



Experience in Motion

INNOVATING FOR A BETTER WORLD

2022 ANNUAL REPORT

**R. SCOTT ROWE**President and
Chief Executive Officer**DAVID E. ROBERTS**Non-Executive Chairman
of the Board**TO OUR SHAREHOLDERS:**

Flowserve hit an important milestone this year as we celebrated our 25th anniversary being publicly listed on the New York Stock Exchange, a major highlight of our history in the flow control industry that spans more than 230 years. For over two centuries, Flowserve has been an innovation trailblazer, and we continue that leadership position today. In 2022, we introduced our Diversify, Decarbonize and Digitize (3D) strategy to position Flowserve for accelerated growth in a changing world. Through this strategy, we are pursuing higher growth end-markets like water and specialty chemicals and helping today's industries reduce CO₂ with solutions such as carbon capture, energy efficiency and energy transition. Flowserve is also providing our RedRaven IoT capabilities to digitize our customers' existing flow control assets to improve operations, minimize expensive downtime and deliver predictive analytics. Over 25% of our total bookings during the year were attributed to our 3D strategy. Meanwhile, energy security and energy independence became a global theme during 2022, and Flowserve remained committed to supporting our traditional customers in those markets to help ensure the world's energy needs are met.

Year in Review – Positioning for Growth

We faced a challenging business environment in 2022 including with respect to supply chain, labor availability and logistics issues which prevented us from delivering the financial results our shareholders should expect. While we were not satisfied with our 2022 financial performance, Flowserve excelled at implementing our 3D strategy and supporting our traditional customers. This success led to a year-over-year bookings and backlog increase of 14% and 35%, respectively. As a result, Flowserve is well-positioned for strong growth this year, with an ending 2022 backlog of \$2.7 billion, which is up nearly \$700 million from the

prior year. With this level of work under contract, constructive end-markets and our 3D strategy, Flowserve's future looks bright.

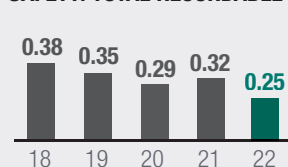
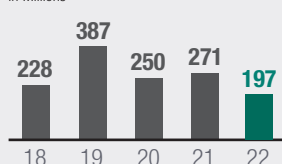
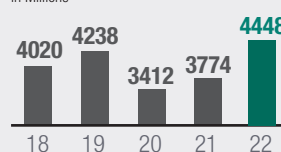
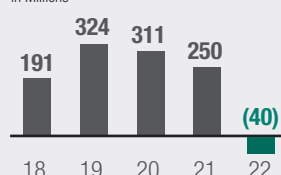
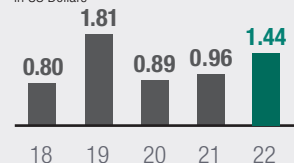
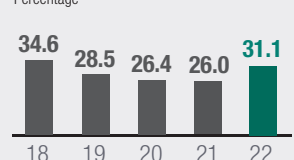
Driving Innovation

Flowserve remains on the forefront of flow control innovation. During 2022, we launched more than 20 new and redesigned products that directly align to our 3D strategy, enhance our ESG initiatives and support our customers' sustainability efforts. In addition, the company purchased in-process R&D for hydrogen pump technology for dispensing applications and we expect to broaden this skillset to more areas in the growing hydrogen space. We formed a technology joint venture for cryogenic applications such as LNG, hydrogen and other gasses, and also entered into a partnership agreement to address the most challenging issues in industrial water and wastewater treatment.

In early 2023, Flowserve announced an agreement to acquire Velan Inc., a manufacturer of industrial valves supporting the nuclear, cryogenic and defense markets, which will further accelerate our 3D strategy. Additionally, we signed an agreement with a global cleantech company to provide flow control technology for their plastic recycling operations to generate green, sustainable chemicals from plastic waste.

Prepared for the Future

Flowserve is well-positioned for significant growth in 2023 and beyond. As we deliver on our robust backlog, we will focus on operational excellence, margin expansion and acceleration of our 3D strategy to drive us forward. Our greatest asset is our dedicated associates, and when combined with our 3D strategy, a comprehensive product and service offering and the commitment to innovation, Flowserve is prepared to drive the long-term profitable growth that our customers and shareholders expect. Lastly, we thank you for your continued support.

**FINANCIAL
HIGHLIGHTS****SAFETY: TOTAL RECORDABLE RATE****OPERATING INCOME**
in Millions**BOOKINGS**
in Millions**OPERATING CASH FLOW**
in Millions**EARNINGS PER SHARE**
in US Dollars**NET DEBT TO NET CAPITAL RATIO**
Percentage



Our Path Forward

At Flowserve, our approach to energy transition begins and ends with our purpose: to make the world better for everyone. We understand that when we enable our customers in tackling climate change and addressing increasing energy demands through our innovative flow control solutions, we can make the world better now and for generations to come.

So how are we supporting our customers through this energy shift?

Our approach is threefold. We are diversifying, decarbonizing and digitizing to support the global energy sector's transformation toward low-carbon sources.



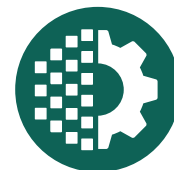
DIVERSIFICATION

Our innovative portfolio of flow control solutions and services will support energy systems around the world to diversify the energy mix and adopt cleaner sources of energy.



DECARBONIZATION

We will support the reduction of energy-related CO₂ emissions across the mix of energy sources through our innovative portfolio of flow control solutions and services.



DIGITIZATION

We will enable improvements in efficiency, productivity, sustainability and safety of energy systems around the world through our digital solutions and services.

Together, these three pathways will define how we support our customers, where we expand and the innovations we drive forward to address this global call to action.

For our more than 230-year history, we've supported our customers through some of the world's biggest transformations, today is no exception. We are uniquely positioned to support our customers now and through the future.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2022

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM TO .

Commission file number 1-13179

FLOWERVE CORPORATION

(Exact name of registrant as specified in its charter)



New York

(State or other jurisdiction of incorporation or organization)

31-0267900

(I.R.S. Employer Identification No.)

5215 N. O'Connor Boulevard Suite 700, Irving, Texas

(Address of principal executive offices)

75039

(Zip Code)

(972) 443-6500

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, \$1.25 Par Value	FLS	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐
Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☒ No ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the common stock held by non-affiliates of the registrant, computed by reference to the closing price of the registrant's common stock as reported on June 30, 2022 (the last business day of the registrant's most recently completed second fiscal quarter), was approximately \$2,414,922,893. For purposes of the foregoing calculation only, all directors, executive officers and known 5% beneficial owners have been deemed affiliates.

Number of the registrant's common shares outstanding as of March 1, 2023 was 131,117,928.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information contained in the definitive proxy statement for the registrant's 2023 Annual Meeting of Shareholders scheduled to be held on May 25, 2023 is incorporated by reference into Part III hereof.

**FLOWSERVE CORPORATION
FORM 10-K**

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PART I

ITEM 1. BUSINESS

Unless the context otherwise indicates, references to “Flowserve,” “the Company” and such words as “we,” “our” and “us” include Flowserve Corporation and its subsidiaries.

OVERVIEW

Flowserve Corporation is a world-leading manufacturer and aftermarket service provider of comprehensive flow control systems. We develop and manufacture precision-engineered flow control equipment integral to the movement, control and protection of the flow of materials in our customers’ critical processes. Our product portfolio of pumps, valves, seals, automation and aftermarket services supports global infrastructure industries, including oil and gas, chemical, power generation (including nuclear, fossil and renewable) and water management, as well as certain general industrial markets where our products and services add value. Through our manufacturing platform and global network of Quick Response Centers (“QRCs”), we offer a broad array of aftermarket equipment services, such as installation, advanced diagnostics, repair and retrofitting.

Strategies

Our overarching strategic objectives are to remain a leader in each of the market segments we serve and become the employer of choice in the flow control industry. Additionally, we seek to be recognized by our customers as the most trusted brand of flow control technology in terms of reliability and quality, which we believe will help maximize shareholder value.

In pursuit of these objectives, we maintain a rolling, five-year strategic plan that takes a balanced approach to integrating both short-term and long-term initiatives in four key areas: People, Process & Technology, Customer and Finance.

People

With the goal of developing and maintaining a people-first culture, we focus on several elements in our strategic efforts to continuously enhance our organizational capability, including: (i) fully committing to providing a safe work environment for our associates, worldwide, (ii) upholding a high-performance workforce, that is empowered, accountable and flexible, (iii) becoming an employer of choice by fostering a people-first culture and (iv) recruiting, developing and retaining a global and diverse workforce.

Process & Technology

With the goal of improving our productivity and delivering a continuous stream of innovative solutions to our customers, we focus on select strategies relating to: (i) developing and maintaining an enterprise-first business approach across all operating units and functional organizations, (ii) simplifying our business processes and optimizing corporate structural costs, (iii) continually reducing our product cost and rationalizing our product portfolio and (iv) remaining a technical leader in the flow control industry.

Customers

With the goal of achieving the highest level of customer satisfaction amongst our peers, we focus on select strategies related to rigorous and disciplined selection of target markets and customers, while maintaining competitive lead times and emphasizing the highest levels of on-time delivery and quality. We seek to provide an outstanding experience for our customers over the entire product lifecycle by providing unique, integrated flow-control solutions that solve real-world application problems in our customers’ facilities.

Finance

With the goal of growing the value of our enterprise, we focus on select strategies we believe will increase our revenue above the rate of market growth, while optimizing performance in terms of gross margin, selling, general and administrative (“SG&A”) expense, operating margin, cash flow and primary working capital.

History

Flowserve Corporation as it exists today was created in 1997 through the merger of two leading fluid motion and control companies — BW/IP and Durco International. Under the name of a predecessor entity, we were incorporated in the State of New York on May 1, 1912, but some of our heritage product brand names date back to our founding in 1790. Over the years, we have evolved through organic growth and strategic acquisitions, and our over 225-year history of Flowserve heritage brands serves as the foundation for the breadth and depth of our products and services today.

BUSINESS SEGMENTS AND PRODUCTS

Our Primary Industries

We sell our products and services to approximately 10,000 companies, including some of the world's leading engineering, procurement and construction firms ("EPC"), original equipment manufacturers, distributors and end users. Our products and services are used in several distinct industries having a broad geographic reach. Our total bookings in 2022, 2021 and 2020 were \$4.4 billion, \$3.8 billion and \$3.4 billion, respectively. Our bookings mix by industry in 2022, 2021 and 2020 consisted of:

	<u>2022</u>	<u>2021</u>	<u>2020</u>
• oil and gas	40%	35%	34%
• general industries ⁽¹⁾	22%	26%	26%
• chemical ⁽²⁾	22%	24%	24%
• power generation	12%	12%	13%
• water management	4%	3%	3%

(1) General industries include mining and ore processing, pulp and paper, food and beverage and other smaller applications, as well as sales to distributors whose end customers typically operate in the other industries we primarily serve as identified above.

(2) Chemical industry is comprised of chemical-based and pharmaceutical products.

Demand

Demand for most of our products depends on the level of new capital investment as well as planned and unplanned maintenance expenditures by our customers. The level of new capital investment depends, in turn, on capital infrastructure projects driven by the need for products that rely on oil and gas, chemicals, power generation and water resource management, as well as general economic conditions. These drivers are generally related to the phase of the business cycle in their respective industries and the expectations of future market behavior, including changes in demand for certain products and processes as a result of evolving industry trends and needs. The levels of maintenance expenditures are additionally driven by the reliability of equipment, planned and unplanned downtime for maintenance and the required capacity utilization of the process.

Sales Channels

Sales to EPC firms and original equipment manufacturers are typically for large project orders and critical applications, as are certain sales to distributors. Project orders are typically procured for customers either directly from us or indirectly through contractors for new construction projects or facility enhancement projects that are longer-cycle projects and can take up to two years.

In contrast to large project orders, the quick turnaround business, which we also refer to as "short-cycle," is defined as orders that are received from the customer (booked) and shipped generally within six months of receipt. These orders are typically for more standardized, general purpose products, parts or services, and are less cyclical than larger capital expenditures driven by project orders. Each of our two business segments generates certain levels of this type of short-cycle business.

In the sale of aftermarket products and services (collectively referred to as "aftermarket"), we benefit from a large installed base of our original equipment, which requires periodic maintenance, repair and replacement parts. We use our manufacturing platform and global network of QRCs to offer a broad array of aftermarket equipment services, such as installation, advanced diagnostics, repair and retrofitting. In geographic regions where we are positioned to provide quick response, we believe customers have traditionally relied on us, rather than our competitors, for

aftermarket products due to our highly engineered and customized products. However, the aftermarket for standard products is competitive, as the existence of common standards allows for easier replacement of the installed products. As proximity of service centers, timeliness of delivery and quality are important considerations for all aftermarket products and services, we continue to selectively expand our global QRC capabilities to improve our ability to capture an increasing portion of this important aftermarket business. Each of our two business segments generates certain levels of aftermarket products and services.

We have pursued a strategy of industry diversity and geographic breadth to mitigate the impact on our business of normal economic downturns in any one of the industries or in any particular part of the world we serve. In addition, to augment our focus on growth we have initiated a diversify, decarbonize and digitize growth strategy (“3D Strategy”). The 3D Strategy focuses on diversifying end markets to create a more balanced portfolio, supporting customers through the energy transition and leveraging technology and data to improve customer operations and provide solutions.

For events that may occur and adversely impact our business, financial condition, results of operations and cash flows, refer to “Item 1A. Risk Factors” of this Annual Report on Form 10-K for the year ended December 31, 2022 (“Annual Report”). For information on our sales and long-lived assets by geographic areas, see Note 19 to our consolidated financial statements included in “Item 8. Financial Statements and Supplementary Data” (“Item 8”) of this Annual Report.

Business Functions

Our segments share a focus on industrial flow control technology and benefit from our global footprint and our economies of scale in reducing administrative and overhead costs to serve customers more cost effectively. All segments share certain resources and functions, including elements of research and development (“R&D”), supply chain, safety, quality assurance and administrative functions that provide efficiencies and an overall lower cost structure.

Our operations leadership reports to our Chief Executive Officer and the segments share leadership for operational support functions such as R&D, marketing and supply chain. We believe this leadership structure positions the Company to leverage operational excellence, cost reduction initiatives and internal synergies across our entire operating platform to drive further growth and increase in shareholder value.

BUSINESS SEGMENTS

We report a two operating segment structure, consisting of our Flowserve Pumps Division and our Flow Control Division. In addition to the business segment information presented below, Note 19 to our consolidated financial statements in Item 8 of this Annual Report contains additional financial information about our business segments and geographic areas in which we have conducted business in 2022, 2021 and 2020.

FLOWSERVE PUMP DIVISION

Our largest business segment is the Flowserve Pump Division (“FPD”), through which we design, manufacture, pretest, distribute and service specialty and highly-engineered custom and pre-configured pumps and pump systems, mechanical seals, auxiliary systems, replacement parts and upgrades and related aftermarket services. FPD products and services are primarily used by companies that operate in the oil and gas, chemical, power generation, water management and general industries. We market our pump and mechanical seal products through our global sales force and our regional QRCs and service and repair centers or through independent distributors and sales representatives. A portion of our mechanical seal products are sold directly to other original equipment manufacturers for incorporation into their rotating equipment requiring mechanical seals.

Our pump products are manufactured in a wide range of metal alloys and with a variety of configurations to reliably meet the operating requirements of our customers. Mechanical seals are critical to the reliable operation of rotating equipment in that they prevent leakage and emissions of hazardous substances from the rotating equipment and reduce shaft wear on the equipment caused by the use of non-mechanical seals. We also manufacture a gas-lubricated mechanical seal that is used in high-speed compressors for gas pipelines and in the oil and gas production and process markets. Our products are currently manufactured in 35 manufacturing facilities worldwide, 10 of which are located in Europe, 11 in North America, eight in Asia Pacific and six in Latin America, and we have 132 QRCs, including those co-located in manufacturing facilities and/or shared with our Flow Control Division (“FCD”).

We also conduct business through strategic foreign joint ventures. We have five unconsolidated joint ventures that are located in Chile, India, Saudi Arabia, South Korea and the United Arab Emirates, where a portion of our products are manufactured, assembled or serviced in these territories. These relationships provide numerous strategic opportunities, including increased access to our current and new markets, access to additional manufacturing capacity and expansion of our operational platform to support best-cost sourcing initiatives and balance capacity demands for other markets.

FPD Products

We manufacture more than 40 different active types of pumps, including American Petroleum Institute (“API”) process pumps used in many downstream refining and petrochemical processing systems, and single case multistage axially split heavy duty pumps often used for high pressure hydrocarbon pipeline transmission. In addition, we manufacture double case diffuser style barrel pumps for medium duty applications in refining and petrochemical applications and submersible pump for deep well pumping in irrigation and municipal water supply service. We also manufacture approximately 185 different models of mechanical seals and sealing systems. Our pump products are sold under globally recognized brands in some cases dating back as far as 225 years ago, including Worthington, SIHI, Durco and Innomag. As announced in 2022, Flowserve also produces FLEX, a pressure exchange device for mainly the desalination market.

FPD Services

We also provide engineered aftermarket services through our global network of 132 QRCs, some of which are co-located in manufacturing facilities, in 45 countries. Our FPD service personnel provide a comprehensive set of equipment services for flow management control systems, including installation, commissioning services, seal systems spare parts, repairs, advanced diagnostics, re-rate and upgrade solutions and retrofit programs, machining and comprehensive asset management solutions. We provide asset management services and condition monitoring for rotating equipment through special contracts with many of our customers that reduce maintenance costs. A large portion of FPD’s service work is performed on a quick response basis and we offer 24-hour service in all of our major markets.

FPD New Product Development

Our investments in new product R&D continue to focus on increasing the capability of our products as customer applications become more advanced, demanding greater levels of production (i.e., flow and power) and under more extreme conditions (i.e., erosive, corrosive and temperature) beyond the level of traditional technology. We continue to invest in our product platform and develop innovations to improve our competitive position in our key markets, including the global chemical industry and in the engineered equipment industry, specifically upstream, offshore and downstream applications for the oil and gas market. Continued engagement with our end users is exemplified through the completion of advancements that significantly improve energy efficiency, reduce total cost-of-ownership and enhance safety.

As the world continues to undergo energy transition in the coming years, significant investment towards renewable sources of energy and energy efficiency solutions will become increasingly more important. We continue to develop new product designs to support our customers through energy transition in our key end markets. We have launched and will continue to launch new initiatives to support renewable energy, energy efficiency, emissions reduction, decarbonization, and sustainability as the world continues to embrace energy transition into the future. Product development and continued improvements in these areas is a key aspect of our environmental, social and governance (“ESG”) program.

