests of Porsche or other affiliated companies in the reporting period."

The Annual Financial Statements of Volkswagen AG (in accordance with the German Commercial Code) can be accessed from the electronic company register at www.unternehmensregister.de.

Sustainable Value Enhancement

Our goal is to run our business responsibly along the entire value chain. Everyone should benefit from this – our customers, our employees, the environment and society. Even in our Group strategy NEW AUTO – Mobility for generations to come, we aim to make mobility sustainable for present and future generations.

The main financial performance indicators for the Volkswagen Group are described in the “Results of Operations, Financial Position and Net Assets” chapter. Nonfinancial key performance indicators also provide information on the efficiency of our Company’s value drivers. These include the processes in the areas of research and development, procurement, technology, production, marketing and sales, information technology and quality assurance. In all of these processes, we are aware of our responsibility towards our customers, our employees, the environment and society. In this chapter we provide examples of how we want to increase the value of our Company in a sustainable way.

SUSTAINABILITY

Sustainability means maintaining intact environmental, social and economic systems with long-term viability at a global, regional and local level. The Volkswagen Group can influence these systems in various ways, and actively takes responsibility to make a contribution to their sustainability. We have thus developed a sustainable style of company management and put in place the necessary management structures.

We have also anchored our goal to sustainably shape mobility for present and future generations in our Group strategy NEW AUTO. Especially the Group’s ESG, Decarbonization and Integrity base initiative will drive this topic further.

The materiality process is used to identify and evaluate the most important sustainability issues for the Group. Based on the business model of Volkswagen AG and its social impacts, the focus is on key ESG requirements, stakeholder expectations and adherence to legal regulations and internationally established reporting standards.

We conducted another materiality analysis in the reporting period. In reviewing potentially material issues, we considered perspectives from within and outside the company and reviewed whether the focus topics of the Group’s NEW AUTO strategy are still in keeping with the times. As a result of this process, the six focus areas already defined – decarbonization, circular economy, supply chain and human rights, people & transformation, diversity, and integrity – were confirmed and classified as material by the Group Sustainability Steering Committee. The six focus areas cover most of the requirements formulated in the ESG ratings for assessment criteria applied. Wherever this is already possible, each focus area is linked to clear goals and milestones, KPIs and appropriate packages of measures. ESG-related KPIs such as the decarbonization index and the diversity index are already today reflected in the remuneration of members of the Board of Management.

Decarbonization
The decarbonization of the Group and in particular its portfolio of products is a major part of the NEW AUTO Group strategy, where it has been defined as one of the focus areas in the base initiative. We have established the decarbonization index (DKI) as a key performance indicator: the decarbonization index measures the emissions of CO_2 and CO_2 equivalents (jointly referred to as CO_2e) by the brands that produce passenger cars and light commercial vehicles in the regions of Europe (EU27, United Kingdom, Norway and Iceland), China and the USA over the entire life cycle. In this index, the use phase is calculated over 200,000 km and with reference to region-specific fleet values without statutory flexibilities. The CO_2e intensity of the charging current of the electric vehicles is also calculated based on region-specific electricity mixes. Our vehicle life cycle assessments, which are used as the data basis for calculating supply chain and recycling emissions, have been verified externally and independently in accordance with ISO 14040. The DKI gives us an informative measuring tool that makes our progress and interim results public and verifiable. The DKI calculation methodology is regularly adapted according to internal and external requirements, such as new test cycles for fleet emissions. Published DKI values can therefore also be adjusted to the new methodology and thus changed to facilitate the presentation of a time series that is methodologically consistent. In 2021, the methodology was adjusted to the WLTP test cycle for fleet emissions. By 2030, the DKI is to be reduced by 30% compared with the base year 2018, and emissions offsetting will not be included in the figure. In the reporting year, the DKI value averaged 48.0 t CO_2e/vehicle. This represents a reduction of 0.4 t CO_2e/vehicle compared with the figure adjusted for 2021 due to a change in the assumption on which the calculation is based, for example the first-time inclusion of region-specific life cycle assessments for Chinese models.

Circular economy
The finite nature of natural resources and the social and environmental consequences of mining raw materials make decoupling economic growth from resource consumption and the development of a circular economy key sustainability topics. Policymakers at both international and national level have addressed these challenges and made it their mission to regulate markets more aggressively in the future in an effort to speed up the transformation towards resource efficiency and a circular economy. Recognizing the importance of the topic, Volkswagen anchored the topic of circular economy in the NEW AUTO Group strategy through its ESG, Decarbonization and Integrity base initiative.

The Volkswagen Group created and implemented concepts for the reconditioning and recycling of vehicle components from an early stage. Going forward, we plan to intensify our efforts for a transition to a loop-oriented and resource-conserving approach to doing business by pooling expertise within the Group and working on projects and measures on a cross-brand basis.

We are stepping up efforts to use recyclable materials in our vehicle projects. These currently include raw materials from production residues as well as renewable raw materials or natural fibers such as flax, cotton, wood and cellulose, provided they comply with all the technical requirements. In the future, the use of raw materials from end-of-life vehicles will be increasingly taken into account and simplified.

To preserve circular materials from electric vehicles, Volkswagen Group Components opened the Group’s first pilot facility for recycling high-voltage vehicle batteries at the Salzgitter site in early 2021. The objective is industrialized recovery of valuable raw materials such as lithium, nickel, manganese and cobalt.

More information on the focus areas can be found in the sections on integrity and compliance, procurement and employees, as well as in our Sustainability Report for fiscal year 2022.

Parameters and guiding principles

Our actions are determined by the Volkswagen Group Essentials as the foundation of values and the basis for our shared corporate culture. The Volkswagen Group Essentials support managers and employees in overcoming legal and ethical challenges that arise in their daily work. At the same time, we are guided in our activities by several internal guidelines on sustainability.

On this basis, we seek to align the Volkswagen Group's actions with international agreements and frameworks such as the Sustainable Development Goals (SDGs) of the United Nations (UN), the declarations of the International Labour Organization (ILO), the principles and conventions of the Organisation for Economic Co-operation and Development (OECD) and the UN covenants on basic rights and freedoms.

UN Global Compact

Since 2021, after a five-year hiatus, the Volkswagen Group has officially been reinstated as a participant of the UN Global Compact (UNGC), the world's largest corporate sustainability initiative, and participates in national and international initiatives together with Audi, Porsche, TRATON, MAN Truck & Bus and Scania. Investors and asset managers in the capital markets view membership of the UNGC as an important factor when deciding to invest in shares and bonds of Volkswagen AG. ESG funds have become very popular in recent years and indispensable for stakeholders.

Management and coordination

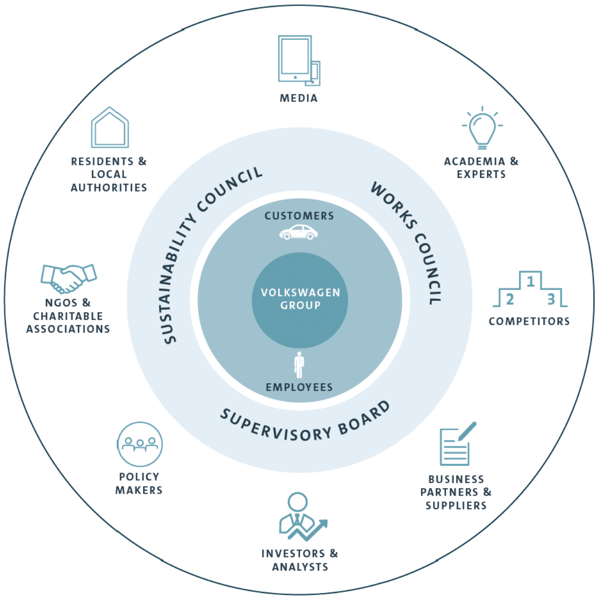
The Volkswagen Group has established a Group-wide sustainability management. The related structures, processes and responsibilities are codified in a specific Group policy. We view sustainability management as a continuous improvement process. The core elements include assumption of cross-functional overall responsibility for sustainability by the Chair of the Board of Management of Volkswagen AG, specification of the competence of the responsible Board members for specific sustainability management concepts and implementation of the Group Sustainability Steering Committee as a top management committee. The members of this steering committee include managers from central Board of Management business areas and Group divisions as well as representatives from the brands and the Group Works Council. The steering committee defines concrete strategic goals and programs, establishes measures for uniform further development of sustainability management across divisions, brands and regions and decides on fundamental sustainability issues. The office of the Group Sustainability Steering Committee is the responsibility of the Group's Sustainability function.

Strategic stakeholder management

Our stakeholders are individuals, groups, or organizations who have an influence on or are influenced by the course or the result of corporate decisions. Our customers and employees are at the center of our stakeholder network. Based on continuous stakeholder analysis, we have also identified eight more stakeholder groups. The Group's supervisory and advisory bodies – i.e. the Supervisory Board, the Works Council and the Sustainability Council – act as interfaces between internal and external stakeholder groups.

We understand stakeholder management as systematic interaction with key interest and stakeholder groups in line with our NEW AUTO Group strategy. Our goal is an open, constructive and also critical exchange with the stakeholder groups shown in the following chart. We aim to actively shape and promote implementation of their requirements and expectations, as well as central strategic issues.

THE VOLKSWAGEN GROUP'S STAKEHOLDERS



To be able to continuously incorporate our stakeholders' suggestions and recommendations, we have given our stakeholder management an organizational structure that also includes external committees. At Group level, this is the Sustainability Council. In addition, we offer our stakeholders a broad range of opportunities for interaction including regular discussion panels and surveys. Following the pandemic-related interruption, we were able to resume the exchange in the reporting period.

Sustainability Council

The Sustainability Council provides assistance to the Volkswagen Group with important, strategic sustainability issues and is made up of internationally renowned experts from the academic world, politics and society. This advisory body establishes its own working methods and areas of focus independently, has far-reaching rights for the purposes of exchanging information, consultation and initiating action, and consults regularly with the Board of Management, top management and the employee representatives.

Dialogue between Volkswagen and the Sustainability Council in 2022 focused specifically on the *Lieferkettensorgfaltspflichtengesetz* (German Supply Chain Due Diligence Act), the use of digital technologies for sustainable development, the Zero Impact Factory concept, promotion of transformation and training, Volkswagen's further decarbonization, and the future alignment of mobility solutions with the NEW AUTO Group strategy. The Sustainability Council also discussed the impact of the Russia-Ukraine conflict on the Group.

Furthermore, the projects launched by the Council to examine the importance of digitalization for sustainability, the transformative potential of employment and training and the inclusivity and effecttiveness of climate legislation in the transport sector were completed in the reporting period. Further links to the letters of recommendation to the Group Board of Management and the results of the Council projects are provided on the Sustainability Council internet page.

Corporate citizenship

As a good corporate citizen, we aim to be a source of economic impetus for local structural development and equal opportunities. We have always believed in the importance of recognizing our social responsibilities toward our stakeholders. The main focus of our corporate social engagement activities is on supporting future, environmental, educational and community projects at many of our sites across the world. In 2022, the brands and companies supported around 800 projects and initiatives worldwide.

Environmental Strategy

As one of the largest automobile manufacturers, Volkswagen takes responsibility for the environmental impact of its activities. Based on the NEW AUTO Group strategy, we have put greater focus on our ambitious environmental targets. With our environmental mission statement goTOzero, we aspire to reduce environmental impact along the entire life cycle – from raw material extraction until end-of-life – for all our products and mobility solutions in order to keep ecosystems intact. Compliance with environmental regulations, standards and voluntary commitments is a basic prerequisite of our actions.
Our focus is on four prioritized action areas:

> Climate action. We are committed to the Paris Climate Agreement and align our activities with the 1.5 degree goal. We consistently focus on the electrification of our products, decarbonization of our entire value chain and expansion of renewable energy generation to supply our sites and customers. We intend to be a net-carbon-neutral company by 2050 at the latest.
> Conservation of resources. We reduce the volumes of primary raw materials needed by using recycled material and renewable raw materials. We maximize our energy and resource efficiency and establish loops for materials and water. Together with our business partners we cut down on the amount of natural resources utilized throughout our supply chain.
> Conservation of ecosystems. We reduce harmful emissions in air, soil and water. We mitigate the impact of our business operations on biodiversity and ecosystems and support projects to conserve these.
> Environmental compliance. Where integrity and compliance are concerned, we aim to be a role model for a modern, transparent, successful enterprise. With this in mind, we use environmental compliance management systems to identify and manage environmental risks and opportunities throughout the lifetime of our mobility solutions. We conduct open dialog with our stakeholders and incorporate their expectations into our decisions.

Organization of environmental protection

Volkswagen has created an environmental policy that sets out guidelines for environmental decision-making, for the management of projects and for the Group's environmental stewardship. Thus, parameters are set for the conduct and working methods of management and staff in five areas: management behavior, compliance, environmental protection, collaboration with stakeholders and continuous improvement.

The Board of Management of Volkswagen AG is the highest internal decision-making body for environmental issues. Both it and the brands' boards of management take not only business, but also social and environmental criteria into account when making key company decisions. The Group-wide management of environmental protection is the responsibility of the Group Steering Committee for the Environment and Energy. Other bodies take responsibility for steering key individual aspects. They include the Group CO_2 Steering Committee, the Group Steering Committee for Fleet Compliance and Exhaust Gas, and the Group Sustainability Steering Committee.

The Volkswagen Group coordinates the activities of the brands, which in turn steer the measures in the regions. The brands and companies are responsible for their own environmental organization. They base their own environmental protection activities on the targets, guidelines and principles that apply throughout the Group.

Our declared aim is to comply with legal and regulatory requirements. Furthermore, we are guided by Company standards and targets. The intention of our environmental compliance management systems is to ensure that environmental aspects and obligations are given appropriate consideration in our business operations. Disregard for the rules is treated as a severe compliance violation, as are fraud and deliberate misconduct. Compliance with our Environmental Policy Statement and with other Group environmental requirements is evaluated annually and reported to the Board of Management of Volkswagen AG, and the respective brand boards of management or the managing directors of the companies.

i CSR-PROJECTS
https://www.volkswagenag.com/en/sustainability/strategy-policy-engagement/engagement/cc-projects.html

TOGETHER4INTEGRITY

HOLISTIC INTEGRITY AND COMPLIANCE MANAGEMENT SYSTEM

Integrity and compliance are major priorities in the Volkswagen Group. We firmly believe that, for long-term commercial success, it is important that each and every individual complies with laws, regulations and commitments. Compliant behavior must be a matter of course for all Group employees. This is why integrity and compliance remain key elements of our Group's NEW AUTO strategy and a focus topic in matters of sustainability.

Our objective is to be a role model and deepen the trust of our employees, customers, shareholders and partners in our Company. Our regulations, processes and corporate culture are designed in such a way that all employees can act with integrity and comply with the rules at all times.

At the same time, we have embedded integrity in our decision-making processes. For example, every resolution proposal submitted to the Board of Management must demonstrate that the intended decision is in line with integrity and compliance, what risks may be associated with it, and how the risks can be reduced. Similar requirements apply to Group brands and companies and to Group bodies to which the Board of Management has delegated decision-making powers.

As performance indicators, integrity and compliance must have the same strategic and operational priority in our Company as sales revenue, profit, product quality and employer attractiveness. We have been building a holistic integrity and compliance management system (ICMS) since 2018. This system was set up in line with the five internationally recognized ECI (Ethics and Compliance Initiative) principles: strategy, risk management, a culture of integrity, a speak-up environment and resolute accountability.

We employ our Together4Integrity (T4I) program as a means of making integrity and compliance a mainstay throughout the Group. This program brings the vast majority of the Group’s integrity and compliance activities together under one roof, applying uniform, robust process and implementation standards.

Thus, we are not only establishing a worldwide ICMS for all Group and brand companies, we are also advancing one of the most extensive change and cultural programs in the history of the Volkswagen Group.

T4I: eleven key initiatives

The rollout of T4I is almost complete, with full implementation scheduled for 2025. The Group is overseeing the program planning and also the rollout of T4I. The managing directors of the individual companies are responsible for implementing the program at a local level. The packages of measures may differ depending on local circumstances. The implementation time will also vary.

The packages of measures are divided into eleven key initiatives:

1. HR (Human Resources) Compliance Policies and Procedures

The aim of this key initiative is the integration of integrity and compliance into the standard HR processes such as recruitment, training, promotion and remuneration (bonus payments). Integrity and compliance are also a compulsory topic in annual employee appraisals and are a component of the training measures for employees across all levels of the Company.

2. Code of Conduct

The Code of Conduct (CoC) is a key instrument for reinforcing employee awareness of responsible action and decision making, creating the basis for compliance within the Company. The CoC serves as an aid, provides support in finding the right contact persons where needed and is binding for all Group employees. We and our employees undergo regular mandatory training in the key contents of the CoC.

3. Integrity Program

The integrity program is designed to reinforce the culture of integrity. Its objective is to communicate to employees the importance of integrity and motivate employees to behave with integrity in their everyday work. We regard integrity as an attitude; it provides an inner compass for correct action and becomes particularly decisive in gray areas, when explicit rules are missing or conflicting goals exist. We place particular emphasis on making decisions with integrity. Appropriate training modules on this topic provide support to all management levels, from foremen up to executives.

4. Risk Management and Internal Controls

Binding structures and processes are designed to help create transparency and manage risk. These include the quarterly risk process, which focuses on acute risks, the standard internal control system (ICS), which is designed to protect key processes, and root cause analysis.

5. Internal Compliance Risk Assessment

The internal compliance risk assessment (ICRA) identifies and addresses compliance risks in the Group, in particular those risks involving corruption, money laundering and embezzlement. In the reporting period, the ICRA process was brought into line with the requirements of the *Lieferkettensorgfaltspflichtengesetz* (LkSG - German Supply Chain Due Diligence Act). Compliance measures are developed and defined for each company on the basis of the risk profiles derived from the ICRA.

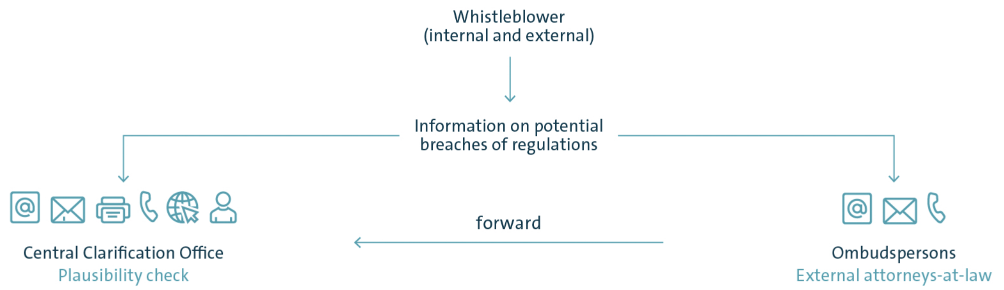
6. Whistleblower System

The whistleblower system is the central point of contact for reporting cases of rule-breaking by Group employees or by direct and indirect suppliers. This includes white collar crimes, acts of corruption, tax offenses, environmental offenses, human rights violations, infringements of antitrust and competition legislation, money laundering and terrorism financing, breaches of product safety and licensing regulations, and serious breaches of privacy. Employees and third parties can report misconduct at any time and in many languages. A wide range of channels is available for this purpose, and the information can be lodged completely anonymously, if preferred. The aim is to use binding principles and a clearly governed process to avert damage to the Company and its employees.

7. M&A and NCS compliance

In the event of planned mergers and acquisitions (M&A transactions), the relevant companies are audited for commercial risks such as corruption, breaches of trust or fraud, and for human rights risks. The analyses provide recommendations for the mitigation of the risks identified. This also applies to joint ventures and to industrialization and cooperation projects with external partners. Furthermore, the Group Compliance organization works to achieve appropriate compliance management at non-controlled shareholdings (NCSs), i.e. companies that are not controlled by a Volkswagen Group company as a majority shareholder.

REPORTING CHANNELS OF THE WHISTLEBLOWER SYSTEM



8. Business Partner Due Diligence
In the business partner due diligence process, the integrity of business partners and suppliers is reviewed, especially with regard to corruption risks and compliance with ethical standards. The aim is to identify these risks at an early stage, to avoid such business partners, and to define measures to minimize risk and implement these with the business partner. If this is not possible, options for terminating the business relationship are explored, or the business relationship is not established in the first place.

9. Product Compliance
The product compliance management system (PCMS) is designed to ensure that our products comply with the legal and regulatory requirements of the exporting and importing country, internal and external standards, contractually agreed customer requirements and externally communicated voluntary commitments over their life cycle.

10. Environmental Compliance
Statutory environmental regulations and voluntary commitments are binding at all locations and in all business fields. The Group's environmental policy and the environmental compliance management system stipulate the relevant requirements and responsibilities for all strategy, planning and decision-making processes in the Group brands and companies. This includes a system of key indicators to determine progress in meeting environmental targets in the fields of renewable energy, CO_2 emissions and resource efficiency.

11. Anti-Corruption
The Volkswagen Group has a zero-tolerance policy on active or passive corruption. This is anchored in both our internal Code of Conduct and our Code of Conduct for Business Partners. Our investigation offices look into and process any reported violations of our principles, and sanctions are imposed on the employees concerned. Tackling corruption also includes the development and implementation of mandatory training for employees in divisions or companies with a high risk exposure.

The aim of T4I is thus not only to strengthen uniform corporate governance throughout the Group in relation to integrity and compliance, but also to advance the culture of integrity. This includes steadfastness in adhering to principles of integrity regardless of economic or social pressures. T4I and the ICMS therefore contribute significantly to increasing sustainability in the Volkswagen Group.

Sustainably measuring success
Methods for monitoring effectiveness and measuring progress are an integral part of the compliance management system. The central planning and reporting system of the T4I program provides continuous transparency on the implementation status of the key initiatives. It is used for internal reporting to the Group Board of Management and the Brand Board of Management, makes project advances known and can provide assistance when countermeasures are being introduced in response to project delays.

In addition to this, the annual opinion survey provides information about the extent to which our culture of integrity has developed. This Group-wide employee survey asks a number of questions, including whether each individual is able to act with integrity. Where a fixed threshold value is not achieved, the relevant manager must identify and remove possible obstacles together with the team.

To measure the level of target achievement in relation to integrity and legal matters, we have defined an indicator for the major brands that manufacture passenger cars: compliance, a culture of dealing openly with mistakes and acting with integrity. This is based on an evaluation of the answers to three questions in the opinion survey that address compliance with regulations and processes, dealing with risks and errors, and the possibility of acting with integrity. In the event of negative deviations, the relevant departments develop and implement measures.

Compliance: clear rules in the Group

Compliance with the rules must be a matter of course for all employees of the Volkswagen Group. The Group compliance organization provides support worldwide in the form of programs, guidelines, processes and practical advice. It helps the Group and brand companies to comply with the rules when carrying out their business activities and to comply with the relevant laws and internal regulations. The compliance work focuses on the anti-corruption measures, and preventing fraudulent breaches of trust and money laundering.

The Compliance Infopoint has established itself as the central help center for compliance questions in the Volkswagen Group. The team either directly issues a recommendation on the matter in question or forwards the query to a competent body. Case studies derived from these consultations are regularly incorporated into communications about compliance. Employees can also contact the Compliance Infopoint directly via the Volkswagen 360° app, an option of particular benefit to employees without a computer workstation of their own.

In addition, the Group Compliance organization offers training and communication formats tailored to specific target groups – management discussions and training courses for key personnel being two of these. Moreover, compliance content is part and parcel of all career development paths from the induction program for trainees to programs for leadership and management development to the senior management program. The measures are supplemented by information and communication activities such as awareness campaigns, film and dialogue formats, newsletters and interactive games for learning about laws and rules.

The Group Compliance organization's program of activities addresses areas of importance for the future. The activities include projects for cross-Group collaboration in the markets, further development of IT-based compliance tools and exchange formats with internal and external compliance experts.

For more information on integrity and compliance, as well as the topic of business and human rights, please see our 2022 Group Sustainability Report.

WHISTLEBLOWER SYSTEM
https://www.volkswagenag.com/en/group/compliance-and-risk-management/whistleblowersystem.html
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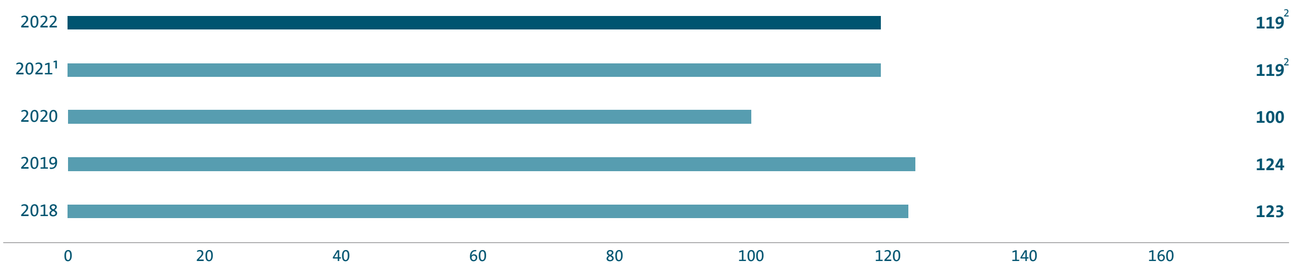
CO_2 EMISSIONS OF THE VOLKSWAGEN GROUP'S EUROPEAN (EU27+2) NEW PASSENGER CAR FLEET
in grams per kilometer (WLTP)



1 The European Commission switched its calculation of CO_2 fleet emissions from NEDC to WLTP in 2021.
2 Subject to confirmation of CO_2 data within the scope of official publication by the European Commission.

RESEARCH AND DEVELOPMENT

Forward-looking mobility solutions with brand-defining products and services would be unthinkable without innovation. This makes our research and development work essential for sustainably increasing the value of the Company.

Together with our Group brands, we have launched measures based on our NEW AUTO strategy to link development activities across the Group. At the heart of this is an efficient, cross-brand development alliance characterized by a close network of our experts, collaboration on an equal footing, an innovative working environment and the pooling of development activities. The aim is to make use of synergies across the Group and act as a role model for the environment, safety and integrity. The development alliance plays a major part in driving the Volkswagen Group's transformation and helping to make it fit for the future.

In view of this strategic focus, we concentrated in the reporting period on continuing to develop forward-looking mobility solutions, establishing technological expertise to strengthen our competitiveness, expanding our range of products and services and improving the functionality, quality, safety and environmental compatibility of our products and services.

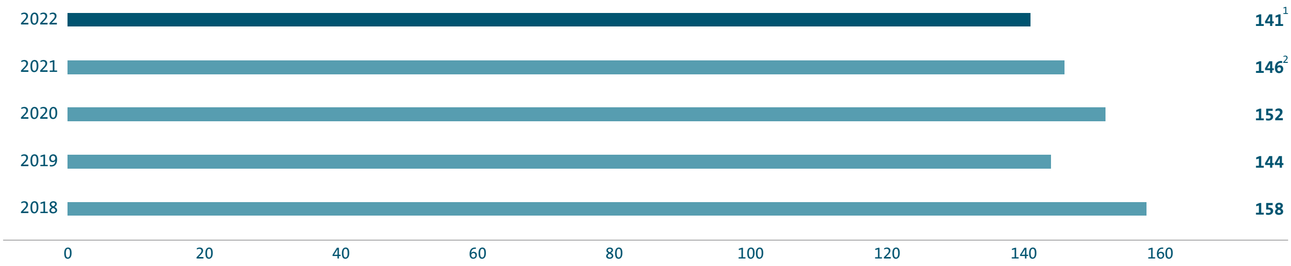
CO_2 fleet emissions

We use the strategic indicator of CO_2 fleet emissions in Europe and the United States to evaluate the effectiveness of our measures to reduce CO_2 emissions when driving our vehicles.

The Volkswagen Group's new passenger car fleet in the EU (EU27+2) (from 2022 including Lamborghini and Bentley) emitted an average of 119 g CO_2/km (Worldwide Harmonized Light Vehicles Test Procedure – WLTP)[1] in the reporting period in accordance with the statutory measurement bases. The statutory target is 122 g CO_2/km (WLTP)[1]. The Volkswagen Group thus more than met the EU's CO_2 fleet target. All figures are subject to confirmation of CO_2 data within the scope of official publication by the European Commission. The targets are expected to be tightened as from 2025 (subject to publication in the EU Official Journal): the European Commission has thus set a target of a 15% reduction in CO_2 emissions, which corresponds to a CO_2 target of less than 105 g CO_2/km for our new passenger car fleet in the EU. A reduction of 55% has been defined for 2030, equivalent to a CO_2 target of less than 55 g CO_2/km. We assume that our new passenger car fleet in the EU will meet the target for 2025 and more than meet the target for 2030. A CO_2 reduction target of 100% for passenger cars has been set for 2035.

The Volkswagen Group's new light commercial vehicles fleet in the EU emitted an average of 193 g CO_2/km (WLTP)[1] in the reporting period according to the statutory measurement bases. The statutory target is 199 g CO_2/km (WLTP)[1]. The Volkswagen Group thus more than met the EU's CO_2 fleet target. All figures are subject to confirmation of CO_2 data within the scope of official publication by the European

CO_2 EMISSIONS IN VOLKSWAGEN GROUP PASSENGER CARS AND LIGHT COMMERCIAL VEHICLES UNDER GHG STANDARDS IN THE USA
in grams per kilometer for the model year



1 Subject to submission of the final MY report MY22 and subsequent confirmation by EPA and CARB (internal data as of September 2022).
2 Subject to confirmation by EPA and CARB (final MY report MY21 submitted but not yet confirmed).

Commission. The targets are expected to be tightened as from 2025 (subject to publication in the EU Official Journal): the European Commission has thus stipulated a 15% reduction of CO_2 emissions, which corresponds to a CO_2 target of less than 184 g CO_2/km for our new light commercial vehicle fleet in the EU. A reduction of 50% has been defined for 2030, equivalent to a CO_2 target of less than 108 g CO_2/km. We assume that our new light commercial vehicles fleet in the EU will meet this target for 2025 and more than meet the target for 2030. A CO_2 reduction target of 100% for light commercial vehicles has been set for 2035. In the United Kingdom and Switzerland/Liechtenstein markets, the Volkswagen Group's light commercial vehicle fleets met the statutory requirements for the reporting period. In Switzerland, the Volkswagen Group's passenger car fleet fell just short of the statutory requirements for the reporting year. The CO_2 pool established together with other manufacturers in the UK achieved its target.

In the United States, the emission pool – comprising the Group brands Volkswagen Passenger Cars, Audi, Lamborghini, Bentley and Porsche – commits to the Greenhouse Gas (GHG) and Corporate Average Fuel Economy (CAFE) regulations. Due to a model year – the accounting period used in the USA – differing in length from the calendar year, internal calculations are used to determine the figures for the current and preceding model year. The average GHG CO_2 value (internal data as of September 2022) for the passenger car and light commercial vehicle fleets in model year 2022 is 141 g CO_2/km (model year 2021: 146 g CO_2/km). The statutory target is 136 g CO_2/km (model year 2021: 142 g CO_2/km). Application of the statutory flexibility offered by GHG and CAFE together with externally acquired credits enabled the Volkswagen Group to comply with the applicable requirements for model year 2021 subject to confirmation by the authorities. The figure given for model year 2022 is also subject to confirmation by the Environmental Protection Agency (EPA). For 2025, we anticipate a CO_2 target in the USA of approximately 110 g CO_2/km and expect to meet this target. For 2030, we aim to increase the share of electric vehicles in our new vehicle fleet to significantly more than 50%, which would put us within the target range of the current administration.

Fuel and drivetrain strategy

With a view to the legal regulations on emissions, we are currently developing a forward-looking vehicle and drivetrain portfolio: we have set ourselves the objective of increasing drive system efficiency with each new model generation – irrespective of whether it is a combustion engine, a hybrid or a purely electric drive system. The Volkswagen Group closely coordinates technology and product planning with its brands so as to avoid breaches of fleet fuel consumption limits. Around one in five new Volkswagen Group vehicles worldwide is therefore to have a purely electric drive already by the year 2025; depending on market development, this could be over two million electric vehicles a year. As part of our electrification campaign, we aim to offer our customers worldwide around 50 completely battery-electric models by 2030. By 2030, the Volkswagen Group aims to have electrified its entire model portfolio, from high-volume models to premium vehicles. This will mean offering at least one electric version – battery electric or hybrid vehicles – of each of our passenger car models across all Group brands. To this end, in addition to the Modular Electric Drive Toolkit (MEB), we have also developed an all-electric platform for our premium and sports brands – the Premium Platform Electric (PPE). Furthermore, we are currently concentrating our energies on designing the Scalable Systems Platform (SSP), the successor platform for our future all-electric vehicles, in the Mechatronics technology initiative within the Group's NEW AUTO strategy. The strategic goals of this SSP platform are to further reduce variance by consistently enhancing synergies and thus tapping into considerable potential for cost savings. A first deployment of the SSP platform is currently under appraisal.

To offer sustainable, affordable mobility in the future for as many people around the world as possible, we offer a range of drivetrains with a focus on electrification. From today's perspective, conventional combustion engines will continue to make up a large share of the drive portfolio in the coming years. In the interest of using resources responsibly, it is therefore essential to further enhance this engine segment and systematically consolidate it for specific markets. Powertrain measures such as significantly more sophisticated exhaust gas purification or mild hybridization of our vehicles, as well as vehicle measures such as optimized aerodynamics or reduced rolling resistance will be necessary to fulfill future emissions standards. We are preparing intensively for this as we develop our product portfolio.

It is more important to us than ever to rigorously pursue the modular approach. We are reducing the number of individual modules so that we can make a large product portfolio economically viable. For example, we are reducing the number of versions of conventional combustion engines in the Group in the long term as part of our transformation towards e-mobility. This will create capacity for the development and production of new electric drives.

Life cycle engineering and recycling

Technological innovation for reducing fuel consumption is not enough on its own to minimize the effect of vehicles on the environment. We consider the environmental impact caused by our products throughout the entire vehicle life cycle and at all stages of the value chain. This includes the manufacturing process with the associated extraction of raw materials, the production of materials, the processes at our suppliers and our own production operations at our sites, the use phase with the resulting vehicle emissions and the necessary supply of fuel and charging current, and ultimately the recycling of the vehicle at the end of its life cycle. We identify the stages of the life cycle at which improvements will have the greatest effect and develop appropriate solutions. We call this life cycle engineering. Recycling, for example, is an important means of reducing environmental impact and conserving resources. We therefore already take the recyclability of the required materials into consideration when developing new vehicles, use high-quality recycled material and avoid pollutants. One of the recommendations for achieving this goal is avoiding substances on the EU REACH Candidate List of Substances of Very High Concern. Under the European Directive on end-of-life vehicles, passenger cars and light commercial vehicles must be 85% recyclable and 95% recoverable. Our vehicles registered in Europe comply with these standards.

Leveraging synergies increases efficiency

When developing vehicles, we cooperate closely with our brands to leverage synergies. The joint strategy of our development alliance involves, for example, making the Group more competitive and viable in the long term by deploying resources more effectively and efficiently in the research and development of new mobility-related technologies, products and services. In our Group-wide development alliance, the brands therefore not only work with each other, but also for each other on key technologies, forming cross-brand networks of expertise to address topics of importance for the future.

The Volkswagen Group further streamlined its innovation portfolio, gearing it towards multibrand technologies of the future in order to provide effective support for the brands' capacity for innovation. In the reporting period, we invigorated the new leading roles assigned to the brands in Technical Development in 2020 to increase efficiency and leverage synergies in module variance, components, parts and processes.

We coordinate the use of modules centrally to reduce costs, capital expenditure and complexity. We are seeking to reduce expenditure in the modular toolkits, while at the same time facilitating widespread electrification and a focus on autonomous systems. We wish to achieve this through a considerable reduction in complexity using streamlined platforms that synergize but do not overlap. To this end, the individual Group brands draw on the modular toolkits, thus creating synergies between the various models of a product line, as well as across the product lines. By optimizing the toolkits, we are giving ourselves the financial leeway needed for developments in topics of importance for the future.

Sustainable mobility, connectivity and automated driving

The mobility of people and goods is a prerequisite for economic growth and social development. But natural resources are dwindling and climate change is advancing. This calls for comprehensive mobility concepts to minimize the environmental impact. Such solutions need to be efficient, sustainable, crisis-proof, customer-oriented and accessible anytime and anywhere.

We are researching and developing such concepts in our Group-wide alliance: when shaping the future of mobility, we are looking not only at the automobile and related services, but at all modes of transport, transport infrastructures and people's mobility habits. Digital connectivity and automated driving allow for completely new approaches to solving problems. They can help us play our part in a comprehensive mobility system for the future and drive forward our industry's transformation.

New software solutions are the basis for this. This is why the Volkswagen Group has declared software development to be one of its target core competencies in its NEW AUTO strategy. Our software subsidiary CARIAD is responsible for this. It is to develop a sustainable, convenient, connected, safe automotive experience for the customers of our Group brands. CARIAD aims to provide answers to the strategic aspects of digitalization and pool the Group's software expertise.

Developers from CARIAD work at plants in Germany and Europe and collaborate with development teams from the Volkswagen Group in North America. CARIAD established a subsidiary in China in 2022. Its mission of 'In China for China' allows the local development teams to sharpen their focus on the wishes of Chinese customers. CARIAD SE employs around 5,500 specialists who are developing the following solutions in the Group:

> VW.OS, a uniform software platform for all Group vehicles
> Uniform end-to-end electronics architectures
> Connectivity with VW.AC, a uniform Volkswagen Automotive Cloud
> An infotainment platform with an app store for third-party providers
> Driver assistance systems, automated parking functions and highly automated driving for private mobility
> A data marketplace
> New mobility services and digital business models

In 2022, the teams of developers from CARIAD worked closely together with the Audi and Porsche brands to complete the E^3 1.2 architecture that will optimize the alignment of the hardware with CARIAD's vehicle software. This is designed not only to improve the performance of the vehicle's computers but also to make it easier to install over-the-air updates – a key lever for the introduction of new services – even after vehicle production has begun.

CARIAD is already supplying updatable software for current vehicle generations on its E^3 1.1 architecture to the Group brands with the goal of making the software secure and traceable. It is already being installed in the vehicles as over-the-air updates.

In the long term, CARIAD is to pool all of its solutions on an enhanced, scalable software platform that will be made available to the Group brands, from the volume segment up to the premium platform. This is expected to generate economies of scale and to lower the cost of growing software requirements in the vehicle for all brands.

The new platform is also set to pave the way for the autonomous driving functions of the future. The development of autonomous driving is a core element of the NEW AUTO strategy, with CARIAD responsible for developing partially and highly automated driving functions (up to Level 4) for the Volkswagen Group's brands. These applications will be progressively introduced in their new vehicle models at different performance levels (Levels 2+, 3 or 4). Volkswagen Commercial Vehicles is responsible specifically for the areas of Mobility as a Service and Transportation as a Service (MaaS/TaaS). The strategic Mobility Solutions technology initiative is promoting autonomous driving in conjunction with new service models, i.e. shared mobility in these areas using robotic shuttles and vans.

CARIAD and Volkswagen Commercial Vehicles will continue to drive the future rollout of autonomous drive technologies together with development partners.

Pooling strengths with strategic alliances

The aim of our NEW AUTO strategy is to transform our core business activities and to expand the mobility solutions business area at the same time. It is decisive to the success of this plan that we place our innovative strength on even broader foundations.

Within the Volkswagen Group, we combine our technological innovation activities in the Volkswagen Group Innovation unit. At seven locations worldwide in the USA, Europe and Asia, employees are working on sustainable solutions for urban and interurban mobility systems in line with our motto "Mobility for generations to come". Technologies and activities that are ready for pre-development are regularly transferred from Volkswagen Group Innovation to our Group brands to ensure that the areas of digitalization, sustainability and e-mobility receive continuous support in innovative projects. In this way, we are creating an agile innovation structure that allows us to initiate new milestone projects with innovative international partners, even at short notice.

Growth in the mobility sector is strongly defined through regional innovation activities. Volkswagen therefore concentrates its strategic venture-capital activities and partnerships in the Group's international innovation ecosystem. This helps us to identify the regional needs of customers more precisely, to adjust our product range accordingly and to establish competitive cost structures. In doing so, we rely to a greater extent than in the past on partnerships, acquisitions and venture-capital investments and manage investment selection centrally so as to generate maximum value for the Group and its brands. It is against this backdrop that we formed an alliance with Ford Motor Company. At the beginning of June 2020, Ford Motor Company and Volkswagen AG signed additional contracts within their existing global alliance for light commercial vehicles, electrification and autonomous driving. Among other things, the contracts serve as the foundation for a total of three vehicle projects: a mid-sized pickup, a city van and a one-tonne cargo van. In addition, Ford will use the Modular Electric Drive Toolkit (MEB) developed by Volkswagen for two electric volume models that are expected to be offered in Europe from 2023. The aim of the cooperation is to place both Volkswagen and Ford in a position that enables them to improve their competitiveness, tailor their products to better meet the needs of customers worldwide and at the same time to leverage synergies related to cost and investment.

We are transforming ourselves into a mobility provider with a digital ecosystem and a fully connected vehicle fleet. Together with our strategic partner Microsoft, we intend to press ahead with software development for the automobile of tomorrow. The Automated Driving Platform being built with Microsoft is accelerating the agile development of cloud-based driver assistance systems and automated driving and parking functions by our software teams.

To design the framework conditions for the approval and introduction of our own self-driving system, we are actively involved in public projects. The experience we are gathering here benefits the Group brands and thus our customers.

Software subsidiary CARIAD is responsible for developing automated driving functions for our brands' customers, for which it entered into several major partnerships in 2022. In the Automated Driving Alliance, CARIAD and Bosch are striving to make partially and highly automated driving suitable for mass use, i.e. also in the volume segment. The aim is to provide functions for Group vehicles that allow drivers to take their hands off the steering wheel at times where this is possible in regulatory terms. In the alliance, both companies are jointly developing Level 2 hands-free systems for driving in cities, the countryside and on the highway, and a system in which the vehicle takes over the complete task of driving on the highway.

CARIAD has entered into a local partnership with Horizon Robotics to drive up development expertise in highly automated driving functions in the Chinese market. The companies also plan to develop a high-tech semiconductor, a system on a chip (SoC), as part of a new joint venture to push the integration of numerous functions on a single chip.

Over and above this, CARIAD is committed to open collaboration in the global developer community. CARIAD joined the Eclipse Foundation open source community in 2022, where as a strategic member of the Software Defined Vehicle working group it is involved in developing basic automotive software more efficiently and promoting innovation.

Key R&D figures

In fiscal year 2022, we filed 5,305 (5,638) patent applications worldwide for employee inventions, the majority of them in Germany. The fact that an ever-increasing share of these patents is for important cutting-edge fields underscores our Company's innovative power. These fields include driver assistance systems and automation, digitalization, connectivity, as well as alternative drive systems.

The Automotive Division's total research and development costs in the reporting period amounted to €18.9 (15.6) billion and were 21.3% higher than in the previous year; their percentage of the Automotive Division's sales revenue – the R&D ratio – was 8.1 (7.6)%. In addition to new models, our activities focused above all on the electrification of our vehicle portfolio, digitalization, new technologies and enhancements of our modular and all-electric toolkits and platforms. The capitalization ratio was 51.4 (50.3)%. Research and development expenditure recognized in profit or loss in accordance with the IFRSs increased to €14.3 (12.8) billion.

As of December 31, 2022, our Research and Development departments – including the equity-accounted Chinese joint ventures – employed 58,912 people (+11.1%) Group-wide, corresponding to 8.7% of the total workforce. The year-on-year increase is partly due to a change in the data collection methodology.

RESEARCH AND DEVELOPMENT COSTS IN THE AUTOMOTIVE DIVISION

€ million	2022	2021
Total research and development costs	18,908	15,583
of which capitalized development costs	9,723	7,843
Capitalization ratio in %	51.4	50.3
Amortization of capitalized development costs	5,144	5,050
Research and development costs recognized in profit or loss	14,329	12,790
Sales revenue	232,385	206,237
Total research and development costs	18,908	15,583
R&D ratio	**8.1**	**7.6**

PROCUREMENT

In fiscal year 2022, the main task for Procurement was to make a decisive contribution to the Group's result in five areas: costs, supplies, sustainability, quality and innovation. The challenges related to supplies and costs were the area of focus. 2022 was mainly devoted to safeguarding the supply of parts. Through pinpointed task force work, we minimized impending vehicle losses due particularly to the shortage of parts in connection with the Russia-Ukraine conflict. In the second half of 2022, the focus was additionally on rising energy prices, the resulting supplier receivables, and safeguarding the energy supply at the company's own plants and at those of its suppliers.

Procurement strategy

The NEW AUTO Group strategy also stands for more speed, focus and stringency within the Procurement division, accelerating change even more. In 2022, we continued to drive forward and improve our functional area strategy. Alongside short-term cost targets, our strategy seeks to improve our supply situation, increase product quality and boost innovativeness and sustainability. The goals are based on the NEW AUTO Group strategy and are driving Volkswagen's transformation also from within the Procurement division. In addition, we are also creating optimized structures for our procurement staff and establishing further focus areas with the digitalization of our processes and increased employee orientation.

E-mobility

A key task for Procurement is to safeguard supplies for the continually growing requirements of the e-mobility offensive over the next five to ten years in a sustainable way, while optimizing cost structures.

When awarding contracts to our electric mobility partners, we lay down requirements as regards sustainable supplier practices, transparent, traceable supply streams, and energy- and carbon-optimized supply chains. Global demand from the European, American and Asian markets is bundled in the awarding of Group contracts with the aim of achieving cost leadership for electric mobility solutions. To this end, we consider diversification in conjunction with dual-supplier strategies as well as localization of the supplier portfolio for all core components of the electric vehicle fleet in an effort to reduce economic and geopolitical risks.

Digitalization of supply

We are working systematically to implement a completely digitalized supply chain. This is intended to help us to safeguard supply and leverage synergies throughout the Group. We are therefore creating a shared database and using innovative technologies to enable efficient, networked collaboration in real time – both within the Group and with our partners. The Procurement division aims to standardize transactions with our suppliers in the future and automate them where possible. This will not only reduce transaction costs but will also accelerate business processes. The integration of Catena-X, the data network for the automotive industry, is one important part of this. It will allow possible supply risks to be identified at an earlier stage and appropriate measures and alternatives to be jointly developed faster. Procurement's digitalization strategy is being consistently followed with the specific aim of not only eliminating the weaknesses of Procurement's IT system environment but also increasing the organization's effectiveness, efficiency and future viability. The initial systems or modules such as a cloud-based module for automating procurement activities in the vehicle project phase and an acclaimed online negotiation tool have already been implemented and integrated into the existing system environment.

Structure of key purchasing markets

The procurement process is organized at a global level, with a presence in the key markets around the world. This allows us to purchase production materials, investments in property, plant and equipment, and services worldwide at the quality required and on the best possible terms. Networking among the brands' procurement organizations enables us to leverage synergies across the Group in the various purchasing markets.

In addition to the brands' procurement units, the Volkswagen Group operates seven regional offices. In growth markets, we identify and train local suppliers to generate cost advantages for all Group production sites. In this context, we are also focusing on start-ups and software suppliers.

Supply chain management in Procurement

Supply chain management activities at Procurement are focused on safeguarding supplies during start-up phases and for series production. This entails providing support in our suppliers' industrialization processes, monitoring series production and managing supply crises, for example energy and raw material shortages related to the Covid-19 pandemic and the Russia-Ukraine conflict.

Even in the early stages of new projects, we conduct audits to ensure that our suppliers will be able to deliver. Furthermore, we provide support for purchased parts along the individual project milestones up to the start of production. Complex components in particular frequently require onsite support from our supplier management team. Finally, an acceptance test of production capacities is carried out to facilitate the timely start of series production of the vehicles at our plants.

In addition, regular checks are carried out during series production, for example related to the continuous matching of demand and capacity or possible capacity adjustments at suppliers. This also safeguards the capacity at suppliers when using existing components in new projects.

Thanks to our established crisis management structure and global supplier network, we are able to overcome complex challenges along the supply chain and have access to a wide range of locations and technologies. This structure has been instrumental in helping us cope in particular with the impact of the Russia-Ukraine conflict, which has necessitated the construction of backup sites. Cross-divisional work among Procurement, Quality Assurance, Development, Production and Logistics reduced short-term losses and successfully industrialized the backup sites.

The measures pursued as a consequence of the Russia-Ukraine conflict demonstrate that global supplier management is working effectively. However, the precarious supply situation, especially for semiconductors, resulted in limited vehicle availability for customers.

Sustainability in supplier relationships

Successful relationships with our business partners are based on respecting human rights, compliance with occupational health and safety standards, active environmental protection and combating corruption. These sustainability standards are defined in the contractually binding Volkswagen Group Requirements for Sustainability in Relations with Business Partners (Code of Conduct for Business Partners). The Code of Conduct for Business Partners also sets out the expectation that business partners will take steps to ensure compliance in their supply chain. We review compliance with the requirements, which has been an explicit condition for the award of contracts since 2019, using sustainability ratings for relevant suppliers. The relevance of a business partner for this rating depends, among other things, on the size of the company or the risk exposure arising from the type of service provided.

In our sustainability rating, we determine suppliers' sustainability performance by means of self-disclosures and risk-based on-site audits. By the end of the reporting period, we had obtained 12,660 ratings for suppliers, covering 75% of the total order volume. Both the validation of the questionnaire and the on-site audits are carried out by selected service providers. As a rule, contracts are not awarded to suppliers who fail to meet our requirements concerning compliance with sustainability standards. Tying award decisions to sustainability criteria is one of the strongest levers for enforcing these. We address existing sustainability risks and violations of sustainability principles by systematically defining and implementing measures to correct the violations; this also includes the upstream supply chain. In the reporting period we continued to offer advanced and continuing training for suppliers. In fiscal year 2022, more than 2,900 suppliers took advantage of our training programs such as digital supplier training courses and e-learning.

With regard to decarbonization, the Volkswagen Group is striving to continuously reduce greenhouse gas emissions or avoid them altogether over the entire life cycle of a vehicle. The Group's transformation into a provider of sustainable mobility solutions and in particular the trend towards electric mobility are shifting the action required from the service life of the vehicle to supply chains and the manufacture of vehicles and components. We are aware of our social responsibility and are committed to the Paris Climate Agreement. We have therefore incorporated the use of renewable energy, among other things, into the specifications for cell manufacturers.

In our sustainable supply management, we are also involved in protecting groups of people who may be subject to a high risk of potential human rights violations at any point in our supply chain. We implemented a human rights focus system in 2022 to comply with international frameworks and requirements and specifically the *Lieferkettensorgfaltspflichtengesetz* (German Supply Chain Due Diligence Act). The system aims to identify particularly high risks in our supply chain in connection with human rights violations and the environment and to manage these appropriately. We continued to implement our raw material due diligence management system to manage the sometimes extensive risks in the raw material supply chains. This sets out in detail the prioritization and processing of the raw material supply chains that we classify as particularly high risk. Transparency requirements for our battery suppliers constitute an important basis for responsible raw material purchasing. Within the framework of these contractual requirements, we ask, for example, that our battery suppliers disclose their entire upstream supply chain before we award new contracts.

For more information on human rights, please see the section on Supply Chain and Human Rights in our 2022 Sustainability Report.

TECHNOLOGY

The Technology Board position is responsible for the following focus areas: all activities of Volkswagen Group Components, the marketing of the Volkswagen platforms and components to third parties, the development, manufacturing and procurement of battery cells (Cell and Battery technology initiative), and all topics relating to charging and energy for the Group worldwide (Charging and Energy Services technology initiative).

The aim is further improvement of future viability and competitiveness through cross-brand management of technology activities and a value creation strategy coordinated throughout the Group. Synergies are to be leveraged across both traditional technologies and future areas to advance the transition to e-mobility.

The Volkswagen Group formalized its objectives for battery and charging for 2030 in its technology roadmap. With the battery roadmap we aim to significantly reduce the complexity and cost of this key component so as to make electric vehicles attractive and affordable for as many people as possible.

Battery

In 2022, Volkswagen founded the battery company PowerCo SE that will be responsible for the Group's global battery activities. From the new European battery hub in Salzgitter, this company will manage the development of international factory operations, continuous development of cell technology, vertical integration of the value chain and supplies of machinery and equipment to factories. Other products such as large-scale storage systems for the energy grid are planned for further down the line.

At the ceremony for laying the foundation stone for the Group's first battery cell factory in Salzgitter, which is due to start production in 2025, PowerCo presented two key concepts with which it intends to set industry standards in the future. One is the unified battery cell, which allows flexible use of many different chemical elements and is to be fitted in up to 80% of all Group models. The second key concept is the standard factory, which aims to enable the rapid rollout of in-house production with standardized buildings, equipment, IT and infrastructure and will thus be able to be adapted quickly and flexibly to future innovations.

A second cell factory will be built in Valencia, Spain and possible locations for three more cell factories in Europe are currently being explored. PowerCo is already conducting a site search for further gigafactories in North America as well. Each factory is to operate solely on renewable power and be designed for future closed-loop recycling. In addition to the cell manufacturer PowerCo, a center of excellence has also been established, whose responsibilities include Group-wide product management for battery cells and battery systems, the development of battery systems and supplier quality.

Vertical integration

Vertical integration of value creation is one of the main components of the battery strategy. By building up its own cell production, Volkswagen will progressively take charge of further stages of the value chain so that it can exercise greater influence over the availability, cost and sustainability of key raw materials and other items. Examples include a long-term supply agreement with Vulcan Energy Resources for carbon-neutral lithium from the Rhine Rift Valley and a memorandum of understanding with the Canadian government for accelerating the development of sustainable, regional raw material supply chains in North America.

Cathode materials have a key role to play in the transformation to e-mobility as a major cost factor and one of the main components in batteries. PowerCo and the Belgian materials technology group Umicore have formed a joint venture that aims to supply cathode and primary materials to the European cell factories starting in 2025. The partners aim to be producing materials for 160 GWh of cell capacity per year by the end of the decade.

Charging and Energy

Since early 2021, all activities in the Charging and Energy area have been combined and managed by the Technology Board position, which will thus play a key role in the Group's electric mobility strategy in its bid to become the leading provider of a smart charging and energy ecosystem.

As part of the Group's strategic alignment, the Charging and Energy area is focusing on two key areas. Firstly, sales of electric vehicles are being underpinned by the international development of a widespread charging infrastructure. With a joint participation of our Group brands Volkswagen Passenger Cars, Audi and Porsche in the pan-European high power charging (HPC) joint venture IONITY, the Ewiva joint venture in Italy formed by Volkswagen and Enel and other partnerships, an extensive charging infrastructure is being developed to safeguard mobility. The number of public fast charging points in Europe is to be increased to 18,000 by 2025. At the same time, the charging network in North America is to be increased to 10,000 fast charging points in collaboration with Electrify America, while the charging network in China is planned to be expanded to 17,000 fast charging points in conjunction with CAMS. Secondly, sustainable business models are being developed by expanding value creation, such as smart and energy market-integrated charging. The Group acts as a vehicle charging subscription provider in Europe with its charging and energy brand Elli. This proprietary charging service gives customers with any electric vehicle access to some 450,000 charging points with approximately 20,000 fast chargers operated by around 800 providers across 27 countries. In addition, Elli's product portfolio also includes the full range of charging solutions for private customers and companies, from the Company's own wallboxes to flexible fast-charging stations and smart green electricity tariffs.

Drivetrain and Platform

The independent corporate entity Volkswagen Group Components, under the umbrella of Volkswagen AG, employs around 70,000 people worldwide. The focus of their expertise is the development and manufacture of vehicle components. As part of the restructuring of Group Components, the former business unit structure was transferred to the Drivetrain and Platform area in a modified form as product lines (conventional powertrain, chassis and electric drivetrain) with effect from April 1, 2021. The product lines assume responsibility for product management and product costs across all locations, covering Group Components' conventional portfolio.

Besides the product lines, the development areas of Group Components are combined in the Drivetrain and Platform area. The development portfolio focuses on the following areas: chassis components, steering systems, drive shafts, transmissions, electric drives and thermal management systems in the electric drivetrain. The new Systems and Innovation Development department, which was created when all components were bundled at organizational level, is working on the holistically optimized electric drivetrain across all business areas. Close integration of product management and development in the Drivetrain and Platform area are expected to optimize product costs, further sharpen the portfolio of Group Components and play a key role in shaping the electric drivetrain of the future.

Platform Business

Group-wide responsibility for external sales of platforms and components has been combined in the Technology Board position. The scope of this Platform Business organizational unit extends to successful initiation and acquisition (including contract design) as well as to support of customer projects including the related order processing (logistics, billing). In the cooperation project with Ford, the necessary cross-brand structures and processes have been created within the Volkswagen organization so that other external customers can also be efficiently served in the future. Expansion of the cooperation with Ford was agreed in 2022. The automaker aims to manufacture around 1.2 million vehicles based on the MEB – double the volume of prior arrangements. Volkswagen is also exploring a supply agreement with Indian automaker Mahindra for MEB components such as electric motors and battery systems.

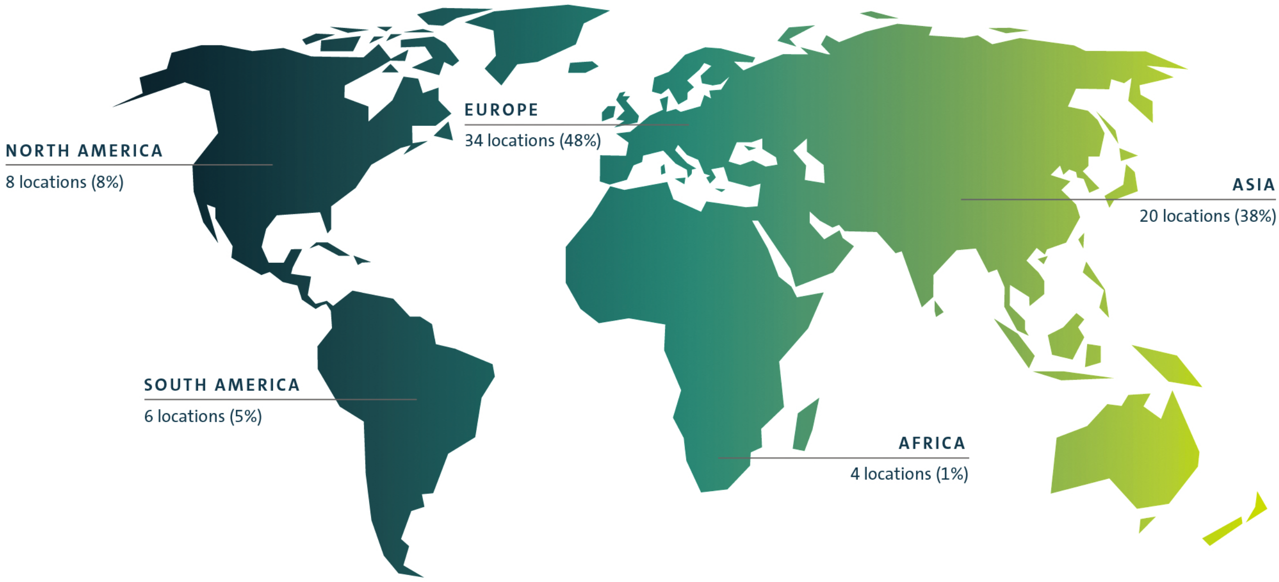
PRODUCTION

The international, cross-brand production network enables the process from the supplier to the factory and assembly line, and from the factory to dealers and customers. Enduring efficiency is a prerequisite for our competitiveness. To be able to meet the challenges of the future, we rely on holistic optimizations, forward-looking innovations, robust supply streams and structures, and a flexible team. At 8.72 million vehicles, global vehicle production in fiscal year 2022 was 5.2% up on the prior-year figure. Productivity increased by 1.2% year-on-year.

The shortage of semiconductors and the disruption of supply chains caused by the Russia-Ukraine conflict and the Covid-19 pandemic restricted production in the Volkswagen Group; the supply and production situation eased toward the end of the reporting period.

VEHICLE PRODUCTION LOCATIONS OF THE VOLKSWAGEN GROUP

Share of total production 2022 in percent



one.PRODUCTION production strategy

Production is supporting the NEW AUTO Group strategy with its one.PRODUCTION functional area strategy. By adopting a common approach for the thematic focus of our activities, we aim to pool the strengths and potential of our global production and logistics across brands and take advantage of the resulting synergy effects.

We have created content clusters around the following topics: production network, efficient processes, environment, digitalization and innovation, and cooperation. Within these five strategic goals, expert teams work on the strategic topics relevant for production in the Group. Examples include the design of our global production network, increasing efficiency in production processes, the reduction and offsetting of environmental impact throughout the production process, and the digital transformation of production and working processes and of collaboration formats.

Our scenario-based strategy process provides the thematic framework for the strategic goals. The overarching aim is to increase productivity and profitability. This will enable us to manufacture high-quality products at our sites that give customers maximum benefit at competitive prices.

Global production network

The Group's production network encompasses 119 production sites, including our Chinese joint ventures. 72 of which are vehicle production plants. Standardizing production with uniform product concepts, plants, operating equipment and production processes within a product family is a key factor in our forward-looking production. We are constantly enhancing our production concepts and aligning them with new technologies to achieve ambitious targets in the individual projects. In a challenging environment, the Volkswagen Group succeeded in starting up 38 vehicle projects in 2022, 12 of which were new products or successor products and 26 were product upgrades and derivatives.

The flexible production capacities provided by our platforms allow us to respond to market challenges, make requirements-based use of the production network and leverage synergies across brands through multibrand sites. Currently, almost half of the 46 passenger car locations are already multibrand locations. The Bratislava plant continues to serve as a prime example in the Group, producing vehicles for the Volkswagen Passenger Cars, ŠKODA, Audi and Porsche brands.

With its NEW AUTO Group strategy, the Volkswagen Group has set itself the goal of becoming one of the world's leading providers of sustainable mobility. Here, the priority is to make mobility solutions which are innovative, efficient, sustainable and customer-oriented, as well as geared towards profitable growth. The foundation for these efforts was the introduction of the Modular Electric Drive Toolkit (MEB), which we are using to complement our range with additional battery-electric vehicles. We have been manufacturing battery-electric vehicles based on the MEB in Zwickau, the Volkswagen Group's first electric car factory, since 2019. One example is the ID.3 from the Volkswagen Passenger Cars brand. The portfolio of the MEB platform in Zwickau was expanded in 2021 through the addition of the CUPRA Born and the Audi Q4 e-tron, and in 2022 through the addition of the ID.5 from Volkswagen Passenger Cars. Furthermore, we use an all-electric platform for premium and sports brands – the Premium Platform Electric (PPE) – to leverage synergies in production across brands. This meant that electric vehicles were manufactured at 14 sites across the global production network as of year-end 2022.

New technologies and digitalization

Digital and innovative technologies are systematically validated in the Volkswagen Group and their use for production and logistics is piloted and rolled out. This is to enable the Group to exploit potential for cost savings in the value chain and realize more flexible implementation options as well as quality improvements. The goal of the digital transformation in production and logistics is to simplify the entire process chain, make the best possible use of new technologies and establish autonomous processes. Fields of innovation in 2022 included computer vision, augmented reality, process mining and AI robotics.

Based on Volkswagen's proprietary computer vision platform, artificial intelligence, for example, is being used for complex image inspections, among other things, and implemented across brands at other sites. Innovative applications are also being developed locally at the plants and are made available to the Group via the central cloud-based Digital Production Platform (DPP). Despite the Covid-19 pandemic and difficult conditions, the expansion of the DPP was driven forward in collaboration with Amazon Web Services (AWS) and Siemens. Since 2019, 26 production sites have been fully linked up to the DPP and equipped with applications developed in-house for improving production and logistics. 2022 also saw increased exchange of local solutions between the sites via the DPP. Examples of overarching solutions on the DPP include localization services for vehicles and car bodies on the factory premises, intelligent plant monitoring systems, digital shop floor management, and quality processes and end-to-end quality control loops supported by artificial intelligence. This will also allow conventional processes for example test drives conducted at the factories for vehicle acceptance purposes to be replaced by applications developed in-house such as the road test predictor – or reduced to a minimum. Modern, efficient management of the IT environment in the production network will help to drive the success of the digital transformation in production and logistics. Here, an architecture management system has been defined for this and established as an interdisciplinary collaboration model for coordinating and harmonizing requirements from strategy, governance and reference development.

Catena-X will enable Volkswagen to shape the future of the automotive supply chain in conjunction with other manufacturers and suppliers. The aim is to build a global data network with shared values regarding collaboration, data sovereignty, trust and cooperation. Material traceability along with overarching demand and capacity management and comprehensive bottleneck management are some examples of how we intend to increase the efficiency of our plants and meet future supply chain requirements at the same time.

Zero Impact Factory

We are planning the production of tomorrow with our one.PRODUCTION functional area strategy. Emission levels and the use of resources at Volkswagen Group sites require particular attention. The Zero Impact Factory program is developing specific steps for production that no longer has an adverse environmental impact and supports our environmental vision goTOzero. In 2023, as part of an internal survey phase for the Zero Impact Factory, we will start collecting extensive data and information at all sites where we produce passenger cars and light commercial vehicles. To map the environmental impact in absolute terms, we will collect data on 22 quantitative indicators as impact points. With the site checklist, we will review the implementation status of 143 qualitative environmental criteria.

The impact points and the site checklist will be used to gather data on criteria in the fields of climate protection and energy, emissions, water and waste. However, the focus will also be on aspects such as the appearance of the factory, commitment to biodiversity, protection of soil, avoidance of operational disruptions, functioning environmental compliance management, improvement of resource efficiency towards a circular economy, and environmentally neutral mobility management for employee and goods transport. These methods will allow us to implement pinpointed reduction measures where they will have the greatest impact.

From 2025, the Zero Impact Factory method is to replace the existing KPI system which measures the reduction of the environmental impact of production (UEP). This represents a shift away from steering based on purely performance-based indicators to a reduction in the environmental impact of our production processes in absolute terms. Our goal is to achieve Zero Impact Factory status for all of our manufacturing plants for passenger cars and light commercial vehicles by 2050.

To support such and other programs, a management system developed in-house has been introduced at all production sites worldwide since mid-2019, linking the main compliance issues with key environmental management issues. This environmental compliance management system (ECMS) provides the foundation for compliance with all external and internal rules and regulations relating to the environment.

ECMS implementation was initially concentrated on the major production and development locations, but was extended in a second step to include Group companies whose business activities entail a lower environmental risk. We continued to actively support, monitor and track the rollout and advisory process in the reporting period.

We are encouraging networking and communication between the brands worldwide in order to leverage synergies. Our environmental experts meet regularly in working groups. In addition, we provide our managers and employees with specific training on the topic of environmental protection.

We record and catalog measures in an IT system and make these available for a Group-wide exchange of best practices. In the reporting period, around 1,400 implemented measures in the area of environment and energy were tracked and documented via the Maßnahmen@Web system. They serve to improve infrastructure and production processes for passenger cars and light commercial vehicles and are incorporated into the decarbonization index (DKI), for example. These activities have a positive effect on the Group's environmental indicators and are often also beneficial from an economic perspective.

GoTOzero Impact Logistics

In the joint "goTOzero Impact Logistics" initiative, Group and brand logistics departments also work together to help achieve the goals of the goTOzero environmental mission statement. Continuous optimization of the transport network and logistics processes can reduce emissions – this includes the use of digitalization tools. The use of new low-emission technologies for transporting production materials and vehicles will also be continuously analyzed and accelerated.

The measures the Volkswagen Group is taking to achieve carbon-neutral logistics in the future include, for example, moving shipments from road to rail and almost complete avoidance of CO_2 through the use of green electricity in rail transport in Germany and other countries in collaboration with Deutsche Bahn AG and other rail service providers. Further rail traffic in Poland was switched over to green electricity in the third quarter of 2022, for example.

In addition, Group Logistics is using the two roll-on/roll-off (RoRo) charter ships powered by low-pollution liquefied natural gas (LNG) for transporting vehicles across the North Atlantic. Group Logistics plans to replace conventionally operated ships on the North Atlantic route with four more car freighters with the same propulsion system from the end of 2023. In contrast to other LNG-fueled marine engines, Group Logistics' charter ships are climate-friendly because the high-pressure technology of the two-stroke engines from MAN Energy Solutions allows almost no methane to escape. As a rule, the dual-fuel engines will also enable non-fossil fuels – biogas (bio-LNG), e-gas (synthetic gas) from renewable sources, or biofuel – to be used in the future so that carbon emissions can be reduced even further.

In addition, Group Logistics permanently operates two charter ships on European sea routes using certified renewable fuel. Used cooking oils and fats – waste and residual materials from the catering and food industries, for example, that cannot be used for further processing into food or animal feed – provide the raw material for the biofuel, which produces less CO_2 than conventional fossil fuels.

SALES AND MARKETING

We regard ourselves as an innovative and sustainable mobility provider for all commercial and private customers worldwide – with a unique product portfolio encompassing our successful brands and innovative financial services.

Together with their sales partners and importers, our passenger car brands agreed on a procedure for integrating state-of-the-art products and services into the sales network. The priority thereby is the safe and legally compliant handling of customer data and the way in which this is processed for digital products and services or in connection with the vehicle purchase. The legal requirements for handling customer data have been tightened in many countries. At the same time, the Group is launching a growing number of vehicles that are connected to the internet where available. We are increasingly investing in distribution systems and processes with the goal of further digitalizing and improving the individual customer experience in all distribution channels. The Volkswagen Group's financial strength and profitability is attributable to an extensive portfolio of strong brands. The objective of our Best Brand Equity instrument is to continuously sharpen the brand profiles and to distinguish as clearly as possible between the customer segments served by the brands, supplementing them as required with tailored solutions. Our aim is to achieve high market saturation with great efficiency and a low level of brand cannibalization. Market positioning is an essential element for increasing brand values. To this end we have established automobile-specific customer segmentation to steer the positioning of our brands which we consistently apply throughout the strategy and product process.

As part of our NEW AUTO strategy, we have introduced strategic base initiatives for China as the largest single market and North America as the market with the greatest growth potential due to their considerable strategic importance for the Volkswagen Group. We used the Group strategy as the foundation for our new functional area strategy called NEW SALES 2030, which forms the basis for transforming our sales activities in the direction of a mobility provider. The aim of NEW SALES 2030 is to enable us to provide an even more flexible and targeted response to our customers' wishes and leverage additional revenue potential, for example through digital business models.

With regard to its NEW AUTO strategy, Volkswagen hit another milestone as part of the Mobility Solutions tech initiative in July 2022 with the closing of the transaction with Europcar. This successful joint acquisition with two consortium partners is important in helping to drive the growth of the Volkswagen Group in vehicle-on-demand (VoD) services. Europcar is to become a cornerstone of a product portfolio that will cover customers' mobility needs from vehicle sharing for a few hours to subscription for multiple months. Our expectation is that most people will still prefer individual mobility by 2030 but the focus will be more on using and less on owning vehicles. The Volkswagen Group is aiming to participate in the global market for mobility services, which is expected to grow rapidly.

Also in the area of sales and marketing, we are aware of our responsibility towards the climate and the environment. In addition to the broad range of completely battery-electric vehicles and hybrid models, we kicked off the goTOzero retail project that will help our sales partners to move over to a climate-neutral business model.

Customer satisfaction, customer loyalty and customer conquest

The Volkswagen Group aims its sales activities at exciting its customers. This is our top priority, as satisfied customers remain loyal to our brands and recommend our products and services to others. For this we measure customer satisfaction with our brands at different customer contact points and make it a subject of discussion at Board committee meetings. In addition to satisfaction with our products and services, we value our customers' emotional connection to our brands. It is important for us to retain customers and win new ones. To measure our success in this area, we compile and analyze strategic indicators for the passenger car-producing brands: the loyalty rate represents the proportion of customers of our passenger car brands who have bought another Group model. Thanks to their faithful customers, the Volkswagen Passenger Cars, ŠKODA and Porsche brands have remained in the upper loyalty rankings of the core European markets in comparison with their competitors for a number of years. Audi was able to strengthen its position in 2022 following a recent upward trend. Compared to other manufacturer groups, the Volkswagen Group continues to hold a top spot in the core European markets in terms of loyalty. The conquest rate shows the share of newly acquired passenger car customers as a proportion of a brand-specific selection of competitors. The ŠKODA, Audi and Porsche brands revealed a stable conquest rate, while that for Volkswagen Passenger Cars and SEAT deteriorated. By contrast, CUPRA's conquest rate increased.

In the core European markets, the brand image of the Volkswagen Passenger Cars brand improved in 2022 and is now above the level for the market as a whole. Confidence in the brand also continued to improve. As in previous years, Porsche remains in top position in the image ranking.

E-mobility and digitalization in Group Sales

As part of our electrification campaign, we aim to offer our customers worldwide around 50 completely battery-electric vehicles by 2030. This campaign will be complemented by vehicle-related, customer-focused offerings, such as customized charging infrastructure solutions and mobile online services. The Volkswagen Group is thus transforming from an automotive manufacturer into a mobility service provider. This poses new challenges for Sales.

We are making very specific use of the opportunities offered by digitalization in Sales, which include an improved customer approach. Our actions are guided by a clearly defined strategy that requires extensive cooperation between the brands and markets to achieve the greatest possible synergies. Our aim here is to create a completely new product experience for the customers of our brands – one which impresses with a seamless communication process, from the initial interest in purchasing a vehicle, to servicing and ultimately to the sale of the used car. In doing so, we are opening up new business models relating to the connected vehicle – in particular with regard to mobility and other services. Vehicles are becoming an integral part of the customer's digital world of experience.

We also align our internal processes and structures to the methods and new forms of working created by digital innovation. This results in project teams operating across different business areas, new forms of cooperation, a more intensive relationship with the international start-up scene, a consolidation of venture capital expertise – as a form of supporting innovative ideas and business models – and new lean systems and cloud-based IT solutions.

Fleet customer business

Business relationships with fleet customers are often long-term partnerships. In a volatile environment, this customer group guarantees greater stability for sales of well-equipped, profitable vehicle models than the private customer segment.

The Volkswagen Group has an established base of business fleet customers, especially in Germany and the rest of Europe. Our extensive product range enables us to satisfy their individual mobility needs from a single source.

In an overall passenger car market in Germany that rose by 1.1% in the reporting period, business fleet customers climbed to 18.8 (16.6)% of total registrations. The Volkswagen Group's share of this customer segment improved to 43.5 (42.1)%. Outside Germany, the Group's share of registrations by fleet customers in Europe was 25.7 (26.6)%. This shows that fleet customers' confidence in the Group remains at a high level.

After Sales and Service

In the after-sales business, we regard ourselves as a complete provider of all products and services relevant to customers. Together with our partners, our mission is to ensure lifelong mobility for our customers and vehicles. To this end we are continuously expanding our range of tailored services in order to improve convenience for our customers and increase customer satisfaction. The partner businesses also offer a comprehensive portfolio of services in all vehicle classes.

In After Sales, we are supporting the changing world of mobility and our systematic focus on e-mobility by developing new services and innovative concepts. As the Group transforms from vehicle manufacturer to a leading, global software-oriented mobility provider, our software company CARIAD is working on the development of the future software architecture for our vehicles. With the resulting connectivity services, we will also be able to generate synergies in After Sales across all the Volkswagen Group's brands and take advantage of new opportunities to boost customer loyalty.

In addition to individual service, the timely provision of genuine parts is essential to assure passenger car customer satisfaction in After Sales. The genuine parts supplied by our passenger car brands and the expertise of the service centers stand for the quality, safety and value retention of our customers' vehicles. With our global after sales network including more than 130 of our own warehouses, we are creating the prerequisites to supply almost all our authorized service facilities around the world within 24 hours. Owing to disruption in supply chains, especially for semiconductors, we were unable to fully guarantee in-time delivery of replacement parts in certain cases during the reporting period.

In the Digital After Sales project, we are modernizing processes and IT systems in After Sales. By adopting an approach that focuses product and service development on the individual needs of both dealers and customers, we aim to reduce the time needed for administrative tasks at the dealers through automated, interrelated services and also to stabilize existing IT systems and boost efficiency. In addition, innovative digital after-sales services will improve the customer experience.

Around the world, our commercial vehicles business also prides itself on products of quality and on customer focus. Our range of trucks, buses and engines is complemented by services that aim to guarantee fuel efficiency, reliability and wide vehicle availability. By offering vehicles equipped with an all-electric or hybrid drive system, we take into account both customers' wishes and our responsibility to contribute to emission-free transportation. Workshop service and service contracts are intended to offer customers a high degree of certainty, in addition to a high level of quality. We are reducing servicing times and costs with a view to the vehicles' total operating costs.

In the Power Engineering segment, we help our customers to secure the availability of machinery with MAN PrimeServ. The global network of more than 100 PrimeServ locations stands for excellent customer focus and offers, among other things, replacement parts of genuine-part quality, qualified technical service and long-term maintenance contracts.

QUALITY

The quality of our products and services plays a key role in maintaining customer satisfaction. Customers are satisfied and loyal particularly when their expectations of a product or service are met or even exceeded. Appeal, reliability and service determine quality as it is perceived by the customer throughout the entire product experience. Our objective is to positively surprise our customers and inspire enthusiasm in all areas, and thus to win them over with our quality.

Digitalization was once again the beating heart of our work in the past fiscal year: we are continuously sharpening our focus on software-based system development, which is a critical factor for success in respect of customer satisfaction. Consistent application of the "Automotive SPICE" process assessment model that we use to improve our processes is particularly important in our activities. It is a key building block for meeting the requirements of our customers, as well as those of the regulatory and legislative bodies.

Volkswagen has been implementing cybersecurity measures across the Company for some time now. For example, we have an independent cybersecurity network in place across all regions and Group brands and monitor potential cyber risks. This enables us to act fast when potential threats arise. Since June 2022, the UNECE (United Nations Economic Commission for Europe) has provided for corresponding certification and homologation to ensure that companies can guarantee that these aspects are dealt with properly so as to protect the users of our vehicles from potential attacks. Our Group pursues the goal of implementing standards in the areas of both accident prevention and security. We are refining the established processes within the framework of an Automotive Cyber Security Management System in keeping with the requirements of the UNECE regulation. In this context, Volkswagen is implementing comprehensive measures across departments throughout the Group.

Strategy of Group Quality

We review our functional area strategy New Quality periodically and coordinate it with the brands. We align our activities with our goal expressed in the motto: "We embody outstanding quality and ensure reliable mobility for our customers worldwide." The NEW AUTO Group strategy sets new parameters for transforming the Group into a software-oriented mobility provider. Based on this, our quality strategy focuses primarily on achieving maximum levels of customer satisfaction throughout the entire customer experience – from ordering through to the digital ecosystem and up to aftersales and customer service. Group Quality and the brands' quality organizations play an active role at all stages of product emergence and testing, making an important contribution to successful product launches, high customer satisfaction and low warranty and ex gratia repair costs. As part of our functional area strategy, we have defined "warranty and ex gratia repair payments per vehicle after 12 months in service" as a strategic indicator at the top level of consideration for the major passenger car-producing brands. This shows all warranty and ex gratia repair payments for the vehicles produced worldwide in each production year, expressed in euros per vehicle. All vehicles from the Volkswagen Passenger Cars, Volkswagen Commercial Vehicles, ŠKODA, SEAT, Audi and Porsche brands are included in this figure. Extraordinary items resulting from initiatives such as recalls to assure product safety or comply with laws are not taken into account. While the figures starting from the 2017 production year remained at a constant low level, they have increased since the 2020 production year due to the growing use of new technologies in the vehicle and rising complexity. Actions were taken to reduce these figures and have proven effective.

Legal and regulatory compliance

The legal and regulatory compliance of our products is paramount in our work. In our processes we employ the principle of multiple-party verification, which involves mutual support and control between the business units. Among other things, software development is accompanied by quality milestones at all brands, whereby all systems, components and parts that directly influence a vehicle's safety, type approval and functioning and therefore require particular vigilance are included in the multiple-party verification. At the series production stage, we see to it that the conformity checks on our products are carried out and assessed with the participation of all business units involved. This applies particularly to checks related to emissions and fuel consumption.

We are also dedicating attention to our quality management system, reinforcing the interdisciplinary, process-driven approach throughout the Group. The quality management system in the Volkswagen Group is based on the ISO 9001 standard and the official type approval requirements. These standards and requirements must be complied with for us to obtain type approval for the manufacture and sale of our vehicles. We conducted numerous system audits in the reporting period to verify that our sites and brands continue to comply with these requirements. Particular focus was placed on assessing the risk of non-compliance with defined processes. Our quality management consultants pay attention to ensuring that these and other new requirements, as well as official regulations, are implemented and complied with; they are coordinated and supported in this endeavor by a central office in Group Quality.

Observing regional requirements

We use a variety of feedback instruments, such as specific customer surveys, to collect information on region-specific customer requirements. In addition, we monitor relevant internet forums and social media postings worldwide to obtain direct customer feedback and identify sentiment and trends at an early stage.

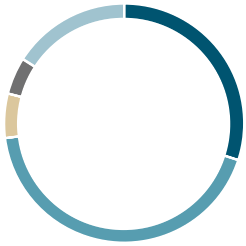
In order to be able to make the perceived quality of our vehicles commensurate with that of our competitors, we take the needs of our regional customers into account in our vehicle audits. Every brand works together with the individual regions to decide how its product is to be positioned there. In this way, we strengthen the brands' responsibility. So that the vehicle audit returns comparable results, consistent quality benchmarks apply across all brands and regions. We are continually adapting these to changing requirements. For more than 40 years now, we have been deploying auditors around the world to assess, from the customer's perspective, the vehicles that are ready for delivery and to ensure that these vehicles comply with the benchmarks defined.

EMPLOYEES

The Volkswagen Group is one of the world's largest private employers. On December 31, 2022, we employed a total of 675,805 people, which includes the Chinese joint ventures. This figure represents a 0.4% increase compared with the end of 2021. The ratio of Group employees in Germany to those abroad remained largely stable over the past year; at the end of 2022, 293,862 (295,065) employees worked in Germany.

EMPLOYEES BY MARKET

in percent, as of December 31, 2022



Human resources strategy and principles of the human resources policy

For the Volkswagen Group the transformation of the workforce is defined as a key focus topic in the Group's NEW AUTO strategy. We have also embedded the topic in our Group-wide People & Transformation initiative. The Group People Strategy Transform to Tech plays a key role in this context for our three brand groups – Volume, Premium and Sport & Luxury. This strategy also enables the Volkswagen Group to continue with key, successful approaches in human resources policy. These include the pronounced stakeholder focus in corporate governance, comprehensive participation rights for employees, forward-looking training opportunities, the principle of long-term service through systematic employee retention and remuneration that is fair and transparent.

At the same time, the Group People Strategy is setting innovative trends. Employee experience is to be improved systematically, the teams strengthened as the most important units in the company's organization, and modern forms of working, such as agile methods, are to be developed. Our aim is to become more attractive as an employer and take the performance of our organization to the next level.

In our Group People Strategy we have identified different dimensions with which we aim to address employees' needs and expectations in a holistic manner. Together, these four dimensions make up the work experience, job satisfaction and, ultimately, the success of the work and the Group's integration into society.

1) "Me" (Me@Volkswagen): We strive to systematically improve the employee experience and ensure that all employees have the best possible conditions in which to do their job. Starting with availability of contemporary, task-specific work equipment and tools, this also entails avoidance of red tape and overly complex process steps and includes state-of-the-art workspaces, opportunities for 360-degree feedback, individual health coaching, and training opportunities tailored to the individual.

2) "My team" (Teams@Volkswagen): High-performance teams in the Volkswagen Group are groups that trust each other, have a common goal and can rely on each other, yet also discuss matters critically and speak their minds. As our transformation takes shape, the way in which teams in the Volkswagen Group collaborate changes. Hybrid digital forms of collaboration are becoming more important. They require modern office environments that simplify collaborative, flexible work. The same applies to opportunities for digital collaboration – an aspect that has become even more important in the wake of the Covid-19 pandemic.

3) "All of us at Volkswagen" (All of us@Volkswagen): The seven Volkswagen Group Essentials define the shared underlying values across all of the Group's brands and companies: We take on responsibility for the environment and society, We are honest and speak up when something is wrong, We break new ground, We live diversity, We are proud of the work we do, We not me, We keep our word. Our corporate culture aims to create a sense of belonging for our workforce – an important aspect that is gaining in significance particularly in times of change and in an increasingly diverse environment. We believe in the importance of fair remuneration, which underscores our image of ourselves as an attractive employer. It is designed to motivate and to express our appreciation for the performance of each individual. In addition, we need to empower our leaders to contribute to a successful transformation and act as role models. Group-wide activities such as team dialogue and the role model program are designed to encourage employees to discuss the Group Essentials and incorporate them into all work processes. In the role model program, managers from all brands strive to improve the corporate culture together with their staff.

4) "Volkswagen in society" (We@Volkswagen and the world around us): We are aware that without long-term social legitimacy at our locations and in our markets, we will not be able to carry forward our business model in times of accelerated changes in values – this applies from an economic, environmental and social perspective. We see our employees as representatives of the Volkswagen Group who communicate our values to society. Together with them, we also assume responsibility above and beyond our core business – such as through foundation work and corporate volunteering. The topics of our social commitment range from education to diversity, a culture of remembrance, culture, climate action and environmental protection, and various local commitments.

The transformation has put us on a long-term path of change and renewal. It is important for us to regularly review whether we are maintaining the course we have set and achieving our objectives. The following strategic key performance indicators help us measure our progress and take remedial action if necessary:

> Internal employer attractiveness: This indicator is determined by asking respondents, as part of the *Stimmungsbarometer* (opinion survey), whether they perceive the respective company as an attractive employer. The opinion survey is conducted for the majority of our Group workforce. The target for 2025 is 89.1 out of a possible total of 100 index points. A score of 86.6 index points was achieved in the reporting period, meaning that the target for 2022 of 88.7 index points was missed. 86.8 points were achieved in the previous year. For Volkswagen AG, the value for 2022 was 87.1 (87.7) index points.
> Diversity index: As part of our group-wide diversity management system, we report in this strategic indicator on trends in the proportion of women in management and in the internationalization of top management as a percentage of the active workforce (total workforce excluding vocational trainees, employees in the passive phase of their partial retirement and employees in the withdrawal phase of their time asset bonds) worldwide. In particular, this indicator underpins the objective of the Group People Strategy, which is aimed at contributing to an exemplary leadership and corporate culture. The proportion of women in management, comprised of management, senior management and top management (including Group Board of Management members), amounted to 17.2% in 2022 and was 0.9 percentage points up on the prior-year level. We aim to raise this figure to 20.2% by 2025. Our goal is to increase the level of internationalization in top management, the uppermost of our three management tiers, to 25.0% in 2025; in the past fiscal year this was 23.4 (20.3)%. The methodology changed in 2022: in the case of dual nationality, both nationalities are taken into account. The figures for the proportion of women in management and the internationalization of top management are placed equally weighted in the diversity index and the figures for the year 2016 set to an index value of 100. For 2022 we had planned to increase this index to 136. This target was exceeded with a score of 140 (127).

- Implementation status of strategic HR planning: Strategic HR planning supplements operational HR planning by adding a qualitative, long-term and strategic planning perspective. It allows business units to identify qualitative and quantitative surpluses and shortfalls at an early stage and develop necessary qualification, training and restructuring requirements designed to help support the transformation. To map progress in strategic HR planning, we will measure the percentage of the active workforce considered in the strategic HR planning from 2023.
- Number of training hours per employee: Due to the transformation in the automotive industry, we are facing the biggest process of expertise and cultural change in the history of the Group. As a result, individual opportunities for change for employees are becoming an increasingly important success factor. By leveraging economies of scale in connection with digitalization and through the Group-wide learning platform Degreed, which is to be gradually rolled out across the Group, Volkswagen is improving the access to training opportunities. The goal is to increase the average number of training hours per employee in the Volkswagen Group – based on the active workforce – by 35% before 2030 to 30 hours per employee per year. The baseline value is 22.3 hours and represents the average for the base years 2015 to 2019. These years were chosen as the baseline due to the outbreak of the Covid-19 pandemic, which temporarily curtailed training activities in 2020 and 2021. The target figure for the reporting period was 22 hours. With an average of 19.9 hours per employee, the target has not been met.

Training and professional development

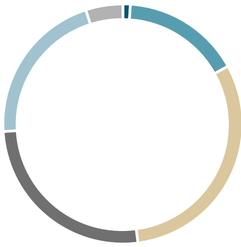
At Volkswagen, our capacity for innovation and our competitive position largely depend on the commitment and knowledge of our employees, particularly during the transformation.

Volkswagen Group employees have access to a wide range of training measures organized according to vocational groups. These comprise all employees whose tasks are based on similar technical skills and who require related expertise in order to perform their jobs. A skills profile lays down the specialist and interdisciplinary skills for each job and serves as a guide for training measures. Formats range from further training in general Company-related topics to specific training or personal development programs. Thanks to these opportunities, Volkswagen employees are able to further develop and steadily deepen their knowledge throughout their working lives. The range of learning opportunities is being expanded continuously.

Degreed, the innovative learning platform that we have implemented, opens up diverse training opportunities for our employees. The platform creates a simple, customized learning experience and is aimed at supporting the results of strategic HR planning with appropriate training programs. Another focus is developing important and specific skills, for example in areas such as data analytics, software development, leadership, machine learning and artificial intelligence. In addition, Volkswagen's Faculty 73 program is providing in-house training for the software developers who are needed for the digital transformation. The graduates from this program largely work in departments at Group and brand IT, Technical Development and CARIAD. In 2022, 200 students embarked on the training program, which is now in its fourth year. The program is designed for employees and also external applicants with an affinity for IT and an interest in software development.