In addition, we continue to advance our capabilities and technology position in the rapidly developing segment known as the Industrial Internet of Things (“IIoT”). Over the past several years we have continued to both invest and partner in this space to build remote monitoring solutions, as well as advanced equipment diagnostics in order to provide remote asset management and related services capabilities for our end-user customers. Our IIoT solution, RedRaven, includes delivering intelligent “edge” devices, advanced networking infrastructure and secure communication and security protocols, secure data management, and remote monitoring and reporting for our customers. In addition, we have moved beyond exploring new additive manufacturing capabilities, such as 3D printing and fast casting methods, and are exploring ways to economically scale these techniques as another means of manufacturing our products to both reduce lead time and lower our production costs.

None of these newly developed products or services required the investment of a material amount of our assets or was otherwise material to our business. Flowserve continues to develop cryogenic hydrogen pumping products and technology in connection with a third party technology partnership which began in 2022. Furthermore, Flowserve has continued to develop and commercialize new products with greater efficiency and capacity in the pressure exchanger portfolio.

FPD Customers

Our customer mix is diversified and includes leading EPC firms, major national oil companies, international oil companies, equipment end users in our served markets, other original equipment manufacturers, distributors and end users. Our sales mix of original equipment products and aftermarket products and services diversifies our business and helps mitigate the impact of normal economic cycles on our business. Our sales are diversified among several industries, including oil and gas, chemical, power generation, water management and general industries.

FPD Competition

The pump and mechanical seal industry is highly fragmented, with thousands of competitors globally. We compete, however, primarily with a limited number of large companies operating on a global scale. There are also a number of smaller, newer entrants in some of our emerging markets. Competition among our closest competitors is generally driven by delivery times, application knowledge, experience, expertise, price, breadth of product offerings, contractual terms, previous installation history and reputation for quality. Some of our largest industry competitors include: Sulzer Pumps; Ebara Corp.; SPX FLOW, Inc.; Eagle Burgmann, which is a joint venture of two traditional global seal manufacturers, A. W. Chesterton Co. and AES Corp.; John Crane Inc., a unit of Smiths Group Plc; Weir Group Plc.; ITT Industries; and KSB SE & Co. KGaA.

The pump and mechanical seal industry continues to undergo considerable consolidation, which is primarily driven by (i) the need to lower costs through reduction of excess capacity and (ii) customers' preference to align with global full service suppliers to simplify their supplier base. Despite the consolidation activity, the market remains highly competitive.

We believe that our strongest sources of competitive advantage rest with our extensive range of pumps for the oil and gas, petrochemical, chemical and power generation industries, our large installed base of products, our strong customer relationships, our high quality technology, our more than 225 years of experience in manufacturing and servicing pumping equipment, our reputation for providing quality engineering solutions and our ability to deliver engineered new seal product orders within 72 hours from the customer's request.

FPD Backlog

FPD's backlog of orders as of December 31, 2022 was \$2,008.9 million, compared with \$1,368.9 million as of December 31, 2021. We expect to recognize revenue on approximately 77% of December 31, 2022 backlog during 2023.

FLOW CONTROL DIVISION

FCD designs, manufactures, distributes and services a broad portfolio of flow control solutions, including engineered and industrial valve and automation systems, isolation and control valves, actuation, controls and related equipment. FCD leverages its experience and application know-how by offering a complete menu of engineering and project management services to complement its expansive product portfolio. FCD products are used to control, direct and manage the flow of liquids, gases and multi-phase fluids, and are a critical part of any flow control system. Our valve and automation products are based on flexible architecture that can be customized or engineered to perform specific functions within each customer's unique flow control environment or objective.

Our flow control products are primarily used by companies operating in the chemical, power generation, oil and gas, water management and general industries. Our products are currently manufactured in 19 principal manufacturing facilities, five of which are located in the U.S., eight located in Europe, five located in Asia Pacific and one located in Latin America. We deliver our services through our global network of 25 QRCs worldwide, including five sites in Europe and Africa, nine in North America, three in the Middle East, six in Asia Pacific and two in Latin America, including those co-located in manufacturing facilities.

On February 9, 2023 the Company entered into a definitive agreement under which it will acquire all of the outstanding equity of Velan Inc., a manufacturer of highly engineered industrial valves, in an all cash transaction valued at approximately \$245 million. The transaction is subject to customary closing conditions, including applicable regulatory approvals and target shareholder approval, and is expected to close by the end of the second quarter of 2023.

FCD Products

Our valve, automation and controls product and solutions portfolio represent one of the most comprehensive in the flow control industry. Our products are used in a wide variety of applications, from general service to the most severe and demanding services, including those involving high levels of corrosion, extreme temperatures and/or pressures, zero fugitive emissions and emergency shutdown.

Our “smart” valve and diagnostic technologies integrate sensors, microprocessor controls and software into high performance integrated control valves, digital positioners and switch boxes for automated on/off valve assemblies and electric actuators. These technologies permit real-time system analysis, system warnings and remote indication of asset health. These technologies have been developed in response to the growing demand for reduced maintenance, improved process control efficiency and digital communications at the plant level. We are committed to further enhancing the quality of our product portfolio by continuing to upgrade our existing offerings with cutting-edge technologies.

Our valve actuation products encompass a broad range of pneumatic, electric, hydraulic and stored energy actuation designs to take advantage of whatever power source the customer has available, including utilizing the process fluid flowing through the pipeline as a source of power to actuate the valve. Our actuation products also cover one of the widest ranges of output torques in the industry, providing the ability to automate anything from the smallest linear globe valve to the largest multi-turn gate valve. Most importantly, FCD combines best-in-class mechanical designs with the latest in controls and communication technologies in order to provide complete integrated automation solutions that optimize flow control performance and enhance digital end-user experience.

We manufacture approximately 30 different active types of products, including valves, actuators, positioners, and switches. Our products are sold under globally recognized brands in some cases dating back as far as 225 years, including Valtek, Argus, Worcester, Limitorque and Durco.

FCD Services

Our service personnel provide comprehensive equipment maintenance services for flow control systems, including advanced diagnostics, repair, installation, commissioning, retrofit programs and field machining capabilities. A large portion of our service work is performed on a quick response basis, which includes 24-hour service in all of our major markets. We also provide in-house repair and return manufacturing services worldwide through our manufacturing facilities. We believe our ability to offer comprehensive, quick turnaround services provides us with a unique competitive advantage and unparalleled access to our customers’ installed base of flow control products.

During 2022, we added the service of condition monitoring for our control valves, which is enabled by RedRaven, our proprietary IIoT solution, and digital positioners. Within any control valve system, the RedRaven solution acts as a condition monitoring system and provides critical operating information to the end users and therefore helps to reduce downtime, improve productivity and increase visibility into their flow processes. Additionally, RedRaven is connected to our QRC network for fast and reliable repair or replacement of valves, actuators and other related valve equipment.

FCD New Product Development

Our R&D investment is focused on areas that will enhance end-user experience and advance our technological leadership by creating compelling value propositions for our customers, and lasting competitive advantage of our products and services in the market. In that respect, our investments have been focusing in four critical areas:

- (1) significantly enhancing the digital integration and interoperability of automation products (e.g., positioners, actuators, limit switches and associated accessories) with Distributed Control Systems (“DCS”) and Asset Management Systems (“AMS”);
- (2) developing and deploying next-generation hardware and software solutions that leverage our in-depth domain knowledge, big data and artificial intelligence, to further flow control diagnostics and bring insights that increase performance and efficiency of end-user processes;
- (3) advancing material science and processing technologies in order to further increase products’ capabilities in severe and critical services – including but not limited to noise and cavitation reduction; and

- (4) investing in our talents and processes that adopt modern R&D project management tools (such as lean startup, SCRUM, agile and hybrid portfolio management, etc.) that enable effective risk mitigation and shorter commercialization cycles.

We expect to continue our R&D investments in the above areas.

In addition, like FPD, a number of FCD's product development efforts are tied to assisting our customers with energy transition. These efforts are geared toward (1) supporting our customers in their own decarbonization efforts with new valve offerings, including Flowtop and Mark linear control valves and Valbart ball valves, as well as (2) cost-effective deployment of alternative energy technologies, such as hydrogen and renewable power with innovations in our Valdisk rotary control valve, Edward gate and globe valves, and Valtek and Durco triple-offset butterfly valve product lines.

None of these newly developed valve products or services required the investment of a material amount of our assets or was otherwise material.

FCD Customers

Our customer mix spans several end markets, including the chemical, power generation, oil and gas, water management, pulp and paper, mining and other general industries. We are especially active in providing solutions for emerging applications that supports sustainability (such as concentrated solar power, hydrogen economy, carbon capture, desalination, etc.) or increases energy productivity (such as Liquefied Natural Gas ("LNG"), Ethylene cracking, Hydro cracking, etc.). Lastly, our expertise in flow control management makes us a reliable partner to assist our customers with energy transition – by either making their processes more efficient and sustainable, or by providing products and solutions for new technologies that enable energy transition.

Our product offerings include original equipment, aftermarket parts, and a portfolio of services and solutions. Contracts and transactions are conducted through a variety of channels depending on customer requirements, including direct end-users, EPC firms, distributors and other original equipment manufacturers.

FCD Competition

While in recent years the valve market has undergone a significant amount of consolidation, the market remains highly fragmented. Some of the largest valve industry competitors include Emerson Electric Co., Cameron International Corp. (a Schlumberger company), Baker Hughes, Rotork plc, Neles, Samson and Crane Co.

Our market research and assessments indicate that the top 10 global valve manufacturers collectively comprise less than 15% of the total valve market. Based on independent industry sources, we believe that FCD is the second largest industrial valve supplier in the world. We believe that our strongest sources of competitive advantage rest with our comprehensive portfolio of valve and automation products and services, our ability to provide complementary pump and rotating equipment products and services, our focus on execution, our expertise in severe corrosion and erosion applications, and strategic partnerships purposely built to advance market adoption of new technologies and digital tools.

FCD Backlog

FCD's backlog of orders as of December 31, 2022 was \$745.5 million, compared with \$639.8 million as of December 31, 2021. We expect to recognize revenue on approximately 90% of December 31, 2022 backlog during 2023.

ADDITIONAL INFORMATION REGARDING BOTH REPORTING SEGMENTS

Seasonality

Our financial results are traditionally seasonal, as we typically experience lower earnings in the first quarter of the year, with lower sales, coupled with fixed operating expenses, impacting our earnings and cash flows. We typically have higher sales, earnings and cash flows in the second half of the year with the fourth quarter being the strongest. Given that certain of our operating expenses are fixed, fluctuations in sales volumes from quarter to quarter may affect operating income for the respective quarters.

Selling and Distribution

We primarily distribute our products through direct sales by employees assigned to specific regions, industries or products. In addition, we use distributors and sales representatives to supplement our direct sales force where it is more economically efficient. We generate a majority of our sales leads through existing relationships with vendors, customers and prospects or through referrals.

Intellectual Property

We own a number of trademarks and patents relating to the names and designs of our products. We consider our trademarks and patents to be valuable assets of our business. In addition, our pool of proprietary information, consisting of know-how and trade secrets related to the design, manufacture and operation of our products, is considered particularly valuable. Accordingly, we take proactive measures to protect such proprietary information. We generally own the rights to the products that we manufacture and sell and are unencumbered by licensing or franchise agreements. In limited circumstances, we have entered into agreements to license intellectual property. The operational and financial terms of these agreements are not material. Our trademarks can typically be renewed indefinitely as long as they remain in use, whereas our existing patents generally expire 10 to 20 years from the dates they were filed, which has occurred at various times in the past. We do not believe that the expiration of any individual patent will have a material adverse impact on our business, financial condition or results of operations.

Raw Materials

The principal raw materials used in manufacturing our products include ferrous and non-ferrous metals in the form of bar stock, machined castings, fasteners, forgings and motors, as well as silicon, carbon faces, gaskets and fluoropolymer components. A substantial volume of our raw materials is purchased from outside sources, and we have been able to develop a robust supply chain. Since the onset of the COVID-19 pandemic, many of our suppliers have experienced varying lengths of production and shipping delays related to the pandemic, some of which continue to exist in highly affected countries. Additionally, global supply chain and logistics constraints affecting global markets caused additional headwinds throughout 2022. We have also experienced, and continue to experience, increased cost inflation throughout our supply chain. Throughout 2022, our operating costs were impacted by inflation, including with respect to the cost of certain raw materials, packaging and freight, as well as wage and benefit costs.

These conditions have had an adverse effect on the speed at which we can manufacture and ship our products to customers, and have also led to an increase in logistics, transportation and freight costs, requiring that we diversify our supply chain and, in some instances, source materials from new suppliers. We continually monitor the business conditions of our suppliers to manage competitive market conditions and to avoid potential supply disruptions wherever possible. We continue to expand global sourcing to capitalize on localization in emerging markets and low-cost sources of purchased goods balanced with efficient consolidated and compliant logistics. The combined effects of supply chain disruption, inflation and the strong U.S. dollar may adversely affect our ability to source raw materials from our suppliers.

Metal castings used in the manufacture of our pump, valve, and mechanical seals are purchased from qualified and approved foundry sources. We remain vertically integrated with metal castings in certain strategic product families.

Concerning the products we supply to customers in the nuclear power generation industry, suppliers of raw materials for nuclear power generation markets must be qualified to meet the requirements of nuclear industry standards and governmental regulations. Supply channels for these materials are currently adequate, and we do not anticipate difficulty in obtaining such materials in the future.

Human Capital Management

Our associates worldwide are critical to delivering on our purpose to create extraordinary flow control solutions. As a global manufacturer, our values start with our people - we strive to create a collaborative team environment that enables us to develop each other, embrace our differences and respect one another.

As of December 31, 2022, we had approximately 16,000 employees (“associates”) globally and a footprint of manufacturing facilities and QRCs in more than 50 countries. Of our global associates, there are approximately 7,600 in FPD and 3,300 in FCD. The remaining 5,100 associates support core business functions including legal, human resources, information technology, finance, commercial operations and sales, global engineering operations

and marketing and technology operations. Regionally, approximately 4,900 of our associates are in North America, approximately 1,600 of our associates are in Latin America, approximately 6,000 of our associates are in Europe, the Middle East and Africa, and approximately 3,500 of our associates are in Asia Pacific. Our workforce is made up of approximately 13,300 salaried employees and 2,700 hourly employees.

We are committed to achieving business success with integrity at the forefront. All associates and our Board of Directors are governed by our Code of Conduct as we continuously work together to improve our operations by fostering a work environment that supports employee health, safety, training, development, diversity, equity and inclusion. To create that environment, members of management work together to identify areas of opportunity and develop and implement various policies, procedures, and initiatives in these key areas. Members of management also provide quarterly (or more frequent, as needed) updates to our Board of Directors, who provide additional input and guidance to management on these key areas.

Workplace Health and Safety: Safety is one of the corporate values at the Company and is embedded throughout our organization. We strive to create and maintain a safe working environment, empowering our employees to identify and report safety concerns and act to correct hazards. Our focus on safety and environmental protection has led to meaningful reductions in workplace safety incidents, emissions to the environment, and solid waste and hazardous waste generation at our facilities worldwide. Flowserve prioritized the safety of our employees, contractors and site visitors during the pandemic by promoting social distancing, masking and vaccination globally. In addition, the Company regularly monitors performance metrics, such as incident rates and lost time rates, and performance indicators, such as observations reported and training completions to ensure our safety program is having a positive impact on these key safety metrics.

Compensation and Benefits: We maintain a market-based compensation strategy that provides a competitive total target compensation opportunity for our associates. We also value the health and well-being of our associates and offer competitive overall benefits, health and wellness programs tailored to the specific localized needs of our employees. We offer a global employee assistance program to support the mental health and wellness needs our employees, as well as physical health incentives aimed at creating healthy lives for our employees and their families.

Training, Development and Ethics: Developing our people is an essential aspect of the Flowserve's strategy and we believe development is a continuous process. We offer developmental opportunities to help our associates build the skills needed to reach their short-term and long-term career goals, including but not limited to on-the-job training, online learning, rotational programs, professional memberships, language learning and leadership development. To help our associates see how their work contributes to overall Company objectives and successes, management uses a robust performance management system and provides regular feedback to develop talent and foster engagement.

Throughout 2022 we engaged our more than 2,000 people leaders with Leadership in Motion, a development program focused on the foundational capabilities of leadership through the lens of Flowserve's values and behaviors. Together, these leaders advanced their skills in collaborating across the enterprise, developing their teams, and strengthening our culture of inclusion for all associates. We also introduced People Leader Expectations through the program to build on our Values and Behaviors with clearly defined attributes and actions for people leaders.

With respect to our Integrity and Compliance program, we provide our associates with training on the Flowserve Code of Conduct annually, through which they gain an understanding of the types of behaviors and decisions that represent our ethics and values. We also provide associates with compliance trainings on relevant topics such as trade, anti-corruption, anti-trust, investigations and data privacy.

Culture and Engagement: To further enhance our culture, we conduct biannual employee engagement surveys to solicit feedback and input directly from our associates. In 2022, approximately 80% of our associates participated in our employee engagement survey. The Company put action to the survey results by empowering leaders with results summaries and personalized action planning support to further advance our culture and values at a local level.

Flowserve also seeks to build a diverse and inclusive culture through our Diversity, Equity and Inclusion program. Flowserve participates in regular national and global observances by sharing educational content with employees that raises awareness of cultural celebrations and experiences. Through these observances, we believe we can inspire mutual understanding and greater empathy across our global workforce. As a multi-national organization, recognition and education of cultural observances is an important part of creating a greater understanding and appreciation for our associates' experiences and for the experiences of our global customer base.

In addition, in 2022 management received education and training on unconscious bias and leading with inclusivity. With these programs and educational opportunities, we hope to foster an employee culture that drives inclusion, combats bias and positively impacts our communities in and outside of Flowserve.

In 2022, we continued our journey to advance our culture of inclusion through partnership with McKinsey's Black Leadership Academy, a virtual program offered to Black managers and leaders who aspire to take the challenging leap into senior leadership. The program focuses on building core management and leadership capabilities, developing the cross-functional knowledge needed to lead successful businesses and teams, and on strengthening personal networks. The 45-hour program supported our leaders in their personal and professional development.

Another avenue to foster our culture is through our employee recognition program, the Spirit of Flowserve. This program supports our business strategy, our values and our vision to drive an innovative culture, customer-centric mindset, employee engagement and talent retention. In 2022, over 21,000 awards were given through the Spirit of Flowserve program for exceptional achievement and positive impact to the Company.

Environmental, Social and Governance Activities

We structure our approach to sustainability around ESG principles that incorporate our values and business priorities so that all of our associates can contribute to our ESG priorities. Our ESG program is centered on three key pillars – climate, culture and core responsibility. Climate captures the environmental pillar of our ESG approach and outlines our commitment to enabling a clean energy future for our operations and our customers. Culture refers to the social pillar of our ESG strategy and is rooted in our belief that the collective energy of our people set us apart. It defines our commitment to strengthening our values-driven culture and investing in our communities through talent recruitment and engagement, diversity, equity and inclusion, workplace health and safety, and employee well-being. Core responsibility represents governance and how we seek to conduct business ethically and in accordance with laws and regulations around the world.

We publish an annual ESG Report that discusses our ESG-related goals, activities and accomplishments, which can be accessed through the “Investor Relations” section of our Internet web site, and which is not incorporated by reference into this Annual Report on Form 10-K.

Environmental Regulations and Proceedings

We are subject to environmental laws and regulations in all jurisdictions in which we have operating facilities. These requirements primarily relate to the generation and disposal of waste, air emissions and wastewater discharges. We periodically make capital expenditures to enhance our compliance with environmental requirements, as well as to abate and control pollution. At present, we have no plans for any material capital expenditures for environmental control equipment at any of our facilities. However, we have incurred and continue to incur operating costs relating to ongoing environmental compliance matters. Based on existing and proposed environmental requirements and our anticipated production schedule, we believe that future environmental compliance expenditures will not have a material adverse effect on our financial condition, results of operations or cash flows.

We use hazardous substances and generate hazardous wastes in many of our manufacturing and foundry operations. Most of our current and former properties are or have been used for industrial purposes and some may require clean-up of historical contamination. During the due diligence phase of our acquisitions, we conduct environmental site assessments to identify potential environmental liabilities and required clean-up measures. We are currently conducting follow-up investigation and/or remediation activities at those locations where we have known environmental concerns. We have cleaned up a majority of the sites with known historical contamination and are addressing the remaining identified issues.

Over the years, we have been involved as one of many potentially responsible parties (“PRP”) at former public waste disposal sites that are or were subject to investigation and remediation. We are currently involved as a PRP at four Superfund sites. The sites are in various stages of evaluation by government authorities. Our total projected “fair share” cost allocation at these four sites is expected to be immaterial. See “Item 3. Legal Proceedings” included in this Annual Report for more information.

We have established reserves that we currently believe to be adequate to cover our currently identified on-site and off-site environmental liabilities.

Exports

Our export sales from the U.S. to foreign unaffiliated customers were \$246.6 million in 2022, \$263.1 million in 2021 and \$264.6 million in 2020.

Licenses are required from U.S. and other government agencies to export certain products. In particular, products with nuclear power generation and/or military applications are restricted, as are certain other pump, valve and seal products.

AVAILABLE INFORMATION

We maintain an Internet web site at www.flowserve.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) of the Securities Exchange Act of 1934 are made available free of charge through the “Investor Relations” section of our Internet web site as soon as reasonably practicable after we electronically file the reports with, or furnish the reports to, the U.S. Securities and Exchange Commission (“SEC”). Reports, proxy statements and other information filed or furnished with the SEC are also available at www.sec.gov.

Also available on our Internet web site are our Corporate Governance Guidelines for our Board of Directors and Code of Ethics and Business Conduct, the charters of the Audit, Finance and Risk, Organization and Compensation and Corporate Governance and Nominating Committees of our Board of Directors, our annual ESG Report, and other important governance documents. All of the foregoing documents may be obtained through our Internet web site as noted above and are available in print without charge to shareholders who request them. Information contained on or available through our Internet web site is not incorporated into this Annual Report or any other document we file with, or furnish to, the SEC.

ITEM 1A. RISK FACTORS

Please carefully consider the following discussion of material factors, events, and uncertainties that make an investment in our securities risky. If any of the factors, events and contingencies discussed below or elsewhere in this Annual Report materialize, our business, financial condition, results of operations, cash flows, reputation or prospects could be materially adversely affected. While we believe all known material risks are disclosed, additional risks and uncertainties not presently known to us, or that we currently deem immaterial, may also materially adversely affect our business, financial condition, results of operations, cash flows, reputation, prospects or stock price. Because of the risk factors discussed below and elsewhere in this Annual Report and in other filings we make with the SEC, as well as other variables affecting our operating results, past financial performance may not be a reliable indicator of future performance, historical trends should not be used to anticipate results or trends in future periods and actual results could differ materially from those projected in the forward-looking statements contained in this Annual Report.

Business and Operating Risks

Our business depends on our customers' levels of capital investment and maintenance expenditures, which in turn are affected by numerous factors, including changes in the state of domestic and global economies, global energy demand and the liquidity cyclical and condition of global credit and capital markets, which have impacted and which could continue to impact the ability or willingness of our customers to invest in our products and services and adversely affect our financial condition, results of operations and cash flow.

Demand for most of our products and services depends on the level of new capital investment and planned maintenance expenditures by our customers. The level of capital expenditures by our customers depends, in turn, on general economic conditions, availability of credit, economic conditions within their respective industries and expectations of future market behavior. Additionally, volatility in commodity prices can negatively affect the level of these activities and can result in postponement of capital spending decisions or the delay or cancellation of existing orders. The ability of our customers to finance capital investment and maintenance is also affected by factors independent of the conditions in their industry, such as the condition of global credit and capital markets.

The businesses of many of our customers, particularly oil and gas companies, chemical companies and general industrial companies, are to varying degrees cyclical and have experienced periodic downturns. Our customers in these industries, particularly those whose demand for our products and services is primarily profit-driven, tend to delay large capital projects, including expensive maintenance and upgrades, during economic downturns. For example, our chemical customers generally tend to reduce their spending on capital investments and operate their facilities at lower levels in a soft economic environment, which reduces demand for our products and services. Additionally, fluctuating energy demand forecasts and lingering uncertainty concerning commodity pricing, specifically the price of oil, have caused, and may in the future cause, our customers to be more conservative in their capital planning, reducing demand for our products and services. Reduced demand for our products and services from time to time results in the delay or cancellation of existing orders or lead to excess manufacturing capacity, which unfavorably impacts our absorption of fixed manufacturing costs. This reduced demand has in the past and may continue in the future to also erode average selling prices in our industry. Any of these results could continue to adversely affect our business, financial condition, results of operations and cash flows.

The ongoing COVID-19 pandemic, and the volatile regional and global economic conditions stemming from the pandemic, have precipitated or aggravated many of the factors described above, and we expect that these factors will continue to adversely impact our operations and financial performance as well as those of many of our customers and suppliers. For further discussion of the risks presented by the ongoing pandemic, see the discussion below under the heading "The COVID-19 pandemic has had, and may continue to have, an adverse impact on our operations and financial performance."

Additionally, our customers sometimes delay capital investment and maintenance even during favorable conditions in their industries or markets. Despite these favorable conditions, the general health of global credit and capital markets and our customers' ability to access such markets impacts investments in large capital projects, including necessary maintenance and upgrades. In addition, the liquidity and financial position of our customers impacts capital investment decisions and their ability to pay in full and/or on a timely basis. Any of these factors, whether individually or in the aggregate, could have a material adverse effect on our customers and, in turn, our business, financial condition, results of operations and cash flows.

Volatility in commodity prices, effects from credit and capital market conditions and global economic growth forecasts have in the past prompted and may in the future prompt customers to delay or cancel existing orders, which could adversely affect the viability of our backlog and could impede our ability to realize revenues on our backlog.

Our backlog represents the value of uncompleted customer orders. While we cannot be certain that reported backlog will be indicative of future results, our ability to accurately value our backlog can be adversely affected by numerous factors, including the health of our customers' businesses and their access to capital, volatility in commodity prices (e.g., copper, nickel, stainless steel) and economic uncertainty. While we attempt to mitigate the financial consequences of order delays and cancellations through contractual provisions and other means, if we were to experience a significant increase in order delays or cancellations that can result from the aforementioned economic conditions or other factors beyond our control, it could impede or delay our ability to realize anticipated revenues on our backlog. Such a loss of anticipated revenues could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our inability to deliver our backlog on time could affect our revenues, future sales and profitability and our relationships with customers.

At December 31, 2022, our backlog was \$2.7 billion. In 2023, our ability to meet customer delivery schedules for backlog is dependent on a number of factors including, but not limited to, sufficient manufacturing plant capacity, adequate supply channel access to the raw materials and other inventory required for production, an adequately trained and capable workforce, project engineering expertise for certain large projects and appropriate planning and scheduling of manufacturing resources. Our manufacturing plant operations, capacity and supply chain are subject to disruption as a result of equipment failure, severe weather conditions and other natural or manmade disasters, including power outages, fires, explosions, terrorism, cyber-based attacks, conflicts or unrest, epidemics or pandemics (including the ongoing COVID-19 pandemic), labor disputes, acts of God, or other reasons. We may also encounter capacity limitations due to changes in demand despite our forecasting efforts. Many of the contracts we enter into with our customers require long manufacturing lead times and contain penalty clauses related to late delivery. Failure to deliver in accordance with contract terms and customer expectations could subject us to financial penalties, damage existing customer relationships, increase our costs, reduce our sales and have a material adverse effect on our business, financial condition, results of operations and cash flows.

Failure to successfully execute and realize the expected financial benefits from any restructuring and strategic realignment and other cost-saving initiatives could adversely affect our business.

Adverse effects from our execution of any future restructuring and realignment activities could interfere with our realization of anticipated synergies, customer service improvements and cost savings from these strategic initiatives. Moreover, because such expenses are difficult to predict and are necessarily inexact, we may incur substantial expenses in connection with the execution of any future restructuring and realignment plans in excess of what is currently anticipated. Further, restructuring and realignment activities are a complex and time-consuming process that can place substantial demands on management, which could divert attention from other business priorities or disrupt our daily operations. Any of these failures could, in turn, materially adversely affect our business, financial condition, results of operations and cash flows, which could constrain our liquidity.

If these measures are not successful or sustainable, we may undertake additional realignment and cost reduction efforts, which could result in future charges. Moreover, our ability to achieve our other strategic goals and business plans may be adversely affected, and we could experience business disruptions with customers and elsewhere if any restructuring and realignment efforts prove ineffective.

We sell our products in highly competitive markets, which results in pressure on our profit margins and limits our ability to maintain or increase the market share of our products.

The markets for our products and services are geographically diverse and highly competitive. We compete against large and well-established national and global companies, as well as regional and local companies, low-cost replicators of spare parts and in-house maintenance departments of our end-user customers. We compete based on price, technical expertise, timeliness of delivery, contractual terms, project management, proximity to service centers, previous installation history and reputation for quality and reliability. Competitive environments in slow-growth industries and for original equipment orders have been inherently more influenced by pricing and domestic and global economic conditions and current economic forecasts suggest that the competitive influence of pricing has broadened. Additionally, some of our customers have been attempting to reduce the number of vendors from which they purchase

in order to reduce the size and diversity of their supply chain. To remain competitive, we must invest in manufacturing, technology, marketing, customer service and support and our distribution networks. No assurances can be made that we will have sufficient resources to continue to make the investment required to maintain or increase our market share or that our investments will be successful. A relatively strong U.S. dollar has made and may continue to make our products more expensive overseas, which may make our ability to meet our international customers' pricing expectations particularly challenging and may result in erosion of product margin and market share. In addition, negative publicity or other organized campaigns critical of us, through social media or otherwise, could negatively affect our reputation and competitive position. If we do not compete successfully, our business, financial condition, results of operations and cash flows could be materially adversely affected.

Failure to successfully develop and introduce new products could limit our ability to grow and maintain our competitive position and adversely affect our financial condition, results of operations and cash flow.

The success of new and improved products and services depends on their initial and continued acceptance by our customers. Our businesses are affected by varying degrees of technological change and corresponding shifts in customer demand, which result in unpredictable product transitions, shortened life cycles and increased importance of being first to market with new products and services. Difficulties or delays in the research, development, production and/or marketing of new products and services negatively impact our operating results and prevent us from recouping or realizing a return on the investments required to continue to bring these products and services to market.

Our inability to obtain raw materials at favorable prices may adversely affect our operating margins and results of operations.

We purchase substantially all electric power and other raw materials we use in the manufacturing of our products from outside sources. The costs of these raw materials have been volatile historically and are influenced by factors that are outside our control, including more recently due to the COVID-19 pandemic. In recent years, the prices for energy, metal alloys, nickel and certain other of our raw materials have been volatile. Our operating margins and results of operations and cash flows may be adversely affected if we are unable to pass increases in the costs of our raw materials on to our customers or if other methods to offset our increased costs through supply chain management, contractual provisions and gains in operational efficiencies are not achieved.

Inflation has the potential to adversely affect our business, financial condition and results of operations by increasing our overall cost structure, including with respect to purchased parts, commodity and raw material costs. Our operating costs are subject to fluctuations, particularly due to changes in prices for commodities, parts, raw materials, energy and related utilities, freight, and cost of labor which have been and may continue to be driven by inflation, tightening labor markets, prevailing price levels, exchange rates, and other economic factors. Throughout 2022, our operating costs have been impacted by price inflation, including with respect to the cost of certain raw materials, commodities, freight and logistics, and we expect this to continue for the foreseeable future. In order to remain competitive, we may not be able to recover all or a portion of these higher costs from our customers through price increases, which would reduce our profit margins and cash flows. Actions we take to mitigate volatility in manufacturing and operating costs may not be successful and, as a result, our business, financial condition, cash flows and results of operations could be materially and adversely affected.

The COVID-19 pandemic has had, and may continue to have an adverse impact on our operations and financial performance.

The COVID-19 pandemic, including actions taken by governments in response, caused and may continue to cause, a substantial curtailment of business activities (including the decrease in demand for a broad variety of goods and services), weakened economic conditions, supply chain disruptions, significant economic uncertainty and volatility in the financial and commodity markets, including global volatility in supply and demand for oil and gas. These effects have had an adverse impact on our operations and financial performance and the operations and financial performance of many of our customers and suppliers.

For example, the global supply chain and logistics constraints affecting global markets adversely affected the speed at which we can manufacture and ship our products to customers, and have also led to an increase in logistics, transportation and freight costs, requiring that we diversify our supply chain and, in some instances, source materials from new suppliers. These effects in some cases impacted our ability to deliver products to customers on time, which has in turn led to an increase in backlog at some of our manufacturing sites. These disruptions in our supply chain and their effects have continued into 2023 and we expect they will continue as ongoing global supply chain and logistics headwinds continue to affect global markets.

The ultimate impact of the COVID-19 pandemic on our operations and financial performance will continue to depend on many factors that are not within our control, including, but not limited, to, any future resurgence and actions taken by governments in response thereto.

Terrorist acts, conflicts, wars, natural or manmade disasters, epidemics or pandemics, acts of God and other such events around the world at times materially adversely affect our business, financial condition and results of operations and the market for our common stock.

As a global company with a large international footprint, we are subject to increased risk of damage or disruption to us, our employees, facilities, partners, suppliers, distributors, resellers or customers due to, among other things, terrorist acts, conflicts (including as a result of geopolitical uncertainty and/or conflicts in the countries and/or regions where we operate, including the United Kingdom, the European Union, Ukraine and the Trans-Pacific region), severe weather conditions and other natural or manmade disasters, including power outages, fires, explosions, cyber-based attacks, epidemics or pandemics (including the ongoing COVID-19 pandemic), labor disputes, and acts of God wherever located around the world. The potential for future such events, the national and international responses to such events or perceived threats to national security, and other actual or potential conflicts or wars, such as the Russia-Ukraine conflict, the Israeli-Hamas conflict and ongoing instability in Syria and Egypt, have created many economic and political uncertainties. In addition, as a global company with headquarters and significant operations located in the U.S., actions against or by the U.S. may impact our business or employees. Changes in general economic conditions or any of the foregoing events, or our inability to accurately forecast these changes or events or mitigate the impact of these conditions on our business, could materially adversely affect us. See also the discussion below under the heading “Economic, political and other risks associated with international operations could adversely affect our business.”

Global climate change and our commitments to reduce our carbon emissions presents challenges to our business which could materially adversely affect us.

The effects of climate change create financial and operational risks to our business, both directly and indirectly. There is a general consensus that greenhouse gas (“GHG”) emissions are linked to global climate change, and that these emissions must be reduced dramatically to avert the worst effects of climate change. Increased public awareness and concern regarding global climate change will result in more regulations designed to reduce GHG emissions. As a result, and as discussed hereafter in our risk factor entitled “We are exposed to certain regulatory and financial risks related to climate change, which could adversely affect our financial condition, results of operations and cash flows,” we may be required to make increased capital expenditures to adapt our business and operations to meet new regulations and standards.

Over the years, we have made several public commitments regarding our intended reduction of carbon emissions including other short- and mid-term environmental sustainability goals. We may be required to expend significant resources to meet these commitments, which could significantly increase our operational costs. Further, there can be no assurance of the extent to which any of our ambitions will be achieved, or that any future investments we make in furtherance of achieving our sustainability goals will meet customer expectations and needs, investor expectations or any binding or non-binding legal standards regarding sustainability performance. In particular, our ability to meet those commitments depends in part on innovations and significant technological advancements with respect to the development and availability of reliable, affordable and sustainable alternative solutions. Moreover, we may determine that it is in the best interest of our company and our shareholders to prioritize other business, social, governance or sustainable investments over the achievement of our current commitments based on economic, regulatory and social factors, business strategy or pressure from investors, activist groups or other stakeholders.

If we are unable to meet these commitments, then, in addition to regulatory and legal risks related to compliance, we could incur adverse publicity and reaction from investors, customers or other stakeholders, which could adversely impact our reputation, which could in turn adversely impact our results of operations. While we have been and remain committed to being responsive to climate change and to reducing our carbon footprint, there can be no assurance that our commitments and current and future strategic plans to achieve those commitments will be successful, that the costs related to the foregoing energy transition may not be higher than expected, that the technological advancements and innovations we are relying upon will come to fruition in the timeframe we expect, or at all, or that proposed regulation or deregulation related to climate change will not have a negative competitive impact, any one of which could have a material adverse effect on our capital expenditures, operating margins and results of operations.

Our business may be adversely impacted by work stoppages and other labor matters.

As of December 31, 2022, we had approximately 16,000 employees, of which approximately 4,500 were located in the U.S. Approximately 5% of our U.S. employees are represented by unions. We also have unionized employees or employee work councils in Argentina, Australia, Austria, Brazil, Finland, France, Germany, India, Italy, Japan, Mexico, The Netherlands, Romania, South Africa, Spain, and Sweden. Although we believe that our relations with our employees are generally satisfactory and we have not experienced any material strikes or work stoppages recently, no assurances can be made that we will not in the future experience these and other types of conflicts with labor unions, works councils, other groups representing employees or our employees generally, or that any future negotiations with our labor unions will not result in significant increases in our cost of labor. Our ability to successfully negotiate new and acceptable agreements when the existing agreements with employees covered by collective bargaining expire could result in business disruptions or increased costs.