Volkswagen AG, CARIAD and ŠKODA are also supporting the establishment and operation of innovative programming schools in Wolfsburg, Berlin and Prague in cooperation with the non-profit École 42. The training institutes have so far accepted over 400 students, who learn from and with each other following an innovative training approach.

AGE STRUCTURE IN YEARS OF EMPLOYEES
as of December 31, 2022; in percent



Vocational training and cooperative education
The core components of training at Volkswagen are vocational training and cooperative education (dual study programs combining university studies with on-the-job training). As of the end of 2022, the Volkswagen Group trained 16,590 young people. We have introduced the principle of dual vocational training at many of the Group's international locations over the past few years and are continuously working on improvements. Once a year, Volkswagen honors its highest-achieving vocational trainees in the Group with the Best Apprentice Award. Even after their vocational training has been completed, young people at the start of their careers are encouraged to continue their professional development in our Company.

Development of university graduates
Volkswagen offers two structured entry and development programs for university graduates and young professionals. In the StartUp Direct trainee program, graduate trainees gain an overview of the Company while working in their own department and also take part in supplementary training measures. University graduates interested in working internationally can participate in the StartUp Cross program. The aim here is to get to know the Company in all its diversity and to build up a broad network. During their participation in the program, young professionals become familiarized with several locations in Germany and other countries by working in various departments. Both programs also include several weeks' experience working in production.

Increasing attractiveness as an employer and development programs for specific target groups
A human resources policy that promotes a work-life balance is a major component of Volkswagen's attractiveness as an employer; in particular, it contributes to greater gender equality. We are working continuously to develop family-friendly working time models and to increase the number of women in management positions. For Volkswagen AG, we have also set targets for the proportion of women in management in accordance with German legislation. In line with the *Gesetz zur gleichberechtigten Teilhabe von Frauen und Männern an Führungspositionen* (German Act on the Equal Participation of Women and Men in Leadership Positions) and section 76(4) of the *Aktiengesetz* (AktG – German Stock Corporation Act), Volkswagen AG set targets for the period until the end of 2025 of 16.5% for the proportion of women in the active workforce at the first level of management (senior management, top management and brand Board of Management) and 23.4% for the second level (management). As of December 31, 2022, the proportion of women in the active workforce (excluding employees in the withdrawal phase of their time asset bonds) at the first level of management was 14.2% and at the second level of management it was 19.7%. The Group Board of Management and Supervisory Board are regularly informed of the figures achieved and the current target paths.

In order to encourage women with great potential to advance within the Company, we have set targets relating to the development of the proportion of women in management for every Board of Management business area at Volkswagen AG. This approach is supported by many different measures ranging from cross-brand mentoring programs to a quota system for the management selection procedure and targets for the share of women among external hires.

The Group also has a large number of collective regulations in place to make it easier for employees to balance the demands and needs of work and home life and allow staff to arrange their own individual working model. In addition to flexible working hours and the use of working time accounts and flextime, these include variable part-time work and shift models, leave of absence enabling employees to care for family members, the possibility to convert salary components into paid leave, childcare services that are associated with the company or are company-owned, and remote working. "*Meine AusZeit*" is a program offered by Volkswagen AG that allows employees to take a self-financed leave of absence with an upfront payment from the Company.

Hybrid working – a combination of remote working and working onsite – gives employees greater flexibility in terms of when and where they work and is increasingly becoming the norm for the Volkswagen Group. In the reporting period, we again refined and expanded virtual and hybrid communication and collaboration, as well as new formats of knowledge transfer and training. Major topics included:

> Design or expansion of the works agreements for remote working at Audi AG and Volkswagen AG
> Preservation of mental health
> Reinforcing the culture of leadership and trust in the context of the changing world of work (Culture and Change Factory)

In addition, we continued developing the Guide for Digital and Hybrid Collaboration, which is intended to provide guidance on successful communication and organization for employees, managers and teams. We also continued working on the Office 2025 initiative, which is designed to drive the modernization of offices and the world of work at Volkswagen AG.

The Volkswagen Group attaches particular importance to its employees being able to act with agility and entrepreneurial drive. Together with 30 publicly traded large companies from Germany, Austria and Switzerland, we developed a skills matrix for training and professional development in the area of agile business processes under the umbrella of the DACH30 initiative. As part of these endeavors, the Volkswagen Group Academy set up an agility training portfolio.

PROPORTION OF WOMEN IN THE VOLKSWAGEN GROUP

as of December 31

%	2022	2021
Employees	18.1	17.9
Vocational trainees[1]	20.3	20.1
Total management	16.8	15.9
Management	18.8	17.9
Senior management	13.5	12.5
Top management	9.8	8.3

[1] Excluding Scania and Navistar

Preventive healthcare and occupational safety

Preventive healthcare and occupational safety are key elements of human resources policy in the Volkswagen Group.

We reformed the Volkswagen Group's Occupational Health and Safety Policy in fiscal year 2022. In addition to complying with legal requirements, we aim to ensure the protection and promotion of physical and mental health, taking into account psychosocial risks and their effects. We believe in providing employees with health care that is above the standard set by law in the country in question.

Employee participation

Codetermination and employee participation are important pillars of our human resources strategy. Volkswagen aims to promote high levels of expertise and a strong sense of team spirit. This includes employees' opinions, assessments and criticism being heard.

We brief our employees extensively on upcoming changes so as to involve them in strategic decision-making as early as possible. When shaping labor relations to embody cooperation and social peace, we are guided by universal human rights and the standards of the International Labour Organization (ILO). Building on these principles, we have agreed various charters and declarations with the European and Global Group Works Council which set out the principles of labor policy in the Volkswagen Group as well as employee rights.

Employee participation in the Company's success through the issuance of treasury shares in the form of an employee share program is not currently offered.

By means of the opinion survey (*Stimmungsbarometer*), the Company regularly gathers information regarding employee satisfaction and also surveys employees on our corporate culture. Based on the results, follow-up processes are implemented in which measures are developed and executed. The 2022 opinion survey covered 159 companies in 49 countries. Of the 614,142 employees in the companies surveyed, 475,778 participated. This was a participation rate of 77%. The sentiment rating calculated from 22 questions is the main parameter of the opinion survey and is used to help determine Board of Management remuneration, among other things. It is calculated from the total of all the related answers in the survey and, in 2022, stood at 82.4 out of a possible total of 100 index points. The score achieved in 2022 was thus just above the previous year's figure, which amounted to 82.3 points.

In addition, we also encourage employee involvement by means of Idea Management. Employees have the opportunity to put their creativity and knowledge to use by contributing their ideas for making improvements, thus contributing to streamlining workflows, further enhancing ergonomics in the workplace, reducing costs and continuously increasing efficiency. The system also provides monetary incentives by offering set rewards.

INFORMATION TECHNOLOGY (IT)

The NEW AUTO strategy is playing a substantial role in driving the Volkswagen Group's transformation into a software-oriented provider of sustainable mobility. We see technology and data competence, both in the vehicle and within the Group, as the key to this. Digitalized supply chains, automated production processes, data-driven sustainability and a seamless customer experience are examples of how innovative IT is the driving force behind the future of mobility. Against this backdrop, the Volkswagen Group established the IT Board position at the beginning of 2022. Based on an in-depth review of the situation, we defined the vision for the NEW IT functional area strategy, which focuses on the following topics:

> Delivering highly automated enterprise processes and systems by means of a high-performance IT infrastructure with a cost-effective cloud-first approach that is designed to be resilient to cyber threats and ensure data protection.
> Through agile development the customer-centric development of IT products and digital services with a short time to market will facilitate continuous improvement and refinement.
> The systematic use and provision of data across the entire organization to optimize products, processes and corporate governance. Data is set to become a value driver for innovations, new business models, personalized customer contact and better corporate management across all brands and companies.

The new strategy NEW IT is intended to gear the IT and data organization to the requirements of the coming years, thus making a systematic contribution to the strategic direction of the Volkswagen Group. By forging ties between the Group Board of Management IT division and the chief information officers (CIOs) of the Volume, Sport & Luxury and Premium brand groups plus Volkswagen Financial Services AG, we aim to ensure a uniform, strategic focus and to help promote the leveraging of synergies and economies of scale. Systematic identification and Group-wide sharing of use cases will enable effective knowledge transfer within the Group, conserve resources and result in greater speed and efficiency. Due to the global spread of the Covid-19 pandemic, we had already taken extended measures in previous years to protect the workforce, such as increasing the use of remote working. In this context, the availability of the IT infrastructure for all brands and companies is a high priority. The provision of state-of-the-art IT applications for digital collaboration and the expansion of options for conducting business on mobile devices are designed to improve productivity in the long term. Building on the rollout of Microsoft 365, additional functions for simple, digital collaboration throughout the Group were implemented in 2022.

Software development

Group IT has the expertise to swiftly develop software and IT solutions for the Group based on the Group's needs. Part of this development work takes place in the Software Development Centers (SDCs) around the world. The strategic goal is to safeguard and successively increase the proportion of in-house services relating to software products for the business processes.

The optimization of processes and the definition of standards for software development remain at the forefront of our activities. Among other things, this entails international, data-driven management of activities in the SDCs, strategic alignment of the business-critical enterprise systems in accordance with NEW IT and safeguarding intellectual property in the form of software product source codes.

Use of digitalization and IT solutions

At Volkswagen, the Board of Management continuously monitors and supports the digital transformation. The Group Board of Management Committee for Digital Transformation addresses the digital transformation of business processes across brands and business units in the Volkswagen Group. It manages the Group’s IT project portfolio, supports the digital cultural change as well as innovations and fosters synergies from the digital transformation between the Group and the brands.

Volkswagen embraces digitalization in the Company; its in-house Software Innovation Centers (SICs) are just one example of this. They act as centers of innovation and expertise, piloting new technologies with their know-how to fulfill the requirements of the different business areas in the Group, developing applications relevant for the Company and making these available for productive use within the organization. Here, Group IT, research institutes, educational institutions (such as universities), technology partners and policymakers work closely together on future trends in information technology. The SICs also use their network with start-ups to adapt innovative solutions to Volkswagen’s needs. This allows the experience and strategic expertise of a large company like Volkswagen to be combined with the pragmatism, the innovative ideas for new areas of business and the speed of young start-ups.

Highly specialized experts at the SICs in Munich and Wolfsburg are working, for example, on exploiting the potential of quantum computing for areas that have a commercial application. The focus here is on the optimization of traffic flows, such as ride pooling (a transport service for several passengers taking a similar route) and optimizing the order of individual steps in a process (for example a painting sequence) to reduce production times and improve the use of resources. Volkswagen is also investigating the optimization of the chemical composition of batteries through the use of quantum computing.

In the field of machine learning, work is being carried out on smart management of energy use to generate sustainable savings, for example in compressed air control systems. Artificial intelligence methods are being used in quality assurance too; for instance, audio analyses to support the quality assurance process in transmission manufacturing.

In addition, the SICs are used to transfer knowledge throughout the entire Company on topics such as advanced data analytics (process for the systematic analysis of data in electronic form) and block chain (distributed ledger technologies) to make these new technologies available to the Group. Advanced data analytics are helping to optimize the storage of replacement parts in the after-sales business, for example. Likewise, numerous bot projects are being implemented to automate business processes (robotic process automation).

Production processes are also safeguarded by artificial intelligence and camera systems (computer vision). The systems and equipment in the factories are linked together in an integrated overall system. In conjunction with the different departments, Group IT is also contributing its expertise to the field of research and development, one example being EU projects. For instance, digitalized work tools such as the "virtual concept vehicle" make the product development process faster and more efficient by replacing physical components with virtual components generated on the computer, among other things.

IT security

Safeguarding data and information throughout the Volkswagen Group worldwide is one of the main tasks of IT and was continued in fiscal year 2022 with the Group Information Security Program. The objective of the program is to create uniform processes and solutions across the Group to further enhance information security. The main focus is on topics that could one day pose information security risks for the Group and that need to be specially safeguarded as part of the Group's digital transformation strategy, including cloud security and industrial cybersecurity. The program's content and orientation are reviewed annually and updated if necessary.

We are one of the first vehicle manufacturers to require our suppliers to have passed TISAX (Trusted Information Security Assessment Exchange) certification. This sends out a strong signal regarding the security of cross-company information and data. TISAX certification is an assessment method developed by the German Association of the Automotive Industry and is based on the international industry standard and the requirements of the automotive world. The aim is for sensitive data and information to be dealt with securely by our suppliers. CAR2X technology offers our customers protection by warning them, for example, of traffic hazards. CAR2X technology enables direct communication from vehicle to vehicle and from the vehicle to the transport infrastructure. This TÜV-certified technology, implemented in accordance with European standards, has already been installed in over 700,000 vehicles, which should increase the level of safety for our customers.

The task of automotive cybersecurity is to avert cyber attacks on our vehicles throughout the entire product life cycle, as well as on the digital vehicle ecosystem. The Group policies in the Volkswagen Group based on the legal requirements of the UNECE (United Nations Economic Commission for Europe) regulation have been implemented. Brand-specific organizational guidelines are being specified and implemented on this basis, taking the organizational circumstances into account.

The Protected Customer program addresses the requirements of the UNECE regulation. To protect our customers against cyber attacks, and to implement our solutions in conformity with national and international legislation, we are establishing integrated, cross-brand, cross-regional security management systems for information and cybersecurity. These were validated through UNECE CSMS certification in 2021. Safeguarding of the complete life cycle of our vehicles and digital mobility services was transferred to standard operations after the program ended in 2021, where it continues to be pursued.

Key central information security processes have been audited in line with the international ISO 27001 framework and were recertified in 2022. This is the most important cross-sectoral standard for information security and is our basis for building an appropriate information security management system for handling all sensitive information in the Group.

In recent years, the introduction of the data protection management system and the data protection management organization has thus established the infrastructure for implementing and complying with data protection requirements at Volkswagen AG in the long term. Increasing digitalization and interconnectedness of business processes, new legislation in the planning with data protection relevance and the sharp rise in the extent of international data protection legislation continue to require a high level of attention if ongoing compliance with data protection requirements is to be ensured. Continuously raising awareness among the workforce and further standardizing and automating processes remain the focus of activities. Compliance requirements are already being integrated into the design of IT solutions and infrastructure decisions.

SEPARATE NONFINANCIAL GROUP REPORT

The combined separate nonfinancial report of Volkswagen AG and the Volkswagen Group in accordance with sections 289b and 315b of the *Handelsgesetzbuch* (HGB – German Commercial Code) for fiscal year 2022 will be available on the website https://www.volkswagenag.com/presence/nachhaltigkeit/documents/sustainability-report/2022/Nichtfinanzieller_Bericht_2022_d.pdf in German and at https://www.volkswagenag.com/presence/nachhaltigkeit/documents/sustainability-report/2022/Nonfinancial_Report_2022_e.pdf in English by no later than April 30, 2023.

REPORT ON POST BALANCE SHEET DATE EVENTS

There were no significant events after the end of fiscal year 2022.

EU Taxonomy

Doing business in an environmentally sustainable way is one of the central challenges of our time. The EU has defined criteria for determining the degree of a company's environmental sustainability. With our taxonomy-aligned investments in development activities and in property, plant and equipment, we are today already shaping the future in an environmentally sustainable way as envisaged by the EU Taxonomy.

BACKGROUND AND OBJECTIVES

As part of the European Green Deal, the European Union (EU) has placed the topics of climate protection, the environment and sustainability at the heart of its political agenda in order to achieve climate neutrality by the year 2050. The finance sector is expected to make an important contribution to realizing this objective. In this context, the EU published the "Strategy for Financing the Transition to a Sustainable Economy" in 2021. Aimed at supporting the financing of the transition to a sustainable economy, the published strategy contains proposals relating to transition finance, inclusiveness, resilience and contribution of the financial system, and global ambition. It is based on the EU's action plan on Financing Sustainable Growth of 2018. In addition to "Disclosures" and "Tools", another key module is the EU Taxonomy (Regulation (EU) 2020/852 and associated delegated acts).

The EU Taxonomy is a classification system for sustainable economic activities. An economic activity is considered taxonomy-eligible if it is listed in the EU Taxonomy and can therefore potentially contribute to realizing at least one of the following six environmental objectives:

> Climate change mitigation
> Climate change adaptation
> Sustainable use and protection of water and marine resources
> Transition to a circular economy
> Pollution prevention and control
> Protection and restoration of biodiversity and ecosystems.

An activity is only considered environmentally sustainable, i.e. taxonomy-aligned, if it meets all three of the following conditions:

> The activity makes a substantial contribution to one of the environmental objectives by meeting the screening criteria defined for this economic activity, e.g. level of CO_2 emissions for the climate change mitigation environmental objective.
> The activity meets the Do-No-Significant-Harm (DNSH) criteria defined for this economic activity. These are designed to prevent significant harm to one or more of the other environmental objectives, e.g. from the production process or by the product.
> The activity is carried out in compliance with the minimum safeguards, which apply to all economic activities and relate primarily to human rights and social and labor standards.

The Volkswagen Group supports the EU's overarching goal. We are committed to the Paris Climate Agreement and align our own activities with the 1.5 degree goal. We aim to achieve net carbon neutrality by 2050.

REPORTING FOR FISCAL YEAR 2022

Under the EU Taxonomy, the Volkswagen Group is required to report on the climate change mitigation and climate change adaptation environmental objectives for fiscal year 2022; the EU has not yet defined the disclosure requirements for the other four environmental objectives. The figures reported on sales revenue, capital expenditure and operating expenditure relate to the companies consolidated in the Volkswagen Group's financial statements. Volumes and financial data for our Chinese joint ventures are therefore excluded.

The wording and terminology used in the EU Taxonomy are still subject to some uncertainty in interpretation, which could lead to changes in the reporting when it is subsequently clarified by the EU. Ultimately, there is a risk that the key performance indicators presented as taxonomy-aligned would need to be assessed differently. Our interpretation is set out below.

ECONOMIC ACTIVITIES OF THE VOLKSWAGEN GROUP

With the Group strategy NEW AUTO – Mobility for generations to come, we are preparing ourselves for the global changes in mobility and thus playing a substantial role in driving Volkswagen's transformation into a software-oriented company. In so doing, we pay particular attention to the use of resources and the emissions of our product portfolio, as well as those of our sites.

The Volkswagen Group's activities in its vehicle-related business with passenger cars, light commercial vehicles, trucks, buses and motorcycles cover the development, production and sale of vehicles and extend to our financial services and other vehicle-related products and services. Activities in these areas are suited under the EU Taxonomy to making a substantial contribution to the environmental objective of climate change mitigation by increasing clean or climate-neutral mobility.

The Volkswagen Group's activities in the Power Engineering Business Area comprise the development, design, production, sale and servicing of machinery and equipment. These activities also fall under the environmental objective of climate change mitigation.

An analysis of our economic activities in the context of the EU Taxonomy has not revealed any activities that contribute specifically to the environmental objective of climate change adaptation.

The table below sets out the allocation of our activities in the vehicle-related business and in Power Engineering to the economic activities listed in the EU Taxonomy under the environmental objective of climate change mitigation. Changes may be made to the economic activities in future as the rules around the EU Taxonomy dynamically evolve.

Economic activity in accordance with the EU Taxonomy	Description of economic activity	Allocation in the Volkswagen Group
Environmental objective: climate change mitigation		
3. Manufacturing		
3.2 Manufacture of equipment for the production and use of hydrogen	Manufacture of equipment for the production and use of hydrogen.	Power Engineering
3.3 Manufacture of low-carbon technologies for transport	Manufacture, repair, maintenance, retrofitting, repurposing and upgrade of low-carbon vehicles, rolling stock and vessels.	Vehicle-related business
3.6 Manufacture of other low-carbon technologies	Manufacture of technologies aimed at substantial greenhouse gas emission reductions in other sectors of the economy, where those technologies are not covered by other economic activities in the manufacturing sector.	Power Engineering
9. Professional, scientific and technical activities		
9.1 Close to market research, development and innovation	Research, applied research and experimental development of solutions, processes, technologies, business models and other products dedicated to the reduction, avoidance or removal of greenhouse gas emissions for which the ability to reduce, remove or avoid greenhouse gas emissions in the target economic activities has at least been demonstrated in a relevant environment, corresponding to at least Technology Readiness Level 6.	Power Engineering

Economic activities in vehicle-related business

Economic activity 3.3 Manufacture of low-carbon technologies for transport

We allocate all activities in our vehicle-related business associated with the development, production, sale (including financial services), operation and servicing of vehicles to this economic activity. This includes all passenger cars, light commercial vehicles, trucks, buses and motorcycles manufactured by us, irrespective of their powertrain technology, and also includes genuine parts.

In our vehicle-related business, we have detailed the vehicles manufactured by us by model and powertrain technology and analyzed the CO_2 emissions associated with them in accordance with the current regulations. In this way, we have identified those vehicles among all of our taxonomy-eligible vehicles that meet the screening criteria and with which the substantial contribution to climate change mitigation is measured. These include all of the Volkswagen Group's all-electric vehicles. Until December 31, 2025, they also include passenger cars and light commercial vehicles with CO_2 emissions of less than 50 g/km in accordance with the WLTP. This encompasses the majority of our plug-in hybrids. Buses meeting the EURO VI standard (Stage E) were also included until December 31, 2022.

At this stage, other activities that are directly associated with the primary vehicle-related business and that in our view should also be allocated to this economic activity have not yet been included or have been interpreted as not yet being taxonomy-eligible. This is because, as the rules of the EU Taxonomy currently stand, it is still unclear where to record them in accordance with the EU Taxonomy. These activities particularly include the sale of engines and powertrains, as well as parts deliveries, the sale of non-Group products and production under license by third parties. Based on current assumptions, hedging transactions and individual activities that we present primarily under Other sales revenue in the consolidated financial statements cannot be classified as economic activities under the EU Taxonomy, and we have therefore initially classified them as not being taxonomy-eligible.

Economic activities in Power Engineering

In the Power Engineering Business Area, we have analyzed our activities with respect to their classification under the EU Taxonomy and, with the exception of the heavy fuel oil engine new building business and individual components for the extraction and processing of fossil fuels, have identified them as taxonomy-eligible.

Economic activity 3.2 Manufacture of equipment for the production and use of hydrogen

Our activities relating to the manufacture of equipment for the production and use of hydrogen that meet the screening criteria and make a substantial contribution to the climate change mitigation objective are taxonomy-eligible. One example is the use of green hydrogen. At Volkswagen, the activities cover the power-to-X technology for the production of low-carbon or carbon-neutral synthetic fuels, as well as components for the storage of hydrogen.

Economic activity 3.6 Manufacture of other low-carbon technologies

The description of this economic activity means that only those technologies manufactured for the purpose of reducing greenhouse gas emissions substantially in other sectors of the economy are taxonomy-eligible. At Volkswagen, this comprises all new-build activities that enable the use of gas and climate-neutral synthetic fuels (e.g. manufacturing of gas and dual-fuel engines), all industrial solutions for energy storage and sector coupling (e.g. heat pumps) and all solutions for carbon capture, storage and usage; it also includes subsea compression (a solution close to the wellhead for the extraction of natural gas). These activities are rounded off by the service and after-sales business, comprising the upgrading and modernization of existing equipment. For example, we retrofit existing maritime fleets with technology that makes it possible to reduce CO_2 emissions.

Economic activity 9.1 Close to market research, development and innovation

The description of this economic activity includes applied research in technologies for the reduction or avoidance of greenhouse gas emissions. We allocate our licensing business to this economic activity. In the course of such business we provide our development services in the form of production documents, based on which our licensees are authorized to manufacture corresponding gas and/or dual-fuel engines.

With regard to economic activity 3.2 Manufacture of equipment for the production and use of hydrogen, we meet the screening criteria that determine whether a substantial contribution has been made to the mitigation of climate change. As the reporting obligations and the complex requirements specified therein, such as for life cycle analyses, were not introduced until very recently, it has not yet been possible to provide corresponding proof of economic activities covered by 3.6 Manufacture of other low-carbon technologies and 9.1 Close to market research, development and innovation.

DO NO SIGNIFICANT HARM (DNSH)

The DNSH criteria were analyzed in the reporting year for economic activities covered by 3.3 Manufacture of low-carbon technologies for transport and 3.2 Manufacture of equipment for the production and use of hydrogen.

In the vehicle-related business, an analysis was performed for each vehicle production site where passenger cars, light commercial vehicles, trucks and buses are or will be produced that meet the screening criteria for the substantial contribution of economic activity 3.3 Manufacture of low-carbon technologies for transport, or that are to meet them in future according to our five-year planning, and based on current regulations. Of the approximately 40 sites included, the majority are located in the EU, with some in the United Kingdom, Türkiye, South Africa, the USA, Mexico, Brazil, Argentina and China. In addition to these, we also included the sites that manufacture specific components for electric vehicles.

For the Power Engineering Business Area, an analysis was performed for each site that produces relevant components for systems or is responsible for supply chains that meet the screening criteria for the substantial contribution of economic activity 3.2 Manufacture of equipment for the production and use of hydrogen, or that are to meet them in future according to our five-year planning. There are three such sites in Germany and one in Sweden.

Below, we set out our interpretation and describe the main analyses we used to examine whether there was any significant harm to the other environmental objectives. The wording and terminology used in the EU Taxonomy are subject to some uncertainty in interpretation and supposedly go beyond the regulations to be applied in regular business operations. In addition, the application of the EU Taxonomy to sites outside the EU leads to particular challenges due to the possibility of diverging legislation. We took applicable laws as well as external and internal regulations and guidelines as the basis for our assessments, which confirm that we meet the requirements of the DNSH criteria in the reporting period for the vehicle-related business and the Power Engineering sites.

Climate change adaptation

We performed a climate risk and vulnerability assessment to identify which production sites may be affected by physical climate risks. The physical climate risks we identified were assessed on the basis of the lifetime of the relevant fixed asset.

Volkswagen's climate-based DNSH assessment is based on Representative Concentration Pathway (RCP) scenario 8.5 to the year 2050 and thus assumes the highest concentration of CO_2 according to the Intergovernmental Panel on Climate Change (IPCC). The relevance of the identified threats was assessed for the local environment and, if appropriate, the measures needed to mitigate the risk were developed.

Sustainable use and protection of water and marine resources

We evaluated our economic activities with respect to the sustainable use and protection of water and marine resources looking at the three following criteria: preserving water quality, avoiding water stress, and an environmental compatibility assessment (EIA or comparable process). Risks identified in an EIA are examined during the approval process and, if relevant, result in measures and regulatory requirements. We based the analysis primarily on ISO 14001 certificates, information from site approvals and other external data sources related to sites with a high risk exposure.

Transition to a circular economy

Environmentally compatible waste management in the manufacturing process, reuse and use of secondary raw materials and a long product lifespan are a major part of Volkswagen's environmental management system. Volkswagen defines clear and unambiguous guidelines on the circular economy in its environmental principles, in its overall factory white paper and in its goTOzero strategy.

The product-related requirements for passenger cars and light commercial vehicles are taken into account through implementation of the statutory end-of-life vehicle requirements in conjunction with the type approval of the vehicle models. In addition to this, each brand has targets and measures for the use of recycled materials in new vehicles.

For trucks and buses, a review was conducted at the level of each brand to establish the extent to which local legislation or internal rules and regulations cover the specific requirements.

Pollution prevention and control

To be considered environmentally sustainable, an economic activity must not significantly increase air, water or soil pollutant emissions as compared with the situation before the activity started. The DNSH criteria for this environmental objective require that the economic activity in question does not lead to the manufacture, distribution or use of substances listed in a variety of EU chemical regulations and directives or product-specific rules and regulations. In this context, we also consider the use of alternative substances in our analyses and assessments. Overall, the automotive sector is tightly regulated already, as demonstrated, for example, by the publicly accessible Global Automotive Declarable Substance List (GADSL). Approval and monitoring processes have been implemented with the aim of ensuring compliance with the legal requirements and internal rules and regulations applicable to regular business operations. This also ensures compliance with the legislation specified in the DNSH criteria. For this purpose, we applied the requirements applicable to regular business operations in the European Union in 2022. Outside of the EU we applied the regulations specific to the country in question.

Protection and restoration of biodiversity and ecosystems

In order to verify adherence to the requirements on biodiversity and ecosystems, the relevant areas were identified. Where biodiversity-sensitive areas are located close to a production site, we checked whether a nature conservation assessment had been performed and whether nature conservation measures had been defined in the environmental approvals and subsequently implemented. We also checked whether changes had occurred in an area's conservation status.

MINIMUM SAFEGUARDS

The minimum safeguards consist of the OECD Guidelines for Multinational Enterprises, the United Nations Guiding Principles on Business and Human Rights, the Fundamental Conventions of the International Labour Organization (ILO) and the International Bill of Human Rights.

The Volkswagen Group accepts its corporate responsibility for human rights, fully recognizes these conventions and declarations and reaffirms its agreement with the contents and principles stated therein.

Below, we describe the main analyses we used to examine whether the minimum safeguards are adhered to.

The Volkswagen Group has conducted and completed human rights risk assessments for 802 controlled Group companies worldwide; this includes all sites that were also examined under the DNSH criteria. This risk analysis takes into account the prior-year results and risk assessments. The companies were given risk-specific measures to counteract the risks identified in the analysis, and were required to implement these. The status of implementation of the respective measures is continuously monitored by the Group.

Relationships with our business partners are based on the Code of Conduct for Business Partners. We review compliance with the binding requirements defined in the Code, using sustainability ratings for relevant suppliers. We address existing sustainability risks and violations of sustainability principles by systematically defining and implementing measures to correct the violations; this also includes the upstream supply chain. We implemented a Human-Rights-Focus-System in 2022 to comply with international frameworks and requirements and specifically the *Lieferkettensorgfaltspflichtengesetz* (LkSG – German Supply Chain Due Diligence Act). The system aims to identify particularly high risks in our supply chain in connection with human rights violations and the environment and to manage these appropriately.

The assessments confirm that we meet the requirements of the minimum safeguards in the reporting year.

KEY PERFORMANCE INDICATORS IN ACCORDANCE WITH THE EU TAXONOMY REGULATION

The EU Taxonomy defines sales revenue, capital expenditure and operating expenditure as the key performance indicators that must be reported on. We explain these below. The tables required by the EU Taxonomy are included at the end of the section.

The financial figures relevant for the Volkswagen Group are taken from the IFRS consolidated financial statements for fiscal year 2022. As we differentiate between economic activities, we have avoided double counting. Where possible, the figures have been directly allocated to an economic activity. In our vehicle-related business, for example, we compiled the financial figures based on the vehicle model and powertrain technology. This applies both to the vehicles themselves and to the corresponding financial services and other services and activities. Only where this was not possible for capital expenditure and operating expenditure were allocation formulas used based on the planned vehicle volumes. In the Power Engineering Business Area, we used allocation formulas based on planned sales revenue. This data and planning form part of the medium-term financial planning for the next five years on which the Board of Management and Supervisory Board have passed a resolution.

Sales revenue

The definition of turnover in the EU Taxonomy corresponds to sales revenue as reported in the IFRS consolidated financial statements. This amounted to €279.2 billion in fiscal year 2022 (see also note on “Sales revenue” in the notes to the consolidated financial statements).

Of this total, €254.5 billion, or 91.1% of Group sales, was attributable to economic activity 3.3 Manufacture of low-carbon technologies for transport, and was classified as taxonomy-eligible. This includes sales revenue after sales allowances from the sale of new and used vehicles, including motorcycles, from genuine parts, from the rental and lease business, and from interest and similar income, as well as sales revenue directly related to the vehicles, such as workshop and other services.

Of the taxonomy-eligible sales revenue, €26.1 billion meet the screening criteria used to measure the substantial contribution to climate change mitigation. This includes all of our all-electric vehicles, the majority of the plug-in hybrids, and the buses meeting the EURO VI standard (Stage E). In 2022, there were 596 thousand such vehicles, 6.5% more than in the previous year. Their share of the relevant sales volume – excluding the vehicles from the Chinese joint ventures – rose to 11.1 (10.1) %. Passenger cars and light commercial vehicles made up the bulk at 594 thousand vehicles; trucks and buses recorded a nine-fold increase year-on-year. Sales of all-electric vehicles were up significantly.

Taking into account the DNSH criteria and minimum safeguards, €26.1 (21.1) billion of the sales revenue generated from our vehicle-related business, equating to 9.4 (8.5) % of consolidated sales revenue, was taxonomy-aligned. Of this amount, €19.6 billion, or 7.0% of consolidated sales revenue, was attributable to our all-electric models (BEVs). In 2022, compliance with the DNSH criteria was also demonstrated for truck and bus sites.

In the Power Engineering Business Area, the majority of our taxonomy-eligible sales revenue was attributable to economic activity 3.6 Manufacture of other low-carbon technologies (€2.5 billion). A further €35 million was contributed by economic activity 9.1 Close to market research, development and innovation. Our activities that fall under economic activity 3.2 Manufacture of equipment for the production and use of hydrogen generated taxonomy-aligned sales revenue of €18 (5) million, taking into account the DNSH criteria and minimum safeguards. The increase in taxonomy-aligned sales revenue is attributable to the expansion of business and above all to the initial consolidation of H-TEC SYSTEMS GmbH.

Of the Volkswagen Group's total sales revenue in fiscal year 2022,

> €257.0 (227.8) billion, or 92.1 (91.0)%, was taxonomy-eligible sales revenue and
> €26.1 (21.2) billion, or 9.4 (8.5)%, was taxonomy-aligned sales revenue.

SALES REVENUE 2022

	SALES REVENUE		SUBSTANTIAL CONTRIBUTION TO CLIMATE CHANGE MITIGATION		COMPLIANCE WITH DNSH CRITERIA	COMPLIANCE WITH MINIMUM SAFEGUARDS	TAXONOMY-ALIGNED SALES REVENUE	
Economic activities	€ million	%[1]	€ million	%[1]	Y/N	Y/N	€ million	%[1]
A. Taxonomy-eligible activities	**257,043**	**92.1**	**26,145**	**9.4**	**Y**	**Y**	**26,145**	**9.4**
Vehicle-related business								
3.3 Manufacture of low-carbon technologies for transport	254,502	91.1	26,128	9.4	Y	Y	26,128	9.4
of which taxonomy-aligned BEVs					Y	Y	19,589	7.0
Power Engineering								
3.2 Manufacture of equipment for the production and use of hydrogen	18	0.0	18	0.0	Y	Y	18	0.0
3.6 Manufacture of other low-carbon technologies	2,488	0.9	-	-	-	-	-	-
9.1 Close to market research, development and innovation	35	0.0	-	-	-	-	-	-
B. Taxonomy-non-eligible activities	**22,189**	**7.9**						
Total (A + B)	**279,232**							

1 All percentages relate to the Group's total sales revenue.

Capital expenditure

Capital expenditure for the purposes of the EU Taxonomy refers to the following items in the IFRS consolidated financial statements: additions to intangible assets, additions to property, plant and equipment, and additions to lease assets and investment property. These are reported in the notes to the 2022 consolidated financial statements in the notes on “Intangible assets”, “Property, plant and equipment” and “Lease assets and investment property”. Additions from business combinations, each of which is reported under “Changes in consolidated Group”, are also included. By contrast, additions to goodwill are not included in the calculation.

In fiscal year 2022, additions in the Volkswagen Group as defined above amounted to

> €11.7 billion from intangible assets,
> €12.9 billion from property, plant and equipment and
> €24.1 billion from lease assets (mainly vehicle leasing business) and investment property.

Other additions to be included resulted from changes in the consolidated Group, amounting to €0.4 billion in fiscal year 2022. Total capital expenditure to be included in accordance with the EU Taxonomy therefore came to €49.1 billion.

All capital expenditure attributable to our vehicle-related business is associated with economic activity 3.3 Manufacture of low-carbon technologies for transport. Taxonomy-eligible capital expenditure for the vehicle-related business amounted to €48.8 billion, or 99.4% of the Group’s capital expenditure.

To determine the substantial contribution in the vehicle-related business, we compiled the financial figures based on the vehicle model and powertrain technology in the same way as for sales revenue. Where possible, capital expenditure was directly attributed to vehicles. It was included if the vehicles in question make a substantial contribution to the climate change mitigation objective. Any capital expenditure directly attributable to vehicles that do not meet the screening criteria was not included. Capital expenditure that was not clearly attributable to a particular vehicle was taken into account on a proportionate basis using allocation formulas. In our vehicle-related business, we developed allocation formulas based on planned vehicle volumes for the Group companies. In the sales companies, for example, we used allocation formulas related either to individual vehicle brands or to all vehicle brands, depending on the primary business activity, while site-based allocation formulas were used for production companies. This means that capital expenditure was counted in full via the allocation formulas for sites that according to our medium-term planning will only produce vehicles meeting the screening criteria for the substantial contribution in the next five years. In contrast, capital expenditure on sites that only produce vehicles not meeting the screening criteria was not counted under the allocation formula. Calculated in this way, capital expenditure relating to vehicles that meet the screening criteria for the substantial contribution amounted to €16.9 billion.

Taking into account the DNSH criteria and minimum safeguards, capital expenditure of €16.9 (14.2) billion was taxonomy-aligned. This represented 34.5 (26.2) % of the Group’s total capital expenditure. Of this figure, €5.8 billion was attributable to intangible assets, €5.7 billion to property, plant and equipment and €5.4 billion to lease assets and investment property. The figure includes additions to capitalized development costs of €4.4 billion and additions to property, plant and equipment of €5.4 billion for our all-electric vehicles (BEVs). The increase in taxonomy-aligned capital expenditure – both the absolute value and the proportion – is attributable to the growing number of environmentally sustainable vehicle projects under the EU Taxonomy.

In the reporting period, we refinanced taxonomy-aligned capital expenditure from fiscal year 2021 based on the Green Finance Framework updated in October 2022 by issuing green bonds in the amount of €2.5 billion. Only capital expenditure in connection with all-electric vehicles was included here.

Also in 2022, Scania issued a green bond totaling SEK3.0 billion to finance research and development activities relating to battery-electric vehicles. €178 million of this total was used in the year under review already, of which €98 million was attributable to taxonomy-aligned capital expenditure. Adjusted for this figure, taxonomy-aligned capital expenditure attributable to the vehicle-related business accounted for 34.3% of total capital expenditure in accordance with the EU Taxonomy.

€27 million of the taxonomy-eligible capital expenditure in the Power Engineering Business Area is attributable to economic activity 3.2 Manufacture of equipment for the production and use of hydrogen and €60 million is attributable to economic activity 3.6 Manufacture of other low-carbon technologies. For the latter, operating expenditure was broken down based on planned sales revenue.

Taxonomy-aligned capital expenditure for the manufacture of equipment for the production and use of hydrogen was disclosed for the first time in the amount of €27 million, almost two thirds of which was attributable to intangible assets and around one third to property, plant and equipment. The expenditure relates predominantly to the initial consolidation of H-TEC SYSTEMS GmbH.

Of the Volkswagen Group’s total capital expenditure in fiscal year 2022,

- €48.9 (53.6) billion, or 99.6 (99.2) %, was taxonomy-eligible capital expenditure and
- €16.9 (14.2) billion, or 34.5 (26.2) %, was taxonomy-aligned capital expenditure.

CAPITAL EXPENDITURE 2022

	CAPITAL EXPENDITURE		SUBSTANTIAL CONTRIBUTION TO CLIMATE CHANGE MITIGATION		COMPLIANCE WITH DNSH CRITERIA	COMPLIANCE WITH MINIMUM SAFEGUARDS	TAXONOMY-ALIGNED CAPITAL EXPENDITURE	
Economic activities	€ million	%[1]	€ million	%[1]	Y/N	Y/N	€ million	%[1]
A. Taxonomy-eligible activities	**48,873**	**99.6**	**16,943**	**34.5**	**Y**	**Y**	**16,943**	**34.5**
Vehicle-related business								
3.3 Manufacture of low-carbon technologies for transport	48,786	99.4	16,917	34.5	Y	Y	16,917	34.5
of which additions to capitalized development costs for BEVs					Y	Y	4,415	9.0
of which additions to property, plant and equipment for BEVs					Y	Y	5,398	11.0
Power Engineering								
3.2 Manufacture of equipment for the production and use of hydrogen	27	0.1	27	0.1	Y	Y	27	0.1
3.6 Manufacture of other low-carbon technologies	60	0.1	-	-	-	-	-	-
9.1 Close to market research, development and innovation	-	-	-	-	-	-	-	-
B. Taxonomy-non-eligible activities	**205**	**0.4**						
Total (A + B)	**49,078**							

1 All percentages relate to the Group’s total capital expenditure.

Operating expenditure

The operating expenditure reported by us for the purposes of the EU Taxonomy comprises non-capitalized research and development costs, which can be taken from the note on “Intangible assets”. We also include the expenditure for short-term leases recognized in our consolidated financial statements, which can be found in the note on “IFRS 16 (Leases)”, and expenditure for maintenance and repairs.

The allocation of operating expenditure to the economic activities followed the same logic as that described for capital expenditure.

All operating expenditure attributable to the vehicle-related business is associated with economic activity 3.3 Manufacture of low-carbon technologies for transport and has been classified as taxonomy-eligible.

Where possible, non-capitalized research and development costs were directly attributed to vehicles. They were included if the vehicles in question make a substantial contribution to the climate change mitigation objective. We did not include any non-capitalized research and development costs directly attributable to vehicles that do not meet the screening criteria. Non-capitalized research and development costs that were not clearly attributable to a particular vehicle were taken into account on a proportionate basis using allocation formulas. For these and other operating expenses, allocation formulas were used, similarly to capital expenditure. Of the taxonomy-aligned operating expenditure of €4.9 (3.3) billion, 85.8% was attributable to non-capitalized research and development costs. The increase in taxonomy-aligned operating expenditure – both the absolute value and the proportion – is attributable to the growing number of environmentally sustainable vehicle projects under the EU Taxonomy.

Including the share of the bond issued by Scania attributable to taxonomy-aligned operating expenditure, the share of taxonomy-aligned operating expenditure declined from 42.7 (32.7)% to 42.0% of total operating expenditure in accordance with the EU Taxonomy.

€4 million of the taxonomy-eligible operating expenditure in the Power Engineering Business Area is attributable to economic activity 3.2 Manufacture of equipment for the production and use of hydrogen and €199 million is attributable to economic activity 3.6 Manufacture of other low-carbon technologies. For the latter, operating expenditure was broken down based on planned sales revenue.

Taxonomy-aligned operating expenditure for the manufacture of equipment for the production and use of hydrogen was disclosed for the first time in the amount of €4 million, which was attributable to non-capitalized research and development costs and related predominantly to the initial consolidation of H-TEC SYSTEMS GmbH.

OPERATING EXPENDITURE 2022

	OPERATING EXPENDITURE		SUBSTANTIAL CONTRIBUTION TO CLIMATE CHANGE MITIGATION		COMPLIANCE WITH DNSH CRITERIA	COMPLIANCE WITH MINIMUM SAFEGUARDS	TAXONOMY-ALIGNED OPERATING EXPENDITURE	
Economic activities	€ million	%[1]	€ million	%[1]	Y/N	Y/N	€ million	%[1]
A. Taxonomy-eligible activities	**11,395**	**98.9**	**4,926**	**42.7**	**Y**	**Y**	**4,926**	**42.7**
Vehicle-related business								
3.3 Manufacture of low-carbon technologies for transport	11,191	97.1	4,922	42.7	Y	Y	4,922	42.7
Power Engineering								
3.2 Manufacture of equipment for the production and use of hydrogen	4	0.0	4	0.0	Y	Y	4	0.0
3.6 Manufacture of other low-carbon technologies	199	1.7	-	-	-	-	-	-
9.1 Close to market research, development and innovation	-	-	-	-	-	-	-	-
B. Taxonomy-non-eligible activities	**131**	**1.1**						
Total (A + B)	**11,525**							

1 All percentages relate to the Group's total operating expenditure.

CAPEX PLAN UNDER THE EU TAXONOMY

The EU Taxonomy requires the reporting to state the extent to which taxonomy-aligned capital and operating expenditures a) relate to assets or processes associated with environmentally sustainable economic activities or b) are part of a plan to expand taxonomy-aligned economic activities or to allow taxonomy-eligible economic activities to become taxonomy-aligned (CapEx plan). A CapEx plan under the EU Taxonomy shows the total capital expense, i.e. the sum of capital and operating expenditures expected to be incurred in the reporting period and during the five-year medium-term planning to expand taxonomy-aligned economic activities or allow taxonomy-eligible economic activities to become taxonomy-aligned.

For the vehicle-related business, the CapEx plan drawn up under the EU Taxonomy relates to economic activity 3.3 Manufacture of low-carbon technologies for transport within the climate change mitigation environmental objective.

Additions from lease assets (mainly vehicle leasing business) are based on existing environmentally sustainable activities and have therefore not been included in the CapEx plan. We allocated additions from intangible assets and property, plant and equipment as well as non-capitalized research and development costs to the CapEx plan if they allow taxonomy-eligible economic activities to become taxonomy-aligned or lead to the expansion of taxonomy-aligned economic activities. For this we compared the average taxonomy-aligned production volume from the medium-term planning with the taxonomy-aligned vehicles from the reporting period and allocated the taxonomy-aligned capital expenditure according to this ratio whereby we considered the share exceeding the current taxonomy-aligned production volume.

As a result, €9 billion of the taxonomy-aligned capital expenditure and €3 billion of the taxonomy-aligned operating expenditure in the reporting period is attributable to the CapEx plan under the EU Taxonomy. The total capital expense from the CapEx plan under the EU Taxonomy that is expected to be incurred in the reporting period and during the five-year medium-term planning amounts to €100 billion.

In the Power Engineering Business Area, the CapEx plan under the EU Taxonomy relates to economic activity 3.2 Manufacture of equipment for the production and use of hydrogen listed in the climate change mitigation environmental objective. Based on the ratio of sales revenue in the reporting period to the average sales revenue envisaged in the medium-term planning, we allocated €26 million of the taxonomy-aligned capital expenditure and €4 million of the taxonomy-aligned operating expenditure to the CapEx plan. The total capital expense from this CapEx plan under the EU Taxonomy that is expected to be incurred in the reporting period and during the medium-term planning amounts to approximately €300 million.

TABULAR PRESENTATION IN ACCORDANCE WITH THE EU TAXONOMY

SALES REVENUE 2022

				CRITERIA FOR A SIGNIFICANT CONTRIBUTION						DNSH CRITERIA (DO NO SIGNIFICANT HARM)										
	Code(s)	Absolute sales revenue	Proportion of sales revenue	Climate change mitigation	Climate change adaptation	Water and marine resources[2]	Circular economy[2]	Pollution[2]	Biodiversity and ecosystems[2]	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards	Taxonomy-aligned proportion of sales revenue 2022	Taxonomy-aligned proportion of sales revenue 2021	Enabling activities category	Transition activities category
Economic activities		€ (m)	%[1]	%[1]	%[1]	%[1]	%[1]	%[1]	%[1]	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%[1]	%[1]	E	T
A. Taxonomy-eligible activities																				
A.1 Environmentally sustainable activities (taxonomy-aligned)																				
Manufacture of low-carbon technologies for transport	3.3	26,128	9.4	9.4	-	-	-	-	-		Y	Y	Y	Y	Y	Y	9.4	8.5	E	
Manufacture of equipment for the production and use of hydrogen	3.2	18	0.0	0.0	-	-	-	-	-		Y	Y	Y	Y	Y	Y	0.0	0.0	E	
Sales revenue from environmentally sustainable activities (taxonomy-aligned) (A.1)		**26,145**	**9.4**	**9.4**	-	-	-	-	-								**9.4**	**8.5**		
A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)																				
Manufacture of low-carbon technologies for transport	3.3	228,374	81.8																	
Manufacture of other low-carbon technologies	3.6	2,488	0.9																	
Close to market research, development and innovation	9.1	35	0.0																	
Sales revenue from taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)		**230,898**	**82.7**																	
Total (A.1 + A.2)		**257,043**	**92.1**																	
B. Taxonomy-non-eligible activities																				
Sales revenue from taxonomy-non-eligible activities (B)		22,189	7.9																	
Total (A + B)		**279,232**	**100.0**																	

1 All percentages relate to the Group's total sales revenue.
2 Criteria for a significant contribution to the environmental objective not yet defined.

CAPITAL EXPENDITURE 2022

				CRITERIA FOR A SIGNIFICANT CONTRIBUTION						DNSH CRITERIA (DO NO SIGNIFICANT HARM)										
Economic activities	Code(s)	Absolute capital expenditure	Proportion of capital expenditure	Climate change mitigation	Climate change adaptation	Water and marine resources[2]	Circular economy[2]	Pollution[2]	Biodiversity and ecosystems[2]	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards	Taxonomy-aligned proportion of capital expenditure 2022	Taxonomy-aligned proportion of capital expenditure 2021	Enabling activities category	Transition activities category
		€ (m)	%[1]	%[1]	%[1]	%[1]	%[1]	%[1]	%[1]	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%[1]	%[1]	E	T
A. Taxonomy-eligible activities																				
A.1 Environmentally sustainable activities (taxonomy-aligned)																				
Manufacture of low-carbon technologies for transport	3.3	16,917	34.5	34.5	-	-	-	-	-		Y	Y	Y	Y	Y	Y	34.5	26.2	E	
Manufacture of equipment for the production and use of hydrogen	3.2	27	0.1	0.1	-	-	-	-	-		Y	Y	Y	Y	Y	Y	0.1	-	E	
Capital expenditure of environmentally sustainable activities (taxonomy-aligned) (A.1)		**16,943**	**34.5**	**34.5**	**-**	**-**	**-**	**-**	**-**								**34.5**	**26.2**		
A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)																				
Manufacture of low-carbon technologies for transport	3.3	31,870	64.9																	
Manufacture of other low-carbon technologies	3.6	60	0.1																	
Close to market research, development and innovation	9.1	-	-																	
Capital expenditure of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)		**31,930**	**65.1**																	
Total (A.1 + A.2)		**48,873**	**99.6**																	
B. Taxonomy-non-eligible activities																				
Capital expenditure for taxonomy-non-eligible activities (B)		205	0.4																	
Total (A + B)		**49,078**	**100.0**																	

1 All percentages relate to the Group’s total capital expenditure.
2 Criteria for a significant contribution to the environmental objective not yet defined.

OPERATING EXPENDITURE 2022

				CRITERIA FOR A SIGNIFICANT CONTRIBUTION						DNSH CRITERIA (DO NO SIGNIFICANT HARM)										
	Code(s)	Absolute operating expenditure	Proportion of operating expenditure	Climate change mitigation	Climate change adaptation	Water and marine resources[2]	Circular economy[2]	Pollution[2]	Biodiversity and ecosystems[2]	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards	Taxonomy-aligned proportion of operating expenditure 2022	Taxonomy-aligned proportion of operating expenditure 2021	Enabling activities category	Transition activities category
Economic activities		€ (m)	%[1]	%[1]	%[1]	%[1]	%[1]	%[1]	%[1]	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%[1]	%[1]	E	T
A. Taxonomy-eligible activities																				
A.1 Environmentally sustainable activities (taxonomy-aligned)																				
Manufacture of low-carbon technologies for transport	3.3	4,922	42.7	42.7	-	-	-	-	-		Y	Y	Y	Y	Y	Y	42.7	32.7	E	
Manufacture of equipment for the production and use of hydrogen	3.2	4	0.0	0.0	-	-	-	-	-		Y	Y	Y	Y	Y	Y	0.0	-	E	
Operating expenditure for environmentally sustainable activities (taxonomy-aligned) (A.1)		**4,926**	**42.7**	**42.7**	**-**	**-**	**-**	**-**	**-**								**42.7**	**32.7**		
A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)																				
Manufacture of low-carbon technologies for transport	3.3	6,269	54.4																	
Manufacture of other low-carbon technologies	3.6	199	1.7																	
Close to market research, development and innovation	9.1	-	-																	
Operating expenditure of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)		**6,469**	**56.1**																	
Total (A.1 + A.2)		**11,395**	**98.9**																	
B. Taxonomy-non-eligible activities																				
Operating expenditure for taxonomy-non-eligible activities (B)		131	1.1																	
Total (A + B)		**11,525**	**100.0**																	

1 All percentages relate to the Group's total operating expenditure.
2 Criteria for a significant contribution to the environmental objective not yet defined.

Report on Expected Developments

The global economy is expected to grow in 2023, albeit at a slower pace. Global demand for passenger cars will probably vary from region to region and increase noticeably year-on-year. With our brand diversity, broad product range, technologies and services, we believe we are well prepared for the future challenges in the mobility business.

In the following, we describe the expected development of the Volkswagen Group and the general framework for its business activities. Risks and opportunities that could represent a departure from the forecast trends are presented in the Report on Risks and Opportunities.

Our assumptions are based on current estimates by third-party institutions. These include economic research institutes, banks, multinational organizations and consulting firms.

DEVELOPMENTS IN THE GLOBAL ECONOMY

Our planning is based on the assumption that global economic output will grow overall in 2023 albeit at a slower pace. The persistently high inflation in many regions and the resulting restrictive monetary policy measures taken by central banks are expected to increasingly dampen consumer spending. We continue to believe that risks will arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, growth prospects will be negatively impacted by ongoing geopolitical tensions and conflicts, with risks continuing to arise from the Russia-Ukraine conflict. It cannot be ruled out that risks may also arise if new variants of the SARS-CoV-2 virus occur, particularly regional outbreaks and the associated measures. We assume that both the advanced economies and the emerging markets will show positive momentum on average, even with below-average growth in gross domestic product (GDP).

We also expect the global economy to recover in 2024 and continue a path of stable growth until 2027.

Europe/Other Markets

In Western Europe, we expect a comparatively low rate of economic growth in 2023. The relatively high overall level of inflation, which is projected to taper off as the year goes on, poses a major challenge for consumers and companies alike.

Likewise, we anticipate comparatively low growth rates in Central Europe in 2023 with continuous price increases; however, economic output in Eastern Europe is not expected to recover following the slump in the reporting period as a result of the Russia Ukraine conflict.

For Türkiye we expect positive, albeit slower growth than in the reporting period given high inflation and a weak local currency. The South African economy will probably be characterized by political uncertainty and social tensions again in 2023 resulting from high unemployment, among other factors. Here we anticipate only slight growth.

Germany

We expect GDP in Germany to grow only slightly in 2023 and inflation to remain high averaged over the year. The labor market situation is likely to see some deterioration in 2023.

North America

We anticipate only slight economic growth in the USA in 2023, accompanied by a worsening labor market situation. The US Federal Reserve is expected to essentially end the spate of key interest rate hikes that it began in the reporting period. Further inflationary trends will play a decisive role in possible adjustments to the key interest rate, as will developments in the labor market and in the general economic situation. Economic growth in Canada is also likely to be at a relatively low level, while economic output in Mexico is expected to expand at a somewhat faster pace.

South America

In all probability, the Brazilian economy will record a slightly positive rate of growth in 2023. Economic output in Argentina is likewise expected to see no more than a slight improvement amid continued extremely high inflation and depreciation of the local currency.

Asia-Pacific

The Chinese economy is likely to grow at a relatively high level in 2023 after a comparatively moderate expansion rate in the reporting period. We likewise expect a relatively high rate of positive GDP growth for the Indian economy in 2023. A slight rise in economic output is anticipated in Japan.

TRENDS IN THE MARKETS FOR PASSENGER CARS AND LIGHT COMMERCIAL VEHICLES

The trend in the automotive industry closely follows global economic developments. We assume that competition in the international automotive markets will intensify further. Uncertainty may arise from continued shortages of intermediates and commodities. These may be further exacerbated by the consequences of the Russia-Ukraine conflict and, in particular, lead to rising prices and declining availability of energy.

We predict that trends in the markets for passenger cars in the individual regions will be mixed in 2023. Overall, the global volume of new car sales is expected to be noticeably higher than in the previous year. We are forecasting growing demand for passenger cars worldwide in the period from 2024 to 2027.

Trends in the markets for light commercial vehicles in the individual regions will also be mixed; on the whole, we expect a noticeable increase in the sales volume for 2023. For the years 2024 to 2027, we expect demand for light commercial vehicles to increase globally.

Europe/Other Markets

For 2023, we anticipate that the volume of new passenger car registrations in Western Europe will be significantly above that recorded in the reporting period. Limited vehicle availability as a result of the shortages of intermediates and commodities may continue to weigh on the volume of new registrations. We also predict significant growth in 2023 for the major individual markets of France, the United Kingdom, Italy and Spain.

For light commercial vehicles, we expect the volume of new registrations in Western Europe in 2023 to be strongly up on the previous year’s level. Limited vehicle availability as a result of the shortages of intermediates and commodities may continue to weigh on the volume of new registrations. We predict a strong increase in France, the United Kingdom and Spain, and noticeable growth in Italy.

Sales of passenger cars in 2023 are expected to significantly exceed the prior-year figures in markets in Central and Eastern Europe – subject to the further development of the Russia-Ukraine conflict. In the region's principal markets, a significant to sharp rise in the number of new registrations is expected.

Registrations of light commercial vehicles in 2023 are expected to fall noticeably short of the prior-year figures in markets in Central and Eastern Europe – subject to the further development of the Russia-Ukraine conflict.

The volume of new registrations for passenger cars in Türkiye in 2023 is projected to be significantly above the previous year's level. In South Africa, the market volume in 2023 is likely to be up slightly year-on-year.

The volume of new registrations for light commercial vehicles in 2023 is expected to be noticeably higher in Türkiye and significantly higher in South Africa compared with the respective prior-year figure.

Germany

In the German passenger car market, we expect the volume of new registrations in 2023 to noticeably exceed the prior-year figure.

We anticipate that the number of registrations of light commercial vehicles will be very strongly up on the previous year.

North America

The sales volume in the markets for passenger cars and light commercial vehicles (up to 6.35 tonnes) in North America overall and in the USA in 2023 is likely to be noticeably higher than the previous year's level. Demand will probably remain highest for models in the SUV and pickup segments. New registrations of all-electric vehicles are also estimated to increase at a higher-than-average rate. In Canada, too, a noticeable increase is expected in the number of new registrations compared to the previous year. For Mexico, we expect a slight increase in new registrations compared with the reporting period.

South America

Owing to their dependence on demand for raw materials worldwide, the South American markets for passenger cars and light commercial vehicles are heavily influenced by developments in the global economy. We anticipate a significant increase overall in new registrations in the South American markets in 2023 compared with the previous year. Strong growth is expected in the market volume in Brazil compared with 2022. We anticipate that the volume of new registrations in Argentina will be significantly higher year-on-year.

Asia-Pacific

The passenger car markets in the Asia-Pacific region are expected to be noticeably up on the prior-year level in 2023. We estimate that the market volume in China will be slightly higher than the comparative figure for 2022. Attractively priced entry-level models in the SUV segment in particular should still see strong demand. The continuing parts supply shortages, possible measures to halt the spread of the SARS-CoV-2 virus and intensification of geopolitical tensions could act as a drag on demand. As long as there is no resolution in sight, the trade dispute between China and the United States is likely to continue to weigh on business and consumer confidence. We anticipate that the Indian market will perform slightly better than in the previous year. Japan should see noticeable growth in market volume in 2023.

The volume of new registrations for light commercial vehicles in the Asia-Pacific region in 2023 will probably be slightly higher than the previous year's figure. We are likewise expecting demand in the

Chinese market to be slightly higher than the prior-year level. For India, we are forecasting that the volume in 2023 will be on a level with the reporting period. In the Japanese market, we estimate that volumes will be noticeably lower year-on-year.

TRENDS IN THE MARKETS FOR COMMERCIAL VEHICLES

For 2023, we expect a noticeable upwards trend in new registrations for mid-sized and heavy trucks with a gross weight of more than six tonnes compared with the previous year, with variations from region to region, in the markets that are relevant for the Volkswagen Group.

Noticeable market growth is expected for the 27 EU countries excluding Malta, but plus the United Kingdom, Norway and Switzerland (EU27+3) because it has so far not been possible to fully satisfy the high demand for trucks due to continuing supply bottlenecks. We anticipate that Türkiye will see a significant drop in demand. In South Africa, we expect demand to be on a level with the previous year. The truck market in North America is divided into weight classes 1 to 8. We expect a noticeable increase in new registrations in the segments relevant for Volkswagen – Class 6 to 8 (8.85 tonnes or heavier). We estimate that demand in Brazil will be slightly lower than in the previous year.

On average, we anticipate a slight decrease in the relevant truck markets for the years 2024 to 2027.

A significant increase in overall demand, with regional variations, is expected for 2023 in the bus markets relevant for the Volkswagen Group. We anticipate slight year-on-year market growth in the EU27+3 countries. Here, we are assuming that the coach segment will recover and that we will receive orders in the context of government-funded programs. We expect a very sharp increase in the school bus segment in the USA and Canada. For the bus market in Mexiko, we anticipate a sharp rise. In Brazil, new registrations are expected to decline significantly after the strong prior-year growth.

Overall, we expect a slight increase in the demand for buses in the relevant markets for the period from 2024 to 2027.

TRENDS IN THE MARKETS FOR POWER ENGINEERING

In the Power Engineering Business Area, we generally expect market conditions to remain difficult – although we believe they will improve slightly – in 2023. The impact of the Russia-Ukraine conflict, the trend in energy and commodity prices as well as the possible repercussions of the Covid-19 pandemic are generating continued uncertainty in nearly all market segments.

Based on estimates of a higher volume of sea trade, combined with calls for high energy efficiency and low pollutant emissions, the 2023 market volume in the merchant shipping segment is expected to reach a slightly higher level than in the reporting year. The market segments excluding merchant shipping are also expected to reach a slightly higher level than in 2022. An improvement is likewise anticipated in the cruise ship segment as travel continues to return to normal levels. The passenger ferry sub-market is also expected to grow slightly. We continue to anticipate a high level of stable demand for government vessels. In the offshore sector, further new order volumes for special applications are expected, such as for special offshore ships for wind turbines. Overall, we predict that the marine market will reach a somewhat higher level than that seen in the reporting year, with sustained competitive pressure.

Exceedingly challenging conditions are projected for the energy generation market in 2023. The Russia-Ukraine conflict and its impact on energy and commodity prices as well as inflation are creating continued uncertainty, which in turn is affecting investment decisions. Dependence on Russian gas and the associated shortages are generating increased readiness to invest in technologies that will enable medium- to long-term autonomy. Solutions such as power-to-X and balancing facilities to support grids for renewable energy will be essential here, leading to rising demand for these technologies going forward. Demand for decentralized, sustainable gas power plants will continue, but with the clear requirement that these can subsequently be retrofitted for renewable fuels. Growth in the power generation market will be driven by renewable energy in particular. The irregularity of power produced in this way will require an increase in energy storage systems and control reserve facilities, which will result in a corresponding expansion of the market for engines, turbocompressors and turboexpanders.

We are expecting a sustained high level of demand for turbomachinery in 2023 due to an investment backlog and strong demand for raw materials amid rising prices. It is expected that the production plants of market participants will be well utilized. This should result in a continuous relaxation of the competition which had been intensified by the pandemic.

Both in the after-sales market for engines in the marine and power plant business, and in the after-sales market for turbomachinery, we expect healthy demand in 2023 above the level prior to the Covid-19 pandemic, though the energy sector and the geopolitical situation in Eastern Europe will generate uncertainty.

For the period 2024 to 2027, we expect to see growing demand in the power engineering markets. However, the extent and timing of this growth will vary in the individual business fields. It also remains to be seen how long the market will be impacted by the major influential factors: the Russia-Ukraine conflict, trends in the energy sector and the Covid-19 pandemic.

TRENDS IN THE MARKETS FOR FINANCIAL SERVICES

We anticipate that automotive financial services will prove highly important to global vehicle sales in 2023. The continuing shortages of intermediates and commodities may generate uncertainty, exacerbated by the consequences of the Russia-Ukraine conflict. Furthermore, the increased interest rates will put pressure on the demand for financial services. We expect demand to rise in emerging markets where market penetration has so far been low. Regions with already established automotive financial services markets will probably see a continuation of the trend towards enabling mobility at the lowest possible total cost. Integrated end-to-end solutions, which include mobility-related service modules such as insurance and innovative packages of services, are likely to become increasingly important for this. Additionally, we expect that demand will increase for new forms of mobility, such as rental and car subscription (*Auto-Abo*) services, and for integrated mobility services, for example parking, refueling and charging, and that the shift initiated in the European financial services business with individual customers from financing to lease contracts will continue. Especially in the Chinese market, we anticipate an increase in the importance of direct business between manufacturers and customers. The seamless integration of financial services into the online vehicle offering will take on increasing importance in efforts to promote this type of business. We estimate that this trend will also persist in the years 2024 to 2027.

In the mid-sized and heavy commercial vehicles category, we anticipate rising demand for financial services products in emerging markets. In these countries in particular, financing solutions support vehicle sales and are thus an essential component of the sales process. In the developed markets, we expect to see increased demand for telematics services and services aimed at reducing total cost of ownership in 2023. This trend is also expected to persist in the period 2024 to 2027.

EXCHANGE RATE TRENDS

In 2022, the euro weakened against the US dollar on an annual average. The general strength of the US dollar benefited from expansion of the interest rate differential and the considerable uncertainty surrounding developments in the global economy. Specific factors in the eurozone such as safeguarding the energy supply as a consequence of the Russia-Ukraine conflict additionally weighed on the euro. The euro was almost unchanged against pound sterling on an annual average, partly because fiscal policy decisions in the United Kingdom generated movement in the financial markets and caused the euro to appreciate at the end of the year. Changes in the euro against the currencies of the emerging markets were mixed. In particular, the Turkish lira and the Argentinian peso lost value against the European single currency. By contrast, the Brazilian real and the Mexican peso were on average significantly stronger than the European single currency than in the year 2021. Other currencies that appreciated against the euro year-on-year were the Chinese renminbi along with the currencies of several emerging markets in Asia, in addition to the South African rand. For 2023, our planning anticipates that the euro will stabilize against the US dollar and gain slight ground against pound sterling and the Chinese renminbi. We assume that the Argentinian peso, Brazilian real, Mexican peso, South African rand and Turkish lira will depreciate to varying degrees. For 2024 to 2027, we expect that the euro will be stable against the key currencies, while the comparative weakness of the currencies in the aforementioned emerging markets will probably continue. However, there is still a general event risk, defined as the risk arising from unforeseen market developments.

INTEREST RATE TRENDS

The challenging macroeconomic situation as a consequence of the Russia-Ukraine conflict and the Covid-19 pandemic, but especially the high inflation rates, prompted a turnaround in monetary policy in many countries, with global interest rates reaching a relatively high level in fiscal year 2022. National central banks in nearly all of the major Western industrialized nations made corresponding adjustments to their key interest rates to counteract the comparatively high price increases in some cases. Interest rates were also raised in many emerging markets. The interest rate hikes by the US Federal Reserve and the European Central Bank were more extensive and quicker than anticipated at the beginning of the year. Whether there will be further changes in key interest rates in 2023 in the respective countries will depend firstly on further inflationary trends and secondly on the severity of a possible economic downturn. Overall, we expect interest rates to remain relatively high in 2023. For the years 2024 to 2027, we estimate that interest rates will persist at a relatively high level.

COMMODITY PRICE TRENDS

In the commodity markets, the Russia-Ukraine conflict was one of the contributory factors to in some cases significant price increases particularly during the first four months, while over the rest of the year the dampened global economic outlook put pressure on prices. As a consequence of the resulting imbalance between supply and demand, the increase in the price of many commodities and input materials during 2022 was comparatively high. In particular, energy prices in Europe recorded a sharp rise, due mainly to the high dependence of some European countries on Russian gas but also as a result of regional extreme weather in the summer months. Compared with the previous year as a whole, there was also a rise in the average prices of the commodities lithium, coking coal, crude oil, nickel, cobalt and aluminum. Exchange rate effects played a role in some cases, leading average euro prices for natural rubber, lead and copper to rise, while the price in US dollars fell somewhat. The price of the precious metals rhodium, palladium and platinum decreased on average over the year. Particularly given the continued uncertainty about future trends in the global economy, we expect the prices of many commodities to fall in 2023 with only isolated price rises. For 2024 to 2027, we expect the prices of most commodities to decline compared with 2023.

NEW MODELS IN 2023

The Volkswagen Passenger Cars brand will conduct a product initiative focused on all-electric vehicles in 2023. The ID.3 will be significantly enhanced and the ID.7 saloon will be rolled out simultaneously in Europe and China. The T-Cross and Touareg SUVs, which feature conventional drive systems, will receive technology and design updates. In China, Volkswagen will bring out a new notchback entry-level model powered by a combustion engine. The Track, a particularly attractive entry-level model from the important Polo series, will be launched in Brazil. A GTS model will round off the series at the upper end of the scale.

The Audi brand will update its top-of-the-range Q8 model. The all-electric Q8 e-tron and Q8 Sportback e-tron will be upgraded with cutting-edge technology and will have even more range.

Lamborghini will roll out the newly designed successor to the Aventador in 2023.

Porsche will present a completely new variant from its 911 family in 2023. The Cayenne series will be extensively updated.

The TRATON GROUP will drive e-mobility further, with Scania rolling out all-electric solutions for regional distribution transport in 2023.

MAN will enhance its truck range in 2023 in terms of fuel consumption, driver assistance systems and connectivity. In the bus segment, MAN is preparing for the launch of the Lion's Chassis E on international markets.

Navistar will be the second brand of the TRATON GROUP to introduce the integrated 13-liter powertrain.

Volkswagen Truck & Bus will adjust its Delivery, Constellation and Meteor models to comply with the new emissions legislation in Brazil.

Ducati will redesign the popular Scrambler family from the ground up, launching the new generation of the Icon, Nightshift and Full Throttle models in 2023. The Multistrada V4 Rally will expand the Multistrada family and the Ducati Diavel will be available as a V4. The Monster SP, Panigale V4 R and new versions of the Streetfighter V4 will further supplement Ducati's product range.

INVESTMENT AND FINANCIAL PLANNING

To meet people's needs for individual, sustainable, fully connected mobility and thus increase the Volkswagen Group's future viability, we will continue to mobilize our strengths in innovation and technology and push the Volkswagen Group's transformation into a software-oriented mobility provider while leveraging our economies of scale and maximizing synergies.

In our current planning for 2023, most of the capex (investments in property, plant and equipment, investment property and intangible assets, excluding capitalized development costs) will be spent on new products and the electrification of our model portfolio as well as further development of the modular toolkits, such as the all-electric platform for our volume brands – the Modular Electric Drive Toolkit (MEB) – and those for our premium and sports brands – the Premium Platform Electric (PPE) –, which are currently being rolled out throughout the Group. In addition, the Scalable Systems Platform (SSP) marks the development of a successor platform, which will bundle the requirements of the volume, premium and luxury brands and generate high levels of synergy in the future. We will also focus on the growing digitalization of our vehicles and sites and increase our capital expenditure on these. Moreover, we are investing in the gradual conversion of our locations for the production of electric vehicles and in the creation of battery manufacturing capacity with the aim of establishing a battery supply chain under our own control. The Automotive Division's ratio of capex to sales revenue is expected to fluctuate around a level of around 6.5%.

Besides capex, investing activities will also cover additions to capitalized development costs. Among other things, these reflect upfront expenditures in connection with updating the model range as well as electrification and digitalization. Also included are the services of CARIAD, which is developing a standardized operating system for Group brand vehicles, along with other projects.

With the investments in our facilities and models, as well as in the development of electric drives and modular toolkits and in digitalization, we are laying the foundations for profitable, sustainable growth at Volkswagen. These investments also include commitments arising from decisions taken in previous fiscal years.

We aim to finance the investments in our Automotive Division from our own capital resources and expect cash flows from operating activities to exceed the Automotive Division's investment requirements. We anticipate a very strong year-on-year increase in net cash flow for 2023. This will particularly include increasing investments for the future and cash outflows from mergers and acquisitions for battery factories, which are a cornerstone of the Volkswagen Group's transformation. Net liquidity in the Automotive Division in 2023 is expected to be between €35 billion and €40 billion; this includes cash inflows and outflows in connection with the IPO of Porsche AG.

These plans are based on the Volkswagen Group's current structures.

Our equity-accounted joint ventures in China are not included in the figures above. For 2023, these joint ventures plan to invest in e-mobility, further optimization of the model portfolio, the development of new mobility solutions and digitalization. Their capex will probably exceed the 2022 level and be financed from the companies' own funds.

In the Financial Services Division, we are planning higher investments in 2023 than in the previous year. We expect the development of lease assets and of receivables from leasing, customer and dealer financing to lead to funds tied up in working capital, of which around half will be financed from the gross cash flow. As is common in the sector, the remaining funds needed will be met primarily through unsecured bonds on the money and capital markets, the issuing of asset-backed securities, customer deposits from the direct banking business, and through the use of international credit lines.

TARGETS FOR VALUE-BASED MANAGEMENT

Based on long-term interest rates derived from the capital market and the target capital structure (fair value of equity to debt = 2:1), the minimum required rate of return on invested capital defined for the Automotive Division remains unchanged at 9%.

Despite continuing bottlenecks in the supply of parts, including as a consequence of the Russia-Ukraine conflict and the resulting gloomier economic outlook, the ROI was 12.0 (10.4)% in the reporting period. Due to earnings-related reasons, this exceeded both the prior-year figure and our minimum required rate of return on invested capital of 9% (for more information, please see the headline "Return on investment (ROI) and value contribution in the reporting period" in the "Results of Operations, Financial Position and Net Assets" chapter). Invested capital will rise further in 2023 as a result of investment in new models, in the development of alternative drivetrains and further development of the modular and all-electric toolkits and platforms, and in technologies of the future. We expect the return on investment (ROI) in the Automotive Division for 2023 to be between 12% and 15%.

SUMMARY OF EXPECTED DEVELOPMENTS

Our planning is based on the assumption that global economic output will grow overall in 2023 albeit at a slower pace. The persistently high inflation in many regions and the resulting restrictive monetary policy measures taken by central banks are expected to increasingly dampen consumer spending. We continue to believe that risks will arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, continuing geopolitical tensions and conflicts are weighing on growth prospects; risks continue to be associated with the Russia-Ukraine conflict. Furthermore, it cannot be ruled out that risks may also arise if new variants of the SARS-CoV-2 virus occur, particularly with regard to regional outbreaks and the measures associated with these. We assume that both the advanced economies and the emerging markets will show positive momentum on average, but with below-average growth in gross domestic product (GDP).

The trend in the automotive industry closely follows global economic developments. We assume that competition in the international automotive markets will intensify further. Uncertainty may arise from the continued shortage of intermediates and commodities. This may be further exacerbated by the fallout from the Russia-Ukraine conflict and, in particular, lead to rising prices and declining availability of energy.

We predict that trends in the markets for passenger cars in the individual regions will be mixed in 2023. Overall, the global volume of new car sales is expected to be noticeably higher than in the previous year. For 2023, we anticipate that the volume of new passenger car registrations in Western Europe will be significantly above that recorded in the reporting period. In the German passenger car market, we predict a noticeable increase in the volume of new registrations in 2023 compared with the previous year. Sales of passenger cars in 2023 are expected to significantly exceed the prior-year figures in markets in Central and Eastern Europe – subject to the further development of the Russia-Ukraine conflict. The volume of sales in the markets for passenger cars and light commercial vehicles (up to 6.35 tonnes) in North America in 2023 is forecast to be noticeably higher than the level seen the previous year. We anticipate a significant increase overall in new registrations in the South American markets in 2023 compared with the previous year. The passenger car markets in the Asia-Pacific region are expected to be noticeably up on the prior-year level in 2023.

Trends in the markets for light commercial vehicles in the individual regions will also be mixed; on the whole, we expect a noticeable increase in the sales volume for 2023.

For 2023, we expect to see a noticeable upwards trend in new registrations for mid-sized and heavy trucks with a gross weight of more than six tonnes compared with the previous year in the markets that are relevant for the Volkswagen Group, with variations from region to region. A significant increase in overall demand is anticipated for 2023 in the bus markets relevant for the Volkswagen Group, whereby this will vary depending on the region.

We assume that automotive financial services will prove highly important to global vehicle sales in 2023.

We anticipate that, amid challenging market conditions, deliveries to customers of the Volkswagen Group in 2023 will stand at around 9.5 million vehicles. This assumes that the shortages of intermediates and commodities and the bottlenecks in logistics will become less intense.

Challenges will arise in particular from the economic situation, the increasing intensity of competition, volatile commodity, energy and foreign exchange markets, and more stringent emissions-related requirements.

We expect the sales revenue of the Volkswagen Group in 2023 to be 10% to 15% higher than the prior-year figure and the operating return on sales to lie between 7.5% and 8.5%. In the Passenger Cars Business Area, we forecast an increase of 7% to 13% in sales revenue compared with the previous year, with an operating return on sales of between 8% and 9%. For the Commercial Vehicles Business Area, we anticipate an operating return on sales of 6% to 7% amid a 5% to 15% year-on-year increase in sales revenue. In the Power Engineering Business Area, we expect sales revenue to be slightly above the prior-year figure and operating profit to be in the low triple-digit million euro range. For the Financial Services Division, we forecast a strong increase in sales revenue compared with the prior year and an operating result in the range of €3.5 billion.

In the Automotive Division, we expect the R&D ratio to come in at around 8% in 2023 and the ratio of capex to sales revenue to be around 6.5%. We anticipate a very strong year-on-year increase in net cash flow for 2023. This will particularly include increasing investments for the future and cash outflows from mergers and acquisitions for battery factories, which are a cornerstone of the Volkswagen Group's transformation. Net liquidity in the Automotive Division in 2023 is expected to be between €35 billion and €40 billion; this includes cash inflows and outflows in connection with the IPO of Porsche AG. We anticipate a return on investment (ROI) of between 12% and 15%. Our declared goal remains unchanged, namely to continue with our robust financing and liquidity policy.

Report on Risks and Opportunities

(CONTAINS THE REPORT IN ACCORDANCE WITH SECTION 289(4) OF THE HGB)

Promptly identifying the risks and opportunities arising from our business activities and taking a forward-looking approach to managing them is crucial to our Company's long-term success. A comprehensive risk management system and an internal control system help the Volkswagen Group deal with risks in a responsible manner.

In this section, we first explain the objective and structure of the Volkswagen Group's Risk Management System (RMS) and Internal Control System (ICS) and describe these systems, also with regard to the financial reporting process. We then outline the main risks and opportunities arising in our business activities.

OBJECTIVE OF THE RISK MANAGEMENT SYSTEM AND INTERNAL CONTROL SYSTEM AT VOLKSWAGEN

Only by promptly identifying, accurately assessing and effectively and efficiently managing the risks and opportunities arising from our business activities can we ensure the Volkswagen Group's long-term success. The aim of the RMS and ICS is to identify potential risks at an early stage so that suitable countermeasures can be taken to avert the threat of loss to the Company, and any risks that might jeopardize its continued existence can be ruled out.

Assessing the likelihood of occurrence and extent of future events and developments is, by its nature, subject to uncertainty. We are therefore aware that even the best RMS cannot foresee all potential risks and even the best ICS can never completely prevent irregular acts.

STRUCTURE OF THE RISK MANAGEMENT SYSTEM AND INTERNAL CONTROL SYSTEM AT VOLKSWAGEN

The organizational design of the Volkswagen Group's RMS and ICS is based on the internationally recognized COSO framework for enterprise risk management (COSO: Committee of Sponsoring Organizations of the Treadway Commission). The purpose of structuring the RMS/ICS in accordance with the COSO framework for enterprise risk management is so that potential risk areas are covered in full. Uniform Group principles are used as the basis for managing risks in a standardized manner. Opportunities are not recorded in the RMS processes.

THE VOLKSWAGEN THREE LINES MODEL

Another key element of the RMS and ICS at Volkswagen is the Three Lines Model, which is required by, among other bodies, the European Confederation of Institutes of Internal Auditing (ECIIA). In line with this model, the Volkswagen Group's RMS and ICS has three lines designed to protect the Company from significant risks occurring.

The minimum requirements for the RMS and ICS, including the Three Lines Model, are set out in guidelines for the entire Group and are regularly reviewed and refined. In addition, regular training is offered on the RMS and ICS.

A separate Group Board of Management Committee for Risk Management deals with the key aspects of the RMS and ICS every quarter. Its tasks are as follows:

> to further increase transparency in relation to significant risks to the Group and their management,
> to discuss specific issues where these constitute a significant risk to the Group,
> to make recommendations on the further development of the RMS and ICS,
> to support the open approach to dealing with risks and promote an open risk culture.

First line: Operational risk management and ICS

The first line comprises the operational risk management and internal control systems at the individual Group companies and business units. The RMS and ICS are integral parts of the Volkswagen Group's structure and workflows. Events that may give rise to risk are identified and assessed locally in the divisions and at the investees. Countermeasures are introduced, the remaining potential impact is assessed, and the information incorporated into the planning in a timely manner. Material risks are reported to the relevant committees on an ad hoc basis. The results of the operational risk management process are incorporated into planning and financial control on an ongoing basis. The targets agreed in the planning rounds are therefore continually reviewed in revolving planning updates. At the same time, the results of risk mitigation measures are promptly incorporated into the monthly forecasts regarding further business development. This means that the Board of Management also has access to an overall picture of the current risk situation via the documented reporting channels during the year.

CALCULATION OF RISK SCORE

RISK SCORE

$$= \text{LIKELIHOOD OF OCCURENCE} \times \text{POTENTIAL EXTENT OF DAMAGE}$$

$$= \text{SCORE}_{\text{Prob}} \times \left(\text{SCORE}_{\text{Mat}} + \frac{\text{SCORE}_{\text{Rep}} + \text{SCORE}_{\text{Req}}}{2} \right)$$

Second line: Group Risk Management and ICS

Each quarter, in addition to the ongoing operational risk management, the Group Risk Management department sends standardized surveys regarding the risk situation and the implementation of countermeasures – through the quarterly risk process (QRP) – to all Group brands and significant Group companies. The risks are identified and approved in a multiple-party verification process and then checked for plausibility by Group Risk Management.

A score is calculated for each risk by multiplying the likelihood of occurrence (Prob) by the potential extent of the damage. This enables comparison of the risks. The extent of the damage is calculated from the criteria of financial loss (Mat) and reputational damage (Rep) and the potential threat to adherence to external legal requirements (Req). A score between 0 and 10 is assigned to each of these criteria. The measures taken to manage and control risk are taken into account in the risk assessment (net perspective).

The score for a likelihood of occurrence of more than 50% in the analysis period is classified as high; for a medium classification, the likelihood of occurrence is at least 25%. For the criterion of financial loss, the score rises in line with the loss; the highest score of 10 is reached when the potential loss is upwards of €1 billion. The criterion of reputational damage can have characteristics ranging from local erosion of confidence and loss of trust at local level to loss of reputation at regional or international level. The potential threat to adherence to external legal requirements is classified based on the potential impact on the local company, the brand or the Group.

In addition to strategic, operational and reporting risks, risks arising from potential compliance violations (compliance risks) and from sustainability issues (ESG) are also integrated into this process.

Volkswagen Financial Services AG and Volkswagen Bank GmbH have implemented their own RMS and ICS processes and regularly report to Group Risk Management.

To review the Volkswagen Group’s risk-bearing capacity, Group Risk Management uses the risk reports for a regular comparison of the aggregated risk situation and risk-bearing capacity. A simulation is used to check whether individual risks might become a going-concern risk if they are aggregated. There were no indications of insufficient risk-bearing capacity at the Volkswagen Group in the 2022 fiscal year.

Risk reporting to the committees of Volkswagen AG depends on materiality thresholds. Risks with a risk score of 40 or more or potential financial loss of €1 billion or more are presented quarterly to the Board of Management and the Audit Committee of the Supervisory Board of Volkswagen AG. In addition, the reporting includes all risks from the QRP with a risk score of 20.

In addition, significant changes to the risk situation that can arise in the short term, for instance from unexpected external events, are reported to the Board of Management as required. This is necessary if the risk may lead to potential financial loss of €1 billion or more and the likelihood of occurrence is estimated at greater than 50%.

In recent years, a standardized ICS to better protect against process risks has also been developed and put in place in significant companies. It continues to be introduced at further companies each year. The ICS thereby goes significantly beyond the requirements for the accounting-related ICS. In 25 catalogs of controls, the Group companies within its scope are presented with requirements in respect of the process risks and control objectives to be covered in order to protect the value chain in a standardized manner.

In addition to financial reporting issues, for example, they address process risks in development or production, as well as in the areas of compliance and sustainability. The catalogs of controls are checked at regular intervals to verify that they are up to date and are regularly expanded.

Key controls to cover process risks and control objectives are also tested for their effectiveness; any significant weaknesses identified are reported to the responsible bodies at Volkswagen AG and resolved in the departments.

Like the QRP, the standardized ICS is supported by the Risk Radar IT system.

We regularly optimize the RMS and ICS as part of our continuous monitoring and improvement processes. In the process, we give equal consideration to both internal and external requirements. As a component of the RMS, our Compliance Management System (CMS) is also subject to these control and adjustment mechanisms. External experts assist in the continuous enhancement of our RMS, CMS and ICS on a case-by-case basis.

Third line: Review by Group Internal Audit

Group Internal Audit helps the Board of Management to monitor the various divisions and corporate units within the Group. It regularly checks the risk early warning system and the structure and implementation of the RMS, ICS and compliance management system (CMS) as part of its independent audit procedures. The audit plan adopted by the Board of Management includes the first and second lines, i.e. the risk-mitigating functions in addition to the operational units.

RISK EARLY WARNING SYSTEM

The Company's risk situation is ascertained, assessed and documented and therefore also complies with legal requirements. The requirements for a risk early warning system are met by means of the RMS and ICS elements described above (first and second line). Independently of this, the external auditors check both the processes and procedures implemented in this respect and the adequacy of the documentation on an annual basis. The plausibility and adequacy of the risk reports are examined via spot checks in detailed interviews with the divisions and companies concerned. The auditor examines the risk early warning system integrated in the Risk Management System with respect to its fundamental suitability to being able to identify risks that might jeopardize the Company's continued existence at an early stage and assesses the functionality of the risk early warning and monitoring system in accordance with section 317(4) of the HGB.

In addition, scheduled examinations as part of the audit of the annual financial statements are conducted at companies in the Financial Services Division. As a credit institution, Volkswagen Bank GmbH, including its subsidiaries, is subject to supervision by the European Central Bank, while Volkswagen Leasing GmbH as a financial services institution and Volkswagen Versicherung AG as an insurance company are subject to supervision by the relevant division of the *Bundesanstalt für Finanzdienstleistungsaufsicht* (BaFin – the German Federal Financial Supervisory Authority). As part of the scheduled supervisory process and unscheduled audits, the competent supervisory authority assesses whether the requirements, strategies, processes and mechanisms ensure solid risk management and solid risk cover. Furthermore, the P*rüfungsverband deutscher Banken* (Auditing Association of German Banks) audits Volkswagen Bank GmbH from time to time.

Volkswagen Financial Services AG operates a risk early warning and management system. Its aim is to ensure that the locally applicable regulatory requirements are adhered to and at the same time to enable appropriate and effective risk management at Group level. Important components of it are regularly reviewed as part of the audit of the annual financial statements.

Monitoring the effectiveness of the Risk Management System and the Internal Control System

Reporting to the Board of Management and Supervisory Board of Volkswagen AG includes the results of the continuous monitoring and improvement of the RMS and ICS along with the evaluation of the Company-wide risk situation based on the QRP and the presentation of the results of the internal control process based on the standardized ICS and downstream control systems at individual brands.

On this basis, an overall conclusion is reached once a year on the adequacy and effectiveness of our RMS, CMS and ICS at a Volkswagen AG Board of Management meeting. The Board of Management has received no information to indicate that our RMS or ICS as a whole were inadequate or ineffective in fiscal year 2022.

Nevertheless, there are inherent limits to the effectiveness of any risk management, compliance management and control system. Even a system judged to be adequate and effective cannot, for example, ensure that all actually materializing risks will be identified in advance or that any process disruptions will be ruled out under all circumstances.

THE RISK MANAGEMENT AND INTEGRATED INTERNAL CONTROL SYSTEM IN THE CONTEXT OF THE FINANCIAL REPORTING PROCESS

The accounting-related part of the RMS and ICS that is relevant for the financial statements of Volkswagen AG and the Volkswagen Group as well as its subsidiaries comprises measures intended to ensure that the information required for the preparation of the financial statements of Volkswagen AG, the consolidated financial statements and the combined management report of the Volkswagen Group and Volkswagen AG is complete, accurate and transmitted in a timely manner. These measures are designed to minimize the risk of material misstatement in the accounts and in external reporting.

Main features of the Risk Management and integrated Internal Control System in the context of the financial reporting process

The Volkswagen Group's accounting is essentially organized along decentralized lines. For the most part, accounting duties are performed by the consolidated companies themselves or entrusted to the Group's shared service centers. In principle, the financial statements of Volkswagen AG and its subsidiaries prepared in accordance with the IFRSs and the Volkswagen IFRS Accounting Manual are transmitted to the Group in encrypted form. A standard market product is used for encryption.

The Volkswagen IFRS Accounting Manual, which has been prepared in line with external expert opinions in certain cases, is intended to ensure the application and assessment of uniform accounting policies based on the requirements applicable to the parent. In particular, it includes more detailed guidance on the application of legal requirements and industry-specific issues. Components of the reporting packages that are required to be prepared by the Group companies are also set out in detail there, and requirements have been established for the presentation and settlement of intragroup transactions and the balance reconciliation process that is based on these.