Our ability to implement our business strategy and serve our customers is dependent upon the continuing ability to employ talented professionals and attract, train, develop and retain a skilled workforce. We are subject to the risk that we will not be able to effectively replace the knowledge and expertise of an aging workforce as workers retire. Without a properly skilled and experienced workforce, our costs, including productivity costs and costs to replace employees may increase, and this could negatively impact our earnings.

We may also encounter additional costs from claims made and/or legal proceedings brought against us with respect to alleged workplace harassment or discrimination, and we could suffer reputational harm.

Our growth strategy depends on our ability to continue to expand our market presence through acquisitions, and any future acquisitions may present unforeseen integration difficulties or costs which could materially affect our business.

Since 1997, we have expanded through a number of acquisitions, and we may pursue strategic acquisitions of businesses in the future. Our ability to implement this growth strategy will be limited by our ability to identify appropriate acquisition candidates, covenants in our credit agreement and other debt agreements and our financial resources, including available cash and borrowing capacity. Acquisitions may require additional debt financing, resulting in higher leverage and an increase in interest expense or may require equity financing, resulting in ownership dilution to existing shareholders. In addition, acquisitions sometimes require large one-time charges and can result in the incurrence of contingent liabilities, adverse tax consequences, substantial depreciation or deferred compensation charges, the amortization of identifiable purchased intangible assets or impairment of goodwill, any of which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

When we acquire another business, the process of integrating acquired operations into our existing operations creates operating challenges and requires significant financial and managerial resources that would otherwise be available for the ongoing development or expansion of existing operations. Some of the more common challenges associated with acquisitions that we may experience, and have experienced in the past, include:

- loss of key employees or customers of the acquired company;
- conforming the acquired company's standards, processes, procedures and controls, including accounting systems and controls, with our operations, which could cause deficiencies related to our internal control over financial reporting;
- coordinating operations that are increased in scope, geographic diversity and complexity;
- retooling and reprogramming of equipment;
- hiring additional management and other critical personnel; and
- the diversion of management's attention from our day-to-day operations.

Further, no guarantees can be made that we would realize the cost savings, synergies or revenue enhancements that we may anticipate from any acquisition, or that we will realize such benefits within the time frame that we expect. If we are not able to timely address the challenges associated with acquisitions and successfully integrate acquired businesses, or if our integrated product and service offerings fail to achieve market acceptance, our business could be adversely affected.

A significant data breach or disruption to our information technology infrastructure could materially adversely affect our business operations.

Our information technology networks and related systems and devices and those technology systems under control of third parties with whom we do business are critical to the operation of our business and essential to our ability to successfully perform day-to-day operations. These information technology networks and related systems and devices and those under control of third parties are susceptible to damage, disruptions or shutdowns due to programming errors, defects or other vulnerabilities, power outages, hardware failures, computer viruses, cyber-attacks, malware attacks, ransomware attacks, theft, misconduct by employees or other insiders, misuse, human errors or other events. If any of the aforementioned breaches or disruptions occur and our business continuity plans do not effectively resolve the issues in a timely manner, our business, financial condition, results of operations, and liquidity could be materially adversely affected.

In addition, any of the aforementioned breaches or disruptions could expose us to a risk of loss, disclosure, misuse, corruption, or interruption of sensitive and critical data, information and functions, including our proprietary and confidential information and information related to our customers, suppliers and employees. It is also possible a security breach could result in theft of material trade secrets or other material intellectual property. While we devote substantial resources to maintaining adequate levels of cybersecurity, there can be no assurance that we will be able to prevent all of the rapidly evolving forms of increasingly sophisticated and frequent cyberattacks, or avoid or limit a material adverse impact on our systems after such incidents or attacks occur. The potential consequences of a material cybersecurity incident include reputational damage, loss of customers, litigation with third parties, regulatory actions and fines, theft of intellectual property, disruption of manufacturing plant operations and increased cybersecurity protection and remediation costs. If we are unable to prevent, anticipate, detect or adequately respond to security breaches, our operations could be disrupted and our business could be materially and adversely affected.

Developments in the applicable legal standards for the handling of personal data from time to time require changes to our business practices, penalties, increased cost of operations, or otherwise harm our business. To conduct our operations, we regularly move data across national borders and must comply with increasingly complex and rigorous regulatory standards enacted to protect business and personal data in the U.S. and elsewhere. For example, the E.U. recently adopted the General Data Protection Regulation (the “GDPR”). The GDPR imposes additional obligations on companies regarding the handling of personal data and provides certain individual privacy rights to persons whose data is stored. Compliance with existing, proposed and recently enacted laws and regulations can be costly; any failure to comply with these regulatory standards could subject us to legal and reputational risks, including proceedings against the Company by governmental entities or others, fines and penalties, damage to our reputation and credibility and could have a negative impact on our business and results of operations.

Risks Related to International Operations

Economic, political and other risks associated with our international operations could adversely affect our business.

A substantial portion of our operations is conducted and located outside the U.S. We have manufacturing, sales or service facilities in more than 50 countries and sell to customers in over 90 countries, in addition to the U.S. Moreover, we primarily source certain of our manufacturing and engineering functions, raw materials and components from China, Eastern Europe, India and Latin America. Accordingly, our business and results of operations are subject to risks associated with doing business internationally, including:

- instability in a specific country’s or region’s political or economic conditions, particularly economic conditions in Europe and Latin America, and political conditions in the Middle East, Asia, North Africa, Latin America, the Trans-Pacific region and other emerging markets;
- trade protection measures, such as tariff increases, and import and export licensing and control requirements;
- political, financial market or economic instability relating to epidemics or pandemics (including the ongoing COVID-19 pandemic);
- uncertainties related to any geopolitical, economic and regulatory effects or changes due to recent or upcoming domestic and international elections;
- the imposition of governmental economic sanctions on countries in which we do business;

- potentially negative consequences from changes in tax laws or tax examinations;
- difficulty in staffing and managing widespread operations;
- increased aging and slower collection of receivables, particularly in Latin America and other emerging markets;
- difficulty of enforcing agreements and collecting receivables through some foreign legal systems;
- differing and, in some cases, more stringent labor regulations;
- potentially negative consequences from fluctuations in foreign currency exchange rates;
- partial or total expropriation;
- differing protection of intellectual property;
- inability to repatriate income or capital; and
- difficulty in administering and enforcing corporate policies, which may be different than the customary business practices of local cultures.

For example, political unrest or work stoppages negatively impact the demand for our products from customers in affected countries and other customers, such as U.S. oil refineries, that are affected by the resulting disruption in the supply of crude oil. Similarly, military conflicts in Russia/Ukraine, the Middle East, Asia and North Africa could soften the level of capital investment and demand for our products and services. In response to the Russia-Ukraine conflict, several countries, including the United States, have imposed economic sanctions and export controls on certain industry sectors and parties in Russia. As a result of this conflict, including the aforementioned sanctions and overall instability in the region, in February 2022 we stopped accepting new orders in Russia and temporarily suspended fulfillment of existing orders. In March 2022, we made the decision to permanently cease all Company operations in Russia. We have commenced the necessary actions to cease operations of our Russian subsidiary, including taking steps to cancel existing contracts with customers, terminate our approximately 50 Russia-based employees and terminate other related contractual commitments and currently expect this process to continue throughout 2023. See Note 1 to our consolidated financial statements included in Item 8 of this Annual Report for further discussion of the termination of our Russian operations.

In order to manage our day-to-day operations, we must overcome cultural and language barriers and assimilate different business practices. In addition, we are required to create compensation programs, employment policies and other administrative programs that comply with laws of multiple countries. We also must communicate and monitor standards and directives across our global network. In addition, emerging markets pose other uncertainties, including challenges to our ability to protect our intellectual property, pressure on the pricing of our products and increased risk of political instability, and may prefer local suppliers because of existing relationships, local restrictions or incentives. Our failure to successfully manage our geographically diverse operations could impair our ability to react quickly to changing business and market conditions and to enforce compliance with standards and procedures.

Our future success will depend, in large part, on our ability to anticipate and effectively manage these and other risks associated with our international operations. Any of these factors could, however, materially adversely affect our international operations and, consequently, our financial condition, results of operations and cash flows.

Implementation of new tariffs and changes to or uncertainties related to tariffs and trade agreements could adversely affect our business.

The U.S. has implemented certain tariffs on steel and aluminum imported into the country. In response, certain foreign governments have implemented or reportedly considered implementing additional tariffs on U.S. goods. In addition, there have been recent changes to trade agreements, like the U.S. withdrawal from the Trans-Pacific Partnership and the replacement of the North American Free Trade Agreement with the United States-Mexico-Canada Agreement. Uncertainties with respect to tariffs, trade agreements, or any potential trade wars negatively impact the global economic markets and could affect our customers' ability to invest in capital expenditures, which may in turn result in reduced demand for our products and services, and could have a material adverse effect on our financial condition, results of operations and cash flows. Changes in tariffs could also result in changes in supply and demand of our raw material needs, affect our manufacturing capabilities and lead to increased prices that we may not be able to effectively pass on to customers, each of which could materially adversely affect our operating margins, results of operations and cash flows.

Our international operations expose us to fluctuations in foreign currency exchange rates which could adversely affect our business.

A significant portion of our revenue and certain of our costs, assets and liabilities, are denominated in currencies other than the U.S. dollar. The primary currencies to which we have exposure are the Euro, British pound, Mexican peso, Brazilian real, Indian rupee, Japanese yen, Singapore dollar, Argentine peso, Canadian dollar, Australian dollar, Chinese yuan, Colombian peso, Chilean peso and South African rand. Certain of the foreign currencies to which we have exposure, such as the Venezuelan bolivar and Argentine peso, have undergone significant devaluation in the past, which reduce the value of our local monetary assets, reduce the U.S. dollar value of our local cash flow, generate local currency losses that may impact our ability to pay future dividends from our subsidiary to the parent company and potentially reduce the U.S. dollar value of future local net income. Although we enter into forward exchange contracts to economically hedge some of our risks associated with transactions denominated in certain foreign currencies, no assurances can be made that exchange rate fluctuations will not adversely affect our financial condition, results of operations and cash flows.

We could be adversely affected by violations of the U.S. Foreign Corrupt Practices Act and similar worldwide anti-bribery laws and regulations.

The U.S. Foreign Corrupt Practices Act (“FCPA”) and similar anti-bribery laws and regulations in other jurisdictions, such as the UK Bribery Act, generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business or securing an improper advantage. Because we operate in many parts of the world and sell to industries that have experienced corruption to some degree, our policies mandate compliance with applicable anti-bribery laws worldwide. Violation of the FCPA or other similar anti-bribery laws or regulations, whether due to our or others’ actions or inadvertence, could subject us to civil and criminal penalties or other sanctions that could have a material adverse impact on our business, financial condition, results of operations and cash flows. In addition, actual or alleged violations could damage our reputation or ability to do business.

Regulatory and Legal Risks

Our operations are subject to a variety of complex and continually changing laws, regulations and policies, both internationally and domestically, which could adversely affect our business.

Due to the international scope of our operations, the system of laws, regulations and policies to which we are subject is complex and includes, without limitation, regulations issued by the U.S. Customs and Border Protection, the U.S. Department of Commerce’s Bureau of Industry and Security, the U.S. Treasury Department’s Office of Foreign Assets Control and various foreign governmental agencies, including applicable export controls, customs, currency exchange control and transfer pricing regulations, as applicable. No assurances can be made that we will continue to be found to be operating in compliance with, or be able to detect violations of, any such laws, regulations or policies. In addition, we cannot predict the nature, scope or effect of future regulatory requirements to which our international operations might be subject or the manner in which existing laws might be administered or interpreted. Compliance with laws and any new laws or regulations may increase our operations costs or require significant capital expenditures. Any failure to comply with applicable laws, regulations or policies in the U.S. or in any other country in which we operate could result in substantial fines and penalties, which could adversely affect our business.

In particular, there is uncertainty related to the Biden administration’s plans for new or existing treaty and trade relationships with other countries, including with respect to the January 2017 U.S. withdrawal from the Trans-Pacific Partnership, which may affect restrictions or tariffs imposed on products we buy or sell. These factors, together with other key global events during 2022 (such as the ongoing global economic impact of the COVID-19 pandemic, as well as ongoing conflicts and terrorist activity), may adversely impact the ability or willingness of non-U.S. companies to transact business in the U.S. This uncertainty may also affect regulations and trade agreements affecting U.S. companies, global stock markets (including the NYSE, on which our common shares are traded), currency exchange rates, and general global economic conditions. All of these factors are outside of our control, but may nonetheless cause us to adjust our strategy in order to compete effectively in global markets. For further discussion of the impact of tariffs and trade agreements on our business, please see the discussion above under the heading “Implementation of new tariffs and changes to or uncertainties related to tariffs and trade agreements could adversely affect our business.”

Environmental compliance costs and liabilities could adversely affect our financial condition, results of operations and cash flows.

Our operations and properties are subject to regulation under environmental laws, which can impose substantial sanctions for violations. We must conform our operations to applicable regulatory requirements and adapt to changes in such requirements in all countries in which we operate.

We use hazardous substances and generate hazardous wastes in many of our manufacturing and foundry operations. Most of our current and former properties are or have been used for industrial purposes, and some may require clean-up of historical contamination. We are currently conducting investigation and/or remediation activities at a number of locations where we have known environmental concerns. In addition, we have been identified as one of many PRPs at four Superfund sites. The projected cost of remediation at these sites, as well as our alleged “fair share” allocation, while not anticipated to be material, has been reserved. However, until all studies have been completed and the parties have either negotiated an amicable resolution or the matter has been judicially resolved, some degree of uncertainty remains.

We have incurred, and expect to continue to incur, operating and capital costs to comply with environmental requirements. In addition, new laws and regulations, stricter enforcement of existing requirements, the discovery of previously unknown contamination or the imposition of new clean-up requirements could require us to incur costs or become the basis for new or increased liabilities. Moreover, environmental and sustainability initiatives, practices, rules and regulations are under increasing scrutiny of both governmental and non-governmental bodies, which can cause rapid change in operational practices, standards and expectations and, in turn, increase our compliance costs. Any of these factors could have a material adverse effect on our financial condition, results of operations and cash flows.

We are exposed to certain regulatory and financial risks related to climate change, which could adversely affect our financial condition, results of operations and cash flows.

Emissions of carbon dioxide and other greenhouse gases and their role in climate change are receiving ever increasing attention worldwide, which has led to significant legislative and regulatory efforts to limit GHG emissions. Existing or future legislation and regulations related to GHG emissions and climate change by the U.S. Congress, state and foreign legislatures and federal, state, local and foreign governmental agencies could adversely affect our business. Additionally, it is uncertain whether, when and in what form mandatory carbon dioxide emissions reduction programs may be adopted. Similarly, certain countries, including the U.S., have adopted the Paris Climate Agreement and these and other existing international initiatives or those under consideration affect our operations.

When our customers, particularly those involved in the oil and gas, power generation, petrochemical processing or petroleum refining industries, are subject to any of these or other similar proposed or newly enacted laws and regulations, we are exposed to risks that the additional costs by customers to comply with such laws and regulations could impact their ability or desire to continue to operate at similar levels in certain jurisdictions as historically seen or as currently anticipated, which could negatively impact their demand for our products and services. In addition, new laws and regulations that might favor the increased use of non-fossil fuels, including nuclear, wind, solar and bio-fuels or that are designed to increase energy efficiency, could dampen demand for oil and gas production or power generation resulting in lower spending by customers for our products and services. These actions could also increase costs associated with our operations, including costs for raw materials and transportation. There is also increased focus, including by governmental and non-governmental organizations, environmental advocacy groups, investors and other stakeholders on these and other sustainability matters, and adverse publicity in the global marketplace about the levels of GHG emissions by companies in the manufacturing and energy industry could reduce customer demand for our products and services or harm our reputation. Because it is uncertain what laws will be enacted, we cannot predict the potential impact of such laws on our future financial condition, results of operations and cash flows, but such new or additional laws could adversely affect our business.

We are party to asbestos-containing product litigation that could adversely affect our financial condition, results of operations and cash flows.

We are a defendant in a substantial number of lawsuits that seek to recover damages for personal injury allegedly resulting from exposure to asbestos-containing products formerly manufactured and/or distributed by us. Such products were used as internal components of process equipment, and we do not believe that there was any significant emission of asbestos-containing fibers during the use of this equipment. Although we are defending these allegations vigorously and believe that a high percentage of these lawsuits are covered by insurance or indemnities from other

companies, there can be no assurance that we will prevail or that coverage or payments made by insurance or such other companies would be adequate. Unfavorable rulings, judgments or settlement terms could have a material adverse impact on our business, financial condition, results of operations and cash flows.

Inability to protect our intellectual property could negatively affect our competitive position.

We cannot guarantee that the steps we have taken to protect our intellectual property will be adequate to prevent infringement of our rights or misappropriation of our technology. For example, effective patent, trademark, copyright and trade secret protection are unavailable or limited in some of the foreign countries in which we operate. In addition, confidentiality agreements which we enter into with employees and third parties could be breached or otherwise may not provide meaningful protection for our trade secrets and know-how related to the design, manufacture or operation of our products. Resorting to litigation to protect our intellectual property rights is burdensome and costly, and we may not always prevail. Further, adequate remedies are not always available in the event of an unauthorized use or disclosure of our trade secrets and manufacturing expertise. Failure to successfully enforce our intellectual property rights could harm our competitive position, business, financial condition, results of operations and cash flows.

Increased costs as a result of product liability and warranty claims could adversely affect our financial condition, results of operations and cash flows.

From time to time, we are exposed to product liability and warranty claims when the use of one of our products results in, or is alleged to result in, bodily injury and/or property damage or our products actually or allegedly fail to perform as expected. Some of our products are designed to support the most critical, severe service applications in the markets that we serve and any failure of such products could result in significant product liability and warranty claims, as well as damage to our reputation in the marketplace. While we maintain insurance coverage with respect to certain product liability claims, we may not be able to obtain such insurance on acceptable terms in the future, and any such insurance may not provide adequate coverage against product liability claims. In addition, product liability claims can be expensive to defend and can divert the attention of management and other personnel for significant periods of time, regardless of the ultimate outcome. An unsuccessful defense of a product liability claim could have an adverse effect on our business, financial condition, results of operations and cash flows. Even if we are successful in defending against a claim relating to our products, claims of this nature could cause our customers to lose confidence in our products and our company. Warranty claims are not generally covered by insurance, and we may incur significant warranty costs that are not reimbursable, which could adversely affect our financial condition, results of operations and cash flows.

Financial and Accounting Risks

Significant changes in pension fund investment performance or assumptions changes may have a material effect on the valuation of our obligations under our defined benefit pension plans, the funded status of these plans and our pension expense.

We maintain funded defined benefit pension plans that are either currently funded in accordance with local requirements in the U.S., Belgium, Canada, The Netherlands, Switzerland and the U.K., or above funded requirements in India and Mexico, and defined benefit plans that are not required to be funded and are not funded in Austria, France, Germany, Italy, Japan and Sweden. Our pension liability is materially affected by the discount rate used to measure our pension obligations and, in the case of the plans that are required to be funded, the level of plan assets available to fund those obligations and the expected long-term rate of return on plan assets. A change in the discount rate can result in a significant increase or decrease in the valuation of pension obligations, affecting the reported status of our pension plans and our pension expense. Significant changes in investment performance or a change in the portfolio mix of invested assets can result in increases and decreases in the valuation of plan assets or in a change of the expected rate of return on plan assets. This impact may be particularly prevalent where we maintain significant concentrations of specified investments, such as the U.K. equity and fixed income securities in our non-U.S. defined benefit plans. Changes in the expected return on plan assets assumption can result in significant changes in our pension expense and future funding requirements.

We continually review our funding policy related to our U.S. pension plan in accordance with applicable laws and regulations. U.S. regulations have increased the minimum level of funding for U.S. pension plans in prior years, which has at times required significant contributions to our pension plans. Contributions to our pension plans reduce the availability of our cash flows to fund working capital, capital expenditures, R&D efforts and other general corporate purposes.

The recording of increased deferred tax asset valuation allowances in the future or the impact of tax law changes on such deferred tax assets could adversely affect our operating results.

We currently have significant net deferred tax assets resulting from tax credit carryforwards, net operating losses and other deductible temporary differences that are available to reduce taxable income in future periods. Based on our assessment of our deferred tax assets, we determined, based on projected future income and certain available tax planning strategies, that approximately \$297 million of our deferred tax assets will more likely than not be realized in the future, and no valuation allowance is currently required for this portion of our deferred tax assets. Should we determine in the future that these assets will more likely than not be realized we will be required to record an additional valuation allowance in connection with these deferred tax assets and our operating results would be adversely affected in the period such determination is made. In addition, tax law changes could negatively impact our deferred tax assets.

Our outstanding indebtedness and the restrictive covenants in the agreements governing our indebtedness limit our operating and financial flexibility.

Under certain events of default, mandatory repayments on our outstanding indebtedness, which requires us to dedicate a substantial portion of our cash flows from operations to payments on our indebtedness, thereby reducing the availability of our cash flows to fund working capital, capital expenditures, R&D efforts and other general corporate purposes, such as dividend payments and share repurchases, and could generally limit our flexibility in planning for, or reacting to, changes in our business and industry. In addition, we may need new or additional financing in the future to expand our business or refinance our existing indebtedness. Our current senior credit facility matures on September 13, 2026 and our senior notes are due in 2030 and 2032. Additionally, we have drawn amounts under a term loan fund. For additional information regarding our current indebtedness refer to Note 12 to our consolidated financial statements included in Item 8 of this Annual Report. Our inability to timely access capital on satisfactory terms, including as a result of market disruptions, could limit our ability to expand our business as desired and refinance our indebtedness.

In addition, the agreements governing our indebtedness impose certain operating and financial restrictions on us and somewhat limit management's discretion in operating our businesses. These agreements limit or restrict our ability, among other things, to: incur additional debt; fully utilize the capacity under the senior credit facility; pay dividends and make other distributions; repurchase shares of our common stock in certain circumstances; prepay subordinated debt; make investments and other restricted payments; create liens; sell assets; and enter into transactions with affiliates.

We are also required to maintain debt ratings, comply with leverage and interest coverage financial covenants and deliver to our lenders audited annual and unaudited quarterly financial statements. Our ability to comply with these covenants may be affected by events beyond our control. Failure to comply with these covenants could result in an event of default which, if not cured or waived, may have a material adverse effect on our business, financial condition, results of operations and cash flows.

Goodwill impairment could negatively impact our net income and shareholders' equity.

Goodwill is not amortized, but is tested for impairment at the reporting unit level, which is an operating segment or one level below an operating segment. Goodwill is required to be tested for impairment annually and between annual tests if events or circumstances indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying value. Reductions in or impairment of the value of our goodwill or other intangible assets will result in charges against our earnings, which could have a material adverse effect on our reported results of operations and financial position in future periods.

There are numerous risks that may cause the fair value of a reporting unit to fall below its carrying amount, which could lead to the measurement and recognition of goodwill impairment. These risks include, but are not limited to, lowered expectations of future financial results, adverse changes in the business climate, increase in the discount rate, an adverse action or assessment by a regulator, the loss of key personnel, a more-likely-than-not expectation that all or a significant portion of a reporting unit may be disposed of, failure to realize anticipated synergies from acquisitions, a sustained decline in the Company's market capitalization, and significant, prolonged negative variances between actual and expected financial results. In recent years, the estimated fair value of our pump reporting unit has fluctuated, partially due to broad-based capital spending declines and heightened pricing pressures experienced in the oil and gas markets. Although we have concluded that there is no impairment on the goodwill

associated with our pump reporting unit as of December 31, 2022, we will continue to monitor its performance and related market conditions for future indicators of potential impairment. For additional information, see the discussion in Item 7 of this Annual Report and under Note 1 to our consolidated financial statements included in Item 8 of this Annual Report.

The failure to maintain effective internal controls could impact the accuracy and timely reporting of our business and financial results.

Our internal control over financial reporting has not always prevented or detected misstatements because of its inherent limitations, including the possibility of human error, the circumvention or overriding of controls or fraud. We have in the past discovered, and may in the future discover, areas of our internal controls that need improvement, including material weaknesses in internal controls. We have devoted significant resources to remediate and improve our internal controls and to monitor the effectiveness of these remediated measures. There can be no assurance that these measures will ensure that we maintain at all times effective internal controls over our financial processes and reporting in the future. Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. Any future failures to maintain the adequacy of our internal controls, including any failure to implement required new or improved controls, or difficulties in their implementation, could harm our business and financial results and we could fail to meet our financial reporting obligations.

General Risks

We depend on key personnel, the loss of whom would harm our business.

Our future success will depend in part on the continued service of key executive officers and personnel. The loss of the services of any key individual could harm our business. Our future success also depends on our ability to recruit, retain and engage our personnel sufficiently, both to maintain our current business and to execute our strategic initiatives. Competition for officers and employees in our industry is intense and we may not be successful in attracting and retaining such personnel.

Changes in accounting principles and guidance could result in unfavorable accounting charges or effects.

We prepare our consolidated financial statements in conformity with accounting principles generally accepted in the U.S. A change in these principles can have a significant effect on our reported financial position and financial results. The adoption of new or revised accounting principles may require us to make changes to our systems, processes and internal controls, which could have a significant effect on our reported financial results and internal controls, cause unexpected financial reporting fluctuations, retroactively affect previously reported results or require us to make costly changes to our operational processes and accounting systems upon our following the adoption of these standards.

Forward-Looking Information is Subject to Risk and Uncertainty

This Annual Report and other written reports and oral statements we make from time-to-time include “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts included in this Annual Report regarding our financial position, business strategy and expectations, plans and objectives of management for future operations, industry conditions, market conditions and indebtedness covenant compliance are forward-looking statements. Forward-looking statements may include, among others, statements about our goals and strategies, new product introductions, plans to cultivate new businesses, future economic conditions, revenue, pricing, gross profit margin and costs, capital spending, expected cost savings from our realignment programs, depreciation and amortization, research and development expenses, potential impairment of assets, tax rate and pending tax and legal proceedings. In some cases forward-looking statements can be identified by terms such as “may,” “should,” “expects,” “could,” “intends,” “projects,” “predicts,” “plans,” “anticipates,” “estimates,” “believes,” “forecasts,” “seeks” or other comparable terminology. These statements are not historical facts or guarantees of future performance, but instead are based on current expectations and are subject to material risks, uncertainties and other factors, many of which are outside of our control.

We have identified factors that could cause actual plans or results to differ materially from those included in any forward-looking statements. These factors include those described above under this “Risk Factors” heading, or as

may be identified in our other SEC filings from time to time. These uncertainties are beyond our ability to control, and in many cases, it is not possible to foresee or identify all the factors that may affect our future performance or any forward-looking information, and new risk factors can emerge from time to time. Given these risks and uncertainties, undue reliance should not be placed on forward-looking statements as a prediction of actual results.

All forward-looking statements included in this Annual Report are based on information available to us on the date of this Annual Report and the risk that actual results will differ materially from expectations expressed in this report will increase with the passage of time. We undertake no obligation, and disclaim any duty, to publicly update or revise any forward-looking statement or disclose any facts, events or circumstances that occur after the date hereof that may affect the accuracy of any forward-looking statement, whether as a result of new information, future events, changes in our expectations or otherwise. This discussion is provided as permitted by the Private Securities Litigation Reform Act of 1995 and all of our forward-looking statements are expressly qualified in their entirety by the cautionary statements contained or referenced in this section.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal executive offices, including our global headquarters, are located at 5215 N. O'Connor Boulevard, Suite 700, Irving, Texas 75039. Our global headquarters is a leased facility, which we began to occupy on January 1, 2004. In December 2018, we extended our original lease term an additional 10 years to December 2030. We have the option to renew the current lease for two additional five-year periods. We currently occupy approximately 130,000 square feet at this facility.

Our major manufacturing facilities (those with 50,000 or more square feet of manufacturing capacity) operating at December 31, 2022 are presented in the table below. See "Item 1. Business" in this Annual Report for further information with respect to all of our manufacturing and operational facilities, including QRCs.

	<u>Number of Facilities</u>	<u>Approximate Aggregate Square Footage</u>
FPD		
U.S.	7	1,198,000
Non-U.S.	18	3,598,000
FCD		
U.S.	5	925,000
Non-U.S.	10	1,495,000

We own the majority of our manufacturing facilities, and those manufacturing facilities we do not own are leased. We also maintain a substantial network of U.S. and foreign service centers and sales offices, most of which are leased. The majority of our manufacturing leased facilities are covered by lease agreements with terms ranging from two to seven years, with individual lease terms generally varying based on the facilities' primary usage. We believe we will be able to extend leases on our various facilities as necessary, as they expire.

We believe that our current facilities are adequate to meet the requirements of our present and foreseeable future operations. We continue to review our capacity requirements as part of our strategy to optimize our global manufacturing efficiency. See Note 4 to our consolidated financial statements included in Item 8 of this Annual Report for additional information regarding our lease obligations.

ITEM 3. *LEGAL PROCEEDINGS*

We are party to the legal proceedings that are described in Note 15 to our consolidated financial statements included in Item 8 of this Annual Report, and such disclosure is incorporated by reference into this Item 3. In addition to the foregoing, we and our subsidiaries are named defendants in certain other routine lawsuits incidental to our business and are involved from time to time as parties to governmental proceedings, all arising in the ordinary course of business. Although the outcome of lawsuits or other proceedings involving us, and our subsidiaries cannot be predicted with certainty, and the amount of any liability that could arise with respect to such lawsuits or other proceedings cannot be predicted accurately, management does not currently expect these matters, either individually or in the aggregate, to have a material effect on our financial position, results of operations or cash flows. We have established reserves covering exposures relating to contingencies to the extent believed to be reasonably estimable and probable based on past experience and available facts.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

PART II

ITEM 5. *MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES*

Market Information

Our common stock is traded on the New York Stock Exchange ("NYSE") under the symbol "FLS" and our CUSIP number is 34354P105. On March 1, 2023, our records showed 897 shareholders of record. We have historically paid quarterly dividends based on a dividend date-of-record in the last month of each quarter with the dividend paid the following month. Any subsequent dividends will be reviewed by our Board of Directors and declared in its discretion.

Issuer Purchases of Equity Securities

During the quarter ended December 31, 2022, we had no repurchases of our common stock shares as part of publicly announced plans. As of December 31, 2022, we had \$96.1 million of remaining capacity under our current share repurchase program. The following table sets forth the repurchase data for each of the three months during the quarter ended December 31, 2022:

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan ⁽³⁾⁽⁴⁾	Approximate Dollar Value That May Yet Be Purchased Under the Plan (In millions)
October 1 - 31	928 ⁽¹⁾	\$27.17	—	\$96.1
November 1 - 30	1,732 ⁽²⁾	30.26	—	96.1
December 1 - 31	<u>3,944⁽¹⁾</u>	<u>29.92</u>	—	96.1
Total	<u><u>6,604</u></u>	\$29.62	—	

(1) Shares tendered by employees to satisfy minimum tax withholding amounts for Restricted Shares.

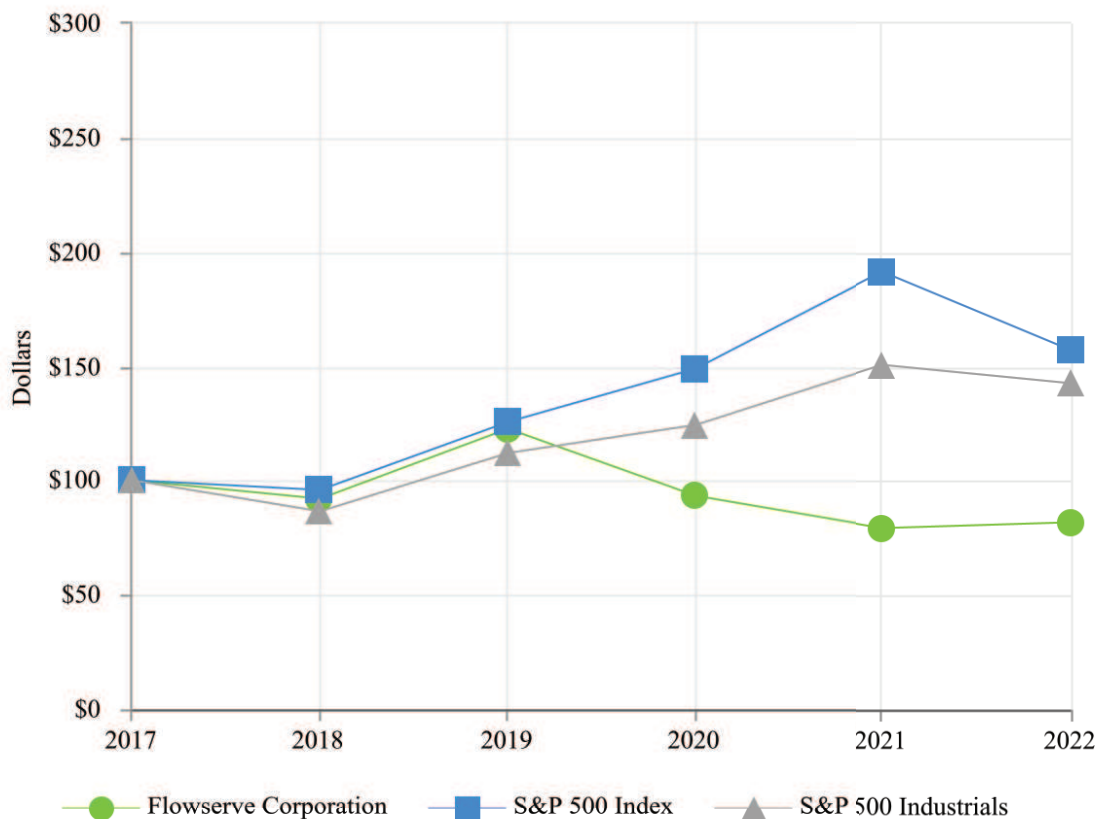
(2) Includes 789 shares that were tendered by employees to satisfy minimum tax withholding amounts for Restricted Shares at an average price per share of \$29.96 and 943 shares purchased at a price of \$30.51 per share by a rabbi trust that we established in connection with our director deferral plans, pursuant to which non-employee directors may elect to defer directors' quarterly cash compensation to be paid at a later date in the form of common stock.

(3) On November 13, 2014, our Board of Directors approved a \$500.0 million share repurchase authorization. Our share repurchase program does not have an expiration date, and we reserve the right to limit or terminate the repurchase program at any time without notice.

(4) Note 17 to our consolidated financial statements included in Item 8 of this Annual Report provides additional information regarding our share repurchase activity.

Stock Performance Graph

The following graph depicts the most recent five-year performance of our common stock with the S&P 500 Index and S&P 500 Industrials. The graph assumes an investment of \$100 on December 31, 2017, and assumes the reinvestment of any dividends over the following five years. The stock price performance shown in the graph is not necessarily indicative of future price performance.



Company/Index	Base Period	December 31,				
	2017	2018	2019	2020	2021	2022
Flowserve Corporation.....	\$100.00	\$91.79	\$122.70	\$ 93.41	\$ 79.31	\$ 81.74
S&P 500 Index.....	100.00	95.61	125.71	148.83	191.51	156.80
S&P 500 Industrials.....	100.00	86.68	112.10	124.49	150.75	142.44

ITEM 6. [Reserved]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis is provided to increase the understanding of, and should be read in conjunction with, the accompanying consolidated financial statements and notes. See "Item 1A. Risk Factors" and the section titled "Forward-Looking Information is Subject to Risk and Uncertainty" included in this Annual Report on Form 10-K for the year ended December 31, 2022 ("Annual Report") for a discussion of the risks, uncertainties and assumptions associated with these statements. Unless otherwise noted, all amounts discussed herein are consolidated.

EXECUTIVE OVERVIEW

Our Company

We are a world-leading manufacturer and aftermarket service provider of comprehensive flow control systems. We develop and manufacture precision-engineered flow control equipment integral to the movement, control and protection of the flow of materials in our customers' critical processes. Our product portfolio of pumps, valves, seals, automation and aftermarket services supports global infrastructure industries, including oil and gas, chemical, power generation and water management, as well as general industrial markets where our products and services add value. Through our manufacturing platform and global network of QRCs, we offer a broad array of aftermarket equipment services, such as installation, advanced diagnostics, repair and retrofitting. As of December 31, 2022, we have approximately 16,000 employees ("associates") globally and a footprint of manufacturing facilities and QRCs in more than 50 countries.