Control activities at Group level include analyzing and, if necessary, adjusting the data reported in the financial statements presented by the subsidiaries, taking into account the reports submitted by the auditors and the outcome of the meetings on the financial statements with representatives of the individual companies. These discussions address both the plausibility of the single-entity financial statements and specific significant issues at the subsidiaries. Alongside plausibility checks, other control mechanisms applied during the preparation of the single-entity and consolidated financial statements of Volkswagen AG include the clear delineation of areas of responsibility and the application of the "four eyes" principle.

The effectiveness of the Internal Control System in the context of the accounting process is systematically assessed in significant companies as part of the standardized ICS. This begins with a risk analysis and definition of controls with the aim of identifying significant risks for the financial reporting process. Regular tests based on samples are performed to evaluate the effectiveness of the controls. These form the basis for a self-evaluation of whether the controls are appropriately designed and effective.

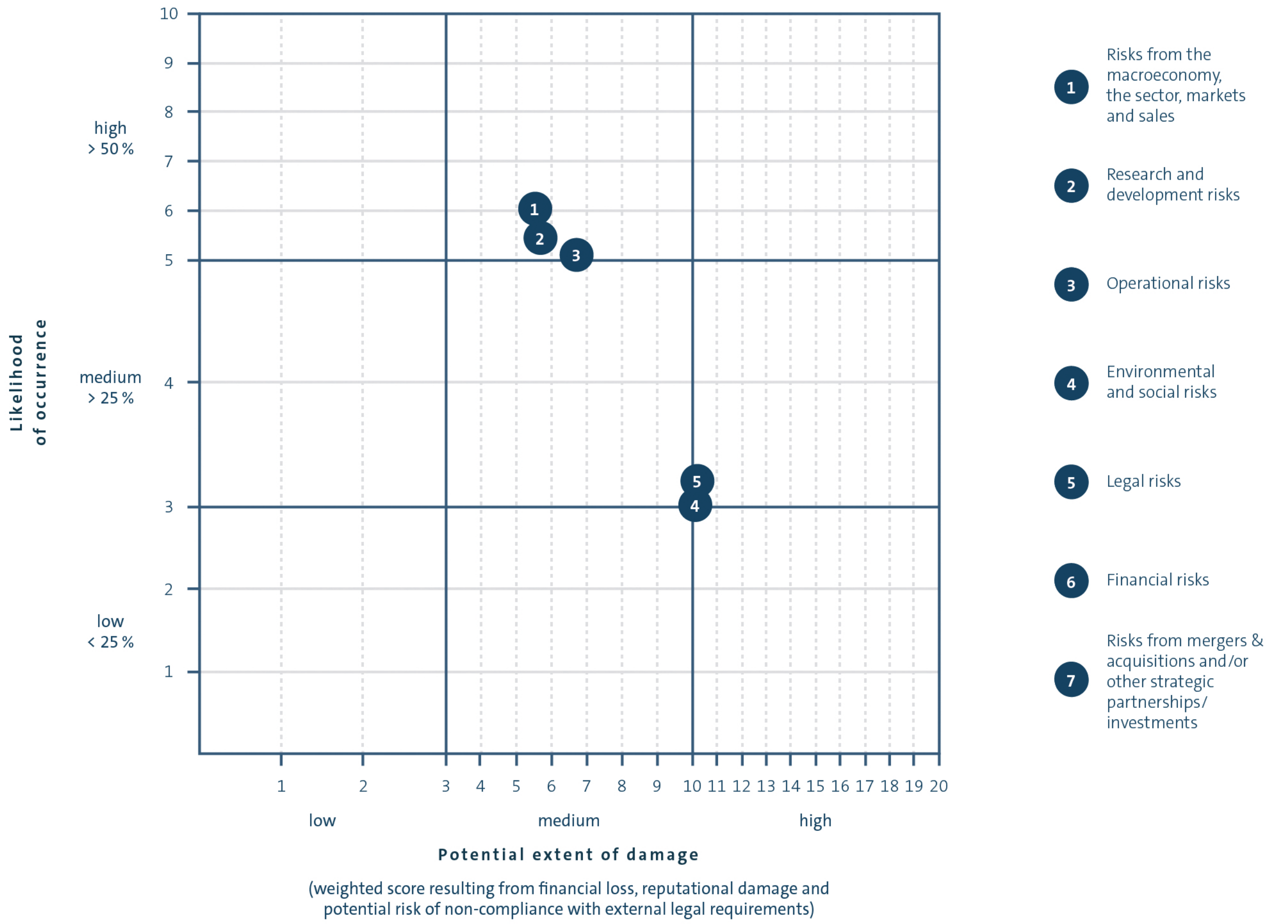
The combined management report of the Volkswagen Group and Volkswagen AG is prepared – in accordance with the applicable requirements and regulations – centrally but with the involvement of and in consultation with the Group units and companies.

In addition, the accounting-related Internal Control System is independently reviewed by Group Internal Audit in Germany and abroad.

Integrated consolidation and planning system

The Volkswagen consolidation and corporate management system (VoKUs) enables the Volkswagen Group to consolidate and analyze both Financial Reporting’s backward-looking data and Controlling’s forward-looking data. VoKUs offers centralized master data management, uniform reporting, an authorization concept and the required flexibility with regard to changes to the legal environment, providing a technical platform that benefits Group Financial Reporting and Group Controlling in equal measure. To verify data consistency, VoKUs has a multi-level validation system that primarily checks content plausibility between the balance sheet, the income statement and the notes.

AVERAGE SCORES OF THE RISK CATEGORIES



RISKS AND OPPORTUNITIES

In this section, we outline the main risks and opportunities arising in our business activities. In order to provide a better overview, we have grouped the risks and opportunities into categories. At the beginning of each risk category, we state the most significant risks in order of their importance as identified using the risk score from the QRP. We then describe the individual risks in no particular order. Unless explicitly mentioned, there were no material changes to the specific risks and opportunities compared with the previous year even though the weighting of individual risks has changed.

The assessment of the Volkswagen Group’s risk categories and the reports to the Board of Management include amongst other items all risks reported to the Group Risk Management department with a risk score of 20 or more for the units included from the QRP. The risk categories are plotted based on the average scores. In the reporting year, no risks with such scores were reported for the “Financial risks” and “Risks from mergers & acquisitions and/or other strategic partnerships/investments” risk categories.

We use analyses of the competition and the competitive environment in addition to market studies to identify not only risks but also opportunities that have a positive impact on the design of our products, the efficiency with which they are produced, their success in the market and our cost structure. Where they can be assessed, risks and opportunities that we expect to occur are already reflected in our medium-term planning and our forecast. The following therefore reports on internal and external developments as risks and opportunities that, based on existing information, may result in a negative or positive deviation from our forecast or targets.

Risks and opportunities from the macroeconomy, the sector, markets and sales

For this risk category, the likelihood of occurrence is classified as high (previous year: high) and the potential extent of damage is classified as medium (previous year: medium).

The most significant risks from the QRP arise from a negative influence on markets and unit sales driven among other factors by restrictions on trade and increasingly protectionist tendencies.

Macroeconomic risks and opportunities

We believe that risks to positive growth in global economic output arise primarily from a further escalation of the Russia-Ukraine conflict, turbulence in the financial, energy and commodity markets, supply shortages in connection with imbalances between supply and demand, increasingly protectionist tendencies, structural deficits, which pose a threat to the performance of individual advanced economies and emerging markets, and a failure to contain the Covid-19 pandemic in a lasting way. In addition, there are increasing environmental challenges that affect individual countries and regions to varying degrees. The worldwide transition from an expansionary to a more restrictive monetary policy together with persistently high inflation also presents risks for the macroeconomic environment. High private- and public-sector debt in many countries is clouding the outlook for growth and may likewise cause markets to respond negatively. Demographic change may also inhibit growth. A decline in growth in key countries and regions often has an immediate impact on the state of the global economy and therefore poses a central risk.

The economic development of some emerging economies is being hampered primarily by dependence on energy and commodity prices and capital inflows, but also by socio-political tensions. Corruption, inadequate government structures and a lack of legal certainty can also pose risks.

Geopolitical tensions and conflicts, along with signs of fragmentation in the global economy, are a further major risk factor to the performance of individual countries and regions. In light of the existing, strong global interdependence, local developments could also have adverse effects on the world economy. Any escalation of the conflicts in the Middle East or Africa, and particularly of the conflict between Russia and Ukraine since February 2022, for example, could cause upheaval on the global energy and commodity markets and exacerbate migration trends. An aggravation of the situation in East Asia could also put a strain on the global economy. The same applies to violent conflicts, terrorist activities, cyber attacks and the spread of infectious diseases, which may suddenly result in unexpected market reactions.

Overall, we expect the world economy to grow with a weaker momentum in 2023. However, due to the risk factors mentioned, as well as cyclical and structural aspects, another slump in the global economy or a period of below-average growth rates is also possible.

The macroeconomic environment may also give rise to opportunities for the Volkswagen Group if actual developments turn out to be more positive than expected.

Sector-specific risks and market opportunities/potential

Western Europe, especially Germany, and China are our main sales markets. A drop in demand in these regions due to the economic climate would have a particularly strong impact on the Company's earnings including financial services. We counter this risk with a clear, customer-oriented, innovative and synergistic product and pricing policy. To diversify our main sales markets, we are pursuing a long-term growth strategy in the USA.

Outside the current main sales markets, delivery volumes are spread widely across the key regions: Central and Eastern Europe, North America and South America. In addition, we either already have a strong presence in numerous existing and developing markets or are working systematically towards this goal.

Particularly in smaller markets with growth potential, we are increasing our presence with the help of strategic partnerships in order to cater to local requirements.

The growth markets of Central and Eastern Europe, South America and Asia are particularly important to the Volkswagen Group. These markets harbor considerable potential; however, the underlying conditions in some countries in these regions make it difficult to increase unit sales figures there. Examples of these are customs regulations or minimum local content requirements for production. At the same time, wherever the economic and regulatory situation permits, there are opportunities above and beyond current projections. These arise from faster growth in the emerging markets where vehicle densities are currently still low.

Price pressure in established automotive markets for new and used vehicles as a result of high market saturation is a further risk for the Volkswagen Group as a supplier of volume and premium models. Competitive pressures are likely to remain high in the future. Individual manufacturers may respond by offering incentives in order to meet their sales targets, putting the entire sector under additional pressure.

There is a risk that excess capacity in global automotive production may lead to a rise in inventories and therefore an increase in tied-up capital. With a decline in demand for vehicles and genuine parts, automotive manufacturers may adjust their capacities or intensify measures to promote sales. This would lead to additional costs and greater price pressure.

Supply chain disruption may give rise to the risk of underutilization of capacity in global automobile production, meaning that existing demand can in some instances not be met and instead moves on.

The demand that built up in individual established markets in times of crisis could result in a significant recovery if the economic environment eases more quickly than expected.

In Europe, there is a risk that further municipalities and cities will impose a driving ban on vehicles with combustion engines in order to comply with emission limits. China imposed a so-called “new energy vehicle quota” in 2019, which means that battery-electric vehicles, plug-in hybrids and fuel cell vehicles will have to account for a certain proportion of a manufacturer’s new passenger car fleet. In the United States, California has for some years imposed a regulation followed by other US states and which tightens the legal requirements on manufacturers each year for the sale of zero-emission vehicles. To ensure compliance with emissions standards, we continuously tailor our range of vehicle models and engines to the conditions in the relevant markets. These requirements may lead to higher costs and consequently to price increases and declines in volumes.

Economic performance may vary from region to region. The resulting risks for our trading and sales companies, such as in relation to efficient inventory management and a profitable dealer network, are substantial and are being responded to with appropriate measures on their part. However, financing business activities through bank loans remains difficult. Our financial services companies offer dealers financing on attractive terms with the aim of strengthening their business models and reducing operational risk. We have installed a comprehensive liquidity risk management system so that we can promptly counteract any liquidity bottlenecks at the dealership end that could hinder smooth business operations.

We continue to approve loans for vehicle financing on the basis of the same cautious principles applied in the past, for example by taking into account the regulatory requirements of section 25a(1) of the *Kreditwesengesetz* (KWG – German Banking Act); in particular, this counters the risk of loan defaults.

Volkswagen maintains a selective distribution system. Within the European Union, dealers and service partners are selected – where permissible – using qualitative and quantitative-qualitative criteria in accordance with the provisions of EU Regulations 461/2010 and 720/2022. The previously relevant EU Regulation 330/2010 was revised by the European Commission and replaced by the new, successor EU Regulation 720/2022, which entered into force on June 1, 2022. As things stand at present, this revised EU regulation does not require any changes to be made to the current distribution system of Volkswagen AG.

The “Supplementary guidelines on vertical restraints in agreements for the sale and repair of motor vehicles and for the distribution of spare parts for motor vehicles”, which accompany EU Regulation 461/2010, are currently being revised by the European Commission, with the new rules due to enter into force on June 1, 2023. A final evaluation of whether and to what extent the distribution system of Volkswagen AG will be specifically affected by the changes will only be definitively possible once the new guidelines have been adopted.

Competition law requirements, including the Block Exemption Regulation 461/2010 and EU Regulations 2018/858 and 2021/1244, aim to ensure and promote effective competition in the motor vehicle aftermarket. Volkswagen AG, too, is exposed to this competitive pressure and associated risks in respect of its servicing and maintenance offering.

In Germany, legislation entered into force on December 2, 2020 to restrict or abolish design protection for repair parts through the introduction of a repair clause. In addition, the European Commission is evaluating the market with regard to existing design protection and has presented a draft to amend the directive on the legal protection of designs and models. A possible restriction or abolition of design protection for visible replacement parts, including at European level, could adversely affect the Volkswagen Group’s genuine parts business.

The automotive industry is facing a process of transformation with far-reaching changes. Electric drives, connected vehicles and autonomous driving are associated with both opportunities and risks for our vehicle sales, our after-sales business and our dealerships. In particular, more rapidly evolving customer requirements, swift implementation of legislative initiatives, including in connection with the achievement of climate protection targets, and the market entry of new competitors from outside the industry will require changed products at a faster pace of innovation as well as adjustments to business models and cost structures. There is uncertainty regarding the widespread use of electric vehicles and the availability of the necessary charging infrastructure.

There is also a risk of freight deliveries worldwide being shifted from trucks to other means of transport, and of demand for the Group’s commercial vehicles falling as a result.

Below, we outline the regions and markets with the greatest growth potential for the Volkswagen Group.

> China
  Demand for vehicles is expected to increase in the coming years due to the need for individual mobility. This also affects e-mobility, a market that is already dominated by high-volume domestic manufacturers, among others. It is also expected that demand will shift from the coastal metropolises to the country’s interior and that competitive pressure from local manufacturers will generally increase. In order to leverage the considerable opportunities offered by this market – especially with regard to e-mobility – and to defend our strong market position in China over the long term, we are continuously expanding our product range to include models that have been specially developed for this market. We are further expanding our production capacity in this growing market, for example with the new plants for electric vehicles in Anhui and Changchun.

> India
  The demand for new vehicles is likely to increase over the coming years in this important future market, partly due to demographic change. The Volkswagen Group has consolidated its activities in India and launched a model initiative with new models tailored to customers’ needs: the Taigun from the Volkswagen Passenger Cars brand and the ŠKODA Kushaq and Slavia.

> USA
In the saturated US market, the proportion of light trucks (particularly SUVs and pickups) is likely to further increase slightly in the coming years. In addition, the electrification of mobility is expected to accelerate due to support measures and legally prescribed fleet emission and fuel consumption targets. The latter factors still depend, however, on which administration is in office. In the USA, Volkswagen Group of America is steadfast in its pursuit to become a full-fledged volume supplier and expand its market share. The expansion of local production capacity – including production for electric vehicles since 2022 – will allow the Group to better serve the market in the North America region. We are also working intensively on offering additional products specifically tailored to the US market. As part of our electrification campaign, we founded a company in the United States in the reporting year with which we aim to tap the market for electric vehicles in the SUV segment with the US brand Scout.

> Brazil
Due to the need for individual mobility, demand for vehicles in Brazil is expected to increase in the coming years, particularly in the low-price, small-vehicle segments. Given existing trade barriers, local production is an important factor in ensuring competitiveness. The growing number of automobile manufacturers with local production has resulted in a sharp increase in price pressure and competition. To strengthen our competitive position in Brazil, we offer vehicles tailored specially to this market that are locally produced, such as the Saveiro and the Nivus.

> Middle East
Political and economic uncertainty in the region weigh on the passenger car markets. In spite of this volatility, the Middle East region offers short-term and long-term growth potential. We aim to leverage the potential for growth with a range of vehicles that has been specifically tailored to this market, without having our own production facilities there.

Power Engineering

Global economic trends such as digitalization and the increasing interest in emissions-reducing technologies associated with decarbonization are expected to continue. Growing global energy needs call for innovation in the industry and a growing willingness on the part of governments to invest in line with the global climate policy.

The development of the marine market continues to carry risk given the current uncertainty regarding future fuel and emissions regulations. The continuing uncertain geopolitical and macroeconomic situation holds additional risks, but also offers opportunities, for example in the navy and offshore wind energy business.

In turbomachinery, there is the risk that planned projects and orders will be scaled back or postponed due to negative developments in sales markets or individual applications.

We are countering these risks by constantly monitoring the markets, focusing on less strongly affected market segments, working closely with all business partners such as customers and licensees, and introducing new and improved technologies.

We are working systematically to leverage market opportunities across the world, for example by positioning ourselves as a solution provider for reduced-CO_2 drive and energy generation technologies such as large-scale heat pumps, storage technologies and hydrogen production or carbon dioxide capture. Moreover, significant potential can be leveraged in the medium term by enhancing our after-sales business through the introduction of new digital products and the expansion of our service network. The requirements for occupational safety, which will continue to increase in the future, the availability of the plants that are already in operation, their efficient operation and the increase in environmental compatibility, together with the large number of engines and plants, will provide the basis for growth. Digital service solutions, for instance for remote plant surveillance, offer further growth potential.

As part of the capital goods industry, the Power Engineering business is affected by fluctuations in the investment climate. Even minor changes in growth rates or growth forecasts, resulting from geopolitical uncertainties or volatile commodities and foreign exchange markets, for example, carry the risk of significant changes in demand or the cancellation of already existing orders.

The measures we use to counter the substantial economic and extraordinary risks include flexible production concepts and cost flexibility by means of temporary external personnel, working time accounts and *Kurzarbeit* (short-time working), and the necessary structural adjustments.

Sales risks

There is a risk that the Volkswagen Group could experience decreases in demand, possibly exacerbated by media reports or insufficient communication. Other potential consequences include lower margins in the new and used car businesses and a temporary increase in funds tied up in working capital.

The Volkswagen Group's multibrand strategy may weaken individual Group brands if there are overlaps in customer segments or the product portfolio. This effect may be reinforced by the Volkswagen Group's common-parts strategy, as this strategy means that, in some cases, the differences in product substance between the brands are small. As a result, there could be a risk of internal cannibalization between the Group brands, higher marketing costs, or repositioning expenses. By sharpening the brand identities as part of our Best Brand Equity instrument, we are working to minimize these risks.

The fleet customer business continues to be characterized by increasing concentration and internationalization, accompanied by the risk that the loss of individual fleet customers may result in relatively high volume losses. Viewed over an extended period, the fleet customer business is more stable than the business with retail customers. The Volkswagen Group is well positioned with its broad portfolio of products and drive systems, as well as its target-group-focused customer care, and counteracts a concentration of default risks at individual fleet customers or markets. The consistently high market share in Europe shows that fleet customers still have confidence in the Group.

Consumer demand is shaped not only by real factors such as disposable income, but also by psychological factors that cannot be planned for. For example, households' worries about the future economic situation may lead to unexpected buyer reluctance, as is currently the case due to high energy costs. This is particularly the case in saturated automotive markets such as Western Europe, where demand could drop as a result of owners holding on to their existing vehicles for longer. We are countering the risk of buyer reluctance with our attractive range of models and our strict policy of customer orientation.

A combination of buyer reluctance in some markets as a result of the crisis, and increases in some vehicle taxes based on CO_2 emissions – which have already been observed in many European countries – may shift demand towards smaller segments and engines, for example. We counter the risk that such a shift will negatively impact the Volkswagen Group's financial situation by constantly developing new, fuel-efficient vehicles and alternative drive technologies, based on our drivetrain, fuel and mobility strategies.

Automotive markets around the world are exposed to risks from government intervention such as tax increases, which curb private consumption, and from restrictions on trade and protectionist tendencies such as tariffs and sanctions. Furthermore, there are future risks from the sale of electrified vehicles if the minimum requirements for local content under free trade agreements cannot be achieved. Sales incentives may lead to shifts in the timing of demand.

Commercial vehicles are capital goods: even minor changes in growth rates or growth forecasts may significantly affect transport requirements and thus demand. The resulting risk of production fluctuations calls for a high degree of flexibility from the manufacturers. Although production volumes are significantly lower, the complexity of the trucks and buses range does in fact significantly exceed the already very high complexity of the passenger cars range. Key factors for commercial vehicle customers are total cost of ownership, vehicle reliability and the service provided. Furthermore, customers are increasingly interested in additional services such as freight optimization and fleet utilization, which we offer in the commercial vehicle segment through the digital brand RIO, for example.

Power Engineering's two-stroke engines are produced exclusively by licensees, particularly in South Korea, China and Japan. The global demand for ships is increasing due to the overall positive development in world trade; however, the volatility in new shipbuilding orders poses the risk of declining license revenues. Due to changes in the competitive environment, especially in China, there is also the risk of losing market share.

Russia-Ukraine conflict

The ongoing Russia-Ukraine conflict continues to hold risks for the performance of the global economy, for growth in the industry and for the business activities of the Volkswagen Group, in particular with regard to rising prices and declining availability of energy.

The Volkswagen Group does not have any material subsidiaries and equity investments in Ukraine.

In relation to the net assets, financial position and results of operations of the Volkswagen Group, the business activities of the Volkswagen Group in these two countries are insignificant.

Other factors

In addition to the risks outlined in the individual risk categories, there are other factors that cannot be predicted and whose repercussions are therefore difficult to control. Should these transpire, they could have an adverse effect on the further development of the Volkswagen Group. In particular, such occurrences include natural disasters, climate-induced extreme weather events, pandemics (such as the spread of the SARS-CoV-2 virus), violent conflicts (such as the current Russia-Ukraine conflict), terrorist attacks and interruptions to the energy supply.

There is a risk that the Covid-19 pandemic could intensify again, due to reasons such as changes in the virus. All areas of the Volkswagen Group are affected by the pandemic. There are risks arising in particular from a fall in demand and an increasing intensity of competition. In production, there are risks especially with regard to stable supply chains and protecting the health of our staff. We have put in place increased hygiene and protective measures that we can fall back on where necessary to ensure that plants can operate.

Research and development risks

For this risk category, the likelihood of occurrence is classified as high (previous year: high) and the potential extent of damage is classified as medium (previous year: medium).

The most significant risks from the QRP result from the inability to develop products in line with demand and requirements, especially with regard to e-mobility and digitalization.

Risks arising from research and development

The automotive industry is undergoing a fundamental transformation process. For multinational corporations like Volkswagen, this means risks in the areas of customer/market, technological advancements and legislation. One risk posed is the implementation of ever more stringent emission and fuel consumption regulations, such as C6 in China or EU7 in Europe from 2025. New test procedures and test cycles (e.g. the Worldwide Harmonized Light Vehicles Test Procedure, WLTP), and their progressive tightening, as well as compliance with approval processes (homologation) are becoming increasingly complex and time-consuming. The test specifications and homologation procedures also vary greatly from country to country.

On a national and international level, there are numerous legal requirements regarding the use, handling and storage of substances and mixtures (including restrictions concerning chemicals, heavy metals, biocides, persistent organic pollutants). There is therefore a risk of non-conformity in the manufacture, procurement and introduction of products such as automobiles or replacement parts.

The economic success and competitiveness of the Volkswagen Group depend on how swiftly we are able to tailor our portfolio of products and services to changing conditions. Given the intensity of competition and speed of technological development, for example in the fields of digitalization and automated driving, there is a risk of failing to identify relevant trends early enough to respond accordingly.

We use the latest findings from the world of physics and other areas of science to plot our course. In addition, we conduct research such as trend analyses and customer surveys and examine the relevance of the results for our customers. We counter the risk that it may not be possible to develop modules, vehicles, or services – especially in relation to e-mobility, digitalization and software – within the specified time frame, to the required quality standards, or in line with cost specifications, by continuously and systematically monitoring the progress of all projects.

To reduce the risk of patent infringements, we conduct thorough analyses of third-party industrial property rights; increasingly also in relation to communication technologies.

We regularly compare the results of all these analyses with the respective project targets; in the event of any discrepancies, we introduce appropriate countermeasures. Our end-to-end project organization fosters cooperation across all of the departments involved in the process, ensuring that specific requirements are incorporated into the development process as early as possible and that their implementation is planned in good time.

Risks and opportunities from the modular toolkit strategy

We are continuously expanding our modular toolkits, focusing on future customer requirements, legal requirements and infrastructural requirements.

However, with higher volumes there is a higher risk that supply chain disruption – for example due to a shortage of semiconductors – or quality problems may affect an increasing number of vehicles.

The Modular Transverse Toolkit (MQB) is an extremely flexible vehicle architecture that was created to allow conceptual dimensions – such as the wheelbase, track width, wheel size and seat position – to be harmonized throughout the Group and utilized flexibly. Other dimensions, for example the distance from the pedals to the middle of the front wheels, are always the same, ensuring a uniform system in the front end of the car. Thanks to the resulting synergies, we are able to reduce both development costs and the necessary one-time expenses, as well as manufacturing times. The toolkits also allow us to produce different models from different brands in varying quantities, using the same equipment in a single plant. This means that our capacities can be used with greater flexibility throughout the entire Group, enabling us to achieve efficiency gains.

We have also transferred this principle of standardization with maximum flexibility to the Modular Electric Drive Toolkit (MEB) and Premium Platform Electric (PPE), concepts developed for all-electric drives. The synergies and efficiency gains offered by the modular toolkit strategy are enabling us to bring e-mobility into mass production worldwide with the MEB- and PPE-based vehicles. In future, we aim to reinforce these synergistic effects by combining the MEB and PPE in the Scalable Systems Platform (SSP).

Operational risks and opportunities

For this risk category, the likelihood of occurrence is classified as high (previous year: high) and the potential extent of damage is classified as medium (previous year: medium).

The most significant risks from the QRP lie particularly in volatile procurement markets, here primarily in relation to the supply of parts, as well as in cyber security and new regulatory requirements regarding IT, and in quality problems.

Risks from extraordinary events in the Volkswagen Group's procurement and production network

Extraordinary events beyond our control including natural disasters, climate-induced extreme weather events, pandemics – such as the spread of the SARS-CoV-2 virus – and other events, for example violent confrontations – such as the current conflict between Russia and Ukraine – fires, explosions, or the leakage of substances hazardous to health or the environment, may result in supply risks in procurement and heavily impair production. As a consequence, bottlenecks or even outages in production may occur, thus preventing the planned production volumes from being achieved.

Early warning systems help to identify supply risks and prevent assembly line stoppages. Furthermore, we counteract other risks with measures such as fire protection and hazardous goods management, and we take out corresponding insurance coverage where this makes economic sense.

Due to the uncertainty arising from the further development of the Covid-19 pandemic, the Russia-Ukraine conflict and associated sanctions, and the further development of the energy market, there is a risk throughout the automotive industry that looming supply breakdowns may not be recognized early enough and that countermeasures may not be initiated in time to maintain production.

Countermeasures to stabilize global production include, for example, monitoring the spread of infection and the measures taken to contain the pandemic, analyzing the impact on suppliers and supply and transport chains, finding alternatives where suppliers are unavailable and organizing special processes. Procurement, working together with all Group departments and the supplier network, was able to put these measures to the test in 2022, particularly in securing purchased parts from Ukraine. Through our organization, we are also keeping other global and local risks under observation and aim to be able to respond quickly to factors throughout the entire supply chain as a result.

Risks and opportunities from Procurement and Technology

Current trends in the automotive industry such as e-mobility and automated driving are resulting in an increased need for financing among suppliers, presenting them with considerable challenges. These are being exacerbated by the current commodity price situation and the limited availability of semiconductors. The supplier risk management department in Procurement at the Volkswagen Group evaluates suppliers, and particularly their financial situation, before they are entrusted with the implementation of projects. Procurement takes into account the recommendations of the supplier risk management department.

The risk of supply shortages and disruption to supply continues to exist, particularly given the current global geopolitical and macroeconomic situation. Examples include the continuing constraints in the supply of semiconductor components and the direct and indirect effects of the Russia-Ukraine conflict, including potential temporary interruptions to the energy supply.

Supply risks are identified in Procurement by means of early warning systems and task force and mitigation structures have been created to reduce these risks. In addition, strategic measures are to be taken to avoid future impacts in the long term.

A global economic slowdown exacerbated by trade disputes and the consequences of the Covid-19 pandemic, including sharply increased commodity and energy prices, is impacting the financial situation of many suppliers. This, too, is giving rise to the risk of bottlenecks and disruption in supply.

Procurement employees specialized in restructuring and supply reliability constantly monitor the financial situation of our suppliers throughout the world, taking measures designed to counter the risk of possible supply disruptions.

Demand for resources, possible speculations on the market and current trends in the automotive industry, such as the growing share of electrified vehicles, may affect the availability and prices of certain raw materials. Trends in raw materials and demand are continuously analyzed and assessed on an interdisciplinary basis to enable steps to be taken at an early stage in the event of potential bottlenecks.

The risks in battery cell production relate particularly to the rising demand for battery cells and the resulting reliance on suppliers, from technological change and from the service life of battery cells. Additional risks may arise from long-term ties to cell manufacturers and the direct responsibility of Volkswagen in the supply chain. To counter these risks, the Volkswagen Group maintains multiple strategic supplier relationships while extending the scope of its own activities along the value chain (raw material extraction, cell production) at the same time.

Commodity risks can be partially mitigated through backward integration of the value chain. For example, partnerships and long-term supply agreements with commodity suppliers can be used to ensure the supply of the relevant material while also achieving competitive prices.

Quality problems may necessitate technical intervention involving a substantial financial outlay if the cost cannot be passed on to the supplier or can only be passed on to a limited extent. Assuring quality is of fundamental importance, all the more so in the US, Brazilian, Indian and Chinese markets, for which we develop vehicles specific to the country and where local manufacturers and suppliers are established, particularly as it may be difficult to predict the impact of regulations or official measures. We constantly analyze the conditions specific to each market and adapt our quality requirements to their individual needs. We counter the local risks we identify by continuously developing measures and implementing them locally, thereby preventing quality defects in the supply chain from arising.

It is not possible at present to rule out the possibility of a further increase in recalls of various models produced by a variety of manufacturers in which certain airbags manufactured by Takata were installed. This could also affect Volkswagen Group models.

Specialists in Procurement systematically investigate risks resulting from antitrust violations by suppliers and file claims for any losses that may arise.

Risks in the supply chain may also arise from the non-fulfillment of statutory duty of care in respect of human rights and the environment, which might result in supply shortages. The requirements are compared with existing processes with the help of gap analyses, and processes are developed and implemented to fill in any gaps. In order to meet our duty of care in respect of human rights, and to identify, counteract and prevent the associated risks in the value chain, we developed a responsible supply chain system in 2022.

Production risks

Volatile developments in the global automotive markets, accidents at suppliers and disruptions in the supply chain, which could be exacerbated by Covid-19 lockdowns and the Russia-Ukraine conflict, may cause fluctuations in production volumes affecting both vehicle models and plants. In specific markets we are seeing a trend away from orders for conventional vehicles with combustion engines and towards increased orders for electric vehicles. We use established tools, such as flexible working time models, to address possible risks related to fluctuations in the mix of vehicle types. The international production network enables us to respond flexibly at the sites. “Turntable concepts” adjust capacity utilization between production facilities. Volatility and assembly line stoppages, for example due currently to the Russia-Ukraine conflict and possible temporary interruptions in the energy supply, can be balanced across brands at multibrand sites.

Potential disruption to our own operating ability or to the supply of inputs crucial for operation that is caused by extreme weather events in the form of flooding and drought, severe storms or similar may lead to production stoppages with financial ramifications for the Group. The Group counters this risk by systematically analyzing the impacts of climate change on its production sites in order to gauge the potential risks and recommend action in response.

Sudden changes in customer demand for specific equipment features in our products, and the decreasing predictability of demand, may lead to supply bottlenecks. We minimize this risk, for example, by continuously comparing our available resources against future demand scenarios. If bottlenecks in the supply of materials are indicated, we can introduce countermeasures far enough in advance.

Production capacity is planned several years in advance based on long-term sales planning for all vehicle projects. This involves a degree of risk as it is subject to market momentum and changes in demand. If forecasts are too optimistic, there is a risk that capacity will not be fully utilized. However, forecasts that are too pessimistic pose a risk of undercapacity, as a result of which, it may not be possible to meet customer demand. In the event of short-notice fluctuations in demand beyond the technical capacity that has been installed, Volkswagen or its suppliers may be unable to meet demand that goes beyond the available technical flexibility. We counter such risks by matching demand and capacity at frequent intervals and issuing program scheduling guidelines where necessary.

The diversity of our models, the reduced product life cycles and the use of complex processes and technical systems are associated with the risk of a delay to the start of production of a vehicle. We address this risk by drawing on the experience of past production starts and identifying weaknesses at an early stage so as to ensure – to the highest degree possible – that production volumes and quality standards are met during the start of production of our vehicles throughout the Group.

Legal changes, for instance in the context of the changeover to the WLTP test procedure, may impact production. For one thing, a temporary reduction in the range causes demand to focus on the available variants. Moreover, gaps in production can occur if model variants have not been approved. These fluctuations necessitate measures to stabilize production, such as the temporary storage of vehicles until official approval.

Risks arising from long-term production

In the case of large projects within the Power Engineering Business Area, risks may arise that are often only identified over the course of the project. They may result in particular from contract design errors, inaccurate or incomplete information used in costing, post-contract changes in the economic and technical environment, weaknesses in project management, quality defects and unnoticed product malfunctions, product emergence, or poor performance by subcontractors. Most notably, omissions at the start of a project, overshooting of the development budget or timeframe, and legislative changes are usually difficult to correct or compensate for and often entail substantial additional expenses. The current disproportionate increases in commodity prices, energy prices and freight rates, and the limited availability of semiconductor products, may have a detrimental impact on production costs and revenue recognition.

By constantly optimizing the project control process across all project phases and by using a lessons-learned process and regular project reviews, we aim to identify these risks at an early stage, particularly during the bidding and planning phase of large upcoming projects, and take appropriate measures to eliminate or minimize them.

Quality risks

We strive to identify and rectify quality problems at an early stage during the development of our products to avoid, among other things, delays to the start of production. As we are using an increasing number of modular components as part of our platform strategy, it is particularly important when malfunctions do occur to identify the cause quickly and eliminate the faults. Nonconformity of internally or externally sourced parts, components or functions may necessitate time-consuming and cost-intensive measures, leading to recalls and therefore damage to the Volkswagen Group's image. In addition, the resulting financial impact may exceed provisions. To meet our customers' expectations and minimize warranty and ex gratia repair costs, we are continuously optimizing the processes at our brands with which we can prevent these faults.

If quality management is ineffective, there is a risk of losing ISO 9001 and KBA certification. This would lead directly to a loss of type approval from one or more authorities. We counter this risk by continuously training the Group's system auditors, while our quality management system and process quality undergo internal audits.

We also check the conformity of series products (conformity of production – CoP) in vehicle production plants as part of system audits with a CoP component. Further risks are associated with discrepancies identified in conformity of production measurements and in-service-conformity (ISC) measurements. We have established an effective system for monitoring the conformity of CoP and ISC measurements for manufactured vehicles. To ensure that the results of the emissions CoP and ISC measurements are analyzed systematically, we have implemented an IT system throughout the Group. This is used for status reporting and documenting the results of the series of measurements.

Vehicle registration and operation criteria are defined and monitored by national and, in some cases, international authorities. Furthermore, several countries have special – and in some cases new – rules aimed at protecting customers in their dealings with vehicle manufacturers. We have established quality processes so that the Volkswagen Group brands and their products fulfill all respective applicable requirements and local authorities receive timely notification of all issues requiring reporting. By doing so, we reduce the risk of customer complaints or other negative consequences.

With the increasing technical complexity of vehicles due to their internal and external connectivity, and the platforms and toolkit systems in use across brands, the quality of the parts and software components supplied must be assured. This is lending ever greater importance to cyber security. To better monitor and manage the risk of cyber attacks on our vehicles in the future, we are establishing an Automotive Cyber Security Management System in all Group brands. Harmonized processes across the Group, such as the car security incident process, enable a fast reaction speed across the brands in the event of an attack so that any weaknesses in our products can be promptly eliminated. The Automotive Cyber Security Management System is an integral part of our quality management system, which helps us leverage synergies with already existing structures. This approach serves to fulfil the legal requirements of the UNECE regulation on cyber security, which have applied since mid-2022.

We have established the *Ausschuss Produktsicherheit* (APS – Product Safety Committee) to comprehensively evaluate and efficiently resolve product safety risks for customers as the product users. In the event of safety defects, doubts about compliance with legal requirements, or issues relating to the brand or corporate image, the APS examines the matter concerned and decides on how to respond. In this context, the APS is also responsible for managing related inquiries from authorities. The cross-divisional Car Security Board (CSB) provides support with regard to cyber security issues. We have also created and established central units within the organization, which are responsible for managing incoming information on APS- and CSB-related topics. In 2021, a universal, transparent management and tracking system was established to follow up on all such information across the Group without employee involvement, right through to the APS decision. In addition, numerous events and training courses are held to improve awareness of safety risks and products' legal conformity among all employees. These activities aim to avoid risks from delayed, erroneous or a lack of reporting and preliminary analyses. The entire APS process is, moreover, subject to regular review in the form of internal and external audits, aimed at minimising risks arising from delayed, erroneous or a lack of decisions and measures on the part of the APS or CSB.

IT risks

At Volkswagen, a global, software-oriented mobility provider, the information technology (IT) used in all business units Group-wide is assuming an ever more important role. IT risks exist in relation to the three protective goals of confidentiality, integrity and availability, and comprise in particular unauthorized access to, modification and extraction of sensitive electronic corporate or customer data as well as limited systems availability as a consequence of downtime, disasters and the volatile geopolitical situation. Proper handling of data is a key factor for data integrity, and for the functionality of error-free systems.

The high standards we set for the quality of our products also apply to the way in which we handle our customers' and employees' data. There is a risk of cyber attacks, particularly on our digital offerings relating to our mobility services. Legal regulations including the UNECE cyber security regulation (R155) define the requirements for our vehicle and software development. These also have a large impact on our IT systems. We therefore work on an interdisciplinary basis to protect our connected vehicles and mobility services. Our guiding principles are data security, transparency, informational self-determination and the safety and security of the customer when using our services.

We counter the risk of unauthorized access to, modification or extraction of corporate and customer data by using IT security technologies such as modern security systems for detecting malware and malicious behavior.

We achieve additional protection by restricting the allocation of access rights to systems and central administration, including periodic identity checks. Based on business impact analyses, we counter data destruction or disruption to operation by designing systems with redundancy and implementing backup strategies.

An overarching committee with members from Information Security, Data Protection, Group Security, Legal Affairs and other parties involved handles interdisciplinary information security and reports directly to the Group Board of Management. This enables a rapid response and the efficient coordination of measures in the event of a possible incident. The technical measures are complemented by a wide range of awareness-raising measures and training courses for employees that create and deepen awareness of information security issues.

We use commercially available technologies to protect our IT landscape, adhering to standards applicable throughout the Company. We future-proof our IT through continual standardization and updates. Continuously increasing automation enhances process reliability and the quality of processing.

The further development and Group-wide use of IT governance processes, particularly the further standardization of the risk management process for IT and information security, also help to identify weaknesses at an early stage and to reduce or avoid risks effectively.

Another focus is the continuous advancement of Group-wide security measures to detect, avert and deal with cyber threats.

Risks from media impact

The image of the Volkswagen Group and its brands is one of the most important assets and forms the basis for long-term business success. Our policy and strategic orientation on issues such as integrity, ethics, sustainability and climate protection are in the public focus. One of the basic principles of running our business is therefore to continuously check and pay particular attention to compliance with legal requirements and ethical principles. However, we are aware that misconduct or criminal acts by individuals and the resulting reputational damage can never be fully prevented. In addition, media reactions can have a negative effect on the image of the Volkswagen Group and its brands. This impact also depends significantly on the effectiveness of our communication during times of crisis.

Environmental and social risks

For this risk category, the likelihood of occurrence is classified as medium (previous year: high) and the potential extent of damage is classified as high (previous year: medium).

The most significant risks from the QRP arise from non-fulfillment of CO_2-related requirements.

Personnel risks

We use a range of instruments to counter economic risks as well as changes in the market and the competitive situation and shortages of supplier components. These help the Volkswagen Group to remain flexible in terms of staff deployment when faced with a fluctuating order situation – whether orders are in decline, or there is an increase in demand for our products. These instruments include time accounts to which hours are added when overtime is necessary and from which hours are deducted in quiet periods, enabling our factories to adjust their capacity to production volume with measures such as extra shifts, closure days, flexible shift models and legally regulated instruments such as *Kurzarbeit* (short-time working). The use of temporary workers also allows us to be more flexible in our planning. All of these measures help the Volkswagen Group to generally maintain a stable permanent workforce, even when orders fluctuate.

The technical expertise and individual commitment of employees are indispensable prerequisites for the success of the Volkswagen Group. We counter the risk of not being able to develop sufficient expertise in the Company's different vocational groups with our strategically oriented and holistic human resource development, which gives all employees attractive training and development opportunities. By boosting our training programs, particularly at our international locations, we are able to adequately address the challenges of technological change and the structural transformation of the automotive industry.

To counter the potential risk of a shortage of skilled specialists – especially in the areas of digitalization and IT – we continuously expand our recruitment tools. Our systematic talent relationship management, for example, enables us to make contact with talented candidates from strategically relevant target groups at an early stage and to build a long-term relationship between them and the Group. In addition to the standard dual vocational training, programs such as our integrated degree *Studium im Praxisverbund* and traineeship scheme, Faculty 73 and the Volkswagen-sponsored non-profit École 42 in Wolfsburg, Berlin and Prague, ensure a pipeline of highly qualified and motivated employees. By systematically increasing our attractiveness as an employer, we are able to gain talented people in areas that are crucial for the future, such as electrical engineering, chemistry or information technology. With tools such as these, we want to ensure that our demand for qualified new staff is covered, even amid a shortage of skilled labor.

We counter the risks associated with employee fluctuation and loss of knowledge as a result of retirement with intensive, department-specific succession planning and training.

The advancing digitalization of our human resources processes entails risks arising from the processing of personal data, but also system-based improvements so that Volkswagen can ensure compliance with data protection laws when processing personal data. Volkswagen is aware of its responsibility in the processing of this data. To make processing compliant with data protection requirements, we address risks as part of our data protection management system by implementing a wide range of measures.

The basis of successful occupational health and safety is complying with legal requirements, identifying and assessing work-related risks, determining appropriate measures and monitoring their effectiveness. This makes a positive contribution to maintaining the health of our employees as part of society. The spread of the SARS-CoV-2 virus underlines the high importance of effective health protection in the workplace. We aim to effectively reduce infection risks for the workforce and thereby minimize the risk of process disruptions and production stoppages.

Environmental protection regulations

The specific emission targets for all new passenger car and light commercial vehicle fleets for brands and groups in the EU for 2020 and subsequent years are set out in Regulation (EU) No 2019/631. This regulation is a material component of the European climate protection policy and therefore forms the key regulatory framework for product design and marketing by all vehicle manufacturers selling in the European market.

Adopted and published by the EU in 2019, the regulation states that, from 2021 onward, the average emissions of European passenger car fleets must be no higher than 95 g CO_2/km. Up to and including 2020, European fleet legislation was complied with on the basis of the New European Driving Cycle (NEDC). From 2021 onward, the NEDC target value was replaced by a WLTP target value through a process defined by lawmakers; this change has not led to additional tightening of the target value. A similar approach applies to light commercial vehicles, where a target of 147 g CO_2/km applied to the entire fleet from 2021 onward.

The targets are expected to be tightened as from 2025 (subject to publication in the EU Official Journal): for new European passenger car fleets, a reduction of 15% in CO_2 emissions will therefore be required from 2025 and a reduction of 55% from 2030. For new light commercial vehicle fleets, the required reductions will be 15% from 2025 and 50% from 2030. For 2035, a CO_2 reduction target of 100% will then apply to new passenger car and light commercial vehicle fleets. In each case, the starting point is the WLTP fleet value in 2021. These targets can only be achieved through a growing proportion of electric vehicles within the fleet.

If the respective fleet-wide target is not fulfilled, the Commission may impose an excess emissions premium, amounting to €95 per excess gram of CO_2 per newly registered vehicle.

At the same time, regulations governing fleet fuel consumption of new vehicles are also being developed or introduced outside the EU27 (plus Norway and Iceland), for example in Brazil, Canada, China, India, Japan, Mexico, Saudi Arabia, South Korea, Switzerland, Taiwan, the United Kingdom and the USA. Fuel consumption regulations in China are being gradually tightened with a fleet average target of 4.6 l/100 km (WLTP) for 2025. More stringent rules are expected for the period after 2025. In addition to this legislation on fleet consumption, a new energy vehicle quota applies in China. This requires every manufacturer to increase the share of electric vehicles in its total production or import volumes. For 2022, this quota was 16% and had to be fulfilled through battery-electric vehicles, plug-in hybrids, or fuel cell vehicles. For 2023, it is increasing by two percentage points to 18%, and a further rise is under discussion for 2024 and 2025. There is no indication as to possible targets after 2025.

In the USA, the annual CO_2 and efficiency targets to be fulfilled by the fleet for new passenger cars and light commercial vehicles are defined by the Greenhouse Gas legislation (GHG) and Corporate Average Fuel Economy legislation (CAFE). In December 2021, the current administration published new CO_2 fleet targets for the period from 2022 to 2026. The industry-wide fleet average for passenger cars and light commercial vehicles is to reduce from 137 g CO_2/km in 2022 to 106 g CO_2/km in 2026, reversing the relaxation of the targets by the previous government. The same applies to the CAFE efficiency targets for 2024 to 2026, which were announced in spring 2022. The fleet targets to be achieved will therefore become more stringent each year in the period up to 2026. The current government has set a goal for 50% of new vehicle sales to be electric by 2030. This is expected to be reflected in ambitious targets in future GHG and CAFE regulations. In addition to this, in California and the user states in the US, the regulations of the Californian zero-emission vehicle mandate must be adhered to, which prescribes annually increasing electrification rates for the new vehicle fleet. The aim is to fully electrify passenger cars and light commercial vehicles by 2035.

The tightening of fleet-based CO_2 emissions and fuel consumption regulations makes it necessary to use the latest mobility technologies in all affected markets. Above all, electrified and also purely electric drivetrains are becoming increasingly common. The Volkswagen Group closely coordinates technology and product planning with its brands so as to avoid breaches of fleet values, for example, which would entail severe payment obligations. Whether the Group meets its fleet targets depends crucially on its technological and financial capabilities, which are reflected in, for example, our drivetrain and fuel strategy.

Alongside technical and portfolio electrification measures, it is also possible to use local statutory mechanisms such as the creation of emission pools in Europe, for example, or the trading of emission credits in the United States and China. Legislation provides further region-specific flexibility to aid target achievement. For example:

- Additional innovative technologies in the vehicle that apply outside the test cycle to reduce consumption (eco-innovations and off-cycle credits) can be taken into consideration
- Particularly efficient vehicles qualify for super-credits
- Special rules are in place for small-series producers and niche manufacturers

In the EU, a new test procedure has applied to all new vehicles since September 2018 with the WLTP. Other challenges arise in connection with stricter processes and requirements regarding WLTP, such as from test criteria and homologation (achievement of vehicle type approvals).

The Real Driving Emissions (RDE) Regulation for passenger cars and light commercial vehicles is another of the main European regulations. New, uniform limits for nitrogen oxide and particulate emissions in real road traffic have applied to new vehicle types across the EU since September 2017. This makes the RDE test procedure fundamentally different from the Euro 6 standard still in force, which stipulates that the limits on the chassis dynamometer are authoritative. The RDE regulation is intended primarily to improve air quality in urban areas and areas close to traffic, leading to stricter requirements for exhaust gas aftertreatment in passenger cars and light commercial vehicles. Stricter RDE processes and requirements have resulted in certain challenges, for example relating to test criteria and homologation. The debate on successor emissions legislation (Euro 7) began at European level in late 2022. A final regulation is not expected before 2023 or early 2024. It is anticipated that this successor regulation will enter into force in the middle of the decade.

The other main EU regulations affecting the automotive industry include:

- The Car Labeling Directive 1999/94/EC
- The Fuel Quality Directive (FQD) 2009/30/EC updating the fuel quality specifications and introducing energy efficiency specifications for fuel production
- The Renewable Energy Directive (RED) (2009/28/EC) introducing sustainability criteria; the follow-up regulation (RED2) contains higher quotas for advanced biofuels
- The revised Energy Taxation Directive 2003/96/EC updating the minimum tax rates for all energy products and electricity

Commercial vehicles are increasingly subject to ever stricter environmental regulations all around the world, particularly to regulations relating to climate change and vehicle emissions. For example, with Regulation (EU) 2019/1242 of June 20, 2019, which specifies CO_2 emission standards for new heavy commercial vehicles with a permitted gross weight of over 16 tonnes, the EU has set manufacturers very ambitious targets for reducing CO_2 emissions within the next decade. The CO_2 emissions from such vehicles must be reduced by 15% by 2025 and 30% by 2030 compared to a reference value for a monitoring period from July 2019 to June 2020. If emissions exceed these targets, vehicle manufacturers will be liable to substantial premiums, amounting to €4,250 per excess gram of CO_2/tonne-kilometer (tkm) per vehicle for the period from 2025 to 2029 and €6,800 per excess gram of CO_2/tkm per vehicle for the period from 2030 onward. The target of a greenhouse gas emissions reduction of 30% by 2030 set out in the regulation was revised at the beginning of 2023. The European Commission proposes a 45% CO_2 emissions reduction compared to the reference value by 2025, scaling up to 65% by 2035 and 90% by 2040.

In the European Green Deal, the Commission defined the goal of achieving climate neutrality by 2050. Targeting a general reduction in EU CO_2 emissions of at least 55% (previously 40%) compared to 1990 levels by 2030, this represents a big challenge for the entire transport sector. The revision of CO_2 emission requirements for heavy-duty vehicles planned in the EU for spring 2023 and the proposals for a new Euro 7 standard that have already been published could further exacerbate these challenges.

Commercial vehicle manufacturers in Brazil will face newer regulations on reducing pollutant emissions from 2023. In the United States, emission regulations for CO_2 and nitrogen oxide (NO_x) are also likely to be tightened further for heavy-duty vehicles. CO_2 reductions based on 2016 emission levels have already been defined for 2024 and 2027. The United States is finalizing a new NO_x regulation that is due to enter into force in 2027.

Adapting commercial vehicles to new emission standards is technologically complex and expensive, especially given the often technically contradictory regulations applicable to CO_2 and other pollutant emissions from internal combustion engines. To meet the targets for the different markets, it is imperative to reduce CO_2 and exhaust gas emissions through new technologies. This is why we are making substantial investments in climate-friendly alternative drive systems – especially battery-electric commercial vehicles and buses.

The debate around driving bans for diesel vehicles in Germany has lost some of its heat given the strong improvements in air quality measurements. There were only two cities that failed to comply with the air pollutant limits for nitrogen dioxide (NO_2) immissions in 2022. In some cases, these issues have been, and continue to be, the subject of legal proceedings. Individual cities throughout Germany have already imposed zonal traffic bans for older vehicles such as Euro 4/IV diesel. It is argued that only driving bans for diesel vehicles can bring about the necessary short-term reduction in NO_2 immissions. The aforementioned debate could negatively affect sales of diesel vehicles and result in financial liabilities and possible official requirements.

Local bans on the use of diesel vehicles are already also in place in a number of other countries, though these mainly affect older vehicles with lower emissions standards. Regulations in Belgium that successively ban older vehicles from larger cities are one example. In addition to major cities such as Paris and London, countries like the United Kingdom are now discussing future bans on vehicles with internal combustion engines.

A number of special environmental protection requirements apply to the Power Engineering segment. For example, the International Maritime Organization has issued the International Convention for the Prevention of Pollution from Ships (MARine POLlution – MARPOL), which applies to ship engines. The permitted emissions are being lowered in phases under MARPOL ANNEX VI. A reduction of the sulfur content in marine fuel has been implemented globally in recent years. Particularly stringent environmental regulations apply in emission control areas in Europe and the USA/Canada. Expansion to further regions such as the Mediterranean or Japan is being planned; other regions or territories such as the Black Sea, Alaska, Australia or South Korea are also in discussion. Moreover, emission limits are in force under Regulation (EU) 2016/1628 and in accordance with the regulations of the US Environmental Protection Agency (EPA), for example.

We are pushing for a maritime energy transition in specialist bodies and also promote this to the general public. In a first step, we are supporting the switch to liquefied natural gas (LNG) as a fuel for maritime applications, and offer dual fuel and gas-powered engines for new and retrofitted vessels. For long-term, climate-neutral operation of seagoing vessels, we advocate power-to-X technology, in which excess sustainably generated electricity is converted into carbon-neutral gas or liquid fuel, especially hydrogen, methanol or ammonia.

As regards stationary equipment, there are a number of national rules in place worldwide that limit permitted emissions. On December 18, 2008, the World Bank Group set limits for gas and diesel engines in its Environmental, Health, and Safety Guidelines for Thermal Power Plants. These guidelines, which are currently being revised, are required to be applied in countries that have adopted no national requirements of their own or have requirements that are less stringent. In addition, the United Nations adopted the Convention on Long-range Transboundary Air Pollution back in 1979, setting limits on total emissions as well as nitrogen oxide for the signatory states (including all EU states, other countries in Eastern Europe, the USA and Canada). These are also due for revision. Enhancements to the product portfolio in the Power Engineering segment focus on improving the efficiency and emissions reduction of equipment and systems. While adhering to current and future emissions requirements, we are advancing a series of innovative energy solutions to actively shape the climate transition.

Legal risks

For this risk category, the likelihood of occurrence is classified as medium (previous year: medium) and the potential extent of damage is classified as high (previous year: medium).

The most significant risks from the QRP are associated with the diesel issue.

Litigation

Volkswagen AG and the companies in which it is directly or indirectly invested are involved in a substantial number of legal disputes and governmental proceedings in Germany and abroad. Such legal disputes and other proceedings occur, among other things, in connection with products and services or in relation to employees, public authorities, dealers, investors, customers, suppliers, or other contracting parties. For the companies in question, these disputes and proceedings may result in payments such as fines or in other obligations or consequences. In particular, substantial compensatory or punitive damages may have to be paid and cost-intensive measures may have to be implemented. In this context, specific estimation of the objectively likely consequences is often possible only to a very limited extent, if at all.

Various legal proceedings are pending worldwide, particularly in the USA, in which customers are asserting purported product-related claims, either individually or in class actions. These claims are as a rule based on alleged vehicle defects, including defects alleged in vehicle parts supplied to the Volkswagen Group.

Compliance with legal or regulatory requirements is another area in which risks may arise. This is particularly true in gray areas where Volkswagen and the relevant public authorities may interpret the law differently.

In connection with their business activities, Volkswagen Group companies engage in constant dialogue with regulatory agencies, including the *Kraftfahrt-Bundesamt* (KBA – German Federal Motor Transport Authority). It is not possible to predict with assurance how government regulators will assess certain issues of fact and law in a particular situation. For this reason, the possibility that certain vehicle characteristics and/or type approval aspects may in particular ultimately be deemed deficient or impermissible cannot be ruled out. This is fundamentally a question of the regulatory agency's specific evaluation in a concrete situation.

A comparable challenge results from the tension between divergent national and international statutory or regulatory requirements regarding obligations to transfer information or documents, on the one hand, and privacy mandates under national and international data protection law on the other. Volkswagen is advised by outside law firms on these issues so as to preclude compliance violations as far as possible despite the sometimes unclear state of the law.

Litigation may furthermore result from demands for more extensive climate protection measures or from allegedly incomplete disclosures regarding the impact of climate change. The response of the Volkswagen Group to this risk includes, among other things, certification of its self-imposed decarbonization targets through independent and internationally respected organizations and systematic alignment of its non-financial reporting with the requirements of the law and the capital markets.

Risks may also result from actions for infringement of intellectual property, including infringement of patents, brands, or other third-party rights, particularly in Germany and the USA. If Volkswagen is alleged or determined to have violated third-party intellectual property rights, it may for instance have to pay damages, modify manufacturing processes, or redesign products, and may be barred from selling certain products; this may result in delivery and production restrictions or interruptions.

Criminal acts by individuals, which even the best compliance management system can never completely prevent, are another potential source of legal risks.

Appropriate insurance has been taken out to cover these risks where they were sufficiently definite and such coverage was economically sensible. Where necessary based on the information currently available, identified and correspondingly measurable risks have been reflected by recognizing provisions in amounts considered appropriate or disclosing contingent liabilities, as the case may be. As some risks cannot be assessed or can only be assessed to a limited extent, the possibility of material loss or damage not covered by the insured amounts or by provisions cannot be ruled out. This is, for instance, the case with regard to the legal risks assessed in connection with the diesel issue.

Unless otherwise explicitly stated, the amounts disclosed for the litigation being reported on refer only to the respective principal claim. Ancillary claims, such as for interest and litigation expense, are generally not considered.

Diesel issue

On September 18, 2015, the US Environmental Protection Agency (EPA) publicly announced in a “Notice of Violation” that irregularities in relation to nitrogen oxide (NO_x) emissions had been discovered in emissions tests on certain Volkswagen Group vehicles with 2.0 l diesel engines in the USA. In this context, Volkswagen AG announced that noticeable discrepancies between the figures recorded in testing and those measured in actual road use had been identified in type EA 189 diesel engines and that this engine type had been installed in roughly eleven million vehicles worldwide. On November 2, 2015, the EPA issued a “Notice of Violation” alleging that irregularities had also been discovered in the software installed in US vehicles with type V6 3.0 l diesel engines.

The so-called diesel issue is rooted in a modification of parts of the software of the relevant engine control units – which, according to Volkswagen AG’s legal position, is only unlawful under US law – for the type EA 189 diesel engines that Volkswagen AG was developing at that time. This software function was developed and implemented from 2006 on without knowledge at the level of the Board of Management. Members of the Board of Management did not learn of the development and implementation of this software function until the summer of 2015.

There are furthermore no findings that, following the publication in May 2014 of the study by the International Council on Clean Transportation, an unlawful “defeat device” under US law was disclosed to the persons responsible for preparing the 2014 annual and consolidated financial statements as the cause of the high NO_x emissions in certain US vehicles with 2.0 l type EA 189 diesel engines. Rather, at the time the 2014 annual and consolidated financial statements were being prepared, the persons responsible for preparing these financial statements remained under the impression that the issue could be resolved with comparatively little expense. In the course of the summer of 2015, however, it became progressively apparent to individual members of Volkswagen AG’s Board of Management that the cause of the discrepancies in the USA was a modification of parts of the software of the engine control unit that was later identified as an unlawful “defeat device” as defined by US law. This culminated in Volkswagen's disclosure of a “defeat device” to the EPA and the California Air Resources Board (CARB), a department of the Environmental Protection Agency of the State of California, on September 3, 2015. According to the assessment at the time by the responsible persons dealing with the matter, the magnitude of the costs expected to result for the Volkswagen Group (recall costs, retrofitting costs, and financial penalties) was not fundamentally dissimilar to that in previous cases involving other vehicle manufacturers. It therefore appeared to be manageable overall considering the business activities of the Volkswagen Group. This assessment by Volkswagen AG was based, among other things, on the advice of a law firm engaged in the USA for regulatory approval issues, according to which similar cases had in the past been amicably resolved with the US authorities. The EPA’s publication of the “Notice of Violation” on September 18, 2015, which the Board of Management had not expected, especially at that time, then presented the situation in an entirely different light.

The AUDI AG Board of Management members in office at the time in question have likewise stated that they had no knowledge of the use of “defeat device” software that was prohibited by US law in the type V6 3.0 l TDI engines until the EPA issued its November 2015 “Notice of Violation.”

Within the Volkswagen Group, Volkswagen AG has development responsibility for the four-cylinder diesel engines and AUDI AG has development responsibility for the six- and eight-cylinder diesel engines.

As a consequence of the diesel issue, numerous judicial and regulatory proceedings were initiated in various countries. Volkswagen has in the interim succeeded in making substantial progress and ending many of these proceedings. In the USA, Volkswagen AG and certain affiliates reached settlement agreements with various government authorities and private plaintiffs, the latter represented by a Plaintiffs’ Steering Committee in a multidistrict litigation in the US state of California. The agreements in question include various partial consent decrees as well as a plea agreement that resolved certain civil claims as well as criminal charges under US federal law and the laws of certain US states in connection with the diesel issue. Although Volkswagen is firmly committed to fulfilling the obligations arising from these agreements, a breach of these obligations cannot be completely ruled out. In the event of a violation, significant penalties could be imposed as stipulated in the agreements, in addition to the possibility of further monetary fines, criminal sanctions and injunctive relief.

In agreement with the respective responsible authorities, the Volkswagen Group is making technical measures available worldwide for virtually all diesel vehicles with type EA 189 engines. For all clusters (groups of vehicles) within its jurisdiction, the KBA determined that implementation of the technical measures would not result in any adverse changes in fuel consumption, CO_2 emissions, engine output, maximum torque, and noise emissions.

Following the studies carried out by AUDI AG to check all relevant diesel concepts for possible irregularities and retrofit potential, measures proposed by AUDI AG have been adopted and mandated by the KBA in various recall orders pertaining to vehicle models with V6 and V8 TDI engines. AUDI AG continues to anticipate that the total cost, including recall expenses, of the ongoing largely software-based retrofit program that began in July 2017 will be manageable and has recognized corresponding balance-sheet risk provisions. AUDI AG has in the meantime developed software updates for many of the affected powertrains and, after approval by the KBA, already installed these updates in the vehicles of a large number of affected customers. KBA approval is still expected for the small number of software updates that are still pending.

In connection with the diesel issue, potential consequences for Volkswagen’s results of operations, financial position and net assets could emerge primarily in the following legal areas:

1. Criminal and administrative proceedings worldwide (excluding the USA/Canada)

Criminal investigations, regulatory offense proceedings, and/or administrative proceedings have been commenced in some countries. Criminal investigations into the core factual issues are being conducted by the Offices of the Public Prosecutor in Braunschweig and Munich.

In January 2021, the criminal proceedings regarding alleged market manipulation relating to capital market disclosure obligations in connection with the diesel issue were terminated by the Braunschweig Regional Court provisionally as regards the former Chair of the Board of Management and definitively as regards the corresponding regulatory offense proceeding against Volkswagen AG. The Braunschweig Office of the Public Prosecutor has in the meantime filed a motion with the Braunschweig Regional Court to reopen the proceedings against the former Chair of the Board of Management. A final ruling on this motion is still pending.

In September 2020, the Braunschweig Regional Court allowed the indictment of the same former Chair of the Board of Management of Volkswagen AG to proceed on charges that include fraud in connection with the diesel issue involving type EA 189 engines. The proceedings against this former Chair of the Board of Management of Volkswagen AG have since been severed from the other cases. The trial of the other defendants began in September 2021.

The Braunschweig Office of the Public Prosecutor is continuing its investigations on suspicion of fraud in connection with type EA 288 engines.

In June 2020, the Munich II Regional Court accepted the substantially unchanged indictment of the Munich II Office of the Public Prosecutor, which also names a former Chair of the Board of Management of AUDI AG, and opened the main trial proceedings on charges of, among other things, fraud in connection with the diesel issue involving 3.0 l and 4.2 l TDI engines. Trial proceedings commenced in September 2020.

In August 2020, the Munich II Office of the Public Prosecutor issued a further indictment charging three former members of the Board of Management of AUDI AG and others with, among other things, fraud in connection with the diesel issue involving 3.0 l and 4.2 l TDI engines. The criminal investigation conducted by the Stuttgart Office of the Public Prosecutor against a member of the Board of Management of Dr. Ing. h.c. F. Porsche AG and others on suspicion of fraud and illegal advertising relating to the diesel issue has in the interim been terminated at the end of April 2022, as regards *inter alia* the Board of Management member, against payment of a sum set by the court.

As the type approval authority of proper jurisdiction, the KBA is moreover continuously testing Audi, Volkswagen, and Porsche brand vehicles for problematic functions. If certain functions are deemed impermissible by the KBA, the affected vehicles are recalled pursuant to a recall order or they are brought back into compliance by means of a voluntary service measure.

In judgments rendered in July and November 2022, the European Court of Justice (ECJ) ruled that a so-called thermal window (i.e. a temperature-dependent exhaust gas recirculation) in the range of 15°C and 33°C outside temperature represents a defeat device. In this context, the ECJ has developed a new, unwritten criterion according to which a thermal window, even if it serves to prevent sudden and extraordinary damage, is impermissible if it is active “for most of the year under real driving conditions prevalent in the territory of the European Union.” Volkswagen Group is assessing the effects of this new vehicle engineering criterion. The KBA has commenced formal administrative proceedings relating to certain first generation type EA 896 engines deployed in certain older vehicle models. Volkswagen Group is in discussion with the KBA on this issue.

At the end of February 2023, the Schleswig Administrative Court in a court of first instance judgment upheld a lawsuit brought by *Deutsche Umwelthilfe* (Environmental Action Germany) against the KBA and ordered the KBA to revoke the release notice for the software update for certain older Golf Plus models, insofar as the release notice relates to the thermal window. Volkswagen will review the decision once the written reasoning is available and decide on further measures.

Moreover, additional administrative proceedings relating to the diesel issue are ongoing in other jurisdictions.

The companies of the Volkswagen Group are cooperating with the government authorities.

Risks may furthermore result from possible decisions by the European Court of Justice construing EU type approval provisions.

Whether the criminal and administrative proceedings will ultimately result in fines or other consequences for the Company, and if so what amounts these may entail, is currently subject to estimation risks. According to Volkswagen’s estimates, the likelihood that a sanction will be imposed is 50% or less in the majority of these proceedings. Contingent liabilities have therefore been disclosed where the amount of such liabilities could be measured and the likelihood of a sanction being imposed was assessed at not less than 10%.

2. Product-related lawsuits worldwide (excluding the USA/Canada)
A general possibility exists that customers in the affected markets will file civil lawsuits or that importers and dealers will assert recourse claims against Volkswagen AG and other Volkswagen Group companies. Besides individual lawsuits, various forms of collective actions (i.e. assertion of individual claims by plaintiffs acting jointly or as representatives of a class) are available in various jurisdictions. Furthermore, in a number of markets it is possible for consumer and/or environmental organizations to bring suit to enforce alleged rights to injunctive relief, declaratory judgment, or damages.

Customer class action lawsuits and actions brought by consumer and/or environmental organizations are pending against Volkswagen AG and other Volkswagen Group companies in a number of countries including Belgium, Brazil, England and Wales, France, Germany, Italy, the Netherlands, Portugal, and South Africa. Alleged rights to damages and other relief are asserted in these actions. The pending actions include in particular the following:

In Belgium, the Belgian consumer organization Test Aankoop VZW has filed a class action to which an opt-out mechanism has been held to apply. Given the opt-out rule, the class action potentially covers all vehicles with type EA 189 engines purchased by consumers on the Belgian market after September 1, 2014, unless the right to opt out is actively exercised. The asserted claims are based on purported violations of unfair competition and consumer protection law as well as on alleged breach of contract.

In Brazil, two consumer protection class actions are pending. In the first class action, which pertains to some 17 thousand Amarok vehicles, the Superior Court of Justice in August 2022 rejected in part the appeal filed by Volkswagen do Brasil against the May 2019 judgment at the first appeals level that had initially reduced the damage liability of Volkswagen do Brasil considerably to around BRL172 million. Volkswagen do Brasil has appealed this decision. The judgment therefore remains non-final. The plaintiff in the second class action, which pertains to roughly 67 thousand later generation Amaroks, has appealed the trial court's October 2021 judgment dismissing the complaint.

The financialright GmbH filed consolidated actions before various German courts asserting claims assigned to it by customers in Germany, Slovenia, and Switzerland against Volkswagen Group companies. Following the withdrawal of numerous motions for relief, approximately 33 thousand claims are currently still pending. Some cases have in the meantime moved to the first or second appeals level. In Germany, the *Bundesgerichtshof* (BGH – Federal Court of Justice) rendered a judgment in June 2022 holding, in a case involving the damage claims of Swiss vehicle purchasers, that the assignment of claims to financialright GmbH was valid. The BGH did not address the merits of the claims.

In England and Wales, the roughly 91 thousand claims of the group litigation against the Volkswagen Group were settled out of court in May 2022 for the sum of £193 million as well as a separate amount for the plaintiffs' attorney fees and other costs.

In addition, in late 2021 a new lawsuit was filed in court against Volkswagen AG, Volkswagen Financial Services (UK) Limited, and other Volkswagen Group companies in connection with certain diesel vehicles leased or sold in England, Wales, and Northern Ireland since 2009 and various other diesel engine types.

In France, a class action is pending that was filed by the French consumer organization Confédération de la Consommation, du Logement et du Cadre de Vie (CLCV) against Volkswagen Group Automotive Retail France and Volkswagen AG for up to 1 million French owners and lessees of vehicles with type EA 189 engines. This is an opt-in class action.

In Italy, a trial level judgment in favor of the plaintiffs by the Venice Regional Court in the class action brought by the consumer association Altroconsumo on behalf of Italian customers was announced in July 2021; the judgment requires Volkswagen AG and Volkswagen Group Italia to pay damages to some 63 thousand consumers in an aggregate amount of roughly €185 million. Volkswagen AG and Volkswagen Group Italia have appealed this decision.

In the Netherlands, an opt-out class action is pending that was brought by Stichting Volkswagen Car Claim seeking declaratory rulings for up to 165 thousand customers. A declaratory judgment partially granting the relief sought was issued in July 2021. In the opinion of the court, Volkswagen AG and the other defendant Group companies acted unlawfully with respect to the original engine management software.

The court moreover held that consumers are entitled to a purchase price reduction from the defendant dealerships. No specific payment obligations result from the declaratory judgment. Any individual claims would then have to be established afterwards in separate proceedings. Volkswagen AG and the other defendant Group companies have appealed the decision. Furthermore, an opt-out class action lawsuit brought by the Diesel Emissions Justice Foundation (DEJF) seeking monetary damages on behalf of Dutch consumers is also pending; the action involves vehicles with type EA 189 engines, among others. The court rendered an interlocutory judgment in March 2022 holding the new class action regime – which permits damage awards in addition to declaratory judgment on the existence of claims – to be inapplicable to the instant lawsuit. The interlocutory judgment further finds that the Amsterdam court lacks jurisdiction to hear lawsuits brought by consumers outside the Netherlands. The DEJF appealed this judgment. The court then suspended the trial level proceedings pending a decision by the appellate court.

In Portugal, a Portuguese consumer organization has filed an opt-out class action. The class action potentially affects up to approximately 70 thousand vehicles with type EA 189 engines. The complaint seeks vehicle return and alleges damages as well.

In South Africa, an opt-out class action seeking damages is pending; the action pertains to some 80 thousand vehicles, including vehicles with type EA 189 engines.

Furthermore, individual lawsuits and similar proceedings are pending against Volkswagen AG and other Volkswagen Group companies in various countries; most of these lawsuits are seeking damages or rescission of the purchase contract.

In Germany, roughly 40 thousand individual lawsuits relating to various diesel engine types are currently pending against Volkswagen AG or other Group companies, with the plaintiffs suing for damages or rescission of the contract in most cases.

In 2020, the BGH issued a series of fundamental judgments deciding legal issues of major importance for the litigation still pending with regard to vehicles with type EA 189 engines. The BGH held that buyers who had purchased vehicles prior to public disclosure of the diesel issue could return their vehicles to Volkswagen AG and receive a refund of the purchase price paid, less a deduction for the benefit derived from using the vehicle. However, buyers have no tort-based claim for damages if they purchased their vehicles after the ad hoc announcement of September 22, 2015 or if they raise claims based solely on a temperature-dependent exhaust gas recirculation (so-called thermal window) in the engine. In February 2022, the BGH issued further fundamental judgments concerning vehicles with EA 189 motors affirming that buyers of new vehicles of the Volkswagen brand were entitled to residual damage claims against Volkswagen AG after the knowledge-based limitation period has expired; the BGH had previously held that purchasers of used cars lacked such claims. The BGH held that buyers must return their vehicles in order to claim payment and that such payment was reduced by the benefit derived from using the vehicle and by the dealer profit margin. In an additional fundamental judgment rendered in July 2022 concerning vehicles with EA 189 engines, the BGH held that buyers of new vehicles of other Group brands have no claim for residual damages against Volkswagen AG.

Volkswagen estimates the likelihood that the plaintiffs will prevail to be 50% or less in the great majority of cases: customer class actions, complaints filed by consumer and/or environmental organizations, and individual lawsuits. Contingent liabilities are disclosed for these proceedings where the amount of such liabilities can be measured and the chance that the plaintiff will prevail was assessed as not remote. Given the early stage of the proceedings, it is in some cases not yet possible to quantify the realistic risk exposure. Furthermore, provisions were recognized to the extent necessary based on the current assessment.

At this time, it cannot be estimated how many customers will choose to file lawsuits in the future in addition to those already pending and what prospect of success such lawsuits might have.

3. Lawsuits filed by investors worldwide (excluding the USA/Canada)
Investors from Germany and abroad have filed claims for damages against Volkswagen AG – in some cases along with Porsche Automobil Holding SE (Porsche SE) as joint and several debtors – based on purported losses due to alleged misconduct in capital market communications in connection with the diesel issue.

The vast majority of these investor lawsuits are currently pending before the Braunschweig Regional Court. In August 2016, the Braunschweig Regional Court issued an order referring common questions of law and fact relevant to the investor lawsuits pending before it to the Higher Regional Court in Braunschweig for binding declaratory rulings pursuant to the *Kapitalanleger-Musterverfahrensgesetz* (KapMuG – German Capital Investor Model Declaratory Judgment Act). In this proceeding, common questions of law and fact relevant to these actions are to be adjudicated by the Braunschweig Higher Regional Court in a single consolidated proceeding (model case proceedings). The investor lawsuits pending against Volkswagen AG in Germany are stayed pending resolution of the common issues, unless the cases can be dismissed for reasons independent of the common issues that are to be adjudicated in the model case proceedings. The resolution in the model case proceedings of the common questions of law and fact will be binding for the pending cases that have been stayed as described. The model case plaintiff is Deka Investment GmbH. Oral argument in the model case proceedings before the Braunschweig Higher Regional Court began in September 2018 and is continuing at subsequent hearings. The latest indication from the court was that it may hear witness testimony on certain points.

Further investor lawsuits have been filed with the Stuttgart Regional Court against Volkswagen AG, in some cases along with Porsche SE as joint and several debtor. A further investor action for model declaratory judgment is pending before the Stuttgart Higher Regional Court against Porsche SE; Volkswagen AG is involved in this action as a third party intervening in support of a party to the dispute. The Wolverhampton City Council, Administrating Authority for the West Midlands Metropolitan Authorities Pension Fund, has been appointed model case plaintiff. Oral argument in this case began in July 2021 and continued in subsequent hearings. The court has scheduled a hearing in the spring of 2023 at which it will deliver its decision.

Excluding the United States and Canada and following the withdrawal of various actions, claims in connection with the diesel issue totaling roughly €9.5 billion are currently pending worldwide against Volkswagen AG in the form of investor lawsuits, judicial applications for dunning and conciliation procedures, and claims under the KapMuG. Volkswagen AG remains of the opinion that it duly complied with its capital market obligations. Therefore, no provisions have been recognized for these investor lawsuits. Contingent liabilities have been disclosed where the chance of success was estimated to be not less than 10%.

4. Proceedings in the USA/Canada
In the USA and Canada, the matters described in the EPA's "Notices of Violation" are the subject of various types of lawsuits and requests for information that have been filed against Volkswagen AG and other Volkswagen Group companies, in particular by customers, investors, and various government agencies in Canada and the United States.

In January 2017, Volkswagen entered into a Third Partial Consent Decree with the DOJ and the EPA, which the federal court in the multidistrict litigation approved in April 2017. The Third Partial Consent Decree resolved claims for civil penalties and injunctive relief under the Clean Air Act related to the 2.0 l and 3.0 l TDI vehicles, and imposed a civil penalty as well as monitoring, auditing, and compliance obligations. In July 2017, the court furthermore approved the Third California Partial Consent Decree, in which Volkswagen agreed with the California Attorney General and CARB to pay civil penalties and cost reimbursements. Subsequently, Volkswagen sought to terminate both consent decrees on the basis that all requirements had been met, and the US and California authorities agreed to the termination, which the court granted in September 2022.

The Texas attorney general and some municipalities continue to pursue actions in state and federal courts against Volkswagen AG, Volkswagen Group of America, Inc., and certain affiliates, alleging violations of environmental laws. In January 2022, the Texas Supreme Court granted the February 2021 petition of the State of Texas for review of the Texas appellate court decision that had dismissed the environmental claims of Texas against Volkswagen AG and AUDI AG for lack of personal jurisdiction.

In November 2021, the US Supreme Court denied petitions by Volkswagen requesting that it review both a decision by the US Court of Appeals for the Ninth Circuit declining to dismiss certain claims brought by Hillsborough County, Florida, and Salt Lake County, Utah, and a decision by the Ohio Supreme Court declining to dismiss certain claims brought by the State of Ohio.

In January 2022, Volkswagen settled environmental claims brought by Ohio.

In March 2019, the US Securities and Exchange Commission (SEC) filed a lawsuit against, among others, Volkswagen AG, Volkswagen Group of America Finance, LLC, and VW Credit, Inc., asserting claims under US federal securities law based, among other things, on alleged misstatements and omissions in connection with the offer and sale of certain bonds and asset-backed securities. In August 2020, the US District Court for the Northern District of California dismissed, among other things, all claims against VW Credit, Inc. relating to asset-backed securities. In September 2020, the SEC filed an amended complaint that, among other things, removed the dismissed claims. The pre-trial discovery phase is still ongoing.

As to private civil law matters, the Superior Court of Quebec approved the settlement of an environmental class action lawsuit seeking punitive damages on behalf of the residents of the Province of Quebec in June 2022; an appeal of that approval on the limited subject of counsel fees has been dismissed in the meantime so that the settlement may now proceed.

In line with IAS 37.92, no statements have been made concerning estimates of financial impact or regarding uncertainty as to the amount or maturity of provisions and contingent liabilities in relation to proceedings in the USA/Canada. This is so as to not compromise the results of the proceedings or the interests of the Company.

5. Special audit

In a November 2017 ruling, the Higher Regional Court of Celle ordered, upon the request of three US funds, the appointment of a special auditor for Volkswagen AG. The special auditor was supposed to examine whether the members of the Board of Management and Supervisory Board of Volkswagen AG breached their duties in connection with the diesel issue from June 22, 2006 onwards and, if so, whether this resulted in damages for Volkswagen AG. Volkswagen AG had filed a constitutional complaint with the German Federal Constitutional Court against this decision, which was originally unappealable as a formal matter. Volkswagen AG also filed a constitutional complaint against the subsequent (and likewise formally unappealable) decision by the Higher Regional Court of Celle to appoint a special auditor other than the one initially appointed. In rulings announced in November 2022, the Federal Constitutional Court found both constitutional complaints to be meritorious and held that the decisions of the Higher Regional Court of Celle violated the constitutional rights of Volkswagen AG in multiple respects. The decisions of the Higher Regional Court were vacated and the case was remanded to this court. Volkswagen AG had in addition previously filed an action before the Braunschweig Regional Court seeking to enjoin the special auditor from performing the audit as long as he had not furnished sufficient proof of his independence.

The Braunschweig Regional Court dismissed the action for injunctive relief in the summer of 2022; Volkswagen AG then appealed this decision to the Braunschweig Higher Regional Court.

A second motion seeking appointment of a special auditor for Volkswagen AG to examine matters relating to the diesel issue was filed with the Regional Court of Hanover. This proceeding was stayed pending the decision by the Federal Constitutional Court in the initial special auditor litigation. No decision whether to resume the proceeding has as yet been issued.

6. Risk assessment regarding the diesel issue

An amount of around €1.4 (2.1) billion has been included in the provisions for litigation and legal risks as of December 31, 2022 to account for the currently known legal risks related to the diesel issue based on the presently available information and the current assessments. Where adequately measurable at this stage, contingent liabilities relating to the diesel issue have been disclosed in the notes in an aggregate amount of €4.2 (4.3) billion, whereby roughly €3.6 (3.6) billion of this amount results from lawsuits filed by investors in Germany. The provisions recognized, the contingent liabilities disclosed, and the other latent legal risks in the context of the diesel issue are in part subject to substantial estimation risks given the complexity of the individual relevant factors, the ongoing coordination with the authorities, and the fact that the fact-finding efforts have not yet been concluded. Should these legal or estimation risks materialize, this could result in further substantial financial charges. In particular, adjustment of the provisions recognized in light of knowledge acquired or events occurring in the future cannot be ruled out.

In line with IAS 37.92, no further statements have been made concerning estimates of financial impact or regarding uncertainty as to the amount or maturity of provisions and contingent liabilities in relation to the diesel issue. This is so as to not compromise the results of the proceedings or the interests of the Company.

Additional important legal cases

In 2011, ARFB Anlegerschutz UG (haftungsbeschränkt) filed a claim for damages against Volkswagen AG and Porsche SE for allegedly violating disclosure requirements under capital market law in connection with the acquisition of ordinary shares in Volkswagen AG by Porsche SE in 2008. The damages being sought based on allegedly assigned rights currently amount to approximately €2.26 billion plus interest. In late September 2022 the 1st Antitrust Chamber of the Higher Regional Court of Celle issued a model case ruling by which all of the plaintiffs' objects of declaratory judgment were either dismissed or declared to be irrelevant. The legal positions of the model case defendants were thus upheld in their entirety. Under the court's decision, Volkswagen AG is not liable because, among other things, the plaintiffs failed to make a sufficient showing that the Board of Management of Volkswagen AG had knowledge of the capital market information that was allegedly incorrect or subject to disclosure. The court further held that, even assuming members of the Supervisory Board to have had knowledge as alleged, such knowledge could not be imputed to the Board of Management. Two appeals alleging error of law in the model case ruling have been received, one of which is also directed against Volkswagen AG.

In Brazil, the Brazilian tax authorities commenced tax proceedings against Volkswagen Truck & Bus (formerly: MAN Latin America); at issue in these proceedings are the tax consequences of the acquisition structure chosen for Volkswagen Truck & Bus in 2009. In December 2017, an adverse administrative appeal ruling was rendered against Volkswagen Truck & Bus. Volkswagen Truck & Bus challenged this ruling before the regular court in 2018. Estimation of the risk in the event the tax authorities prevail on all points is subject to uncertainty because of differences in the amount of penalties and interest that might then apply under Brazilian law. However, a positive outcome for Volkswagen Truck & Bus remains the expectation. Should this not occur, a risk of about BRL3.5 billion could result for the contested period from 2009 onwards; this amount has been included in contingent liabilities in the notes.

In 2011, the European Commission conducted searches at European truck manufacturers for suspected unlawful exchange of information during the period from 1997 to 2011; in November 2014, the Commission issued a statement of objections to MAN, Scania, and the other truck manufacturers concerned. In its settlement decision of July 2016, the European Commission assessed fines against five European truck manufacturers. MAN's fine was waived in full as the company had informed the European Commission about the irregularities as a key witness. In September 2017, the European Commission fined Scania €0.88 billion. In a judgment rendered in February 2022, the European General Court (Court of First Instance) rejected in its entirety the appeal filed by Scania in this connection. Scania appealed this judgment to the European Court of Justice in April 2022. Furthermore, antitrust lawsuits seeking damages have been received from customers. As is the case in any antitrust proceedings, this may result in further lawsuits for damages. No provisions have been recognized or contingent liabilities disclosed for these cases as most of them are still in an early stage and currently cannot be assessed for this reason. In other cases, the chance of a decision by a court of last resort awarding antitrust damages against MAN or Scania currently appears remote.

In July 2021, the European Commission assessed a fine totaling roughly €502 million against Volkswagen AG, AUDI AG, and Dr. Ing. h.c. F. Porsche AG pursuant to a settlement decision. Volkswagen declined to file an appeal, hence the decision became final in 2021. The subject matter scope of the decision is limited to the cooperation of German automobile manufacturers on individual technical questions in connection with the development and introduction of SCR (selective catalytic reduction) systems for passenger cars that were sold in the European Economic Area. The manufacturers are not charged with any other misconduct such as price fixing or allocating markets and customers.

The Korean competition authority KFTC is analyzing potential violations based on the facts of the EU case. The final report of the appointed KFTC case handler was issued in November 2021. Volkswagen, Audi, and Porsche have replied to this report. In February 2023, the KFTC published a press release stating that an administrative fine decision would be issued against four automobile manufacturers in the SCR context. According to the press release, no fine is to be imposed on Volkswagen AG and the decision would not affect Porsche AG. However, an administrative fine decision would be issued against AUDI AG in the SCR matter. The competition authority's final decision and the grounds thereof have not yet been served; service is currently expected in the first half of 2023. The Turkish competition authorities, who investigated similar matters, issued a final decision in January 2022 in which they determined anticompetitive behavior to allegedly exist, but found that it had no effect on Türkiye, for which reason they refrained from imposing fines on the German automakers. Volkswagen, Audi, and Porsche are currently considering whether to file an appeal. Based on comparable matters, the Chinese competition authority has instituted proceedings against Volkswagen, Audi, and Porsche, among others, and issued requests for information.

In connection with the amended antitrust class action, which was initially dismissed with prejudice by the Northern District of California and which alleged that several automobile manufacturers, including Volkswagen AG and other Group companies, had conspired to unlawfully increase vehicle prices in violation of US antitrust and consumer protection law, the Ninth Circuit Court of Appeals in January 2022 denied plaintiffs' motion (filed at the end of 2021) for rehearing on the decision in which the court had affirmed the judgment of the US District Court. In February 2022, the District Court also denied plaintiffs' motion to set aside its judgment and to be allowed to file a new complaint. In June 2022, the US Supreme Court denied the petition filed by the plaintiffs seeking review of this decision.

Plaintiffs in Canada filed claims with similar allegations on behalf of putative classes of purchasers against several automobile manufacturers, including Volkswagen Group Canada Inc., Audi Canada Inc., and other Volkswagen Group companies. Neither provisions nor contingent liabilities are stated because the early stage of the proceedings makes an assessment of the realistic risk exposure currently impossible.

In March 2022, the European Commission and the Competition and Markets Authority (CMA), the English antitrust authorities, searched the premises of various automotive manufacturers and automotive industry organizations and/or served them with formal requests for information. In the Volkswagen Group, the investigation affects Volkswagen Group UK, which was searched by the CMA, and Volkswagen AG, which has received a Group-wide information request from the European Commission. The investigation relates to European, Japanese, and Korean manufacturers as well as national organizations operating in such countries and the European organization European Automobile Manufacturers' Association (ACEA), which are suspected of having agreed from 2001/2002 to the initiation of the proceedings to avoid paying for the services of recycling companies that dispose of end-of-life vehicles (ELV) (specifically passenger cars and vans up to 3.75 tons). Also alleged is an agreement to refrain from competitive use of ELV issues, that is, not to publicize relevant recycling data (recyclates, recyclability, recovery) for competitive purposes. The violation under investigation is alleged to have taken place in particular in the "ACEA" Working Group Recycling and related sub-groups thereof. Volkswagen AG is responding to the European Commission's information requests. Volkswagen Group UK is cooperating with the CMA. In this matter, CMA has furthermore issued requests for information to Volkswagen AG. In July 2022, Volkswagen AG filed an action for judicial review challenging the CMA's requests for information in particular because Volkswagen AG believes that they exceed the CMA's jurisdiction. In February 2023, the court granted the claim. The court's decision may still be appealed by the CMA. Concurrent therewith, Volkswagen AG continues to examine the possibilities for reasonable cooperation.

In addition, a few national and international authorities have initiated antitrust investigations. Volkswagen is cooperating closely with the responsible authorities in these investigations. An assessment of the underlying situation is not possible at this early stage.

Porsche AG has discovered potential regulatory issues relating to vehicles for various markets worldwide. There are questions as to the permissibility of specific hardware and software components used in type approval measurements. Differences compared with production versions may also have occurred in certain cases. Based on the information presently available, current production is not affected, however. The issues are unrelated to the defeat devices that were at the root of the diesel issue. Porsche AG is cooperating with the relevant authorities including the Stuttgart Office of the Public Prosecutor, which is investigating the matter in Germany. Based on the available information, no formal criminal investigation has been opened against the company, however. Porsche's own internal investigations are still in progress.

In November 2022, the US District Court for the Northern District of California granted final approval of a USD80 million class action settlement resolving claims brought against Volkswagen AG, Dr. Ing. h.c. F. Porsche AG, and Porsche Cars North America, Inc. that certain Porsche gasoline vehicles allegedly used software and/or hardware that resulted in increased emissions and/or overstated fuel economy estimates as compared to the results of certification testing.

The final Profit Sharing Settlement Agreement entered into by Navistar in December 2021 to resolve disputes concerning the calculation of profit sharing amounts for purposes of Navistar's corporate retiree healthcare commitments received final approval from the relevant court in June 2022. In the reporting period, Navistar paid the entire amount of all remaining sums required to fulfill the agreement of about €0.4 billion.

In November 2021, three claimants accompanied by Greenpeace filed a lawsuit against Volkswagen AG before the Braunschweig Regional Court. The action seeks to compel Volkswagen to initially reduce in stages and by 2029 completely cease its production and placement into the stream of commerce of vehicles with internal combustion engines as well as to reduce greenhouse gas emissions from development, production, and marketing (including third party vehicle use). The lawsuit further seeks to compel Volkswagen to exercise influence over Group companies, subsidiaries, and joint ventures so as to cause them to fulfill these demands as well. In February 2023, the Braunschweig Regional Court dismissed the action as unfounded. In addition, another action with similar requests for relief and by and large the same rationale has been filed against Volkswagen AG by an organic farmer with the support of Greenpeace before the Detmold Regional Court. This action was dismissed by the Detmold Regional Court also as unfounded in February 2023.

Provisions were recognized by Volkswagen Bank GmbH and Volkswagen Leasing GmbH for possible claims in connection with financial services provided to consumers. These relate to actions involving certain features of customer loan and leasing agreements that may toll the running of the statutory cancellation time periods.

In September 2022, GT Gettaxi Ltd. discontinued the lawsuit it had filed against Volkswagen AG and another defendant, alleging in particular large damage claims. In August 2021, the lawsuit had been dismissed at the trial level on the grounds that the Cypriot courts lacked jurisdiction, but GT Gettaxi Ltd. appealed this decision to the Supreme Court, the court of final appeal in Cyprus.

In line with IAS 37.92, no further statements have been made concerning estimates of financial impact or regarding uncertainty as to the amount or maturity of provisions and contingent liabilities in relation to additional important legal cases. This is so as to not compromise the results of the proceedings or the interests of the Company.

Tax risks

Volkswagen AG and its subsidiaries have operations worldwide and are audited by local tax authorities on an ongoing basis. Amendments to tax laws and changes in legal precedent and their interpretation by the tax authorities in the respective countries may lead to tax payments that differ from the estimates made in the financial statements.

Risks arise particularly from tax assessment of the cross-border supply of intragroup goods and services. Through organizational measures, such as the implementation of an advance pricing agreement, as well as the monitoring of transfer prices, Volkswagen constantly monitors the development of tax risks, as well as the impact thereof on the consolidated financial statements.

Tax provisions were recognized for potential future payments of taxes for former years, while other provisions were recognized for ancillary tax payments arising in this connection.

Financial risks

No risks with a score of 20 or more were reported for this risk category in the reporting year.

Strategies for hedging financial risks

In the course of our business activities, financial risks may arise from changes in interest rates, exchange rates, raw material prices, or share and fund prices – but also from unforeseeable events such as the Russia-Ukraine conflict and the Covid-19 pandemic. Management of these financial risks and of liquidity risks is the central responsibility of the Group Treasury department, which reduces these risks using nonderivative and derivative financial instruments. The Board of Management is informed of the current risk situation at regular intervals.

Interest rate risk refers to potential losses that could arise as a result of changes in market interest rates. It occurs because of interest rate mismatches between asset and liability items in a portfolio or on the balance sheet. We hedge interest rate risk – where appropriate in combination with currency risk – and risks arising from fluctuations in the value of financial instruments by means of interest rate swaps, cross-currency interest rate swaps and other interest rate contracts with generally matching amounts and maturities. The principle of matching amounts and maturities applies to financing arrangements within the Volkswagen Group in the Automotive Division. In the Financial Services Division, the risk of changes in the interest rate is managed on the basis of limits using interest rate derivatives as part of the defined risk strategy.

Foreign currency risk is reduced in particular through natural hedging, i.e. by adapting our production capacity at our locations around the world, establishing new production facilities in the most important currency regions and also procuring a large percentage of components locally. We hedge the residual exchange rate risk using hedging instruments. These mainly comprise currency forwards and currency options. We use these transactions to limit the exchange rate risk associated with forecasted cash flows from operating activities, intragroup financing and liquidity positions in currencies other than the respective functional currency, for example as a result of restrictions on capital movements. The currency forwards and currency options can have a term of up to ten years. We use these to hedge our principal foreign currency risks, mostly against the euro and primarily in Australian dollars, Brazilian real, Canadian dollars, Chinese renminbi, Czech koruna, Hong Kong dollars, Hungarian forints, Indian rupees, Japanese yen, Mexican pesos, Norwegian kroner, Polish zloty, pounds sterling, Singapore dollars, South African rand, South Korean won, Swedish kronor, Swiss francs, Taiwan dollars and US dollars.

Recently, existing hedges for the Russian ruble that are in some cases expiring have no longer been replaced by new hedges and have for the most part been closed out through offsetting transactions.

The hedging of commodity prices entails risks relating to the availability of raw materials and price trends. Particularly against the backdrop of the Russia-Ukraine conflict, we continuously analyze potential risks arising from changes in commodity and energy prices in the market so that immediate action can be taken whenever these arise. We limit these risks particularly by entering into forward transactions and swaps. We have used appropriate contracts to hedge some of our requirements for commodities such as aluminum, coal, copper and lead over a period of up to six years. We have also entered into price hedges for cobalt and coal with maximum terms of less than three years. In the case of nickel, the strategic hedging horizon is up to ten years, although existing hedges focus particularly on the next six years. Appropriate contracts have also been put in place to hedge electricity and gas prices and ensure availability.

The precious metals platinum, palladium and rhodium have shorter hedging periods, generally amounting to a maximum of up to three years. For selected commodities, this may also involve increases in physical inventories. We have also entered into transactions in order to supplement and improve allocations of CO_2 emission certificates as part of the European Union Emissions Trading System (EU ETS).

Special funds, in which we invest surplus liquidity, entail equity price risks and fund price risks in particular. We reduce these risks through the diversified investment of funds and through minimum values set out in the respective investment guidelines. In addition, exchange rates are hedged when market conditions are appropriate.

In the notes to the consolidated financial statements we explain our hedging policy, the hedging rules and the default and liquidity risks, and quantify the hedging transactions mentioned. We also disclose information on market risk within the meaning of IFRS 7 in the same section.

Risks arising from financial instruments

Channeling excess liquidity into investments and entering into derivatives contracts gives rise to counterparty risk. Partial or complete failure by a counterparty to perform its obligation to pay interest and repay principal, for example, would have a negative impact on the Volkswagen Group's earnings and liquidity. We counter this risk through our counterparty risk management, which we describe in more detail in the section entitled "Principles and Goals of Financial Management" in the "Results of Operations, Financial Position and Net Assets" chapter. The financial instruments held for hedging purposes give rise to both counterparty risks and balance sheet risks, which we limit using hedge accounting.

By diversifying when selecting business partners, we work to limit the impact of a default and keep the Volkswagen Group solvent at all times, even in the event of a default by individual counterparties.

The use of financial instruments may result in losses if the hedging exchange rates are less favorable than the rates achievable on the market at the maturity of the financial instrument.

Risks arising from trade receivables and from financial services are explained in more detail in the notes to the consolidated financial statements.

Liquidity risk

Volkswagen is reliant on its ability to adequately cover its financing needs. There is a potential liquidity risk that we will be unable to cover existing capital requirements by raising funds or unable to finance the Group on reasonable terms, which in turn can have a substantially negative impact on Volkswagen's business position, assets, financial position and earnings.

In principle, the Automotive Division and Financial Services Division refinance themselves independently of one another. However, they are subject to very similar refinancing risks. In the Automotive Division, the Company's solvency is primarily safeguarded through retained, non-distributed earnings, by drawing down on credit lines and by issuing financial instruments on the money and capital markets. The capital requirements of the financial services business are covered mainly by raising funds in the national and international financial markets, as well as through customer deposits from the direct banking business.

One of the ways in which Volkswagen finances its projects is with loans provided by national development banks such as *Kreditanstalt für Wiederaufbau* (KfW) or Banco Nacional de Desenvolvimento Econômico e Social (BNDES), or by supranational development banks.

In addition to confirmed credit lines, unconfirmed lines of credit from commercial banks supplement our broadly diversified refinancing structure.

Financing opportunities can be hindered by worsening financial and general market conditions – also as a consequence of the Russia-Ukraine conflict and the Covid-19 pandemic –, a worsening credit profile and outlook or a downgrade or withdrawal of the credit rating. The increasing relevance of ESG ratings to investors is also of growing significance in this context. In such cases, there is a risk of a fall in demand from market participants for securities issued by Volkswagen, which may additionally have a detrimental effect on the interest rates payable and restrict access to the capital market.

Risks and opportunities in the financial services business

While carrying out our financial services activities, we are primarily exposed to residual value risks and credit risks.

A residual value risk arises when the expected fair value for the disposal of the lease or finance asset may be lower than the residual value set at contract conclusion. However, there is also a possibility that disposal of the asset will generate more income than calculated for the residual value.

Referring to the bearer of residual value risk, a distinction is made between direct and indirect residual value risks. A direct residual value risk means that our financial services companies directly bear this risk (as outlined in the contract). An indirect residual value risk occurs when, based on a residual value guarantee, the residual value risk has passed to a third party, such as a dealer. In such cases, there is an initial counterparty default risk associated with this third party (the residual value guarantor). If the guarantor defaults, the residual value risk passes to our financial services companies.

Management of the residual value risk is based on a defined control cycle, which ensures that risks are fully assessed, monitored, responded to and communicated. This process structure enables us to manage residual risks professionally and also to systematically improve and enhance the way we handle residual value risks.

As part of our risk management efforts, the appropriateness of the risk provision is assessed regularly, as is the residual value risk potential. In the process, we compare the contractually agreed residual values with the obtainable fair values. These are determined utilizing data from external service providers and our own marketing data. We do not take possible gains on residual market values into account when recognizing risk provisions. Based on the resulting potential residual value risk, a variety of measures are initiated in order to limit this risk. With regard to new business, the residual value recommendation must take into account current market circumstances and factors that might have an influence in future.

Credit risk describes the risk of losses due to defaults in customer transactions, specifically by the borrower or lessee. Default occurs when the borrower or lessee is unable or unwilling to make the payments due. This includes late or partial payment of interest and principal on the part of the contracting party.

Credit checks on borrowers are the primary basis for lending decisions. Rating and scoring systems are used to provide an objective decision-making basis for granting loans and leases and for recognizing risk provisions.

An opportunity may arise if the losses from the lending and leasing business are lower than the previously calculated expected losses and the risk provision recognized on this basis. Particularly in those countries in which we take a conservative approach to risk due to the uncertain economic situation, the realized losses may be lower than the expected losses if the economy stabilizes and borrowers' credit ratings improve as a result.

Risks are managed and monitored within the framework of corresponding processes relating to economic circumstances and collateral, adherence to limits, contractual obligations, and conditions stipulated both by outside parties and the company itself. As such, commitments are managed according to the degree of risk involved (standard, intensified and problem loan management).

More information on risks in the financial services business can be found in the 2022 annual reports of Volkswagen Financial Services AG and Volkswagen Bank GmbH.

Opportunities and risks from mergers & acquisitions and/or other strategic partnerships/investments

No risks with a score of 20 or more were reported for this risk category in the reporting year.

Opportunities and risks from partnerships

As part of our NEW AUTO strategy, we are stepping up our efforts to forge partnerships, both for the transformation of our core business and for the establishment of the new mobility solutions business.

In the field of battery cells, risks could arise from potential disagreement with our partners, possible delays in battery cell development or delayed battery cell production.

Close interaction with partners in the field of e-mobility in the form of partnerships and joint ventures supports technological change. Examples include the development of a comprehensive charging infrastructure. This cooperation involves risks such as an increased coordination workload, more complex decision-making processes and the loss of expertise. At the same time, opportunities are presented by the pooling of specialist knowledge, by horizontal and vertical integration and by better use of resources. Volkswagen has therefore created various teams in Group Components to closely support all such partnerships.

The marketing of the Modular Electric Drive Toolkit to third parties, for example as part of the strategic alliance with Ford, could result in damage claims in the event of problems with procurement, production and quality.

We are concentrating to a greater extent on partnerships, acquisitions and venture capital investments. In doing so, we are generating maximum value for the Group and its brands and are able to expand our expertise, particularly in new areas of business. Our innovative presence in the markets supports this process. By entering into partnerships at a local level, we aim to identify regional customer needs more precisely, establish competitive cost structures and thus develop and offer market-driven products. At the same time, partnerships bear the risk that the interests of business partners differ from our own or that common goals cannot be reached.

Volkswagen owns a large number of patents and other industrial property rights and copyrights. Patent and licensing infringements may also arise in partnerships and thus result in the unauthorized disclosure of company-specific expertise. Volkswagen monitors the sales markets and also protects its expertise with legal action.

Risks arising from the recoverability of goodwill or brand names and from equity investments

For the goodwill recognized in the financial statements and for brand names, as well as for equity investments, there is a risk that the carrying amount of goodwill may be higher than the recoverable amount and that an extraordinary impairment loss must therefore be recognized. Volkswagen tests at least once a year on the basis of underlying cash-generating units, whether the value of the goodwill or the brand names could have been impaired. We also regularly test the equity investments for impairment. The possible consequences of climate change and future regulatory requirements, especially where associated with the transformation of our business towards e-mobility, and the potential effects of these, are taken into account in our medium-term planning and thus in the calculation of future cash flows, including in impairment tests. If there are objective indications that the recoverable amount of the asset concerned is lower than the carrying amount, Volkswagen recognizes this as a non-cash impairment. An impairment can be caused, for example, by an increase in interest rates or deteriorating business prospects.

Risks from the disposal of equity investments

An unexpected need for funding may lead to a situation in which assets have to be sold for a lower amount not equivalent to their value.

OVERALL ASSESSMENT OF THE RISK AND OPPORTUNITY POSITION

The Volkswagen Group's overall risk and opportunity position results from the specific risks and opportunities shown above. We have established a comprehensive risk management system to ensure that these risks are controlled. The most significant risks to the Volkswagen Group across all risk categories arise from a negative trend in markets and unit sales, with regard to quality and cyber security, and from an inability to develop products in line with demand and requirements, especially in view of e-mobility and digitalization. The Volkswagen Group continues to be exposed to risks from the diesel issue. In 2023, an adverse effect may result from the continued limited availability of parts, energy and other raw materials, as well as from geopolitical tensions and conflicts, including from the Russia-Ukraine conflict. Taking into account all the information known to us at present, no risks exist which could pose a threat to the continued existence of significant Group companies or the Volkswagen Group.

This annual report contains forward-looking statements on the business development of the Volkswagen Group. These statements are based on assumptions relating to the development of the economic, political and legal environment in individual countries, economic regions and markets, and in particular for the automotive industry, which we have made on the basis of the information available to us and which we consider to be realistic at the time of going to press. The estimates given entail a degree of risk, and actual developments may differ from those forecast. Any changes in significant parameters relating to our key sales markets, or any significant shifts in exchange rates, energy and other commodities or the supply of parts relevant to the Volkswagen Group, or deviations in the actual effects of the Covid-19 pandemic from the scenario presented in this report will have a corresponding effect on the development of our business. In addition, there may be departures from our expected business development if the assessments of the factors influencing sustainable value enhancement and of risks and opportunities presented in this annual report develop in a way other than we are currently expecting, or if additional risks and opportunities or other factors emerge that affect the development of our business.

Prospects for 2023

Our planning is based on the assumption that global economic output will grow overall in 2023 albeit at a slower pace. The persistently high inflation in many regions and the resulting restrictive monetary policy measures taken by central banks are expected to increasingly dampen consumer spending. We continue to believe that risks will arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, continuing geopolitical tensions and conflicts are weighing on growth prospects; risks continue to be associated with the Russia-Ukraine conflict. Furthermore, it cannot be ruled out that risks may also arise if new variants of the SARS-CoV-2 virus occur, particularly with regard to regional outbreaks and the measures associated with these. We assume that both the advanced economies and the emerging markets will show positive momentum on average, but with below-average growth in gross domestic product (GDP).

The trend in the automotive industry closely follows global economic developments. We assume that competition in the international automotive markets will intensify further. Uncertainty may arise from the continued shortage of intermediates and commodities. This may be further exacerbated by the fallout from the Russia-Ukraine conflict and, in particular, lead to rising prices and a declining availability of energy.

We predict that trends in the markets for passenger cars in the individual regions will be mixed in 2023. Overall, the global volume of new car sales is expected to be noticeably higher than in the previous year. For 2023, we anticipate that the volume of new passenger car registrations in Western Europe will be significantly above that recorded in the reporting period. In the German passenger car market, we predict a noticeable increase in the volume of new registrations in 2023 compared with the previous year. Sales of passenger cars in 2023 are expected to significantly exceed the prior-year figures in markets in Central and Eastern Europe – subject to the further development of the Russia-Ukraine conflict. The volume of sales in the markets for passenger cars and light commercial vehicles (up to 6.35 tonnes) in North America in 2023 is forecast to be noticeably higher than the level seen the previous year. We anticipate a significant increase overall in new registrations in the South American markets in 2023 compared with the previous year. The passenger car markets in the Asia-Pacific region are expected to be noticeably up on the prior-year level in 2023.

Trends in the markets for light commercial vehicles in the individual regions will also be mixed; on the whole, we expect a noticeable increase in the sales volume for 2023.

For 2023, we expect to see a noticeable upwards trend in new registrations for mid-sized and heavy trucks with a gross weight of more than six tonnes compared with the previous year in the markets that are relevant for the Volkswagen Group, with variations from region to region. A significant increase in overall demand is anticipated for 2023 in the bus markets relevant for the Volkswagen Group, whereby this will vary depending on the region.

We assume that automotive financial services will prove highly important to global vehicle sales in 2023.

We anticipate that, amid challenging market conditions, deliveries to customers of the Volkswagen Group in 2023 will stand at around 9.5 million vehicles. This assumes that the shortages of intermediates and commodities and the bottlenecks in logistics will become less intense.

Challenges will arise in particular from the economic situation, the increasing intensity of competition, volatile commodity, energy and foreign exchange markets, and more stringent emissions-related requirements.

We expect the sales revenue of the Volkswagen Group in 2023 to be 10% to 15% higher than the prior-year figure and the operating return on sales to lie between 7.5% and 8.5%. In the Passenger Cars Business Area, we forecast an increase of around 7% to 13% in sales revenue compared with the previous year, with an operating return on sales of between 8% and 9%. For the Commercial Vehicles Business Area, we anticipate an operating return on sales of 6% to 7% amid a 5% to 15% year-on-year increase in sales revenue. In the Power Engineering Business Area, we expect sales revenue to be slightly above the prior-year figure and operating profit to be in the low triple-digit million euro range. For the Financial Services Division, we forecast a strong increase in sales revenue compared with the prior year and an operating result in the range of €3.5 billion.

In the Automotive Division, we expect the R&D ratio to come in at around 8% in 2023 and the ratio of capex to sales revenue to be around 6.5%. We anticipate a very strong year-on-year increase in net cash flow for 2023. This will particularly include increasing investments for the future and cash outflows from mergers and acquisitions for battery factories, which are a cornerstone of the Volkswagen Group's transformation. Net liquidity in the Automotive Division in 2023 is expected to be between €35 billion and €40 billion; this includes cash inflows and outflows in connection with the IPO of Porsche AG. We anticipate a return on investment (ROI) of between 12% and 15%. Our declared goal remains unchanged, namely to continue with our robust financing and liquidity policy.

Wolfsburg, February 21, 2023
The Board of Management

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CONSOLIDATED FINANCIAL STATEMENTS

CONSOLIDATED FINANCIAL STATEMENTS

Income Statement

of the Volkswagen Group for the period January 1 to December 31, 2022

€ million	Note	2022	2021
Sales revenue	**1**	**279,232**	**250,200**
Cost of sales	2	–227,005	–202,959
Gross result		**52,228**	**47,241**
Distribution expenses	3	–19,840	–19,228
Administrative expenses	4	–11,689	–10,420
Other operating income	5	19,238	14,731
Other operating expenses	6	–17,812	–13,049
Operating result		**22,124**	**19,275**
Share of the result of equity-accounted investments	7	2,395	2,321
Interest income	8	1,325	810
Interest expenses	8	–442	–1,818
Other financial result	9	–3,359	–463
Financial result		**–81**	**851**
Earnings before tax		**22,044**	**20,126**
Income tax income/expense	10	–6,208	–4,698
Current		–5,262	–4,612
Deferred		–946	–86
Earnings after tax		**15,836**	**15,428**
of which attributable to			
Noncontrolling interests		393	46
Volkswagen AG hybrid capital investors		576	539
Volkswagen AG shareholders		14,867	14,843
Basic/diluted earnings per ordinary share in €	**11**	**29.63**	**29.59**
Basic/diluted earnings per preferred share in €	**11**	**29.69**	**29.65**

Statement of Comprehensive Income

Changes in comprehensive income for the period January 1 to December 31, 2022

€ million	Total	Income attributable to Volkswagen AG shareholders	Income attributable to Volkswagen AG hybrid capital investors	Income attributable to noncontrolling interests
Earnings after tax	**15,836**	**14,867**	**576**	**393**
Pension plan remeasurements recognized in other comprehensive income				
Pension plan remeasurements recognized in other comprehensive income, before tax	14,880	14,793	–	87
Deferred taxes relating to pension plan remeasurements recognized in other comprehensive income	–4,572	–4,550	–	–22
Pension plan remeasurements recognized in other comprehensive income, net of tax	10,308	10,243	–	65
Fair Value valuation of equity instruments that will not be reclassified to profit or loss, net of tax	–440	–393	–	–47
Share of other comprehensive income of equity-accounted investments that will not be reclassified to profit or loss, net of tax	11	11	–	0
Items that will not be reclassified to profit or loss	**9,879**	**9,860**	**–**	**19**
Exchange differences on translating foreign operations				
Gains/losses on currency translation recognized in other comprehensive income	100	256	–	–156
Transferred to profit or loss	59	59	–	–
Exchange differences on translating foreign operations, before tax	160	316	–	–156
Deferred taxes relating to exchange differences on translating foreign operations	5	5	–	–
Exchange differences on translating foreign operations, net of tax	164	321	–	–156
Hedging				
Fair value changes recognized in other comprehensive income (OCI I)	2,203	1,675	–	528
Transferred to profit or loss (OCI I)	1,094	1,045	–	48
Cash flow hedges (OCI I), before tax	3,297	2,720	–	577
Deferred taxes relating to cash flow hedges (OCI I)	–976	–800	–	–176
Cash flow hedges (OCI I), net of tax	2,321	1,920	–	401
Fair value changes recognized in other comprehensive income (OCI II)	–2,058	–2,002	–	–56
Transferred to profit or loss (OCI II)	753	730	–	22
Cash flow hedges (OCI II), before tax	–1,305	–1,272	–	–34
Deferred taxes relating to cash flow hedges (OCI II)	398	387	–	11
Cash flow hedges (OCI II), net of tax	–908	–885	–	–23
Fair value valuation of debt instruments that may be reclassified to profit or loss				
Fair value changes recognized in other comprehensive income	–430	–430	–	–
Transferred to profit or loss	0	0	–	–
Fair value valuation of debt instruments that may be reclassified to profit or loss, before tax	–430	–430	–	–
Deferred taxes relating to fair value valuation of debt instruments recognized in other comprehensive income	118	118	–	–
Fair value valuation of debt instruments that may be reclassified to profit or loss, net of tax	–312	–312	–	–
Share of other comprehensive income of equity-accounted investments that may be reclassified to profit or loss, net of tax	321	321	–	0
Items that may be reclassified to profit or loss	**1,587**	**1,365**	**–**	**222**
Other comprehensive income, before tax	16,494	16,066	–	428
Deferred taxes relating to other comprehensive income	–5,027	–4,840	–	–187
Other comprehensive income, net of tax	**11,466**	**11,226**	**–**	**241**
Total comprehensive income	**27,302**	**26,092**	**576**	**634**

Changes in comprehensive income for the period January 1 to December 31, 2021

€ million	Total	Income attributable to Volkswagen AG shareholders	Income attributable to Volkswagen AG hybrid capital investors	Income attributable to noncontrolling interests
Earnings after tax	**15,428**	**14,843**	**539**	**46**
Pension plan remeasurements recognized in other comprehensive income	–			
Pension plan remeasurements recognized in other comprehensive income, before tax	5,603	5,556	–	47
Deferred taxes relating to pension plan remeasurements recognized in other comprehensive income	–1,423	–1,414	–	–9
Pension plan remeasurements recognized in other comprehensive income, net of tax	4,180	4,143	–	37
Fair Value valuation of equity instruments that will not be reclassified to profit or loss, net of tax	–52	–39	–	–13
Share of other comprehensive income of equity-accounted investments that will not be reclassified to profit or loss, net of tax	1	–2	–	3
Items that will not be reclassified to profit or loss	**4,128**	**4,102**	**–**	**27**
Exchange differences on translating foreign operations				
Gains/losses on currency translation recognized in other comprehensive income	3,389	3,336	–	53
Transferred to profit or loss	0	0	–	–
Exchange differences on translating foreign operations, before tax	3,390	3,337	–	53
Deferred taxes relating to exchange differences on translating foreign operations	4	4	–	–
Exchange differences on translating foreign operations, net of tax	3,393	3,340	–	53
Hedging				
Fair value changes recognized in other comprehensive income (OCI I)	–2,711	–2,707	–	–5
Transferred to profit or loss (OCI I)	–70	–76	–	6
Cash flow hedges (OCI I), before tax	–2,782	–2,783	–	1
Deferred taxes relating to cash flow hedges (OCI I)	860	861	–	0
Cash flow hedges (OCI I), net of tax	–1,922	–1,922	–	0
Fair value changes recognized in other comprehensive income (OCI II)	–613	–612	–	–1
Transferred to profit or loss (OCI II)	1,114	1,114	–	0
Cash flow hedges (OCI II), before tax	502	503	–	–1
Deferred taxes relating to cash flow hedges (OCI II)	–161	–161	–	0
Cash flow hedges (OCI II), net of tax	341	342	–	–1
Fair value valuation of debt instruments that may be reclassified to profit or loss				
Fair value changes recognized in other comprehensive income	–61	–61	–	–
Transferred to profit or loss	0	0	–	–
Fair value valuation of debt instruments that may be reclassified to profit or loss, before tax	–61	–61	–	–
Deferred taxes relating to fair value valuation of debt instruments recognized in other comprehensive income	18	18	–	–
Fair value valuation of debt instruments that may be reclassified to profit or loss, net of tax	–43	–43	–	–
Share of other comprehensive income of equity-accounted investments that may be reclassified to profit or loss, net of tax	631	624	–	7
Items that may be reclassified to profit or loss	**2,401**	**2,341**	**–**	**60**
Other comprehensive income, before tax	7,231	7,134	–	96
Deferred taxes relating to other comprehensive income	–702	–692	–	–9
Other comprehensive income, net of tax	**6,529**	**6,442**	**–**	**87**
Total comprehensive income	**21,958**	**21,285**	**539**	**133**

Balance Sheet

of the Volkswagen Group as of December 31, 2022

€ million	Note	Dec. 31, 2022	Dec. 31, 2021
Assets			
Noncurrent assets			
Intangible assets	12	83,241	77,689
Property, plant and equipment	13, 33	63,890	63,695
Lease assets	14, 33	59,380	59,699
Investment property	14	610	615
Equity-accounted investments	15	12,668	12,531
Other equity investments	15	3,489	3,000
Financial services receivables	16	86,944	84,954
Other financial assets	17	13,832	9,156
Other receivables	18	3,095	2,895
Tax receivables	19	394	635
Deferred tax assets	19	12,921	13,393
		340,464	**328,261**
Current assets			
Inventories	20	52,274	43,725
Trade receivables	21	18,581	15,521
Financial services receivables	16	61,549	56,498
Other financial assets	17	15,167	12,584
Other receivables	18	7,896	7,473
Tax receivables	19	1,732	1,618
Marketable securities and time deposits[1]	22	37,206	22,532
Cash and cash equivalents[1]	23	29,172	39,723
Assets held for sale		733	674
		224,309	**200,347**
Total assets		**564,772**	**528,609**

1 In the current fiscal year, investments in time deposits with maturities of more than three months are reported together with securities.

€ million	Note	Dec. 31, 2022	Dec. 31, 2021
Equity and liabilities			
Equity	**24**		
Subscribed capital		1,283	1,283
Capital reserve		14,551	14,551
Retained earnings		137,267	117,342
Other reserves		–1,845	–3,167
Equity attributable to Volkswagen AG hybrid capital investors		14,121	14,439
Equity attributable to Volkswagen AG shareholders and hybrid capital investors		165,378	144,449
Noncontrolling interests		12,950	1,705
		178,327	**146,154**
Noncurrent liabilities			
Financial liabilities	25	121,737	131,618
Other financial liabilities	26	8,188	4,466
Other liabilities	27	9,020	8,430
Deferred tax liabilities	28	10,734	5,131
Provisions for pensions	29	27,553	41,550
Provisions for taxes	28	4,320	3,392
Other provisions	30	21,900	23,474
		203,453	**218,062**
Current liabilities			
Financial liabilities	25	83,448	78,584
Trade payables	31	28,748	23,624
Tax payables	28	726	614
Other financial liabilities	26	19,820	13,002
Other liabilities	27	22,655	19,890
Provisions for taxes	28	2,586	2,863
Other provisions	30	24,851	25,578
Liabilities associated with assets held for sale		158	238
		182,992	**164,393**
Total equity and liabilities		**564,772**	**528,609**

Statement of Changes in Equity

of the Volkswagen Group for the period January 1 to December 31, 2022

				OTHER RESERVES								
					HEDGING							
€ million	Subscribed capital	Capital reserve	Retained earnings	Currency translation reserve	Cash flow hedges (OCI I)	Deferred costs of hedging (OCI II)	Equity and debt instruments	Equity-accounted investments	Equity attributable to Volkswagen AG hybrid capital investors	Equity attributable to Volkswagen AG shareholders and hybrid capital investors	Noncontrolling interests	**Total equity**
Balance at Jan. 1, 2021	**1,283**	**14,551**	**100,772**	**–5,659**	**1,287**	**–708**	**–219**	**30**	**15,713**	**127,049**	**1,734**	**128,783**
Earnings after tax	–	–	14,843	–	–	–	–	–	539	15,383	46	15,428
Other comprehensive income, net of tax	–	–	4,143	3,340	–1,922	342	–82	621	–	6,442	87	6,529
Total comprehensive income	**–**	**–**	**18,986**	**3,340**	**–1,922**	**342**	**–82**	**621**	**539**	**21,825**	**133**	**21,958**
Disposal of equity instruments	–	–	54	–	–	–	–54	–	–	–	–	–
Capital increases/Capital decreases	–	–	–	–	–	–	–	–	–1,237	–1,237	170	–1,068
Dividends payment	–	–	–2,419	–	–	–	–	–	–576	–2,994	–28	–3,022
Capital transactions involving a change in ownership interest	–	–	–269	–32	–1	0	0	–1	–	–302	–288	–590
Other changes	–	–	217	–	–	–	–	–109	–	108	–16	93
Balance at Dec. 31, 2021	**1,283**	**14,551**	**117,342**	**–2,351**	**–635**	**–367**	**–355**	**541**	**14,439**	**144,449**	**1,705**	**146,154**
Balance at Jan. 1, 2022	**1,283**	**14,551**	**117,342**	**–2,351**	**–635**	**–367**	**–355**	**541**	**14,439**	**144,449**	**1,705**	**146,154**
Earnings after tax	–	–	14,867	–	–	–	–	–	576	15,443	393	15,836
Other comprehensive income, net of tax	–	–	10,243	321	1,920	–885	–705	332	–	11,226	241	11,466
Total comprehensive income	**–**	**–**	**25,109**	**321**	**1,920**	**–885**	**–705**	**332**	**576**	**26,668**	**634**	**27,302**
Disposal of equity instruments	–	–	–58	–	–	–	58	–	–	–	–	–
Capital increases/Capital decreases[1]	–	–	–	–	–	–	–	–	–337	–337	103	–234
Dividends payment[2]	–	–	–13,327	–	–	–	–	–	–557	–13,884	–257	–14,141
Capital transactions involving a change in ownership interest[2]	–	–	8,148	–226	338	174	–3	0	–	8,432	10,796	19,228
Other changes	–	–	52	–	–	–	–	–3	–	50	–30	20
Balance at Dec. 31, 2022	**1,283**	**14,551**	**137,267**	**–2,256**	**1,623**	**–1,077**	**–1,005**	**870**	**14,121**	**165,378**	**12,950**	**178,327**

1 For details on capital increases/decreases, see the "Equity" section.
2 For information on dividend payments and capital transactions involving a change in ownership interest, see the "Equity" section and the "Key events" section.

Explanatory notes on equity are presented in the note relating to equity.

Cash flow statement

of the Volkswagen Group for the period January 1 to December 31, 2022

€ million	2022	2021
Cash and cash equivalents at beginning of period	**39,123**	**33,432**
Earnings before tax	22,044	20,126
Income taxes paid	–4,415	–4,216
Depreciation and amortization of, and impairment losses on, intangible assets, property, plant and equipment, and investment property[1]	13,364	12,947
Amortization of and impairment losses on capitalized development costs[1]	5,144	5,050
Impairment losses on equity investments[1]	2,185	137
Depreciation of and impairment losses on lease assets[1]	9,977	9,339
Gain/loss on disposal of noncurrent assets and equity investments	30	180
Share of the result of equity-accounted investments	575	787
Other noncash expense/income	–542	–1,652
Change in inventories	–8,385	2,110
Change in receivables (excluding financial services)	–3,207	1,888
Change in liabilities (excluding financial liabilities)	8,586	1,856
Change in provisions	–1,856	1,943
Change in lease assets	–8,711	–16,205
Change in financial services receivables	–6,294	4,345
Cash flows from operating activities	**28,496**	**38,633**
Investments in intangible assets (excluding development costs), property, plant and equipment, and investment property	–12,948	–10,655
Additions to capitalized development costs	–9,723	–7,843
Acquisition of subsidiaries	–1,122	–3,158
Acquisition of other equity investments	–2,504	–2,741
Disposal of subsidiaries	372	–304
Disposal of other equity investments	35	52
Proceeds from disposal of intangible assets, property, plant and equipment, and investment property	437	469
Change in investments in securities and time deposits[2]	–14,885	–1,281
Change in loans[2]	–1,483	–667
Cash flows from investing activities	**–41,822**	**–26,128**
Capital contributions/capital redemptions	–235	–1,071
Dividends paid	–4,362	–3,022
Capital transactions with noncontrolling interest shareholders	16,198	–590
Proceeds from issuance of bonds	23,876	32,659
Repayments of bonds	–25,638	–30,557
Changes in other financial liabilities	–4,366	–3,928
Repayments of lease liabilities	–1,248	–1,246
Cash flows from financing activities	**4,225**	**–7,754**
Effect of exchange rate changes on cash and cash equivalents	–285	942
Change of loss allowance within cash and cash equivalents	1	–1
Net change in cash and cash equivalents	**–9,385**	**5,691**
Cash and cash equivalents at end of period	**29,738**	**39,123**
Cash and cash equivalents at end of period	29,738	39,123
Securities and time deposits and loans	49,771	34,515
Gross liquidity	**79,509**	**73,637**
Total third-party borrowings	–205,312	–210,213
Net liquidity	**–125,803**	**–136,576**

1 Net of impairment reversals.
2 In the previous fiscal year, time deposits with maturities of more than three months were reported together with change in loans.

Explanatory notes on the cash flow statement are presented in the section relating to the cash flow statement.

Notes to the Consolidated Financial Statements

of the Volkswagen Group as of December 31, 2022

Basis of presentation

Volkswagen AG is domiciled in Wolfsburg, Germany, and entered in the commercial register at the Braunschweig Local Court under No. HRB 100484. The fiscal year corresponds to the calendar year.

In accordance with Regulation No. 1606/2002 of the European Parliament and of the Council, Volkswagen AG prepared its consolidated financial statements for 2022 in compliance with the International Financial Reporting Standards (IFRSs), as adopted by the European Union. All the IFRSs adopted by the EU and required to be applied have been complied with.

The accounting policies applied in the previous year were generally retained. The only changes required resulted from new or amended standards.

Moreover, all the provisions of German commercial law that Volkswagen is additionally required to apply, as well as the German Corporate Governance Code, have been complied with in the preparation of the consolidated financial statements.

The consolidated financial statements were prepared in euros. Unless otherwise stated, all amounts are given in millions of euros (€ million).

All figures shown are rounded, so minor discrepancies may arise from addition of these amounts.

The income statement was prepared using the internationally accepted cost of sales method.

Preparation of the consolidated financial statements in accordance with the aforementioned standards requires management to make estimates that affect the reported amounts of certain items in the consolidated balance sheet and in the consolidated income statement, as well as the related disclosure of contingent assets and liabilities. The consolidated financial statements provide a true and fair view of the net assets, financial position and results of operations as well as the cash flows of the Volkswagen Group.

The Board of Management completed preparation of the consolidated financial statements on February 21, 2023. On that date, the period ended in which adjusting events after the reporting period are recognized.

Effects of new and amended IFRSs

Volkswagen AG has applied all accounting pronouncements adopted by the EU and effective for periods beginning in fiscal year 2022.

As of January 1, 2022, a number of new rules entered into force following the issuance of Annual Improvements to International Financial Reporting Standards 2018-2020. They include amendments clarifying IFRS 1, IFRS 9, IFRS 16 and IAS 41. As IFRS 1 governs the first-time adoption of IFRSs and IAS 41 deals with accounting in agriculture, these amendments to standards do not have any effect on the Volkswagen Group. The amendment to IFRS 9 provides clarification of the fees that a company should include when assessing whether the terms of a new or modified financial liability are substantially different from the terms of the original financial liability. An example in the Illustrative Examples accompanying IFRS 16 was removed; it had repeatedly caused confusion with regard to leasehold improvements.

In addition to this, amendments were made to IAS 16, that have also been applicable since January 1, 2022. Pursuant to these amendments, the proceeds from the sale of goods produced in the testing phase of property, plant and equipment are now recognized in profit or loss rather than as a deduction from cost. This means that costs and revenue resulting from the production of goods during the testing phase of property, plant and equipment are now recognized separately in expense and income.

Amendments to IAS 37 have also been applicable since January 1, 2022. These clarify that when assessing whether a contract is an onerous contract, the cost of fulfilling the contract must include not only the incremental costs but also other costs that relate directly to fulfilling the contract (e.g. the allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract).

Finally, IFRS 3 was amended with an updated reference to the Conceptual Framework and clarifications were added to ensure that the accounting practice pursuant to IFRS 3 can essentially remain unchanged.

As from January 1, 2021, the application of amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 (Interest Rate Benchmark Reform – Phase 2) became mandatory.

The Volkswagen Group is exposed to the interest rate benchmark reform regarding its variable IBOR-related transactions. To avoid any material risk arising from the transition to alternative benchmark rates (interest rate basis risk, liquidity risk, litigation risk, operational risk) risk management strategies and procedures have been implemented. The Volkswagen Group has closely monitored the market and the output from the various industry working groups managing the transition to new benchmark interest rates. This includes announcements made by the IBOR regulators.

Regarding financial instruments that reference discontinued benchmark rates, the Volkswagen Group aims to complete its transition process prior to their official cessation dates, i.e. any existing derivatives transactions (“legacy trades”) have been or will be transitioned to alternative benchmark rates (active approach) rather than relying on the incorporation of a contractual fallback language made available by the International Swaps and Derivatives Association (ISDA) via ISDA 2020 IBOR Fallbacks Protocol or respective bilateral agreements with the Group’s counterparties (passive approach). For new derivatives transactions that reference discontinued rates (if any), respective fallback mechanisms have been incorporated into the relevant framework agreements with the Group’s counterparties via ISDA 2020 IBOR Fallbacks Supplement to the 2006 ISDA Definitions, the 2021 ISDA Interest Rate Derivatives Definitions and/or the 2018 ISDA Benchmark Supplement.

The exposures of financial instruments that are still affected by the interest rate benchmark reform at the reporting date arise on derivative and non-derivative financial assets and liabilities. They are exposed to the following significant benchmark rates. From the Volkswagen Group’s point of view, EURIBOR is not affected by a replacement and these types of financial instruments are therefore not included in the disclosure.

Disclosures on exposures impacted by interest rate benchmark reform as at December 31, 2022:

€ million	Non-derivative financial assets Carrying amount	Non-derivative financial liabilities Carrying amount	Derivatives Nominal amount
USD LIBOR	47	3,933	10,011
CAD CDOR	15	265	2,339
SEK STIBOR	0	1,693	2,483
Total	**62**	**5,891**	**14,833**

The amendments referred to above do not materially affect the Volkswagen Group’s net assets, financial position and results of operations.

New and amended IFRSs not applied

In its 2022 consolidated financial statements, Volkswagen AG did not apply the following accounting pronouncements that have been adopted by the IASB until December 31, 2022, but were not yet required to be applied for the fiscal year.

Standard/Interpretation		Published by the IASB	Application mandatory[1]	Adopted by the EU	Expected impact
IFRS 16	Sale and Leaseback Transactions	Sept. 22, 2022	Jan. 1, 2024	No	No material impact
IFRS 17	Insurance Contracts	May 18, 2017	Jan. 1, 2023	Yes[2]	Detailed descriptions after the overview in the table
IFRS 17	Insurance Contracts – several amendments	June 25, 2020	Jan. 1, 2023	Yes[2]	Detailed descriptions after the overview in the table
IFRS 17	Initial application of IFRS 17 and IFRS 9 – Comparative information	Dec. 12, 2021	Jan. 1, 2023	Yes[2]	No material impact
IAS 1	Classification of liabilities as current or non-current	Jan. 23, 2020	Jan. 1, 2024	No	No material impact
IAS 1	Disclosure of Accounting Policies	Feb. 12, 2021	Jan. 1, 2023	Yes	Adjustments to the corresponding explanatory notes. Primarily choice not to present the legal requirements.
IAS 1	Non-current liabilities with Covenants	Oct. 31, 2022	Jan. 1, 2024	No	No material impact
IAS 8	Definition of Accounting Estimates	Feb. 12, 2021	Jan. 1, 2023	Yes	No material impact
IAS 12	Deferred taxes on leases and decommissioning and restoration liabilities	May 7, 2021	Jan. 1, 2023	Yes	No material impact

1 Effective date from Volkswagen AG's perspective.
2 The EU's endorsement includes an option that exempts companies from applying a valuation requirement in certain cases.

IFRS 17 – INSURANCE CONTRACTS

IFRS 17 amends the guidance for accounting for insurance contracts, replacing the existing IFRS 4 standard. The Volkswagen Group will transition to the new guidance of IFRS 17 for the first time as of January 1, 2023, generally applying the full retrospective approach and, under certain circumstances, the modified retrospective approach. Based on current estimates for the portfolio of insurance contracts as of January 1, 2023, the transition to the amended system is expected to result in a decrease in equity in the mid-double-digit million euro range. Due to the net approach to measurement, there will equally be a reduction in assets and provisions relating to the insurance business in the mid-three-digit million euro range.

Key events

Diesel issue

On September 18, 2015, the US Environmental Protection Agency (EPA) publicly announced in a “Notice of Violation” that irregularities in relation to nitrogen oxide (NO_x) emissions had been discovered in emissions tests on certain Volkswagen Group vehicles with 2.0 l diesel engines in the USA. In this context, Volkswagen AG announced that noticeable discrepancies between the figures recorded in testing and those measured in actual road use had been identified in type EA 189 diesel engines and that this engine type had been installed in roughly eleven million vehicles worldwide. On November 2, 2015, the EPA issued a “Notice of Violation” alleging that irregularities had also been discovered in the software installed in US vehicles with type V6 3.0 l diesel engines.

The so-called diesel issue is rooted in a modification of parts of the software of the relevant engine control units – which, according to Volkswagen AG’s legal position, is only unlawful under US law – for the type EA 189 diesel engines that Volkswagen AG was developing at that time. This software function was developed and implemented from 2006 on without knowledge at the level of the Board of Management. Members of the Board of Management did not learn of the development and implementation of this software function until the summer of 2015.

There are furthermore no findings that, following the publication in May 2014 of the study by the International Council on Clean Transportation, an unlawful “defeat device” under US law was disclosed to the persons responsible for preparing the 2014 annual and consolidated financial statements as the cause of the high NO_x emissions in certain US vehicles with 2.0 l type EA 189 diesel engines. Rather, at the time the 2014 annual and consolidated financial statements were being prepared, the persons responsible for preparing these financial statements remained under the impression that the issue could be resolved with comparatively little expense.

In the course of the summer of 2015, however, it became progressively apparent to individual members of Volkswagen AG’s Board of Management that the cause of the discrepancies in the USA was a modification of parts of the software of the engine control unit that was later identified as an unlawful “defeat device” as defined by US law. This culminated in Volkswagen's disclosure of a “defeat device” to the EPA and the California Air Resources Board (CARB), a department of the Environmental Protection Agency of the State of California, on September 3, 2015. According to the assessment at the time by the responsible persons dealing with the matter, the magnitude of the costs expected to result for the Volkswagen Group (recall costs, retrofitting costs, and financial penalties) was not fundamentally dissimilar to that in previous cases involving other vehicle manufacturers. It therefore appeared to be manageable overall considering the business activities of the Volkswagen Group. This assessment by Volkswagen AG was based, among other things, on the advice of a law firm engaged in the USA for regulatory approval issues, according to which similar cases had in the past been amicably resolved with the US authorities. The EPA’s publication of the “Notice of Violation” on September 18, 2015, which the Board of Management had not expected, especially at that time, then presented the situation in an entirely different light.

In fiscal year 2022, special items in connection with the diesel issue amounted to €399.1 million (previous year: €750.8 million); they were mainly recognized in the other operating result. These special items were attributable to additional expenses primarily for legal risks.

Further information on the litigation in connection with the diesel issue can be found in the “Litigation” section.

Antitrust investigations

In 2011, the European Commission conducted searches at European truck manufacturers for suspected unlawful exchange of information during the period from 1997 to 2011; in November 2014, the Commission issued a statement of objections to MAN, Scania, and the other truck manufacturers concerned. In its settlement decision of July 2016, the European Commission assessed fines against five European truck manufacturers. MAN's fine was waived in full as the company had informed the European Commission about the irregularities as a key witness. In September 2017, the European Commission fined Scania €0.88 billion. Scania appealed to the European Court of Justice in Luxembourg and mounted a comprehensive defense. In a judgment rendered in February 2022, the European General Court (Court of First Instance) rejected in its entirety the appeal filed by Scania in this connection. Scania appealed this judgment to the European Court of Justice in April 2022. Scania had already recognized a provision of €0.4 billion in 2016 and increased this provision to approximately €0.9 billion in 2021. Furthermore, antitrust lawsuits seeking damages have been received from customers. As is the case in any antitrust proceedings, this may result in further lawsuits for damages. No provisions have been recognized or contingent liabilities disclosed for these cases as most of them are still in an early stage and currently cannot be assessed for this reason. In other cases, the chance of a decision by a court of last resort awarding antitrust damages against MAN or Scania currently appears remote.

In July 2021, the European Commission assessed a fine totaling roughly €502 million against Volkswagen AG, AUDI AG, and Dr. Ing. h.c. F. Porsche AG pursuant to a settlement decision. This amount was recognized under other operating expenses in the previous year. Volkswagen declined to file an appeal, hence the decision became final in 2021. The subject matter scope of the decision is limited to the cooperation of German automobile manufacturers on individual technical questions in connection with the development and introduction of SCR (selective catalytic reduction) systems for passenger cars that were sold in the European Economic Area. The manufacturers are not charged with any other misconduct such as price fixing or allocating markets and customers.

The Korean competition authority KFTC is analyzing potential violations based on the facts of the EU case. The final report of the appointed KFTC case handler was issued in November 2021. Volkswagen, Audi, and Porsche have replied to this report. In February 2023, the KFTC published a press release stating that an administrative fine decision would be issued against four automobile manufacturers in the SCR context. According to the press release, no fine is to be imposed on Volkswagen AG and the decision would not affect Porsche AG. However, an administrative fine decision would be issued against AUDI AG in the SCR matter. The competition authority's final decision and the grounds thereof have not yet been served; service is currently expected in the first half of 2023. The Turkish competition authorities, who investigated similar matters, issued a final decision in January 2022 in which they determined anticompetitive behavior to allegedly exist, but found that it had no effect on Türkiye, for which reason they refrained from imposing fines on the German automakers. Volkswagen, Audi, and Porsche are currently considering whether to file an appeal. Based on comparable matters, the Chinese competition authority has instituted proceedings against Volkswagen, Audi, and Porsche, among others, and issued requests for information.

Russia-Ukraine conflict / Covid-19 pandemic / semiconductor shortages

The start of the Russia-Ukraine conflict in February 2022 led not only to a humanitarian crisis but also brought market upheaval around the world. There have been substantial price rises, particularly on the energy and commodity markets, and significant increases in interest and inflation rates have been observed internationally.

In addition, the parts supply shortages intensified in this context directly after the start of the conflict. In the Volkswagen Group, this particularly affected the supply of cable harnesses from Ukraine. Volkswagen took immediate action to clear these supply bottlenecks from Ukraine, with the result that there are no material bottlenecks in this regard at present.

Moreover, different sanctions have been imposed on Russia as a result of the conflict, especially by the EU and the USA. They restrict economic transactions with Russia and have an impact on the Russian companies and plants of the Volkswagen Group and on sales of vehicles to Russia. The sanctions also affect the new financial services business in Russia and lead to impairment risks to existing lease assets and financial receivables. Against the backdrop of the Russia-Ukraine conflict and the resulting consequences, Volkswagen has decided to suspend vehicle production in Russia until further notice. Vehicle exports to Russia have also been halted. In addition, the respective sanction requirements are also being complied with in relation to parts supplies and the provision of technical information. In addition, Russia itself, in its role as an energy exporter, has restricted gas deliveries to Europe. The resulting increase in commodity prices and intensified supply shortages are reinforcing the threat of persistently high inflation.

Russia’s partial mobilization on September 21, 2022 and the ensuing tightening of sanctions led to adjustments to the risk assessment in relation to the situation in Russia in the third quarter and to the potential future development of the Group’s business activities in Russia.

Since there was no noticeable easing in the Russia-Ukraine conflict in the fourth quarter, the discontinuation of business activities in Russia took concrete shape in the Volkswagen Group. In this context, some companies were sold already and further sale negotiations were initiated (see the “IFRS 5 – Noncurrent assets held for sale” section). Overall, comprehensive impairment losses on assets of production facilities and financial services companies as well as risk provisions, especially for third-party expenses expected from the discontinuation of activities in Russia, were recognized in the fiscal year.

Overall, total expenses of around €2 billion were recognized in the fiscal year as a direct result of the Russia-Ukraine conflict, which are reported in cost of sales and in the other operating result. Of this amount, €1.5 billion was attributable to the Automotive Division and €0.5 billion to the Financial Services Division.

In connection with inflation rate trends, the weighted average cost of capital (WACC) used in testing the different cash-generating units for impairment were also subject to significant change. Please refer to the “Accounting policies” section.

In addition, as a result of the turbulence on the commodity and capital markets, gains totaling €3.7 billion had to be recognized in the other operating result, primarily from the fair value measurement and realization of derivatives to which hedge accounting is not applied (especially commodity, currency and interest rate hedges).

During 2022, the restrictive measures put in place to protect the population from the SARS-CoV-2 virus were lifted to a large extent in many countries. The progress made in administering vaccines to the public had a positive effect, while the emergence of the new Omicron variant and its subvariants led to a renewed sharp rise in infections on a national scale, mostly causing milder symptoms but increased rates of sick leave. In China particularly, local outbreaks of infection in the course of 2022 led to tight restrictions under the zero-Covid strategy being pursued there, resulting in economic constraints and disruption to international supply chains. The departure from this strategy led to a rapid increase in infection rates in China at the end of the year.

In addition to the uncertainty and measures being taken around the world to deal with the Covid-19 pandemic, persistent semiconductor shortages and the resulting limited availability of Group models meant that demand could not be adequately met in some regions.

Please also refer to the comments in the 2022 group management report, specifically in the chapters entitled Business Development, Results of Operations, Financial Position and Net Assets, Report on Expected Developments and Report on Risks and Opportunities.

Material transactions of the current fiscal year

IPO of Porsche AG

On September 28, 2022, as part of the IPO of Dr. Ing. h.c. F. Porsche AG, Stuttgart (Porsche AG), a total of 113,875,000 preferred shares of Porsche AG were successfully placed with investors at a placement price of €82.50 per preferred share, totaling around €9.4 billion – including 14,853,260 preferred shares to cover potential additional allocations. The non-voting no-par value bearer shares came from the portfolio of Porsche Holding Stuttgart GmbH, Stuttgart – a wholly owned subsidiary of Volkswagen AG. The total number of preferred shares offered in the IPO corresponded to up to 25% of the preference share capital of Porsche AG (including additional allocations). The non-voting preferred shares of Porsche AG have been traded on the Regulated Market of the Frankfurt Stock Exchange since September 29, 2022. Up to the early termination of the stabilization period on October 11, 2022, a total of 3,794,199 preferred shares had been bought back on the market. The free float of the preferred shares after the end of the stabilization period is therefore 24.2% and comprises 110,080,801 preferred shares.

In connection with the IPO, Volkswagen additionally sold an interest of 25% of Porsche AG's ordinary shares plus one ordinary share to Porsche Automobil Holding SE, Stuttgart (Porsche SE). As consideration, Porsche SE has undertaken to pay a purchase price of around €10.1 billion to Volkswagen; this purchase price includes a premium of 7.5% on the placement price of the preferred shares per share. The purchase of the ordinary shares will be completed in two tranches of 79,712,501 and 34,162,500 shares respectively.

As a result of the transactions, the Volkswagen Group's equity increased by €19.1 billion, net of bank commissions and fees of €0.1 billion taken directly to equity; of this amount, €10.8 billion is reported as noncontrolling interests. The cash inflow for the preferred shares and the first tranche of the ordinary shares occurred at the beginning of the fourth quarter of 2022.

The resolution of the extraordinary General Meeting of Volkswagen AG on December 16, 2022 gave rise to the obligation to pay a dividend, which was increased by €19.06 per ordinary and preferred share ("special dividend") and led to a total obligation to the shareholders of Volkswagen AG amounting to €9.6 billion. Taking into account the offsetting transaction described below, a corresponding liability was recognized for this payment as of the balance sheet date. The cash outflow was slated for January 9, 2023 and occurred on that day.

Volkswagen AG and Porsche SE agreed to offset the obligation to pay a special dividend to Porsche SE against Volkswagen AG's claim to the payment of the purchase price still outstanding for the second tranche of ordinary shares. In the consolidated financial statements as of December 31, 2022, the purchase price receivable of €3.0 billion for the second tranche and the dividend liability of €3.1 billion were therefore presented on a net basis. Upon payment of the special dividend on January 9, 2023, the netting process was completed.

The employees of Volkswagen AG and Volkswagen Sachsen GmbH are to participate in the economic success of the placement of the preferred shares and the sale of ordinary shares in Porsche AG by way of a one-off payment of up to €2,000 per employee. A liability of €0.3 billion was recognized to this end as of the balance sheet date. On October 17, 2022, the Board of Management and the Works Council of Porsche AG communicated a special payment to employees to mark the successful IPO; the payment of €0.2 billion was made and recognized in profit or loss in the fourth quarter of 2022.

The total bonus for employees in connection with the IPO of Porsche AG amounted to €0.5 billion in the Volkswagen Group as of the balance sheet date.

Acquisition of Europcar

In 2021, together with investment firm Attestor Limited and Pon Holdings B.V., Volkswagen made a joint public takeover offer for the shares of Europcar Mobility Group S.A., Paris/France (Europcar) through the consortium company Green Mobility Holding S.A. (GMH) based in Strassen/Luxembourg. The European Commission issued final antitrust approval at the end of May 2022. During the extended offer period, the French Financial Markets Authority gave Europcar shareholders the opportunity to tender their shares to the consortium company. In total, 93.6% of Europcar's shareholders accepted the offer. The consortium jointly assumed control of Europcar in mid-June 2022. Because the acceptance rate was over 90%, a squeeze-out was initiated for the remaining Europcar shares in July 2022, and the company was delisted. Since July 13, 2022, the consortium company has held 100% of the shares in Europcar. The purchase price was 51 cents per Europcar share.

At the end of June 2022, the entire portion of the purchase price attributable to Volkswagen, amounting to €1.7 billion, was contributed to GMH. Since joint control has been contractually agreed, the company, in which Volkswagen holds 66% of the shares, will be accounted for using the equity method in the Volkswagen consolidated financial statements. In addition, Volkswagen is the writer of put options held by the other members of the consortium, and the other members have granted Volkswagen call options on their shares in the consortium company. The long-term extension of the Attestor options was arranged in December 2022. The measurement of the options led to a total non-cash expense of €325 million in fiscal year 2022, which was recognized in the financial result.

The completion of the Europcar transaction marks another important milestone for Volkswagen in the Group's Mobility Solutions initiative under the NEW AUTO strategy. With this transaction, the Volkswagen Group intends to secure a significant share of the global market for mobility services. Europcar Mobility Group is to become one of the cornerstones of the mobility platform planned by Volkswagen.

Argo AI

In the third quarter of 2022, Volkswagen made the strategic decision to not further invest in Argo AI, LLC, Pittsburgh/USA (Argo AI) for the development of autonomous driving. As Argo AI was previously unable to attract new investors, the investment was fully written down in the absence of expected returns. This resulted in an expense of €1.9 billion in fiscal year 2022, which is reported in other financial result. It is planned that Argo AI will be wound down. For this purpose, Volkswagen provided Argo AI with USD50 million in January 2023. In addition, Volkswagen is in negotiations to acquire Argo AI personnel and assets.

Material transactions of the previous fiscal year

Merger of MAN SE with TRATON SE

The merger of MAN SE with TRATON SE was adopted by resolution of the Annual General Meeting of MAN SE on June 29, 2021. The merger resolution also triggered the process to transfer the shares held by the noncontrolling interest shareholders of MAN SE to TRATON SE against payment of an appropriate cash settlement (merger squeeze-out). In this context, the present value of the put options granted, amounting to approximately €587 million, was recognized as a current liability directly in equity. The noncontrolling interests in the Volkswagen Group's equity declined accordingly, as did the retained earnings and other reserves attributable to the shareholders of Volkswagen AG.

The merger of MAN SE with TRATON SE was entered in the commercial register for MAN SE and TRATON SE on August 31, 2021. The squeeze-out took legal effect on the date of this entry in the commercial register. This was followed on September 3, 2021 by the disbursement of the cash settlement of €70.68 per ordinary and preferred share to the noncontrolling interest shareholders of MAN SE, thus completing the MAN SE squeeze-out. Judicial award proceedings initiated by noncontrolling interest shareholders who had received a settlement as a result of the squeeze-out were conducted to review whether the cash settlement is appropriate.

Investment in Northvolt AB

In mid-June 2021, Volkswagen and the Swedish battery cell producer Northvolt AB, Stockholm/Sweden (Northvolt AB) had agreed to concentrate production of Volkswagen premium cells in Skellefteå/Sweden. In connection with this, Volkswagen had participated in a financing round at Northvolt AB that was proportionate to its shareholding, investing a further USD650 million in the company. Volkswagen had also increased its existing convertible loan by a further €190 million and, at the same time, converted this part of the loan to preferred shares. This increased Volkswagen's ownership interest in Northvolt AB to 23.6%. Due to favorable terms and conditions on conversion, the measurement of the converted loan had resulted in non-cash income of €62 million in the previous year. As a result, the carrying amount of the equity investment in Northvolt AB rose by €796 million. A convertible loan of €240 million remains on issue.

Establishment of Bugatti Rimac d.o.o.

In 2021, the Volkswagen Group and Rimac Automobili d.o.o., Sveta Nedelja/Croatia (Rimac), established Bugatti Rimac d.o.o., which has its headquarter in Sveta Nedelja. Volkswagen had contributed its consolidated subsidiaries Bugatti Automobiles S.A.S, Molsheim/France and an initial 51% of Bugatti International S.A., Strassen/Luxembourg. After proportional profit elimination, the contribution had resulted in a non-cash gain of €124 million in the previous year, which was recognized in the other operating result. Rimac holds 55% of the shares in the company and Volkswagen holds 45% through Porsche AG. In addition, Porsche AG holds a direct interest of 22% in Rimac. In the consolidated financial statements, both equity investments are reported under equity-accounted investments.

Initially, Bugatti Rimac d.o.o. will produce two hypercar models, the Bugatti Chiron and the Rimac Nevera. It is envisaged that further in the future the activities of Bugatti Rimac d.o.o. will focus on a joint product portfolio under the Bugatti brand name with the aim of developing, producing and selling electric-powered, luxury hyper sports cars.

Equity investment in Gotion High-Tech Co., Ltd.

To expand its battery expertise, Volkswagen acquired an interest in Gotion High-Tech Co., Ltd., Hefei/China (Gotion) through Volkswagen (China) Investment Co. Ltd. in 2021, and is therefore the largest shareholder of the Chinese battery supplier. The Group spent a total of €1.2 billion on this transaction in the previous year. The investment is accounted for using the equity method.

Acquisition of Navistar

On July 1, 2021, a TRATON GROUP company acquired all of the outstanding shares in Navistar International Corporation (Navistar), a US manufacturer of commercial vehicles based in Lisle, Illinois/USA. The purchase price of €3,118 million (USD3,700 million) was paid in cash. TRATON SE indirectly holds 100% of the shares in Navistar International Corporation, which until June 30, 2021 was accounted for using the equity method (interest of 16.7%). Trading in Navistar shares on the New York Stock Exchange has been discontinued.

The goodwill in the amount of €2,783 million from the acquisition determined as of December 31, 2021 reflected the synergies arising from the operation with Navistar. These relate particularly to the growth in the share of the market, to procurement, production costs, modularization and the use of shared components, and to the area of research and development.

The fair value of the equity interest in Navistar that TRATON GROUP had held immediately prior to the acquisition date was determined on the basis of the share price of USD44.50/share at the acquisition date; it amounted to €624 million. The remeasurement of this equity interest resulted in a gain of €219 million in 2021. Moreover, the derecognition of the equity-accounted investment during the initial consolidation of Navistar resulted in income and expenses previously recognized directly in equity being reclassified to the income statement, which had led to an expense of €37 million in the previous year. This resulted in a total gain of €182 million in the previous year which was presented in the share of the result of equity-accounted investments. The resulting preliminary allocation of the purchase price to the assets acquired and liabilities assumed in the previous year was as follows:

€ million	Preliminary fair values as of July 1, 2021
Consideration transferred	
Cash	3,118
Unwinding of pre-existing relationships	126
Exchange of share-based payment awards	22
Total	**3,266**

€ million	Preliminary fair values as of July 1, 2021
Net assets acquired	
Intangible assets	3,542
of which Customer relationships	2,163
of which Brand names	736
Property, plant and equipment	917
Lease assets	316
Other equity investments	621
Noncurrent receivables and financial assets	369
Inventories	1,045
Current receivables and financial assets	1,732
Cash funds	565
Deferred tax assets	600
Total assets	**9,709**
Noncurrent financial liabilities	509
Provisions for pensions and similar obligations	1,066
Deferred tax liabilities	114
Other noncurrent liabilities and provisions	695
Current financial liabilities	3,322
Other current liabilities and provisions	2,894
Total liabilities	**8,599**
Balance of net assets acquired	**1,109**

€ million	Preliminary goodwill calculation
Consideration transferred	3,266
Equity interests	3
Fair value of equity interests held previously	624
less	
Net assets acquired	1,109
Goodwill	2,783

In 2021, the consideration transferred included an amount of €126 million for winding down pre-existing relationships. This corresponded to the fair value of the Volkswagen Group’s receivables from and liabilities to Navistar recognized as of the acquisition date. The fair value of an amount receivable by MAN Truck & Bus from Navistar arising from the termination of a development project exceeded the previously recognized carrying amount by €12 million. The difference was recognized through profit or loss in other operating income in 2021.

Receivables and financial assets included the following groups of receivables for which the gross amounts differed from the fair values in 2021:

€ million	Gross amount	Amount expected to be uncollectible
Financing business receivables	924	15
Lease receivables	201	36
Trade receivables	501	15
Other receivables	512	1

The transaction costs of €34 million incurred up to December 31, 2021 for implementing the business combination were recognized in administrative expenses.

As a result of the consolidation of Navistar as of July 1, 2021, the Volkswagen Group's sales revenue increased by €3,494 million as of December 31, 2021, while earnings after tax, including amortization on realized hidden reserves, decreased by €217 million.

If Navistar had been included in the consolidated financial statements of the Volkswagen Group as a fully consolidated subsidiary since January 1, 2021, consolidated sales revenue after consolidation reported as of December 31, 2021 would have amounted to €253,802 million, and profit after tax would have been €526 million lower, at €14,942 million.

Due to the size of the transaction, it was not possible to complete the internal reviews of the information underlying the purchase price allocation until fiscal year 2022. The update to the purchase price allocation did not materially affect the Volkswagen Group's net assets, financial position and results of operations.

Effects of climate change

Against the backdrop of climate change and the resulting stricter emissions regulations, the transformation of the automotive industry towards e-mobility and further digitalization continues to make progress. In its NEW AUTO strategy, the Volkswagen Group has again stepped up the pace of its transformation towards e-mobility.

In the preparation of the consolidated financial statements, the Board of Management took into account the potential effects of climate changes and future regulatory requirements, and especially the corresponding transformation towards e-mobility. Potential effects, especially on noncurrent assets, provisions for emissions levies and future cash flows were, as far as possible, incorporated as part of the significant estimates and assumptions included in the consolidated financial statements. The Volkswagen Group aims to increase the share of all-electric vehicles as a proportion of total deliveries in the medium term, from 6.9% in 2022 to around 20% in 2025. The Group aims to offer its customers worldwide around 50 completely battery-electric models by 2030. The effects of the transformation towards e-mobility and the planned increase in the share of all-electric vehicles planned in this context are taken into account in compiling the medium-term planning and therefore in the calculation of future cash flows for determining recoverable amounts in impairment tests of goodwill and intangible assets with indefinite useful lives, especially when planning future vehicle models, development costs and production facilities. An amount in the low triple-digit billion euro range has been earmarked for this purpose in the medium-term planning. In addition, Volkswagen regularly assesses whether these developments give rise to the need for ad hoc impairment tests or for adjustments to the useful lives of other noncurrent non-financial assets. No material effects on the useful lives of capitalized development costs or property, plant and equipment were identified, given the periods under consideration for the regulatory requirements and due to the parallel production of battery electric vehicles and vehicles with combustion engines in the coming years. With reference to increasingly stringent emissions regulations, it is ensured that the various international regulations are taken into account and that any obligations are recognized appropriately. This did not result in any material effects on the consolidated financial statements. The increase in development costs in the areas of e-mobility and digitalization have, however, led to a corresponding increase in internally generated intangible assets. For more information, please refer to the “Accounting policies” section.

For a detailed presentation of how sustainability is taken into account within the Group strategy, in the management of the Group and in Group planning, please refer to the sections entitled “Goals and Strategies” and “Sustainable Value Enhancement” in the group management report.

Basis of consolidation

In addition to Volkswagen AG, the consolidated financial statements comprise all significant German and non-German subsidiaries, including structured entities that are controlled directly or indirectly by Volkswagen AG. This is the case if Volkswagen AG obtains power over the potential subsidiaries directly or indirectly from voting rights or similar rights, is exposed or has rights to, positive or negative variable returns from its involvement with the subsidiaries, and is able to influence those returns. In the case of the structured entities consolidated in the Volkswagen Group, Volkswagen is able to direct the material relevant activities remaining after the change in the structure even if it is not invested in the structured entity concerned and is thus able to influence the variable returns from its involvement. The structured entities are used primarily to enter into asset-backed securities transactions to refinance the financial services business and to invest surplus liquidity in special securities funds. Consolidation of subsidiaries begins at the first date on which control exists, and ends when such control no longer exists.

Subsidiaries whose business is dormant or insignificant, both individually and in the aggregate, for the fair presentation of the net assets, financial position and results of operations as well as the cash flows of the Volkswagen Group are not consolidated. They are carried in the consolidated financial statements at cost net of any impairment losses and reversals of impairment losses required to be recognized.

Significant companies where Volkswagen AG is able, directly or indirectly, to significantly influence financial and operating policy decisions (associates), or that are directly or indirectly jointly controlled (joint ventures), are accounted for using the equity method. Joint ventures also include companies in which the Volkswagen Group holds the majority of voting rights, but whose articles of association or partnership agreements stipulate that important decisions may only be resolved unanimously. Insignificant associates and joint ventures are carried at cost net of any impairment losses and reversals of impairment losses required to be recognized.

The composition of the Volkswagen Group is shown in the following table:

	2022	2021
Volkswagen AG and consolidated subsidiaries		
Germany	149	144
Abroad	797	803
Subsidiaries carried at cost		
Germany	86	80
Abroad	290	284
At equity accounted associates and joint ventures and at fair value accounted other equity investments		
Germany	45	38
Abroad	102	88
Associates and joint ventures carried at cost		
Germany	51	45
Abroad	48	47
	1,568	**1,529**

The list of all shareholdings that forms part of the annual financial statements of Volkswagen AG can be downloaded from the electronic companies register at www.unternehmensregister.de and from https://www.volkswagenag.com/en/InvestorRelations.html.

The following consolidated German subsidiaries with the legal form of a corporation or partnership have met the criteria set out in section 264(3) or section 264b of the Handelsgesetzbuch (HGB – German Commercial Code) and have as far as possible exercised the option not to publish annual financial statements:

> ARTEMIS GmbH, Wolfsburg
> AUDI AG, Ingolstadt
> Audi Berlin GmbH, Berlin
> Audi Frankfurt GmbH, Frankfurt am Main
> Audi Hamburg GmbH, Hamburg
> Audi Hannover GmbH, Hanover
> Audi Leipzig GmbH, Leipzig
> Audi München GmbH, Munich
> Audi Sport GmbH, Neckarsulm
> Audi Stuttgart GmbH, Stuttgart
> Auto & Service PIA GmbH, Munich
> Autostadt GmbH, Wolfsburg
> Bugatti Engineering GmbH, Wolfsburg
> CARIAD SE, Wolfsburg
> dx.one GmbH, Wolfsburg
> Eberhardt Kraftfahrzeug GmbH & Co. KG, Ulm
> GETAS Verwaltung GmbH & Co. Objekt Augsburg KG, Pullach i. Isartal
> GETAS Verwaltung GmbH & Co. Objekt Heinrich-von-Buz-Straße KG, Pullach i. Isartal
> HABAMO Verwaltung GmbH & Co. Objekt Sterkrade KG, Pullach i. Isartal
> Haberl Beteiligungs-GmbH, Munich
> Held & Ströhle GmbH & Co. KG, Ulm
> H-Tec SYSTEMS GmbH, Augsburg
> MAHAG Automobilhandel und Service GmbH & Co. oHG, Munich
> MAHAG GmbH, Munich
> MAHAG Sportwagen Zentrum Albrechtstraße GmbH, Munich
> MAN Energy Solutions SE, Augsburg
> MOIA GmbH, Berlin
> MOIA Operations Germany GmbH, Hanover
> Porsche Holding Stuttgart GmbH, Stuttgart
> Porsche Niederlassung Mannheim GmbH, Mannheim
> Porsche Siebte Vermögensverwaltung GmbH, Wolfsburg
> PowerCo SE, Salzgitter
> PZ Leipzig GmbH, Leipzig
> Schwaba GmbH, Augsburg
> SEAT Deutschland Niederlassung GmbH, Frankfurt am Main
> SKODA AUTO Deutschland GmbH, Weiterstadt
> SZM Sportwagen Zentrum München GmbH, Munich
> VfL Wolfsburg-Fußball GmbH, Wolfsburg
> VGRB GmbH, Berlin
> VGRD GmbH, Wolfsburg
> VGRHH GmbH, Hamburg
> Volkswagen ADMT Hannover GmbH, Hanover

- Volkswagen AirService GmbH, Braunschweig
- Volkswagen Automobile Berlin GmbH, Berlin
- Volkswagen Automobile Chemnitz GmbH, Chemnitz
- Volkswagen Automobile Frankfurt GmbH, Frankfurt am Main
- Volkswagen Automobile Hamburg GmbH, Hamburg
- Volkswagen Automobile Hannover GmbH, Hanover
- VOLKSWAGEN Automobile Leipzig GmbH, Leipzig
- Volkswagen Automobile Region Hannover GmbH, Hanover
- Volkswagen Automobile Rhein-Neckar GmbH, Mannheim
- Volkswagen Automobile Stuttgart GmbH, Stuttgart
- Volkswagen Beteiligungsverwaltung GmbH, Wolfsburg
- Volkswagen Deutschland GmbH & Co. KG, Wolfsburg
- Volkswagen Deutschland Verwaltungs GmbH, Wolfsburg
- Volkswagen Dritte Leasingobjekt GmbH, Braunschweig
- Volkswagen Erste Leasingobjekt GmbH, Braunschweig
- Volkswagen Fünfte Leasingobjekt GmbH, Braunschweig
- Volkswagen Gebrauchtfahrzeughandels und Service GmbH, Langenhagen
- Volkswagen Group IT Solutions GmbH, Wolfsburg
- Volkswagen Group Real Estate GmbH & Co. KG, Wolfsburg
- Volkswagen Group Services GmbH, Wolfsburg
- Volkswagen Immobilien GmbH, Wolfsburg
- Volkswagen Konzernlogistik GmbH & Co. OHG, Wolfsburg
- Volkswagen Original Teile Logistik GmbH & Co. KG, Baunatal
- Volkswagen Osnabrück GmbH, Osnabrück
- Volkswagen Sachsen GmbH, Zwickau
- Volkswagen Sechste Leasingobjekt GmbH, Braunschweig
- Volkswagen Siebte Leasingobjekt GmbH, Braunschweig
- Volkswagen Software Asset Management GmbH, Wolfsburg
- Volkswagen Vermögensverwaltungs-GmbH, Wolfsburg
- Volkswagen Vierte Leasingobjekt GmbH, Braunschweig
- Volkswagen Zubehör GmbH, Dreieich
- Volkswagen Zweite Leasingobjekt GmbH, Braunschweig

CONSOLIDATED SUBSIDIARIES

The fiscal year's changes in the consolidated Group are shown in the following table:

Number	Germany	Abroad
Initially consolidated		
Subsidiaries previously carried at cost	5	23
Newly acquired subsidiaries	–	11
Newly formed subsidiaries	3	5
Other	1	–
	9	**39**
Deconsolidated		
Mergers	1	22
Liquidations	1	8
Sales/other	2	15
	4	**45**

The initial consolidation or deconsolidation of these subsidiaries, either individually or collectively, did not have a significant effect on the presentation of the net assets, financial position and results of operations. The unconsolidated structured entities are immaterial from a Group perspective. In particular, they do not give rise to any significant risks to the Group.

INVESTMENTS IN ASSOCIATES

From a Group perspective, the associates QuantumScape Corporation, San José/United States (QuantumScape), Northvolt AB and Gotion, with activities in the battery business field, and the other associates Sinotruk (Hong Kong) Ltd., Hongkong/China (Sinotruk), Bertrandt AG, Ehningen/Germany (Bertrandt), and There Holding B.V., Rijswijk/the Netherlands (There Holding), were material as of the balance sheet date.

QuantumScape

QuantumScape is a US-based start-up for lithium-metal solid state batteries. A strategic partnership has been set up between Group companies and QuantumScape for the joint production of battery cells in the future. QuantumScape's principal place of business is in San José/United States.

As of December 31, 2022, the quoted market price of the shares in QuantumScape amounted to €453 million (previous year: €1,682 million).

Gotion

Gotion is a Chinese technology company that engages primarily in research and development, production and sales of lithium-ion batteries and in electric transmission and transformation businesses. Group companies and Gotion have agreed a strategic framework for cooperation in the development, manufacture and distribution of battery cells. Gotion's principal place of business is in Hefei/China.

As of December 31, 2022, the quoted market price of the shares in Gotion amounted to €1.8 billion (previous year: €3.1 billion).

Northvolt AB

Northvolt AB develops and produces lithium-ion batteries. Battery purchase agreements are in place between Group companies and Northvolt AB. Northvolt AB's principal place of business is in Stockholm/Sweden.

Sinotruk

Sinotruk is one of the largest truck manufacturers in the Chinese market. There is an agreement in place between Group companies and Sinotruk regarding a long-term strategic partnership, under which the Group participates in the local market. Sinotruk's principal place of business is in Hongkong/China.

As of December 31, 2022, the quoted market price of the shares in Sinotruk amounted to €903 million (previous year: €938 million).

Bertrandt

Bertrandt is an engineering partner to companies in the automotive and aviation industry. Its portfolio of services ranges from developing individual components through complex modules to end-to-end solutions. Bertrandt's principal place of business is in Ehningen/Germany.

As of December 31, 2022, the quoted market price of the shares in Bertrandt amounted to €118 million (previous year: €168 million).

There Holding

Together with the BMW Group, Mercedes-Benz Group (formerly: Daimler AG) and other companies, Volkswagen holds an equity investment in There Holding B.V., Rijswijk/the Netherlands, an investment company. In turn, There Holding B.V. held around 60% of the shares of HERE International B.V., Eindhoven/the Netherlands, as of the end of fiscal year 2022. HERE International B.V. is one of the world's largest producers of digital road maps for navigation systems. Since the interest held does not grant control in accordance with IFRS 10, HERE International B.V. is included in the financial statements of There Holding B.V. as an associate using the equity method.

SUMMARIZED FINANCIAL INFORMATION ON MATERIAL ASSOCIATES IN THE BATTERY BUSINESS FIELD ON A 100 % BASIS

€ million	QuantumScape[1]	Gotion[2]	Northvolt AB[3]
2022			
Equity interest in %	20	25	23
Noncurrent assets	387	3,823	2,137
Current assets	1,194	4,936	2,905
Noncurrent liabilities	113	1,653	1,323
Current liabilities	47	3,774	248
Net assets	1,422	3,332	3,471
Sales revenue	–	1,985	67
Earnings after tax from continuing operations	–398	35	–65
Earnings after tax from discontinued operations	–	–	–
Other comprehensive income	–24	–21	16
Total comprehensive income	–422	14	–49
Dividends received[4]	–	6	–
2021			
Equity interest in %	20	26	24
Noncurrent assets	179	–	2,137
Current assets	1,342	–	2,905
Noncurrent liabilities	57	–	1,323
Current liabilities	31	–	248
Net assets	1,432	–	3,471
Sales revenue	–	–	67
Earnings after tax from continuing operations	18	–	–65
Earnings after tax from discontinued operations	–	–	–
Other comprehensive income	0	–	16
Total comprehensive income	18	–	–49
Dividends received[4]	–	–	–

1 Balance sheet amounts refer to the September 30 reporting date and income statement amounts refer to the period from October 1 to September 30. Balance sheet amounts of the previous year refer to the September 30 reporting date and income statement amounts of the previous year refer to the period from January 1 to September 30.
2 Balance sheet amounts refer to the September 30 reporting date and income statement amounts refer to the period from January 1 to September 30.
3 The financial information presented refer to fiscal year 2021.
4 Proportionate dividends are shown net of withholding tax.

RECONCILIATION OF THE FINANCIAL INFORMATION TO THE CARRYING AMOUNT OF THE EQUITY-ACCOUNTED INVESTMENTS

€ million	QuantumScape	Gotion	Northvolt AB[2]
2022			
Net assets at Jan. 1	1,432	2,725	1,109
Profit or loss	−398	35	−65
Other comprehensive income	−24	−21	16
Changes in share capital	0	16	0
Changes in reserves	132	630	2,463
Foreign exchange differences	279	−30	−53
Dividends[1]	–	−24	–
Net assets at Dec. 31	1,422	3,332	3,471
Proportionate equity	281	790	818
Consolidation/Goodwill/Others	842	231	93
Carrying amount of equity-accounted investments	1,123	1,021	911
2021			
Net assets at Jan. 1	288	–	1,109
Profit or loss	18	–	−65
Other comprehensive income	0	–	16
Changes in share capital	0	–	0
Changes in reserves	1,072	–	2,463
Foreign exchange differences	54	–	−53
Dividends[1]	–	–	–
Net assets at Dec. 31	1,432	–	3,471
Proportionate equity	292	–	818
Consolidation/Goodwill/Others	855	–	279
Carrying amount of equity-accounted investments	1,147	1,072	1,097

1 Dividends are shown before withholding tax.
2 The financial information presented refer to fiscal year 2021.

SUMMARIZED FINANCIAL INFORMATION ON OTHER MATERIAL ASSOCIATES ON A 100 % BASIS

€ million	Sinotruk[1]	Bertrandt[2]	There Holding
2022			
Equity interest in %	25	29	30
Noncurrent assets	4,150	581	1,076
Current assets	10,393	512	1
Noncurrent liabilities	180	232	129
Current liabilities	8,258	336	0
Net assets	6,105	524	947
Sales revenue	7,863	1,008	–
Earnings after tax from continuing operations	309	–2	–134
Earnings after tax from discontinued operations	–	–	–
Other comprehensive income	5	4	–9
Total comprehensive income	314	3	–143
Dividends received[3]	54	1	–
2021			
Equity interest in %	25	29	30
Noncurrent assets	3,852	610	1,175
Current assets	12,346	476	2
Noncurrent liabilities	161	407	87
Current liabilities	10,499	155	0
Net assets	5,539	524	1,090
Sales revenue	15,273	846	–
Earnings after tax from continuing operations	1,057	–16	–108
Earnings after tax from discontinued operations	–	–	–
Other comprehensive income	–10	0	–17
Total comprehensive income	1,047	–16	–125
Dividends received[3]	75	0	–

1 Balance sheet amounts refer to the June 30 reporting date and income statement amounts refer to the period from July 1 to June 30.
2 Balance sheet amounts refer to the September 30 reporting date and income statement amounts refer to the period from October 1 to September 30.
3 Proportionate dividends are shown net of withholding tax.

RECONCILIATION OF THE FINANCIAL INFORMATION TO THE CARRYING AMOUNT OF THE EQUITY-ACCOUNTED INVESTMENTS

€ million	Sinotruk	Bertrandt	There Holding
2022			
Net assets at Jan. 1	5,539	524	1,090
Profit or loss	309	–2	–134
Other comprehensive income	5	4	–9
Changes in reserves	–74	–	–
Foreign exchange differences	565	–	–
Dividends[1]	–238	–3	–
Net assets at Dec. 31	6,105	524	947
Proportionate equity	1,526	152	282
Consolidation/Goodwill/Others	–682	–30	–
Carrying amount of equity-accounted investments	845	122	282
2021			
Net assets at Jan. 1	3,969	541	1,214
Profit or loss	1,057	–16	–108
Other comprehensive income	–10	0	–17
Changes in reserves	697	–	–
Foreign exchange differences	168	–	–
Dividends[1]	–342	–1	–
Net assets at Dec. 31	5,539	524	1,090
Proportionate equity	1,385	152	324
Consolidation/Goodwill/Others	–553	14	–
Carrying amount of equity-accounted investments	832	166	324

1 Dividends are shown before withholding tax.

SUMMARIZED FINANCIAL INFORMATION ON INDIVIDUALLY IMMATERIAL ASSOCIATES ON THE BASIS OF THE VOLKSWAGEN GROUP'S PROPORTIONATE INTEREST

€ million	2022	2021
Earnings after tax from continuing operations	–32	–191
Earnings after tax from discontinued operations	–	–
Other comprehensive income	16	21
Total comprehensive income	–16	–170
Carrying amount of equity-accounted investments	1,440	4,304

The change in the carrying amounts shown above results mainly from the separate presentation of the companies with activities in the battery business field in fiscal year 2022.

There were unrecognized losses of €2 million (previous year: €7 million) relating to investments in associates. Financial guarantees have been issued to associates in an amount of €1 million (previous year: €– million).

INTERESTS IN JOINT VENTURES

From a Group perspective, the joint ventures FAW-Volkswagen Automotive Company Ltd., Changchun/China, SAIC-Volkswagen Automotive Company Ltd., Shanghai/China, and SAIC-Volkswagen Sales Company Ltd., Shanghai/China, were material at the reporting date due to their size.

FAW-Volkswagen Automotive Company

FAW-Volkswagen Automotive Company develops, produces and sells passenger cars. There is an agreement in place between Group companies and the joint venture partner China FAW Corporation Limited regarding a long-term strategic partnership. The principal place of business is in Changchun/China.

SAIC-Volkswagen Automotive Company

SAIC-Volkswagen Automotive Company develops and produces passenger cars. There is an agreement in place between Group companies and the joint venture partner Shanghai Automotive Industry Corporation regarding a long-term strategic partnership. The principal place of business is in Shanghai/China.

SAIC-Volkswagen Sales Company

SAIC-Volkswagen Sales Company sells passenger cars for SAIC-Volkswagen Automotive Company. There is an agreement in place between Group companies and the joint venture partner Shanghai Automotive Industry Corporation regarding a long-term strategic partnership. The principal place of business is in Shanghai/China.

SUMMARIZED FINANCIAL INFORMATION ON THE MATERIAL JOINT VENTURES ON A 100% BASIS

€ million	FAW-Volkswagen Automotive Company	SAIC-Volkswagen Automotive Company[1]	SAIC-Volkswagen Sales Company
2022			
Equity interest in %	40	50	30
Noncurrent assets	11,021	7,003	937
Current assets	13,941	6,459	3,656
of which cash and cash equivalents	8,355	1,243	525
Noncurrent liabilities	1,112	593	128
of which financial liabilities[2]	25	2	24
Current liabilities	14,832	9,831	4,091
of which financial liabilities[2]	30	2,135	13
Net assets	9,018	3,039	374
Sales revenue	47,986	22,844	25,112
Depreciation and amortization	2,333	1,899	25
Interest income	316	45	7
Interest expenses	2	24	3
Earnings before tax from continuing operations	5,711	1,391	453
Income tax expense	1,510	80	126
Earnings after tax from continuing operations	4,201	1,311	328
Earnings after tax from discontinued operations	–	–	–
Other comprehensive income	161	26	–
Total comprehensive income	4,361	1,337	328
Dividends received[3]	1,527	683	100
2021			
Equity interest in %	40	50	30
Noncurrent assets	12,154	10,253	973
Current assets	13,417	5,335	3,355
of which cash and cash equivalents	6,856	2,444	338
Noncurrent liabilities	1,312	593	135
of which financial liabilities[2]	12	18	35
Current liabilities	15,536	11,793	3,801
of which financial liabilities[2]	10	2,078	14
Net assets	8,724	3,202	392
Sales revenue	46,841	18,113	20,791
Depreciation and amortization	1,648	1,777	22
Interest income	162	49	5
Interest expenses	1	18	2
Earnings before tax from continuing operations	5,188	1,122	416
Income tax expense	1,352	215	104
Earnings after tax from continuing operations	3,837	907	312
Earnings after tax from discontinued operations	–	–	–
Other comprehensive income	–4	–8	–
Total comprehensive income	3,833	899	312
Dividends received[3]	1,309	938	106

1 SAIC-Volkswagen Sales Company sells passenger cars for SAIC-Volkswagen Automotive Company. Therefore, the sales revenue reported for SAIC-Volkswagen Automotive Company was mostly generated from its business with SAIC-Volkswagen Sales Company.
2 Excluding trade liabilities.
3 Proportionate dividends are shown net of withholding tax.

RECONCILIATION OF THE FINANCIAL INFORMATION TO THE CARRYING AMOUNT OF THE EQUITY-ACCOUNTED INVESTMENTS

€ million	FAW-Volkswagen Automotive Company	SAIC-Volkswagen Automotive Company	SAIC-Volkswagen Sales Company
2022			
Net assets at January 1	8,724	3,202	392
Profit or loss	4,201	1,311	328
Other comprehensive income	161	26	–
Changes in share capital	–	–	–
Changes in reserves	–	–	–
Foreign exchange differences	–67	–73	–12
Dividends[1]	–4,001	–1,427	–334
Net assets at December 31	9,018	3,039	374
Proportionate equity	3,607	1,519	112
Consolidation/Goodwill/Others	–824	–891	–
Carrying amount of equity-accounted investments	2,783	628	112
2021			
Net assets at January 1	7,528	3,936	399
Profit or loss	3,837	907	312
Other comprehensive income	–4	–8	–
Changes in share capital	–	–	–
Changes in reserves	–	–	–
Foreign exchange differences	779	324	35
Dividends[1]	–3,416	–1,957	–353
Net assets at December 31	8,724	3,202	392
Proportionate equity	3,490	1,601	117
Consolidation/Goodwill/Others	–868	–867	–
Carrying amount of equity-accounted investments	2,622	734	117

1 Dividends are shown before withholding tax.

SUMMARIZED FINANCIAL INFORMATION ON INDIVIDUALLY IMMATERIAL JOINT VENTURES ON THE BASIS OF THE VOLKSWAGEN GROUP'S PROPORTIONATE INTEREST

€ million	2022	2021
Earnings after tax from continuing operations	190	218
Earnings after tax from discontinued operations	–	–
Other comprehensive income	346	124
Total comprehensive income	536	342
Carrying amount of equity-accounted investments	3,436	3,431

The carrying amount includes the equity investment in GMH. An impairment loss on the entire investment in Argo AI included in this item in the previous year was recognized in the fiscal year. For further details, see the “Key events” section.