Our business model is significantly influenced by the capital spending of global infrastructure industries for the placement of new products into service and maintenance spending for aftermarket services for existing operations. The worldwide installed base of our products is an important source of aftermarket revenue, where products are intended to maximize operating time of many key industrial processes. We continue to invest in our aftermarket strategy to provide local support to drive customer investments in our offerings and use of our services to replace or repair installed products. The aftermarket portion of our business also helps provide business stability during various economic periods. The aftermarket business, which is primarily served by our network of 152 QRCs located around the globe, some of which are shared by our two business segments, provides a variety of service offerings for our customers including spare parts, service solutions, product life cycle solutions and other value-added services. It is generally a higher margin business compared to our original equipment business and a key component of our profitable growth strategy.

Our operations are conducted through two business segments that are referenced throughout this Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A"):

- FPD designs and manufactures custom, highly-engineered pumps, pre-configured industrial pumps, pump systems, mechanical seals, auxiliary systems and replacement parts and related services; and
- FCD designs, manufactures and distributes a broad portfolio of engineered-to-order and configured-to-order isolation valves, control valves, valve automation products and related equipment.

Our business segments share a focus on industrial flow control technology and have a high number of common customers. These segments also have complementary product offerings and technologies that are often combined in applications that provide us a net competitive advantage. Our segments also benefit from our global footprint, our economies of scale in reducing administrative and overhead costs to serve customers more cost effectively and shared leadership for operational support functions, such as research and development, marketing and supply chain.

The reputation of our product portfolio is built on more than 50 well-respected brand names such as Worthington, IDP, Valtek, Limitorque, Durco, Argus, Edward, Valbart and Durametallic, which we believe to be one of the most comprehensive in the industry. Our products and services are sold either directly or through designated channels to more than 10,000 companies, including some of the world's leading engineering, procurement and construction ("EPC") firms, original equipment manufacturers, distributors and end users.

We continue to leverage our QRC network to be positioned as near to customers as possible for service and support in order to capture valuable aftermarket business. Along with ensuring that we have the local capability to sell, install and service our equipment in remote regions, we continuously improve our global operations. Despite recent supply chain disruption caused by the COVID-19 pandemic and labor constraints, we continue to enhance our global supply chain capability to increase our ability to meet global customer demands and improve the quality and

timely delivery of our products over the long-term. Additionally, we continue to devote resources to improving the supply chain processes across our business segments to find areas of synergy and cost reduction and to improve our supply chain management capability to meet global customer demands. We also remain focused on improving on-time delivery and quality, while managing warranty costs as a percentage of sales across our global operations, through the assistance of a focused Continuous Improvement Process (“CIP”) initiative. The goal of the CIP initiative, which includes lean manufacturing, six sigma business management strategy and value engineering, is to maximize service fulfillment to customers through on-time delivery, reduced cycle time and quality at the highest internal productivity.

COVID-19 and Related Impacts

We continue to assess and proactively respond to the impacts of the COVID-19 pandemic on all aspects of our business and geographies, including with respect to our associates, customers and communities, supply chain impacts and labor availability issues, and to take appropriate actions in an effort to mitigate adverse effects of the pandemic.

We are adhering to the state and country mandates and guidelines related to the COVID-19 pandemic wherever we operate. The substantial majority of our production sites have remained fully operational this year, while also protecting the health and safety of our associates.

As a result of the emergence of COVID-19 variants, certain geographies where we operate, such as China, have occasionally reinstituted temporary government-mandated shutdowns that were previously implemented to curtail the spread of the virus. While all of our facilities generally remain open and operational, the measures described above, combined with continued employee costs and under-absorption of manufacturing costs as a result of temporary closures and work-from-home policies, had an adverse impact on our financial performance throughout 2022. As the geographies in which we operate continue to fully open, we expect a decline of COVID-related adverse impacts as we navigate through 2023.

Since the onset of the pandemic, many of our suppliers have also experienced varying lengths of production and shipping delays related to the COVID-19 pandemic and its effects, some of which continue to exist in highly affected countries. For example, as part of its COVID-related policies in 2022, China has declared a number of city-wide lockdowns that adversely affected the global supply chain. As a result of these measures, our production facilities and suppliers located in China experienced interruptions in production in 2022. These interruptions contributed to component shortages and other supply chain constraints that affected our ability to fulfill customer orders within desired lead times, both directly in the Asia Pacific Region and indirectly in other regions. As China and other countries within the region fully open we expect these adverse impacts to decline in 2023.

Additionally, the global supply chain and logistics constraints continued to cause additional headwinds in 2022. These conditions have had an adverse effect on the speed at which we can manufacture and ship our products to customers, and have also led to an increase in logistics, transportation and freight costs, requiring that we diversify our supply chain and, in some instances, source materials from new suppliers. Additionally, these conditions have in some cases impacted our ability to deliver products to customers on time, which has in turn led to an increase in backlog at some of our manufacturing sites. These disruptions in our supply chain and their effects have continued and we expect they will continue into 2023 as ongoing global supply chain and logistics headwinds continue.

In order to position ourselves to fulfill demand and to counteract the ongoing impacts on our supply chain, we continue to monitor the supply chain closely and to take various proactive steps to protect the continuity of supply, including building inventory to support backlog execution, qualifying alternative sources and redesigning our products.

The strong U.S. dollar has made and may continue to make our products more expensive overseas and has made it challenging to meet our international customers’ pricing expectations. We will continue to be proactive in our efforts to stay competitive in our prices and market share.

Throughout the pandemic we engaged in a number of cost savings measures in order to help mitigation the adverse effects of the pandemic on our financial results, including certain realignment activities. We will continue to evaluate additional cost savings measures in order to reduce the impact of the COVID-19 pandemic on our financial results, and we will continue to adapt our operations to respond to the changing conditions as needed but we expect these actions to reduce as the adverse impacts of the pandemic decrease in 2023.

In connection with the supply chain disruptions described above we have also experienced, and continue to experience, increased inflation and higher freight and logistics costs. Our operating costs have been impacted by price

inflation throughout 2022, including with respect to the cost of certain raw materials, commodities, and freight and logistics. In response to these increased costs, we have engaged and will continue to engage in various mitigation strategies, including enhanced price realization efforts that were enacted throughout 2022.

During 2022, we continued to experience the same increased difficulty in maintaining staffing and productivity levels due to a tighter labor market for new hiring. We expect that labor market to improve as we progress in 2023 as hiring conditions in the major markets we operate in have started to shift favorably.

During 2022, the ongoing effects of the COVID-19 pandemic in global markets continued to adversely impact our customers, particularly in the oil and gas markets. Many of our large oil and gas customers reduced capital expenditures and budgets in 2020 and while spending for maintenance and repair projects and aftermarket services returned to pre-pandemic levels in 2022, project-based, oil and gas customer spending has yet to return to pre-pandemic levels despite some modest improvement during 2022. In this regard, we saw an overall increase in bookings of 17.8% during 2022 as compared to the same period in 2021.

The timing for completion of delayed projects will largely depend on the duration of the recovery in oil and gas capital expenditure budgets in 2023. We continue to expect planned oil and gas capital spending to increase in 2023 but remain below pre-pandemic levels.

Our Markets

Our products and services are used in several distinct industries: oil and gas, chemical, power generation, water management, and several other industries, such as mining, food and beverage, steel, and pulp and paper, that are collectively referred to as “general industries.”

Oil and Gas

The oil and gas industry, which represented approximately 40% and 35% of our bookings in 2022 and 2021, respectively, experienced a material decrease in capital spending in 2020 primarily due to decreased project activity and short cycle investment resulting from the pandemic’s negative impact on demand for refined products. Customers’ repair and maintenance budgets improved in 2021 where bookings levels returned to roughly pre-pandemic levels, partially offsetting the decreased project activity and short cycle investment. Customer spending in 2022 for repair and maintenance continued at roughly pre-pandemic levels and also included improved larger project investment, where Flowserve booked one of its largest oil and gas orders in its history of over \$230 million.

The outlook for the oil and gas industry is heavily dependent on the duration of the pandemic and its impact on fuel demand, demand growth from both mature markets and developing geographies as well as changes in the regulatory environment. While we believe that the pandemic will continue to negatively impact our customers’ capital investment budgets, we expect increased investment related to energy security and decarbonization efforts in 2023. We further believe improved and stable oil prices provide support for increased demand for our aftermarket products and services. We believe the medium and long-term fundamentals for this industry remain attractive and see a stabilized environment with expected increased fuel demand on improved pandemic management, and as the industry works through current excess supply. In addition, we believe projected depletion rates of existing fields and forecasted long-term demand growth will require additional investments. With our long-standing reputation in providing successful solutions for upstream, mid-stream and downstream applications, along with the advancements in our portfolio of offerings, we believe that we continue to be well-positioned to assist our customers in this improving environment.

General Industries

General industries represented, in the aggregate, approximately 22% and 26% of our bookings in 2022 and 2021, respectively. General industries comprise a variety of different businesses, including mining and ore processing, pulp and paper, food and beverage and other smaller applications, none of which individually represented more than 5% of total bookings in 2022 and 2021. General industries also include sales to distributors, whose end customers operate in the industries we primarily serve. General industry activity levels increased in 2022 for the second consecutive year, primarily due to customers’ improved repair and maintenance budgets.

The outlook for this group of industries is heavily dependent upon the condition of global economies and consumer confidence levels. The long-term fundamentals of many of these industries remain sound, as many of the

products produced by these industries are common staples of industrialized and urbanized economies. We believe that our specialty product offerings designed for these industries and our aftermarket service capabilities will provide continued business opportunities.

Chemical

The chemical industry represented approximately 22% and 24% of our bookings in 2022 and 2021, respectively. The chemical industry is comprised of petrochemical, specialty chemical and pharmaceutical products. Customer spending in 2022 increased for the second consecutive year following the pandemic's negative impact on demand for chemical products in 2020. Customers' repair and maintenance budgets improved in 2022 and 2021 where bookings levels returned to roughly pre-pandemic levels.

The outlook for the chemical industry remains heavily dependent on global economic conditions. As global economies and unemployment conditions improve, a rise in consumer spending should follow. An increase in spending would drive greater demand for petrochemical, specialty chemical and pharmaceutical products supporting improved levels of capital investment. We believe the chemical industry will continue to invest in North America and Middle East capacity additions, maintenance and upgrades for optimization of existing assets and that developing regions will selectively invest in capital infrastructure to meet current and future indigenous demand. We believe our global presence and our localized aftermarket capabilities are well-positioned to serve the potential growth opportunities in this industry.

Power Generation

The power generation industry represented approximately 12% and 12% of our bookings in 2022 and 2021, respectively. In 2022, energy security concerns drove increased investment in the power generation industry, including nuclear new build and life extensions as well as traditional thermal power sources.

Natural gas-fired combined cycle ("NGCC") plants increased their share of the energy mix, driven by market prices for gas remaining low and stable (partially due to the increasing global availability of liquefied natural gas ("LNG")), low capital expenditures, and the ability of NGCC to stabilize unpredictable renewable sources. With the potential of unconventional sources of gas, the global power generation industry is forecasting an increased use of this form of fuel for power generation plants.

Despite fewer new nuclear plants being constructed in recent years, nuclear power remains an important contributor to the global energy mix. We continue to support our significant installed base in the global nuclear fleet by providing aftermarket and life extension products and services. Due to our extensive history, we believe we are well positioned to take advantage of this ongoing source of aftermarket and new project opportunities.

Global efforts to limit the emissions of carbon dioxide may have some adverse effect on thermal power investment plans depending on the potential requirements imposed and the timing of compliance by country. However, many proposed methods of capturing and limiting carbon dioxide emissions offer business opportunities for our products and services. At the same time, we continue to take advantage of new investments in concentrated solar power generating capacity, where our pumps, valves, and seals are uniquely positioned for both molten salt applications as well as the traditional steam cycle.

We believe the long-term fundamentals for the power generation industry remain solid based on projected increases in demand for electricity driven by global population growth, growth of urbanization in developing markets and the increased use of electricity driven transportation. We also believe that our long-standing reputation in the power generation industry, our portfolio of offerings for the various generating methods, our advancements in serving the renewable energy market and carbon capture methodologies, as well as our global service and support structure, position us well for the future opportunities in this important industry.

Water Management

The water management industry represented approximately 4% and 3% of our bookings in 2022 and 2021, respectively. Water management industry activity levels increased in 2022 for the second consecutive year, following the decrease in 2020 primarily due to the pandemic's negative impact on government budgets across the globe. Worldwide demand for fresh water, water treatment and re-use, desalination and flood control are expected to create requirements for new facilities or for upgrades of existing systems, many of which require products that we offer,

particularly pumps. With improved management of the pandemic, we expect capital and aftermarket spending to rise in developed and emerging markets with governments and private industry providing funding for critical projects when their priorities shift away from pandemic-management.

The proportion of people living in regions that find it difficult to meet water requirements is expected to double by 2025. We believe that the persistent demand for fresh water during all economic cycles supports continued investments, especially in North America and developing regions.

Impact of Russia-Ukraine Conflict on our Business

In response to the ongoing military conflict in Ukraine, several countries, including the United States, have imposed economic sanctions and export controls on certain industry sectors and parties in Russia. As a result of this conflict, including the aforementioned sanctions and overall instability in the region, in February 2022 we stopped accepting new orders in Russia and temporarily suspended fulfillment of existing orders. In March 2022, we made the decision to permanently cease all Company operations in Russia. We have commenced the necessary actions to cease operations of our Russian subsidiary, including taking steps to cancel existing contracts with customers, terminate our approximately 50 Russia-based employees and terminate other related contractual commitments. As a result of the conflict and the resulting macroeconomic impacts we have also experienced supply shortages and inflationary pressures.

In 2021 our Russian subsidiary had approximately \$14 million of sales with an additional \$36 million of sales from certain of our other foreign subsidiaries into the Russian market. As of March 31, 2022, the net assets held on our Russian subsidiary's balance sheet were \$2.7 million, including \$7.1 million of cash, \$3.6 million of accounts receivables, net, a \$9.3 million net intercompany payable position and other immaterial amounts. In addition, certain of our other foreign subsidiaries had open contracts with Russian customers that were subsequently cancelled for which revenue had been previously recognized over time utilizing the percentage of completion ("POC") method. As a result of the above, in the first quarter of 2022 we recorded a \$20.2 million pre-tax charge (\$21.0 million after-tax) to reserve the asset positions of our Russian subsidiary (excluding cash) as of March 31, 2022, to record contra-revenue for previously recognized revenue and estimated cancellation fees on open contracts that were previously accounted for under POC and subsequently canceled, to establish a reserve for the estimated cost to exit the operations of our Russian subsidiary and to record a reserve for our estimated financial exposure on contracts that have or are anticipated to be cancelled.

We reevaluated our financial exposure as of December 31, 2022 and recorded an incremental \$13.6 million pre-tax charge (\$9.8 million after-tax) in the fourth quarter of 2022 for additional contract cancellation fees and to reserve our residual financial exposure due to increased Russia sanctions imposed during the latter part of 2022 and our decision to cancel backlog as a result of the additional sanctions.

The following table presents the above impacts of the Russia pre-tax charge:

(Amounts in thousands)	Year Ended December 31, 2022		
	FPD	FCD	Consolidated Total
Sales	\$ (9,330)	\$ —	\$ (9,330)
Cost of sales ("COS")	7,442	1,418	8,860
Gross loss	(16,772)	(1,418)	(18,190)
Selling, general and administrative expense ("SG&A")	13,977	1,720	15,697
Operating loss	<u>\$(30,749)</u>	<u>\$(3,138)</u>	<u>\$(33,887)</u>

We continue to monitor the situation involving Russia and Ukraine and its impact on the rest of our global business. This includes the macroeconomic impact, including with respect to global supply chain issues and inflationary pressures. To date, these impacts have not been material to our business and we do not currently expect that any incremental impact in future quarters, including any financial impacts caused by our cancellation of customer contracts and ceasing of operations in Russia, will be material to the Company.

Outlook for 2023

As the world continues to recover from the COVID-19 pandemic, we have seen an inflection in our served end-markets as commodity prices and mobility levels increase. With our increased backlog and improved market

environment we expect to return to growth in 2023, however the combined effects of the supply chain, logistics and labor availability headwinds are expected to continue in 2023, though to a lesser extent than 2022. Further, we have not seen and do not expect to see an increase in cancellations from our backlog. We therefore expect to continue to deliver on our backlog during 2023, though with a slightly longer cycle time than originally expected.

Our bookings were \$4.4 billion during 2022. Because a booking represents a contract that can be, in certain circumstances, modified or canceled, and can include varying lengths between the time of booking and the time of revenue recognition, there is no guarantee that bookings will result in comparable revenues or otherwise be indicative of future results. Assuming continued progress with the pandemic and other supply chain, logistics and labor availability headwinds, we further expect full-year bookings in 2023 to be comparable to 2022 levels.

On December 31, 2022, we had \$989.2 million of fixed-rate Senior Notes outstanding. We expect our interest expense in 2023 will be higher compared with amounts incurred in 2022 as a result of the early termination of our cross-currency swap agreements on December 20, 2022. Our results of operations may also be impacted by unfavorable foreign currency exchange rate movements. See “Item 7A. Quantitative and Qualitative Disclosures about Market Risk” of this Annual Report.

We expect to generate sufficient cash from operations and have sufficient capacity under our Senior Credit Facility to fund our working capital, capital expenditures, dividend payments, share repurchases, debt payments and pension plan contributions in 2023. The amount of cash generated or consumed by working capital is dependent on our level of revenues, customer cash advances, backlog, customer-driven delays and other factors. We will seek to improve our working capital utilization, with a particular focus on improving the management of accounts receivable and inventory. In 2023, our cash flows for investing activities will be focused on strategic initiatives, information technology infrastructure, general upgrades and cost reduction opportunities and we currently estimate capital expenditures to be between \$75 million and \$85 million, before consideration of any acquisition activity. We currently anticipate that our contributions to our non-U.S. pension plans will be approximately \$2 million in 2023, excluding direct benefits paid.

OUR RESULTS OF OPERATIONS

The following is the discussion and analysis of changes in the financial condition and results of operations for fiscal year December 31, 2022 compared to fiscal year 2021. The discussion and analysis of changes in the financial condition and results of operations for fiscal year 2021 compared to fiscal year 2020 that are not included in this Form 10-K may be found in Part II, Item 7 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, filed with the SEC on February 23, 2022.

Throughout this discussion of our results of operations, we discuss the impact of fluctuations in foreign currency exchange rates. We have calculated currency effects on operations by translating current year results on a monthly basis at prior year exchange rates for the same periods.

In the second quarter of 2020, we identified and initiated certain realignment activities to right-size our organizational operations based on the current business environment, with the overall objective to reduce our costs. We anticipate a total investment in Realignment Program activities of approximately \$95 million and the vast majority of the charges were incurred in 2020 and 2021. There are certain remaining realignment activities that are being evaluated, but have not yet been finalized and therefore not included in the anticipated total investment.