There were no unrecognized losses relating to investments in joint ventures in the fiscal year (previous year: €2 million). Contingent liabilities to joint ventures amounted to €236 million (previous year: €239 million), while financial guarantees stood at €70 million (previous year: €70 million). Cash funds of joint ventures amounting to €172 million (previous year: €185 million) are deposited as collateral for asset-backed securities transactions and are therefore not freely available.

IFRS 5 – NONCURRENT ASSETS HELD FOR SALE

Assets and disposal groups held for sale of the current fiscal year

In December, Porsche AG entered into an agreement with an independent, non-Group investor for the sale of two Russian sales companies in the Passenger Cars and Light Commercial Vehicles segment, OOO Porsche Russland, Moscow/Russia, and OOO Porsche Center Moscow, Moscow/Russia, as well as one company assigned to the Financial Services segment, OOO Porsche Financial Services Russland, Moscow/Russia. Moreover, a repurchase option was agreed with this investor, which can be exercised at the earliest five years and at the latest ten years after the sale. As of the reporting date, the legal transfer of ownership of the Russian subsidiaries of Porsche AG was still subject to approval by the Russian authorities. It is currently expected that ownership will be legally transferred and the purchase price finally determined in the course of the first quarter of 2023. An impairment loss of €25 million was determined for the disposal group and charged to other operating expenses.

It was resolved in the fourth quarter of 2022 to sell the following fully consolidated subsidiaries allocated to the Financial Services segment: OOO Volkswagen Bank RUS, Moscow/Russia, OOO Volkswagen Group Finanz, Moscow/Russia, and OOO Volkswagen Financial Services RUS, Moscow/Russia. The resolution by the competent governing body was immediately followed by the implementation of a disposal plan, which is expected to be completed in the first half of 2023. Impairment losses resulting from measurement requirements under IFRS 5 were not recognized for the disposal groups since the carrying amounts recognized had already been determined under increased macroeconomic uncertainty and it was not considered likely that the implementation of the disposal plan would lead to further impairment losses.

On December 15, 2022, the Supervisory Board of Volkswagen AG resolved to sell the MAN ES gas turbine business of MAN Energy Solutions SE, Augsburg, and MAN Energy Solutions Schweiz AG, Zurich/Switzerland, by way of an asset deal to CSIC Longjiang GH Gas Turbine Co. Ltd., Harbin/China, and its subsidiaries, which are still to be established under German and Swiss law. The transaction is expected to be completed within the next 12 months.

In accordance with IFRS 5, the assets and liabilities held for sale were recognized at the lower of their carrying amount and fair value less expected costs of disposal.

The main groups of assets and liabilities classified as held for sale in the Volkswagen Group as of December 31, 2022, are shown below:

€ million	Dec. 31, 2022
Intangible assets	55
Property, plant and equipment	35
Inventories	3
Cash and securities	566
Other assets	73
Assets held for sale	**733**
Financial liabilities	127
Provisions	10
Other liabilities	21
Liabilities associated with assets held for sale	**158**

The cumulative income and expenses in connection with the disposal groups held for sale are recognized in other comprehensive income; they amount to € –178 million.

Transactions completed in the current fiscal year

TRATON GROUP has signed a declaration of intent in the third quarter of 2022 under which 100% of the shares in OOO Scania-Rus, Moscow, Golitsino/Russia (OOO Scania-Rus), are to be sold. OOO Scania-Rus was consequently classified as a disposal group held for sale as to September 30, 2022. The sale was completed on December 14, 2022 at a purchase price of €75 million.

The sale led to the recognition of an expense of €102 million. With the exception of cash and cash equivalents and other receivables, an impairment loss was recognized on all assets of OOO Scania-Rus. Of the total expense, an amount of €56 million was attributable to other operating expenses and €3 million to the tax result.

In addition, negative accumulated other comprehensive income of €43 million was attributable to OOO Scania-Rus; it relates to currency translation effects and was reclassified to other operating expenses at the time of the sale. The sale of the shares resulted in a net cash outflow of €11 million.

Furthermore, TRATON GROUP entered into an agreement with a Russian supplier in the third quarter of 2022 for the sale of 100% of the shares of OOO MAN Truck and Bus RUS, Moscow/Russia. For this reason, the company was presented as a disposal group held for sale as of September 30, 2022.

The sale was completed effective December 2, 2022 at a selling price of €5 million. The transaction includes an option for the TRATON GROUP to repurchase the shares of the company sold, which can be exercised in the period from January 1, 2024 to July 31, 2037. The sale led to the recognition of an expense of €97 million. With the exception of cash and cash equivalents, an impairment loss was recognized on all assets. An additional provision of €43 million was recognized separately from the disposal group and subsequently derecognized as part of the deconsolidation. Of the total impairment loss, an amount of €74 million was attributable to other operating expenses and €5 million to the tax result.

In addition, negative accumulated other comprehensive income of €18 million was attributable to OOO MAN Truck and Bus RUS; it relates to currency translation effects and was likewise reclassified to other operating expenses at the time of the sale. The sale of the shares resulted in a net cash outflow of €59 million.

In April 2022, TRATON GROUP entered into a definitive agreement with Tupy S.A., Brazil for the sale of International Indústria Automotiva Da América Do Sul Ltda (MWM). MWM specializes in the manufacture of diesel engines. Based on this, MWM was presented as a disposal group held for sale as of June 30, 2022.

The sale of MWM was completed on November 30, 2022. The selling price is €224 million, of which €158 million has already been settled. The amount in excess is reported under other financial assets; €52 million of this amount is attributable to purchase price adjustments relating to the closing balance sheet of MWM and €14 million to contingent consideration. A gain of €7 million was recognized in connection with the sale. This included impairment losses of €2 million, which are disclosed under other operating expenses. In addition, positive accumulated other comprehensive income of €9 million was attributable to MWM; it relates to currency translation effects and was reclassified to other operating expenses at the time of the sale. The sale of the shares in MWM resulted in a net cash inflow of €113 million.

On March 26, 2021, Brose Fahrzeugteile SE & Co. Kommanditgesellschaft (Brose) and VW Finance Luxemburg S.A., a subsidiary of Volkswagen AG, entered into an agreement to establish a jointly operated company for the development and manufacture of complete seat units, seat structures and components, and solutions for the vehicle interior. As part of this arrangement, Brose acquired half of the shares of the Volkswagen Group company SITECH Sp. z o.o., Polkowice/Poland. Brose and Volkswagen each hold 50% of the jointly operated company, Brose Sitech Sp. z o.o., Polkowice/Poland (Brose Sitech), but Brose takes the industrial lead. Consequently, Brose controls the jointly operated company and Volkswagen, given its significant influence following the transaction, accounts for the company as an associate using the equity method.

In accordance with IFRS 5, SITECH Sp. z o.o., Polkowice/Poland, and its consolidated subsidiaries SITECH Sitztechnik GmbH, Wolfsburg, and SITECH Dongchang Automotive Seating Technology Limited, Shanghai/China, were classified as a disposal group held for sale as of December 31, 2021, which was recognized at its carrying amount.

Once all closing conditions had been met, the transaction was completed on January 1, 2022.

Consolidation methods

The assets and liabilities of the German and foreign companies included in the consolidated financial statements are recognized in accordance with the uniform accounting policies used within the Volkswagen Group. In the case of companies accounted for using the equity method, the same accounting policies are generally applied to determine the proportionate equity, based on the most recent audited annual financial statements of each company.

In the case of subsidiaries consolidated for the first time, assets and liabilities are generally measured at their fair value at the date of acquisition. Their carrying amounts are adjusted in subsequent years. Goodwill arises when the purchase price of the investment exceeds the fair value of identifiable net assets. Goodwill is tested for impairment at least once a year to determine whether its carrying amount is recoverable. If the carrying amount of goodwill is higher than the recoverable amount, an impairment loss is recognized. If this is not the case, there is no change in the carrying amount of goodwill compared with the previous year. If the purchase price of the investment is less than the identifiable net assets, the difference is recognized in the income statement in the year of acquisition. Goodwill is accounted for at the subsidiaries in the functional currency of those subsidiaries. Any difference that arises from the acquisition of additional shares of an already consolidated subsidiary is taken directly to equity. Unless otherwise stated, the proportionate equity directly attributable to noncontrolling interests is determined at the acquisition date as the share of the fair value of the assets (excluding goodwill) and liabilities attributable to them. Contingent consideration is measured at fair value at the acquisition date. Subsequent changes in the fair value of contingent consideration do not generally result in the adjustment of the acquisition-date measurement. Acquisition-related costs that are not equity transaction costs are not added to the purchase price; they are recognized as expenses in the period in which they are incurred.

The consolidation process involves adjusting the items in the separate financial statements of the parent and its subsidiaries and presenting them as if they were those of a single economic entity. Intragroup assets, liabilities, equity, income, expenses and cash flows are eliminated in full. Intercompany profits or losses are eliminated in Group inventories and noncurrent assets. Deferred taxes are recognized for consolidation adjustments, and deferred tax assets and liabilities are offset where taxes are levied by the same tax authority and have the same maturity.

Currency translation

Transactions in foreign currencies are translated in the single-entity financial statements of Volkswagen AG and its consolidated subsidiaries at the rates prevailing at the transaction date. Foreign currency monetary items are recorded in the balance sheet using the middle rate at the closing date, while any foreign exchange gains and losses are recognized in profit or loss. This does not apply to foreign exchange differences from loans receivable that represent part of a net investment in a foreign operation. The financial statements of foreign companies are translated into euros using the functional currency concept, under which asset and liability items are translated at the closing rate. With the exception of income and expenses recognized directly in equity, equity is translated at historical rates. The resulting foreign exchange differences are recognized in other comprehensive income until disposal of the subsidiary concerned, and are presented as a separate item in equity.

Income statement items are translated into euros at weighted average rates.

The rates applied are presented in the following table:

		BALANCE SHEET MIDDLE RATE ON DECEMBER 31		INCOME STATEMENT AVERAGE RATE	
	€1 =	2022	2021	2022	2021
Argentina	ARS	188.75869	116.24508	136.67276	112.29685
Australia	AUD	1.57060	1.56120	1.51749	1.57478
Brazil	BRL	5.64440	6.30680	5.44441	6.38119
Canada	CAD	1.44395	1.44170	1.37048	1.48331
Czech Republic	CZK	24.14500	24.85900	24.55830	25.65394
India	INR	88.16400	84.16900	82.73456	87.46457
Japan	JPY	140.66500	130.32000	138.02361	129.86045
Mexico	MXN	20.88790	23.14175	21.21209	23.99548
People's Republic of China	CNY	7.36605	7.18700	7.08135	7.63330
Poland	PLN	4.68600	4.59425	4.68566	4.56535
Republic of Korea	KRW	1,338.29500	1,344.96500	1,358.19726	1,353.93832
Russia	RUB	76.28680	84.97785	73.27417	87.22880
South Africa	ZAR	18.07945	18.05315	17.20322	17.48226
Sweden	SEK	11.07865	10.25475	10.62776	10.14603
United Kingdom	GBP	0.88680	0.84000	0.85256	0.86000
USA	USD	1.06770	1.13200	1.05409	1.18341

Accounting policies

MEASUREMENT PRINCIPLES

With certain exceptions, such as financial instruments measured at fair value and provisions for pensions and other post-employment benefits, items in the Volkswagen Group are accounted for under the historical cost convention. The methods used to measure the individual items are explained in more detail below.

INTANGIBLE ASSETS

Purchased intangible assets are recognized at cost and – if they have finite useful lives – amortized over their useful lives using the straight-line method. This relates in particular to software, which is normally amortized over three years.

In accordance with IAS 38, research costs are recognized as expenses when incurred.

Development costs for future series products and other internally generated intangible assets are capitalized at cost, provided the cash-generating unit to which the respective intangible asset is attributable is not impaired and the other criteria for recognition as assets are met. If at least one of the criteria for recognition as assets is not met, the expenses are recognized in the income statement in the year in which they are incurred.

Capitalized development costs include all direct and indirect costs that are directly attributable to the development process. The costs are amortized using the straight-line method from the start of use (e.g. start of production) over the expected life cycle of the models, powertrains or software developed – generally between three and nine years.

Amortization charges on intangible assets are allocated to the relevant functional areas in the income statement.

Brand names from business combinations usually have an indefinite useful life and are therefore not amortized. An indefinite useful life is usually the result of a brand's further use and maintenance.

Goodwill, intangible assets with indefinite useful lives and intangible assets that are not yet available for use are tested for impairment at least once a year. Assets in use and other intangible assets with finite useful lives are tested for impairment only if there are specific indications that they may be impaired. The Volkswagen Group generally applies the higher of value in use and fair value less costs to sell of the relevant cash-generating unit to determine the recoverable amount of goodwill and intangible assets with indefinite and finite useful lives. Normally, the respective brand is the cash-generating unit that is used as the testing level. Jointly used (corporate) assets are allocated to the cash-generating units using allocation formulas. Measurement of value in use is based on management's current medium-term planning (referred to as budget planning round). The planning period generally covers five years. This planning is based on expectations regarding future global economic trends and on assumptions derived from those trends about the markets for passenger cars and commercial vehicles, expected trends in the Volkswagen Group's market shares, the timing and cost of the development of vehicle models and the amount of investments in production facilities, as well as changes in price and cost structures, taking particular account of the transformation to e-mobility and an increase in regulatory requirements. The planning for the Financial Services segment is likewise prepared on the basis of these expectations, and also reflects the relevant market penetration rates of expected vehicle sales with finance or lease agreements and other services, as well as regulatory requirements. The planning for the Power Engineering segment reflects expectations about trends in the various individual markets.

The planning includes reasonable assumptions about macroeconomic trends (exchange rate, interest rate and commodity price trends) and historical developments.

The Volkswagen Group's planning is based on the assumption that global economic output will grow overall in 2023 albeit at a slower pace. The persistently high inflation in many regions and the restrictive monetary policy measures taken by central banks to rein this in are expected to increasingly dampen consumer spending. Risks will continue to arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, continuing geopolitical tensions and conflicts are weighing on growth prospects; the Russia-Ukraine conflict also holds risks. It cannot be ruled out that risks may also arise if new variants of the SARS-CoV-2 virus occur, particularly regional outbreaks and the associated measures. It is assumed that both the advanced economies and the emerging markets will show positive momentum on average, even with below-average growth in gross domestic product. Moreover, the global economy is expected to recover in 2024 and continue a path of stable growth until 2027. Following high rates of inflation in 2022, inflationary trends are expected to be at a slightly lower level in 2023.

The Volkswagen Group's automotive market and volume planning reflects the above regional differentiation and takes account of the impact of the Covid-19 pandemic, the Russia-Ukraine conflict, and shortages of intermediates and commodities on the initial years of the planning period. The negative impact on earnings expected to arise from 2023 onward from more stringent emission and fuel consumption legislation and the sustained effects of the Covid-19 pandemic is to be offset by corresponding programs to increase efficiency. In addition, the planning is based on the assumption that the supply situation for intermediates and commodities will improve from fiscal year 2023 onward. The change in the operating return on sales assumed for fiscal year 2023 for the purpose of the impairment test is within the range forecast by Volkswagen.

The estimation of cash flows is generally based on the expected growth trends for the markets concerned. The estimates for the cash flows following the end of the planning period are generally based on a growth rate of up to 1% p.a. (previous year: up to 1% p.a.) in the Passenger Cars segment, and on a growth rate of up to 1% p.a. (previous year: up to 1% p.a.) in the Power Engineering and Commercial Vehicles segments.

Value in use is determined for the purpose of impairment testing of goodwill, indefinite-lived intangible assets and finite-lived intangible assets – mainly capitalized development costs – using the following pretax weighted average cost of capital (WACC) rates, which are adjusted if necessary for country-specific discount factors:

WACC	2022	2021
Passenger Cars segment	10.2%	6.2%
Commercial Vehicles segment	13.4%	8.3%
Power Engineering segment	14.2%	9.2%

The WACC rates are calculated based on the risk-free rate of interest, a market risk premium and the cost of debt. Additionally, specific peer group information on beta factors and leverage is taken into account. The composition of the peer groups used to determine beta factors and leverage is continuously reviewed and adjusted if necessary.

For information on the assumptions applied to the detailed planning period, please refer to the Report on Expected Developments, which is part of the Management Report. For subsequent years, plausible assumptions are made regarding future trends. The planning assumptions are adapted to reflect the current state of knowledge.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is carried at cost less depreciation and – where necessary – write-downs for impairment. Investment grants received are generally deducted from cost. Cost is determined on the basis of the direct and indirect costs that are directly attributable. Special operational equipment is reported under other equipment, operating and office equipment. Property, plant and equipment is depreciated using the straight-line method over its estimated useful life. The useful lives of items of property, plant and equipment are reviewed on a regular basis and adjusted if required. As part of this review, the useful lives of certain items of property, plant and equipment were reassessed and extended in January 2023. The effects expected on the operating result are explained in the "Estimates and assumptions by management" section.

Depreciation is based mainly on the following useful lives:

	Useful life
Buildings	20 to 50 years
Site improvements	10 to 20 years
Technical equipment and machinery	6 to 12 years
Other equipment, operating and office equipment, including special operational equipment	3 to 15 years

Impairment losses on property, plant and equipment are recognized in accordance with IAS 36 where the recoverable amount of the asset concerned has fallen below the carrying amount. The recoverable amount is the higher of value in use and fair value less costs to sell. Value in use is determined using the principles described for intangible assets. The discount rates for product-specific tools and other investments are the same as the discount rates for intangible assets given above for each segment. If the reasons for impairments recognized in previous years no longer apply, the impairment losses are reversed up to a maximum of the amount that would have been determined if no impairment loss had been recognized.

In accordance with the principle of substance over form, assets that have been formally transferred to third parties under a sale and leaseback transaction including a repurchase option also continue to be accounted for as separate assets.

LEASES

The Volkswagen Group accounts for leases in accordance with IFRS 16, which defines a lease as a contract or part of a contract in which a lessor transfers to a lessee the right to use an asset for an agreed period of time in exchange for consideration.

If the Volkswagen Group is the lessee, it generally recognizes in its balance sheet a right-of-use asset and a lease liability for each lease. In the Volkswagen Group the lease liability is measured on the basis of the present value of outstanding lease payments, while the right-of-use asset is generally measured at the amount of the lease liability plus any direct costs.

During the lease term, the right-of-use asset is always depreciated on a straight-line basis over the term of the lease. The lease liability is adjusted using the effective interest method and taking the lease payments into account.

The right-of-use assets are reported in the balance sheet under those items in which the assets underlying the lease would have been recognized if the Volkswagen Group had been their beneficial owner. For this reason, the right-of-use assets are presented under noncurrent assets, mostly in property, plant and equipment, as of the balance sheet date and included in impairment tests of property, plant and equipment conducted in accordance with IAS 36.

Practical expedients are allowed for short-term and low-value leases; the Volkswagen Group makes use of this option and therefore does not recognize right-of-use assets or liabilities for these types of leases. In this respect, the lease payments are recognized in the income statement. Leases are accounted for being as of low value if the value of the leased asset when new is no higher than €5,000. Furthermore, the accounting rules of IFRS 16 are not applied to leases of intangible assets.

A large number of leases contain extension and termination options. The determination of the lease terms considers all relevant facts and circumstances that create an economic incentive to exercise or not to exercise the option. Optional periods are taken into account in determining the lease term, if it is reasonably certain that the option will or will not be exercised.

LEASE ASSETS

The accounting treatment of lease assets is based on the classification into operating leases and finance leases. The classification is made on the basis of the distribution of risks and rewards incidental to ownership of the lease asset.

If the lease is an operating lease, the Volkswagen Group is exposed to the material risks and rewards. The lease asset is recognized at amortized cost in the Volkswagen Group’s noncurrent assets and the lease installments collected in the period are recognized as income in the income statement.

Vehicles leased out under operating leases are recognized at cost and depreciated to their estimated residual value using the straight-line method over the term of the lease. Impairment losses identified as a result of an impairment test in accordance with IAS 36 are recognized. The forecast residual values are adjusted to include constantly updated internal and external information on residual values, depending on specific local factors and the experiences gained in the marketing of used cars. This requires management to make assumptions in particular about vehicle supply and demand in the future, as well as about vehicle price trends. Such assumptions are based either on qualified estimates or on data published by external experts. Qualified estimates are based on external data – if available – that reflects additional information that is available from within the company, such as historical experience and current sales data.

Under a finance lease, the material risks and rewards are transferred to the lessee. The lease asset is derecognized from the Volkswagen Group’s noncurrent assets, and instead a receivable is recognized in the amount of the net investment in the lease.

INVESTMENT PROPERTY

Real estate and buildings held in order to obtain rental income (investment property) are carried at amortized cost; the useful lives applied to depreciation generally correspond to those of the property, plant and equipment used by the Company itself. The fair value of investment property is disclosed in the notes. Fair value is generally estimated using an investment method based on internal calculations. This involves determining the income value for a specific building on the basis of gross income, taking into account additional factors such as land value, remaining useful life and a multiplier specific to property.

CAPITALIZATION OF BORROWING COSTS

Borrowing costs of qualifying assets are capitalized as part of the cost of these assets. A qualifying asset is an asset that necessarily takes at least a year to get ready for its intended use.

EQUITY-ACCOUNTED INVESTMENTS

The cost of equity-accounted investments is adjusted to reflect the share attributable to the Volkswagen Group of increases or reductions in equity at the associates and joint ventures after their acquisition, as well as any effects from purchase price allocation. Additionally, the investment is tested for impairment if there are indications of impairment and written down to the lower recoverable amount if necessary. The recoverable amount is determined using the principles described for indefinite-lived intangible assets. If the reason for impairment ceases to apply at a later date, the impairment loss is reversed to the carrying amount that would have been determined had no impairment loss been recognized.

FINANCIAL INSTRUMENTS

Financial instruments are contracts that give rise to a financial asset of one company and a financial liability or an equity instrument of another. Regular way purchases or sales of financial instruments are accounted for at the settlement date – that is, at the date on which the asset is delivered.

Financial assets are classified and measured on the basis of the entity's business model and the characteristics of the financial asset's cash flows.

IFRS 9 classifies financial assets into the following categories:

> financial assets at fair value through profit or loss;
> financial assets at fair value through other comprehensive income (debt instruments);
> financial assets at fair value through other comprehensive income (equity instruments); and
> financial assets at amortized cost.

Financial liabilities are classified into the following categories:

> financial liabilities at fair value through profit or loss; and
> financial liabilities measured at amortized cost.

In the Volkswagen Group, the categories presented above are allocated to the “at amortized cost” and “at fair value” classes.

FINANCIAL ASSETS AND LIABILITIES AT AMORTIZED COST

Financial assets measured at amortized cost are held under a business model that is aimed at collecting contractual cash flows (“hold” business model). The cash flows of these assets relate solely to payments of principal and interest on the principal amount outstanding. The amortized cost of a financial asset or liability is the amount:

> at which a financial asset or liability is measured at initial recognition;
> minus any principal repayments;
> taking account of any loss allowances, write-downs for impairment and uncollectibility relating to financial assets; and
> plus or minus the cumulative amortization of any difference between the original amount and the amount repayable at maturity (premium, discount), amortized using the effective interest method over the term of the financial asset or liability.

Financial liabilities measured at amortized cost using the effective interest method relate to liabilities to banks, bonds, commercial paper and notes, loans and other liabilities. Gains or losses resulting from changes in amortized cost, including the effects of changes in exchange rates, are recognized through profit or loss. For reasons of materiality, discounting or unwinding of discounting is not applied to current liabilities (due within one year).

To encourage lending to private households and companies affected by the Covid-19 pandemic, the ECB provided additional liquidity on favorable terms under the TLTRO III program. The Volkswagen Group is of the view that this support constitutes a government grant. The income from these government grants within the meaning of IAS 20 is recognized in the interest result.

Financial assets and liabilities measured at amortized cost are

> receivables from financing business;
> trade receivables and payables;
> other receivables, financial assets and financial liabilities;
> financial liabilities;
> time deposits; and
> cash and cash equivalents.

FINANCIAL ASSETS AND LIABILITIES AT FAIR VALUE

Changes in the carrying amount of financial assets measured at fair value are recognized either through OCI or through profit or loss.

The fair value through OCI (debt instruments) category comprises exclusively debt instruments. Changes in fair value are always recognized directly in equity, net of deferred taxes. Certain changes in the fair value of these debt instruments (impairment losses, foreign exchange gains and losses, interest calculated using the effective interest method) are recognized immediately in profit or loss.

Financial assets measured at fair value through other comprehensive income (debt instruments) are held under a business model aimed at both collecting contractual cash flows and selling financial assets (“hold and sell” business model).

Financial assets that are equity instruments are also measured at fair value. Here, Volkswagen exercises the option to recognize changes in fair value always through other comprehensive income, i.e. gains and losses from the measurement of equity investments are never recycled to the income statement but instead reclassified to retained earnings on disposal (no reclassification).

Any financial assets not measured at either amortized cost or through other comprehensive income are allocated to the fair value through profit or loss category. Financial assets at fair value through profit or loss are aimed in particular at generating cash flows by selling financial instruments ("sell" business model).

At Volkswagen, this category primarily comprises
- hedging relationships to which hedge accounting is not applied and
- investment fund units.

All financial liabilities at fair value through profit or loss relate to derivatives to which hedge accounting is not applied.

Fair value generally corresponds to the market or quoted market price. If no active market exists, fair value is determined using other observable inputs as far as possible. If no observable inputs are available, fair value is determined using valuation techniques, such as by discounting the future cash flows at the market interest rate, or by using recognized option pricing models, and, as far as possible, verified by confirmations from the banks that handle the transactions.

In the case of current financial receivables and liabilities, amortized cost generally corresponds to the principal or repayment amount.

The fair value option for financial assets and financial liabilities is not used in the Volkswagen Group.

Financial assets and financial liabilities are generally presented at their gross amounts and only offset if the Volkswagen Group currently has a legally enforceable right to set off the amounts and intends to settle on a net basis.

Subsidiaries, associates and joint ventures that are not consolidated for reasons of materiality do not fall within the scope of IFRS 9 and IFRS 7.

DERIVATIVES AND HEDGE ACCOUNTING

Volkswagen Group companies use derivatives to hedge balance sheet items and future cash flows (hedged items). Appropriate derivatives such as swaps, forward transactions and options are used as hedging instruments. The criteria for the application of hedge accounting are that the hedging relationship between the hedged item and the hedging instrument is clearly documented and that the hedge is highly effective.

The accounting treatment of changes in the fair value of hedging instruments depends on the nature of the hedging relationship. In the case of hedges against the risk of change in the fair value of balance sheet items (fair value hedges), both the hedging instrument and the hedged risk portion of the hedged item are measured at fair value. If appropriate, several risk portions of the hedged items are combined into one portfolio. In a portfolio fair value hedge, changes in fair values are recognized on the basis of the individual transaction in the same way as in fair value hedging. Gains or losses from the measurement of hedging instruments and hedged items are recognized in profit or loss. In addition to the guidance of IFRS 9, the Volkswagen Group applies the guidance of IAS 39 on portfolio hedging to hedge the interest rate risk in the Financial Services Division.

In the previous year, portfolio fair value hedge accounting was not applied since not all requirements had been met. However, the Group's hedge accounting strategy does still provide for the continued application of portfolio fair value hedge accounting on as comprehensive a basis as possible. The changes necessary to ensure all the requirements for application are satisfied were accordingly made in fiscal year 2022 so that it would be possible to apply portfolio fair value hedge accounting for finance lease receivables again in fiscal year 2022 for the three-month hedging period beginning July 1, 2022 and for the three-month hedging period beginning October 1, 2022.

In the case of hedges of future cash flows (cash flow hedges), the hedging instruments are also measured at fair value. The designated effective portion of the hedging instrument is accounted for through OCI I and the non-designated portion through OCI II. They are only recognized in the income statement when the hedged item is recognized in profit or loss. The ineffective portion of cash flow hedges is recognized through profit or loss immediately.

Derivatives used by the Volkswagen Group for financial management purposes to hedge against interest rate, foreign currency, commodity price, equity price, or fund price risks, but that do not meet the strict hedge accounting criteria of IFRS 9, are classified as financial assets or liabilities at fair value through profit or loss (referred to below as derivatives to which hedge accounting is not applied). This also applies to options on shares. External hedging instruments of intragroup hedged items that are subsequently eliminated in the consolidated financial statements are also assigned to this category as a general rule. Assets and liabilities measured at fair value through profit or loss consist of derivatives or components of derivatives that are not included in hedge accounting. These relate for example to the non-designated currency forwards used to hedge sales revenue, interest rate hedges, commodity futures and currency forwards relating to commodity futures.

RECEIVABLES FROM FINANCE LEASES

Where a Group company is the lessor – generally of vehicles – a receivable in the amount of the net investment in the lease is recognized in the case of finance leases, in other words where substantially all the risks and rewards are transferred to the lessee.

IMPAIRMENT LOSSES ON FINANCIAL INSTRUMENTS

Financial assets are exposed to default risk, which is taken into account by recognizing loss allowances or, if losses have already been incurred, by recognizing impairment losses. Default risk on loans and receivables in the financial services segment is accounted for by recognizing specific loss allowances and general loss allowances.

In particular, a loss allowance is recognized on these financial assets in the amount of the expected loss in accordance with Group-wide standards. The actual specific loss allowances for the losses incurred are then charged to this loss allowance. A potential impairment is assumed not only for a number of situations such as delayed payment over a period of more than 90 days, the institution of enforcement measures, the threat of insolvency or overindebtedness, application for or the opening of bankruptcy proceedings, or the failure of reorganization measures, but also for receivables that are not past due.

Insignificant receivables and significant individual receivables for which there is no indication of impairment are grouped into homogeneous portfolios on the basis of comparable credit risk features and allocated by risk class. Average historical default probabilities in combination with forward-looking parameters for the respective portfolio are then used to calculate the amount of the impairment loss.

Credit risks must be considered for all financial assets measured at amortized cost or fair value through other comprehensive income (debt instruments), as well as for contract assets in accordance with IFRS 15 and lease receivables within the scope of IFRS 16.

The rules on impairment also apply to risks from irrevocable credit commitments not recognized in the balance sheet and to the measurement of financial guarantees.

As a matter of principle, a simplified process, which takes historical default rates and forward-looking information into account, and specific loss allowances are used to account for impairment losses on receivables outside the Financial Services segment.

DEFERRED TAXES

Deferred tax assets are generally recognized for tax-deductible temporary differences between the tax base of assets and liabilities and their carrying amounts in the consolidated balance sheet, as well as on tax loss carryforwards and tax credits provided it is probable that they can be used in future periods. Deferred tax liabilities are generally recognized for all taxable temporary differences between the tax base of assets and liabilities and their carrying amounts in the consolidated balance sheet.

Deferred tax liabilities and assets are recognized in the amount of the expected tax liability or tax benefit, as appropriate, in subsequent fiscal years, based on the expected enacted tax rate at the time of realization. The tax consequences of dividend payments are generally not taken into account until the resolution on appropriation of earnings available for distribution has been adopted.

Deferred tax assets that are unlikely to be realized within a clearly predictable period are reduced by loss allowances.

Deferred tax assets for tax loss carryforwards are usually measured on the basis of future taxable income over a planning period of five fiscal years.

Deferred tax assets and deferred tax liabilities are offset where taxes are levied by the same taxation authority and relate to the same tax period.

INVENTORIES

Raw materials, consumables and supplies, merchandise, work in progress and self-produced finished goods reported in inventories are carried at the lower of cost or net realizable value. Cost is determined on the basis of the direct and indirect costs that are directly attributable. Borrowing costs are not capitalized. The measurement of same or similar inventories is generally based on the weighted average method.

NONCURRENT ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS

Under IFRS 5, noncurrent assets or groups of assets and liabilities (disposal groups) are classified as held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. Such assets are carried at the lower of their carrying amount and fair value less costs to sell, and are presented separately in current assets and liabilities in the balance sheet.

Discontinued operations are components of an entity that have either been disposed of or are classified as held for sale. The assets and liabilities of operations that are held for sale represent disposal groups that must be measured and reported using the same principles as noncurrent assets held for sale. The income and expenses from discontinued operations are presented in the income statement as profit or loss from discontinued operations below the profit or loss from continuing operations. Corresponding disposal gains or losses are contained in the profit or loss from discontinued operations. The prior-year figures in the income statement are adjusted accordingly.

PENSION PROVISIONS

The actuarial valuation of pension provisions is based on the projected unit credit method stipulated by IAS 19 for defined benefit plans. The valuation is not only based on pension payments and vested entitlements known at the balance sheet date, but also reflects future salary and pension trends, as well as experience-based staff turnover rates. Remeasurements are recognized in retained earnings in other comprehensive income, net of deferred taxes.

PROVISIONS FOR INCOME TAXES

Tax provisions contain obligations resulting from current income taxes. Deferred taxes are presented in separate items of the balance sheet and income statement. Provisions are recognized for potential tax risks on the basis of the best estimate of the liability.

SHARE-BASED PAYMENT

Share-based payment in the Volkswagen Group comprises variable cash-settled payment plans. The obligations are therefore accounted for as cash-settled plans in accordance with IFRS 2. Obligations under these payment plans are measured at fair value using a recognized option pricing model, until maturity. The total compensation cost to be recognized corresponds to the actual payment and is allocated over the vesting period.

OTHER PROVISIONS

In accordance with IAS 37, provisions are recognized where a present obligation exists to third parties as a result of a past event, where a future outflow of resources with economic benefits is probable and where a reliable estimate of that outflow can be made.

Provisions not resulting in an outflow of resources in the year immediately following are recognized at their settlement value discounted to the balance sheet date. Discounting is based on market interest rates. An average discount rate of 3.16% (previous year: – 0.04%) was used in the Eurozone. The settlement value also reflects cost increases expected at the balance sheet date. Provisions are not offset against claims for reimbursement.

CONTINGENT LIABILITIES

If the criteria for recognizing a provision are not met, but the outflow of resources with economic benefits is not remote, such obligations are disclosed in the notes to the consolidated financial statements (see the “Contingent liabilities” section). Contingent liabilities are only recognized if the obligations are more certain, i.e. the outflow of resources with economic benefits has become probable and their amount can be reliably estimated.

LIABILITIES

Noncurrent liabilities are recorded at amortized cost in the balance sheet. Differences between historical cost and the repayment amount are amortized using the effective interest method.

Liabilities to members of partnerships from puttable shares are recognized in the income statement at the present value of the redemption amount at the balance sheet date.

Lease liabilities are carried at the present value of the lease payments.

Current liabilities are recognized at their repayment or settlement value.

REVENUE AND EXPENSE RECOGNITION

Sales revenue, interest and commission income from financial services and other operating income are recognized only when the relevant services have been rendered or the goods have been delivered, i.e. when the customer has obtained control of the goods or services. Where new and used vehicles and original parts are sold, the Company's performance invariably occurs upon delivery, because that is the point when control is transferred, and the inventory risk and, for deliveries to a dealer, invariably also the pricing decision pass to the customer. Revenue is reported net of sales allowances (discounts, customer bonuses, or rebates). The Volkswagen Group measures sales allowances and other variable consideration on the basis of experience and by taking account of current circumstances. Vehicles are normally sold to dealers on payment terms. A trade receivable is recognized for the period between vehicle delivery and receipt of payment. Any financing component included in the transaction is only recognized if the period between the transfer of the goods and the payment of consideration is longer than one year and the amount to be accrued is significant.

Sales revenue from financing and finance lease agreements is recognized using the effective interest method. If non-interest-bearing or low-interest vehicle financing arrangements are agreed, sales revenue is reduced by the interest benefits granted. Sales revenue from operate leases is recognized over the term of the contract on a straight line basis.

In contracts under which the goods or services are transferred over a period of time, revenue is recognized, depending on the type of goods or services provided, either according to the stage of completion or, to simplify, on a straight-line basis; the latter is only allowed if revenue recognition on a straight-line basis does not differ materially from recognition according to the stage of completion. As a rule, the stage of completion is determined as the proportion that contract costs incurred by the end of the reporting period bear to the estimated total contract costs (cost-to-cost method). Contract costs incurred invariably represent the best way to measure the stage of completion for the performance obligation. If the outcome of a performance obligation satisfied over time is not sufficiently certain, but the Company expects, as a minimum, to recover its costs, revenue is only recognized in the amount of contract costs incurred (zero profit margin method). If the expected costs exceed the expected revenue, the expected losses are recognized immediately in full as expenses by recognizing impairment losses on the associated contract assets recognized, and additionally by recognizing provisions for any amounts in excess of the impairment losses. Since long-term construction contracts invariably give rise to contingent receivables from customers for the period to completion or payment by the customer, contract assets are recognized for the corresponding amounts. A trade receivable is recognized as soon as the Company has transferred the goods or services in full.

If a contract comprises several separately identifiable components (multiple-element arrangements), these components are recognized separately in accordance with the principles outlined above.

If services are sold to the customer at the same time as the vehicle, and the customer pays for them in advance, the Group recognizes a corresponding contract liability until the services have been transferred. Examples of services that customers pay for in advance are servicing, maintenance and certain warranty contracts as well as mobile online services. For extended warranties granted to customers for a particular model, a provision is normally recognized in the same way as for statutory warranties. If the warranty is optional for the customer or includes an additional service component, the related sales revenue is deferred and recognized over the term of the warranty.

Income from the sale of assets for which a Group company has a buyback obligation is recognized only when the assets have definitively left the Group. If a fixed repurchase price was agreed when the contract was entered into, the difference between the selling price and the present value of the repurchase price is recognized ratably as income over the term of the contract. Prior to that time, the assets are carried as inventories in the case of short contract terms and as lease assets in the case of long contract terms.

Sales revenue is generally determined on the basis of the price stated in the contract. If variable consideration (e.g. volume-based bonus payments) has been agreed in a contract, the large number of contracts involved means that revenue has to be estimated using the expected value method. In exceptional cases, the most probable amount method may also be used. Once the expected sales revenue has been estimated, an additional check is carried out to determine whether there is any uncertainty that necessitates the reversal of the revenue initially recognized so that it can be virtually ruled out that sales revenue subsequently has to be adjusted downward. Provisions for reimbursements arise mainly from dealer bonuses.

In multiple element arrangements, the transaction price is allocated to the different performance obligations of the contract on the basis of relative standalone selling prices. In the Automotive Division, non-vehicle-related services are invariably measured at their standalone selling prices for reasons of materiality.

Cost of sales includes the costs incurred to generate the sales revenue and the cost of goods purchased for resale. This item also includes the costs of additions to warranty provisions. Research and development costs not eligible for capitalization in the period and amortization of development costs are likewise carried under cost of sales. Reflecting the presentation of interest and commission income in sales revenue, the interest and commission expenses attributable to the financial services business are presented in cost of sales.

Dividend income is recognized on the date when the dividend is legally approved.

GOVERNMENT GRANTS

Government grants related to assets are deducted when arriving at the carrying amount of the asset and are recognized in profit or loss over the life of the depreciable asset as a reduced depreciation expense. If the Group becomes entitled to a grant subsequently, the amount of the grant attributable to prior periods is recognized as profit or loss.

Government grants related to income, i.e. that compensate the Group for expenses incurred, are always recognized in profit or loss for the period and allocated to those items in which the expenses to be compensated by the grants are also recognized. Grants in the form of nonmonetary assets (e.g. the use of land free of charge or the transfer of resources free of charge) are disclosed as a memo item.

ESTIMATES AND ASSUMPTIONS BY MANAGEMENT

Preparation of the consolidated financial statements requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, and income and expenses, as well as the related disclosure of contingent assets and liabilities of the reporting period. The estimates and assumptions relate largely to the following matters:

The impairment testing of nonfinancial assets (especially goodwill, brand names, capitalized development costs and special operational equipment) and equity-accounted investments, or investments accounted at cost, and the measurement of options on shares in companies that are not traded in an active market require assumptions about the future cash flows during the planning period, and possibly beyond it, as well as about the discount rate to be applied. The estimates made in order to separate cash flows mainly relate to future market shares, the trend in the respective markets and the profitability of the Volkswagen Group's products. When determining cash flows for conducting impairment tests on companies or equity investments with new technology operations, it is of particular importance to assess whether these new technologies are technically feasible and have the potential for industrial use. In addition, the recoverability of the Group's lease assets depends in particular on the residual value of the leased vehicles after expiration of the lease term, because this represents a significant portion of the expected cash flows. More detailed information on impairment tests and the measurement parameters used for those tests can be found in the explanations above regarding intangible assets.

If there are no observable market inputs, the fair values of assets acquired and liabilities assumed in a business combination are measured using recognized valuation techniques, such as the relief-from-royalty method or the residual method.

Impairment testing of financial assets requires estimates about the extent and probability of occurrence of future events. As far as possible, estimates are derived from experience taking into account current market data as well as rating categories and scoring information. The sections entitled "IFRS 7 (Financial Instruments)" and "Financial risk management and financial instruments" contain further details on how to determine loss allowances.

Accounting for provisions is also based on estimates of the extent and probability of occurrence of future events, as well as estimates of the discount rate. As far as possible, these are also based on experience or external opinions. The assumptions applied in the measurement of pension provisions are described in the "Provisions for pensions and other post-employment benefits" section. Actuarial gains or losses arising from changes in measurement inputs are recognized in other comprehensive income and do not affect profit or loss reported in the income statement. Any change in the estimates of the amount of other provisions is always recognized in profit or loss. The provisions are regularly adjusted to reflect new information obtained. The use of expected values invariably means that unused provisions are reversed or additional amounts have to be recognized for provisions. Similarly to expenses for the recognition of provisions, income from the reversal of provisions is allocated to the respective functions. Warranty claims from sales transactions are calculated on the basis of losses to date, estimated future losses and the policy on ex gratia arrangements. In addition, assumptions must be made about the nature and extent of future warranty and ex gratia claims.

For the provisions recognized in connection with the diesel issue, assumptions were made in particular about working hours, material costs and hourly wage rates, depending on the series, model year and country concerned. In addition, assumptions are made about future resale prices of repurchased vehicles. These assumptions are based on qualified estimates, which are based in turn on external data, and also reflect additional information available internally, such as values derived from experience. Further information on the legal proceedings and on the legal risks associated with the diesel issue can be found in the "Litigation" section.

Tax provisions were recognized for potential future retrospective tax payments, while other provisions were recognized for ancillary tax payments arising in this connection.

Volkswagen AG and its subsidiaries have operations worldwide and are audited by local tax authorities on an ongoing basis. Amendments to tax laws and changes in legal precedent and their interpretation by the tax authorities in the respective countries may lead to tax payments that differ from the estimates made in the financial statements.

The measurement of the tax provision is based on the most likely exposure resulting from this risk materializing. Volkswagen decides whether to account for multiple tax uncertainties separately or in groups on the merits of each individual case considered, depending on which type of presentation is better suited to predicting the extent to which the tax risk will materialize. The pricing of individual products and services is complex, especially in relation to contracts for the cross-border supply of intragroup goods and services, because it is in many cases not possible to observe market prices for internally generated products, or the use of market prices for similar products is subject to uncertainty because they are not comparable. In these cases, prices – including for tax purposes – are determined on the basis of standardized, generally accepted valuation techniques.

In December 2021, the OECD issued model rules for a new global minimum tax framework. Several jurisdictions announced the intention to bring these into effect. In December 2022, EU member states agreed to a correspondant EU directive. While the overarching framework has been published, the domestic legislation and detailed guidance are being awaited to assess the full implications.

If actual developments differ from the assumptions made for recognizing the provisions, the figures actually recorded may differ compared to the estimates expected originally.

An overview of other provisions can be found in the “Noncurrent and current other provisions” section.

Government grants are recognized based on an assessment as to whether there is reasonable assurance that the Group companies will fulfill the conditions for awarding the grants and that the grants will in fact be awarded. This assessment is based on the nature of the legal entitlement and past experience.

Estimates of the useful life of finite-lived assets are based on experience and are reviewed regularly. Where estimates are modified the residual useful life is adjusted and an impairment loss is recognized, if necessary. As part of this review, the useful lives of certain items of property, plant and equipment were reassessed and extended in January 2023. These adjustments are expected to have a positive effect on the operating result in an amount of around €1.4 billion in 2023 and of around €0.8 billion in 2024.

Estimates of lease terms under IFRS 16 are based on the non-cancelable period of a lease and an assessment of whether existing extension and termination options will be exercised. The determination of the lease term and the discount rates used impacts on the amounts to be recognized for right-of-use assets and lease liabilities.

Measuring deferred tax assets requires assumptions regarding future taxable income and the timing of the realization of deferred tax assets.

The estimates and assumptions are based on underlying assumptions that reflect the current state of available knowledge. Specifically, the expected future development of business was based on the circumstances known at the date of preparation of these consolidated financial statements and a realistic assessment of the future development of the global and sector-specific environment. Estimates and assumptions remain subject to a high degree of uncertainty because future business developments are subject to uncertainties that in part cannot be influenced by the Group. This applies in particular to short- and medium-term cash flow forecasts and to the discount rates used.

Developments in this environment that differ from the assumptions and that cannot be influenced by management could result in amounts that differ from the original estimates. If actual developments differ from the expected developments, the underlying assumptions and, if necessary, the carrying amounts of the assets and liabilities affected are adjusted.

Following the slump in global economic output in 2020 and the incipient recovery due to base and catch-up effects in 2021, the global economy recorded positive overall growth of 3.0% in 2022 (previous year: growth of 6.0%). Both the advanced economies and the emerging markets remained on an economic recovery course on average, albeit with diminishing momentum and slower growth overall than in the prior year.

The Volkswagen Group's planning is based on the assumption that global economic output will grow overall in 2023 albeit at a slower pace. The persistently high inflation in many regions and the restrictive monetary policy measures taken by central banks to rein this in are expected to increasingly dampen consumer spending. Risks will continue to arise from protectionist tendencies, turbulence in the financial markets and structural deficits in individual countries. In addition, continuing geopolitical tensions and conflicts are weighing on growth prospects; the Russia-Ukraine conflict also holds risks. It cannot be ruled out that risks may also arise if new variants of the SARS-CoV-2 virus occur, particularly regional outbreaks and the associated measures. It is assumed that both the advanced economies and the emerging markets will show positive momentum on average, even with below-average growth in gross domestic product. Moreover, the global economy is expected to recover in 2024 and continue a path of stable growth until 2027. Following high rates of inflation in 2022, inflationary trends are expected to be at a slightly lower level in 2023.

Estimates and assumptions by management were based in particular on assumptions relating to the development of the general economic environment, the automotive markets and the legal environment. These and further assumptions are explained in detail in the Report on Expected Developments, which is part of the group management report

Segment reporting

Segments are identified on the basis of the Volkswagen Group's internal management and reporting. In line with the Group's multibrand strategy, each of its brands (operating segments) is managed by its own Board of Management. The Group targets and requirements laid down by the Board of Management of Volkswagen AG must be complied with. Segment reporting comprises four reportable segments: Passenger Cars and Light Commercial Vehicles, Commercial Vehicles, Power Engineering and Financial Services.

The activities of the Passenger Cars and Light Commercial Vehicles segment cover the development of vehicles, engines and vehicle software, the production and sale of passenger cars and light commercial vehicles, and the corresponding genuine parts business. In the Passenger Cars and Light Commercial Vehicles reporting segment, the individual brands are combined into a single reportable segment, in particular as a response to the high degree of technological and economic interlinking in the production network. Furthermore, there is collaboration within key areas such as procurement, research and development or treasury.

The Commercial Vehicles segment primarily comprises the development, production and sale of trucks and buses, the corresponding genuine parts business and related services. As in the case of the passenger car brands, there is collaboration within the areas procurement, development and sales. The aim is to create closer cooperation within the business areas. As from the second half of 2021, this segment also includes Navistar.

The Power Engineering segment combines the large-bore diesel engines, turbomachinery and propulsion components businesses.

The activities of the Financial Services segment comprise dealership and customer financing, leasing, banking and insurance activities, fleet management and mobility services. In this segment, activities are combined for reporting purposes taking into particular account the comparability of the type of services and of the regulatory environment.

Purchase price allocation for companies acquired is allocated directly to the corresponding segments.

At Volkswagen, segment profit or loss is measured on the basis of the operating result.

In segment reporting, the share of the result of joint ventures is contained in the result of equity-accounted investments in the corresponding segments.

The reconciliation contains activities and other operations that by definition do not constitute segments. It also includes the unallocated Group financing activities. Consolidation adjustments between the segments are also contained in the reconciliation.

Investments in intangible assets, property, plant and equipment, and investment property are reported net of investments in right-of-use assets from leases.

As a matter of principle, business relationships between the companies within the segments of the Volkswagen Group are transacted at arm's length prices.

REPORTING SEGMENTS 2022

€ million	Passenger Cars and Light Commercial Vehicles	Commercial Vehicles	Power Engineering	Financial Services	Total segments	Reconciliation	Volkswagen Group
Sales revenue from external customers	193,067	38,346	3,564	43,857	278,833	399	279,232
Intersegment sales revenue	17,304	1,170	1	2,990	21,466	–21,466	–
Total sales revenue	210,371	39,516	3,565	46,847	300,299	–21,067	279,232
Depreciation and amortization	16,004	2,885	148	9,870	28,907	–656	28,251
Impairment losses	2,501	34	2	371	2,908	3	2,911
Reversal of impairment losses	60	4	2	557	623	–	623
Segment result (operating result)	17,153	1,588	281	5,656	24,677	–2,553	22,124
Share of the result of equity-accounted investments	2,186	97	3	109	2,395	–	2,395
Interest result and other financial result	2,268	98	–4	–184	2,179	–4,655	–2,476
Equity-accounted investments	10,731	1,084	18	836	12,668	–	12,668
Investments in intangible assets, property, plant and equipment, and investment property	20,125	1,907	84	217	22,334	338	22,672

REPORTING SEGMENTS 2021

€ million	Passenger Cars and Light Commercial Vehicles	Commercial Vehicles	Power Engineering	Financial Services	Total segments	Reconciliation	Volkswagen Group
Sales revenue from external customers	176,492	29,046	3,277	41,006	249,821	379	250,200
Intersegment sales revenue	16,274	1,046	1	2,957	20,278	–20,278	–
Total sales revenue	192,767	30,092	3,278	43,963	270,099	–19,899	250,200
Depreciation and amortization	15,848	2,617	245	9,159	27,870	–588	27,282
Impairment losses	140	164	13	539	856	1	857
Reversal of impairment losses	125	50	1	614	790	–54	736
Segment result (operating result)	14,614	134	45	6,045	20,838	–1,563	19,275
Share of the result of equity-accounted investments	1,808	433	–9	89	2,321	–	2,321
Interest result and other financial result	3,804	–142	–4	–154	3,504	–4,974	–1,470
Equity-accounted investments	10,645	1,035	37	814	12,531	–	12,531
Investments in intangible assets, property, plant and equipment, and investment property	16,329	1,596	68	159	18,152	346	18,498

RECONCILIATION

€ million	2022	2021
Segment sales revenue	**300,299**	**270,099**
Unallocated activities	1,405	1,290
Group financing	27	27
Consolidation/Holding company function	–22,498	–21,216
Group sales revenue	**279,232**	**250,200**
Segment result (operating result)	**24,677**	**20,838**
Unallocated activities	–2	–36
Group financing	–37	–18
Consolidation/Holding company function	–2,514	–1,509
Operating result	**22,124**	**19,275**
Financial result	**–81**	**851**
Consolidated result before tax	**22,044**	**20,126**

BY REGION 2022

€ million	Germany	Europe/Other markets[1]	North America	South America	Asia-Pacific	Hedges sales revenue	Total
Sales revenue from external customers	49,054	105,475	60,077	15,476	51,444	–2,294	279,232
Intangible assets, property, plant and equipment, lease assets and investment property	119,386	47,661	32,517	2,709	4,848	–	207,121

1 Excluding Germany.

BY REGION 2021

€ million	Germany	Europe/Other markets[1]	North America	South America	Asia-Pacific	Hedges sales revenue	Total
Sales revenue from external customers	44,452	101,118	45,305	11,039	48,672	–386	250,200
Intangible assets, property, plant and equipment, lease assets and investment property	113,153	47,697	34,274	2,519	4,054	–	201,697

1 Excluding Germany.

Allocation of sales revenue to the regions follows the destination principle.

The allocation of interregional intragroup transactions regarding the segment assets has been presented uniformly according to the economic ownership.

Income statement disclosures

1. Sales revenue

STRUCTURE OF GROUP SALES REVENUE 2022

€ million	Passenger Cars and Light Commercial Vehicles	Commercial Vehicles	Power Engineering	Financial Services	Total Segments	Reconciliation	Volkswagen Group
Vehicles	160,562	25,542	–	0	186,104	–14,657	171,447
Genuine parts	14,970	6,759	–	–	21,729	–160	21,570
Used vehicles and third-party products	11,474	2,334	–	20,485	34,293	–3,650	30,643
Engines, powertrains and parts deliveries	12,313	858	–	–	13,171	–65	13,105
Power Engineering	–	–	3,565	–	3,565	–1	3,564
Motorcycles	915	–	–	–	915	–	915
Leasing business	764	1,693	0	16,669	19,126	–1,231	17,895
Interest and similar income	285	1	–	8,873	9,160	–418	8,742
Hedges sales revenue	–2,220	–20	–	–	–2,241	–53	–2,294
Other sales revenue	11,306	2,349	–	821	14,476	–831	13,645
	210,371	**39,516**	**3,565**	**46,847**	**300,299**	**–21,067**	**279,232**

STRUCTURE OF GROUP SALES REVENUE 2021

€ million	Passenger Cars and Light Commercial Vehicles	Commercial Vehicles	Power Engineering	Financial Services	Total Segments	Reconciliation	Volkswagen Group
Vehicles	143,473	19,029	–	–	162,502	–14,435	148,067
Genuine parts	13,353	4,800	–	–	18,153	–138	18,015
Used vehicles and third-party products	12,018	1,887	–	20,160	34,065	–3,201	30,864
Engines, powertrains and parts deliveries	12,188	723	–	–	12,911	–58	12,853
Power Engineering	–	–	3,278	–	3,278	–1	3,276
Motorcycles	732	–	–	–	732	–	732
Leasing business	785	1,686	0	15,171	17,642	–1,167	16,474
Interest and similar income	209	5	–	7,856	8,070	–349	7,721
Hedges sales revenue	–365	–42	–	0	–407	22	–386
Other sales revenue	10,375	2,004	–	775	13,154	–571	12,583
	192,767	**30,092**	**3,278**	**43,963**	**270,099**	**–19,899**	**250,200**

For segment reporting purposes, the sales revenue of the Group is presented by segment and market.

Other sales revenue comprises revenue from workshop services and license revenue, among other things.

Of the sales revenue recognized in the period under review, an amount of €8,045 million (previous year: €6,877 million) was included in contract liabilities as of January 1, 2022.

The sales revenue realized in the period under review comprises payment obligations of €718 million (previous year: €575 million) that had already been met in an earlier period.

In addition to existing performance obligations of €3,939 million (previous year: €3,260 million) in the Power Engineering segment, most of which are expected to be satisfied or for which sales revenue is expected to be recognized by December 31, 2023, the vast majority of the Volkswagen Group's performance obligations that were unsatisfied as of the reporting date relate to vehicle deliveries. Most of these deliveries had already been made at the time this report was prepared, or will be made in the first quarter of 2023. The calculation of the amounts for the Power Engineering Business Area took account of both contracts with a term of up to one year and service contracts under which the Volkswagen Group realizes sales revenue in exactly the same amount as the customer benefits from the services rendered by the Company. In the case of variable consideration, sales revenue is only recognized to the extent that there is reasonable assurance that this sales revenue will not subsequently have to be reversed or adjusted downward.

2. Cost of sales

Cost of sales includes interest expenses of €3,323 million (previous year: €1,984 million) attributable to the financial services business.

This item also includes impairment losses on intangible assets (primarily development costs), property, plant and equipment (primarily other equipment, operating and office equipment), and lease assets in the amount of €843 million (previous year: €805 million). The impairment losses totaling €572 million (previous year: €344 million) recognized during the reporting period on intangible assets and items of property, plant and equipment result primarily from lower values in use of various products in the Passenger Cars and Light Commercial Vehicles segment, due to market and exchange rate risks, and in particular from expected declines in volumes. The impairment losses on lease assets in the amount of €270 million (previous year: €461 million) are predominantly attributable to the Financial Services segment. They are based on constantly updated internal and external information that is factored into the forecast residual values of the vehicles. €10 million (previous year: €27 million) of this figure is reported in current lease assets.

Government grants related to income amounted to €457 million in the fiscal year (previous year: €985 million) and were generally allocated to the functional areas.

3. Distribution expenses

Distribution expenses amounting to €19.8 billion (previous year: €19.2 billion) include nonstaff overheads and personnel costs, and depreciation and amortization applicable to the distribution function, as well as the costs of shipping, advertising and sales promotions.

4. Administrative expenses

Administrative expenses of €11.7 billion (previous year: €10.4 billion) mainly include nonstaff overheads and personnel costs, as well as depreciation and amortization charges applicable to the administrative function.

5. Other operating income

€ million	2022	2021
Income from reversal of loss allowances on receivables and other assets	1,512	1,754
Income from reversal of provisions and accruals	988	1,236
Income from derivatives within hedge accounting	892	339
Income from derivatives not within hedge accounting Financial Services	2,001	572
Income from other hedges	5,396	3,547
Income from foreign exchange gains	3,640	2,610
Income from sale of promotional material	339	398
Income from cost allocations	1,099	1,040
Income from investment property	30	10
Gains on asset disposals and the reversal of impairment losses on noncurrent assets	724	771
Miscellaneous other operating income	2,616	2,455
	19,238	**14,731**

Foreign exchange gains mainly comprise gains from changes in exchange rates between the dates of recognition and payment of receivables and liabilities denominated in foreign currencies, as well as exchange rate gains resulting from measurement at the closing rate. Foreign exchange losses from these items are included in other operating expenses.

Income from other hedges includes primarily gains from the fair value measurement of financial instruments used to hedge exchange rates and commodity prices in the Automotive Division that are not designated in a hedging relationship. Losses are included in other operating expenses.

6. Other operating expenses

€ million	2022	2021
Loss allowances on trade receivables	345	294
Loss allowances on other receivables and other assets	2,756	1,632
Expenses from derivatives within hedge accounting	971	869
Expenses from derivatives not within hedge accounting Financial Services	1,309	404
Expenses from other hedges	2,417	1,091
Foreign exchange losses	3,762	1,909
Expenses from cost allocations	833	653
Expenses for termination agreements	280	333
Losses on disposal of noncurrent assets	321	253
Miscellaneous other operating expenses	4,818	5,611
	17,812	**13,049**

Allowances on other receivables and other assets include allowances on receivables from long-term construction contracts amounting to €0.3 million (previous year: €1.2 million). Allowances on other receivables and other assets also include expenses incurred in connection with the Russia-Ukraine conflict (see “Key events” section).

Expenses from other hedges include primarily losses from the fair value measurement of financial instruments used to hedge exchange rates and commodity prices in the Automotive Division that are not designated in a hedging relationship. Gains are included in other operating income.

Miscellaneous other operating expenses consist, among other items, of expenses in connection with the diesel issue (see the “Key events” section for more information).

7. Share of the result of equity-accounted investments

€ million	2022	2021
Share of profits of equity-accounted investments	2,950	2,669
of which from joint ventures	2,886	2,364
of which from associates	64	306
Share of losses of equity-accounted investments	554	349
of which from joint ventures	187	236
of which from associates	367	113
	2,395	**2,321**

8. Interest result

€ million	2022	2021
Interest income	**1,325**	**810**
Other interest and similar income	1,325	810
Interest expenses	**–442**	**–1,818**
Other interest and similar expenses	–938	–1,449
Result from valuation of fair value hedges	1	–27
Expenses from discounting lease liabilities	–158	–168
Interest result from compounding/discounting other noncurrent liabilities	1,203	180
Net interest on the net defined benefit liability	–549	–354
Interest result	**883**	**–1,007**

The positive interest result from compounding/discounting other noncurrent liabilities in fiscal year 2022 is mainly the result of adjustments to the discount rates used to measure noncurrent provisions.

9. Other financial result

€ million	2022	2021
Income from profit and loss transfer agreements	55	43
Cost of loss absorption	–52	–81
Other income from equity investments	168	315
Other expenses from equity investments	–2,270	–210
Gains and losses from marketable securities and loans	–1,013	164
Realized income of loan receivables and payables in foreign currency	1,227	753
Realized expenses of loan receivables and payables in foreign currency	–985	–928
Gains and losses from remeasurement and impairment of financial instruments	166	94
Gains and losses from fair value changes of hedging instruments/derivatives not included in hedge accounting	–662	–648
Gains and losses from fair value changes of hedging instruments/derivatives included in hedge accounting	7	36
Other financial result	**–3,359**	**–463**

Other expenses from equity investments reported in fiscal year 2022 related primarily to the impairment loss of €1.9 billion recognized to write down all shares held in Argo AI. See “Key events” section for more information.

Gains and losses from marketable securities and loans are mainly the result of negative net income from funds because of the turbulence in the capital markets attributable to the Russia-Ukraine conflict.

Gains and losses from fair value changes of hedging instruments/derivatives not included in hedge accounting include losses on the measurement of the options in connection with the acquisition of Europcar in an amount of €0.3 billion (see “Key events” section). The prior-year figure had primarily included losses on the measurement and realization of forward purchase agreements for new shares in QuantumScape in an amount of €0.6 billion.

10. Income tax income/expense

COMPONENTS OF TAX INCOME AND EXPENSE

€ million	2022	2021
Current tax expense, Germany	1,180	1,230
Current tax expense, abroad	4,082	3,382
Current income tax expense	**5,262**	**4,612**
of which prior-period income (–)/expense (+)	666	310
Deferred tax income (–)/expense (+) Germany	3,323	1,072
Deferred tax income (–)/expense (+) abroad	–2,377	–986
Deferred tax income (–)/expense (+)	**946**	**86**
Income tax income/expense	**6,208**	**4,698**

The statutory corporation tax rate in Germany for the 2022 assessment period was 15%. Including trade tax and the solidarity surcharge, this resulted in an aggregate tax rate of 30.0% (previous year: 30.0%).

A tax rate of 30.0% (previous year: 30.0%) was used to measure deferred taxes in the German consolidated tax group.

The local income tax rates applied to companies outside Germany vary between 0% and 46% (previous year: 0% and 50%). In the case of split tax rates, the tax rate applicable to undistributed profits is applied.

The realization of tax benefits from tax loss carryforwards from previous years resulted in a reduction in current income taxes in 2022 of €1,013 million (previous year: €700 million).

The tax loss carryforwards and the expiry of loss carryforwards that could not be used changed as follows:

	PREVIOUSLY UNUSED TAX LOSS CARRYFORWARDS		THEREOF UNUSABLE TAX LOSS CARRYFORWARDS	
€ million	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Non-expiring tax loss carryforwards	13,178	16,934	4,512	4,374
Expiry within 10 years	3,556	2,747	1,199	1,595
Expiry over 10 years	11,002	11,760	1,335	7,057
Total	**27,736**	**31,441**	**7,045**	**13,026**

The benefit arising from previously unrecognized tax losses or tax credits of a prior period that is used to reduce current tax expense in the current fiscal year amounts to €139 million (previous year: €32 million). Deferred tax expense was reduced by €1,687 million (previous year: €305 million) because of a benefit arising from previously unrecognized tax losses and tax credits of a prior period. Deferred tax expense resulting from the write-down of a deferred tax asset amounts to €70 million (previous year: €24 million). Deferred tax income resulting from the reversal of a write-down of deferred tax assets amounts to €34 million (previous year: €381 million).

Tax credits granted by various countries amounted to €493 million (previous year: €578 million).

No deferred tax assets were recognized for deductible temporary differences of €2,262 million (previous year: €2,157 million) and for tax credits of €159 million (previous year: €208 million) that would expire in the next 20 years.

In accordance with IAS 12.39, deferred tax liabilities of €265 million (previous year: €200 million) for temporary differences and undistributed profits of Volkswagen AG subsidiaries were not recognized because control exists.

Deferred tax expense resulting from changes in tax rates amounted to €31 million at Group level (previous year: €42 million).

Deferred tax assets of €1,731 million (previous year: €12,044 million) were recognized without being offset by deferred tax liabilities in the same amount. In fiscal year 2021, the existing deferred tax assets of companies within the German tax group, which had been recognized due to positive results in the past, were included in this analysis. The companies concerned are expecting positive tax income in the future, following losses in the reporting period or the previous year.

€2,279 million (previous year: €7,281 million) of the deferred taxes recognized in the balance sheet was credited to equity and relates to other comprehensive income. €– 6 million (previous year: €27 million) of this figure is attributable to noncontrolling interests. In fiscal year 2022, deferred tax income of €2 million (previous year: €10 million) from the remeasurement of pension plans directly through equity was reclassified within equity. In the fiscal year under review and in the previous year, there were effects from capital transactions with noncontrolling interests. The classification of changes in deferred taxes is presented in the statement of comprehensive income.

In fiscal year 2022, tax effects of €3 million resulting from equity transaction costs were credited to equity (previous year adjusted: €0 million).

DEFERRED TAXES CLASSIFIED BY BALANCE SHEET ITEM

The following recognized deferred tax assets and liabilities were attributable to recognition and measurement differences in the individual balance sheet items and to tax loss carryforwards:

	DEFERRED TAX ASSETS		DEFERRED TAX LIABILITIES	
€ million	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Intangible assets	1,170	1,113	13,698	12,477
Property, plant and equipment, and lease assets	5,236	5,216	8,190	8,729
Noncurrent financial assets	55	135	193	301
Inventories	2,073	2,106	979	801
Receivables and other assets (including Financial Services Division)	2,097	1,775	10,069	9,516
Other current assets	4,077	4,455	76	24
Pension provisions	4,674	9,350	92	29
Liabilities and other provisions	13,968	14,269	5,644	5,298
Loss allowances on deferred tax assets from temporary differences	–236	–203	–	–
Temporary differences, net of loss allowances	33,115	38,215	38,941	37,175
Tax loss carryforwards, net of loss allowances	5,394	4,783	–	–
Tax credits, net of loss allowances	330	374	–	–
Value before consolidation and offset	**38,839**	**43,372**	**38,941**	**37,175**
of which attributable to noncurrent assets and liabilities	25,388	29,284	31,167	29,556
Offset	29,070	32,649	29,070	32,649
Consolidation	3,151	2,670	862	605
Amount recognized	**12,921**	**13,393**	**10,734**	**5,131**

In accordance with IAS 12, deferred tax assets and liabilities are offset if, and only if, they relate to income taxes levied by the same taxation authority and relate to the same tax period.

The tax expense reported for 2022 of €6,208 million (previous year: €4,698 million) was €405 million lower (previous year: €1,340 million) than the expected tax expense of €6,613 million that would have resulted from application of a tax rate for the Group of 30.0% (previous year: 30.0%) to the earnings before tax of the Group.

RECONCILIATION OF EXPECTED TO EFFECTIVE INCOME TAX

€ million	2022	2021
Profit before tax	22,044	20,126
Expected income tax income (–)/expense (+) (tax rate 30.0%; previous year 30.0%)	**6,613**	**6,038**
Reconciliation:		
Effect of different tax rates outside Germany	–561	–1,002
Proportion of taxation relating to:		
tax-exempt income	–1,398	–1,078
expenses not deductible for tax purposes	1,101	1,041
effects of loss carryforwards	–1,247	–221
permanent differences	382	–326
Tax credits	–96	–133
Prior-period tax expense	688	262
Effect of tax rate changes	31	42
Nondeductible withholding tax	369	285
Other taxation changes	326	–210
Effective income tax expense	**6,208**	**4,698**
Effective tax rate in %	28.2	23.3

11. Earnings per share

Basic earnings per share are calculated by dividing earnings attributable to Volkswagen AG shareholders by the weighted average number of ordinary and preferred shares outstanding during the reporting period. Since there were no transactions in 2022 and 2021 that had a dilutive effect on the number of shares, diluted earnings per share are equivalent to basic earnings per share.

In accordance with Article 27(2) No. 3 of the Articles of Association of Volkswagen AG, preferred shares are entitled to a €0.06 higher dividend than ordinary shares.

		2022	2021
Weighted average number of:			
Ordinary shares – basic/diluted	Shares	295,089,818	295,089,818
Preferred shares – basic/diluted	Shares	206,205,445	206,205,445
Earnings after tax	€ million	15,836	15,428
Earnings attributable to noncontrolling interests	€ million	393	46
Earnings attributable to Volkswagen AG hybrid capital investors	€ million	576	539
Earnings attributable to Volkswagen AG shareholders	€ million	14,867	14,843
of which basic/diluted earnings attributable to ordinary shares	€ million	8,744	8,730
of which basic/diluted earnings attributable to preferred shares	€ million	6,123	6,113
Earnings per ordinary share – basic/diluted	€	29.63	29.59
Earnings per preferred share – basic/diluted	€	29.69	29.65

Balance sheet disclosures

12. Intangible assets

CHANGES IN INTANGIBLE ASSETS IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2022

€ million	Brand names	Goodwill	Capitalized development costs for products under development	Capitalized development costs for products currently in use	Other intangible assets	Total
Cost						
Balance at Jan. 1, 2022	**17,661**	**26,203**	**10,287**	**44,806**	**13,789**	**112,745**
Foreign exchange differences	–22	–17	16	–125	155	7
Changes in consolidated Group	5	75	1	40	110	232
Additions	–	–	9,057	666	1,945	11,668
Transfers	0	–	–1,728	1,738	55	65
Classified as held for sale	0	–	4	65	30	99
Disposals	11	50	33	2,111	560	2,764
Balance at Dec. 31, 2022	**17,633**	**26,211**	**17,595**	**44,949**	**15,464**	**121,853**
Amortization and impairment						
Balance at Jan. 1, 2022	**89**	**29**	**88**	**26,120**	**8,731**	**35,056**
Foreign exchange differences	0	0	0	–118	29	–89
Changes in consolidated Group	–	–	–	7	9	16
Additions to cumulative amortization	2	–	–	5,058	1,111	6,171
Additions to cumulative impairment losses	16	30	21	65	15	147
Transfers	–	–	0	1	–5	–4
Classified as held for sale	–	–	0	18	25	43
Disposals	2	50	15	2,095	481	2,642
Reversal of impairment losses	–	–	–	–	–	–
Balance at Dec. 31, 2022	**105**	**9**	**93**	**29,021**	**9,385**	**38,612**
Carrying amount at Dec. 31, 2022	**17,528**	**26,202**	**17,502**	**15,929**	**6,079**	**83,241**

CHANGES IN INTANGIBLE ASSETS IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2021

€ million	Brand names	Goodwill	Capitalized development costs for products under development	Capitalized development costs for products currently in use	Other intangible assets	Total
Cost						
Balance at Jan. 1, 2021	**16,911**	**23,318**	**6,438**	**41,316**	**10,334**	**98,317**
Foreign exchange differences	14	82	35	312	194	636
Changes in consolidated Group	736	2,835	215	235	2,380	6,402
Additions	–	–	6,513	1,323	1,223	9,059
Transfers	–	–	–2,904	2,904	35	35
Classified as held for sale	–	22	1	146	18	188
Disposals	–	11	10	1,138	358	1,517
Balance at Dec. 31, 2021	**17,661**	**26,203**	**10,287**	**44,806**	**13,789**	**112,745**
Amortization and impairment						
Balance at Jan. 1, 2021	**83**	**–**	**87**	**22,133**	**8,046**	**30,349**
Foreign exchange differences	0	0	0	185	53	238
Changes in consolidated Group	–	–	–	–63	–14	–77
Additions to cumulative amortization	0	–	–	4,987	842	5,829
Additions to cumulative impairment losses	6	39	8	56	25	133
Transfers	–	–	–	0	–2	–1
Classified as held for sale	–	–	–	110	16	127
Disposals	–	11	7	1,068	204	1,289
Reversal of impairment losses	–	–	–	0	–	0
Balance at Dec. 31, 2021	**89**	**29**	**88**	**26,120**	**8,731**	**35,056**
Carrying amount at Dec. 31, 2021	**17,572**	**26,174**	**10,199**	**18,685**	**5,058**	**77,689**

Other intangible assets comprise in particular concessions, purchased customer lists and dealer relationships, industrial and similar rights, and licenses in such rights and assets.

The allocation of the brand names and goodwill to the operating segments is shown in the following table:

€ million	2022	2021
Brand names by operating segment		
Porsche	13,823	13,823
Scania Vehicles and Services	878	949
MAN Truck & Bus	1,127	1,127
MAN Energy Solutions	415	415
Navistar	813	771
Ducati	404	404
Other	68	84
	17,528	**17,572**
Goodwill by operating segment		
Porsche	18,825	18,825
Scania Vehicles and Services	2,548	2,749
MAN Truck & Bus	587	587
MAN Energy Solutions	263	264
Navistar	3,101	2,917
Ducati	290	290
ŠKODA	168	163
Porsche Holding Salzburg	126	127
Other	294	252
	26,202	**26,174**

The impairment test for recognized goodwill and brand names is always based on value in use, which has been determined at the level of the respective brand. In this process, the WACC rates, based on the risk-free rate of interest, a market risk premium and the cost of debt, are applied. For the Porsche cash generating unit, the recoverable amount corresponds to fair value less costs of disposal, which is determined according to the price of Porsche AG shares. For more information on the general approach and key assumptions, please refer to the details provided on intangible assets in the “Accounting policies” section.

Moreover, the following aspects were of significance for the brands with material recognized brand names and goodwill:

In the Commercial Vehicles reporting segment, the five-year planning reflects an expansion of e-mobility for all cash generating units. The foundation for the electrification of the commercial vehicle sector in Europe was laid in fiscal year 2022 with the establishment of the Milence joint venture. The purpose of the joint venture, which the TRATON GROUP has formed together with Daimler Truck and the Volvo Group, is to create a charging infrastructure for heavy-duty trucks and coach buses.

Furthermore, at MAN Truck & Bus, the planning reflects positive effects in the planning period from the realignment program initiated in fiscal year 2022. Moreover, Navistar is to be taken to new levels of strength. The measures applied to this end range from using the powerful component and technology organization within the TRATON GROUP through expanding the financial services business down to making even more effective use of one of the largest independent dealer and service networks in the North American market that Navistar has already established.

For all cash-generating units, recoverability is not affected by a variation in the growth forecast of – 0.5 percentage points with respect to the perpetual annuity or of +1 percentage point with respect to the discount rate.

Research and development costs developed as follows:

€ million	2022	2021	%
Total research and development costs	18,908	15,583	21.3
of which: capitalized development costs	9,723	7,843	24.0
Capitalization ratio in %	51.4	50.3	
Amortization of capitalized development costs	5,144	5,050	1.9
Research and development costs recognized in profit or loss	**14,329**	**12,790**	**12.0**

13. Property, plant and equipment

CHANGES IN PROPERTY, PLANT AND EQUIPMENT IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2022

€ million	Land, land rights and buildings, including buildings on third-party land	Technical equipment and machinery	Other equipment, operating and office equipment	Payments on account and assets under construction	Total
Cost					
Balance at Jan. 1, 2022	**48,281**	**52,144**	**88,111**	**7,645**	**196,181**
Foreign exchange differences	158	314	697	70	1,240
Changes in consolidated Group	18	10	27	21	77
Additions	2,065	1,240	2,858	6,698	12,861
Transfers	1,117	1,702	1,489	–4,373	–65
Classified as held for sale	21	39	–14	0	45
Disposals	830	1,439	1,985	71	4,325
Balance at Dec. 31, 2022	**50,789**	**53,934**	**91,212**	**9,991**	**205,925**
Amortization and impairment					
Balance at Jan. 1, 2022	**21,083**	**40,103**	**71,296**	**4**	**132,486**
Foreign exchange differences	83	270	592	0	945
Changes in consolidated Group	–48	34	12	0	–2
Additions to cumulative amortization	2,250	3,175	6,379	–	11,804
Additions to cumulative impairment losses	154	132	132	6	425
Transfers	13	8	–17	0	4
Classified as held for sale	9	9	–2	–	16
Disposals	426	1,336	1,823	–3	3,583
Reversal of impairment losses	16	1	8	3	29
Balance at Dec. 31, 2022	**23,083**	**42,377**	**76,565**	**10**	**142,035**
Carrying amount at Dec. 31, 2022	**27,705**	**11,557**	**14,647**	**9,981**	**63,890**

CHANGES IN PROPERTY, PLANT AND EQUIPMENT IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2021

€ million	Land, land rights and buildings, including buildings on third-party land	Technical equipment and machinery	Other equipment, operating and office equipment	Payments on account and assets under construction	Total
Cost					
Balance at Jan. 1, 2021	**45,151**	**49,822**	**84,389**	**7,766**	**187,129**
Foreign exchange differences	674	857	1,124	128	2,783
Changes in consolidated Group	271	80	8	212	571
Additions	1,874	1,159	3,454	4,246	10,733
Transfers	1,144	1,745	1,694	–4,623	–39
Classified as held for sale	78	226	139	26	469
Disposals	756	1,293	2,420	58	4,527
Balance at Dec. 31, 2021	**48,281**	**52,144**	**88,111**	**7,645**	**196,181**
Amortization and impairment					
Balance at Jan. 1, 2021	**19,142**	**37,665**	**66,408**	**30**	**123,245**
Foreign exchange differences	252	634	912	4	1,802
Changes in consolidated Group	–200	–129	–116	–1	–447
Additions to cumulative amortization	2,164	3,242	6,464	–	11,870
Additions to cumulative impairment losses	102	85	19	5	211
Transfers	56	–21	1	–31	5
Classified as held for sale	38	138	97	–	273
Disposals	382	1,231	2,288	2	3,903
Reversal of impairment losses	13	4	7	2	26
Balance at Dec. 31, 2021	**21,083**	**40,103**	**71,296**	**4**	**132,486**
Carrying amount at Dec. 31, 2021	**27,199**	**12,041**	**16,814**	**7,641**	**63,695**

Government grants of €299 million (previous year: €328 million) were deducted from the cost of property, plant and equipment.

In connection with land and buildings, real property liens of €1,517 million (previous year: €1,528 million) are pledged as collateral for partial retirement obligations, financial liabilities and other liabilities.

14. Lease assets and investment property

CHANGES IN LEASE ASSETS AND INVESTMENT PROPERTY IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2022

€ million	Lease assets	Investment property	Total
Cost			
Balance at Jan. 1, 2022	**79,146**	**947**	**80,092**
Foreign exchange differences	1,105	17	1,122
Changes in consolidated Group	187	–5	182
Additions	24,105	4	24,110
Transfers	–14	4	–10
Disposals	23,611	6	23,617
Balance at Dec. 31, 2022	**80,919**	**961**	**81,880**
Amortization and impairment			
Balance at Jan. 1, 2022	**19,447**	**332**	**19,779**
Foreign exchange differences	262	3	265
Changes in consolidated Group	73	–1	72
Additions to cumulative amortization	10,255	21	10,276
Additions to cumulative impairment losses	261	1	261
Transfers	–4	1	–3
Disposals	8,216	3	8,220
Reversal of impairment losses	539	1	540
Balance at Dec. 31, 2022	**21,539**	**351**	**21,890**
Carrying amount at Dec. 31, 2022	**59,380**	**610**	**59,990**

CHANGES IN LEASE ASSETS AND INVESTMENT PROPERTY IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2021

€ million	Lease assets	Investment property	Total
Cost			
Balance at Jan. 1, 2021	**67,127**	**869**	**67,996**
Foreign exchange differences	2,791	21	2,812
Changes in consolidated Group	283	48	331
Additions	29,108	9	29,117
Transfers	–26	2	–24
Disposals	20,136	3	20,139
Balance at Dec. 31, 2021	**79,146**	**947**	**80,092**
Amortization and impairment			
Balance at Jan. 1, 2021	**16,441**	**311**	**16,752**
Foreign exchange differences	894	4	898
Changes in consolidated Group	10	0	10
Additions to cumulative amortization	9,564	18	9,582
Additions to cumulative impairment losses	434	–	434
Transfers	–4	0	–4
Disposals	7,234	1	7,234
Reversal of impairment losses	659	0	660
Balance at Dec. 31, 2021	**19,447**	**332**	**19,779**
Carrying amount at Dec. 31, 2021	**59,699**	**615**	**60,313**

Lease assets include assets leased out under the terms of operating leases and assets covered by long-term buyback agreements.

Investment property includes apartments rented out and leased dealerships with a fair value of €1,279 million (previous year: €1,436 million). Fair value is estimated using an investment method based on internal calculations (Level 3 of the fair value hierarchy). Operating expenses of €69 million (previous year: €64 million) were incurred for the maintenance of investment property in use. Expenses of €0.8 million (previous year: €1.0 million) were incurred for unused investment property.

Rental income from investment property amounted to €59 million in fiscal year 2022 (previous year: €58 million).

15. Equity-accounted investments and other equity investments

CHANGES IN EQUITY-ACCOUNTED INVESTMENTS AND OTHER EQUITY INVESTMENTS IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2022

€ million	Equity-accounted investments	Other equity investments	Total
Gross carrying amount			
Balance at Jan. 1, 2022	**13,102**	**4,033**	**17,135**
Foreign exchange differences	–82	1	–81
Changes in consolidated Group	203	–233	–30
Additions	2,167	1,499	3,666
Transfers	–	–	–
Disposals	–	318	318
Changes recognized in profit or loss	2,392	5	2,396
Dividends[1]	–2,877	–	–2,877
Other changes recognized in other comprehensive income	331	–449	–118
Balance at Dec. 31, 2022	**15,235**	**4,538**	**19,774**
Impairment losses			
Balance at Jan. 1, 2022	**571**	**1,033**	**1,604**
Foreign exchange differences	–2	–4	–6
Changes in consolidated Group	–25	11	–15
Additions	2,077	180	2,258
Transfers	–	–	–
Disposals	–	121	121
Reversal of impairment losses	54	50	104
Balance at Dec. 31, 2022	**2,567**	**1,050**	**3,617**
Carrying amount at Dec. 31, 2022	**12,668**	**3,489**	**16,157**

1 Dividends are shown before withholding tax.

CHANGES IN EQUITY-ACCOUNTED INVESTMENTS AND OTHER EQUITY INVESTMENTS IN THE PERIOD JANUARY 1 TO DECEMBER 31, 2021

€ million	Equity-accounted investments	Other equity investments	Total
Gross carrying amount			
Balance at Jan. 1, 2021	**10,610**	**2,833**	**13,443**
Foreign exchange differences	300	56	355
Changes in consolidated Group	–360	285	–75
Additions	2,875	1,066	3,941
Transfers	–	–	–
Classified as held for sale	–	4	4
Disposals	35	134	169
Changes recognized in profit or loss	2,172	42	2,214
Dividends[1]	–3,068	–	–3,068
Other changes recognized in other comprehensive income	608	–110	497
Balance at Dec. 31, 2021	**13,102**	**4,033**	**17,135**
Impairment losses			
Balance at Jan. 1, 2021	**531**	**968**	**1,499**
Foreign exchange differences	12	20	32
Changes in consolidated Group	–	19	19
Additions	79	118	197
Transfers	–	–	–
Disposals	–	43	43
Reversal of impairment losses	51	48	99
Balance at Dec. 31, 2021	**571**	**1,033**	**1,604**
Carrying amount at Dec. 31, 2021	**12,531**	**3,000**	**15,531**

1 Dividends are shown before withholding tax.

Equity-accounted investments include joint ventures in the amount of €6,959 million (previous year: €6,905 million) and associates in the amount of €5,709 million (previous year: €5,627 million).

Additions to equity-accounted investments in the fiscal year include primarily a capital increase of €1.7 billion at GMH in connection with the acquisition of Europcar. Additional disclosures can be found in the “Key events” section.

In the previous year, additions to equity-accounted investments related to the acquisition of additional shares in Gotion in an amount of €1.1 billion, the acquisition of additional shares in Northvolt AB in an amount of €0.8 billion, and the capital increase at QuantumScape and the realization of a forward purchase transaction in this context in an amount of €0.5 billion.

Changes in the consolidated Group affecting equity-accounted investments in the fiscal year affect mainly the associate Brose Sitech in an amount of €0.3 billion. Additional disclosures on Brose Sitech can be found in the “IFRS 5 – Noncurrent assets held for sale” section.

In the previous year, the main changes in the consolidated Group affecting equity-accounted investments related to the reclassification of shares in Navistar in an amount of €–0.6 billion following its first-time consolidation.

Additions to impairment losses on equity-accounted investments in an amount of €1.9 billion are mostly attributable to the joint venture Argo AI in the fiscal year. Additional disclosures can be found in the "Key events" section.

Of the other changes recognized in other comprehensive income, €373 million (previous year: €481 million) is attributable to joint ventures and €– 43 million (previous year: €127 million) to associates. They are mainly the result of foreign exchange differences in the amount of €157 million (previous year: €521 million), pension plan remeasurements in the amount of €9 million (previous year: €17 million) and fair value measurement of cash flow hedges in the amount of €143 million (previous year: €– 16 million).

16. Noncurrent and current financial services receivables

	CARRYING AMOUNT			FAIR VALUE	CARRYING AMOUNT			FAIR VALUE
€ million	Current	Noncurrent	Dec. 31, 2022	Dec. 31, 2022	Current	Noncurrent	Dec. 31, 2021	Dec. 31, 2021
Receivables from financing business								
Customer financing	27,087	49,065	76,152	75,302	27,272	48,639	75,911	77,103
Dealer financing	14,243	2,653	16,896	16,908	9,647	1,785	11,432	11,420
Direct banking	338	17	356	359	311	12	322	323
	41,668	**51,735**	**93,403**	**92,568**	**37,230**	**50,435**	**87,665**	**88,846**
Receivables from operating leases	387	–	387	387	325	–	325	325
Receivables from finance leases	19,493	35,209	54,702	53,748	18,943	34,519	53,462	54,481
	61,549	**86,944**	**148,493**	**146,703**	**56,498**	**84,954**	**141,452**	**143,651**

Finance lease receivables included in financial services receivables of €148.5 billion (previous year: €141.5 billion) declined by €156 million (previous year: €– million) due to hedged fair value changes of hedged items designated in portfolio hedges.

The receivables from customer and dealer financing are secured by vehicles or real property liens. Of the receivables, €767 million (previous year adjusted: €651 million) was furnished as collateral for financial liabilities and contingent liabilities.

The receivables from dealer financing include €15 million (previous year: €25 million) receivable from unconsolidated affiliated companies.

17. Noncurrent and current other financial assets

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2022	Current	Noncurrent	Dec. 31, 2021
Positive fair values of derivative financial instruments	3,916	7,545	11,461	1,787	3,532	5,319
Receivables from loans, bonds, profit participation rights (excluding interest)	6,843	5,253	12,097	6,174	4,539	10,713
Miscellaneous financial assets	4,408	1,033	5,441	4,623	1,086	5,709
	15,167	**13,832**	**28,999**	**12,584**	**9,156**	**21,741**

Other financial assets include receivables from related parties of €11.8 billion (previous year: €10.1 billion). Other financial assets amounting to €118 million (previous year: €161 million) were furnished as collateral for financial liabilities and contingent liabilities. There is no original right of disposal or pledge for the furnished collateral on the part of the collateral taker.

In addition, miscellaneous financial assets include receivables from restricted deposits that serve as collateral (mainly under asset-backed securities transactions).

The positive fair values of derivatives relate to the following items:

€ million	Dec. 31, 2022	Dec. 31, 2021
Transactions for hedging		
foreign currency risk from assets using fair value hedges	50	0
foreign currency risk from liabilities using fair value hedges	38	66
interest rate risk using fair value hedges	868	380
interest rate risk using cash flow hedges	504	82
foreign currency and price risk from future cash flows (cash flow hedges)	3,282	1,391
Hedging transactions Total	**4,741**	**1,920**
Assets related to derivatives not included in hedging relationships	6,720	3,399
Total	**11,461**	**5,319**

Positive fair values of €822 million (previous year: €– million) were recognized from transactions for hedging interest rate risk (fair value hedges) designated in portfolio hedges.

Further details on derivative financial instruments as a whole are given in the section entitled “Financial risk management and financial instruments”.

18. Noncurrent and current other receivables

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2022	Current	Noncurrent	Dec. 31, 2021
Other recoverable income taxes	4,855	1,028	5,882	4,381	964	5,345
Miscellaneous receivables	3,041	2,068	5,109	3,092	1,931	5,023
	7,896	**3,095**	**10,991**	**7,473**	**2,895**	**10,368**

Miscellaneous receivables include assets to fund post-employment benefits in the amount of €70 million (previous year: €175 million). This item also includes the share of the technical provisions attributable to reinsurers amounting to €58 million (previous year: €57 million).

Current other receivables are predominantly non-interest-bearing.

Other receivables include contingent receivables from long-term construction contracts recognized in accordance with project progress. They correspond to the contract assets recognized under contracts with customers and changed as follows:

€ million	2022	2021
Contingent construction contract receivables at Jan. 1	**306**	**389**
Additions and disposals	–96	–90
Change in valuation allowances	1	5
Foreign exchange differences	2	2
Contingent construction contract receivables at Dec. 31	**212**	**306**

The Volkswagen Group capitalizes costs to obtain a contract and amortizes them on a straight-line basis over the life of the contract only if they are material, the underlying contract has a term of at least one year, and these costs would not have been incurred, if the corresponding contract had not been entered into. As of December 31, 2022, costs to obtain contracts amounting to €81 million (previous year: €76 million) were recognized as assets. In fiscal year 2022, amortization charges on capitalized costs to obtain contracts amounted to €47 million (previous year: €38 million). No impairment losses were recognized on capitalized costs to obtain contracts in 2022 and 2021.

19. Tax assets

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2022	Current	Noncurrent	Dec. 31, 2021
Deferred tax assets	–	12,921	12,921	–	13,393	13,393
Tax receivables	1,732	394	2,125	1,618	635	2,252
	1,732	**13,314**	**15,046**	**1,618**	**14,027**	**15,645**

Deferred tax assets include an amount of €7,021 million (previous year: €7,473 million) arising from recognition and measurement differences between IFRS carrying amounts and the tax base, which will reverse within one year.

20. Inventories

€ million	Dec. 31, 2022	Dec. 31, 2021
Raw materials, consumables and supplies	10,458	9,331
Work in progress	6,041	6,559
Finished goods and purchased merchandise	29,466	22,201
Current lease assets	5,170	5,291
Prepayments	1,165	344
Hedges on inventories	–26	–2
	52,274	**43,725**

At the same time as the relevant revenue was recognized, inventories in the amount of €204 billion (previous year: €181 billion) were included in cost of sales. Loss allowances (excluding lease assets) recognized as expenses in the reporting period amounted to €582 million (previous year: €594 million). Vehicles with a value amounting to €257 million (previous year: €345 million) were assigned as collateral for partial retirement obligations.

21. Trade receivables

€ million	Dec. 31, 2022	Dec. 31, 2021
Trade receivables from		
third parties	14,832	11,897
unconsolidated subsidiaries	210	334
joint ventures	3,451	3,246
associates	87	42
other investees and investors	1	1
	18,581	**15,521**

The fair values of the trade receivables correspond to the carrying amounts.

22. Marketable securities and time deposits

The marketable securities serve to safeguard liquidity. They are mainly short-term fixed-income securities and shares. Most securities are measured at fair value. Current securities amounting to € 1,406 million (previous year: €485 million) were furnished as collateral for financial liabilities and contingent liabilities. There is no original right of disposal or pledge for the furnished collateral on the part of the collateral taker. In the current fiscal year, time deposits with maturities of more than three months are recognized in the item securities and time deposits; in the previous year, these items were recognized in cash, cash equivalents and time deposits.

23. Cash and cash equivalents

€ million	Dec. 31, 2022	Dec. 31, 2021
Bank balances	28,685	39,363
Checks, cash-in-hand, bills and call deposits	487	361
	29,172	**39,723**

Bank balances are held at various banks in different currencies and also include time deposits with maturities of less than three months.

24. Equity

The subscribed capital of Volkswagen AG is composed of no-par value bearer shares with a notional value of €2.56. As well as ordinary shares, there are preferred shares that entitle the bearer to a €0.06 higher dividend than ordinary shares, but do not carry voting rights..

The Annual General Meeting on May 14, 2019 resolved to create authorized capital of up to €179 million, expiring on May 13, 2024, to issue new preferred bearer shares.

The subscribed capital is composed of 295,089,818 no-par value ordinary shares (previous year: 295,089,818) and 206,205,445 no-par value preferred shares (previous year: 206,205,445), and amounts to €1,283,315,873 (previous year: €1,283,315,873).

The capital reserves comprise the share premium totaling €14,225 million (previous year: €14,225 million) from capital increases, the share premium of €219 million from the issuance of bonds with warrants and an amount of €107 million appropriated on the basis of the capital reduction implemented in 2006. No amounts were withdrawn from the capital reserves.

DIVIDENDS AND DIVIDEND PROPOSAL

In accordance with section 58(2) of the Aktiengesetz (AktG – German Stock Corporation Act), the dividend payment by Volkswagen AG is based on the net retained profits reported in the annual financial statements of Volkswagen AG prepared in accordance with the German Commercial Code. Based on these annual financial statements of Volkswagen AG, following the transfer of €6,230 million to revenue reserves, net retained profits of €12,021 million are eligible for distribution. The Board of Management and Supervisory Board will propose to the Annual General Meeting that a total dividend of €4,374 million, i.e. €8.70 per ordinary share and €8.76 per preferred share, be paid from the net retained profits. Shareholders are not entitled to a dividend payment until it has been resolved by the Annual General Meeting. The remaining net retained profits of €7,647 million will be carried forward to the new fiscal year. The Board of Management and Supervisory Board will propose to the Annual General Meeting to transfer another €7,645 million to revenue reserves.

In fiscal year 2022, based on the resolution of the Annual General Meeting of Volkswagen AG of May 12, 2022, a dividend was distributed, initially of €7.50 per ordinary share and €7.56 per preferred share. At the extraordinary General Meeting of Volkswagen AG on December 16, 2022, it was resolved in connection with the IPO of Porsche AG to adjust the regular dividend resolution by increasing the dividend by €19.06 per ordinary and preferred share (see “Key events” section).

The dividend payments of €257 million included in noncontrolling interests also comprise the dividends (€225 million) arising from the contractual obligations in connection with the IPO of Porsche AG, although these will not be distributed until after the Annual General Meeting of Porsche AG in 2023. Additional disclosures on the IPO of Porsche AG can be found in the “Key events” section.

HYBRID CAPITAL

In February 2022, Volkswagen AG called a hybrid note (maturity: 7 years) with a principal amount of €1,100 million, which had been placed in 2015 via Volkswagen International Finance N.V., Amsterdam/the Netherlands (issuer). Once called, the note had to be classified as debt in accordance with IAS 32, thus reducing the equity and net liquidity of the Volkswagen Group. The hybrid note was redeemed on March 21, 2022.

From the hybrid capital issued on March 28, 2022, Volkswagen AG recorded a cash inflow of €2,250 million less transaction costs of €11 million. In addition, the recognition of deferred taxes led to noncash effects of €3 million. The hybrid capital is to be classified as equity granted.

In November 2022, Volkswagen AG called a hybrid note (maturity: 5.5 years) with a principal amount of €1,500 million, which had been placed in 2017 via Volkswagen International Finance N.V., Amsterdam/the Netherlands (issuer). Once called, the note had to be classified as debt in accordance with IAS 32, thus reducing the equity and net liquidity of the Volkswagen Group. The hybrid note was redeemed on December 14, 2022.

Interest may be accumulated depending on whether a dividend is paid to Volkswagen AG shareholders. Under IAS 32, these hybrid notes must be classified in their entirety as equity. The capital raised was recognized in equity, less a discount and transaction costs and net of deferred taxes. The interest payments payable to the noteholders will be recognized directly in equity. IAS 32 only allows these hybrid notes to be classified as debt once the respective hybrid note is called.

NONCONTROLLING INTERESTS

As of December 31, 2022, noncontrolling interests amounted to €12,950 million (previous year: €1,705 million). Noncontrolling interests are mainly attributable to the Porsche AG Group (see “Key events” section for details) and the TRATON GROUP.

The table below shows summarized financial information of the Porsche AG Group, including amortized goodwill and fair value adjustments, which were determined at the acquisition date:

€ million	2022
Noncontrolling interests in %[1]	24.58
Noncontrolling interests	11,028
Noncurrent assets	60,383
Current assets	20,186
Noncurrent liabilities	18,254
Current liabilities	16,613
Sales revenue	37,630
Earnings after tax[2]	4,924
Other comprehensive income, net of tax	1,947
Dividend paid to noncontrolling interest shareholders	6
Gross cash flow	8,271
Change in working capital	–1,156
Cash flows from operating activities	7,114
Cash flows from investing activities	–4,103
Net cash flow	3,011

1 The percentage only includes direct noncontrolling interests.
2 Of this amount, roughly €4 billion is intended for transfer to Porsche Holding Stuttgart GmbH under the control and profit and loss transfer agreement, which expired in fiscal year 2022. This information was already published at the time of the IPO of Porsche AG.

The table below shows summarized financial information of the TRATON GROUP, including amortized goodwill and fair value adjustments, which were determined at the acquisition date:

€ million	2022	2021
Noncontrolling interests in %[1]	10.28	10.28
Noncontrolling interests	1,442	1,270
Noncurrent assets	40,333	40,099
Current assets	19,108	16,232
Noncurrent liabilities	21,682	22,272
Current liabilities	22,636	19,829
Sales revenue	40,335	30,620
Earnings after tax	1,136	466
Other comprehensive income, net of tax	10	469
Dividend paid to noncontrolling interest shareholders	26	23
Gross cash flow	4,042	2,704
Change in working capital	–4,702	–1,170
Cash flows from operating activities	–660	1,534
Cash flows from investing activities	–1,916	–4,406
Net cash flow	–2,576	–2,873

1 The percentage only includes direct noncontrolling interests.

25. Noncurrent and current financial liabilities

	CARRYING AMOUNT			CARRYING AMOUNT		
€ million	Current	Noncurrent	Dec. 31, 2022	Current	Noncurrent	Dec. 31, 2021
Bonds	21,284	71,835	93,119	21,722	76,317	98,038
Commercial paper and notes	17,239	18,034	35,273	16,781	20,796	37,578
Liabilities to banks	18,840	23,266	42,105	12,786	25,904	38,691
Deposits business	24,107	2,642	26,749	24,243	2,588	26,831
Loans and miscellaneous liabilities	876	677	1,554	1,944	875	2,819
Lease liabilities	1,102	5,283	6,385	1,108	5,137	6,245
	83,448	**121,737**	**205,185**	**78,584**	**131,618**	**210,202**

26. Noncurrent and current other financial liabilities

€ million	CARRYING AMOUNT			CARRYING AMOUNT		
	Current	Noncurrent	Dec. 31, 2022	Current	Noncurrent	Dec. 31, 2021
Negative fair values of derivative financial instruments	2,281	5,565	7,846	2,375	2,047	4,422
Interest payable	837	215	1,052	638	108	746
Miscellaneous financial liabilities	16,702	2,409	19,111	9,989	2,311	12,300
	19,820	**8,188**	**28,008**	**13,002**	**4,466**	**17,468**

Under miscellaneous current financial liabilities, an amount of €6,750 million is attributable to the obligation to pay a special dividend to the shareholders of Volkswagen AG in connection with the IPO of Porsche AG (see "Key events" section).

The negative fair values of derivatives relate to the following items:

€ million	Dec. 31, 2022	Dec. 31, 2021
Transactions for hedging		
foreign currency risk from assets using fair value hedges	12	75
foreign currency risk from liabilities using fair value hedges	14	17
interest rate risk using fair value hedges	2,596	244
interest rate risk using cash flow hedges	54	42
foreign currency and price risk from future cash flows (cash flow hedges)	2,801	2,822
Hedging transactions Total	**5,477**	**3,200**
Liabilities related to derivatives not included in hedging relationships	2,369	1,222
Total	**7,846**	**4,422**

Negative fair values of €0 million (previous year: €– million) were recognized from transactions for hedging interest rate risk (fair value hedges) designated in portfolio hedges.

Further details on derivative financial instruments as a whole are given in the section entitled "Financial risk management and financial instruments".

27. Noncurrent and current other liabilities

€ million	Carrying amount Current	Noncurrent	Dec. 31, 2022	Carrying amount Current	Noncurrent	Dec. 31, 2021
Payments received on account of orders	9,579	6,301	15,880	8,653	5,792	14,445
Liabilities relating to						
other taxes	3,546	159	3,706	2,958	122	3,080
social security	806	149	955	674	126	801
wages and salaries	6,503	878	7,381	5,371	815	6,186
Miscellaneous liabilities	2,220	1,534	3,753	2,233	1,576	3,809
	22,655	**9,020**	**31,675**	**19,890**	**8,430**	**28,320**

The liabilities from payments on account received under contracts with customers correspond to the contract liabilities under contracts with customers; they are part of the payments received on account of orders. They changed as follows:

€ million	2022	2021
Liabilities from advance payments received under contracts with customers at Jan. 1	**12,762**	**11,398**
Additions and disposals	1,467	975
Changes in consolidated Group	–4	14
Classified as held for sale	2	–
Foreign exchange differences	63	375
Liabilities from advance payments received under contracts with customers at Dec. 31	**14,286**	**12,762**

28. Tax liabilities

€ million	Carrying amount Current	Noncurrent	Dec. 31, 2022	Carrying amount Current	Noncurrent	Dec. 31, 2021
Deferred tax liabilities	–	10,734	10,734	–	5,131	5,131
Provisions for taxes	2,586	4,320	6,906	2,863	3,392	6,256
Tax payables	726	–	726	614	–	614
	3,312	**15,054**	**18,366**	**3,478**	**8,523**	**12,001**

Deferred tax liabilities include an amount of €767 million (previous year: €503 million) arising from recognition and measurement differences between IFRS carrying amounts and the tax base, which will reverse within one year.

29. Provisions for pensions and other post-employment benefits

Provisions for pensions are recognized for commitments in the form of retirement, invalidity and dependents' benefits payable under pension plans. The benefits provided by the Group vary according to the legal, tax and economic circumstances of the country concerned, and usually depend on the length of service and remuneration of the employees.

Volkswagen Group companies provide occupational pensions under both defined contribution and defined benefit plans. In the case of defined contribution plans, the Company makes contributions to state or private pension schemes based on legal or contractual requirements, or on a voluntary basis. Once the contributions have been paid, there are no further obligations for the Volkswagen Group. Current contributions are recognized as pension expenses of the period concerned. In fiscal year 2022, they amounted to a total of €2,846 million (previous year: €2,660 million) in the Volkswagen Group. Of this figure, contributions to the compulsory state pension system in Germany amounted to €1,854 million (previous year: €1,825 million).

In the case of defined benefit plans, a distinction is made between pensions funded by provisions and externally funded plans.

The pension provisions for defined benefits are measured by independent actuaries using the internationally accepted projected unit credit method in accordance with IAS 19, under which the future obligations are measured on the basis of the ratable benefit entitlements earned as of the balance sheet date. Measurement reflects actuarial assumptions as to discount rates, salary and pension trends, employee turnover rates, longevity and increases in healthcare costs, which were determined for each Group company depending on the economic environment. Remeasurements arise from differences between what has actually occurred and the prior-year assumptions, from changes in assumptions, as well as from gains or losses on plan assets, excluding amounts included in net interest income or expenses. They are recognized in other comprehensive income, net of deferred taxes, in the period in which they arise.

Multi-employer pension plans exist in the Volkswagen Group in the United Kingdom, Switzerland, Sweden and the Netherlands. These plans are defined benefit plans. A small proportion of them are accounted for as defined contribution plans, as the Volkswagen Group is not authorized to receive the information required in order to account for them as defined benefit plans. Under the terms of the multi-employer plans, the Volkswagen Group is not liable for the obligations of the other employers. In the event of its withdrawal from the plans or their winding-up, the proportionate share of the surplus of assets attributable to the Volkswagen Group will be credited or the proportionate share of the deficit attributable to the Volkswagen Group will have to be funded. In the case of the defined benefit plans accounted for as defined contribution plans, the Volkswagen Group's share of the obligations represents a small proportion of the total obligations. No probable significant risks arising from multi-employer defined benefit pension plans that are accounted for as defined contribution plans have been identified. The expected contributions to those plans will amount to €26 million for fiscal year 2023.

Owing to their benefit character, the obligations of the US Group companies in respect of post-employment medical care in particular are also carried under provisions for pensions and other post-employment benefits. These post-employment benefit provisions take into account the expected long-term rise in the cost of healthcare. In fiscal year 2022, €33 million (previous year: €20 million) was recognized as an expense for healthcare costs. The related carrying amount as of December 31, 2022 was €637 million (previous year: €800 million).

The following amounts were recognized in the balance sheet for defined benefit plans:

€ million	Dec. 31, 2022	Dec. 31, 2021
Present value of funded obligations	18,082	26,449
Fair value of plan assets	14,880	17,285
Funded status (net)	3,201	9,165
Present value of unfunded obligations	24,090	32,105
Amount not recognized as an asset because of the ceiling in IAS 19	191	106
Net liability recognized in the balance sheet	**27,483**	**41,376**
of which provisions for pensions	27,553	41,550
of which other assets	70	175

SIGNIFICANT PENSION ARRANGEMENTS IN THE VOLKSWAGEN GROUP

For the period after their active working life, the Volkswagen Group offers its employees benefits under attractive, modern occupational pension arrangements. Most of the arrangements in the Volkswagen Group are pension plans for employees in Germany classified as defined benefit plans under IAS 19. The majority of these obligations are funded solely by recognized provisions. These plans are now largely closed to new members. To reduce the risks associated with defined benefit plans, in particular longevity, salary increases and inflation, the Volkswagen Group has introduced new defined benefit plans in recent years whose benefits are funded by appropriate external plan assets. The aforementioned risks have been largely reduced in these pension plans. The proportion of the total defined benefit obligation attributable to pension obligations funded by plan assets will continue to rise in the future. The significant pension plans are described in the following.

German pension plans funded solely by recognized provisions

The pension plans funded solely by recognized provisions comprise both contribution-based plans with guarantees and final salary plans. For contribution-based plans, an annual pension expense dependent on income and status is converted into a lifelong pension entitlement using annuity factors (guaranteed modular pension entitlements). The annuity factors include a guaranteed rate of interest. At retirement, the modular pension entitlements earned annually are added together. For final salary plans, the underlying salary is multiplied at retirement by a percentage that depends on the years of service up until the retirement date.

The present value of the guaranteed obligation rises as interest rates fall and is therefore exposed to interest rate risk.

The pension system provides for lifelong pension payments. The companies bear the longevity risk in this respect. This is accounted for by calculating the annuity factors and the present value of the guaranteed obligation using the latest generational mortality tables – the “Heubeck 2018 G” mortality tables – which already reflect future increases in life expectancy.

To reduce the inflation risk from adjusting the regular pension payments by the rate of inflation, a pension adjustment that is not indexed to inflation was introduced for pension plans where this is permitted by law.

German pension plans funded by external plan assets

The pension plans funded by external plan assets are contribution-based plans with guarantees. In this case, an annual pension expense dependent on income and status is either converted into a lifelong pension entitlement using annuity factors (guaranteed modular pension entitlement) or paid out in a single lump sum or in installments. In some cases, employees also have the opportunity to provide for their own retirement through deferred compensation. The annuity factors include a guaranteed rate of interest. At retirement, the modular pension entitlements earned annually are added together. The pension expense is contributed on an ongoing basis to a separate pool of assets that is administered independently of the Company in trust and invested in the capital markets. If the plan assets exceed the present value of the obligations calculated using the guaranteed rate of interest, surpluses are allocated (modular pension bonuses).

Since the assets administered in trust meet the IAS 19 criteria for classification as plan assets, they are deducted from the obligations.

The amount of the pension assets is exposed to general market risk. The investment strategy and its implementation are therefore continuously monitored by the trusts' governing bodies, on which the companies are also represented. For example, investment policies are stipulated in investment guidelines with the aim of limiting market risk and its impact on plan assets. In addition, asset-liability management studies are conducted if required so as to ensure that investments are in line with the obligations that need to be covered. The pension assets are currently invested primarily in fixed-income or equity funds. The main risks are therefore interest rate and equity price risk. To mitigate market risk, the pension system also provides for cash funds to be set aside in an equalization reserve before any surplus is allocated.

The present value of the obligation is the present value of the guaranteed obligation after deducting the plan assets. If the plan assets fall below the present value of the guaranteed obligation, a provision must be recognized in that amount. The present value of the guaranteed obligation rises as interest rates fall and is therefore exposed to interest rate risk.

In the case of lifelong pension payments, the Volkswagen Group bears the longevity risk. This is accounted for by calculating the annuity factors and the present value of the guaranteed obligation using the latest generational mortality tables – the "Heubeck 2018 G" mortality tables – which already reflect future increases in life expectancy. In addition, the independent actuaries carry out annual risk monitoring as part of the review of the assets administered by the trusts.

To reduce the inflation risk from adjusting the regular pension payments by the rate of inflation, a pension adjustment that is not indexed to inflation was introduced for pension plans where this is permitted by law.

Calculation of the pension provisions was based on the following actuarial assumptions:

	GERMANY		ABROAD	
%	2022	2021	2022	2021
Discount rate at Dec. 31	3.69	1.21	5.00	2.42
Payroll trend	3.23	3.25	4.41	3.33
Pension trend	2.19	1.69	2.96	3.03
Employee turnover rate	1.20	1.18	4.43	3.85
Annual increase in healthcare costs	–	–	5.56	6.03

These assumptions are averages that were weighted using the present value of the defined benefit obligation.

With regard to life expectancy, consideration is given to the latest mortality tables in each country. The discount rates are generally defined to reflect the yields on prime-rated corporate bonds with matching maturities and currencies. The iBoxx AA Corporate Bond index was taken as the basis for the obligations of German Group companies. Similar indices were used for foreign pension obligations.

The payroll trends cover expected wage and salary trends, which also include increases attributable to career development.

The pension trends either reflect the contractually guaranteed pension adjustments or are based on the rules on pension adjustments in force in each country.

The employee turnover rates are based on past experience and future expectations.

The following table shows changes in the net defined benefit liability recognized in the balance sheet:

€ million	2022	2021
Net liability recognized in the balance sheet at Jan. 1	**41,376**	**45,040**
Current service cost	2,086	2,419
Net interest expense	546	352
Actuarial gains (–)/losses (+) arising from changes in demographic assumptions	–13	0
Actuarial gains (–)/losses (+) arising from changes in financial assumptions	–19,630	–4,879
Actuarial gains (–)/losses (+) arising from experience adjustments	1,762	–75
Income (+)/expenses (–) from plan assets not included in interest income	–3,017	719
Change in amount not recognized as an asset because of the ceiling in IAS 19	85	12
Employer contributions to plan assets	902	1,003
Employee contributions to plan assets	–15	–14
Pension payments from company assets	984	933
Past service cost (including plan curtailments)	38	–2
Gains (–) or losses (+) arising from plan settlements	–16	–1
Changes in consolidated Group	–3	972
Classified as held for sale	–	18
Other changes	104	145
Foreign exchange differences from foreign plans	2	51
Net liability recognized in the balance sheet at Dec. 31	**27,482**	**41,376**

The change in the amount not recognized as an asset because of the ceiling in IAS 19 contains an interest component, part of which was recognized in the financial result in profit or loss, and part of which was recognized outside profit or loss directly in equity.

The change in the present value of the defined benefit obligation is attributable to the following factors:

€ million	2022	2021
Present value of obligations at Jan. 1	**58,555**	**58,301**
Current service cost	2,086	2,419
Interest cost	820	504
Actuarial gains(–)/losses (+) arising from changes in demographic assumptions	–13	0
Actuarial gains(–)/losses (+) arising from changes in financial assumptions	–19,630	–4,879
Actuarial gains(–)/losses (+) arising from experience adjustments	1,762	–75
Employee contributions to plan assets	25	22
Pension payments from company assets	984	933
Pension payments from plan assets	549	370
Past service cost (including plan curtailments)	38	–2
Gains (–) or losses (+) arising from plan settlements	–16	–1
Changes in consolidated Group	–3	3,078
Classified as held for sale	–	32
Other changes	22	180
Foreign exchange differences from foreign plans	59	341
Present value of obligations at Dec. 31	**42,172**	**58,555**

The actuarial gains arising from changes in financial assumptions result primarily from the change in the discount rate and in the pension trend for pension obligations in Germany. While the rise in the discount rate from 1.2% to 3.7% led to actuarial gains of €19,588 million, the increase in the pension trend from 1.7% to 2.2% had an offsetting effect, reducing actuarial gains by €2,389 million.

Changes in the relevant actuarial assumptions would have had the following effects on the defined benefit obligation:

		DEC. 31, 2022		DEC. 31, 2021	
Present value of defined benefit obligation if		€ million	Change in percent	€ million	Change in percent
Discount rate	is 0.5 percentage points higher	39,172	–7.11	52,999	–9.49
	is 0.5 percentage points lower	45,599	8.13	64,766	10.61
Pension trend	is 0.5 percentage points higher	43,926	4.16	61,402	4.86
	is 0.5 percentage points lower	40,585	–3.76	55,994	–4.37
Payroll trend	is 0.5 percentage points higher	42,398	0.54	58,969	0.71
	is 0.5 percentage points lower	41,966	–0.49	57,942	–1.05
Longevity	increases by one year	43,461	3.05	60,641	3.56

The sensitivity analysis shown above considers the change in one assumption at a time, leaving the other assumptions unchanged versus the original calculation, i.e. any correlation effects between the individual assumptions are ignored.

To examine the sensitivity of the defined benefit obligation to a change in assumed longevity, the estimates of mortality were reduced as part of a comparative calculation to the extent that doing so increases life expectancy by approximately one year.

The average duration of the defined benefit obligation weighted by the present value of the defined benefit obligation (Macaulay duration) is 16 years (previous year: 20 years).

The present value of the defined benefit obligation is attributable as follows to the members of the plan:

€ million	2022	2021
Active members with pension entitlements	21,054	33,394
Members with vested entitlements who have left the Company	2,270	3,788
Pensioners	18,848	21,372
	42,172	**58,555**

The maturity profile of payments attributable to the defined benefit obligation is presented in the following table, which classifies the present value of the obligation by the maturity of the underlying payments:

€ million	2022	2021
Payments due within the next fiscal year	1,638	1,513
Payments due between two and five years	6,655	6,535
Payments due in more than five years	33,879	50,506
	42,172	**58,555**

Changes in plan assets are shown in the following table:

€ million	2022	2021
Fair value of plan assets at Jan. 1	**17,285**	**13,264**
Interest income on plan assets determined using the discount rate	274	152
Income (+)/expenses (–) from plan assets not included in interest income	–3,017	808
Employer contributions to plan assets	902	1,003
Employee contributions to plan assets	9	8
Pension payments from plan assets	550	371
Gains (+) or losses (–) arising from plan settlements	–	–
Changes in consolidated Group	0	2,107
Classified as held for sale	–	15
Other changes	–81	36
Foreign exchange differences from foreign plans	57	291
Fair value of plan assets at Dec. 31	**14,880**	**17,285**

The investment of the plan assets to cover future pension obligations resulted in expenses of €2,742 million (previous year: income of €960 million).

Employer contributions to plan assets are expected to amount to €901 million (previous year: €838 million) in the next fiscal year.

Plan assets are invested in the following asset classes:

€ million	DEC. 31, 2022			DEC. 31, 2021		
	Quoted prices in active markets	No quoted prices in active markets	Total	Quoted prices in active markets	No quoted prices in active markets	Total
Cash and cash equivalents	591	–	591	791	–	791
Equity instruments	278	–	278	279	–	279
Debt instruments	518	5	523	611	5	615
Direct investments in real estate	0	193	193	–	170	170
Derivatives	444	29	473	2	–27	–26
Equity funds	4,593	1	4,594	5,547	15	5,563
Bond funds	5,522	107	5,628	6,494	168	6,663
Real estate funds	617	30	647	510	23	532
Other funds	1,011	233	1,244	1,922	183	2,105
Other instruments	105	604	709	85	507	592

Plan assets include €15 million (previous year: €6 million) invested in Volkswagen Group assets and €5 million (previous year: €5 million) in Volkswagen Group debt instruments.

The following amounts were recognized in the income statement:

€ million	2022	2021
Current service cost	2,086	2,419
Net interest on the net defined benefit liability	546	352
Past service cost (including plan curtailments)	38	–2
Gains (–) or losses (+) arising from plan settlements	–16	–1
Net income (–) and expenses (+) recognized in profit or loss	**2,654**	**2,769**

The above amounts are generally included in the personnel costs of the functional areas in the income statement. Net interest on the net defined benefit liability is reported in interest expenses.

30. Noncurrent and current other provisions

€ million	Obligations arising from sales	Employee expenses	Litigation and legal risks	Miscellaneous provisions	Total
Balance at Jan. 1, 2021	**25,998**	**6,270**	**3,918**	**9,465**	**45,652**
Foreign exchange differences	526	54	60	211	851
Changes in consolidated Group	408	38	972	174	1,592
Classified as held for sale	2	26	–	0	28
Utilization	9,274	1,870	1,259	2,606	15,009
Additions/New provisions	10,997	2,783	2,120	4,503	20,403
Unwinding of discount/effect of change in discount rate	–71	–133	7	16	–181
Reversals	2,272	278	599	1,078	4,227
Balance at Dec. 31, 2021	**26,310**	**6,837**	**5,220**	**10,685**	**49,052**
of which current	11,754	2,784	3,389	7,651	25,578
of which noncurrent	14,555	4,053	1,831	3,035	23,474
Balance at Jan. 1, 2022	**26,310**	**6,837**	**5,220**	**10,685**	**49,052**
Foreign exchange differences	208	18	83	130	438
Changes in consolidated Group	–1	12	–3	12	20
Classified as held for sale	6	1	1	2	10
Utilization	9,009	2,633	2,781	3,261	17,684
Additions/New provisions	11,528	2,830	974	5,622	20,953
Unwinding of discount/effect of change in discount rate	–465	–553	–53	–49	–1,119
Reversals	2,518	194	394	1,791	4,898
Balance at Dec. 31, 2022	**26,046**	**6,314**	**3,045**	**11,346**	**46,751**
of which current	12,396	3,073	1,181	8,201	24,851
of which noncurrent	13,650	3,241	1,864	3,145	21,900

The obligations arising from sales contain provisions covering all risks relating to the sale of vehicles, components and genuine parts through to the disposal of end-of-life vehicles. They primarily comprise warranty obligations, calculated on the basis of losses to date and estimated future losses. They also include provisions for discounts, bonuses and similar allowances which are incurred after the balance sheet date, but for which there is a legal or constructive obligation attributable to sales revenue before the balance sheet date.

Provisions for employee expenses are recognized for long-service awards, time credits, partial retirement arrangements, severance payments and similar obligations, among other things.

In addition to residual provisions relating to the diesel issue, the provisions for litigation and legal risks contain amounts related to a large number of legal disputes and official proceedings in which Volkswagen Group companies become involved in Germany and internationally in the course of their operating activities. In particular, such legal disputes and other proceedings may occur in relation to suppliers, dealers, customers, employees, or investors. Please refer to the “Litigation” section for a discussion of the legal risks.

Miscellaneous provisions relate to a wide range of identifiable specific risks, price risks and uncertain obligations, which are measured in the amount of the expected settlement value. Depending the jurisdiction concerned, they also include risk provisions for any non-compliance with legal emissions limits. Their measurement takes into account, among other things, the respective sales volume and the legally defined fee or the cost of acquiring emission rights from other manufacturers. Advantage has been taken of synergies between individual brands of the Volkswagen Group by establishing emission pools where possible.

Miscellaneous provisions additionally include provisions amounting to €1,761 million (previous year: €1,527 million) relating to the insurance business.

31. Trade payables

€ million	Dec. 31, 2022	Dec. 31, 2021
Trade payables to		
third parties	27,974	22,964
unconsolidated subsidiaries	197	233
joint ventures	227	186
associates	342	239
other investees and investors	7	2
	28,748	**23,624**

Other disclosures

32. IAS 23 (Borrowing Costs)

Capitalized borrowing costs amounted to €178 million (previous year: €77 million) and related mainly to capitalized development costs. An average cost of debt of 2.2% (previous year: 1.3%) was used as a basis for capitalization in the Volkswagen Group.

33. IFRS 16 (Leases)

1. LESSEE ACCOUNTING

The Volkswagen Group is a lessee, mainly as a result of leasing office equipment, real estate and other means of production. The leases are negotiated individually and include a large number of contract terms and conditions. The following amounts for right-of-use assets resulting from leases are included in the balance sheet items:

PRESENTATION OF AND CHANGES IN RIGHT-OF-USE ASSETS FROM LEASES FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31, 2022

€ million	Right of use on land, land rights and buildings incl. buildings on third party land	Right of use on technical equipment and machinery	Right of use on other equipment, operational and office equipment	Total
Cost				
Balance at Jan. 1, 2022	**7,962**	**63**	**816**	**8,841**
Foreign exchange differences	–8	0	–3	–12
Changes in consolidated group	51	–	1	52
Additions	1,477	7	174	1,657
Transfers	–32	–	–1	–32
Classified as held for sale	7	–	–	7
Disposals	685	7	75	768
Balance at Dec. 31, 2022	**8,758**	**62**	**911**	**9,731**
Depreciation and impairment				
Balance at Jan. 1, 2022	**2,332**	**34**	**289**	**2,656**
Foreign exchange differences	–10	0	–2	–12
Changes in consolidated group	–1	–	0	–1
Additions to cumulative depreciation	1,000	7	179	1,185
Additions to cumulative impairment losses	6	–	0	6
Transfers	–3	–	0	–3
Classified as held for sale	5	–	–	5
Disposals	362	7	72	440
Reversal of impairment losses	15	–	–	15
Balance at Dec. 31, 2022	**2,942**	**34**	**394**	**3,370**
Carrying amount at Dec. 31, 2022	**5,816**	**28**	**517**	**6,361**

PRESENTATION OF AND CHANGES IN RIGHT-OF-USE ASSETS FROM LEASES FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31, 2021

€ million	Right of use on land, land rights and buildings incl. buildings on third party land	Right of use on technical equipment and machinery	Right of use on other equipment, operational and office equipment	Total
Cost				
Balance at Jan. 1, 2021	**7,009**	**56**	**744**	**7,809**
Foreign exchange differences	196	2	6	203
Changes in consolidated group	129	0	10	139
Additions	1,224	10	155	1,390
Transfers	–16	–2	–8	–26
Classified as held for sale	31	–	1	32
Disposals	549	3	89	641
Balance at Dec. 31, 2021	**7,962**	**63**	**816**	**8,841**
Depreciation and impairment				
Balance at Jan. 1, 2021	**1,608**	**28**	**204**	**1,840**
Foreign exchange differences	49	2	3	54
Changes in consolidated group	7	0	–3	4
Additions to cumulative depreciation	945	7	156	1,108
Additions to cumulative impairment losses	9	–	1	10
Transfers	–6	0	–1	–7
Classified as held for sale	12	–	1	13
Disposals	255	3	70	328
Reversal of impairment losses	13	–	–	13
Balance at Dec. 31, 2021[1]	**2,332**	**34**	**289**	**2,656**
Carrying amount at Dec. 31, 2021[1]	**5,630**	**29**	**527**	**6,185**

1 Prior-year figures adjusted.

Subleases of right-of-use assets generated income of €17 million (previous year: €19 million) in the fiscal year.

The measurement of right-of-use assets from leases and the associated lease liabilities is based on a best estimate regarding the exercise of extension and termination options. If there are material changes in circumstances or in the contract, this estimate is updated.

The tables below show how the lease liabilities are assigned in the balance sheet and give an overview of their contractual maturities:

ASSIGNMENT OF LEASE LIABILITIES TO THE RESPECTIVE BALANCE SHEET ITEMS

€ million	Dec. 31, 2022	Dec. 31, 2021
Financial liabilities – Noncurrent	5,283	5,137
Financial liabilities – Current	1,102	1,108
Lease liabilities – Total	**6,385**	**6,245**

MATURITY ANALYSIS OF UNDISCOUNTED LEASE LIABILITIES

	REMAINING CONTRACTUAL MATURITIES			
€ million	under one year	within one to five years	over five years	Total
Lease liabilities at Dec. 31, 2022	1,290	3,544	2,813	**7,647**
Lease liabilities at Dec. 31, 2021	1,266	3,312	2,803	**7,381**

Interest expenses of €168 million (previous year: €177 million) were incurred for lease liabilities in the fiscal year.

No right-of-use assets are recognized for low-value or short-term leases. Expenses for leasing low-value assets totaled €265 million (previous year: €233 million) in the fiscal year. This figure does not include any expenses for short-term leases, which totaled €234 million (previous year: €276 million) in the fiscal year. Variable lease expenses not included in the measurement of lease liabilities accounted for €19 million (previous year: €6 million) in the fiscal year.

Leases gave rise to cash outflows totaling €1,832 million (previous year: €1,952 million) in the fiscal year.

The table below shows a summary of potential future cash outflows, that have not been included in the measurement of the lease liabilities:

€ million	2022	2021
Future cash outflows to which the lessee is potentially exposed		
Variable lease payments	44	0
Extension options	3,513	3,594
Termination options	3	2
Obligations under leases not yet commenced	249	270
	3,809	**3,867**

No material cash outflows attributable to residual value guarantees are expected.

2. LESSOR ACCOUNTING

The Volkswagen Group is a lessor in both the finance lease business and the operating lease business. The subject of these transactions is primarily motor vehicles and, to a small extent, land and buildings and items of equipment for dealerships.

The Volkswagen Group fully accounts for the default risk on lease receivables by recognizing loss allowances, which are recognized in accordance with the requirements of IFRS 9. As lessor, the Volkswagen Group covers risks arising from the assets underlying the leases by, among other measures, taking account of residual value guarantees received for parts of the lease portfolio and by taking account of forward-looking residual values forecast on the basis of internal and external information as part of residual value management. The forecast residual values are regularly reviewed.

2.1 OPERATING LEASES

Assets leased under long-term operating leases amounted to €59,990 million at the end of the fiscal year (previous year: €60,313 million). While €610 million (previous year: €615 million) is attributable to investment property, assets separately reported as lease assets in the balance sheet amount to €59,380 million (previous year: €59,699 million). They relate primarily to vehicles in an amount of €59,263 million (previous year: €59,622 million) as well as land, land rights and buildings, including buildings on third-party land, in an amount of €109 million (previous year: €68 million). The remaining assets relate to technical equipment and machinery as well as other equipment, operating and office equipment. More information on changes in value of investment property and lease assets can be found in the section entitled “Lease assets and investment property”.

The following cash inflows from expected outstanding, non-discounted operating lease payments are expected over the coming years:

DISCLOSURE AS OF DECEMBER 31, 2022

€ million	2023	2024	2025	2026	2027	from 2028	Total
Lease payments	8,615	5,851	3,441	1,368	464	262	**20,001**

DISCLOSURE AS OF DECEMBER 31, 2021

€ million	2022	2023	2024	2025	2026	from 2027	Total
Lease payments	8,840	6,198	3,761	1,243	398	329	**20,769**

BREAKDOWN OF INCOME FROM OPERATING LEASES

€ million	2022	2021
Lease income	14,600	13,560
Income from variable lease payments	1	5
Total	**14,600**	**13,566**

2.2 FINANCE LEASES

Interest income from the net investment in the leases amounted to €2.6 billion (previous year: €2.3 billion) in the fiscal year. Furthermore, a selling profit from the finance leases in the amount of €1.2 billion (previous year: €1.1 billion) was recognized.

The following table shows the reconciliation of outstanding lease payments under finance leases to the net investment:

€ million	Dec. 31, 2022	Dec. 31, 2021
Non-discounted lease payments	**57,501**	**54,985**
Non-guaranteed residual value	3,466	3,393
Unearned interest income	–4,497	–3,710
Loss allowance on lease receivables	–1,611	–1,207
Net investment	**54,858**	**53,462**

The following cash inflows from expected outstanding, non-discounted finance lease payments are expected over the coming years:

DISCLOSURE AS OF DECEMBER 31, 2022

€ million	2023	2024	2025	2026	2027	from 2028	Total
Lease payments	21,172	15,055	12,381	7,588	848	457	**57,501**

DISCLOSURE AS OF DECEMBER 31, 2021

€ million	2022	2023	2024	2025	2026	from 2027	Total
Lease payments	20,220	15,512	11,802	6,273	725	454	**54,985**

34. IFRS 7 (Financial Instruments)

The table below shows the carrying amounts of financial instruments by measurement category:

CARRYING AMOUNT OF FINANCIAL INSTRUMENTS BY IFRS 9 MEASUREMENT CATEGORY

€ million	Dec. 31, 2022	Dec. 31, 2021
Financial assets at fair value through profit or loss	28,185	22,998
Financial assets at fair value through other comprehensive income (debt instruments)	4,224	4,719
Financial assets at fair value through other comprehensive income (equity instruments)	277	687
Financial assets measured at amortized cost	170,857	157,770
of which classified as held for sale	570	142
Financial liabilities at fair value through profit or loss	2,522	1,737
Financial liabilities measured at amortized cost	247,694	240,268
of which classified as held for sale	132	142

CLASSES OF FINANCIAL INSTRUMENTS

Financial instruments are divided into the following classes at the Volkswagen Group:

> financial instruments measured at fair value;
> financial instruments measured at amortized cost;
> derivative financial instruments within hedge accounting;
> not allocated to any measurement category; and
> credit commitments and financial guarantees (off-balance sheet).

RECONCILIATION OF BALANCE SHEET ITEMS TO CLASSES OF FINANCIAL INSTRUMENTS

The following table shows the reconciliation of the balance sheet items to the relevant classes of financial instruments, broken down by the carrying amount and fair value of the financial instruments.

The fair value of financial instruments measured at amortized cost, such as receivables and liabilities, is calculated by discounting the carrying amount using a market rate of interest for a similar risk and matching maturity. For reasons of materiality, the fair value of current balance sheet items is generally deemed to be their carrying amount.

For reconciliation to the carrying amounts, the “Not allocated to a measurement category” column in the table also includes items other than financial instruments.

The risk variables governing the fair value of the receivables are risk-adjusted interest rates.

“Financial instruments measured at fair value” also include shares in partnerships and corporations.

RECONCILIATION OF BALANCE SHEET ITEMS TO CLASSES OF FINANCIAL INSTRUMENTS AS OF DECEMBER 31, 2022

	MEASURED AT FAIR VALUE	MEASURED AT AMORTIZED COST		DERIVATIVE FINANCIAL INSTRUMENTS WITHIN HEDGE ACCOUNTING	NOT ALLOCATED TO A MEASUREMENT CATEGORY	BALANCE SHEET ITEM AT DEC. 31, 2022
€ million	Carrying amount	Carrying amount	Fair value	Carrying amount	Carrying amount	
Noncurrent assets						
Equity-accounted investments	–	–	–	–	12,668	12,668
Other equity investments	342	–	–	–	3,147	3,489
Financial services receivables	178	51,557	50,721	–	35,209	86,944
Other financial assets	4,735	5,626	5,533	3,471	–	13,832
Tax receivables	–	–	–	–	394	394
Current assets						
Trade receivables	1	18,580	18,580	–	0	18,581
Financial services receivables	24	41,644	41,644	–	19,881	61,549
Other financial assets	2,845	11,051	11,051	1,270	–	15,167
Tax receivables	–	10	10	–	1,721	1,732
Marketable securities and time deposits	24,560	12,646	12,646	–	–	37,206
Cash and cash equivalents	–	29,172	29,172	–	–	29,172
Assets held for sale	–	570	570	–	163	733
Noncurrent liabilities						
Financial liabilities	–	116,455	112,101	–	5,283	121,737
Other financial liabilities	1,518	2,623	2,502	4,047	–	8,188
Current liabilities						
Financial liabilities	–	82,346	82,346	–	1,102	83,448
Trade payables	–	28,748	28,748	–	–	28,748
Other financial liabilities	1,004	17,386	17,386	1,430	–	19,820
Tax payables	–	17	17	–	709	726
Liabilities associated with assets held for sale	–	132	132	–	26	158

RECONCILIATION OF BALANCE SHEET ITEMS TO CLASSES OF FINANCIAL INSTRUMENTS AS OF DECEMBER 31, 2021

	MEASURED AT FAIR VALUE	MEASURED AT AMORTIZED COST		DERIVATIVE FINANCIAL INSTRUMENTS WITHIN HEDGE ACCOUNTING	NOT ALLOCATED TO A MEASUREMENT CATEGORY	BALANCE SHEET ITEM AT DEC. 31, 2021
€ million	Carrying amount	Carrying amount	Fair value	Carrying amount	Carrying amount	
Noncurrent assets						
Equity-accounted investments	–	–	–	–	12,531	12,531
Other equity investments	760	–	–	–	2,240	3,000
Financial services receivables	290	50,146	51,326	–	34,519	84,954
Other financial assets	2,830	4,950	5,031	1,377	–	9,156
Tax receivables	–	–	–	–	635	635
Current assets						
Trade receivables	8	15,513	15,513	–	–	15,521
Financial services receivables	26	37,204	37,204	–	19,268	56,498
Other financial assets	1,996	10,046	10,046	543	–	12,584
Tax receivables	–	9	9	–	1,608	1,618
Marketable securities	22,495	37	37	–	–	22,532
Cash, cash equivalents and time deposits	–	39,723	39,723	–	–	39,723
Assets held for sale	–	142	142	–	532	674
Noncurrent liabilities						
Financial liabilities	–	126,481	131,359	–	5,137	131,618
Other financial liabilities	728	2,419	2,437	1,320	–	4,466
Current liabilities						
Financial liabilities	–	77,476	77,476	–	1,108	78,584
Trade payables	–	23,624	23,624	–	–	23,624
Other financial liabilities	1,009	10,112	10,112	1,880	–	13,002
Tax payables	–	27	27	–	588	614
Liabilities associated with assets held for sale	–	142	142	–	96	238

The category headed “not allocated to a measurement category” is used in particular for shares in equity-accounted investments, shares in non-consolidated affiliated companies as well as for lease receivables.

The carrying amount of lease receivables was €55.1 billion (previous year: €53.8 billion) and their fair value was €54.1 billion (previous year: €54.8 billion).

Due to increasing investments in long-term time deposits (maturities of more than 3 months), these time deposits are reported together with securities in the current fiscal year.

Uniform valuation techniques and inputs are used to measure fair value. The fair value of Level 2 and 3 financial instruments is measured in the individual divisions on the basis of Group-wide specifications. The measurement techniques used are explained in the section entitled “Accounting policies”. The fair value of Level 3 receivables was measured by reference to individual expectations of losses; these are based to a significant extent on the Company’s assumptions about counterparty credit quality. The inputs used are not observable in an active market.

The following tables contain an overview of the financial assets and liabilities measured at fair value by level:

FINANCIAL ASSETS AND LIABILITIES MEASURED AT FAIR VALUE BY LEVEL

€ million	Dec. 31, 2022	Level 1	Level 2	Level 3
Noncurrent assets				
Other equity investments	342	91	0	251
Financial services receivables	178	–	–	178
Other financial assets	4,735	–	2,571	2,165
Current assets				
Trade receivables	1	–	–	1
Financial services receivables	24	–	–	24
Other financial assets	2,845	–	2,283	562
Marketable securities and time deposits	24,560	24,487	73	–
Noncurrent liabilities				
Other financial liabilities	1,518	–	1,439	79
Current liabilities				
Other financial liabilities	1,004	–	982	23

€ million	Dec. 31, 2021	Level 1	Level 2	Level 3
Noncurrent assets				
Other equity investments	760	579	0	181
Financial services receivables	290	–	–	290
Other financial assets	2,830	–	1,477	1,353
Current assets				
Trade receivables	8	–	–	8
Financial services receivables	26	–	–	26
Other financial assets	1,996	–	1,733	263
Marketable securities	22,495	22,406	89	–
Noncurrent liabilities				
Other financial liabilities	728	–	529	199
Current liabilities				
Other financial liabilities	1,009	–	905	104

FAIR VALUE OF FINANCIAL ASSETS AND LIABILITIES MEASURED AT AMORTIZED COST BY LEVEL

€ million	Dec. 31, 2022	Level 1	Level 2	Level 3
Fair value of financial assets measured at amortized cost				
Financial services receivables	92,366	–	–	92,366
Trade receivables	18,580	–	18,580	–
Other financial assets	16,584	615	5,389	10,580
Tax receivables	10	–	10	–
Marketable securities and time deposits	12,646	84	12,562	–
Cash and cash equivalents	29,172	29,172	–	–
Assets held for sale	570	557	13	–
Fair value of financial assets measured at amortized cost	**169,927**	**30,428**	**36,554**	**102,945**
Fair value of financial liabilities measured at amortized cost				
Trade payables	28,748	–	28,748	–
Financial liabilities	194,447	47,343	145,444	1,660
Other financial liabilities	19,888	592	18,854	442
Tax payables	17	–	17	–
Liabilities associated with assets held for sale	132	132	–	–
Fair value of financial liabilities measured at amortized cost	**243,231**	**48,067**	**193,062**	**2,102**

€ million	Dec. 31, 2021	Level 1	Level 2	Level 3
Fair value of financial assets measured at amortized cost				
Financial services receivables	88,530	–	–	88,530
Trade receivables	15,513	–	15,513	–
Other financial assets	15,077	996	5,126	8,955
Tax receivables	9	–	9	–
Marketable securities	37	37	–	–
Cash, cash equivalents and time deposits	39,723	39,043	680	–
Assets held for sale	142	85	57	–
Fair value of financial assets measured at amortized cost	**159,032**	**40,162**	**21,385**	**97,485**
Fair value of financial liabilities measured at amortized cost				
Trade payables	23,624	–	23,624	–
Financial liabilities	208,835	51,759	155,499	1,577
Other financial liabilities	12,549	858	11,375	316
Tax payables	27	–	27	–
Liabilities associated with assets held for sale	142	–	142	–
Fair value of financial liabilities measured at amortized cost	**245,177**	**52,617**	**190,666**	**1,893**

DERIVATIVE FINANCIAL INSTRUMENTS WITHIN HEDGE ACCOUNTING BY LEVEL

€ million	Dec. 31, 2022	Level 1	Level 2	Level 3
Noncurrent assets				
Other financial assets	3,471	–	3,471	–
Current assets				
Other financial assets	1,270	–	1,270	–
Noncurrent liabilities				
Other financial liabilities	4,047	–	4,047	–
Current liabilities				
Other financial liabilities	1,430	–	1,430	–

€ million	Dec. 31, 2021	Level 1	Level 2	Level 3
Noncurrent assets				
Other financial assets	1,377	–	1,377	–
Current assets				
Other financial assets	543	–	543	–
Noncurrent liabilities				
Other financial liabilities	1,320	–	1,320	–
Current liabilities				
Other financial liabilities	1,880	–	1,880	–

The allocation of fair values to the three levels in the fair value hierarchy is based on the availability of observable market prices. Level 1 is used to report the fair value of financial instruments for which a price is directly available in an active market. Examples include marketable securities and other equity investments measured at fair value that are listed and traded on a public market. Fair values in Level 2, for example of derivatives, are measured on the basis of market inputs using market-based valuation techniques. In particular, the inputs used include exchange rates, yield curves and commodity prices that are observable in the relevant markets and obtained through pricing services. Fair Values in Level 3 are calculated using valuation techniques that incorporate inputs that are not directly observable in active markets. In the Volkswagen Group, long-term commodity futures are allocated to Level 3 because the prices available on the market must be extrapolated for measurement purposes. This is done on the basis of observable inputs obtained for the different commodities through pricing services. Options on equity instruments, residual value protection models, customer financing receivables and receivables from vehicle financing programs and other equity investments are also reported in Level 3. Equity instruments are measured primarily using the relevant business plans and entity-specific discount rates. The significant inputs used to measure fair value for the residual value protection models include forecasts and estimates of used vehicle residual values for the appropriate models. The measurement of vehicle financing programs requires in particular the use of the corresponding vehicle price.

The table below provides a summary of changes in level 3 balance sheet items measured at fair value:

CHANGES IN BALANCE SHEET ITEMS MEASURED AT FAIR VALUE BASED ON LEVEL 3

€ million	Financial assets measured at fair value	Financial liabilities measured at fair value
Balance at Jan. 1, 2022	**2,119**	**303**
Foreign exchange differences	53	–6
Changes in consolidated Group	0	–
Total comprehensive income	2,027	–127
recognized in profit loss	1,999	–127
recognized in other comprehensive income	28	–
Additions (purchases)	167	–
Sales and settlements	–601	–46
Transfers into Level 1	0	–
Transfers into Level 2	–584	–22
Balance at Dec. 31, 2022	**3,181**	**102**
Total gains or losses recognized in profit or loss	**1,999**	**127**
Other operating result	1,962	127
of which attributable to assets/liabilities held at the reporting date	1,322	31
Financial result	36	–
of which attributable to assets/liabilities held at the reporting date	12	–

€ million	Financial assets measured at fair value	Financial liabilities measured at fair value
Balance at Jan. 1, 2021	**1,383**	**908**
Foreign exchange differences	48	12
Changes in consolidated Group	–297	–
Total comprehensive income	1,114	–367
recognized in profit loss	802	–268
recognized in other comprehensive income	312	–99
Additions (purchases)	616	–
Sales and settlements	–157	–227
Transfers into Level 1	–333	–
Transfers into Level 2	–255	–23
Balance at Dec. 31, 2021	**2,119**	**303**
Total gains or losses recognized in profit or loss	**802**	**268**
Other operating result	753	268
of which attributable to assets/liabilities held at the reporting date	296	290
Financial result	49	–
of which attributable to assets/liabilities held at the reporting date	–6	–

The transfers between the levels of the fair value hierarchy are reported at the respective reporting dates. The transfers out of Level 3 into Level 2 comprise commodity futures for which observable quoted prices are now available for measurement purposes due to the decline in their remaining maturities; consequently, no further extrapolation is required.

Commodity prices are the key risk variable for the fair value of commodity futures. Sensitivity analyses are used to present the effect of changes in commodity prices on earnings after tax and equity.

If commodity prices for commodity futures classified as Level 3 had been 10% higher (lower) as of December 31, 2022, earnings after tax would have been €291 million (previous year: €237 million) higher (lower). The equity is not affected.

The key risk variable for measuring options on equity instruments held by the Company is the relevant enterprise value. Sensitivity analyses are used to present the effect of changes in risk variables on earnings after tax.

If the assumed enterprise values at December 31, 2022 had been 10% higher, earnings after tax would have been €8 million (previous year: €6 million) higher. If the assumed enterprise values as of December 31, 2022 had been 10% lower, earnings after tax would have been €8 million (previous year: €6 million) lower.

Residual value risks result from hedging agreements with dealerships under which earnings effects caused by market-related fluctuations in residual values that arise from buy-back obligations under leases are borne in part by the Volkswagen Group.

The key risk variable influencing the fair value of the options relating to residual value risks is used car prices. Sensitivity analyses are used to quantify the effects of changes in used car prices on earnings after tax.

If the prices of the used cars covered by the residual value protection model had been 10% higher as of December 31, 2022, earnings after tax would have been €470 million (previous year: €416 million) higher. If the prices of the used cars covered by the residual value protection model had been 10% lower as of December 31, 2022, earnings after tax would have been €504 million (previous year: €468 million) lower.

If the risk-adjusted interest rates applied to receivables measured at fair value had been 100 basis points higher as of December 31, 2022, earnings after tax would have been €7 million (previous year: €3 million) lower. If the risk-adjusted interest rates as of December 31, 2022 had been 100 basis points lower, earnings after tax would have been €4 million (previous year: €3 million) higher.

If the corresponding vehicle price used in the vehicle financing programs had been 10% higher as of December 31, 2022, earnings after tax would have been €6 million (previous year: €8 million) higher. If the corresponding vehicle prices used in the vehicle financing programs had been 10% lower as of December 31, 2022, earnings after tax would have been €6 million (previous year: €8 million) lower.

If the result of operations of equity investments measured at fair value had been 10% better as of December 31, 2022, equity would have been €8.5 million (previous year: €6.2 million) higher, and earnings after tax would have been €5.0 million (previous year: €8.7 million) higher. If the result of operations of equity investments measured at fair value had been 10% worse, equity would have been €8.5 million (previous year: €6.2 million) lower, and earnings after tax would have been €5.0 million (previous year: €8.7 million) lower.

OFFSETTING OF FINANCIAL ASSETS AND LIABILITIES

The following tables contain information about the effects of offsetting in the balance sheet and the potential financial effects of offsetting in the case of instruments that are subject to a legally enforceable master netting arrangement or a similar agreement.

				AMOUNTS THAT ARE NOT SET OFF IN THE BALANCE SHEET		
€ million	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off in the balance sheet	Net amounts of financial assets presented in the balance sheet	Financial instruments	Collateral received	Net amount at Dec. 31, 2022
Derivatives	11,497	–36	11,461	–4,523	–37	6,901
Financial services receivables	149,090	–597	148,493	–	–81	148,412
Trade receivables	18,620	–39	18,581	0	–	18,581
Marketable securities and time deposits	37,206	–	37,206	–	–	37,206
Cash and cash equivalents	29,172	–	29,172	–	–	29,172
Other financial assets	18,018	–127	17,890	0	–	17,890

				AMOUNTS THAT ARE NOT SET OFF IN THE BALANCE SHEET		
€ million	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off in the balance sheet	Net amounts of financial assets presented in the balance sheet	Financial instruments	Collateral received	Net amount at Dec. 31, 2021
Derivatives	5,408	–89	5,319	–3,195	–7	2,117
Financial services receivables	142,057	–605	141,452	–	–102	141,350
Trade receivables	15,552	–31	15,521	0	–	15,521
Marketable securities	22,532	–	22,532	–	–	22,532
Cash, cash equivalents and time deposits	39,723	–	39,723	–	–	39,723
Other financial assets	17,191	–	17,191	0	–	17,191

Other financial assets include receivables from tax allocations of €10 million (previous year: €9 million).

€ million	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off in the balance sheet	Net amounts of financial liabilities presented in the balance sheet	AMOUNTS THAT ARE NOT SET OFF IN THE BALANCE SHEET		Net amount at Dec. 31, 2022
				Financial instruments	Collateral pledged	
Derivatives	8,009	−163	7,846	−4,523	–	3,323
Financial liabilities	205,185	–	205,185	–	−3,225	201,960
Trade payables	28,787	−39	28,748	0	–	28,748
Other financial liabilities	20,777	−597	20,179	–	–	20,179

€ million	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off in the balance sheet	Net amounts of financial liabilities presented in the balance sheet	AMOUNTS THAT ARE NOT SET OFF IN THE BALANCE SHEET		Net amount at Dec. 31, 2021
				Financial instruments	Collateral pledged	
Derivatives	4,425	−3	4,422	−3,195	−19	1,208
Financial liabilities	210,202	–	210,202	–	−1,756	208,446
Trade payables	23,654	−31	23,623	0	–	23,623
Other financial liabilities	13,765	−692	13,073	–	–	13,073

The “Financial instruments” column shows the amounts that are subject to a master netting arrangement but were not set off because they do not meet the criteria for offsetting in the balance sheet. The “Collateral received” and “Collateral pledged” columns show the amounts of cash collateral and collateral in the form of financial instruments received and pledged for the total assets and liabilities that do not meet the criteria for offsetting in the balance sheet.

Other financial liabilities include liabilities from tax allocations of €17 million (previous year: €27 million).

ASSET-BACKED SECURITIES TRANSACTIONS

Asset-backed securities transactions with financial assets amounting to €28.0 billion (previous year: €33.0 billion) entered into to refinance the financial services business are included in bonds, commercial paper and notes, and liabilities from loans. The corresponding carrying amount of the receivables from the customer and dealer financing and the finance lease business amounted to €34.6 billion (previous year: €38.2 billion). Collateral of €53.1 billion (previous year: €55.8 billion) in total was furnished as part of asset-backed securities transactions. The expected payments were assigned to structured entities and the equitable liens in the financed vehicles were transferred. These asset-backed securities transactions did not result in the receivables from financial services business being derecognized, as the Group retains nonpayment and late payment risks. The difference between the assigned receivables and the related liabilities is the result of different terms and conditions and the share of the securitized paper and notes held by the Volkswagen Group itself.

Most of the public and private asset-backed securities transactions of the Volkswagen Group can be repaid in advance (clean-up call) if less than 10% of the original transaction volume is outstanding. The assigned receivables cannot be assigned again or pledged elsewhere as collateral. The claims of the holders of commercial paper and notes are limited to the assigned receivables and the receipts from those receivables are earmarked for the repayment of the corresponding liability.

As of December 31, 2022, the fair value of the assigned receivables still recognized in the balance sheet was €32.8 billion (previous year: €38.5 billion). The fair value of the related liabilities was €27.5 billion (previous year: €32.6 billion) at that reporting date.

The Volkswagen Bank GmbH Group is contractually obliged, under certain conditions, to transfer funds to the structured entities that are included in its financial statements. Since the receivables are transferred to the special purpose entity by way of undisclosed assignment, the situation may occur in which the receivable has already been reduced in a legally binding manner at the originator, for example if the obligor effectively offsets it against receivables owed to it by a company belonging to the Volkswagen Group. In this case, collateral must be furnished for the resulting compensation claims against the special purpose entity, for example if the rating of the Group company concerned declines to a contractually agreed reference value.

ADDITIONAL INCOME STATEMENT DISCLOSURES IN ACCORDANCE WITH IFRS 7 (FINANCIAL INSTRUMENTS)

The table below shows net gains and losses on financial assets and financial liabilities by measurement category, followed by a detailed explanation of key aspects:

NET GAINS OR LOSSES FROM FINANCIAL INSTRUMENTS BY IFRS 9 MEASUREMENT CATEGORY

€ million	2022	2021
Financial instruments at fair value through profit or loss	3,024	3,097
Financial assets measured at amortized cost	5,771	5,889
Financial assets at fair value through other comprehensive income (debt instruments)	10	1
Financial liabilities measured at amortized cost	–4,885	–3,247
	3,919	**5,740**

Net gains and losses in the category "financial instruments at fair value through profit or loss" are mainly composed of the fair value measurement gains and losses on derivatives, including interest and gains and losses on currency translation.

Net gains and losses from financial assets measured at fair value through other comprehensive income (debt instruments) relate to interest income from fixed-income securities.

Net gains and losses from financial assets and liabilities measured at amortized cost mainly comprise interest income and expenses calculated according to the effective interest method pursuant to IFRS 9, currency translation effects, and the recognition of loss allowances. Interest also includes interest income and expenses from the lending business of the Financial Services Division.

The table below presents total interest income and expenses from financial assets and liabilities measured at amortized cost, separately from financial assets measured at fair value through other comprehensive income:

TOTAL INTEREST INCOME AND EXPENSES ATTRIBUTABLE TO FINANCIAL INSTRUMENTS NOT MEASURED AT FAIR VALUE THROUGH PROFIT OR LOSS

€ million	2022	2021
Financial assets and liabilities measured at amortized cost		
Interest income	8,199	7,099
Interest expenses	4,705	3,540
Financial assets (debt instruments) and liabilities measured at fair value through other comprehensive income		
Interest income	12	5
Interest expenses	0	0

GAINS AND LOSSES ON THE DISPOSAL OF FINANCIAL ASSETS MEASURED AT AMORTIZED COST

€ million	2022	2021
Gains arising from the derecognition of financial assets measured at amortized cost	1,189	583
Losses arising from the derecognition of financial assets measured at amortized cost	–1,006	–1,003
	182	**–420**

In the fiscal year, €2 million (previous year: €1 million) was recognized as an expense and €23 million (previous year: €27 million) as income from fees and commissions for trust activities and from financial assets and liabilities not measured at fair value that are not accounted for using the effective interest method.

35. Cash flow statement

Cash flows are presented in the cash flow statement classified into cash flows from operating activities, investing activities and financing activities, irrespective of the balance sheet classification.

Cash flows from operating activities are derived indirectly from earnings before tax. Earnings before tax are adjusted to eliminate noncash expenditures (mainly depreciation, amortization and impairment losses) and income. Other noncash income and expense results mainly from measurement effects in connection with financial instruments and to fair value changes relating to hedging transactions. This results in cash flows from operating activities after accounting for changes in working capital, which also include changes in lease assets and in financial services receivables.

Investing activities include additions to property, plant and equipment and equity investments, additions to capitalized development costs, and investments in securities and time deposits as well as loans.

Financing activities include outflows of funds from dividend payments and the redemption of bonds, inflows from capital increases and the issuance of bonds, and changes in other financial liabilities. Please refer to the "Equity" section for information on the in-/outflows from the issuance/repayment of hybrid capital contained in the capital contributions.

The changes in balance sheet items that are presented in the cash flow statement cannot be derived directly from the balance sheet, as the effects of currency translation and changes in the consolidated Group are noncash transactions and are therefore eliminated.

In the fiscal year, cash flows from operating activities include interest received amounting to €8,504 million (previous year: €7,188 million) and interest paid amounting to €3,274 million (previous year: €2,471 million). Cash flows from operating activities also include dividend payments (net of withholding tax) received from joint ventures and associates of €2,781 million (previous year: €2,960 million).

Dividends amounting to €3,772 million (previous year: €2,419 million) were paid to Volkswagen AG shareholders.

€ million	Dec. 31, 2022	Dec. 31, 2021
Cash and cash equivalents as reported in the balance sheet	29,172	39,723
Cash and cash equivalents held for sale	566	85
Time deposits[1]	–	–686
Cash and cash equivalents as reported in the cash flow statement	**29,738**	**39,123**

1 In the current fiscal year, time deposits with maturities of more than three months are presented in the securities and time deposits item in the balance sheet.

Time deposits with contractual maturities of more than three months are not classified as cash equivalents. The maximum default risk corresponds to its carrying amount.

The following table shows the classification of changes in financial liabilities into cash and non-cash transactions:

€ million	Jan. 1, 2022	Cash-effective changes	NON - CASH CHANGES Foreign exchange differences	Changes in consolidated Group	Classified as held for sale	Other changes	Dec. 31, 2022
Bonds	98,038	–1,762	–265	–	–	–2,892	93,119
Other total third-party borrowings	105,929	–4,210	174	842	–10	3,082	105,808
Finance lease liabilities[1]	6,245	–1,248	14	50	–2	1,325	6,385
Total third-party borrowings	**210,213**	**–7,220**	**–78**	**892**	**–11**	**1,516**	**205,312**
Other financial assets and liabilities	–21	–156	19	0	–	97	–61
Financial assets and liabilities in financing activities	**210,192**	**–7,376**	**–59**	**892**	**–11**	**1,613**	**205,250**

1 Other changes in lease liabilities largely contain non-cash additions of lease liabilities.

€ million	Jan. 1, 2021	Cash-effective changes	NON - CASH CHANGES Foreign exchange differences	Changes in consolidated Group	Classified as held for sale	Other changes	Dec. 31, 2021
Bonds	92,626	2,102	1,239	1,942	–	129	98,038
Other total third-party borrowings	104,707	–3,954	3,074	1,784	–11	306	105,929
Finance lease liabilities[1]	6,124	–1,246	162	132	13	1,087	6,245
Total third-party borrowings	**203,457**	**–3,097**	**4,475**	**3,859**	**2**	**1,522**	**210,213**
Other financial assets and liabilities	21	26	0	–	–	–69	–21
Financial assets and liabilities in financing activities	**203,478**	**–3,071**	**4,476**	**3,859**	**2**	**1,453**	**210,192**

1 Other changes in lease liabilities largely contain non-cash additions of lease liabilities.

36. Financial risk management and financial instruments

1. HEDGING GUIDELINES AND FINANCIAL RISK MANAGEMENT PRINCIPLES

The principles and responsibilities for managing and controlling the risks that could arise from financial instruments are defined by the Board of Management and monitored by the Supervisory Board. General rules apply to the Group-wide risk policy; these are oriented on the statutory requirements and the "Minimum Requirements for Risk Management by Credit Institutions".

Group Treasury is responsible for operational risk management and the control of risks from financial instruments. The Group Board of Management Committee for Risk Management is regularly informed about current financial risks. In addition, the Group Board of Management and the Supervisory Board are regularly updated on the current risk situation. The MAN Energy Solutions, Porsche AG, Porsche Holding Salzburg and TRATON GROUP subgroups and the Financial Services Division are in part included in Group Treasury's operational risk management and control for risks relating to financial instruments and also have their own risk management structures.

For more information, see the section on financial risks in the Report on Risks and Opportunities of the group management report.

2. CREDIT AND DEFAULT RISK

The credit and default risk arising from financial assets involves the risk of default by counterparties, and therefore comprises at a maximum the amount of the claims under carrying amounts receivable from them and the irrevocable credit commitments. The maximum potential credit and default risk is reduced by collateral held and other credit enhancements. Collateral is held predominantly for financial assets in the "at amortized cost" category. It relates primarily to collateral for financial services receivables and trade receivables. Collateral comprises vehicles and assets transferred as security, as well as guarantees and real property liens. Cash collateral is also used in hedging transactions.

For level 3 and level 4 financial assets with objective indications of impairment as of the reporting date, the collateral provided led to a reduction in risk by €1.1 billion (previous year: €1.1 billion). Collateral of €187 million (previous year: €203 million) has been accepted for assets measured at fair value through profit or loss.

Significant cash and capital investments, as well as derivatives, are only entered into with national and international banks. Credit and default risk is limited by a limit system based primarily on the equity base of the counterparties concerned and on credit assessments by international rating agencies. Financial guarantees issued also give rise to credit and default risk. The maximum default risk is determined by the guarantee amount. The corresponding amounts are presented in the Liquidity risk section.

There were no material concentrations of risk at individual counterparties or counterparty groups in the fiscal year due to the global allocation of the Group's business activities and the resulting diversification. There was a slight change in the concentration of credit and default risk exposures to the German public banking sector as a whole that has arisen from Group-wide cash and capital investments as well as derivatives: the portion attributable to this sector was 6.0% at the end of 2022 compared with 6.9% at the end of 2021. Any existing concentration of risk is assessed and monitored both at the level of individual counterparties or counterparty groups and with regard to the countries in which these are based, in each case using the share of all credit and default risk exposures accounted for by the risk exposure concerned. This analysis excludes the items of Chinese companies in which Volkswagen holds an interest of 50% or less.

For China, credit and default risk exposures accounted for 14.0% at the end of 2022, as against 17.0% at the end of 2021. There were no other material concentrations of credit and default risk exposures in individual countries.

LOSS ALLOWANCE

The Volkswagen Group consistently uses the expected credit loss model of IFRS 9 for all financial assets and other risk exposures.

The expected credit loss model under IFRS 9 takes in both loss allowances for financial assets for which there are no objective indications of impairment and loss allowances for financial assets that are already impaired. For the calculation of impairment losses, IFRS 9 distinguishes between the general approach and the simplified approach.

Under the general approach, financial assets are allocated to one of three stages, plus an additional stage for financial assets that are already impaired when acquired (stage 4). Stage 1 comprises financial assets that are recognized for the first time or for which the probability of default has not increased significantly. The expected credit losses for the next twelve months are calculated at this stage. Stage 2 comprises financial assets with a significantly increased probability of default, while financial assets with objective indications of default are allocated to stage 3. The lifetime expected credit losses are calculated at these stages. Stage 4 financial assets, which are already impaired when acquired, are subsequently measured by recognizing a loss allowance on the basis of the accumulated lifetime expected losses. Financial assets classified as impaired on acquisition remain in this category until they are derecognized.

The Volkswagen Group applies the simplified approach to trade receivables and contract assets with a significant financing component in accordance with IFRS 15. The same applies to receivables under operating or finance leases accounted for under IFRS 16. Under the simplified approach, the expected losses are consistently determined for the entire life of the asset.

The tables below show the reconciliation of the loss allowance for various financial assets and financial guarantees and credit commitments:

CHANGES IN GROSS CARRYING AMOUNTS OF FINANCIAL ASSETS MEASURED AT AMORTIZED COST

€ million	Stage 1	Stage 2	Stage 3	Simplified approach	Stage 4	Total
Carrying amount at Jan. 1, 2022	**115,250**	**23,918**	**1,978**	**19,627**	**404**	**161,177**
Foreign exchange differences	454	268	49	38	3	811
Changes in consolidated group	203	4	15	206	–	428
Changes	24,877	–13,174	–634	925	–38	11,956
Modifications	2	0	0	0	–1	0
Transfers to						
Stage 1	3,163	–3,116	–47	–	–	0
Stage 2	–4,707	4,794	–87	–	–	0
Stage 3	–532	–264	796	–	–	0
Classified as held for sale	–742	–7	–6	–2	–	–757
Carrying amount at Dec. 31, 2022	**137,968**	**12,423**	**2,063**	**20,794**	**368**	**173,615**

CHANGES IN LOSS ALLOWANCE FOR FINANCIAL ASSETS MEASURED AT AMORTIZED COST

€ million	Stage 1	Stage 2	Stage 3	Simplified approach	Stage 4	Total
Carrying amount at Jan. 1, 2022	**828**	**675**	**1,212**	**492**	**49**	**3,257**
Foreign exchange differences	10	17	35	8	2	71
Changes in consolidated group	10	–	–	–17	–	–7
Newly extended/purchased financial assets (additions)	557	–	–	226	10	793
Other changes within a stage	53	41	90	6	–27	162
Transfers to						
Stage 1	37	–109	–34	–	–	–106
Stage 2	–89	296	–51	–	–	156
Stage 3	–138	–53	458	–	–	267
Financial instruments derecognized during the period (disposals)	–230	–131	–205	–152	–5	–723
Utilization	–	–	–373	–47	–11	–431
Changes to models or risk parameters	23	11	8	4	9	54
Classified as held for sale	–156	–7	–5	0	–	–168
Carrying amount at Dec. 31, 2022	**905**	**740**	**1,134**	**519**	**26**	**3,325**

CHANGES IN GROSS CARRYING AMOUNTS OF FINANCIAL ASSETS MEASURED AT AMORTIZED COST

€ million	Stage 1	Stage 2	Stage 3	Simplified approach	Stage 4	Total
Carrying amount at Jan. 1, 2021	**113,665**	**22,253**	**1,600**	**16,935**	**458**	**154,912**
Foreign exchange differences	3,685	359	28	342	1	4,415
Changes in consolidated group	1,302	7	0	1,313	10	2,631
Changes	1,347	758	–1,041	–1,657	–64	–657
Modifications	–3,155	1	369	2,788	0	2
Transfers to						
Stage 1	3,365	–3,348	–17	–	–	0
Stage 2	–4,461	4,528	–67	–	–	0
Stage 3	–467	–638	1,105	–	–	0
Classified as held for sale	–31	–	–	–95	–	–126
Carrying amount at Dec. 31, 2021	**115,250**	**23,918**	**1,978**	**19,627**	**404**	**161,177**

CHANGES IN LOSS ALLOWANCE FOR FINANCIAL ASSETS MEASURED AT AMORTIZED COST

€ million	Stage 1	Stage 2	Stage 3	Simplified approach	Stage 4	Total
Carrying amount at Jan. 1, 2021	**929**	**786**	**825**	**814**	**87**	**3,440**
Foreign exchange differences	22	19	20	4	0	66
Changes in consolidated group	1	–	0	0	–	0
Newly extended/purchased financial assets (additions)	425	–	–	183	0	608
Other changes within a stage	–107	–34	488	–311	–13	23
Transfers to						
Stage 1	22	–100	–7	–	–	–85
Stage 2	–102	250	–20	–	–	128
Stage 3	–139	–69	476	–	–	268
Financial instruments derecognized during the period (disposals)	–201	–176	–267	–178	–18	–840
Utilization	–	–	–280	–18	–9	–306
Changes to models or risk parameters	–21	–1	–23	0	2	–43
Classified as held for sale	0	–	–	–1	–	–1
Carrying amount at Dec. 31, 2021	**828**	**675**	**1,212**	**492**	**49**	**3,257**

CHANGES IN DEFAULT RISK POSITIONS OF FINANCIAL GUARANTEES AND CREDIT COMMITMENTS

€ million	Stage 1	Stage 2	Stage 3	Stage 4	Total
Carrying amount at Jan. 1, 2022	**12,032**	**3,858**	**312**	**228**	**16,430**
Foreign exchange differences	–54	–54	0	1	–107
Changes in consolidated group	–108	–	–	–	–108
Changes	–1,862	–314	–3	–7	–2,186
Modifications	–	–	–	–	–
Transfers to					
Stage 1	92	–92	0	–	0
Stage 2	–136	137	–1	–	0
Stage 3	–5	–6	10	–	–
Carrying amount at Dec. 31, 2022	**9,960**	**3,529**	**318**	**222**	**14,029**

CHANGES IN LOSS ALLOWANCE FOR FINANCIAL GUARANTEES AND CREDIT COMMITMENTS

€ million	Stage 1	Stage 2	Stage 3	Stage 4	Total
Carrying amount at Jan. 1, 2022	**43**	**20**	**20**	**7**	**90**
Foreign exchange differences	1	0	0	0	1
Changes in consolidated group	0	–	–	–	0
Newly extended/purchased financial assets (additions)	14	–	–	0	14
Other changes within a stage	2	0	0	26	28
Transfers to					
Stage 1	0	–2	0	–	–1
Stage 2	–1	1	–	–	1
Stage 3	0	0	3	–	3
Financial instruments derecognized during the period (disposals)	–24	–2	–1	0	–27
Utilization	–	–	0	0	0
Changes to models or risk parameters	–1	0	0	–	–1
Carrying amount at Dec. 31, 2022	**34**	**19**	**23**	**32**	**108**

CHANGES IN DEFAULT RISK POSITIONS OF FINANCIAL GUARANTEES AND CREDIT COMMITMENTS

€ million	Stage 1	Stage 2	Stage 3	Stage 4	Total
Carrying amount at Jan. 1, 2021	**9,016**	**2,648**	**281**	**174**	**12,119**
Foreign exchange differences	75	23	0	0	99
Changes in consolidated group	1,087	1	–	12	1,100
Changes[1]	1,881	1,161	28	42	3,111
Modifications	–	–	–	–	–
Transfers to					
Stage 1	115	–115	0	–	0
Stage 2	–143	143	0	–	0
Stage 3	–1	–3	4	–	0
Carrying amount at Dec. 31, 2021	**12,032**	**3,858**	**312**	**228**	**16,430**

1 Prior-year figures adjusted.

CHANGES IN LOSS ALLOWANCE FOR FINANCIAL GUARANTEES AND CREDIT COMMITMENTS

€ million	Stage 1	Stage 2	Stage 3	Stage 4	Total
Carrying amount at Jan. 1, 2021	**19**	**3**	**0**	**0**	**22**
Foreign exchange differences	0	0	0	0	0
Changes in consolidated group	6	0	–	4	10
Newly extended/purchased financial assets (additions)	65	–	–	0	65
Other changes within a stage	–38	18	19	3	2
Transfers to					
Stage 1	0	0	–	–	0
Stage 2	–1	1	0	–	0
Stage 3	–1	0	2	–	1
Financial instruments derecognized during the period (disposals)	–6	–1	0	0	–8
Utilization	–	–	–1	–1	–2
Changes to models or risk parameters	0	0	0	0	0
Carrying amount at Dec. 31, 2021	**43**	**20**	**20**	**7**	**90**

CHANGES IN GROSS CARRYING AMOUNTS OF LEASE RECEIVABLES AND CONTRACT ASSETS

	SIMPLIFIED APPROACH	
€ million	2022	2021
Carrying amount at Jan. 1	**55,515**	**54,817**
Foreign exchange differences	–889	1,170
Changes in consolidated group	294	162
Changes	2,240	–633
Modifications	3	–2
Classified as held for sale	–149	–
Carrying amount at Dec. 31	**57,015**	**55,515**

CHANGES IN LOSS ALLOWANCE FOR LEASE RECEIVABLES AND CONTRACT ASSETS

	SIMPLIFIED APPROACH	
€ million	2022	2021
Carrying amount at Jan. 1	**1,297**	**1,516**
Foreign exchange differences	–4	17
Changes in consolidated group	5	–
Newly extended/purchased financial assets (additions)	611	386
Other changes	307	6
Financial instruments derecognized during the period (disposals)	–297	–511
Utilization	–71	–105
Changes to models or risk parameters	14	–11
Classified as held for sale	–149	–
Carrying amount at Dec. 31	**1,713**	**1,297**

CHANGES IN GROSS CARRYING AMOUNTS OF ASSETS MEASURED AT FAIR VALUE

€ million	Stage 1	Stage 2	Stage 3	Simplified approach	Stage 4	No loss allowance	Total
Carrying amount at Jan. 1, 2022	**2,795**	**1,931**	**–**	**–**	**–**	**23,668**	**28,394**
Foreign exchange differences	18	–	–	–	–	73	91
Changes in consolidated group	–	–	–	–	–	0	0
Changes	–438	–68	–	–	–	4,715	4,209
Modifications	–	–	–	–	–	–	–
Transfers to							
Stage 1	–	–	–	–	–	–	–
Stage 2	–905	905	–	–	–	–	–
Stage 3	–	–	–	–	–	–	–
Carrying amount at Dec. 31, 2022	**1,470**	**2,768**	**–**	**–**	**–**	**28,456**	**32,694**

CHANGES IN GROSS CARRYING AMOUNTS OF ASSETS MEASURED AT FAIR VALUE

€ million	Stage 1	Stage 2	Stage 3	Simplified approach	Stage 4	No loss allowance	Total
Carrying amount at Jan. 1, 2021	**2,763**	**785**	**–**	**–**	**–**	**22,038**	**25,585**
Foreign exchange differences	13	–	–	–	–	128	141
Changes in consolidated group	–	–	–	–	–	545	545
Changes	1,105	60	–	–	–	958	2,123
Modifications	–	–	–	–	–	–	–
Transfers to							
Stage 1	290	–290	–	–	–	–	0
Stage 2	–1,376	1,376	–	–	–	–	0
Stage 3	–	–	–	–	–	–	–
Carrying amount at Dec. 31, 2021	**2,795**	**1,931**	**–**	**–**	**–**	**23,668**	**28,394**

The loss allowance on assets measured at fair value in Stage 1 rose by €0 million (previous year: €2 million) in fiscal year 2022 and those in Stage 2 by €1 million (previous year: €2 million), resulting in a closing balance of €8 million (previous year: €7 million). Of this amount, €4 million is attributable to Stage 1 (previous year: €4 million) and €4 million to Stage 2 (previous year €3 million).

The amount contractually outstanding for financial assets that have been derecognized in the current fiscal year and are still subject to enforcement proceedings is €304 million (previous year: €229 million).

MODIFICATIONS

There were contract modifications to financial assets in the reporting period that did not lead to the derecognition of the asset. These were primarily attributable to credit ratings and relate to financial assets for which loss allowances were measured in the amount of the expected lifetime credit losses. For trade and lease receivables, the treatment is simplified by considering the credit rating-based modifications where the receivables are more than 30 days past due. Before the modification, amortized cost amounted to €548 million (previous year: €225 million). In the reporting period, contract modifications resulted in net income/net expenses of €– 1.8 million (previous year: €3.0 million).

As of the reporting date, the gross carrying amounts of financial assets that have been modified since initial recognition and were simultaneously reclassified from stage 2 or 3 to stage 1 in the reporting period amounted to €324 million (previous year: €31 million). As a result, the measurement of the loss allowance for these financial assets was changed from lifetime expected credit losses to 12-month expected credit losses.

MAXIMUM CREDIT RISK

The table below shows the maximum credit risk to which the Volkswagen Group was exposed as of the reporting date, broken down by class to which the impairment model is applied:

MAXIMUM CREDIT RISK BY CLASS

€ million	Dec. 31, 2022	Dec. 31, 2021
Financial assets measured at fair value	4,224	4,719
Financial assets measured at amortized cost	170,286	157,628
Financial guarantees and credit commitments[1]	13,921	16,340
Not allocated to a measurement category	55,090	53,787
Total	**243,520**	**232,473**

1 Prior-year figures adjusted.

In the previous year, credit commitments in the Financial Services Division had been adjusted by €8.3 billion.

RATING CATEGORIES

The Volkswagen Group performs a credit assessment of borrowers in all loan and lease agreements, using scoring systems for the high-volume business and rating systems for corporate customers as well as receivables from dealer financing. Receivables rated as good are contained in risk class 1. Receivables from customers whose credit rating is not good but have not yet defaulted are contained in risk class 2. Risk class 3 comprises all defaulted receivables.

The table below presents the gross carrying amounts of financial assets by rating category:

GROSS CARRYING AMOUNTS OF FINANCIAL ASSETS BY RATING CATEGORY AS OF DECEMBER 31, 2022

€ million	Stage 1	Stage 2	Stage 3	Simplified approach	Stage 4
Credit risk rating grade 1 (receivables with no credit risk – standard loans)	137,056	10,549	–	74,547	103
Credit risk rating grade 2 (receivables with credit risk – intensified loan management)	2,382	4,642	–	2,150	44
Credit risk rating grade 3 (cancelled receivables – non-performing loans)	–	–	2,063	1,112	221
Total	**139,438**	**15,191**	**2,063**	**77,809**	**368**

GROSS CARRYING AMOUNTS OF FINANCIAL ASSETS BY RATING CATEGORY AS OF DECEMBER 31, 2021

€ million	Stage 1	Stage 2	Stage 3	Simplified approach	Stage 4
Credit risk rating grade 1 (receivables with no credit risk – standard loans)	117,687	21,300	–	70,337	105
Credit risk rating grade 2 (receivables with credit risk – intensified loan management)	2,005	4,549	–	2,121	47
Credit risk rating grade 3 (cancelled receivables – non-performing loans)	–	–	2,009	1,024	232
Total	**119,692**	**25,849**	**2,009**	**73,483**	**384**

Furthermore, the default risk exposure for financial guarantees and credit commitments is presented below:

DEFAULT RISK FOR FINANCIAL GUARANTEES AND CREDIT COMMITMENTS AS OF DECEMBER 31, 2022

€ million	Stage 1	Stage 2	Stage 3	Stage 4
Credit risk rating grade 1 (receivables with no credit risk – standard loans)	9,850	2,856	–	87
Credit risk rating grade 2 (receivables with credit risk – intensified loan management)	110	673	–	9
Credit risk rating grade 3 (cancelled receivables – non-performing loans)	–	–	318	126
Total	**9,960**	**3,529**	**318**	**222**

DEFAULT RISK FOR FINANCIAL GUARANTEES AND CREDIT COMMITMENTS AS OF DECEMBER 31, 2021

€ million	Stage 1	Stage 2	Stage 3	Stage 4
Credit risk rating grade 1 (receivables with no credit risk – standard loans)[1]	11,875	3,032	–	129
Credit risk rating grade 2 (receivables with credit risk – intensified loan management)[1]	157	826	–	14
Credit risk rating grade 3 (cancelled receivables – non-performing loans)[1]	–	–	312	86
Total	**12,032**	**3,858**	**312**	**228**

1 Prior-year figures adjusted.

Collateral that was accepted for financial assets in the current fiscal year was recognized in the balance sheet in the amount of €205 million (previous year: €120 million). This mainly relates to vehicles.

3. LIQUIDITY RISK

The solvency and liquidity of the Volkswagen Group are secured by rolling liquidity planning, a liquidity reserve, confirmed credit lines and the issuance of securities on the international money and capital markets. The volume of confirmed bilateral and syndicated credit lines stood at €27.3 billion as of December 31, 2022 (previous year: €28.4 billion), of which €1.0 billion (previous year: €1.6 billion) was drawn down.

Local cash funds in certain countries (e.g. China, Brazil, Argentina, South Africa and India) are only available to the Group for cross-border transactions subject to exchange controls. There are no significant restrictions over and above these.

The following overview shows the contractual undiscounted cash flows from financial instruments:

MATURITY ANALYSIS OF UNDISCOUNTED CASH FLOWS FROM FINANCIAL INSTRUMENTS

	REMAINING CONTRACTUAL MATURITIES				REMAINING CONTRACTUAL MATURITIES			
€ million	up to one year	within one to five years	more than five years	2022	up to one year	within one to five years	more than five years	2021
Financial liabilities	86,834	108,078	24,942	219,854	81,006	112,095	26,797	219,898
Trade payables	28,731	16	0	28,748	23,610	14	–	23,624
Other financial liabilities	17,546	2,479	125	20,150	10,651	2,240	170	13,061
Derivatives	79,591	87,649	10,916	178,155	74,236	72,283	8,425	154,944
Liabilities associated with assets held for sale[1]	114	25	–	139	145	8	1	154
	212,816	**198,247**	**35,983**	**447,046**	**189,648**	**186,640**	**35,392**	**411,681**

1 Prior-year figures adjusted.

The cash outflows on other financial liabilities include outflows on liabilities for tax allocations amounting to €17 million (previous year: €27 million).

Derivatives comprise both cash flows from derivative financial instruments with negative fair values and cash flows from derivatives with positive fair values for which gross settlement has been agreed. Derivatives entered into through offsetting transactions are also accounted for as cash outflows. The cash outflows from derivatives for which gross settlement has been agreed are matched in part by cash inflows. These cash inflows are not reported in the maturity analysis. If these cash inflows were also recognized, the cash outflows presented would be substantially lower. This also particularly applies if hedges have been closed with offsetting transactions.

The cash outflows from obligations from loan commitments and irrevocable credit commitments are presented in the section entitled "Other financial obligations", classified by contractual maturities.

As of December 31, 2022, the maximum potential liability under financial guarantees amounted to €1,185 million (previous year: €1,391 million). Financial guarantees are assumed to be due immediately in all cases.

4. MARKET RISK

4.1 Hedging policy and financial derivatives

During the course of its general business activities, the Volkswagen Group is exposed to foreign currency, interest rate, commodity price, equity price and fund price risk. Corporate policy is to limit such risk by means of hedging. Generally, all necessary hedging transactions are executed or coordinated centrally by Group Treasury; exceptions include, among others, the MAN Energy Solutions, Porsche Holding Salzburg and TRATON GROUP subgroups and the Financial Services Division, as well as some regions such as South America and China.

DISCLOSURES ON GAINS AND LOSSES FROM FAIR VALUE HEDGES

Fair value hedges involve hedging against the risk of changes in the carrying amount of balance sheet items. As of the reporting date, both hedging instruments and hedged items are measured at fair value in relation to the hedged risk, and the resulting changes in value are recognized on a net basis in the corresponding income statement item.