Realignment Activity

The following tables present our investment activity by segment related to our Realignment Program:

(Amounts in thousands)	December 31, 2022				
	FPD	FCD	Subtotal– Reportable Segments	All Other	Consolidated Total
Total Realignment Program Charges					
COS.	\$238	\$ 179	\$ 417	\$ (61)	\$ 356
SG&A.	148	(395)	(247)	(274)	(521)
Total	<u>\$386</u>	<u>\$(216)</u>	<u>\$ 170</u>	<u>\$(335)</u>	<u>\$(165)</u>

(Amounts in thousands)	December 31, 2021				
	FPD	FCD	Subtotal– Reportable Segments	All Other	Consolidated Total
Total Realignment and Transformation Program Charges					
COS.	\$14,249	\$2,007	\$16,256	\$ 590	\$16,846
SG&A ⁽¹⁾	1,033	699	1,732	3,913	5,645
Total	<u>\$15,282</u>	<u>\$2,706</u>	<u>\$17,988</u>	<u>\$4,503</u>	<u>\$22,491</u>

(1) Includes gains from the sales of non-strategic manufacturing facilities that are included in our Realignment Programs.

Bookings and Backlog

	2022	2021	2020
	(Amounts in millions)		
Bookings.	\$4,447.5	\$3,774.4	\$3,411.6
Backlog (at period end).	2,735.3	2,003.6	1,854.9

We define a booking as the receipt of a customer order that contractually engages us to perform activities on behalf of our customer in regard to the manufacture, delivery, and/or support of products or the delivery of service. Bookings recorded and subsequently canceled within the same fiscal period are excluded from reported bookings. Bookings cancelled from the prior fiscal periods are excluded from the reported bookings and represent less than 1% for all periods presented. Bookings of \$4.4 billion in 2022 increased by \$673.0 million, or 17.8%, as compared with 2021. The increase included negative currency effects of approximately \$184 million. The increase was driven by increased customer bookings in the oil and gas, power generation, chemical, general and water industries. The increase in customer bookings was more heavily weighted towards original equipment bookings. The increase included the impact of FPD original equipment orders booked in 2022 in excess of \$230 million to supply pumps and related equipment to support the development of an onshore unconventional gas project in the Middle East.

Backlog represents the aggregate value of booked but uncompleted customer orders and is influenced primarily by bookings, sales, cancellations and currency effects. Backlog of \$2.7 billion at December 31, 2022 increased by \$731.7 million, or 36.5%, as compared with December 31, 2021 and include the negative impact of \$25.2 million of order cancellations in 2022 due to cessation of our operations in Russia. Currency effects provided a decrease of approximately \$53 million (currency effects on backlog are calculated using the change in period end exchange rates). Backlog related to aftermarket orders was approximately 34% and 38% of the backlog at December 31, 2022 and 2021, respectively. We expect to recognize revenue on approximately 81% of the December 31, 2022 backlog during 2023. Backlog includes our unsatisfied (or partially unsatisfied) performance obligations related to contracts having an original expected duration in excess of one year of approximately \$652 million as discussed in Note 2 to our consolidated financial statements included in Item 8 of this Annual Report.

Sales

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions)		
Sales	\$3,615.1	\$3,541.1	\$3,728.1

Sales in 2022 increased by \$74.0 million, or 2.1%, as compared with 2021. The increase included negative currency effects of approximately \$167 million. The increase in sales was primarily driven by aftermarket, with increased sales into North America, the Middle East, Africa and Latin America, partially offset by decreased sales into Asia Pacific and Europe. Aftermarket sales represented approximately 53% of total sales, as compared with approximately 52% of total sales for the same period in 2021.

Sales to international customers, including export sales from the U.S., were approximately 62% of total sales in 2022 and 67% in 2021. Sales into Europe, the Middle East and Africa (“EMA”) were approximately 32% of total sales in both 2022 and 2021. Sales into Asia Pacific were approximately 19% of total sales for 2022 and 23% in 2021. Sales into Latin America were approximately 7% of total sales in both 2022 and 2021.

Gross Profit and Gross Profit Margin

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions, except percentages)		
Gross profit	\$994.3	\$1,049.7	\$1,116.8
Gross profit margin	27.5%	29.6%	30.0%

Gross profit in 2022 decreased by \$55.4 million, or 5.3%, as compared with 2021. Gross profit margin in 2022 of 27.5% decreased from 29.6% in 2021. The decrease was primarily due to lower conversion of customer backlog to revenue, the under absorption of \$5.1 million of fixed manufacturing costs primarily due to operational interruptions related to the implementation of a new enterprise resource planning system at certain of our North America quick response centers, increased freight costs largely due to global supply chain and logistics constraints and a \$8.9 million charge taken in 2022 related to our financial exposure in Russia, partially offset by a mix shift to higher aftermarket sales, a \$4.5 million reversal of previously reserved inventory due to settlement with a customer, decreased costs related to our realignment actions and lower broad-based annual incentive compensation as compared to the same period in 2021.

SG&A

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions, except percentages)		
SG&A	\$815.5	\$797.1	\$878.2
SG&A as a percentage of sales	22.6%	22.5%	23.6%

SG&A in 2022 increased by \$18.4 million, or 2.3%, as compared with 2021. Currency effects yielded a decrease of approximately \$32 million. In 2022, SG&A as a percentage of sales increased 10 basis points primarily due to a \$15.7 million charge taken in 2022 related to our financial exposure in Russia, incremental operating lease expense of \$5.5 million related to the identification and correction of an accounting error and the acquisition and expense of \$4.8 million of in-process research and development, partially offset by lower costs related to our realignment actions, a \$8.6 million favorable settlement with a customer to reimburse previously incurred legal fees, the reversal of \$5.1 million of previously reserved accounts receivable due to collection from a customer, a \$4.2 million gain resulting from the sale of a small FPD QRC facility and lower broad-based annual incentive compensation as compared with the same period in 2021.

Net Earnings from Affiliates

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions)		
Net earnings from affiliates	\$18.5	\$16.3	\$11.8

Net earnings from affiliates represents our net income from investments in five joint ventures (one located in each of Chile, India, Saudi Arabia, South Korea and the United Arab Emirates) that are accounted for using the equity method of accounting. Net earnings from affiliates in 2022 increased by \$2.2 million, or 13.5%, as compared to the prior year, primarily as a result of increased earnings of our FPD joint venture in South Korea.

Operating Income

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions, except percentages)		
Operating income	\$197.2	\$270.8	\$250.3
Operating income as a percentage of sales	5.5%	7.6%	6.7%

Operating income in 2022 decreased by \$73.6 million, or 27.2%, as compared with 2021. The decrease included negative currency effects of approximately \$13 million. The decrease was primarily a result of the \$18.4 million increase in SG&A and a \$55.4 million decrease in gross profit.

Interest Expense and Interest Income

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions)		
Interest expense	\$(46.2)	\$(57.6)	\$(56.2)
Interest income	4.0	2.8	4.2

Interest expense in 2022 decreased by \$11.4 million as compared with 2021. The decrease was primarily attributable to a lower effective interest rate on our outstanding debt as compared with the same period in 2021. Interest income in 2022 increased by \$1.2 million as compared to 2021. The increase in interest income was partially due to higher interest rates on our average cash balances compared with same period in 2021.

Loss on Extinguishment of Debt

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions)		
Loss on extinguishment of debt	\$—	\$(46.2)	\$(1.2)

Loss on extinguishment of debt in 2021 of \$46.2 million resulted from the redemption of our 2023 Senior Notes, 2022 Senior Notes and 2022 Euro Senior Notes and the write-off of deferred financing fees due to the amendment and restatement of the previous Senior Credit facility.

Other Income (Expense), net

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions)		
Other income (expense), net	\$(0.6)	\$(36.1)	\$5.2

Other expense, net decreased \$35.5 million as compared to 2021, due to a \$46.7 million decrease in losses from transactions in currencies other than our sites' functional currencies, partially offset by a \$9.5 million increase in losses from foreign exchange contracts. The net change was primarily due to the foreign currency exchange rate movements in the Canadian dollar, Brazilian real, Euro and Indian rupee during the year ended December 31, 2022, as compared with the same period in 2021. Included in the other expense, net decrease for the period is a \$19.2 million foreign currency remeasurement gain associated with a Canadian dollar denominated intercompany loan held by a Euro functional currency entity.

Income Tax and Tax Rate

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions, except percentages)		
Provision for (benefit from) income taxes	\$(43.6)	\$(2.6)	\$61.4
Effective tax rate	(28.3)%	(1.9)%	30.4%

Our effective tax rate of (28.3)% for the year ended December 31, 2022 decreased from (1.9)% in 2021 and differed from the federal statutory tax rate of 21% primarily due to the release of the valuation allowance against our deferred tax assets in Germany and Mexico partially offset by a valuation allowance establishment in Argentina, and the release of the valuation allowance on our U.S. foreign tax credit carryforwards on general category income.

The 2021 effective tax rate differed from the federal statutory rate of 21% primarily due to the net impact of foreign operations and the reversal of certain deferred tax liabilities as a result of legal entity restructurings.

Our effective tax rate is based upon current earnings and estimates of future taxable earnings for each domestic and international location. The assumptions about future taxable income require the use of significant judgment and are consistent with the plans and estimates used in the underlying business. Changes in any of these and other factors, including our ability to utilize foreign tax credits and net operating losses or results from tax audits, could impact the tax rate in future periods. As of December 31, 2022, we had U.S. foreign tax credit carryforwards of \$93.5 million, expiring in 2026-2032 tax years, against which we recorded a valuation allowance of \$45.2 million related to the U.S. foreign tax credit carryforwards on foreign branch category income. Additionally, we have recorded other net deferred tax assets of \$55.8 million, which relate to net operating losses, tax credits and other deductible temporary differences that are available to reduce taxable income in future periods, most of which do not have a definite expiration. Should we not be able to utilize all or a portion of these credits and losses, our effective tax rate would increase.

Net Earnings and Earnings Per Share

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions, except per share amounts)		
Net earnings attributable to Flowserve Corporation	\$188.7	\$125.9	\$130.4
Net earnings per share — diluted	\$ 1.44	\$ 0.96	\$ 1.00
Average diluted shares	131.3	130.9	131.1

Net earnings in 2022 increased by \$62.8 million to \$188.7 million, or to \$1.44 per diluted share, as compared with 2021. The increase was primarily attributable to the loss on extinguishment of debt of \$46.2 million in 2021 that did not recur, a \$41.0 million increase in tax benefit, a \$35.5 million decrease in other expense, net and a \$11.4 million decrease in interest expense, partially offset by an decrease in operating income of \$73.6 million.

Other Comprehensive Income (Loss)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions)		
Other comprehensive income (loss)	\$(82.9)	\$44.7	\$(24.6)

Other comprehensive income (loss) in 2022 decreased by \$127.6 million from an income of \$44.7 million in 2021. The net loss in 2022 was primarily due to foreign currency translation adjustments resulting primarily from exchange rate movements of the Euro, British pound, Indian rupee, Chinese yuan and Mexican peso versus the U.S. dollar at December 31, 2022 as compared with 2021.

Business Segments

We conduct our operations through two business segments based on type of product and how we manage the business. We evaluate segment performance and allocate resources based on each segment's operating income. See Note 19 to our consolidated financial statements included in Item 8 of this Annual Report for further discussion of our segments. The key operating results for our two business segments, FPD and FCD, are discussed below.

Flowserve Pump Division Segment Results

Our largest business segment is FPD, through which we design, manufacture, pretest, distribute and service specialty and highly-engineered custom and pre-configured pumps and pump systems, mechanical seals and auxiliary systems (collectively referred to as “original equipment”). FPD includes longer lead time, highly-engineered pump products and mechanical seals that are generally manufactured within shorter lead times. FPD also manufactures replacement parts and related equipment and provides aftermarket services. FPD primarily operates in the oil and gas, chemical, power generation, water management and general industries. FPD operates in 49 countries with 35 manufacturing facilities worldwide, 10 of which are located in Europe, 11 in North America, eight in Asia Pacific and six in Latin America, and we have 132 QRCs, including those co-located in manufacturing facilities and/or shared with FCD.

	FPD		
	2022	2021	2020
	(Amounts in millions, except percentages)		
Bookings.....	\$3,214.7	\$2,675.7	\$2,358.4
Sales	2,522.5	2,470.8	2,675.7
Gross profit.....	728.1	760.4	811.4
Gross profit margin	28.9%	30.8%	30.3%
SG&A.....	538.5	535.6	552.2
Gain on sale of business	—	1.8	—
Segment operating income.....	208.0	243.2	271.0
Segment operating income as a percentage of sales.....	8.2%	9.8%	10.1%
Backlog (at period end)	2,008.9	1,368.9	1,236.9

Bookings in 2022 increased by \$539.0 million, or 20.1%, as compared with 2021. The increase included negative currency effects of approximately \$134 million. The increase in customer bookings was driven by increased orders in the oil and gas, power generation, chemical, general and water industries. Increased customer bookings of \$179.2 million into North America, \$261.9 million into the Middle East, \$46.7 million into Europe, \$51.4 million into Asia Pacific and \$20.7 million into Latin America, were partially offset by decreased customer bookings of \$5.6 million into Africa. The increase in customer bookings was more heavily weighted towards original equipment bookings. Of the \$3.2 billion of bookings in 2022, approximately 44% were from oil and gas, 22% from general industries, 18% from chemical, 12% from power generation and 4% from water management. The increase included the impact of original equipment orders booked in 2022 in excess of \$230 million to supply pumps and related equipment to support the development of an onshore unconventional gas project in the Middle East.

Sales in 2022 increased \$51.6 million, or 2.1%, as compared with 2021. The increase included negative currency effects of approximately \$118 million. The increase was driven by customer aftermarket sales, resulting from increased customer sales of \$106.5 million into North America, \$39.2 million into the Middle East, \$12.0 million into Latin America and \$22.4 million into Africa, partially offset by decreased sales of \$93.1 million into Asia Pacific and \$34.3 million into Europe.

Gross profit in 2022 decreased by \$32.3 million, or 4.2%, as compared with 2021. Gross profit margin in 2022 of 28.9% decreased from 30.8% in 2021. The decrease in gross profit margin was primarily attributable to lower conversion of customer backlog to revenue, under absorption of \$5.1 million of fixed manufacturing costs primarily due to operational interruptions related to the implementation of a new enterprise resource planning system at certain of our North America quick response centers, increased freight costs largely due to global supply chain and logistics constraints and a \$7.4 million charge taken in 2022 related to our financial exposure in Russia, partially offset by a mix shift to higher margin aftermarket, lower broad-based annual incentive compensation, a \$4.5 million reversal of previously reserved inventory due to settlement with a customer and decreased costs related to our realignment actions as compared to the same period in 2021.

SG&A in 2022 increased by \$2.9 million, or 0.5%, as compared with 2021. Currency effects provided a decrease of approximately \$21 million. The increase in SG&A was primarily due a \$14.0 million charge taken in 2022 related to our financial exposure in Russia and the acquisition and expense of \$4.8 million of in-process research and development, partially offset by the reversal of \$5.1 million of previously reserved accounts receivable due to collection from a customer, a \$4.2 million gain resulting from the sale of a small QRC facility and lower broad-based annual incentive compensation as compared to the same period in 2021.

Operating income in 2022 decreased by \$35.2 million, or 14.5%, as compared with 2021. The decrease included negative currency effects of approximately \$12 million. The decrease was primarily due to the \$32.3 million decrease in gross profit and the \$2.9 million increase in SG&A.

Backlog of \$2.0 billion at December 31, 2022 increased by \$640.0 million, or 46.8%, as compared with December 31, 2021 and include the negative impact of \$19.0 million of order cancellations in 2022 due to the cessation of our operations in Russia. Currency effects provided a decrease of approximately \$34 million.

Flow Control Division Segment Results

FCD designs, manufactures, distributes and services a broad portfolio of engineered and industrial valve and automation solutions, including isolation and control valves, actuation, controls and related equipment. FCD leverages its experience and application know-how by offering a complete menu of engineering and project management services to complement its expansive product portfolio. FCD has a total of 44 manufacturing facilities and QRCs in 22 countries around the world, with five of its 19 manufacturing operations located in the U.S., eight located in Europe, five located in Asia Pacific and one located in Latin America. We believe that FCD is the second largest industrial valve supplier in the world.

	FCD		
	2022	2021	2020
	(Amounts in millions, except percentages)		
Bookings	\$1,247.2	\$1,112.8	\$1,065.8
Sales	1,100.6	1,075.9	1,057.5
Gross profit	305.5	316.7	321.9
Gross profit margin	27.8%	29.4%	30.4%
SG&A	192.1	197.4	196.3
Segment operating income	113.4	119.7	125.6
Segment operating income as a percentage of sales	10.3%	11.1%	11.9%
Backlog (at period end)	745.5	639.8	623.1

Bookings in 2022 increased \$134.4 million, or 12.1%, as compared with 2021. The increase included negative currency effects of approximately \$49 million. The increase in customer bookings was driven by increased orders in the oil and gas, chemical, general and water industries. There were increased customer bookings of \$52.4 million into North America, \$0.4 million into Europe, \$32.2 million into Asia Pacific, \$32.1 million into the Middle East, \$3.4 million into Latin America and \$9.2 million into Africa. The increase was more heavily weighted towards original equipment bookings. Of the \$1.2 billion of bookings in 2022, approximately 32% were from chemical, 30% were from oil and gas, 24% from general, 13% from power generation and 1% from water industries.

Sales in 2022 increased by \$24.7 million, or 2.3%, as compared with 2021. The increase included negative currency effects of approximately \$53 million and was driven primarily by increased customer original equipment sales. Sales increased \$83.2 million into North America and \$0.5 million into Africa, partially offset by decreased customer sales of \$16.6 million into Europe \$28.2 million into Asia Pacific, \$7.0 million into the Middle East and \$7.0 million into Latin America.

Gross profit in 2022 decreased by \$11.2 million, or 3.5%, as compared with 2021. Gross profit margin in 2022 of 27.8% decreased from 29.4% in 2021. The decrease in gross profit margin was primarily attributable to increased freight costs largely due to global supply chain and logistics constraints, the establishment of \$1.7 million of inventory reserves related to certain contracts that are estimated to be below market and a \$1.4 million charge taken in 2022 related to our financial exposure in Russia, partially offset by decreased costs related to our realignment actions and lower broad-based annual incentive compensation as compared to the same period in 2021.