The following table shows the gains and losses from fair value hedges by risk type:

DISCLOSURES ON GAINS AND LOSSES FROM FAIR VALUE HEDGES

€ million	Dec. 31, 2022	Dec. 31, 2021
Hedging interest rate risk		
Other financial result	15	–
Other operating result	–18	1
Hedging currency risk		
Other financial result	–	–
Other operating result	–13	–42
Combined interest rate and currency risk hedging		
Other financial result	–	–
Other operating result	0	0

DISCLOSURES ON GAINS AND LOSSES FROM CASH FLOW HEDGES

Cash flow hedges are used to hedge against risks of fluctuations in future cash flows. These cash flows may arise from a recognized asset or liability, or from a highly probable forecast transaction. The following table shows the gains and losses from cash flow hedges by risk type:

DISCLOSURES ON GAINS AND LOSSES FROM CASH FLOW HEDGES

€ million	2022	2021
Hedging interest rate risk		
Gains or losses from changes in fair value of hedging instruments within hedge accounting		
Recognized in equity	287	94
Recognized in profit or loss	–2	3
Reclassification from the cash flow hedge reserve to profit or loss		
Due to early discontinuation of the hedging relationships	–	–
Due to realization of the hedged item	–8	4
Hedging currency risk		
Gains or losses from changes in fair value of hedging instruments within hedge accounting		
Recognized in equity	–187	–2,365
Recognized in profit or loss	–2	–3
Reclassification from the cash flow hedge reserve to profit or loss		
Due to early discontinuation of the hedging relationships	–130	–5
Due to realization of the hedged item	1,472	692
Combined interest rate and currency risk hedging		
Gains or losses from changes in fair value of hedging instruments within hedge accounting		
Recognized in equity	20	–39
Recognized in profit or loss	1	5
Reclassification from the cash flow hedge reserve to profit or loss		
Due to early discontinuation of the hedging relationships	–	–
Due to realization of the hedged item	–40	39
Hedging commodities price risk		
Gains or losses from changes in fair value of hedging instruments within hedge accounting		
Recognized in equity	–	0
Recognized in profit or loss	–	–
Reclassification from the cash flow hedge reserve to profit or loss		
Due to early discontinuation of the hedging relationships	–	–
Due to realization of the hedged item	–	0

The table presents effects taken to equity, reduced by deferred taxes.

The gain or loss from changes in the fair value of hedging instruments used in hedge accounting corresponds to the basis for determining hedge ineffectiveness. The ineffective portion of a cash flow hedge is the income or expense resulting from changes in the fair value of the hedging instrument that exceed the changes in the fair value of the hedged item. This hedge ineffectiveness is attributable to differences in the parameters for the hedging instrument and the hedged item. Such income and expenses are recognized in other operating income/expenses or in the financial result.

The Volkswagen Group uses two different methods to present market risk from nonderivative and derivative financial instruments in accordance with IFRS 7. For quantitative risk measurement, interest rate and foreign currency risk in the Volkswagen Financial Services subgroup is measured using a value-at-risk (VaR) model on the basis of a historical simulation, while market risk in the other Group companies is determined using a sensitivity analysis. The value-at-risk calculation indicates the size of the maximum potential loss on the portfolio as a whole within a time horizon of 40 days, measured at a confidence level of 99%. To provide the basis for this calculation, all cash flows from nonderivative and derivative financial instruments are aggregated into an interest rate gap analysis. The historical market data used in calculating value at risk covers a period of 1,000 trading days. The sensitivity analysis calculates the effect on equity and profit or loss by modifying risk variables within the respective market risks.

DISCLOSURES ON HEDGING INSTRUMENTS IN HEDGE ACCOUNTING

The Volkswagen Group regularly enters into hedging instruments to hedge against changes in the carrying amount of balance sheet items. The summary below shows the notional amounts, fair values and base variables for determining the ineffectiveness of hedging instruments entered into to hedge against the risk of changes in carrying amounts in fair value hedges:

DISCLOSURES ON HEDGING TRANSACTIONS IN FAIR VALUE HEDGES IN 2022

€ million	Notional amount	Other assets	Other liabilities	Fair value changes to determine hedge ineffectiveness
Hedging interest rate risk				
Interest rate swaps	58,170	868	2,596	–2,305
Hedging currency risk				
Currency forwards, currency options, cross-currency swaps	4,384	87	26	40
Combined interest rate and currency risk hedging				
Cross-currency interest rate swaps	140	0	–	0

DISCLOSURES ON HEDGING TRANSACTIONS IN FAIR VALUE HEDGES IN 2021

€ million	Notional amount	Other assets	Other liabilities	Fair value changes to determine hedge ineffectiveness
Hedging interest rate risk				
Interest rate swaps	37,589	380	244	26
Hedging currency risk				
Currency forwards, currency options, cross-currency swaps	5,536	67	92	–112
Combined interest rate and currency risk hedging				
Cross-currency interest rate swaps	–	–	–	–

In addition, hedges are used to hedge against risks of fluctuations in future cash flows. The table below shows the notional amounts, fair values and base variables for determining the ineffectiveness of hedging instruments designated in cash flow hedges:

DISCLOSURES ON HEDGING TRANSACTIONS IN CASH FLOW HEDGES IN 2022

€ million	Notional amount	Other assets	Other liabilities	Fair value changes to determine hedge ineffectiveness
Hedging interest rate risk				
Interest rate swaps	15,371	509	30	419
Hedging currency risk				
Currency forwards and cross-currency swaps	119,499	3,087	2,540	2,204
Currency options	27,342	166	268	–77
Combined interest rate and currency risk hedging				
Cross-currency interest rate swaps	1,437	23	17	1

DISCLOSURES ON HEDGING TRANSACTIONS IN CASH FLOW HEDGES IN 2021

€ million	Notional amount	Other assets	Other liabilities	Fair value changes to determine hedge ineffectiveness
Hedging interest rate risk				
Interest rate swaps	17,009	82	39	50
Hedging currency risk				
Currency forwards and cross-currency swaps	107,677	1,277	2,609	–925
Currency options	23,852	109	183	–31
Combined interest rate and currency risk hedging				
Cross-currency interest rate swaps	1,289	4	34	–28

The fair value change used to determine ineffectiveness corresponds to the fair value change of the designated component.

DISCLOSURES ON HEDGED ITEMS IN HEDGE ACCOUNTING

In addition to disclosures on hedging instruments, disclosures are also required on the hedged items, broken down by risk category and type of designation for hedge accounting. Below follows a list of hedged items designated in fair value hedges, separately from those designated in cash flow hedges:

DISCLOSURES ON HEDGED ITEMS IN FAIR VALUE HEDGES IN 2022

€ million	Carrying amount	Cumulative hedge adjustments	Hedge adjustments current period/ fiscal year	Cumulative hedge adjustments from discontinued hedging relationships
Hedging interest rate risk				
Financial services receivables	14,764	–156	–156	–
Other financial assets	–	–	–	–
Financial liabilities	34,622	–2,890	–3,061	–
Hedging currency risk				
Financial services receivables	–	–	–	–
Other financial assets	795	–5	–1	–
Financial liabilities	1,132	–7	–23	–
Combined interest rate and currency risk hedging				
Financial services receivables	–	–	–	–
Other financial assets	–	–	–	–
Financial liabilities	181	39	39	–

DISCLOSURES ON HEDGED ITEMS IN FAIR VALUE HEDGES IN 2021

€ million	Carrying amount	Cumulative hedge adjustments	Hedge adjustments current period/ fiscal year	Cumulative hedge adjustments from discontinued hedging relationships
Hedging interest rate risk				
Financial services receivables	–	–	–	–
Other financial assets	–	–	–	–
Financial liabilities	39,751	281	–668	–
Hedging currency risk				
Financial services receivables	–	–	–	–
Other financial assets	593	11	11	–
Financial liabilities	955	14	–20	–
Combined interest rate and currency risk hedging				
Financial services receivables	–	–	–	–
Other financial assets	–	–	–	–
Financial liabilities	–	–	–	–

DISCLOSURES ON HEDGED ITEMS IN CASH FLOW HEDGES IN 2022

€ million	Changes in fair value to determine hedge ineffectiveness	Reserve for: Active cash flow hedges	Reserve for: Discontinued cash flow hedges
Hedging interest rate risk			
Designated components	424	420	0
Non-designated components	–	–	–
Deferred taxes	–	–114	0
Total hedging interest rate risk	424	306	0
Hedging currency risk			
Designated components	2,130	1,998	–8
Non-designated components	–	–1,800	–11
Deferred taxes	–	–61	6
Total hedging currency risk	2,130	137	–13
Combined interest rate and currency risk hedging			
Designated components	1	–29	–
Non-designated components	–	–	–
Deferred taxes	–	9	–
Total hedging combined interest rate and currency risk	1	–20	–
Hedging commodity price risk			
Designated components	–	–	–
Non-designated components	–	–	–
Deferred taxes	–	–	–
Total hedging commodity price risk	–	–	–

DISCLOSURES ON HEDGED ITEMS IN CASH FLOW HEDGES IN 2021

€ million	Changes in fair value to determine hedge ineffectiveness	Reserve for: Active cash flow hedges	Reserve for: Discontinued cash flow hedges
Hedging interest rate risk			
Designated components	49	47	–1
Non-designated components	–	–	–
Deferred taxes	–	–18	0
Total hedging interest rate risk	49	29	–1
Hedging currency risk			
Designated components	–998	–969	8
Non-designated components	–	–500	–6
Deferred taxes	–	436	0
Total hedging currency risk	–998	–1,033	1
Combined interest rate and currency risk hedging			
Designated components	–29	–1	–
Non-designated components	–	–	–
Deferred taxes	–	0	–
Total hedging combined interest rate and currency risk	–29	–1	–
Hedging commodity price risk			
Designated components	–	–	–
Non-designated components	–	–	–
Deferred taxes	–	–	–
Total hedging commodity price risk	–	–	–

CHANGES IN THE RESERVE

When accounting for cash flow hedges, the designated effective portions of a hedge are recognized in OCI I directly in equity. All changes beyond this in the fair value of the designated component are recognized as ineffectiveness in profit or loss.

The tables below show a reconciliation to the reserve:

CHANGES IN THE RESERVE FOR CASH FLOW HEDGES (OCI I)

€ million	Interest rate risk	Currency risk	Interest rate/ currency risk	Commodity price risk	Total
Balance at Jan. 1, 2022	**28**	**–665**	**–1**	**–**	**–637**
Gains or losses from effective hedging relationships	287	1,244	20	–	1,551
Reclassifications due to changes in whether the hedged item is expected to occur	–	–133	–	–	–133
Reclassifications due to realization of the hedged item	–8	952	–40	–	904
Balance at Dec. 31, 2022	**307**	**1,397**	**–20**	**–**	**1,684**

CHANGES IN THE RESERVE FOR CASH FLOW HEDGES (OCI I)

€ million	Interest rate risk	Currency risk	Interest rate/ currency risk	Commodity price risk	Total
Balance at Jan. 1, 2021	**–70**	**1,355**	**–1**	**0**	**1,284**
Gains or losses from effective hedging relationships	94	–1,932	–39	0	–1,877
Reclassifications due to changes in whether the hedged item is expected to occur	–	–5	–	–	–5
Reclassifications due to realization of the hedged item	4	–83	39	0	–40
Balance at Dec. 31, 2021	**28**	**–665**	**–1**	**–**	**–637**

If expectations about the occurrence of the hedged item change, the arrangement is reclassified by terminating the hedging relationship prematurely. Changed expectations are primarily caused by a change in projections for hedging sales revenue.

Changes in the fair values of non-designated components of a derivative are likewise generally recognized immediately through profit or loss. An exception from this principle is any change in the fair value attributable to non-designated time values of options, to the extent that they relate to the hedged item. Moreover, the Volkswagen Group initially recognizes in equity (hedging costs) changes in the fair values of non-designated forward components in currency forwards and currency hedges attributed to cash flow hedges. This means that the Volkswagen Group recognizes changes in the fair value of the non-designated component or parts thereof immediately through profit or loss only if there is ineffectiveness.

The tables below show a summary of changes in the reserve for hedging costs resulting from the non-designated portions of options and currency hedges:

CHANGES IN THE RESERVE FOR HEDGING COSTS – NON-DESIGNATED TIME VALUES OF OPTIONS

	CURRENCY RISK	
€ million	2022	2021
Balance at Jan. 1	**–80**	**59**
Gains and losses from non-designated time value of options		
Hedged item is recognized at a point in time	82	–171
Reclassifications due to changes in whether the hedged item is expected to occur		
Hedged item is recognized at a point in time	1	0
Reclassification due to realization of the hedged item		
Hedged item is recognized at a point in time	–91	32
Balance at Dec. 31	**–87**	**–80**

CHANGES IN THE RESERVE FOR HEDGING COSTS – NON-DESIGNATED FORWARD COMPONENT AND CROSS CURRENCY BASIS SPREAD (CCBS)

	CURRENCY RISK	
€ million	2022	2021
Balance at Jan. 1	**–287**	**–766**
Gains and losses from non-designated forward elements and CCBS		
Hedged item is recognized at a point in time	–1,514	–263
Reclassification due to changes in whether the hedged item is expected to occur		
Hedged item is recognized at a point in time	2	0
Reclassifications due to realization of the hedged item		
Hedged item is recognized at a point in time	611	742
Balance at Dec. 31	**–1,187**	**–287**

4.2 Market risk in the Volkswagen Group (excluding Volkswagen Financial Services subgroup)

4.2.1 Foreign currency risk

Foreign currency risk in the Volkswagen Group (excluding Volkswagen Financial Services subgroup) is attributable to investments, financing measures and operating activities. Currency forwards, currency options, currency swaps and cross-currency interest rate swaps are used to limit foreign currency risk. These transactions relate to the exchange rate hedging of material payments covering general business activities that are not made in the functional currency of the respective Group companies. The principle of matching currencies applies to the Group’s financing activities.

Hedging transactions entered into in 2022 as part of foreign currency risk management were amongst others in Australian dollars, Brazilian real, British pound sterling, Chinese renminbi, Hong Kong dollars, Indian rupees, Japanese yen, Canadian dollars, Mexican pesos, Norwegian kroner, Polish zloty, Swedish kronor, Swiss francs, Singapore dollars, South African rand, South Korean won, Taiwan dollars, Czech koruna, Hungarian forints and US dollars.

All nonfunctional currencies in which the Volkswagen Group enters into financial instruments are included as relevant risk variables in the sensitivity analysis in accordance with IFRS 7.

If the functional currencies concerned had appreciated or depreciated by 10% against the other currencies, the exchange rates shown below would have resulted in the following effects on the hedging reserve in equity and on earnings after tax. It is not appropriate to add together the individual figures, since the results of the various functional currencies concerned are based on different scenarios.

The following table shows the sensitivities of the main currencies in the portfolio as of December 31, 2022:

	DEC. 31, 2022		DEC. 31, 2021	
€ million	+10%	–10%	+10%	–10%
Exchange rate				
EUR / CNY				
Hedging reserve	1,299	–1,310	1,029	–1,128
Earnings after tax	–342	342	–157	157
EUR / GBP				
Hedging reserve	1,309	–1,317	1,737	–1,745
Earnings after tax	–120	121	–78	80
EUR / USD				
Hedging reserve	497	–534	233	–224
Earnings after tax	–731	717	–672	666
EUR / CHF				
Hedging reserve	796	–823	574	–592
Earnings after tax	–1	1	17	–19
EUR / CAD				
Hedging reserve	280	–279	209	–211
Earnings after tax	–20	20	–24	24
EUR / AUD				
Hedging reserve	262	–262	284	–283
Earnings after tax	–31	31	–13	13
EUR / SEK				
Hedging reserve	171	–169	311	–312
Earnings after tax	–67	67	–82	81
EUR / JPY				
Hedging reserve	160	–157	200	–193
Earnings after tax	–36	36	–27	27
EUR / TWD				
Hedging reserve	183	–183	136	–136
Earnings after tax	–10	10	–6	6
EUR / KRW				
Hedging reserve	133	–133	124	–124
Earnings after tax	–46	45	–18	18
EUR / PLN				
Hedging reserve	–72	72	–93	93
Earnings after tax	–37	37	–49	49
EUR / BRL				
Hedging reserve	41	–41	9	–9
Earnings after tax	–66	66	–96	96
EUR / CZK				
Hedging reserve	–24	24	89	–89
Earnings after tax	–65	65	–39	40
EUR / INR				
Hedging reserve	–65	65	–37	37
Earnings after tax	–13	13	–3	3
GBP / USD				
Hedging reserve	75	–75	43	–43
Earnings after tax	3	–3	1	–1

4.2.2 Interest rate risk

Interest rate risk in the Volkswagen Group (excluding Volkswagen Financial Services subgroup) results from changes in market interest rates, primarily for medium- and long-term variable interest receivables and liabilities. Interest rate swaps and cross-currency interest rate swaps are sometimes entered into to hedge against this risk primarily under fair value or cash flow hedges, and depending on market conditions. Intragroup financing arrangements are mainly structured to match the maturities of their refinancing. Departures from the Group standard are subject to centrally defined limits and monitored on an ongoing basis.

Interest rate risk within the meaning of IFRS 7 is calculated for these companies using sensitivity analyses. The effects of the risk-variable market rates of interest on the financial result and on equity are presented, net of tax.

If market interest rates had been 100 bps higher as of December 31, 2022, equity would have been €20 million (previous year adjusted: €0 million) lower. If market interest rates had been 100 bps lower as of December 31, 2022, equity would have been €22 million (previous year adjusted: €1 million) higher.

If market interest rates had been 100 bps higher as of December 31, 2022, earnings after tax would have been €143 million (previous year adjusted: €331 million) lower. If market interest rates had been 100 bps lower as of December 31, 2022, earnings after tax would have been €149 million (previous year adjusted: €353 million) higher.

4.2.3 Commodity price risk

Commodity price risk in the Volkswagen Group (excluding Volkswagen Financial Services subgroup) primarily results from price fluctuations and the availability of ferrous and non-ferrous metals, precious metals, commodities required in connection with the Group's digitalization and electrification strategy, as well as of coal, CO_2 certificates and rubber.

Commodity price risk is limited by entering into forward transactions and swaps.

However, not all commodities are suitable for these types of hedges, e.g. because of low market liquidity or a lack of correlation between hedged item and hedging instrument. Likewise, selected commodities were purchased on the spot market, which led to a corresponding increase in inventories. Commodity price risk within the meaning of IFRS 7 is presented using sensitivity analyses. These show the effect on earnings after tax of changes in the risk variable commodity prices.

If the commodity prices of the hedged nonferrous metals, coal and rubber had been 10% higher (lower) as of December 31, 2022, earnings after tax would have been €954 million (previous year: €679 million) higher (lower).

4.2.4 Equity and bond price risk

The special funds launched using surplus liquidity and the equity interests measured at fair value are subject in particular to equity price and bond price risk, which can arise from fluctuations in quoted market prices, stock exchange indices and market rates of interest. The changes in bond prices resulting from variations in the market rates of interest are quantified in sections 4.2.1 and 4.2.2, as are the measurement of foreign currency and other interest rate risks arising from the special funds and the equity interests measured at fair value. As a rule, risks arising from the special funds are countered by ensuring a broad diversification of products, issuers and regional markets when investing funds, as stipulated by the Investment Guidelines of the Group. In addition, the Investment Guidelines define fixed minimum values, which are to be met by taking suitable risk management measures. In addition, hedgings are executed when market conditions are appropriate.

As part of the presentation of market risk, IFRS 7 requires disclosures on how hypothetical changes in risk variables affect the price of financial instruments. Potential risk variables here are in particular quoted market prices or indices, as well as interest rate changes as bond price parameters.

If share prices had been 10% higher as of December 31, 2022, earnings after tax would have been €107 million (previous year: €228 million) higher and equity would have been €4 million (previous year: €5 million) higher. If share prices had been 10% lower as of December 31, 2022, earnings after tax would have been €65 million (previous year: €246 million) lower and equity would have been €4 million (previous year: €5 million) lower.

4.3 Market risk at Volkswagen Financial Services subgroup

Exchange rate risk in the Volkswagen Financial Services subgroup is mainly attributable to assets that are not denominated in the functional currency and from refinancing within operating activities. Interest rate risk relates to refinancing without matching maturities and the varying interest rate elasticity of individual asset and liability items. The risks are limited by the use of currency and interest rate hedges.

Microhedges are used for interest rate hedging. Fixed-rate assets and liabilities included in the hedging strategy are recognized at fair value, as opposed to their original subsequent measurement at amortized cost. The resulting effects in the income statement are offset by the corresponding gains and losses on the interest rate hedging instruments (swaps). Currency hedges (currency forwards and cross-currency interest rate swaps) are used to mitigate foreign currency risk. All cash flows in foreign currency are hedged.

As of December 31, 2022, the value at risk was €792 million (previous year: €233 million) for interest rate risk and €76 million (previous year: €164 million) for foreign currency risk.

The entire value at risk for interest rate and foreign currency risk at the Volkswagen Financial Services subgroup was €720 million (previous year: €172 million).

5. METHODS FOR MONITORING HEDGE EFFECTIVENESS

Since the implementation of IFRS 9, the Volkswagen Group determines hedge effectiveness mainly on a prospective basis using the critical terms match method. Retrospective analysis of effectiveness uses effectiveness tests in the form of the dollar offset method. Under the dollar offset method, the changes in value of the hedged item expressed in monetary units are compared with the changes in value of the hedging instrument expressed in monetary units.

To this end, the accumulated changes in the fair value of the designated spot component of the hedging instrument and hedged item are compared. If the critical terms do not match, the same procedure is applied to the non-designated component.

For hedges involving interest rate or cross-currency interest rate swaps, the Volkswagen Group is exposed to uncertainty resulting from the IBOR reform, which may affect the timing, the amount of the IBOR-based cash flows, or the hedged risk of the hedged item or the hedging instrument. The Volkswagen Group applies the practical expedients of IFRS 9 created in this context.

The uncertainty relates mainly to the following interest rate benchmarks: USD LIBOR and CAD CDOR. In the case of fair value hedges, the uncertainty relates to the identifiability of the risk component which results from the change in the fair value used to hedge against risks of changes in the carrying amounts of financial assets and financial liabilities. In cash flow hedges used to hedge against risks arising from changes in future cash flows, the uncertainty relates to the highly probable requirement for hedged future variable cash flows. The expected impact of the IBOR reform is being assessed on an ongoing basis. Any replacement measures required have already been implemented for the interest rate benchmarks affected.

NOTIONAL AMOUNT OF DERIVATIVES

The notional amounts of hedging instruments exposed to the uncertainty from the IBOR reform described above totaled €12,481 million (previous year: €18,436 million) in the fiscal year. Of this total, €10,118 million was attributable to the USD LIBOR (previous year: €13,876 million), and €2,363 million to the CAD CDOR (previous year: €4,560 million).

The summary below presents the remaining maturities profile of the notional amounts of the hedging instruments, which are accounted for under the Volkswagen Group's hedge accounting rules, and of derivatives to which hedge accounting is not applied:

NOTIONAL AMOUNT OF DERIVATIVES IN 2022

€ million	REMAINING TERM up to one year	within one to five years	more than five years	TOTAL NOTIONAL AMOUNT Dec. 31, 2022
Notional amount of hedging instruments within hedge accounting				
Hedging interest rate risk				
Interest rate swap	13,674	52,876	6,991	73,541
Hedging currency risk				
Currency forwards/Cross-currency swaps				
Currency forwards/Cross-currency swaps in CNY	7,654	12,682	120	20,456
Currency forwards/Cross-currency swaps in GBP	12,106	9,679	–	21,785
Currency forwards/Cross-currency swaps in USD	12,210	22,833	2,314	37,357
Currency forwards/Cross-currency swaps in other currencies	18,904	25,381	–	44,284
Currency options				
Currency options in USD	3,484	2,772	–	6,256
Currency options in CNY	7,005	8,689	–	15,694
Currency options in other currencies	1,736	3,656	–	5,392
Combined interest rate and currency risk hedging				
Cross-currency interest rate swaps	773	804	–	1,577
Notional amount of other derivatives				
Hedging Interest rate risk				
Interest rate swap	17,835	36,775	16,380	70,991
Hedging Currency risk				
Currency forwards/Cross-currency swaps				
Currency forwards/Cross-currency swaps in USD	9,060	7,431	165	16,656
Currency forwards/Cross-currency swaps in other currencies	16,430	2,511	0	18,941
Currency options				
Currency options in USD	3,549	644	–	4,193
Currency options in other currencies	280	212	–	492
Combined interest rate and currency risk hedging				
Cross-currency interest rate swaps	5,231	8,717	3,945	17,892
Hedging Commodity price risk				
Forward commodity contracts aluminum	979	2,390	–	3,369
Forward commodity contracts copper	416	651	–	1,067
Forward commodity contracts nickel	840	2,048	165	3,052
Forward commodity contracts other	380	153	–	533

NOTIONAL AMOUNT OF DERIVATIVES IN 2021

€ million	REMAINING TERM up to one year	within one to five years	more than five years	TOTAL NOTIONAL AMOUNT Dec. 31, 2021
Notional amount of hedging instruments within hedge accounting				
Hedging interest rate risk				
Interest rate swap	9,413	38,214	6,971	54,598
Hedging currency risk				
Currency forwards/Cross-currency swaps				
Currency forwards/Cross-currency swaps in CNY	9,337	4,594	123	14,054
Currency forwards/Cross-currency swaps in GBP	12,776	15,163	–	27,939
Currency forwards/Cross-currency swaps in USD	9,895	17,175	3,147	30,218
Currency forwards/Cross-currency swaps in other currencies	20,048	20,900	55	41,003
Currency options				
Currency options in USD	3,701	3,825	–	7,527
Currency options in CNY	6,122	4,174	–	10,296
Currency options in other currencies	2,212	3,817	–	6,029
Combined interest rate and currency risk hedging				
Cross-currency interest rate swaps	628	661	–	1,289
Notional amount of other derivatives				
Hedging Interest rate risk				
Interest rate swap	25,689	45,653	20,892	92,233
Hedging Currency risk				
Currency forwards/Cross-currency swaps				
Currency forwards/Cross-currency swaps in USD	6,154	4,916	390	11,461
Currency forwards/Cross-currency swaps in other currencies	13,123	1,468	0	14,591
Currency options				
Currency options in USD	532	636	–	1,168
Currency options in other currencies	3	–	–	3
Combined interest rate and currency risk hedging				
Cross-currency interest rate swaps	4,450	9,111	3,363	16,925
Hedging Commodity price risk				
Forward commodity contracts aluminum	934	1,535	–	2,470
Forward commodity contracts copper	300	370	–	670
Forward commodity contracts nickel	457	2,146	390	2,992
Forward commodity contracts other	110	8	–	117

Both derivatives closed with offsetting transactions and the offsetting transactions themselves are included in the respective notional amount. The offsetting transactions cancel out the effects of the original hedging transactions. If the offsetting transactions were not included, the respective notional amount would be lower. In addition to the derivatives used for hedging foreign currency, interest rate and price risk, the Group held options and other derivatives on equity instruments at the reporting date, mainly in connection with fund investments. The notional volume with a remaining maturity of less than one year was €17.9 billion (previous year: €16.8 billion). The notional volume with a remaining maturity of more than one year was €4.2 billion (previous year: €1.8 billion) and relates primarily to options in connection with the acquisition of Europcar.

Also in connection with fund investments, the Group held credit default swaps with a notional amount of €17.5 billion (previous year: €21.4 billion).

Existing cash flow hedges in the notional amount of €2.0 billion (previous year: €0.6 billion) were discontinued because of a reduction in the projections. In addition, hedges were to be terminated due to internal risk regulations.

Items hedged under cash flow hedges are expected to be realized in accordance with the maturity buckets of the hedges reported in the table. For cash flow hedges, the Volkswagen Group achieved an average hedging interest rate of 1.35% for hedging interest rate risk. In addition, currency risk was hedged at the following hedging exchange rates for the major currency pairs: EUR/USD at 1.18; EUR/GBP at 0.88; EUR/CNY at 7.46.

The fair values of the derivatives are estimated using market data at the balance sheet date as well as by appropriate valuation techniques. The following term structures were used for the calculation:

in %	EUR	AUD	CAD	CHF	CNY	CZK	GBP	JPY	SEK	USD
Interest rate for six months	2.7317	3.5266	4.8926	1.2200	2.4115	7.3492	4.0800	0.0088	3.1440	4.7940
Interest rate for one year	3.0270	3.9000	4.9396	1.5100	2.4629	7.3476	4.4600	0.1025	3.3307	4.8870
Interest rate for five years	3.1855	4.2475	3.7430	1.8150	3.0600	5.1950	4.0820	0.6000	3.2725	3.7270
Interest rate for ten years	3.1510	4.5450	3.7590	2.0400	4.0700	4.7650	3.7520	0.9075	3.1250	3.5340

37. Capital management

The Group’s capital management ensures that its goals and strategies can be achieved in the interests of shareholders, employees and other stakeholders. In particular, management focuses on generating the minimum return on invested assets in the Automotive Division that is required by the capital markets, and on increasing the return on equity in the Financial Services Division. In the process, it aims overall to achieve the highest possible growth in the value of the Group and its divisions for the benefit of all the Company’s stakeholder groups.

In order to ensure that resources are used as efficiently as possible in the Automotive Division and to measure the success of this, we have for a number of years been using a value-based management system, with value contribution as an absolute performance measure and return on investment (ROI) as a relative indicator.

Value contribution is defined as the difference between operating profit after tax and the opportunity cost of invested capital. The opportunity cost of capital is calculated by multiplying the market cost of capital by average invested capital. Invested capital is calculated by taking the operating assets reported in the balance sheet (property, plant and equipment, intangible assets, lease assets, inventories and receivables) and deducting non-interest-bearing liabilities (trade payables and payments on account received). Average invested capital is derived from the balance at the beginning and the end of the reporting period.

The return on investment is defined as the return on invested capital for a particular period based on the operating result after tax. If the return on investment exceeds the market cost of capital, there is an increase in the value of the invested capital and a positive value contribution. In the Group, a minimum required rate of return on invested capital of 9.0% is defined, which applies to both the business units and the individual products and product lines. The goal of generating a sustained return on investment of over 15.0% is anchored in the company's strategy. The return on investment therefore serves as a consistent target in operational and strategic management and is used to measure target attainment for the Automotive Division, the individual business units, and projects and products. The return on investment achieved for the Automotive Division was 12.0% in the reporting period, which is above the minimum rate of return on invested capital of 9.0%. Given the current cost of capital of 8.3%, this results in a positive value contribution of €4,376 million.

Due to the specific features of the Financial Services Division, its management focuses on return on equity, a special target linked to invested capital. This measure is calculated as the ratio of earnings before tax to average equity. Average equity is calculated from the balance at the beginning and the end of the reporting period. In addition, the goals of the Financial Services Division are to meet the banking supervisory authorities' regulatory capital requirements, to procure equity for the growth planned in the coming fiscal years and to support its external rating by ensuring capital adequacy. To ensure compliance with prudential requirements at all times, a planning procedure integrated into internal reporting has been put in place at the Volkswagen Bank, allowing the required equity to be continuously determined on the basis of actual and expected business performance. In the reporting period, this again ensured that regulatory minimum capital requirements were always met both at Group level and at the level of subordinate companies' individual, specific capital requirements.

The return on investment and value contribution in the Automotive Division as well as the return on equity and the equity ratio in the Financial Services Division are shown in the following table:

€ million	2022	2021
Automotive Division[1]		
Operating result after tax	14,078	11,740
Invested capital (average)	117,412	113,386
Return on investment (ROI) in %	**12.0**	**10.4**
Cost of capital in %	8.3	6.2
Opportunity cost of invested capital	9,702	6,984
Value contribution[2]	**4,376**	**4,756**
Financial Services Division		
Earnings before tax	5,581	5,981
Average equity	39,761	34,591
Return on equity before tax in %	**14.0**	**17.3**
Equity ratio in %	**16.1**	**14.5**

1 Including proportionate inclusion of the Chinese joint ventures and allocation of consolidation adjustments between the Automotive and Financial Services Divisions; excluding effects on earnings and assets from purchase price allocation.

2 The value contribution corresponds to the Economic Value Added (EVA®). EVA® is a registered trademark of Stern Stewart & Co

38. Contingent liabilities

€ million	Dec. 31, 2022	Dec. 31, 2021
Liabilities under guarantees	521	504
Liabilities under warranty contracts	73	71
Assets pledged as security for third-party liabilities	11	15
Other contingent liabilities	10,000	9,111
	10,604	**9,700**

In the case of liabilities from guarantees, the Group is required to make specific payments if the debtors fail to meet their obligations.

The other contingent liabilities primarily comprise potential liabilities arising from matters relating to taxes and customs duties, as well as litigation and proceedings relating to suppliers, dealers, customers, employees and investors. The contingent liabilities recognized in connection with the diesel issue totaled €4.2 billion (previous year: €4.3 billion), of which €3.6 billion (previous year: €3.6 billion) was attributable to investor lawsuits in Germany. Also included are certain elements of the class action lawsuits and proceedings/misdemeanor proceedings relating to the diesel issue as far as these can be quantified. As some of these proceedings are still at a very early stage, the plaintiffs have in a number of cases so far not specified the basis of their claims and/or there is insufficient certainty about the number of plaintiffs or the amounts being claimed. Where these lawsuits meet the definition of a contingent liability, no disclosure was normally required because it had not been possible to measure the amount involved.

In addition, other contingent liabilities include an amount of €0.6 billion for potential liabilities resulting from the risk of tax proceedings instituted by the Brazilian tax authorities against Volkswagen Truck & Bus (formerly: MAN Latin America).

Since 2016, the U.S. National Highway Traffic Safety Administration (NHTSA) has announced further extensions of the recalls of various models from a variety of manufacturers containing certain airbags produced by the Takata company. Recalls were also demanded by the local authorities in individual countries. The recalls also included models manufactured by the Volkswagen Group. Appropriate provisions have been recognized. Currently, the possibility of further extensions to the recalls that could also affect Volkswagen Group models cannot be ruled out. It is not possible at the moment to provide further disclosures in accordance with IAS 37.86 in relation to this matter because the technical investigations and consultations with the authorities are still ongoing.

In line with IAS 37.92, no further statements have been made concerning estimates of financial impact or regarding uncertainty as to the amount or maturity of provisions and contingent liabilities in relation to additional important legal cases. This is so as to not compromise the results of the proceedings or the interests of the Company. Further information can be found under the section entitled “Litigation”.

39. Litigation

Volkswagen AG and the companies in which it is directly or indirectly invested are involved in a substantial number of legal disputes and governmental proceedings in Germany and abroad. Such legal disputes and other proceedings occur, among other things, in connection with products and services or in relation to employees, public authorities, dealers, investors, customers, suppliers, or other contracting parties. For the companies in question, these disputes and proceedings may result in payments such as fines or in other obligations or consequences. In particular, substantial compensatory or punitive damages may have to be paid and cost-intensive measures may have to be implemented. In this context, specific estimation of the objectively likely consequences is often possible only to a very limited extent, if at all.

Various legal proceedings are pending worldwide, particularly in the USA, in which customers are asserting purported product-related claims, either individually or in class actions. These claims are as a rule based on alleged vehicle defects, including defects alleged in vehicle parts supplied to the Volkswagen Group.

Compliance with legal or regulatory requirements is another area in which risks may arise. This is particularly true in gray areas where Volkswagen and the relevant public authorities may interpret the law differently.

In connection with their business activities, Volkswagen Group companies engage in constant dialogue with regulatory agencies, including the Kraftfahrt-Bundesamt (KBA – German Federal Motor Transport Authority). It is not possible to predict with assurance how government regulators will assess certain issues of fact and law in a particular situation. For this reason, the possibility that certain vehicle characteristics and/or type approval aspects may in particular ultimately be deemed deficient or impermissible cannot be ruled out. This is fundamentally a question of the regulatory agency's specific evaluation in a concrete situation.

A comparable challenge results from the tension between divergent national and international statutory or regulatory requirements regarding obligations to transfer information or documents, on the one hand, and privacy mandates under national and international data protection law on the other. Volkswagen is advised by outside law firms on these issues so as to preclude compliance violations as far as possible despite the sometimes unclear state of the law.

Litigation may furthermore result from demands for more extensive climate protection measures or from allegedly incomplete disclosures regarding the impact of climate change. The response of the Volkswagen Group to this risk includes, among other things, certification of its self-imposed decarbonization targets through independent and internationally respected organizations and systematic alignment of its non-financial reporting with the requirements of the law and the capital markets.

Risks may also result from actions for infringement of intellectual property, including infringement of patents, brands, or other third-party rights, particularly in Germany and the USA. If Volkswagen is alleged or determined to have violated third-party intellectual property rights, it may for instance have to pay damages, modify manufacturing processes, or redesign products, and may be barred from selling certain products; this may result in delivery and production restrictions or interruptions.

Criminal acts by individuals, which even the best compliance management system can never completely prevent, are another potential source of legal risks.

Appropriate insurance has been taken out to cover these risks where they were sufficiently definite and such coverage was economically sensible. Where necessary based on the information currently available, identified and correspondingly measurable risks have been reflected by recognizing provisions in amounts considered appropriate or disclosing contingent liabilities, as the case may be. As some risks cannot be assessed or can only be assessed to a limited extent, the possibility of material loss or damage not covered by the insured amounts or by provisions cannot be ruled out. This is, for instance, the case with regard to the legal risks assessed in connection with the diesel issue.

Unless otherwise explicitly stated, the amounts disclosed for the litigation being reported on refer only to the respective principal claim. Ancillary claims, such as for interest and litigation expense, are generally not considered.

Diesel issue

On September 18, 2015, the US Environmental Protection Agency (EPA) publicly announced in a "Notice of Violation" that irregularities in relation to nitrogen oxide (NO_x) emissions had been discovered in emissions tests on certain Volkswagen Group vehicles with 2.0 l diesel engines in the USA. In this context, Volkswagen AG announced that noticeable discrepancies between the figures recorded in testing and those measured in actual road use had been identified in type EA 189 diesel engines and that this engine type had been installed in roughly eleven million vehicles worldwide. On November 2, 2015, the EPA issued a "Notice of Violation" alleging that irregularities had also been discovered in the software installed in US vehicles with type V6 3.0 l diesel engines.

The so-called diesel issue is rooted in a modification of parts of the software of the relevant engine control units – which, according to Volkswagen AG's legal position, is only unlawful under US law – for the type EA 189 diesel engines that Volkswagen AG was developing at that time. This software function was developed and implemented from 2006 on without knowledge at the level of the Board of Management. Members of the Board of Management did not learn of the development and implementation of this software function until the summer of 2015.

There are furthermore no findings that, following the publication in May 2014 of the study by the International Council on Clean Transportation, an unlawful "defeat device" under US law was disclosed to the persons responsible for preparing the 2014 annual and consolidated financial statements as the cause of the high NO_x emissions in certain US vehicles with 2.0 l type EA 189 diesel engines. Rather, at the time the 2014 annual and consolidated financial statements were being prepared, the persons responsible for preparing these financial statements remained under the impression that the issue could be resolved with comparatively little expense. In the course of the summer of 2015, however, it became progressively apparent to individual members of Volkswagen AG's Board of Management that the cause of the discrepancies in the USA was a modification of parts of the software of the engine control unit that was later identified as an unlawful "defeat device" as defined by US law. This culminated in Volkswagen's disclosure of a "defeat device" to the EPA and the California Air Resources Board (CARB), a department of the Environmental Protection Agency of the State of California, on September 3, 2015. According to the assessment at the time by the responsible persons dealing with the matter, the magnitude of the costs expected to result for the Volkswagen Group (recall costs, retrofitting costs, and financial penalties) was not fundamentally dissimilar to that in previous cases involving other vehicle manufacturers. It therefore appeared to be manageable overall considering the business activities of the Volkswagen Group. This assessment by Volkswagen AG was based, among other things, on the advice of a law firm engaged in the USA for regulatory approval issues, according to which similar cases had in the past been amicably resolved with the US authorities. The EPA's publication of the "Notice of Violation" on September 18, 2015, which the Board of Management had not expected, especially at that time, then presented the situation in an entirely different light.

The AUDI AG Board of Management members in office at the time in question have likewise stated that they had no knowledge of the use of "defeat device" software that was prohibited by US law in the type V6 3.0 l TDI engines until the EPA issued its November 2015 "Notice of Violation."

Within the Volkswagen Group, Volkswagen AG has development responsibility for the four-cylinder diesel engines and AUDI AG has development responsibility for the six- and eight-cylinder diesel engines.

As a consequence of the diesel issue, numerous judicial and regulatory proceedings were initiated in various countries. Volkswagen has in the interim succeeded in making substantial progress and ending many of these proceedings. In the USA, Volkswagen AG and certain affiliates reached settlement agreements with various government authorities and private plaintiffs, the latter represented by a Plaintiffs' Steering Committee in a multidistrict litigation in the US state of California. The agreements in question include various partial consent decrees as well as a plea agreement that resolved certain civil claims as well as criminal charges under US federal law and the laws of certain US states in connection with the diesel issue. Although Volkswagen is firmly committed to fulfilling the obligations arising from these agreements, a breach of these obligations cannot be completely ruled out. In the event of a violation, significant penalties could be imposed as stipulated in the agreements, in addition to the possibility of further monetary fines, criminal sanctions and injunctive relief.

In agreement with the respective responsible authorities, the Volkswagen Group is making technical measures available worldwide for virtually all diesel vehicles with type EA 189 engines. For all clusters (groups of vehicles) within its jurisdiction, the KBA determined that implementation of the technical measures would not result in any adverse changes in fuel consumption, CO_2 emissions, engine output, maximum torque, and noise emissions.

Following the studies carried out by AUDI AG to check all relevant diesel concepts for possible irregularities and retrofit potential, measures proposed by AUDI AG have been adopted and mandated by the KBA in various recall orders pertaining to vehicle models with V6 and V8 TDI engines. AUDI AG continues to anticipate that the total cost, including recall expenses, of the ongoing largely software-based retrofit program that began in July 2017 will be manageable and has recognized corresponding balance-sheet risk provisions. AUDI AG has in the meantime developed software updates for many of the affected powertrains and, after approval by the KBA, already installed these updates in the vehicles of a large number of affected customers. KBA approval is still expected for the small number of software updates that are still pending.

In connection with the diesel issue, potential consequences for Volkswagen's results of operations, financial position and net assets could emerge primarily in the following legal areas:

1. Criminal and administrative proceedings worldwide (excluding the USA/Canada)

Criminal investigations, regulatory offense proceedings, and/or administrative proceedings have been commenced in some countries. Criminal investigations into the core factual issues are being conducted by the Offices of the Public Prosecutor in Braunschweig and Munich.

In January 2021, the criminal proceedings regarding alleged market manipulation relating to capital market disclosure obligations in connection with the diesel issue were terminated by the Braunschweig Regional Court provisionally as regards the former Chair of the Board of Management and definitively as regards the corresponding regulatory offense proceeding against Volkswagen AG. The Braunschweig Office of the Public Prosecutor has in the meantime filed a motion with the Braunschweig Regional Court to reopen the proceedings against the former Chair of the Board of Management. A final ruling on this motion is still pending.

In September 2020, the Braunschweig Regional Court allowed the indictment of the same former Chair of the Board of Management of Volkswagen AG to proceed on charges that include fraud in connection with the diesel issue involving type EA 189 engines. The proceedings against this former Chair of the Board of Management of Volkswagen AG have since been severed from the other cases. The trial of the other defendants began in September 2021.

The Braunschweig Office of the Public Prosecutor is continuing its investigations on suspicion of fraud in connection with type EA 288 engines.

In June 2020, the Munich II Regional Court accepted the substantially unchanged indictment of the Munich II Office of the Public Prosecutor, which also names a former Chair of the Board of Management of AUDI AG, and opened the main trial proceedings on charges of, among other things, fraud in connection with the diesel issue involving 3.0 l and 4.2 l TDI engines. Trial proceedings commenced in September 2020.

In August 2020, the Munich II Office of the Public Prosecutor issued a further indictment charging three former members of the Board of Management of AUDI AG and others with, among other things, fraud in connection with the diesel issue involving 3.0 l and 4.2 l TDI engines. The criminal investigation conducted by the Stuttgart Office of the Public Prosecutor against a member of the Board of Management of Dr. Ing. h.c. F. Porsche AG and others on suspicion of fraud and illegal advertising relating to the diesel issue has in the interim been terminated at the end of April 2022, as regards *inter alia* the Board of Management member, against payment of a sum set by the court.

As the type approval authority of proper jurisdiction, the KBA is moreover continuously testing Audi, Volkswagen, and Porsche brand vehicles for problematic functions. If certain functions are deemed impermissible by the KBA, the affected vehicles are recalled pursuant to a recall order or they are brought back into compliance by means of a voluntary service measure.

In judgments rendered in July and November 2022, the European Court of Justice (ECJ) ruled that a so-called thermal window (i.e. a temperature-dependent exhaust gas recirculation) in the range of 15°C and 33°C outside temperature represents a defeat device. In this context, the ECJ has developed a new, unwritten criterion according to which a thermal window, even if it serves to prevent sudden and extraordinary damage, is impermissible if it is active “for most of the year under real driving conditions prevalent in the territory of the European Union.” Volkswagen Group is assessing the effects of this new vehicle engineering criterion. The KBA has commenced formal administrative proceedings relating to certain first generation type EA 896 engines deployed in certain older vehicle models. Volkswagen Group is in discussion with the KBA on this issue.

At the end of February 2023, the Schleswig Administrative Court in a court of first instance judgment upheld a lawsuit brought by Deutsche Umwelthilfe (Environmental Action Germany) against the KBA and ordered the KBA to revoke the release notice for the software update for certain older Golf Plus models, insofar as the release notice relates to the thermal window. Volkswagen will review the decision once the written reasoning is available and decide on further measures.

Moreover, additional administrative proceedings relating to the diesel issue are ongoing in other jurisdictions.

The companies of the Volkswagen Group are cooperating with the government authorities.

Risks may furthermore result from possible decisions by the European Court of Justice construing EU type approval provisions.

Whether the criminal and administrative proceedings will ultimately result in fines or other consequences for the Company, and if so what amounts these may entail, is currently subject to estimation risks. According to Volkswagen’s estimates, the likelihood that a sanction will be imposed is 50% or less in the majority of these proceedings. Contingent liabilities have therefore been disclosed where the amount of such liabilities could be measured and the likelihood of a sanction being imposed was assessed at not less than 10%.

2. Product-related lawsuits worldwide (excluding the USA/Canada)
A general possibility exists that customers in the affected markets will file civil lawsuits or that importers and dealers will assert recourse claims against Volkswagen AG and other Volkswagen Group companies. Besides individual lawsuits, various forms of collective actions (i.e. assertion of individual claims by plaintiffs acting jointly or as representatives of a class) are available in various jurisdictions. Furthermore, in a number of markets it is possible for consumer and/or environmental organizations to bring suit to enforce alleged rights to injunctive relief, declaratory judgment, or damages.

Customer class action lawsuits and actions brought by consumer and/or environmental organizations are pending against Volkswagen AG and other Volkswagen Group companies in a number of countries including Belgium, Brazil, England and Wales, France, Germany, Italy, the Netherlands, Portugal, and South Africa. Alleged rights to damages and other relief are asserted in these actions. The pending actions include in particular the following:

In Belgium, the Belgian consumer organization Test Aankoop VZW has filed a class action to which an opt-out mechanism has been held to apply. Given the opt-out rule, the class action potentially covers all vehicles with type EA 189 engines purchased by consumers on the Belgian market after September 1, 2014, unless the right to opt out is actively exercised. The asserted claims are based on purported violations of unfair competition and consumer protection law as well as on alleged breach of contract.

In Brazil, two consumer protection class actions are pending. In the first class action, which pertains to some 17 thousand Amarok vehicles, the Superior Court of Justice in August 2022 rejected in part the appeal filed by Volkswagen do Brasil against the May 2019 judgment at the first appeals level that had initially reduced the damage liability of Volkswagen do Brasil considerably to around BRL172 million. Volkswagen do Brasil has appealed this decision. The judgment therefore remains non-final. The plaintiff in the second class action, which pertains to roughly 67 thousand later generation Amaroks, has appealed the trial court’s October 2021 judgment dismissing the complaint.

The financialright GmbH filed consolidated actions before various German courts asserting claims assigned to it by customers in Germany, Slovenia, and Switzerland against Volkswagen Group companies. Following the withdrawal of numerous motions for relief, approximately 33 thousand claims are currently still pending. Some cases have in the meantime moved to the first or second appeals level. In Germany, the Bundesgerichtshof (BGH – Federal Court of Justice) rendered a judgment in June 2022 holding, in a case involving the damage claims of Swiss vehicle purchasers, that the assignment of claims to financialright GmbH was valid. The BGH did not address the merits of the claims.

In England and Wales, the roughly 91 thousand claims of the group litigation against the Volkswagen Group were settled out of court in May 2022 for the sum of £193 million as well as a separate amount for the plaintiffs’ attorney fees and other costs.

In addition, in late 2021 a new lawsuit was filed in court against Volkswagen AG, Volkswagen Financial Services (UK) Limited, and other Volkswagen Group companies in connection with certain diesel vehicles leased or sold in England, Wales, and Northern Ireland since 2009 and various other diesel engine types.

In France, a class action is pending that was filed by the French consumer organization Confédération de la Consommation, du Logement et du Cadre de Vie (CLCV) against Volkswagen Group Automotive Retail France and Volkswagen AG for up to 1 million French owners and lessees of vehicles with type EA 189 engines. This is an opt-in class action.

In Italy, a trial level judgment in favor of the plaintiffs by the Venice Regional Court in the class action brought by the consumer association Altroconsumo on behalf of Italian customers was announced in July 2021; the judgment requires Volkswagen AG and Volkswagen Group Italia to pay damages to some 63 thousand consumers in an aggregate amount of roughly €185 million. Volkswagen AG and Volkswagen Group Italia have appealed this decision.

In the Netherlands, an opt-out class action is pending that was brought by Stichting Volkswagen Car Claim seeking declaratory rulings for up to 165 thousand customers. A declaratory judgment partially granting the relief sought was issued in July 2021. In the opinion of the court, Volkswagen AG and the other defendant Group companies acted unlawfully with respect to the original engine management software. The court moreover held that consumers are entitled to a purchase price reduction from the defendant dealerships. No specific payment obligations result from the declaratory judgment. Any individual claims would then have to be established afterwards in separate proceedings. Volkswagen AG and the other defendant Group companies have appealed the decision. Furthermore, an opt-out class action lawsuit brought by the Diesel Emissions Justice Foundation (DEJF) seeking monetary damages on behalf of Dutch consumers is also pending; the action involves vehicles with type EA 189 engines, among others. The court rendered an interlocutory judgment in March 2022 holding the new class action regime – which permits damage awards in addition to declaratory judgment on the existence of claims – to be inapplicable to the instant lawsuit. The interlocutory judgment further finds that the Amsterdam court lacks jurisdiction to hear lawsuits brought by consumers outside the Netherlands. The DEJF appealed this judgment. The court then suspended the trial level proceedings pending a decision by the appellate court.

In Portugal, a Portuguese consumer organization has filed an opt-out class action. The class action potentially affects up to approximately 70 thousand vehicles with type EA 189 engines. The complaint seeks vehicle return and alleges damages as well.

In South Africa, an opt-out class action seeking damages is pending; the action pertains to some 80 thousand vehicles, including vehicles with type EA 189 engines.

Furthermore, individual lawsuits and similar proceedings are pending against Volkswagen AG and other Volkswagen Group companies in various countries; most of these lawsuits are seeking damages or rescission of the purchase contract.

In Germany, roughly 40 thousand individual lawsuits relating to various diesel engine types are currently pending against Volkswagen AG or other Group companies, with the plaintiffs suing for damages or rescission of the contract in most cases.

In 2020, the BGH issued a series of fundamental judgments deciding legal issues of major importance for the litigation still pending with regard to vehicles with type EA 189 engines. The BGH held that buyers who had purchased vehicles prior to public disclosure of the diesel issue could return their vehicles to Volkswagen AG and receive a refund of the purchase price paid, less a deduction for the benefit derived from using the vehicle. However, buyers have no tort-based claim for damages if they purchased their vehicles after the ad hoc announcement of September 22, 2015 or if they raise claims based solely on a temperature-dependent exhaust gas recirculation (so-called thermal window) in the engine. In February 2022, the BGH issued further fundamental judgments concerning vehicles with EA 189 motors affirming that buyers of new vehicles of the Volkswagen brand were entitled to residual damage claims against Volkswagen AG after the knowledge-based limitation period has expired; the BGH had previously held that purchasers of used cars lacked such claims. The BGH held that buyers must return their vehicles in order to claim payment and that such payment was reduced by the benefit derived from using the vehicle and by the dealer profit margin. In an additional fundamental judgment rendered in July 2022 concerning vehicles with EA 189 engines, the BGH held that buyers of new vehicles of other Group brands have no claim for residual damages against Volkswagen AG.

Volkswagen estimates the likelihood that the plaintiffs will prevail to be 50% or less in the great majority of cases: customer class actions, complaints filed by consumer and/or environmental organizations, and individual lawsuits. Contingent liabilities are disclosed for these proceedings where the amount of such liabilities can be measured and the chance that the plaintiff will prevail was assessed as not remote. Given the early stage of the proceedings, it is in some cases not yet possible to quantify the realistic risk exposure. Furthermore, provisions were recognized to the extent necessary based on the current assessment.

At this time, it cannot be estimated how many customers will choose to file lawsuits in the future in addition to those already pending and what prospect of success such lawsuits might have.

3. Lawsuits filed by investors worldwide (excluding the USA/Canada)

Investors from Germany and abroad have filed claims for damages against Volkswagen AG – in some cases along with Porsche Automobil Holding SE (Porsche SE) as joint and several debtors – based on purported losses due to alleged misconduct in capital market communications in connection with the diesel issue.

The vast majority of these investor lawsuits are currently pending before the Braunschweig Regional Court. In August 2016, the Braunschweig Regional Court issued an order referring common questions of law and fact relevant to the investor lawsuits pending before it to the Higher Regional Court in Braunschweig for binding declaratory rulings pursuant to the Kapitalanleger-Musterverfahrensgesetz (KapMuG – German Capital Investor Model Declaratory Judgment Act). In this proceeding, common questions of law and fact relevant to these actions are to be adjudicated by the Braunschweig Higher Regional Court in a single consolidated proceeding (model case proceedings). The investor lawsuits pending against Volkswagen AG in Germany are stayed pending resolution of the common issues, unless the cases can be dismissed for reasons independent of the common issues that are to be adjudicated in the model case proceedings. The resolution in the model case proceedings of the common questions of law and fact will be binding for the pending cases that have been stayed as described. The model case plaintiff is Deka Investment GmbH. Oral argument in the model case proceedings before the Braunschweig Higher Regional Court began in September 2018 and is continuing at subsequent hearings. The latest indication from the court was that it may hear witness testimony on certain points.

Further investor lawsuits have been filed with the Stuttgart Regional Court against Volkswagen AG, in some cases along with Porsche SE as joint and several debtor. A further investor action for model declaratory judgment is pending before the Stuttgart Higher Regional Court against Porsche SE; Volkswagen AG is involved in this action as a third party intervening in support of a party to the dispute. The Wolverhampton City Council, Administrating Authority for the West Midlands Metropolitan Authorities Pension Fund, has been appointed model case plaintiff. Oral argument in this case began in July 2021 and continued in subsequent hearings. The court has scheduled a hearing in the spring of 2023 at which it will deliver its decision.

Excluding the United States and Canada and following the withdrawal of various actions, claims in connection with the diesel issue totaling roughly €9.5 billion are currently pending worldwide against Volkswagen AG in the form of investor lawsuits, judicial applications for dunning and conciliation procedures, and claims under the KapMuG. Volkswagen AG remains of the opinion that it duly complied with its capital market obligations. Therefore, no provisions have been recognized for these investor lawsuits. Contingent liabilities have been disclosed where the chance of success was estimated to be not less than 10%.

4. Proceedings in the USA/Canada

In the USA and Canada, the matters described in the EPA's "Notices of Violation" are the subject of various types of lawsuits and requests for information that have been filed against Volkswagen AG and other Volkswagen Group companies, in particular by customers, investors, and various government agencies in Canada and the United States.

In January 2017, Volkswagen entered into a Third Partial Consent Decree with the DOJ and the EPA, which the federal court in the multidistrict litigation approved in April 2017. The Third Partial Consent Decree resolved claims for civil penalties and injunctive relief under the Clean Air Act related to the 2.0 l and 3.0 l TDI vehicles, and imposed a civil penalty as well as monitoring, auditing, and compliance obligations. In July 2017, the court furthermore approved the Third California Partial Consent Decree, in which Volkswagen agreed with the California Attorney General and CARB to pay civil penalties and cost reimbursements. Subsequently, Volkswagen sought to terminate both consent decrees on the basis that all requirements had been met, and the US and California authorities agreed to the termination, which the court granted in September 2022.

The Texas attorney general and some municipalities continue to pursue actions in state and federal courts against Volkswagen AG, Volkswagen Group of America, Inc., and certain affiliates, alleging violations of environmental laws. In January 2022, the Texas Supreme Court granted the February 2021 petition of the State of Texas for review of the Texas appellate court decision that had dismissed the environmental claims of Texas against Volkswagen AG and AUDI AG for lack of personal jurisdiction.

In November 2021, the US Supreme Court denied petitions by Volkswagen requesting that it reviews both a decision by the US Court of Appeals for the Ninth Circuit declining to dismiss certain claims brought by Hillsborough County, Florida, and Salt Lake County, Utah, and a decision by the Ohio Supreme Court declining to dismiss certain claims brought by the State of Ohio.

In January 2022, Volkswagen settled environmental claims brought by Ohio.

In March 2019, the US Securities and Exchange Commission (SEC) filed a lawsuit against, among others, Volkswagen AG, Volkswagen Group of America Finance, LLC, and VW Credit, Inc., asserting claims under US federal securities law based, among other things, on alleged misstatements and omissions in connection with the offer and sale of certain bonds and asset-backed securities. In August 2020, the US District Court for the Northern District of California dismissed, among other things, all claims against VW Credit, Inc. relating to asset-backed securities. In September 2020, the SEC filed an amended complaint that, among other things, removed the dismissed claims. The pre-trial discovery phase is still ongoing.

As to private civil law matters, the Superior Court of Quebec approved the settlement of an environmental class action lawsuit seeking punitive damages on behalf of the residents of the Province of Quebec in June 2022; an appeal of that approval on the limited subject of counsel fees has been dismissed in the meantime so that the settlement may now proceed.

In line with IAS 37.92, no statements have been made concerning estimates of financial impact or regarding uncertainty as to the amount or maturity of provisions and contingent liabilities in relation to proceedings in the USA/Canada. This is so as to not compromise the results of the proceedings or the interests of the Company.

5. Special audit

In a November 2017 ruling, the Higher Regional Court of Celle ordered, upon the request of three US funds, the appointment of a special auditor for Volkswagen AG. The special auditor was supposed to examine whether the members of the Board of Management and Supervisory Board of Volkswagen AG breached their duties in connection with the diesel issue from June 22, 2006 onwards and, if so, whether this resulted in damages for Volkswagen AG. Volkswagen AG had filed a constitutional complaint with the German Federal Constitutional Court against this decision, which was originally unappealable as a formal matter. Volkswagen AG also filed a constitutional complaint against the subsequent (and likewise formally unappealable) decision by the Higher Regional Court of Celle to appoint a special auditor other than the one initially appointed. In rulings announced in November 2022, the Federal Constitutional Court found both constitutional complaints to be meritorious and held that the decisions of the Higher Regional Court of Celle violated the constitutional rights of Volkswagen AG in multiple respects. The decisions of the Higher Regional Court were vacated and the case was remanded to this court. Volkswagen AG had in addition previously filed an action before the Braunschweig Regional Court seeking to enjoin the special auditor from performing the audit as long as he had not furnished sufficient proof of his independence. The Braunschweig Regional Court dismissed the action for injunctive relief in the summer of 2022; Volkswagen AG then appealed this decision to the Braunschweig Higher Regional Court.

A second motion seeking appointment of a special auditor for Volkswagen AG to examine matters relating to the diesel issue was filed with the Regional Court of Hanover. This proceeding was stayed pending the decision by the Federal Constitutional Court in the initial special auditor litigation. No decision whether to resume the proceeding has as yet been issued.

6. Risk assessment regarding the diesel issue

An amount of around €1.4 billion (previous year: €2.1 billion) has been included in the provisions for litigation and legal risks as of December 31, 2022 to account for the currently known legal risks related to the diesel issue based on the presently available information and the current assessments. Where adequately measurable at this stage, contingent liabilities relating to the diesel issue have been disclosed in the notes in an aggregate amount of €4.2 billion (previous year: €4.3 billion), whereby roughly €3.6 billion (previous year: €3.6 billion) of this amount results from lawsuits filed by investors in Germany. The provisions recognized, the contingent liabilities disclosed, and the other latent legal risks in the context of the diesel issue are in part subject to substantial estimation risks given the complexity of the individual relevant factors, the ongoing coordination with the authorities, and the fact that the fact-finding efforts have not yet been concluded. Should these legal or estimation risks materialize, this could result in further substantial financial charges. In particular, adjustment of the provisions recognized in light of knowledge acquired or events occurring in the future cannot be ruled out.

In line with IAS 37.92, no further statements have been made concerning estimates of financial impact or regarding uncertainty as to the amount or maturity of provisions and contingent liabilities in relation to the diesel issue. This is so as to not compromise the results of the proceedings or the interests of the Company.

Additional important legal cases

In 2011, ARFB Anlegerschutz UG (haftungsbeschränkt) filed a claim for damages against Volkswagen AG and Porsche SE for allegedly violating disclosure requirements under capital market law in connection with the acquisition of ordinary shares in Volkswagen AG by Porsche SE in 2008. The damages being sought based on allegedly assigned rights currently amount to approximately €2.26 billion plus interest. In late September 2022 the 1st Antitrust Chamber of the Higher Regional Court of Celle issued a model case ruling by which all of the plaintiffs' objects of declaratory judgment were either dismissed or declared to be irrelevant. The legal positions of the model case defendants were thus upheld in their entirety. Under the court's decision, Volkswagen AG is not liable because, among other things, the plaintiffs failed to make a sufficient showing that the Board of Management of Volkswagen AG had knowledge of the capital market information that was allegedly incorrect or subject to disclosure. The court further held that, even assuming members of the Supervisory Board to have had knowledge as alleged, such knowledge could not be imputed to the Board of Management. Two appeals alleging error of law in the model case ruling have been received, one of which is also directed against Volkswagen AG.

In Brazil, the Brazilian tax authorities commenced tax proceedings against Volkswagen Truck & Bus (formerly: MAN Latin America); at issue in these proceedings are the tax consequences of the acquisition structure chosen for Volkswagen Truck & Bus in 2009. In December 2017, an adverse administrative appeal ruling was rendered against Volkswagen Truck & Bus. Volkswagen Truck & Bus challenged this ruling before the regular court in 2018. Estimation of the risk in the event the tax authorities prevail on all points is subject to uncertainty because of differences in the amount of penalties and interest that might then apply under Brazilian law. However, a positive outcome for Volkswagen Truck & Bus remains the expectation. Should this not occur, a risk of about BRL3.5 billion could result for the contested period from 2009 onwards; this amount has been included in contingent liabilities in the notes.

In 2011, the European Commission conducted searches at European truck manufacturers for suspected unlawful exchange of information during the period from 1997 to 2011; in November 2014, the Commission issued a statement of objections to MAN, Scania, and the other truck manufacturers concerned. In its settlement decision of July 2016, the European Commission assessed fines against five European truck manufacturers. MAN's fine was waived in full as the company had informed the European Commission about the irregularities as a key witness. In September 2017, the European Commission fined Scania €0.88 billion. In a judgment rendered in February 2022, the European General Court (Court of First Instance) rejected in its entirety the appeal filed by Scania in this connection. Scania appealed this judgment to the European Court of Justice in April 2022. Furthermore, antitrust lawsuits seeking damages have been received from customers. As is the case in any antitrust proceedings, this may result in further lawsuits for damages. No provisions have been recognized or contingent liabilities disclosed for these cases as most of them are still in an early stage and currently cannot be assessed for this reason. In other cases, the chance of a decision by a court of last resort awarding antitrust damages against MAN or Scania currently appears remote.

In July 2021, the European Commission assessed a fine totaling roughly €502 million against Volkswagen AG, AUDI AG, and Dr. Ing. h.c. F. Porsche AG pursuant to a settlement decision. Volkswagen declined to file an appeal, hence the decision became final in 2021. The subject matter scope of the decision is limited to the cooperation of German automobile manufacturers on individual technical questions in connection with the development and introduction of SCR (selective catalytic reduction) systems for passenger cars that were sold in the European Economic Area. The manufacturers are not charged with any other misconduct such as price fixing or allocating markets and customers.

The Korean competition authority KFTC is analyzing potential violations based on the facts of the EU case. The final report of the appointed KFTC case handler was issued in November 2021. Volkswagen, Audi, and Porsche have replied to this report. In February 2023, the KFTC published a press release stating that an administrative fine decision would be issued against four automobile manufacturers in the SCR context. According to the press release, no fine is to be imposed on Volkswagen AG and the decision would not affect Porsche AG. However, an administrative fine decision would be issued against AUDI AG in the SCR matter. The competition authority's final decision and the grounds thereof have not yet been served; service is currently expected in the first half of 2023. The Turkish competition authorities, who investigated similar matters, issued a final decision in January 2022 in which they determined anticompetitive behavior to allegedly exist, but found that it had no effect on Türkiye, for which reason they refrained from imposing fines on the German automakers. Volkswagen, Audi, and Porsche are currently considering whether to file an appeal. Based on comparable matters, the Chinese competition authority has instituted proceedings against Volkswagen, Audi, and Porsche, among others, and issued requests for information.

In connection with the amended antitrust class action, which was initially dismissed with prejudice by the Northern District of California and which alleged that several automobile manufacturers, including Volkswagen AG and other Group companies, had conspired to unlawfully increase vehicle prices in violation of US antitrust and consumer protection law, the Ninth Circuit Court of Appeals in January 2022 denied plaintiffs' motion (filed at the end of 2021) for rehearing on the decision in which the court had affirmed the judgment of the US District Court. In February 2022, the District Court also denied plaintiffs' motion to set aside its judgment and to be allowed to file a new complaint. In June 2022, the US Supreme Court denied the petition filed by the plaintiffs seeking review of this decision.

Plaintiffs in Canada filed claims with similar allegations on behalf of putative classes of purchasers against several automobile manufacturers, including Volkswagen Group Canada Inc., Audi Canada Inc., and other Volkswagen Group companies. Neither provisions nor contingent liabilities are stated because the early stage of the proceedings makes an assessment of the realistic risk exposure currently impossible.

In March 2022, the European Commission and the Competition and Markets Authority (CMA), the English antitrust authorities, searched the premises of various automotive manufacturers and automotive industry organizations and/or served them with formal requests for information. In the Volkswagen Group, the investigation affects Volkswagen Group UK, which was searched by the CMA, and Volkswagen AG, which has received a Group-wide information request from the European Commission. The investigation relates to European, Japanese, and Korean manufacturers as well as national organizations operating in such countries and the European organization European Automobile Manufacturers' Association (ACEA), which are suspected of having agreed from 2001/2002 to the initiation of the proceedings to avoid paying for the services of recycling companies that dispose of end-of-life vehicles (ELV) (specifically passenger cars and vans up to 3.75 tons). Also alleged is an agreement to refrain from competitive use of ELV issues, that is, not to publicize relevant recycling data (recyclates, recyclability, recovery) for competitive purposes. The violation under investigation is alleged to have taken place in particular in the "ACEA" Working Group Recycling and related sub-groups thereof. Volkswagen AG is responding to the European Commission's information requests. Volkswagen Group UK is cooperating with the CMA. In this matter, CMA has furthermore issued requests for information to Volkswagen AG. In July 2022, Volkswagen AG filed an action for judicial review challenging the CMA's requests for information in particular because Volkswagen AG believes that they exceed the CMA's jurisdiction. In February 2023, the court granted the claim. The court's decision may still be appealed by the CMA. Concurrent therewith, Volkswagen AG continues to examine the possibilities for reasonable cooperation.

In addition, a few national and international authorities have initiated antitrust investigations. Volkswagen is cooperating closely with the responsible authorities in these investigations. An assessment of the underlying situation is not possible at this early stage.

Porsche AG has discovered potential regulatory issues relating to vehicles for various markets worldwide. There are questions as to the permissibility of specific hardware and software components used in type approval measurements. Differences compared with production versions may also have occurred in certain cases. Based on the information presently available, current production is not affected, however. The issues are unrelated to the defeat devices that were at the root of the diesel issue. Porsche AG is cooperating with the relevant authorities including the Stuttgart Office of the Public Prosecutor, which is investigating the matter in Germany. Based on the available information, no formal criminal investigation has been opened against the company, however. Porsche's own internal investigations are still in progress. In November 2022, the US District Court for the Northern District of California granted final approval of a USD80 million class action settlement resolving claims brought against Volkswagen AG, Dr. Ing. h.c. F. Porsche AG, and Porsche Cars North America, Inc. that certain Porsche gasoline vehicles allegedly used software and/or hardware that resulted in increased emissions and/or overstated fuel economy estimates as compared to the results of certification testing.

The final Profit Sharing Settlement Agreement entered into by Navistar in December 2021 to resolve disputes concerning the calculation of profit sharing amounts for purposes of Navistar's corporate retiree healthcare commitments received final approval from the relevant court in June 2022. In the reporting period, Navistar paid the entire amount of all remaining sums required to fulfill the agreement of about €0.4 billion.

In November 2021, three claimants accompanied by Greenpeace filed a lawsuit against Volkswagen AG before the Braunschweig Regional Court. The action seeks to compel Volkswagen to initially reduce in stages and by 2029 completely cease its production and placement into the stream of commerce of vehicles with internal combustion engines as well as to reduce greenhouse gas emissions from development, production, and marketing (including third party vehicle use). The lawsuit further seeks to compel Volkswagen to exercise influence over Group companies, subsidiaries, and joint ventures so as to cause them to fulfill these demands as well. In February 2023, the Braunschweig Regional Court dismissed the action as unfounded. In addition, another action with similar requests for relief and by and large the same rationale has been filed against Volkswagen AG by an organic farmer with the support of Greenpeace before the Detmold Regional Court. This action was dismissed by the Detmold Regional Court also as unfounded in February 2023.

Provisions were recognized by Volkswagen Bank GmbH and Volkswagen Leasing GmbH for possible claims in connection with financial services provided to consumers. These relate to actions involving certain features of customer loan and leasing agreements that may toll the running of the statutory cancellation time periods.

In September 2022, GT Gettaxi Ltd. discontinued the lawsuit it had filed against Volkswagen AG and another defendant, alleging in particular large damage claims. In August 2021, the lawsuit had been dismissed at the trial level on the grounds that the Cypriot courts lacked jurisdiction, but GT Gettaxi Ltd. appealed this decision to the Supreme Court, the court of final appeal in Cyprus.

In line with IAS 37.92, no further statements have been made concerning estimates of financial impact or regarding uncertainty as to the amount or maturity of provisions and contingent liabilities in relation to additional important legal cases. This is so as to not compromise the results of the proceedings or the interests of the Company.

40. Other financial obligations

€ million	PAYABLE 2023	PAYABLE 2024 - 2027	PAYABLE from 2028	TOTAL Dec. 31, 2022
Purchase commitments in respect of				
property, plant and equipment	8,024	2,167	1	10,191
intangible assets	2,405	240	–	2,645
investment property	16	–	–	16
Obligations from loan commitments and irrevocable credit commitments	12,329	98	14	12,441
Obligations from leasing and rental contracts	350	278	135	762
Miscellaneous other financial obligations	4,302	3,407	1,609	9,318
	27,426	**6,190**	**1,758**	**35,375**

€ million	PAYABLE 2022	PAYABLE 2023 - 2026	PAYABLE from 2027	TOTAL Dec. 31, 2021
Purchase commitments in respect of				
property, plant and equipment	6,146	1,220	2	7,368
intangible assets	1,823	501	–	2,324
investment property	15	–	–	15
Obligations from loan commitments and irrevocable credit commitments	14,560	127	47	14,734
Obligations from leasing and rental contracts	324	271	178	774
Miscellaneous other financial obligations	3,976	3,553	1,956	9,485
	26,844	**5,673**	**2,183**	**34,700**

Other financial obligations include an amount of €0.5 billion (previous year: €0.7 billion) for investments to which the Group has committed itself, both in the infrastructure for zero-emission vehicles and in initiatives to promote access to and awareness of these technologies. These commitments were made as part of the settlement agreements in the USA in connection with the diesel issue.

In addition to the other financial obligations shown in the table, purchase commitments exist for inventories with a short turnover period, which arise primarily from the Master Collaboration Agreement with Ford Motor Company for the joint development of vans and mid-sized pickups for the global market.

41. Total fee of the Group auditor

Under the provisions of the Handelsgesetzbuch (HGB – German Commercial Code), Volkswagen AG is obliged to disclose the total fee charged for the fiscal year by the Group auditor, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft.

€ million	2022	2021
Financial statement audit services	26	22
Other assurance services	6	3
Tax advisory services	0	7
Other services	2	4
	34	**36**

The financial statement audit services related to the audit of the consolidated financial statements of Volkswagen AG and to the annual financial statements of German Group companies, as well as to reviews of the interim consolidated financial statements of Volkswagen AG and of the interim financial statements of German Group companies. Other assurance services mainly related to statutory and non-statutory audits as well as non-statutory assurance services for capital market transactions. The tax advisory services provided by the auditors in the previous year related primarily to assistance in the preparation of tax returns for employees on delegations abroad. Other services provided by the auditors related primarily to advisory services in connection with transformation processes.

42. Personnel expenses

€ million	2022	2021
Wages and salaries	37,529	34,644
Social security, post-employment and other employee benefit costs	9,473	9,033
	47,002	**43,677**

43. Average number of employees during the year

	2022	2021
Performance-related wage-earners	263,053	263,193
Salaried staff	318,016	313,010
	581,069	**576,203**
of which in the passive phase of partial retirement	12,144	12,171
Vocational trainees	15,622	16,404
	596,691	**592,607**
Employees of Chinese joint ventures	72,585	75,040
	669,275	**667,647**

44. Events after the balance sheet date

There were no events with a significant effect on net assets, financial position and results of operations after December 31, 2022.

45. Remuneration based on performance shares

The remuneration of the Board of Management is based on the remuneration system updated by the Supervisory Board on December 14, 2020 with effect from January 1, 2021. The remuneration system implements the requirements of the AktG as amended by ARUG II and takes into account the recommendations of the German Corporate Governance Code (the Code) in the version dated April 28, 2022 (which entered into force on June 27, 2022). The Annual General Meeting approved the remuneration system on July 22, 2021 with 99.61% of the votes cast.

The new remuneration system has applied from January 1, 2021 to all Board of Management members with employment contracts newly concluded or renewed after the Supervisory Board resolution of December 14, 2020. For the Board of Management members already appointed at the time of the resolution by the Supervisory Board on December 14, 2020, the new remuneration system also applies in principle from January 1, 2021. Until such time as their contracts are renewed, however, the following exceptions apply: the performance share plan of the Board of Management members already appointed continues to have only a three-year performance period but otherwise corresponds to the performance share plan described in this system. Penalty and clawback rules and a four-year performance period (previously: three years) will only apply to Board of Management members already appointed on renewal of their contracts.

The group of beneficiaries of the performance share plan was expanded at the end of 2018 by including members of top management and at the end of 2019 by adding all other members of management and selected participants below management level. Performance shares were first granted to members of top management at the beginning of 2019. All other beneficiaries were allocated benefits on the basis of performance shares for the first time at the beginning of 2020. The function of the performance share plan for top management and other beneficiaries is largely identical to the performance share plan that was granted to the members of the Board of Management. The performance period for beneficiaries below Board of Management level is 3 years. When the performance share plan was launched, members of top management were guaranteed a minimum bonus amount for the first three years on the basis of the remuneration for 2018, while all other beneficiaries were given a guarantee for the first three years on the basis of the remuneration for 2019.

PERFORMANCE SHARES

Each performance period of the performance share plan has a term of three or four years. For members of the Board of Management and of top management, the annual target amount under the LTI is converted at the time of granting into performance shares on the basis of the initial reference price of Volkswagen's preferred shares. This annual target amount is allocated to the respective beneficiaries as a pure calculation position. Based on the degree of target achievement for the annual earnings per Volkswagen preferred share, the number of performance shares is definitively determined on the basis of a three- or four-year, forward-looking performance period. After the end of the performance period, a cash settlement is made. The payment amount corresponds to the number of determined performance shares, multiplied by the closing reference price at the end of the period plus a dividend equivalent.

For all other beneficiaries, the payment amount is determined by multiplying the target amount by the degree of target achievement for the annual earnings per Volkswagen preferred share and the ratio of the closing reference price at the end of the period, plus a dividend equivalent, to the initial reference price. Target achievement is determined on the basis of a three-year performance period with a forward-looking horizon of one year. For all beneficiaries, the payment amount under the performance share plan is limited to 200% of the target amount; the payment amount is reduced by 20% if the average ratio of capex to sales revenue or the R&D ratio in the Automotive Division is smaller than 5% during the performance period.

BOARD OF MANAGEMENT AND MEMBERS OF TOP MANAGEMENT

		Dec. 31, 2022	Dec. 31, 2021
Total expense of the reporting period	€ million	136	152
Carrying amount of the obligation	€ million	181	189
Intrinsic value of the obligation	€ million	69	127
Fair value on granting date	€ million	101	110
Granted performance shares	Shares	2,006,851	2,064,335
of which granted during the reporting period	Shares	684,317	769,496

MEMBERS OF MANAGEMENT AND SELECTED PARTICIPANTS BELOW MANAGEMENT LEVEL

In the fiscal year, beneficiary members of management and selected participants below management level were allocated a target amount of €688 million (previous year: €665 million) on which target achievement of 100% is based. As of December 31, 2022, the total carrying amount of the obligation, which corresponded to the intrinsic value of the liabilities, was €841 million (previous year: €836 million). A total expense of €886 million (previous year: €857 million) was recognized for this commitment in the reporting period.

46. Related party disclosures in accordance with IAS 24

Related parties as defined by IAS 24 are natural persons and entities that Volkswagen AG has the ability to control or on which it can exercise significant influence, or natural persons and entities that have the ability to control or exercise significant influence on Volkswagen AG, or that are influenced by another related party of Volkswagen AG.

All transactions with related parties are regularly conducted on an arm’s length basis.

Porsche SE held the majority of the voting rights in Volkswagen AG as of the reporting date. The creation of rights of appointment for the State of Lower Saxony was resolved at the extraordinary General Meeting of Volkswagen AG on December 3, 2009. This means that Porsche SE cannot elect all shareholder representatives to the Supervisory Board of Volkswagen AG for as long as the State of Lower Saxony holds at least 15% of Volkswagen AG’s ordinary shares. However, Porsche SE has the power to participate in the operating policy decisions of the Volkswagen Group and is therefore classified as a related party as defined by IAS 24.

According to a notification dated January 9, 2023, the State of Lower Saxony and Hannoversche Beteiligungsgesellschaft Niedersachsen mbH, Hanover, held 20.00% of the voting rights of Volkswagen AG on December 31, 2022. As mentioned above, the General Meeting of Volkswagen AG on December 3, 2009 also resolved that the State of Lower Saxony may appoint two members of the Supervisory Board (right of appointment).

Contribution of Porsche SE’s holding company operating business

The contribution of Porsche SE’s holding company operating business to Volkswagen AG on August 1, 2012 has the following effects on the agreements between Porsche SE, Volkswagen AG and companies of the Porsche Holding Stuttgart GmbH Group that existed prior to the contribution and were entered into on the basis of the Comprehensive Agreement and its related implementation agreements:

> Volkswagen AG continues to indemnify Porsche SE internally against claims by the Einlagensicherungsfonds (German deposit protection fund) after Porsche SE submitted an indemnification agreement required by the Bundesverband Deutscher Banken (Association of German Banks) to the Einlagensicherungsfonds in August 2009. Volkswagen AG has also undertaken to indemnify the Einlagensicherungsfonds against any losses caused by measures taken by the latter in favor of a bank in which Volkswagen AG holds a majority interest.

> Under certain conditions, Porsche SE continues to indemnify Porsche Holding Stuttgart GmbH, Porsche AG and their legal predecessors against tax disadvantages that exceed the obligations recognized in the financial statements of those companies relating to periods up to and including July 31, 2009. In return, Volkswagen AG has undertaken to reimburse Porsche SE for any tax advantages of Porsche Holding Stuttgart GmbH, Porsche AG and their legal predecessors and subsidiaries relating to tax assessment periods up to July 31, 2009. Based on the results of the external tax audit for the assessment periods 2006 to 2008, which has now been completed, and based on information for the 2009 assessment period available at the date of preparing these consolidated financial statements, a compensation obligation estimated in the low triple-digit million euro range will arise for Volkswagen AG. New information emerging in the future could result in an increase or decrease in the potential compensation obligation.

Under the terms of the Comprehensive Agreement, Porsche SE and Volkswagen AG had granted each other put and call options with regard to the remaining 50.1% interest in Porsche Holding Stuttgart GmbH held by Porsche SE until the contribution of its holding company operating business to Volkswagen AG. Both Volkswagen AG (if it had exercised its call option) and Porsche SE (if it had exercised its put option) had undertaken to bear the tax burden resulting from the exercise of the options and any subsequent activities in relation to the equity investment in Porsche Holding Stuttgart GmbH (e.g. from recapture taxation on the spin-off in 2007 and/or 2009). If tax benefits had accrued to Volkswagen AG, Porsche Holding Stuttgart GmbH, Porsche AG, or their respective subsidiaries as a result of recapture taxation on the spin-off in 2007 and/or 2009, the purchase price to be paid by Volkswagen AG for the transfer of the outstanding 50.1% equity investment in Porsche Holding Stuttgart GmbH if the put option had been exercised by Porsche SE would have been increased by the present value of the tax benefit. This arrangement was taken over under the terms of the contribution agreement to the effect that Porsche SE has a claim against Volkswagen AG for payment in the amount of the present value of the realizable tax benefits from any recapture taxation of the spin-off in 2007 as a result of the contribution. It was also agreed under the terms of the contribution that Porsche SE will indemnify Volkswagen AG, Porsche Holding Stuttgart GmbH and their subsidiaries against taxes if measures taken by or not taken by Porsche SE result in recapture taxation for 2012 at these companies in the course of or following implementation of the contribution. In this case, too, Porsche SE is entitled to assert a claim for payment against Volkswagen AG in the amount of the present value of the realizable tax benefits that arise at the level of Volkswagen AG or one of its subsidiaries as a result of such a transaction.

Further agreements were entered into and declarations were issued in connection with the contribution of Porsche SE's holding company operating business to Volkswagen AG, in particular:

- Porsche SE indemnifies the subsidiaries it contributed as part of the business contribution as well as Porsche Holding Stuttgart GmbH, Porsche AG and their subsidiaries against certain liabilities to Porsche SE that relate to the period up to and including December 31, 2011 and that exceed the obligations recognized in the financial statements of those companies for that period.
- Moreover, Porsche SE indemnifies Volkswagen AG, Porsche Holding Stuttgart GmbH, Porsche AG and their subsidiaries against half of the taxes (other than taxes on income) arising at those companies in conjunction with the contribution that would not have been incurred in the event of the exercise of the call options on the shares of Porsche Holding Stuttgart GmbH that continued to be held by Porsche SE until the contribution. Volkswagen AG therefore indemnifies Porsche SE against half of such taxes that the company incurs.
- Additionally, Porsche SE and Porsche AG agreed to allocate any subsequent VAT receivables or liabilities from transactions in the period up to December 31, 2009 to the company entitled to the receivable or incurring the liability.
- A range of information, conduct and cooperation obligations were agreed by Porsche SE and the Volkswagen Group in the contribution agreement.

As part of the IPO of Porsche AG and the sale of ordinary shares to Porsche SE, Porsche SE and Volkswagen AG entered not only into the share purchase agreement and the shareholders' agreement, but also into a "procedural and amendment agreement and agreement to amend the Comprehensive Agreement". The latter led to amendments to some provisions, including those on appointments to governing bodies of Porsche AG, contained in the Comprehensive Agreement.

IPO of Porsche AG

On September 28, 2022, Volkswagen placed 25% of the preferred shares (including additional allocations) of its subsidiary Porsche AG with investors at a placement price of €82.50 per preferred share. These preferred shares have been traded on the stock exchange since the day after the placement. The basis for the IPO was a comprehensive agreement to enter into a number of contracts between Volkswagen and Porsche SE. In this context, the two parties agreed that Porsche SE would acquire 25% of the ordinary shares of Porsche AG plus one ordinary share from Volkswagen. The price per ordinary share equaled the placement price per preferred share plus a premium of 7.5%. The remaining shares of the preference and ordinary share capital of Porsche AG continue to be held by Volkswagen Group companies. Under the purchase agreement, Volkswagen AG as warrantor provides several warranties to Porsche SE, which essentially puts Porsche SE in the same position as buyers of the preferred shares sold under the IPO. In addition, Volkswagen AG assumes a small number of other standard market guarantees, most of them limited to positive knowledge of Volkswagen AG.

Porsche SE acquired the ordinary shares in two tranches of 79,712,501 and 34,162,500 shares respectively, but the voting rights attached to the 113,875,001 ordinary shares were already transferred to Porsche SE on delivery of the first tranche. Completion of the first tranche was conditional on the full placement of the preferred shares within the price range as part of the IPO as well as on the book transfer of the placement shares against payment of the placement price. Completion, which occurred on October 4, 2022, coincided with the settlement of the purchase price liability of €7.1 billion for the first tranche. Completion of the second tranche of ordinary shares was conditional on the completion of the first tranche and distribution of the special dividend of 49% of the total gross proceeds from the placement of the preferred shares (including any additional allocations) and the sale of the ordinary shares. Porsche SE had the right unilaterally to waive this second closing condition and in this way initiate the early transfer of the second tranche against payment of the purchase price. Moreover, Porsche SE had the right to bring about the transfer of the second tranche as of December 30, 2022 without amending the due date of the purchase price as of the distribution date of the special dividend. To this end, a lien was to be granted over the ordinary shares of the second tranche to secure Volkswagen's purchase price receivable. Porsche SE exercised this right so that the material transfer of the second tranche was completed on December 30, 2022. The transaction resulted in a receivable from Porsche SE in an amount of €3.0 billion. The resolution of the extraordinary General Meeting of Volkswagen AG on December 16, 2022 gave rise to the obligation to pay a dividend, which was increased by €19.06 per ordinary and preferred share ("special dividend") and led to a total obligation to the shareholders of Volkswagen AG amounting to €9.6 billion.

The cash outflow had been slated for January 9, 2023 and occurred on that day. Out of the total, an amount of €3.1 billion was attributable to Porsche SE.

Volkswagen AG and Porsche SE agreed to offset the obligation to pay a special dividend to Porsche SE against Volkswagen AG's claim to the payment of the purchase price still outstanding for the second tranche of ordinary shares. In the consolidated financial statements as of December 31, 2022, the purchase price receivable and the dividend liability were therefore presented on a net basis. Upon payment of the special dividend on January 9, 2023, the netting process was completed.

In connection with the IPO of Porsche AG, Volkswagen AG also assumed obligations for dividend distributions of Porsche AG, although payments will only be made in 2023 after the Annual General Meeting of Porsche AG. €114 million of this obligation is attributable to Porsche SE.

Volkswagen AG and Porsche SE have agreed in connection with the IPO and sale of ordinary shares to Porsche SE that representatives of Porsche SE will have a significant presence on the Supervisory Board of Porsche AG. Ultimate decision rights of the shareholder representatives determined by Volkswagen on the Supervisory Board with regard to the ability to direct the relevant activities at Porsche AG within the meaning of IFRS 10 will ensure continued control by Volkswagen AG.

Other related party disclosures in accordance with IAS 24

The following tables present the amounts of supplies and services transacted, as well as outstanding receivables and liabilities, between consolidated companies of the Volkswagen Group and related parties:

€ million	SUPPLIES AND SERVICES RENDERED		SUPPLIES AND SERVICES RECEIVED	
	2022	2021	2022	2021
Porsche SE and its majority interests	4	6	0	4
Supervisory Board members	2	2	1	1
Board of Management members	0	0	0	0
Unconsolidated subsidiaries	1,123	992[1]	1,707	1,380
Joint ventures and their majority interests	16,284	17,474	897	815
Associates and their majority interests	326	349	2,582	1,539
Pension plans	1	1	4	4
Other related parties	0	0	1	1
State of Lower Saxony, its majority interests and joint ventures	15	11	5	7

1 Prior-year figures adjusted.

€ million	RECEIVABLES FROM		LIABILITIES (INCLUDING OBLIGATIONS) TO	
	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Porsche SE and its majority interests	1	2	136	1
Supervisory Board members	0	0	276	252
Board of Management members	0	0	54	90
Unconsolidated subsidiaries	1,346	1,442	1,866	1,715
Joint ventures and their majority interests	14,046	12,303	2,740	2,029
Associates and their majority interests	625	533	1,096	965
Pension plans	1	1	0	–
Other related parties	0	0	52	49
State of Lower Saxony, its majority interests and joint ventures	255	240[1]	1,127	2

1 Prior-year figures adjusted.

The tables above do not contain the dividend payments (net of withholding tax) of €2,781 million (previous year: €2,960 million) received from joint ventures and associates and the dividends of €4,231 million (previous year: €756 million) paid to, or offset against receivables from, Porsche SE.

The changes in supplies and services rendered to joint ventures and their majority interests relate primarily to supplies to the Chinese joint ventures. The changes in supplies and services received from associates and their majority interests result primarily from the inclusion of Brose Sitech as an associate for the first time in the fiscal year. Additional disclosures on the Brose Sitech transaction can be found in the "IFRS 5 – Noncurrent assets held for sale" section.

Receivables from joint ventures are primarily attributable to loans granted in an amount of €10,350 million (previous year: €8,756 million) as well as trade receivables in an amount of €3,491 million (previous year: €3,289 million). Receivables from non-consolidated subsidiaries also result primarily from loans granted in an amount of €727 million (previous year: €737 million) as well as trade receivables in an amount of €222 million (previous year: €344 million).

Liabilities to Porsche SE as of December 31, 2022 include Volkswagen AG's special dividend, after netting against the purchase price receivable for the second tranche of ordinary shares, of €22 million (previous year: €– million), and the obligation arising from Porsche AG's dividend of €114 million (previous year: €– million). Liabilities to the State of Lower Saxony as of December 31, 2022 include Volkswagen AG's special dividend of €1,125 million (previous year: €– million).

Outstanding related party receivables include doubtful receivables on which impairment losses of €49 million (previous year: €17 million) were recognized. This incurred expenses of €40 million (previous year: €1 million) in fiscal year 2022. The change is primarily attributable to a loan granted to a joint venture.

In addition, the Volkswagen Group has furnished guarantees to external banks on behalf of related parties in the amount of €296 million (previous year: €391 million).

In the fiscal year, the Volkswagen Group made capital contributions of €2,854 million (previous year: €1,323 million) at related parties. The increase relates mainly to the acquisition of Europcar by GMH (see "Key events" section for more information).

As in the previous year, obligations to members of the Supervisory Board and other related parties relate primarily to interest-bearing bank balances of Supervisory Board members and related parties that were invested at standard market terms and conditions at Volkswagen Group companies.

Obligations to members of the Board of Management include balances outstanding on the annual bonus, the fair values of performance shares granted to the members of the Board of Management and pension provisions of €50.0 million (previous year: €81.2 million).

In addition to the amounts shown above, the following expenses were recognized for benefits and remuneration granted to members of the Board of Management and Supervisory Board of the Volkswagen Group in the course of their activities as members of these bodies:

€	2022	2021
Short-term benefits	44,535,627	40,369,641
Benefits based on performance shares and virtual shares	16,482,035	24,108,076
Post-employment benefits (service cost only)	9,475,563	9,772,143
Termination benefits	36,802,931	1,655,497
	107,296,157	**75,905,357**

Employee representatives on the Supervisory Board who are employed by the company continue to be entitled to a regular salary under their contract. This applies accordingly to the representative of senior executives on the Supervisory Board.

The post-employment benefits relate to additions to pension provisions for current members of the Board of Management. The termination benefits relate to the commitments made to Dr. Diess in connection with his departure from the Board of Management on August 31, 2022 (previous year: departure of Mr. Witter).

47. Notices and disclosure of changes regarding the ownership of voting rights in Volkswagen AG in accordance with the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act)

PORSCHE

1) Porsche Automobil Holding SE, Stuttgart, Germany has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in Volkswagen Aktiengesellschaft, Wolfsburg, Germany, exceeded the threshold of 50% on January 5, 2009 and amounted to 50.76% (149,696,680 voting rights) at this date.

2) The following persons notified us in accordance with article 21, section 1 of the WpHG that their share of the voting rights in Volkswagen Aktiengesellschaft in each case exceeded the threshold of 50% on January 5, 2009 and in each case amounted to 50.76% (149,696,680 voting rights) at this date. All of the above-mentioned 149,696,680 voting rights are attributable to each of the persons making the notification in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG. The voting rights attributed to the persons making the notifications are held via subsidiaries within the meaning of article 22, section 3 of the WpHG, whose attributed share of the voting rights amounts to 3% or more and whose names are given in brackets:

Mag. Josef Ahorner, Austria
(Ferdinand Porsche Privatstiftung, Salzburg/Austria; Ferdinand Porsche Holding GmbH, Salzburg/Austria; Louise Daxer-Piëch GmbH, Salzburg/Austria; Louise Daxer-Piech GmbH, Grünwald/Germany; Prof. Ferdinand Alexander Porsche GmbH, Salzburg/Austria; Ferdinand Alexander Porsche GmbH, Grünwald/Germany; Gerhard Anton Porsche GmbH, Salzburg/Austria; Gerhard Porsche GmbH, Grünwald/Germany; Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

Mag. Louise Kiesling, Austria
(Ferdinand Porsche Privatstiftung, Salzburg/Austria; Ferdinand Porsche Holding GmbH, Salzburg/Austria; Louise Daxer-Piëch GmbH, Salzburg/Austria; Louise Daxer-Piech GmbH, Grünwald/Germany; Prof. Ferdinand Alexander Porsche GmbH, Salzburg/Austria; Ferdinand Alexander Porsche GmbH, Grünwald/Germany; Gerhard Anton Porsche GmbH, Salzburg/Austria; Gerhard Porsche GmbH, Grünwald/Germany; Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

Prof. Ferdinand Alexander Porsche, Austria
(Ferdinand Porsche Privatstiftung, Salzburg/Austria; Ferdinand Porsche Holding GmbH, Salzburg/Austria; Louise Daxer-Piëch GmbH, Salzburg/Austria; Louise Daxer-Piech GmbH, Grünwald/Germany; Prof. Ferdinand Alexander Porsche GmbH, Salzburg/Austria; Ferdinand Alexander Porsche GmbH, Grünwald/Germany; Gerhard Anton Porsche GmbH, Salzburg/Austria; Gerhard Porsche GmbH, Grünwald/Germany; Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

Dr. Oliver Porsche, Austria
(Ferdinand Porsche Privatstiftung, Salzburg/Austria; Ferdinand Porsche Holding GmbH, Salzburg/Austria; Louise Daxer-Piëch GmbH, Salzburg/Austria; Louise Daxer-Piech GmbH, Grünwald/Germany; Prof. Ferdinand Alexander Porsche GmbH, Salzburg/Austria; Ferdinand Alexander Porsche GmbH, Grünwald/Germany; Gerhard Anton Porsche GmbH, Salzburg/Austria; Gerhard Porsche GmbH, Grünwald/Germany; Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

Kai Alexander Porsche, Austria
(Ferdinand Porsche Privatstiftung, Salzburg/Austria; Ferdinand Porsche Holding GmbH, Salzburg/Austria; Louise Daxer-Piëch GmbH, Salzburg/Austria; Louise Daxer-Piech GmbH, Grünwald/Germany; Prof. Ferdinand Alexander Porsche GmbH, Salzburg/Austria; Ferdinand Alexander Porsche GmbH, Grünwald/Germany; Gerhard Anton Porsche GmbH, Salzburg/Austria; Gerhard Porsche GmbH, Grünwald/Germany; Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

Mark Philipp Porsche, Austria
(Ferdinand Porsche Privatstiftung, Salzburg/Austria; Ferdinand Porsche Holding GmbH, Salzburg/Austria; Louise Daxer-Piëch GmbH, Salzburg/Austria; Louise Daxer-Piech GmbH, Grünwald/Germany; Prof. Ferdinand Alexander Porsche GmbH, Salzburg/Austria; Ferdinand Alexander Porsche GmbH, Grünwald/Germany; Gerhard Anton Porsche GmbH, Salzburg/Austria; Gerhard Porsche GmbH, Grünwald/Germany; Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

Gerhard Anton Porsche, Austria
(Ferdinand Porsche Privatstiftung, Salzburg/Austria; Ferdinand Porsche Holding GmbH, Salzburg/Austria; Louise Daxer-Piëch GmbH, Salzburg/Austria; Louise Daxer-Piech GmbH, Grünwald/Germany; Prof. Ferdinand Alexander Porsche GmbH, Salzburg/Austria; Ferdinand Alexander Porsche GmbH, Grünwald/Germany; Gerhard Anton Porsche GmbH, Salzburg/Austria; Gerhard Porsche GmbH, Grünwald/Germany; Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

Ing. Hans-Peter Porsche, Austria
(Familie Porsche Privatstiftung, Salzburg/Austria; Familie Porsche Holding GmbH, Salzburg/Austria; Ing. Hans-Peter Porsche GmbH, Salzburg/Austria; Hans-Peter Porsche GmbH, Grünwald/Germany; Familie Porsche Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

Peter Daniell Porsche, Austria
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Dr. Wolfgang Porsche, Germany
(Familie Porsche Privatstiftung, Salzburg/Austria; Familie Porsche Holding GmbH, Salzburg/Austria; Ing. Hans-Peter Porsche GmbH, Salzburg/Austria; Hans-Peter Porsche GmbH, Grünwald/Germany; Wolfgang Porsche GmbH, Grünwald/Germany; Familie Porsche Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

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Ferdinand Porsche Holding GmbH, Salzburg/Austria
(Louise Daxer-Piëch GmbH, Salzburg/Austria; Louise Daxer-Piech GmbH, Grünwald/Germany; Prof. Ferdinand Alexander Porsche GmbH, Salzburg/Austria; Ferdinand Alexander Porsche GmbH, Grünwald/Germany; Gerhard Anton Porsche GmbH, Salzburg/Austria; Gerhard Porsche GmbH, Grünwald/Germany; Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

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(Ing. Hans-Peter Porsche GmbH, Salzburg/Austria; Hans-Peter Porsche GmbH, Grünwald/Germany; Familie Porsche Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

Louise Daxer-Piëch GmbH, Salzburg/Austria
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Prof. Ferdinand Alexander Porsche GmbH, Salzburg/Austria
(Ferdinand Alexander Porsche GmbH, Grünwald/Germany; Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/ Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

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(Familien Porsche-Daxer-Piech Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/ Germany),

Gerhard Porsche GmbH, Grünwald/Germany
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Wolfgang Porsche GmbH, Grünwald/Germany
(Familie Porsche Beteiligung GmbH, Grünwald/Germany; Porsche Automobil Holding SE, Stuttgart/Germany),

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Ferdinand Karl Alpha Privatstiftung, Vienna/Austria
(Porsche Automobil Holding SE, Stuttgart/Germany; Ferdinand Piech GmbH, Grünwald/Germany; Dipl.-Ing. Dr. h.c. Ferdinand Piëch GmbH, Salzburg/Austria),

Dipl.-Ing. Dr. h.c. Ferdinand Piëch GmbH, Salzburg/Austria
(Porsche Automobil Holding SE, Stuttgart/Germany; Ferdinand Piech GmbH, Grünwald/Germany),

Ferdinand Piech GmbH, Grünwald/Germany
(Porsche Automobil Holding SE, Stuttgart/Germany).

3) Porsche Holding Gesellschaft m.b.H., Salzburg/Austria, and Porsche GmbH, Salzburg/Austria, notified us in accordance with article 21, section 1 of the WpHG that their share of the voting rights in Volkswagen Aktiengesellschaft in each case exceeded the threshold of 50% on January 5, 2009 and in each case amounted to 53.13% (156,702,015 voting rights) at this date.

All the above-mentioned 156,702,015 voting rights are attributable to Porsche Holding Gesellschaft m.b.H. in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG. The companies via which the voting rights are actually held and whose attributed share of the voting rights amounts to 3% or more are:
– Porsche GmbH, Salzburg/Austria;
– Porsche GmbH, Stuttgart/Germany;
– Porsche Automobil Holding SE, Stuttgart/Germany.

Of the above-mentioned 156,702,015 voting rights, 50.76% of the voting rights (149,696,753 voting rights) are attributable to Porsche GmbH, Salzburg/Austria, in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG. The companies via which the voting rights are actually held and whose attributed share of the voting rights amounts to 3% or more are:
– Porsche GmbH, Stuttgart/Germany;
– Porsche Automobil Holding SE, Stuttgart/Germany.

4) Porsche Wolfgang 1. Beteiligungs GmbH & Co. KG, Stuttgart, Germany has notified us in accordance with article 21, section 1 of the WpHG that its (indirect) share of the voting rights in Volkswagen Aktiengesellschaft, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on September 29, 2010 and amounted to 50.74% of the voting rights (149,696,680 voting rights) at this date.

Of this figure, 50.74% of the voting rights (149,696,680 voting rights) are attributable to Porsche Wolfgang 1. Beteiligungs GmbH & Co. KG in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG.

The voting rights attributed to Porsche Wolfgang 1. Beteiligungs GmbH & Co. KG are held via the following enterprises controlled by it, whose share of the voting rights in Volkswagen Aktiengesellschaft amounts to 3% or more in each case: Wolfgang Porsche GmbH, Grünwald, Familie Porsche Beteiligung GmbH, Grünwald, Porsche Automobil Holding SE, Stuttgart.

These voting rights were not reached by exercise of purchase rights resulting from financial instruments according to article 25, section 1, sentence 1 of the WpHG.

5) On August 12, 2013, LK Holding GmbH, Salzburg, Austria, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on August 10, 2013 and amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date.

Of this figure, 50.73% of the voting rights (149,696,681 voting rights) are attributable to LK Holding GmbH in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG.

The voting rights attributed to LK Holding GmbH are held via the following enterprises controlled by it, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case: Porsche Automobil Holding SE, Stuttgart; Familien Porsche-Kiesling Beteiligung GmbH, Grünwald; Louise Daxer-Piech GmbH, Grünwald.

6) On September 11, 2013, Ahorner Alpha Beteiligungs GmbH, Grünwald, Germany, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on September 11, 2013 and amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date. Of this figure, 50.73% of the voting rights (149,696,681 voting rights) are attributable to Ahorner Alpha Beteiligungs GmbH in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG.

The voting rights attributed to Ahorner Alpha Beteiligungs GmbH are held via the following enterprises controlled by it, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case: Porsche Automobil Holding SE, Stuttgart.

7) On September 11, 2013, Ahorner Beta Beteiligungs GmbH, Grünwald, Germany, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on September 11, 2013 and amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date. Of this figure, 50.73% of the voting rights (149,696,681 voting rights) are attributable to Ahorner Beta Beteiligungs GmbH in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG.

The voting rights attributed to Ahorner Beta Beteiligungs GmbH are held via the following enterprises controlled by it, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case: Ahorner Alpha Beteiligungs GmbH, Grünwald; Porsche Automobil Holding SE, Stuttgart.

8) On September 11, 2013, Louise Daxer-Piech GmbH, Salzburg, Austria, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on September 11, 2013 and amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date. Of this figure, 50.73% of the voting rights (149,696,681 voting rights) are attributable to Louise Daxer-Piech GmbH in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG.

The voting rights attributed to Louise Daxer-Piech GmbH are held via the following enterprises controlled by it, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case: Ahorner Beta Beteiligungs GmbH, Grünwald; Ahorner Alpha Beteiligungs GmbH, Grünwald; Porsche Automobil Holding SE, Stuttgart.

9) On September 11, 2013, Ahorner Holding GmbH, Salzburg, Austria, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on September 11, 2013 and amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date. Of this figure, 50.73% of the voting rights (149,696,681 voting rights) are attributable to Ahorner Holding GmbH in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG.

The voting rights attributed to Ahorner Holding GmbH are held via the following enterprises controlled by it, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case: Louise Daxer-Piech GmbH, Salzburg, Austria; Ahorner Beta Beteiligungs GmbH, Grünwald; Ahorner Alpha Beteiligungs GmbH, Grünwald; Porsche Automobil Holding SE, Stuttgart.

10) On December 16, 2014, Porsche Wolfgang 1. Beteiligungsverwaltungs GmbH, Stuttgart, Germany, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, fell below the thresholds of 50%, 30%, 25%, 20%, 15%, 10%, 5% and 3% of the voting rights on December 15, 2014 and amounted to 0% of the voting rights (0 voting rights) at this date.

11) On December 17, 2014, Dr. Wolfgang Porsche Holding GmbH, Salzburg, Austria, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on December 15, 2014 and amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date. Of this figure, 50.73% of the voting rights (149,696,681 voting rights) are attributable to Dr. Wolfgang Porsche Holding GmbH in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG.

The voting rights attributed to Dr. Wolfgang Porsche Holding GmbH are held via the following enterprises controlled by it, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case: Wolfgang Porsche GmbH, Grünwald; Familie Porsche Beteiligung GmbH, Grünwald; Porsche Automobil Holding SE, Stuttgart.

12) On July 15, 2015, the following persons in each case have notified us in accordance with article 21, section 1 of the WpHG that their share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on July 14, 2015 and in each case amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date:

– Dipl.-Design. Stephanie Porsche-Schröder, Austria,
– Dr. Dr. Christian Porsche, Austria,
– Ferdinand Rudolf Wolfgang Porsche, Austria

Of this figure, in each case 50.73% of the voting rights (149,696,681 voting rights) are attributable to each of the above-mentioned notifying persons in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG. The voting rights attributed to the notifying persons in each case are held via the following enterprises controlled by the notifying persons, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case:

Dr. Wolfgang Porsche Holding GmbH, Salzburg; Wolfgang Porsche GmbH, Grünwald; Ferdinand Porsche Familien-Privatstiftung, Salzburg; Familie Porsche Holding GmbH, Salzburg; Ing. Hans-Peter Porsche GmbH, Salzburg; Hans-Peter Porsche GmbH, Grünwald; Ferdinand Porsche Holding GmbH, Salzburg; Prof. Ferdinand Alexander Porsche GmbH, Salzburg; Ferdinand Alexander Porsche GmbH, Grünwald; Gerhard Anton Porsche GmbH, Salzburg; Gerhard Porsche GmbH, Grünwald; LK Holding GmbH, Salzburg; Louise Kiesling GmbH, Grünwald; Familie Porsche Beteiligung GmbH, Grünwald; Porsche Automobil Holding SE, Stuttgart.

13) On July 15, 2015, Familie Porsche Privatstiftung, Salzburg, Austria, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, fell below the thresholds of 50%, 30%, 25%, 20%, 15%, 10%, 5% and 3% of the voting rights on July 14, 2015 and amounted to 0% of the voting rights (0 voting rights) at this date.

14) On July 15, 2015, Ferdinand Porsche Privatstiftung, Salzburg, Austria, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, fell below the thresholds of 50%, 30%, 25%, 20%, 15%, 10%, 5% and 3% of the voting rights on July 14, 2015 and amounted to 0% of the voting rights (0 voting rights) at this date.

15) On July 15, 2015, Ferdinand Porsche Familien-Privatstiftung, Salzburg, Austria, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on July 14, 2015 and amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date. Of this figure, 50.73% of the voting rights (149,696,681 voting rights) are attributable to Ferdinand Porsche Familien-Privatstiftung in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG.

The voting rights attributed to Ferdinand Porsche Familien-Privatstiftung are held via the following enterprises controlled by it, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case:

Familie Porsche Holding GmbH, Salzburg; Ing. Hans-Peter Porsche GmbH, Salzburg; Hans-Peter Porsche GmbH, Grünwald; Ferdinand Porsche Holding GmbH, Salzburg; Prof. Ferdinand Alexander Porsche GmbH, Salzburg; Ferdinand Alexander Porsche GmbH, Grünwald; Gerhard Anton Porsche GmbH, Salzburg; Gerhard Porsche GmbH, Grünwald; LK Holding GmbH, Salzburg; Louise Kiesling GmbH, Grünwald; Familie Porsche Beteiligung GmbH, Grünwald; Porsche Automobil Holding SE, Stuttgart.

16) On July 20, 2015, the following persons in each case have notified us in accordance with article 21, section 1 of the WpHG that their share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on July 14, 2015 and in each case amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date:

– Dr. Geraldine Porsche, Austria,
– Diana Porsche, Austria,
– Felix Alexander Porsche, Germany.

Of this figure, in each case 50.73% of the voting rights (149,696,681 voting rights) are attributable to each of the above-mentioned notifying persons in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG. The voting rights attributed to the notifying persons in each case are held via the following enterprises controlled by the notifying persons, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case:

Ferdinand Porsche Familien-Privatstiftung, Salzburg; Familie Porsche Holding GmbH, Salzburg; Ing. Hans-Peter Porsche GmbH, Salzburg; Hans-Peter Porsche GmbH, Grünwald; Ferdinand Porsche Holding GmbH, Salzburg; Prof. Ferdinand Alexander Porsche GmbH, Salzburg; Ferdinand Alexander Porsche GmbH, Grünwald; Gerhard Anton Porsche GmbH, Salzburg; Gerhard Porsche GmbH, Grünwald; LK Holding GmbH, Salzburg; Louise Kiesling GmbH, Grünwald; Familie Porsche Beteiligung GmbH, Grünwald; Porsche Automobil Holding SE, Stuttgart.

17) On August 4, 2015, Ferdinand Porsche Familien- Holding GmbH, Salzburg, Austria, has notified us in accordance with article 21, section 1 of the WpHG that its share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Germany, exceeded the thresholds of 3%, 5%, 10%, 15%, 20%, 25%, 30% and 50% of the voting rights on July 31, 2015 and amounted to 50.73% of the voting rights (149,696,681 voting rights) at this date. Of this figure, 50.73% of the voting rights (149,696,681 voting rights) are attributable to Ferdinand Porsche Familien- Holding GmbH in accordance with article 22, section 1, sentence 1 no. 1 of the WpHG.

The voting rights attributed to Ferdinand Porsche Familien- Holding GmbH are held via the following enterprises controlled by it, whose share of the voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT amounts to 3% or more in each case:
Hans-Peter Porsche GmbH, Grünwald; Ferdinand Alexander Porsche GmbH, Grünwald; Gerhard Porsche GmbH, Grünwald; Louise Kiesling GmbH, Grünwald; Familie Porsche Beteiligung GmbH, Grünwald;
Porsche Automobil Holding SE, Stuttgart.

18) Release according to article 26, section 1 of the WpHG of June 3, 2016

1. Details of issuer
VOLKSWAGEN AKTIENGESELLSCHAFT, Berliner Ring 2, 38440 Wolfsburg, Germany

2. Reason for notification
☐ Acquisition/disposal of shares with voting rights
☒ Acquisition/disposal of instruments
☐ Change of breakdown of voting rights
☐ Other reason:

3. Details of person subject to the notification obligation

Name:	City and country of registered of
Dr. Dr. Christian Porsche, Dipl.- Design. Stephanie Porsche-Schröder, Ferdinand Rudolf Wolfgang Porsche, Felix Alexander Porsche	

4. Names of shareholder(s) holding directly 3% or more voting rights, if different from 3.
Porsche Automobil Holding SE

5. Date on which treshold was crossed or reached
June 1, 2016

6. Total positions

	% of voting rights attached to shares (total of 7.a.)	% of voting rights through instruments (total of 7.b.1. + 7.b.2.)	total of both in % (7.a. + 7.b.)	total number of voting rights of issuer
Resulting situation	52.22%	52.22%	52.22%	295089818
Previous notification	50.73%	n/a%	0.00%	

7. Notified details of the resulting situation a. Voting rights attached to shares (articles 21, 22 WpHG)				
ISIN	absolute		in %	
	direct (article 21 WpHG)	indirect (article 22 WpHG)	direct (article 21 WpHG)	indirect (article 22 WpHG)
DE0007664005	0	154093681	0%	52,22%
Total	**154093681**		**52.22 %**	

b.1. Instruments according to article 25, section 1, no. 1 WpHG				
Type of instrument	Expiration or maturity date	Exercise or conversion period	Voting rights absolute	Voting rights in %
				%
		Total		**%**

b.2. Instruments according to article 25, section 1, no. 2 WpHG					
Type of instrument	Expiration or maturity date	Exercise or conversion period	Cash or physical settlement	Voting rights absolute	Voting rights in %
Contribution Agreement	n/a	n/a	physical	154093681	52.22%
			Total	**154093681**	**52.22%**

8. Information in relation to the person subject to the notification obligation

☐ Person subject to the notification obligation (3.) is not controlled and does itself not control any other undertaking(s) holding directly or indirectly an interest in the (underlying) issuer (1.).

☒ Full chain of controlled undertakings starting with the ultimate controlling natural person or legal entity:

Name	% of voting rights (if at least held 3% or more)	% of voting rights through instruments (if at least held 5% or more)	Total of both (if at least held 5% or more)
Dr. Dr. Christian Porsche, Dipl.-Design. Stephanie Porsche-Schröder, Ferdinand Rudolf Wolfgang Porsche, Felix Alexander Porsche	%	%	%
Familie WP Holding GmbH	%	52.22%	52.22%
Dr. Dr. Christian Porsche, Dipl.-Design. Stephanie Porsche-Schröder, Ferdinand Rudolf Wolfgang Porsche, Felix Alexander Porsche	%	%	%
Dr. Wolfgang Porsche Holding GmbH	%	%	%
Ferdinand Alexander Porsche GmbH	%	%	%
Familie Porsche Beteiligung GmbH	%	%	%
Porsche Automobil Holding SE	52.22%	%	52.22%
Dr. Dr. Christian Porsche, Dipl.-Design. Stephanie Porsche-Schröder, Ferdinand Rudolf Wolfgang Porsche, Felix Alexander Porsche	%	%	%
Ferdinand Porsche Familien-Privatstiftung	%	%	%
Ferdinand Porsche Familien- Holding GmbH	%	%	%
Ferdinand Alexander Porsche GmbH	%	%	%
Familie Porsche Beteiligung GmbH	%	%	%
Porsche Automobil Holding SE	52.22%	%	52.22%

9. In case of proxy voting according to article 22, section 3 WpHG
(only possible when attributable according to article 22, section 1, sentence 1 no. 6 of the WpHG)
Date of general meeting:
Holding position after general meeting: % (equals voting rights)

19) Release according to article 26, section 1 of the WpHG of June 3, 2016

1. Details of issuer
VOLKSWAGEN AKTIENGESELLSCHAFT, Berliner Ring 2, 38440 Wolfsburg, Germany

2. Reason for notification
☐ Acquisition/disposal of shares with voting rights
☒ Acquisition/disposal of instruments
☐ Change of breakdown of voting rights
☐ Other reason:

3. Details of person subject to the notification obligation	
Name:	City and country of
Mr. Dr. Wolfgang Porsche	registered office:

4. Names of shareholder(s) holding directly 3% or more voting rights, if different from 3.
Porsche Automobil Holding SE

5. Date on which treshold was crossed or reached
June 1, 2016

6. Total positions

	% of voting rights attached to shares (total of 7.a.)	% of voting rights through instruments (total of 7.b.1. + 7.b.2.)	total of both in % (7.a. + 7.b.)	total number of voting rights of issuer
Resulting situation	52.22%	52.22%	52.22%	295089818
Previous notification	50.76%	n/a %	0.00%	

7. Notified details of the resulting situation
a. Voting rights attached to shares (articles 21, 22 WpHG)

ISIN	absolute		in %	
	direct (article 21 WpHG)	indirect (article 22 WpHG)	direct (article 21 WpHG)	indirect (article 22 WpHG)
DE0007664005	0	154093681	0%	52.22%
Total	**154093681**		**52.22%**	

b.1. Instruments according to article 25, section 1, no. 1 WpHG

Type of instrument	Expiration or maturity date	Exercise or conversion period	Voting rights absolute	Voting rights in %
				%
		Total		**%**

b.2. Instruments according to article 25, section 1, no. 2 WpHG

Type of instrument	Expiration or maturity date	Exercise or conversion period	Cash or physical settlement	Voting rights absolute	Voting rights in %
Contribution Agreement	n/a	n/a	physical	154093681	52.22%
			Total	**154093681**	**52.22%**

8. Information in relation to the person subject to the notification obligation

☐ Person subject to the notification obligation (3.) is not controlled and does itself not control any other undertaking(s) holding directly or indirectly an interest in the (underlying) issuer (1.).

☒ Full chain of controlled undertakings starting with the ultimate controlling natural person or legal entity:

Name	% of voting rights (if at least held 3% or more)	% of voting rights through instruments (if at least held 5% or more)	Total of both (if at least held 5% or more)
Dr. Wolfgang Porsche	%	%	%
Familie WP Holding GmbH	%	52.22%	52.22%
Dr. Wolfgang Porsche	%	%	%
Dr. Wolfgang Porsche Holding GmbH	%	%	%
Ferdinand Alexander Porsche GmbH	%	%	%
Familie Porsche Beteiligung GmbH	%	%	%
Porsche Automobil Holding SE	52.22%	%	52.22%
Dr. Wolfgang Porsche	%	%	%
Ferdinand Porsche Familien-Privatstiftung	%	%	%
Ferdinand Porsche Familien- Holding GmbH	%	%	%
Ferdinand Alexander Porsche GmbH	%	%	%
Familie Porsche Beteiligung GmbH	%	%	%
Porsche Automobil Holding SE	52.22%	%	52.22%

9. In case of proxy voting according to article 22, section 3 WpHG (only possible when attributable according to article 22, section 1, sentence 1 no. 6 of the WpHG) Date of general meeting: Holding position after general meeting: % (equals voting rights)

20) Release according to article 26, section 1 of the WpHG of June 17, 2016

1. Details of issuer VOLKSWAGEN AKTIENGESELLSCHAFT, Berliner Ring 2, 38440 Wolfsburg, Germany

2. Reason for notification ☐ Acquisition/disposal of shares with voting rights ☒ Acquisition/disposal of instruments ☐ Change of breakdown of voting rights ☒ Other reason: Group notification due to intra group restructuring

3. Details of person subject to the notification obligation	
Name:	City and country of registered office:
Dr. Wolfgang Porsche, Dr. Dr. Christian Porsche, Dipl.-Design. Stephanie Porsche-Schröder, Ferdinand Rudolf Wolfgang Porsche, Felix Alexander Porsche	

4. Names of shareholder(s) holding directly 3% or more voting rights, if different from 3. Porsche Automobil Holding SE

5. Date on which treshold was crossed or reached June 15, 2016

6. Total positions

	% of voting rights attached to shares (total of 7.a.)	% of voting rights through instruments (total of 7.b.1. + 7.b.2.)	total of both in % (7.a. + 7.b.)	total number of voting rights of issuer
Resulting situation	52.22%	0.00%	52.22%	295089818
Previous notification	52.22%	52.22%	52.22%	

7. Notified details of the resulting situation a. Voting rights attached to shares (articles 21, 22 WpHG)				
ISIN	absolute		in %	
	direct (article 21 WpHG)	indirect (article 22 WpHG)	direct (article 21 WpHG)	indirect (article 22 WpHG)
DE0007664005	0	154093681	0%	52.22%
Total	**154093681**		**52.22%**	

b.1. Instruments according to article 25, section 1, no. 1 WpHG				
Type of instrument	Expiration or maturity date	Exercise or conversion period	Voting rights absolute	Voting rights in %
				%
		Total		**%**

b.2. Instruments according to article 25, section 1, no. 2 WpHG					
Type of instrument	Expiration or maturity date	Exercise or conversion period	Cash or physical settlement	Voting rights absolute	Voting rights in %
					%
			Total		**%**

8. Information in relation to the person subject to the notification obligation

☐ Person subject to the notification obligation (3.) is not controlled and does itself not control any other undertaking(s) holding directly or indirectly an interest in the (underlying) issuer (1.).

☒ Full chain of controlled undertakings starting with the ultimate controlling natural person or legal entity:

Name	% of voting rights (if at least held 3% or more)	% of voting rights through instruments (if at least held 5% or more)	Total of both (if at least held 5% or more)
Dr. Wolfgang Porsche, Dr. Dr. Christian Porsche, Dipl.-Design. Stephanie Porsche-Schröder, Ferdinand Rudolf Wolfgang Porsche, Felix Alexander Porsche	%	%	%
Familie WP Holding GmbH	%	%	%
Dr. Wolfgang Porsche Holding GmbH	%	%	%
Ferdinand Alexander Porsche GmbH	%	%	%
Familie Porsche Beteiligung GmbH	%	%	%
Porsche Automobil Holding SE	52.22%	%	52.22%
Dr. Wolfgang Porsche, Dr. Dr. Christian Porsche, Dipl.-Design. Stephanie Porsche-Schröder, Ferdinand Rudolf Wolfgang Porsche, Felix Alexander Porsche	%	%	%
Ferdinand Porsche Familien-Privatstiftung	%	%	%
Ferdinand Porsche Familien- Holding-GmbH	%	%	%
Ferdinand Alexander Porsche GmbH	%	%	%
Familie Porsche Beteiligung GmbH	%	%	%
Porsche Automobil Holding SE	52.22%	%	52.22%

9. In case of proxy voting according to article 22, section 3 WpHG
(only possible when attributable according to article 22, section 1, sentence 1 no. 6 of the WpHG)
Date of general meeting:
Holding position after general meeting: % (equals voting rights)

21) Release according to article 26, section 1 of the WpHG of November 10, 2017

1. Details of issuer
VOLKSWAGEN AKTIENGESELLSCHAFT, Berliner Ring 2, 38440 Wolfsburg, Germany

2. Reason for notification
☐ Acquisition/disposal of shares with voting rights
☐ Acquisition/disposal of instruments
☐ Change of breakdown of voting rights
☒ Other reason: Disposal of subsidiary

3. Details of person subject to the notification obligation	
Name:	City and country of registered office:
Mr Hon.-Prof. Dr. techn. h.c. Dipl.-Ing. ETH Ferdinand Karl Piëch, Date of birth: April 17, 1937	

4. Names of shareholder(s) holding directly 3% or more voting rights, if different from 3.

5. Date on which treshold was crossed or reached
November 8, 2017

6. Total positions

	% of voting rights attached to shares (total of 7.a.)	% of voting rights through instruments (total of 7.b.1. + 7.b.2.)	total of both in % (7.a. + 7.b.)	total number of voting rights of issuer
Resulting situation	0.00%	0.00%	0.00%	295089818
Previous notification	50.76%	n/a%	n/a%	

7. Notified details of the resulting situation
a. Voting rights attached to shares (articles 21, 22 WpHG)

ISIN	absolute		in %	
	direct (article 21 WpHG)	indirect (article 22 WpHG)	direct (article 21 WpHG)	indirect (article 22 WpHG)
DE0007664005	0	0	0.00%	0.00%
Total	**0**		**0.00%**	

b.1. Instruments according to article 25, section 1, no. 1 WpHG

Type of instrument	Expiration or maturity date	Exercise or conversion period	Voting rights absolute	Voting rights in %
				%
		Total		**%**

b.2. Instruments according to article 25, section 1, no. 2 WpHG

Type of instrument	Expiration or maturity date	Exercise or conversion period	Cash or physical settlement	Voting rights absolute	Voting rights in %
					%
			Total		**%**

8. Information in relation to the person subject to the notification obligation

☒ Person subject to the notification obligation (3.) is not controlled and does itself not control any other undertaking(s) holding directly or indirectly an interest in the (underlying) issuer (1.).

☐ Full chain of controlled undertakings starting with the ultimate controlling natural person or legal entity

Name	% of voting rights (if at least held 3% or more)	% of voting rights through instruments (if at least held 5% or more)	Total of both (if at least held 5% or more)

9. In case of proxy voting according to article 22, section 3 WpHG
(only possible when attributable according to article 22, section 1, sentence 1 no. 6 of the WpHG)
Date of general meeting:
Holding position after general meeting: % (equals voting rights)

10. Other explanatory remarks:
This voting rights notification is made with releasing effect also for Dipl.Ing. Dr. h.c. Ferdinand K. Piech GmbH, Salzburg, and Ferdinand Karl Alpha Privatstiftung, Salzburg. Due to the sale and transfer of the participation in Auto 2015 Beteiligungs GmbH by Dipl.Ing. Dr. h.c. Ferdinand K. Piech GmbH, Salzburg, voting rights in VOLKSWAGEN AKTIENGESELLSCHAFT are also no longer attributed to Dipl.Ing. Dr. h.c. Ferdinand K. Piech GmbH, Salzburg, and Ferdinand Karl Alpha Privatstiftung, Salzburg.

QATAR

We have received the following notification:

(1) Pursuant to article 21, section 1 of the WpHG we hereby notify for and on behalf of the State of Qatar, acting by and through the Qatar Investment Authority, Doha, Qatar, that its indirect voting rights in Volkswagen Aktiengesellschaft

(a) exceeded the threshold of 10% on December 17, 2009 and amounted to 13.71% of the voting rights of Volkswagen Aktiengesellschaft (40,440,274 voting rights) as per this date

(i) 6.93% (20,429,274 voting rights) of which have been obtained by the exercise by Qatar Holding LLC of financial instruments within the meaning of article 25, section 1, sentence 1 of the WpHG on that date granting the right to acquire shares in Volkswagen Aktiengesellschaft, and

(ii) all of which are attributed to the State of Qatar pursuant to article 22, section 1, sentence 1 no. 1 of the WpHG.

(b) exceeded the threshold of 15% on December 18, 2009 and amounted to 17.00% of the voting rights of Volkswagen Aktiengesellschaft (50,149,012 voting rights) as per this date

(i) 3.29% (9,708,738 voting rights) of which have been obtained by the exercise by Qatar Holding LLC of financial instruments within the meaning of article 25, section 1, sentence 1 of the WpHG on that date granting the right to acquire shares in Volkswagen Aktiengesellschaft, and

(ii) all of which are attributed to the State of Qatar pursuant to article 22, section 1, sentence 1 no. 1 of the WpHG.

Voting rights that are attributed to the State of Qatar pursuant to lit. (a) and (b) above are held via the following entities which are controlled by it and whose attributed proportion of voting rights in Volkswagen Aktiengesellschaft amount to 3% each or more:

(aa) Qatar Investment Authority, Doha, Qatar;
(bb) Qatar Holding LLC, Doha, Qatar;
(cc) Qatar Holding Luxembourg II S.à.r.l., Luxembourg, Luxembourg;
(dd) Qatar Holding Netherlands B.V., Amsterdam, The Netherlands.

(2) Pursuant to article 21, section 1 of the WpHG we hereby notify for and on behalf of the Qatar Investment Authority, Doha, Qatar, that its indirect voting rights in Volkswagen Aktiengesellschaft

(a) exceeded the threshold of 10% on December 17, 2009 and amounted to 13.71% of the voting rights of Volkswagen Aktiengesellschaft (40,440,274 voting rights) as per this date

(i) 6.93% (20,429,274 voting rights) of which have been obtained by the exercise by Qatar Holding LLC of financial instruments within the meaning of article 25, section 1, sentence 1 of the WpHG on that date granting the right to acquire shares in Volkswagen Aktiengesellschaft, and

(ii) all of which are attributed to the Qatar Investment Authority pursuant to article 22, section 1, sentence 1 no. 1 of the WpHG.

(b) exceeded the threshold of 15% on December 18, 2009 and amounted to 17.00% of the voting rights of Volkswagen Aktiengesellschaft (50,149,012 voting rights) as per this date

(i) 3.29% (9,708,738 voting rights) of which have been obtained by the exercise by Qatar Holding LLC of financial instruments within the meaning of article 25, section 1, sentence 1 of the WpHG on that date granting the right to acquire shares in Volkswagen Aktiengesellschaft, and

(ii) all of which are attributed to the Qatar Investment Authority pursuant to article 22, section 1, sentence 1 no. 1 of the WpHG.

Voting rights that are attributed to the Qatar Investment Authority pursuant to lit. (a) and (b) above are held via the entities as set forth in (1) (bb) through (dd) which are controlled by it and whose attributed proportion of voting rights in Volkswagen Aktiengesellschaft amount to 3% each or more.

(3) Pursuant to article 21, section 1 of the WpHG we hereby notify for and behalf of Qatar Holding LLC, Doha, Qatar, that its direct and indirect voting rights in Volkswagen Aktiengesellschaft

(a) exceeded the threshold of 10% on December 17, 2009 and amounted to 13.71% of the voting rights of Volkswagen Aktiengesellschaft (40,440,274 voting rights) as per this date

(i) 6.93% (20,429,274 voting rights) of which have been obtained by the exercise of financial instruments within the meaning of article 25, section 1, sentence 1 of the WpHG on that date granting the right to acquire shares in Volkswagen Aktiengesellschaft, and

(ii) 6.78% (20,011,000 voting rights) of which are attributed to Qatar Holding LLC pursuant to article 22, section 1, sentence 1 no. 1 of the WpHG.

(b) exceeded the threshold of 15% on December 18, 2009 and amounted to 17.00% of the voting rights of Volkswagen Aktiengesellschaft (50,149,012 voting rights) as per this date

(i) 3.29% (9,708,738 voting rights) of which have been obtained by the exercise of financial instruments within the meaning of article 25, section 1, sentence 1 of the WpHG on that date granting the right to acquire shares in Volkswagen Aktiengesellschaft, and

(ii) 6.78% (20,011,000 voting rights) of which are attributed to Qatar Holding LLC pursuant to article 22, section 1, sentence 1 no. 1 of the WpHG.

Voting rights that are attributed to Qatar Holding LLC pursuant to lit. (a) and (b) above are held via the entities as set forth in (1) (cc) through (dd) which are controlled by it and whose attributed proportion of voting rights in Volkswagen Aktiengesellschaft amount to 3% each or more.

We have received the following notification:

(1) Pursuant to article 21, section 1 of the WpHG we hereby notify for and on behalf of Qatar Holding Luxembourg II S.à.r.l., Luxembourg, Luxembourg, that its indirect voting rights in Volkswagen Aktiengesellschaft exceeded the thresholds of 10% and 15% on December 18, 2009 and amounted to 17.00% of the voting rights of Volkswagen Aktiengesellschaft (50,149,012 voting rights) as per this date, all of which are attributed to Qatar Holding Luxembourg II S.à.r.l. pursuant to article 22, section 1, sentence 1 no.1 of the WpHG.

Voting rights that are attributed to Qatar Holding Luxembourg II S.à.r.l. are held via the following entities which are controlled by it and whose attributed proportion of voting rights in Volkswagen Aktiengesellschaft amount to 3% each or more:
(a) Qatar Holding Netherlands B.V., Amsterdam, The Netherlands;
(b) Qatar Holding Germany GmbH, Frankfurt am Main, Germany.

(2) Pursuant to article 21, section 1 of the WpHG we hereby notify for and on behalf of Qatar Holding Netherlands B.V., Amsterdam, The Netherlands, that its indirect voting rights in Volkswagen Aktiengesellschaft exceeded the thresholds of 10% and 15% on December 18, 2009 and amounted to 17.00% of the voting rights of Volkswagen Aktiengesellschaft (50,149,012 voting rights) as per this date, all of which are attributed to Qatar Holding Luxembourg II S.à.r.l. pursuant to article 22, section 1, sentence 1 no. 1 of the WpHG

Voting rights that are attributed to Qatar Holding Netherlands B.V. are held via the entity as set forth in (1) (b) which is controlled by it and whose attributed proportion of voting rights in Volkswagen Aktiengesellschaft amounts to 3% or more.

(3) Pursuant to article 21, section 1 of the WpHG we hereby notify for and on behalf of Qatar Holding Germany GmbH, Frankfurt am Main, Germany, that its direct voting rights in Volkswagen Aktiengesellschaft exceeded the thresholds of 3%, 5%, 10% and 15% on December 18, 2009 and amounted to 17.00% of the voting rights of Volkswagen Aktiengesellschaft (50,149,012 voting rights) as per this date.

STATE OF LOWER SAXONY

The State of Lower Saxony notified us on January 9, 2023 that it held a total of 59,022,390 ordinary shares of Volkswagen AG as of December 31, 2022. It held 520 VW ordinary shares directly and 59,021,870 ordinary shares indirectly via Hannoversche Beteiligungsgesellschaft Niedersachsen mbH (HanBG), which is owned by the State of Lower Saxony.

48. German Corporate Governance Code

The Board of Management and Supervisory Board of Volkswagen AG issued the declaration of conformity with the German Corporate Governance Code in accordance with section 161 of the AktG on November 11, 2022 . It has been made permanently available to the shareholders of Volkswagen AG on the company's website at https://www.volkswagenag.com/en/InvestorRelations/corporate-governance/declaration-of-conformity.html.

In December 2022, the Executive Board and Supervisory Board of TRATON SE also issued their declaration of conformity with the German Corporate Governance Code and made it permanently available to the shareholders at ir.traton.com/websites/traton/English/5000/corporate-governance.html.

The Board of Management and Supervisory Board of Dr. Ing. h.c. F. Porsche AG also issued their declaration of conformity with the German Corporate Governance Code in December 2022. It has been made permanently available to shareholders on the company's website at https://investorrelations.porsche.com/en/corporate-governance/.

49. Remuneration of the Board of Management and the Supervisory Board

Total remuneration granted to the members of the Board of Management amounted to €58.5 million (previous year: €51.5 million).

Under the performance share plan, a total of 133,775 performance shares (previous year: 110,165) were granted to active members of the Bord of Management for fiscal year 2022; their value at the grant date was €19.2 million (previous year: €16.3 million).

No more advances were granted to members of the Board of Management under the performance share plan in fiscal year 2022. In total, advances amounting to €1.4 million were deducted from payments under the performance share plan (previous year: €5.1 million) in the fiscal year.

Total remuneration granted to the members of the Supervisory Board amounted to €5.3 million (previous year: €5.2 million).

PENSION ENTITLEMENTS AND BENEFITS TO RETIRED MEMBERS OF THE BOARD OF MANAGEMENT

The former members of the Board of Management and their surviving dependents were granted €53.5 million (previous year: €17.5 million). Pension provisions for this group of individuals amounted to €273.3 million (previous year: €371.9 million).

The individual remuneration of the members of the Board of Management and the Supervisory Board is explained in the remuneration report. A comprehensive assessment of the individual remuneration components can also be found there.

Wolfsburg, February 21, 2023

Volkswagen Aktiengesellschaft
The Board of Management

Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group.

Wolfsburg, February 21, 2023

Volkswagen Aktiengesellschaft
The Board of Management

Oliver Blume	Arno Antlitz	Ralf Brandstätter
Manfred Döss	Markus Duesmann	Gunnar Kilian
Thomas Schäfer	Thomas Schmall-von Westerholt	Hauke Stars

Independent auditor's report

On completion of our audit, we issued an unqualified auditor's report dated March 3, 2023 in German language. The following text is a translation of this auditor's report. The German text is authoritative:

To VOLKSWAGEN AKTIENGESELLSCHAFT

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

OPINIONS

We have audited the consolidated financial statements of VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, and its subsidiaries (the Group), which comprise the consolidated income statement and consolidated statement of comprehensive income for the fiscal year from 1 January to 31 December 2022, and the consolidated balance sheet as at 31 December 2022, consolidated statement of changes in equity and consolidated cash flow statement for the fiscal year from 1 January to 31 December 2022, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of VOLKSWAGEN AKTIENGESELLSCHAFT, which is combined with the Company's management report, for the fiscal year from 1 January to 31 December 2022. In accordance with the German legal requirements, we have not audited the content of the parts of the group management report specified in the appendix and the company information stated therein that is provided outside of the annual report and is referenced in the group management report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB ["Handelsgesetzbuch": German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2022 and of its financial performance for the fiscal year from 1 January to 31 December 2022, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. We do not express an opinion on the parts of the group management report listed in the appendix.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

BASIS FOR THE OPINIONS

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and the EU Audit Regulation (No 537/2014, referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the Group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Art. 10 (2) f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Art. 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

KEY AUDIT MATTERS IN THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the fiscal year from 1 January to 31 December 2022. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon; we do not provide a separate opinion on these matters.

Below, we describe what we consider to be the key audit matters:

1. Accounting treatment of the risk provisions for the diesel issue

Reasons why the matter was determined to be a key audit matter

Due to indications of irregularities in connection with exhaust gas emissions from diesel engines in certain vehicles of the Volkswagen Group, regulatory authorities in numerous countries (particularly in Europe, the USA and Canada) commenced investigations in the past few years, some of which are still ongoing.

On the basis of its own findings and those of the authorities, the Volkswagen Group implemented various measures, which differed according to the country in some cases and included hardware and software measures, vehicle buybacks and early termination of leases as well as compensation payments to vehicle owners in some instances. The hardware and software measures had largely been completed as of the reporting date. The risk provisions for the diesel issue mainly include provisions for administrative and civil proceedings. Furthermore, there are legal risks from other criminal and administrative proceedings as well as civil actions, particularly by customers and holders of securities.

The provisions recognized as of 31 December 2022 and the contingent liabilities disclosed in the notes to the consolidated financial statements are subject to a significant estimation risk in view of the extensive ongoing criminal and administrative investigations and proceedings, the complexity of the different issues, developments in court rulings and market conditions for used diesel vehicles. Whether provisions need to be recognized or contingent liabilities disclosed for the legal risks from the diesel issue, and in what amount, depends to a large extent on the assessments and assumptions made by the executive directors. As described in the notes to the consolidated financial statements, the executive directors considered in their assessments in particular the fact that, based on the various measures taken and meanwhile largely concluded to resolve the diesel issue, there is still no confirmation that members of the Board of Management were aware of any deliberate manipulation of the engine control unit software prior to the summer of 2015.

In light of the significance of the risk provisions and the extent of the assumptions and scope for judgment by the executive directors, this matter was a key audit matter.

Auditor's response

To assess the recognition and measurement of the provisions for legal risks and the disclosure of contingent liabilities arising from the diesel issue, we considered, in particular, work and opinions by experts engaged by the executive directors of the Volkswagen Group in addition to available official notices and court judgments as part of a risk-based selection of significant transactions. Moreover, with the involvement of our own legal and forensic specialists, we held regular meetings with the Legal department and the external lawyers engaged by the executive directors of the Volkswagen Group to obtain oral explanations about the current developments and reasons leading to the assessments of the ongoing proceedings. We compared confirmations received from external lawyers with the risk assessment by the executive directors. We also regularly reviewed publicly available information, such as media reports, to assess the completeness of the provisions and contingent liabilities.

In addition, we reviewed on a sample basis the input factors (quantity and value) of the provisions and contingent liabilities for individual matters using statements of claims received, settlement agreements and court judgments. With regard to the valuation, we also compared the current assessments by the executive directors with past experience, where observable. For significant additions to provisions, we examined whether they were due to new matters or to changes in the estimation inputs and obtained corresponding evidence. To analyze significant utilizations of the provisions, we obtained an understanding of the procedural controls implemented and examined a sample to determine whether they were based on settlement agreements or court judgments and whether corresponding payments were made.

Our audit procedures did not lead to any reservations relating to the accounting treatment of the risk provisions for the diesel issue.

Reference to related disclosures

The information presented and the statements made in connection with the diesel issue, including the comments on the underlying causes, on when the members of the Board of Management became aware of the issue and on the effects on the accompanying financial statements are contained in the "Key events" and "Accounting policies" sections, on management's estimates and assessments in the "Balance sheet disclosures" section, note 30, "Noncurrent and current provisions," note 38, "Contingent liabilities" and note 39, "Litigation" of the notes to the consolidated financial statements and in the "Report on Risks and Opportunities" chapter of the group management report, "Legal risks" section, subsection "Diesel issue."

2. Recoverability of goodwill and the acquired brand names

Reasons why the matter was determined to be a key audit matter

The result of the impairment testing of goodwill and the acquired brand names is highly dependent on the executive directors’ estimate of future cash flows and which discount rates they use. The recoverable amount of the cash-generating units is calculated on the basis of their value in use, applying discounted cash flow models.

In addition to the continued effects of the Covid-19 pandemic that are subject to regional variation, in particular production stops due to semiconductor supply shortages and the direct and indirect impact of the Russia-Ukraine conflict affected the cash inflows of the Volkswagen Group and its various brand companies in fiscal year 2022 and may also affect the further development of cash inflows. Moreover, there was an increase in the capital market interest rates relevant for determining the discount rates.

The ongoing transformation of the core business toward electromobility and digitalization, the transition to autonomous vehicles and growing environmental regulation lead to uncertainties in the estimation of market shares and margins for electric vehicles and the long-term growth rates. Growth expectations of the executive directors are subject to risk and may be revised in response to changes in environmental regulation and market conditions.

In addition, the executive directors have scope for judgment in determining the cash-generating units for impairment testing, in determining the discount rates used and the long-term growth rates assumed.

In view of the foregoing, the materiality of goodwill and the acquired brand names in relation to total assets, the complexity of the valuation and the judgment exercised during valuation, the impairment testing of goodwill and the acquired brands was a key audit matter.

Auditor’s response

During our audit, we involved valuation specialists to assess among other things the methodology used to perform the impairment tests in light of the provisions of IAS 36. We also checked the arithmetical accuracy of the valuation models used.

On the basis of the Volkswagen Group’s internal reporting, we assessed for the acquired brands whether the brands represent the lowest level within the Volkswagen Group at which independent cash inflows are generated and whether goodwill is monitored at brand level for internal management purposes.

We analyzed the planning process established in the Volkswagen Group as well as the impairment testing process and tested the operating effectiveness of the controls implemented in each process. As a starting point, we compared the Volkswagen Group’s five-year operational plan prepared by the executive directors and acknowledged by the Supervisory Board with the forecast figures in the underlying impairment tests. We discussed the key planning assumptions for selected brands to which significant goodwill and acquired brand names are allocated with the executive directors and compared them with past earnings and cash inflows to assess the planning accuracy.

We based plausibility testing of the inputs for the impairment tests among other things on a comparison with general and industry-specific market expectations underlying the expected cash inflows.

We discussed with the executive directors the impact of the Russia-Ukraine conflict, the regional variation in the effects of the Covid-19 pandemic on important sales regions and the semiconductor supply shortages on the development of cash inflows in the individual cash-generating units and compared them with current market expectations. We also investigated the expectations regarding the development of market shares for, and the cost of, battery electric vehicles, the effects on the planned investments and their indirect effects on the long-term cash inflows expected by the executive directors.

With respect to the rollforward from the medium-term plan to the long-term forecast, we assessed the plausibility of the assumed growth rates by comparing them with observable data. To assess the discount rates and growth rates applied, we analyzed the inputs used to determine them on the basis of publicly available information and obtained an understanding of the methods used with regard to the relevant requirements of IAS 36.

We also assessed the sensitivity analyses performed by the executive directors in order to estimate any potential impairment risk associated with a reasonably possible change in one of the significant assumptions used in the valuation.

Our procedures did not lead to any reservations relating to the recoverability of goodwill and the acquired brand names.

Reference to related disclosures

With regard to the recognition and measurement policies applied for goodwill and the acquired brand names, refer to the disclosure on intangible assets in the "Accounting policies" section of the notes to the consolidated financial statements. For the related disclosures on judgments by the executive directors and sources of estimation uncertainty as well as the disclosures on goodwill and the acquired brand names, refer to the disclosure in the "Accounting policies" section on estimates and assumptions by management and note 12, "Intangible assets" in the "Balance sheet disclosures" section of the notes to the consolidated financial statements. In the group management report, refer to the "Report on Risks and Opportunities" chapter, "Risks and opportunities" section, subsection "Risks arising from the recoverability of goodwill or brand names and from equity investments."

3. Capitalization and recoverability of development costs

Reasons why the matter was determined to be a key audit matter

Key criteria for capitalizing development costs are the ability to implement the development projects (including their technical feasibility, the intention to complete them and the ability to use them) as well as the realization of an expected future economic benefit. The complexity of research and development projects is mounting in view of the technological transformation of the Volkswagen Group and the resulting new development areas (including high investments in electromobility, software and autonomous driving). Assessments of project feasibility are playing an ever greater role in this connection and entail the use of considerable judgment.

Where capitalized development costs are not yet subject to amortization, they must be tested for impairment as part of the related cash-generating unit at least annually at the level of the brands defined as cash-generating units. The assumption of realizing future economic benefits and the result of testing the recoverability of capitalized development costs during the analyses and impairment tests performed are highly dependent on the executive directors' estimate of future cash flows and which discount rates they use. The recoverable amount of the cash-generating units is calculated on the basis of their value in use, applying discounted cash flow models.

In addition to the continued effects of the Covid-19 pandemic that are subject to regional variation, in particular production stops due to semiconductor supply shortages and the direct and indirect impact of the Russia-Ukraine conflict affected the cash inflows of the Volkswagen Group and its various brand companies in fiscal year 2022 and may also affect the further development of cash inflows. Moreover, there was an increase in the capital market interest rates relevant for determining the discount rates.

The ongoing transformation of the core business toward electromobility and digitalization, the transition to autonomous vehicles and growing environmental regulation lead to uncertainties in the estimation of market shares and margins for electric vehicles and the long-term growth rates. Growth expectations of the executive directors are subject to risk and may be revised in response to changes in environmental regulation and market conditions.

In addition, the executive directors have scope for judgment in determining the cash-generating units for impairment testing, in determining the discount rates used and the long-term growth rates assumed.

In light of the foregoing, the materiality of the capitalized development costs in relation to total assets, the total amount of research and development costs and the judgment exercised in the accounting process, the capitalization of development costs and the impairment test were a key audit matter.

Auditor's response

During our audit, we examined the process for identifying the research and development costs, particularly with reference to the criteria for capitalization. In this connection, we carried out analytical audit procedures such as comparisons of project budgets and capitalization rates, inspected documentation on project feasibility and tested process-related controls in some areas. We also assessed the future economic benefit criterion for capitalization based on the assumptions regarding the cash inflows of the cash-generating unit to which the capitalized development work is allocated.

Moreover, we involved valuation specialists to assess among other things the methodology used to determine the relevant cash-generating units and perform the impairment tests in light of the provisions of IAS 36. We also checked the arithmetical accuracy of the valuation models used.

We analyzed the planning process established in the Volkswagen Group as well as the impairment testing process and tested the operating effectiveness of the controls implemented in each process. As a starting point, we compared the Volkswagen Group's five-year operational plan prepared by the executive directors and acknowledged by the Supervisory Board with the forecast figures in the underlying impairment tests. We discussed with the executive directors the key planning assumptions for a sample we selected of brands with significant capitalized development costs and compared them with past earnings and cash inflows to assess the planning accuracy. We based plausibility testing of the inputs for the impairment tests among other things on a comparison with general and industry-specific market expectations underlying the expected cash inflows.

We discussed with the executive directors the impact of the Russia-Ukraine conflict, the regional variation in the effects of the Covid-19 pandemic on important sales regions and the semiconductor supply shortages on the development of cash inflows in the individual cash-generating units and compared them with current market expectations. We also investigated the expectations regarding the development of market shares for, and the cost of, battery electric vehicles, the effects on the planned investments and their indirect effects on the long-term cash inflows expected by the executive directors.

With respect to the rollforward from the medium-term plan to the long-term forecast, we assessed the plausibility of the assumed growth rates by comparing them with observable data. To assess the discount rates and growth rates applied, we analyzed the inputs used to determine them on the basis of publicly available information and obtained an understanding of the methods used with regard to the relevant requirements of IAS 36.

We also assessed the sensitivity analyses performed by the executive directors in order to estimate any potential impairment risk associated with a reasonably possible change in one of the significant assumptions used in the valuation.

Our procedures did not lead to any reservations relating to the recognition and recoverability of the capitalized development costs.

Reference to related disclosures

With regard to the recognition and measurement policies applied for capitalized development costs, refer to the disclosure on intangible assets in the "Accounting policies" section of the notes to the consolidated financial statements. For the related disclosures on judgments by the executive directors and sources of estimation uncertainty as well as the disclosures on capitalized development costs, refer to the disclosures in the "Accounting policies" section on estimates and assumptions by management and note 12, "Intangible assets" in the "Balance sheet disclosures" section of the notes to the consolidated financial statements.

4. Completeness and measurement of provisions for warranty obligations

Reasons why the matter was determined to be a key audit matter

Obligations for warranty claims are calculated on the basis of estimated warranty costs and ex gratia arrangements. Where unusual individual technical risks are anticipated, an individual assessment is made whether and, if so, to what extent measures are required to remediate them and provisions need to be recognized.

The amount of provisions for warranty claims is significant overall. Besides the general use of judgment in selecting the valuation methods and assessing the obligations, increasing estimation uncertainty stems from the growing proportion of hybrid and battery electric vehicles entering the market and a lack of experience of their susceptibility to faults. In light of the amount of the provisions and the judgment exercised during valuation, the completeness and measurement of provisions for warranty obligations was a key audit matter.

Auditor's response

With regard to the accounting for the provisions for warranty obligations, we examined the underlying processes for recording previous claims, calculating and valuing the estimated future warranty costs and recognizing the provisions, and tested controls in some areas.

In light of the uncertainty in relation to the estimated future warranty, we assessed the underlying valuation assumptions, especially the expected claim rate per vehicle and the cost thereof, using analyses of historical data. Where there was a lack of past experience, we obtained an understanding of the assumptions made by the executive directors and tested their plausibility using historical data for comparable items. Using the calculation bases derived from these historical data, we checked the estimated costs for expected claims per vehicle. To assess the completeness of the provisions, we also reconciled the number of sold vehicles used to recognize the provision with the sales volumes. We obtained an understanding of the method used for calculating the provisions, including the discounting, and reperformed the calculations.

For significant individual technical risks, we assessed the expected incidence of technical faults and the calculation of expected costs per claim/vehicle using documentation on previous claims, inspecting resolutions passed by technical committees and holding discussions with the departments responsible.

Our audit procedures did not lead to any reservations relating to the completeness and valuation of provisions for warranty obligations.

Reference to related disclosures

With regard to the recognition and measurement policies applied in accounting for provisions for warranty obligations, refer to the disclosures in the "Accounting policies" section on estimates and assessments by management and note 30, "Noncurrent and current other provisions" in the "Balance sheet disclosures" section of the notes to the consolidated financial statements.

5. Determination of the expected residual values of lease assets during impairment testing

Reasons why the matter was determined to be a key audit matter

The lease assets balance sheet item comprises vehicles under operating leases. The recoverability of the lease assets depends in particular on the expected residual value of the leased vehicles after expiration of the contractual term. The expected residual values are reviewed by the Company on a quarterly basis. The forecast residual values are adjusted to include constantly updated internal and external information on residual values, depending on specific local factors and the experiences gained in the marketing of used cars. This requires management to make, in particular, assumptions about vehicle supply and demand in the future, as well as about vehicle price trends.

As it is not possible to make a conclusive assessment of the direct and indirect effects of the still disrupted supply chains and the resulting worldwide supply shortages, the energy crisis and rising energy prices as a result of the Russia-Ukraine war and inflation, the estimation uncertainty in relation to the determination of the expected residual values remained heightened in the fiscal year. Minimal changes in the parameters underlying the valuation can lead to significant variation in values. In this light, the determination of the expected residual values of assets leased under operating leases during impairment testing was a key audit matter.

Auditor's response

During our audit, we analyzed the process implemented by the Company for determining and monitoring the residual values to identify any risks of material misstatement and obtained an understanding of the process steps and controls. On this basis, we tested the operating effectiveness of the implemented controls over the determination and monitoring of the expected residual values. To assess the forecasting models used to determine the residual values, we assessed the validation plans on the basis of the respective model designs to determine whether the validation procedures described in the plans allow an assessment of the models' forecast quality. We investigated whether the validation procedures performed according to the validation plans and the backtesting performed led to any indications of model weaknesses or any need to adjust the models. Furthermore, we assessed whether the assumptions underlying the forecasting model and the inputs used for determining the expected residual values were clearly documented. To this end, we obtained evidence for the main inputs and assumptions used for mileage, age and lifecycle phase of the vehicles to determine the residual values and examined them for currentness and transparency. We assessed whether the marketing assumptions used reflect industry-specific and general market expectations as well as, in particular, current marketing results.

Our audit procedures did not lead to any reservations relating to the determination of the expected residual values of the assets leased under operating leases during impairment testing.

Reference to related disclosures

With regard to the recognition and measurement policies applied for lease assets, refer to the disclosure on intangible assets in the "Accounting policies" section of the notes to the consolidated financial statements. For the related disclosures on judgments by the executive directors and sources of estimation uncertainty, refer to the disclosures in the "Accounting policies" section on estimates and assumptions by management and note 14, "Lease assets and investment property" in the "Balance sheet disclosures" section of the notes to the consolidated financial statements.

6. Accounting effects of the IPO of Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, on the consolidated financial statements

Reasons why the matter was determined to be a key audit matter

On 28 September 2022, VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, placed 25% of the preferred shares (including over-allotment shares) in Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, with investors via Porsche Holding Stuttgart GmbH, Stuttgart. These preferred shares have since been traded on the stock exchange. Various agreements were concluded between VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Porsche Holding Stuttgart GmbH, Stuttgart, Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, and Porsche Automobil Holding SE, Stuttgart, in connection with the IPO. This includes the agreement between VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Porsche Holding Stuttgart GmbH, Stuttgart, and Porsche Automobil Holding SE, Stuttgart, on the sale of 25% of the ordinary shares plus one share in Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, to Porsche Automobil Holding SE, Stuttgart. The remaining preferred shares and ordinary shares in Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, will continue to be held by Volkswagen Group entities after the completion of the IPO and sale of the ordinary shares.

The sale of the ordinary shares took place in two tranches; the voting rights associated with the ordinary shares of the second tranche had already been transferred to Porsche Automobil Holding SE, Stuttgart, upon the transfer of the ordinary shares from the first tranche at the time of the IPO. The execution of the transfer of the second tranche of ordinary shares was subject to a condition precedent concerning the execution of the transfer of the first tranche, the payment of a special dividend amounting to 49% of the total gross proceeds from the placement of preferred shares (including any over-allotment shares) and the sale of the ordinary shares. The transfer of the second tranche took place as of 30 December 2022 and VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, therefore recognized a receivable of EUR 3.0b from Porsche Automobil Holding SE, Stuttgart, for the purchase price from the transfer of the second tranche of ordinary shares. The receivable previously transferred by Porsche Holding Stuttgart GmbH, Stuttgart, was subsequently netted with the liability relating to the special dividend payment on the basis of a netting agreement concluded between VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, and Porsche Automobil Holding SE, Stuttgart, as of 30 December 2022.

VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, and Porsche Automobil Holding SE, Stuttgart, agreed on the significant participation of representatives of Porsche Automobil Holding SE, Stuttgart, on the Supervisory Board of Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart. The executive directors believe that the rights of final decision lying with the shareholder representatives appointed by VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, to the Supervisory Board with regard to the direction of the relevant activities within the meaning of IFRS 10 at Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, continue to ensure control by VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg.

In connection with the IPO and the sale of the ordinary shares, non-controlling interests in equity of EUR 10.8b continued to be recognized in the consolidated financial statements of VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg. Additionally, some of the costs of the IPO were recognized directly in equity and some were expensed. Equity increased by EUR 19.1b in total as a result of the transaction including the costs offset directly against equity at the time of the IPO. Cash inflows from the IPO of EUR 16.1b were recognized in the consolidated cash flow statement of the Volkswagen Group.

At an Extraordinary General Meeting of VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, on 16 December 2022, it was resolved to distribute a special dividend amounting to 49% of the total gross proceeds from the placement of the preferred shares (including any over-allotment shares) and the sale of the ordinary shares to shareholders. A corresponding liability of EUR 9.6b is recognized in the consolidated financial statements of VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, as of 31 December 2022. After netting with the receivable from Porsche Automobil Holding SE, Stuttgart, for the purchase price payment for the second tranche of ordinary shares, the liability recognized amounted to EUR 6.5b as of 31 December 2022.

This matter was a key audit matter in light of the significance of the effects of the IPO on the consolidated financial statements of VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, the complexity of determining the non-controlling interests and the assessment of the impact of the agreements concluded as part of the transaction on control over Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, as well as the transfer of beneficial ownership of the second tranche and the disclosures on transactions with related parties required under IAS 24.

Auditor's response

First, we appraised the agreements concluded in the context of the IPO and gained an understanding of the various transactions and of the accounting treatment of the IPO. During our procedures, we examined the effects of the IPO on accounting and profit or loss. In particular, we obtained an understanding of the how the non-controlling interests recognized at the time of the IPO were determined in terms of their substance and calculation, taking into account the use of over-allotment shares in light of the contractual arrangements. We inspected bank documents to satisfy ourselves of the receipt of the cash inflows from the placement of the preferred shares (including the over-allotment shares) as well as from the sale of the first tranche of ordinary shares. We satisfied ourselves on a sample basis that the costs of the IPO were recognized properly in equity or in profit or loss.

On basis of the agreements concluded between VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, Porsche Holding Stuttgart GmbH, Stuttgart, and Porsche Automobil Holding SE, Stuttgart, the Articles of Association of Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, and other documents, we assessed, with the assistance of internal experts, whether VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, controls Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, in accordance with the provisions of IFRS 10.

With respect to the receivable from the sale of the second tranche of ordinary shares to Porsche Automobil Holding SE, Stuttgart, we assessed the transfer of ownership of the shares as of the reporting date by inspecting the underlying agreements. We also inspected resolution documents to check the correct accounting treatment in the consolidated financial statements of the special dividend resolved by the Extraordinary General Meeting of VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, on 16 December 2022.

Finally, we assessed whether the disclosures in the notes to the consolidated financial statements of VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, on the IPO of Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, including the presentation of the underlying contractual arrangements with related parties met the IFRS requirements. In particular, we considered the work products and opinions issued by experts engaged by the executive directors of the Volkswagen Group.

Our audit procedures did not lead to any reservations relating to the accounting for the effects of the IPO of Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, on the consolidated financial statements.

Reference to related disclosures

The information presented and the statements made in connection with the IPO of Dr. Ing. h.c. F. Porsche Aktiengesellschaft, Stuttgart, are contained in the "Key events" and "Accounting policies" sections and in the "Balance sheet disclosures" section, note 46, "Related party disclosures in accordance with IAS 24" of the notes to the consolidated financial statements and in the "Results of Operations, Financial Position and Net Assets" chapter of the group management report, "IPO of Porsche AG" section.

Emphasis of matter paragraph – Immanent risk due to uncertainties regarding the legal conformity of the interpretation of the EU Taxonomy Regulation

We draw attention to the executive directors' comments on the EU Taxonomy disclosures in the "EU Taxonomy" section of the group management report, where it is stated that the EU Taxonomy Regulation and the Delegated Acts adopted thereunder contain wording and terms that are still subject to interpretation uncertainties and for which clarifications have not yet been published in every case. The executive directors describe how they interpreted the EU Taxonomy Regulation and the Delegated Acts adopted thereunder. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties. Our opinion on the group management report is not modified in this respect.

OTHER INFORMATION

The Supervisory Board is responsible for the Report of the Supervisory Board. The executive directors and the Supervisory Board are responsible for the declaration pursuant to Sec. 161 AktG ["Aktiengesetz": German Stock Corporation Act] on the German Corporate Governance Code, which is part of the group corporate governance declaration, and for the remuneration report pursuant to Sec. 162 AktG. In all other respects, the executive directors are responsible for the other information. The other information comprises the parts of the annual report listed in the appendix.

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the executive directors and the Supervisory Board for the consolidated financial statements and the group management report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor’s report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Report on the assurance on the electronic rendering of the consolidated financial statements and the group management report prepared for publication purposes in accordance with Sec. 317 (3a) HGB

Opinion

We have performed assurance work in accordance with Sec. 317 (3a) HGB to obtain reasonable assurance about whether the rendering of the consolidated financial statements and the group management report (hereinafter the “ESEF documents”) contained in the file VWAG_JFB_Konzern_2022-12-31.zip and prepared for publication purposes complies in all material respects with the requirements of Sec. 328 (1) HGB for the electronic reporting format (“ESEF format”). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the group management report into the ESEF format and therefore relates neither to the information contained within these renderings nor to any other information contained in the file identified above.

In our opinion, the rendering of the consolidated financial statements and the group management report contained in the file identified above and prepared for publication purposes complies in all material respects with the requirements of Sec. 328 (1) HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinions on the accompanying consolidated financial statements and the accompanying group management report for the fiscal year from 1 January to 31 December 2022 contained in the “Report on the audit of the consolidated financial statements and of the group management report” above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the file identified above.

Basis for the opinion

We conducted our assurance work on the rendering of the consolidated financial statements and the group management report contained in the file identified above in accordance with Sec. 317 (3a) HGB and the IDW Assurance Standard: Assurance on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes in Accordance with Sec. 317 (3a) HGB (IDW AsS 410 (06.2022)). Our responsibility in accordance therewith is further described in the “Group auditor’s responsibilities for the assurance work on the ESEF documents” section. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of the executive directors and the Supervisory Board for the ESEF documents

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic rendering of the consolidated financial statements and the group management report in accordance with Sec. 328 (1) Sentence 4 No. 1 HGB and for the tagging of the consolidated financial statements in accordance with Sec. 328 (1) Sentence 4 No. 2 HGB.

In addition, the executive directors of the Company are responsible for such internal control as they have determined necessary to enable the preparation of ESEF documents that are free from material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB for the electronic reporting format.

The Supervisory Board is responsible for overseeing the process for preparing the ESEF documents as part of the financial reporting process.

Group auditor's responsibilities for the assurance work on the ESEF documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB. We exercise professional judgment and maintain professional skepticism throughout the assurance work. We also:

- Identify and assess the risks of material intentional or unintentional non-compliance with the requirements of Sec. 328 (1) HGB, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.
- Obtain an understanding of internal control relevant to the assurance on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.
- Evaluate the technical validity of the ESEF documents, i.e., whether the file containing the ESEF documents meets the requirements of Commission Delegated Regulation (EU) 2019/815, in the version in force at the date of the financial statements, on the technical specification for this file.
- Evaluate whether the ESEF documents enable an XHTML rendering with content equivalent to the audited consolidated financial statements and to the audited group management report.
- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Arts. 4 and 6 of Commission Delegated Regulation (EU) 2019/815, in the version in force at the date of the financial statements, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further information pursuant to Art. 10 of the EU Audit Regulation

We were elected as group auditor by the Annual General Meeting on 12 May 2022. We were engaged by the Supervisory Board on 13 December 2022. We have been the group auditor of VOLKSWAGEN AKTIENGESELLSCHAFT since fiscal year 2020.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the Audit Committee pursuant to Art. 11 of the EU Audit Regulation (long-form audit report).

Other matter – Use of the auditor's report

Our auditor's report must always be read together with the audited consolidated financial statements and the audited group management report as well as the assured ESEF documents. The consolidated financial statements and the group management report converted to the ESEF format – including the versions to be published in the *Unternehmensregister* [German Company Register] – are merely electronic renderings of the audited consolidated financial statements and the audited group management report and do not take their place. In particular, the ESEF report and our assurance opinion contained therein are to be used solely together with the assured ESEF documents made available in electronic form.

German Public Auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Martin Matischiok.

APPENDIX TO THE AUDITOR'S REPORT:

1. Parts of the group management report whose content is unaudited

We have not audited the content of the following parts of the group management report:

- The group corporate governance declaration which is published on the website stated in the group management report and is part of the group management report.
- The disclosures extraneous to management reports contained in the "Report on Risks and Opportunities" chapter in the section entitled "Monitoring the effectiveness of the risk management system and the internal control system."

Disclosures extraneous to management reports are such disclosures that are not required pursuant to Secs. 315, 315a HGB or Secs. 315b to 315d HGB or GAS 20.

2. Further other information

The other information comprises the following parts of the annual report, of which we obtained a copy prior to issuing this auditor's report:

- The Group Nonfinancial Report

The other information also comprises other parts to be included in the annual report, of which we obtained a copy prior to issuing this auditor's report, in particular the sections:

- To our Shareholders
- Divisions
- Group Corporate Governance Declaration
- Remuneration Report
- Responsibility Statement; and
- Additional Information

but not the consolidated financial statements, not the group management report disclosures whose content is audited and not our auditor's report thereon.

3. Company information outside of the annual report referenced in the group management report

The group management report contains other cross-references to webpages of the Group. We have not audited the content of the information to which these cross-references refer.

Hanover, 3 March 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Meyer	Matischiok
Wirtschaftsprüfer	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

Independent auditor's report on the remuneration report

To VOLKSWAGEN AKTIENGESELLSCHAFT

We have audited the attached remuneration report of VOLKSWAGEN AKTIENGESELLSCHAFT, Wolfsburg, prepared to comply with Sec. 162 AktG ["Aktiengesetz": German Stock Corporation Act] for the fiscal year from 1 January to 31 December 2022 and the related disclosures.

Responsibilities of the executive directors and the Supervisory Board

The executive directors and the Supervisory Board of VOLKSWAGEN AKTIENGESELLSCHAFT are responsible for the preparation of the remuneration report and the related disclosures in compliance with the requirements of Sec. 162 AktG. In addition, the executive directors and the Supervisory Board are responsible for such internal control as they determine is necessary to enable the preparation of a remuneration report and the related disclosures that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on this remuneration report and the related disclosures based on our audit. We conducted our audit in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the remuneration report and the related disclosures are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts in the remuneration report and the related disclosures. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the remuneration report and the related disclosures, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the preparation of the remuneration report and the related disclosures in order to plan and perform audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the accounting policies used and the reasonableness of accounting estimates made by the executive directors and the Supervisory Board, as well as evaluating the overall presentation of the remuneration report and the related disclosures.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

In our opinion, on the basis of the knowledge obtained in the audit, the remuneration report for the fiscal year from 1 January to 31 December 2022 and the related disclosures comply, in all material respects, with the financial reporting provisions of Sec. 162 AktG.

Other matter – formal audit of the remuneration report

The audit of the content of the remuneration report described in this auditor's report comprises the formal audit of the remuneration report required by Sec. 162 (3) AktG and the issue of a report on this audit. As we are issuing an unqualified opinion on the audit of the content of the remuneration report, this also includes the opinion that the disclosures pursuant to Sec. 162 (1) and (2) AktG are made in the remuneration report in all material respects.

Limitation of liability

The "General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms]" as issued by the IDW on 1 January 2017, are applicable to this engagement and also govern our responsibility and liability to third parties in the context of this engagement (www.de.ey.com/general-engagement-terms).

Hanover, 3 March 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Matischiok
Wirtschaftsprüfer
[German Public Auditor]

Hantke
Wirtschaftsprüfer
[German Public Auditor]

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ADDITIONAL INFORMATION

Five-Year Review

	2022	2021	2020	2019	2018
Volume Data (thousands)					
Vehicle sales (units)	**8,481**	**8,576**	**9,157**	**10,956**	**10,900**
Germany	1,005	973	1,108	1,347	1,236
Abroad	7,476	7,603	8,049	9,609	9,664
Production (units)	**8,717**	**8,283**	**8,900**	**10,823**	**11,018**
Germany	1,648	1,483	1,633	2,112	2,303
Abroad	7,069	6,800	7,267	8,712	8,715
Employees (yearly average)	**669**	**668**	**668**	**668**	**656**
Germany	289	294	294	295	291
Abroad	380	373	373	373	365
Financial Data (in € million)					
Income Statement					
Sales revenue	**279,232**	**250,200**	**222,884**	**252,632**	**235,849**
Cost of sales	–227,005	–202,959	–183,937	–203,490	–189,500
Gross profit	**52,228**	**47,241**	**38,947**	**49,142**	**46,350**
Distribution expenses	–19,840	–19,228	–18,407	–20,978	–20,510
Administrative expenses	–11,689	–10,420	–9,399	–9,767	–8,819
Net other operating result	1,426	1,682	–1,466	–1,437	–3,100
Operating result	**22,124**	**19,275**	**9,675**	**16,960**	**13,920**
Financial result	–81	851	1,991	1,396	1,723
Earnings before tax	**22,044**	**20,126**	**11,667**	**18,356**	**15,643**
Income tax expense	–6,208	–4,698	–2,843	–4,326	–3,489
Earnings after tax	**15,836**	**15,428**	**8,824**	**14,029**	**12,153**
Personnel expenses	**47,002**	**43,677**	**40,516**	**42,913**	**41,158**
Balance Sheet (at December 31)					
Noncurrent assets	340,464	328,261	302,170	300,608	274,620
Current assets	224,309	200,347	194,944	187,463	183,536
Total assets	**564,772**	**528,609**	**497,114**	**488,071**	**458,156**
Equity	178,327	146,154	128,783	123,651	117,342
of which: noncontrolling interests	12,950	1,705	1,734	1,870	225
Noncurrent liabilities	203,453	218,062	202,921	196,497	172,846
Current liabilities	182,992	164,393	165,410	167,924	167,968
Total equity and liabilities	**564,772**	**528,609**	**497,114**	**488,071**	**458,156**
Cash flows from operating activities	**28,496**	**38,633**	**24,901**	**17,983**	**7,272**
Cash flows from investing activities attributable to operating activities	**25,454**	**24,181**	**18,372**	**20,076**	**19,386**
Cash flows from financing activities	**–4,225**	**–7,754**	**7,637**	**–865**	**24,566**

1 Adjusted

Financial Key Performance Indicators

%	2022	2021	2020	2019	2018
Volkswagen Group					
Gross margin	18.7	18.9	17.5	19.5	19.7
Personnel expense ratio	16.8	17.5	18.2	17.0	17.5
Operating return on sales	7.9	7.7	4.3	6.7	5.9
Return on sales before tax	7.9	8.0	5.2	7.3	6.6
Return on sales after tax	5.7	6.2	4.0	5.6	5.2
Equity ratio	31.6	27.6	25.9	25.3	25.6
Automotive Division[2]					
Change in unit sales year-on-year[3]	- 1.1	- 6.3	- 16.4	+ 0.5	+ 1.1
Change in sales revenue year-on-year	+ 12.7	+ 13.3	- 14.3	+ 5.7	+ 2.7
Research and development costs as a percentage of sales revenue	8.1	7.6	7.6	6.7	6.8
Operating return on sales	7.1	6.4	3.7	6.5	5.5
EBITDA (in € million)[4]	37,323	31,609	24,462	29,706	26,707
Return on investment (ROI)[5]	12.0	10.4	6.5	11.2	11.0
Cash flows from operating activities as a percentage of sales revenue	12.9	15.7	13.6	14.5	9.2
Cash flows from investing activities attributable to operating activities as a percentage of sales revenue	10.8	11.5	10.1	9.4	9.4
Capex as a percentage of sales revenue	5.5	5.1	6.1	6.6	6.6
Net liquidity as a percentage of consolidated sales revenue	15.4	10.7	12.0	8.4	8.2
Equity ratio	45.1	40.1	38.1	37.6	37.9
Financial Services Division					
Increase in total assets	2.6	5.6	0.7	7.9	11.2
Return on equity before tax[6]	14.0	17.3	8.8	10.8	9.9
Equity ratio	16.1	14.5	13.2	12.8	12.7

1 Adjusted.
2 Including allocation of consolidation adjustments between the Automotive and Financial Services divisions.
3 Including the Chinese joint ventures. These companies are accounted for using the equity method.
4 Operating result plus net depreciation/amortization and impairment losses/reversals of impairment losses on property, plant and equipment, capitalized development costs, lease assets, goodwill and financial assets as reported in the cash flow statement.
5 For details, see the section entitled “Return on investment (ROI) and value contribution in the reporting period” in the chapter entitled “Results of Operations, Financial Position and Net Assets”.
6 Earnings before tax as a percentage of average equity.

Glossary

Selected terms at a glance

Vocational groups

For example, electronics, logistics, marketing, or finance. A new teaching and learning culture is gradually being established by promoting training in the vocational groups. The specialists are actively involved in the teaching process by passing on their skills and knowledge to their colleagues.

Big Data

Big data is a term used to describe new ways of analyzing and evaluating data volumes that are too vast and too complex to be processed using manual or conventional methods.

Net carbon neutrality

Net carbon neutrality will be achieved if anthropogenic CO2 (carbon dioxide) emissions are offset globally through avoidance, reduction and compensation over a specified period of time. This encompasses all other relevant greenhouse gases as well. Avoidance and reduction of such gases is a priority for the Volkswagen Group.

Turntable concept

Concept of flexible manufacturing enabling the production of different models in variable daily volumes within a single plant, as well as offering the facility to vary daily production volumes of one model between two or more plants.

End-to-end electronics architecture

A scalable platform developed by CARIAD for secure, rapid processing of data in the digitally connected vehicle. This platform improves communication between the vehicle and the cloud, thereby enhancing vehicle performance.

Hybrid notes

Hybrid notes issued by Volkswagen are classified in their entirety as equity. The issuer has call options at defined dates during their perpetual maturities. They pay a fixed coupon until the first possible call date, followed by a variable rate depending on their terms and conditions.

Hybrid drive

Drive combining two different types of engine and energy storage systems (usually an internal combustion engine and an electric motor).

Industry 4.0

Describes the fourth industrial revolution and the systematic development of real-time and intelligent networks between people, objects and systems, exploiting all of the opportunities of information technology along the entire value added chain. Intelligent machines, inventory systems and operating equipment that independently exchange information, trigger actions and control each other will be integrated into production and logistics at a technical level. This offers tremendous versatility, efficient resource utilization, ergonomics and the integration of customers and business partners in operational processes throughout the entire value chain.

Liquefied Natural Gas (LNG)

LNG is needed so that natural gas engines can be used in long-distance trucks and buses, since this is the only way of achieving the required energy density.

Modular Electric Drive Toolkit (MEB)

The modular system is for the manufacturing of electric vehicles. The MEB establishes parameters for axles, drive systems, high-voltage batteries, wheelbases and weight ratios to ensure a vehicle optimally fulfills the requirements of e-mobility. The production of the first vehicles based on the MEB started into series production in 2020.

Modular Transverse Toolkit (MQB)

As an extension of the modular strategy, this platform can be deployed in vehicles whose architecture permits a transverse arrangement of the engine components. The modular perspective enables high synergies to be achieved between the vehicles in the Volkswagen Passenger Cars, Volkswagen Commercial Vehicles, Audi, SEAT and ŠKODA brands.

Zero-Emissions Vehicle (ZEV)

Vehicles that operate without exhibiting any harmful emissions from combustion gases. Examples of zero-emissions vehicles include purely battery-powered electric vehicles (BEV) or fuel cell vehicles.

Plug-in hybrid

Performance levels of hybrid vehicles. Plug-in hybrid electric vehicles (PHEVs) have a larger battery with a correspondingly higher capacity that can be charged via the combustion engine, the brake system, or an electrical outlet. This increases the range of the vehicle.

Rating

Systematic assessment of companies in terms of their credit quality. Ratings are expressed by means of rating classes, which are defined differently by the individual rating agencies.

Scalable Systems Platform (SSP)

The Scalable Systems Platform (SSP) is a future-oriented and industry-leading mechatronics platform for all-electric and fully digitalized vehicles based on a standardized software architecture. Innovative technologies and scalability enable high synergies from the smallest vehicles all the way up to the premium segment with the necessary differentiation between the brand groups Volume, Premium and Sport & Luxury, while at the same time enabling low investment requirements.

Premium Platform Electric (PPE)

A new vehicle platform for all-electric premium, sport and luxury class vehicles. The components and functions of this platform are especially tailored to meet the high demands of this segment. This platform enables high synergies to be achieved particularly between the Audi, Porsche and Bentley brands.

Test procedure

Levels of fuel consumption and exhaust gas emissions for vehicles registered in Europe were previously measured on a chassis dynamometer with the help of the “New European Driving Cycle (NEDC)”. Since fall 2017, the existing test procedure for emissions and fuel consumption used in the EU is being gradually replaced by the Worldwide Harmonized Light Vehicles Test Procedure (WLTP). This has been in place for new vehicle types since fall 2017 and for all new vehicles since fall 2018. The aim of this new test cycle is to state CO_2 emissions and fuel consumption in a more practice-oriented manner. A further important European regulation is the Real Driving Emissions (RDE) for passenger cars and light commercial vehicles, which also monitors emissions using portable emission measuring technology in real road traffic.

Vehicle-Lifetime-Value

The value a vehicle generates for the Volkswagen Group including the dealer organization over its entire life cycle, starting with income from the sale, through income during the operational life, up to the recycling at the end of the vehicle life cycle.

Capitalization ratio

The capitalization ratio is defined as the ratio of capitalized development costs to total research and development costs in the Automotive Division. It shows the proportion of primary research and development costs subject to capitalization.

Distribution ratio

The distribution ratio is the ratio of total dividends attributable to ordinary and preferred shares to earnings after tax attributable to the shareholders of Volkswagen AG. The distribution ratio provides information on how earnings are distributed.

Gross margin

Gross margin is the percentage of sales revenue attributable to gross profit in a period. Gross margin provides information on profitability net of cost of sales.

Dividend yield

The dividend yield is the ratio of the dividend for the reporting year to the closing price per share class on the last trading day of the reporting year; it represents the interest rate earned per share. The dividend yield is used in particular for measuring and comparing shares.

Equity ratio

The equity ratio measures the percentage of total assets attributable to shareholders' equity as of a reporting date. This ratio indicates the stability and financial strength of the company and shows the degree of financial independence.

Return on equity before tax

The return on equity shows the ratio of profit before tax to average shareholders' equity of a period, expressed as a percentage. It reflects the company's profitability per share and indicates the interest rate earned on equity.

Price-earnings ratio

The price-earnings ratio is calculated by dividing the share price per share class at the end of the year by the earnings per share. It reflects a company's profitability per share; a comparison over several years shows how its performance has developed over time.

Tax rate

The tax rate is the ratio of income tax expense to profit before tax, expressed in percent. It shows what percentage of the profit generated has to be paid over as tax.

Return on sales before tax

The return on sales is the ratio of profit before tax to sales revenue in a period, expressed as a percentage. It shows the level of profit generated for each unit of sales revenue. The return on sales provides information on the profitability of all business activities before deducting income tax expense.

SCHEDULED DATES 2023

→ **MARCH 14**

Volkswagen AG Annual Media Conference and Investor Conference

→ **MAY 4**

Interim Report January – March 2023

→ **MAY 10**

Volkswagen AG Annual General Meeting

→ **JULY 27**

Half-Yearly Financial Report 2023

→ **OCTOBER 26**

Interim Report January – September 2023

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