SG&A in 2022 decreased by \$5.3 million, or 2.7% as compared with 2021. Currency effects provided a decrease of approximately \$8 million. The decrease in SG&A was primarily due to lower broad-based annual incentive compensation, partially offset by a \$1.7 million charge taken in 2022 related to our financial exposure in Russia, higher bad debt expense and a discrete asset write-down of \$3.0 million in the second quarter of 2022 as compared to the same period in 2021.

Operating income in 2022 decreased by \$6.3 million, or 5.3%, as compared with 2021. The decrease included negative currency effects of approximately \$4 million. The decrease was primarily due to the \$11.2 million decrease in gross profit partially offset by decrease in SG&A of \$5.3 million.

Backlog of \$745.5 million at December 31, 2022 increased by \$105.7 million, or 16.5%, as compared with December 31, 2021 and include the negative impact of \$9.8 million of order cancellations in 2022 due to the cessation of our operations in Russia. Currency effects provided a decrease of approximately \$19 million.

LIQUIDITY AND CAPITAL RESOURCES

Cash Flow Analysis

	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions)		
Net cash flows provided (used) by operating activities	\$ (40.0)	\$ 250.1	\$310.5
Net cash flows provided (used) by investing activities	(6.1)	(59.5)	(41.7)
Net cash flows provided (used) by financing activities	(150.0)	(599.7)	147.6

The following is a discussion and analysis of the Company's liquidity and capital resources for the years ended December 31, 2022 and 2021. A discussion of changes in the Company's liquidity and capital resources for the year ended December 31, 2021 and 2020 can be found in Part II, "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources" of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, filed with the SEC on February 23, 2022.

Existing cash, cash generated by operations and borrowings available under our senior credit facility are our primary sources of short-term liquidity. We monitor the depository institutions that hold our cash and cash equivalents on a regular basis, and we believe that we have placed our deposits with creditworthy financial institutions. Our sources of operating cash generally include the sale of our products and services and the conversion of our working capital, particularly accounts receivable and inventories. Our total cash balance at December 31, 2022 was \$435.0 million, compared with \$658.5 million at December 31, 2021.

At December 31, 2022 our cash used by operating activities was \$40.0 million, as compared to cash provided of \$250.1 million in 2021. Cash flow provided from working capital decreased in 2022 due primarily to increased cash flows used by or decreased cash flows provided by accounts receivable, inventory, contract assets, retirement obligations and other liabilities and accrued liabilities and income tax payable, partially offset by increased cash flows provided by or decreased cash flows used by contract liabilities, accounts payable and prepaid expenses and other assets as compared to 2021.

Increases in accounts receivable used \$152.0 million of cash flow in 2022, compared to \$8.7 million in 2021. For the fourth quarter of 2022 our days' sales outstanding ("DSO") was 75 days as compared to 72 days in 2021. We have not experienced a significant increase in customer payment defaults in 2022.

Increases in inventory used \$147.5 million of cash flow in 2022 as compared with cash used of \$32.1 million in 2021. Inventory turns were 3.6 times at December 31, 2022, as compared with 3.8 times for 2021. Our calculation of inventory turns does not reflect the impact of advanced cash received from our customers.

Increases in contract assets used \$41.8 million of cash flow and increases in contact liabilities provided \$61.7 million of cash flow in 2022.

Increases in accounts payable provided \$79.0 million of cash flow in 2022 compared with cash used of \$19.5 million in 2021. Decreases in accrued liabilities and income taxes payable used \$5.2 million of cash flow in 2022 compared to \$13.9 million in 2021.

Cash used by investing activities were \$6.1 million in 2022, as compared to \$59.5 million in 2021. The decrease of cash used in 2022 was primarily due to the termination of cross-currency swaps resulting in cash proceeds received of \$66.0 million, higher cash proceeds provided from the disposal of assets during the year of \$1.8 million and lower net affiliate investment activity of \$7.0 million. Capital expenditures were \$76.3 million in 2022, as compared to \$54.9 million in 2021. In 2023, we currently estimate capital expenditures to be between \$75 million and \$85 million, before consideration of any acquisition activity.

Cash used by financing activities were \$150.0 million in 2022 compared to cash flow used of \$599.7 million in 2021. Cash outflows during 2022 resulted primarily from the \$32.5 million in payments on our Term Loan and \$104.5 million of dividend payments.

In 2022 we repurchased no shares of our outstanding common stock during the year. As of December 31, 2022, we had \$96.1 million of remaining capacity under our share repurchase plan previously approved by the Board of Directors.

Our material cash requirements for the next 12 months, include our estimated 2023 capital expenditures described above and our contractual obligations summarized below under the subheading “--Contractual Obligations”. In the aggregate, our cash needs in 2023 are expected to be lower than those of 2022 due to anticipated benefits from working capital reductions. We believe cash flows from operating activities, combined with availability under our senior credit facility and our existing cash balances, will be sufficient to enable us to meet our cash flow needs for the next 12 months. However, cash flows from operations could be adversely affected by a decrease in the rate of general global economic growth and an extended decrease in capital spending of our customers, as well as economic, political and other risks associated with sales of our products, operational factors, competition, regulatory actions, fluctuations in foreign currency exchange rates and fluctuations in interest rates, among other factors. We believe that cash flows from operating activities and our expectation of continuing availability to draw upon our credit agreements are also sufficient to meet our cash flow needs for periods beyond the next 12 months.

Financing

On September 13, 2021, we amended and restated our credit agreement (the “Amended and Restated Credit Agreement”) under our Senior Credit Facility (“Credit Facility”) with Bank of America, N.A. and the other lenders to provide greater flexibility in maintaining adequate liquidity and access to available borrowings. The Amended and Restated Credit Agreement, (i) retained, from the previous credit agreement, the \$800.0 million unsecured Revolving Credit Facility (the “Revolving Credit Facility”), which includes a \$750.0 million sublimit for the issuance of letters of credit and a \$30.0 million sublimit for swing line loans ii) provides for an up to \$300 million unsecured Term Loan Facility (the “Term Loan”), (iii) extends the maturity date of the agreement to September 13, 2026, (iv) reduces commitment fees, (v) extends net leverage ratio covenant definition through the maturity of the agreement, and (vi) provides the ability to make certain adjustments to the otherwise applicable commitment fee, interest rate and letter of credit fees based on the Company’s performance against to-be-established key performance indicators with respect to certain of the Company’s environmental, social and governance targets. Most other terms and conditions under the previous Credit Facility remained unchanged.

The interest rates per annum applicable to the Revolving Credit Facility are unchanged under the Amended and Restated Credit Agreement. The interest rates per annum applicable to the Credit Facility, other than with respect to swing line loans, are London Interbank Offered Rate (“LIBOR”) plus between 1.000% to 1.750%, depending on our debt rating by either Moody’s Investors Service, Inc. (“Moody’s”) or Standard & Poor’s Financial Services LLC (“S&P”), or, at our option, the Base Rate (as defined in the Amended and Restated Credit Agreement) plus between 0.000% to 0.750% depending on our debt rating by either Moody’s or S&P. At December 31, 2022, the interest rate on the Revolving Credit Facility was LIBOR plus 1.375% in the case of LIBOR loans and the Base Rate plus 0.375% in the case of Base Rate loans. In addition, a commitment fee is payable quarterly in arrears on the daily unused portions of the Credit Facility. The commitment fee will be between 0.080% and 0.250% of unused amounts under the Credit Facility depending on our debt rating by either Moody’s or S&P. The commitment fee was 0.175% (per annum) during the period ended December 31, 2022.

Under the terms and conditions of the Amended and Restated Credit Agreement, interest rates per annum applicable to the Term Loan are stated as LIBOR plus between 0.875% to 1.625%, depending on the Company’s debt rating by either Moody’s or S&P, or, at the option of the Company, the Base Rate plus between 0.000% to 0.625% depending on the Company’s debt rating by either Moody’s or S&P.

On February 3, 2023 we entered into an amendment to the Credit Facility (the “Amendment”) which (i) replaced LIBOR with Secured Overnight Financing Rate (“SOFR”) as the benchmark reference rate, (ii) lowered the Material Acquisition (as defined in the Credit Facility) threshold from \$250 million to \$200 million and (iii) extended compliance dates for certain financial covenants. We believe this Amendment will provide greater flexibility and additional liquidity under our Credit Facility as we continue to pursue our business goals and strategy.

A discussion of our debt and related covenants is included in Note 12 to our consolidated financial statements included in Item 8 of this Annual Report. We were in compliance with the covenants as of December 31, 2022.

Liquidity Analysis

Our cash balance decreased by \$223.5 million to \$435.0 million as of December 31, 2022 as compared with December 31, 2021. The cash decrease included \$104.5 million in dividend payments, \$76.3 million in capital expenditures, \$32.5 million in Term Loan payments and \$40.0 million in operating cash outflows, partially offset by \$66.0 million in proceeds from the termination of cross-currency swaps.

During 2022, we made no cash contributions to our U.S. pension plan, compared to \$20.0 million in 2021. At December 31, 2022 and 2021, as a result of the values of the plan's assets and our contributions to the plan, our U.S. pension plan was fully-funded as defined by applicable law. As of December 31, 2022 direct benefits paid by the U.S. pension plan were \$3.0 million. We continue to maintain an asset allocation consistent with our strategy to maximize total return, while reducing portfolio risks through asset class diversification.

As of December 31, 2022, we had approximately \$729 million of liquidity, consisting of cash and cash equivalents of \$435 million and \$294 million of borrowings available under our Senior Credit Facility. In light of the liquidity currently available to us, and the costs savings measures planned and already in place, we expect to be able to maintain adequate liquidity over the next 12 months as we manage through the current market environment. We do not currently anticipate, nor are we aware of, any significant market conditions or commitments that would change any of our conclusions of the liquidity currently available to us. Additionally, we expect that the costs savings measures planned and already in place will enable us to maintain adequate liquidity over the next 12 months as we manage through the current market environment. We will continue to actively monitor the potential impacts of COVID-19 and related events on the credit markets in order to maintain sufficient liquidity and access to capital throughout 2023.

Contractual Obligations

The following table presents a summary of our contractual obligations at December 31, 2022:

(Amounts in millions)	Payments Due By Period				
	Within 1 Year	1-3 Years	3-5 Years	Beyond 5 Years	Total
Senior Notes and Term Loan Facility.....	\$ 39.8	\$119.8	\$100.0	\$ 989.2	\$1,248.8
Fixed interest payments ⁽¹⁾	31.5	63.0	63.0	104.8	262.3
Other debt	9.3	15.4	—	—	24.7
Leases:					
Operating	38.7	59.9	40.5	81.0	220.1
Finance.....	5.8	7.4	2.2	5.0	20.4
Purchase obligations: ⁽²⁾					
Inventory	744.2	98.8	9.5	34.2	886.7
Non-inventory	74.9	3.0	0.3	—	78.2
Pension and postretirement benefits ⁽³⁾	57.8	115.1	118.6	291.3	582.8
Total	<u>\$1,002.0</u>	<u>\$482.4</u>	<u>\$334.1</u>	<u>\$1,505.5</u>	<u>\$3,324.0</u>

(1) Fixed interest payments represent interest payments on the Senior Notes as defined in Note 12 to our consolidated financial statements included in Item 8 of this Annual Report.

(2) Purchase obligations are presented at the face value of the purchase order, excluding the effects of early termination provisions. Actual payments could be less than amounts presented herein.

(3) Retirement and postretirement benefits represent estimated benefit payments for our U.S. and non-U.S. defined benefit plans and our postretirement medical plans, as more fully described below and in Note 13 to our consolidated financial statements included in Item 8 of this Annual Report.

The following table presents a summary of our commercial commitments at December 31, 2022:

	Commitment Expiration By Period				Total
	Within 1 Year	1-3 Years	3-5 Years	Beyond 5 Years	
	(Amounts in millions)				
Letters of credit	\$258.8	\$241.3	\$20.8	\$10.2	\$531.1
Surety bonds	40.4	11.0	0.8	—	52.2
Total	<u>\$299.2</u>	<u>\$252.3</u>	<u>\$21.6</u>	<u>\$10.2</u>	<u>\$583.3</u>

We expect to satisfy these commitments through performance under our contracts.

PENSION AND POSTRETIREMENT BENEFITS OBLIGATIONS

Plan Descriptions

We and certain of our subsidiaries have defined benefit pension plans and defined contribution plans for full-time and part-time employees. Approximately 68% of total defined benefit pension plan assets and approximately 58% of defined benefit pension obligations are related to the U.S. qualified plan as of December 31, 2022. Unless specified otherwise, the references in this section are to all of our U.S. and non-U.S. plans. None of our common stock is directly held by these plans.

Our U.S. defined benefit plan assets consist of a balanced portfolio of equity and fixed income securities. Our non-U.S. defined benefit plan assets include a significant concentration of United Kingdom (“U.K.”) fixed income securities, as discussed in Note 13 to our consolidated financial statements included in Item 8 of this Annual Report. We monitor investment allocations and manage plan assets to maintain an acceptable level of risk. At December 31, 2022, the estimated fair market value of U.S. and non-U.S. plan assets for our defined benefit pension plans decreased to \$537.3 million from \$764.2 million at December 31, 2021. Assets were allocated as follows:

Asset category	U.S. Plan	
	2022	2021
Cash and Cash Equivalents	1%	1%
Global Equity	21%	26%
Global Real Assets	13%	16%
Equity securities	34%	42%
Diversified Credit	18%	15%
Liability-Driven Investment	47%	42%
Fixed income	65%	57%
Asset category	Non-U.S. Plans	
	2022	2021
Cash and Cash Equivalents	1%	0%
North American Companies	—%	1%
Global Equity	—%	1%
Equity securities	—%	2%
U.K. Government Gilt Index	38%	42%
Liability-Driven Investment	12%	9%
Fixed income	50%	51%
Multi-asset	20%	20%
Buy-in Contract	19%	20%
Other	10%	7%
Other types	49%	47%

The projected benefit obligation (“Benefit Obligation”) for our defined benefit pension plans was \$651.3 million and \$892.6 million as of December 31, 2022 and 2021, respectively. Benefits under our defined benefit pension plans are based primarily on participants’ compensation and years of credited service.

We sponsor defined benefit postretirement medical plans covering certain current retirees and a limited number of future retirees in the U.S. These plans provide for medical and dental benefits and are administered through insurance companies. We fund the plans as benefits are paid, such that the plans hold no assets in any period presented. Accordingly, we have no investment strategy or targeted allocations for plan assets. The benefits under the plans are not available to new employees or most existing employees.

The Benefit Obligation for our defined benefit postretirement medical plans was \$13.4 million and \$17.0 million as of December 31, 2022 and 2021, respectively.

Accrual Accounting and Significant Assumptions

We account for pension benefits using the accrual method, recognizing pension expense before the payment of benefits to retirees. The accrual method of accounting for pension benefits requires actuarial assumptions concerning future events that will determine the amount and timing of the benefit payments.

Our key assumptions used in calculating our cost of pension benefits are the discount rate, the rate of compensation increase and the expected long-term rate of return on plan assets. We, in consultation with our actuaries, evaluate the key actuarial assumptions and other assumptions used in calculating the cost of pension and postretirement benefits, such as discount rates, expected return on plan assets for funded plans, mortality rates, retirement rates and assumed rate of compensation increases, and determine such assumptions as of December 31 of each year to calculate liability information as of that date and pension and postretirement expense for the following year. See discussion of our accounting for and assumptions related to pension and postretirement benefits in the “Our Critical Accounting Estimates” section of this MD&A.

In 2022, the service cost component of the pension expense for our defined benefit pension plans included in operating income was \$30.7 million compared to \$32.5 million in 2021. The non-service cost portion of net pension expense (e.g., interest cost, actuarial gains and losses and expected return on plan assets) for our defined benefit pension plans included in other income (expense), net was \$(4.2) million in 2022, compared to \$(0.2) million in 2021.

The following are assumptions related to our defined benefit pension plans as of December 31, 2022:

	<u>U.S. Plan</u>	<u>Non-U.S. Plans</u>
Weighted average assumptions used to determine Benefit Obligation:		
Discount rate	5.73%	4.46%
Rate of increase in compensation levels	3.50	3.61
Weighted average assumptions used to determine 2022 net pension expense:		
Long-term rate of return on assets	5.75%	2.43%
Discount rate	3.00	1.71
Rate of increase in compensation levels	3.50	3.18
Weighted-average interest crediting rates	3.79%	1.49%

The following provides a sensitivity analysis of alternative assumptions on the U.S. qualified and aggregate non-U.S. pension plans and U.S. postretirement plans.

Effect of Discount Rate Changes and Constancy of Other Assumptions:

	<u>0.5% Increase</u>	<u>0.5% Decrease</u>
	<u>(Amounts in millions)</u>	
U.S. defined benefit pension plan:		
Effect on net pension expense	\$ (2.1)	\$ 2.0
Effect on Benefit Obligation	(12.5)	13.4
Non-U.S. defined benefit pension plans:		
Effect on net pension expense	(0.6)	0.7
Effect on Benefit Obligation	(15.7)	16.2
U.S. Postretirement medical plans:		
Effect on Benefit Obligation	(0.3)	0.3

Effect of Changes in the Expected Return on Assets and Constancy of Other Assumptions:

	<u>0.5% Increase</u>	<u>0.5% Decrease</u>
	<u>(Amounts in millions)</u>	
U.S. defined benefit pension plan:		
Effect on net pension expense	\$(2.2)	\$2.2
Non-U.S. defined benefit pension plans:		
Effect on net pension expense	(1.2)	1.2

As discussed below, accounting principles generally accepted in the U.S. (“U.S. GAAP”) provide that differences between expected and actual returns are recognized over the average future service of employees or over the remaining expected lifetime for plans with only inactive participants.

At December 31, 2022, as compared with December 31, 2021, we increased our discount rate for the U.S. plan from 3.00% to 5.73% based on an analysis of publicly-traded investment grade U.S. corporate bonds, which had higher yields due to current market conditions. The average discount rate for the non-U.S. plans increased from 1.71% to 4.46% based on analysis of bonds and other publicly-traded instruments, by country, which had higher yields due to market conditions. The average assumed rate of compensation remained constant at 3.50% for the U.S. plan and increased to 3.61% from 3.18% for our non-U.S. plans. To determine the 2022 pension expense, the expected rate of return on U.S. plan and non-US plan assets decreased to 5.75% from 6.00% and increased to 2.43% from 2.37%, respectively, based on our target allocations and expected long-term asset returns. As the expected rate of return on plan assets is long-term in nature, short-term market fluctuations do not significantly impact the rate. For all U.S. plans, we adopted the Pri-2012 mortality tables and the MP-2021 improvement scale published in October 2021. We applied the Pri-2012 tables based on the constituency of our plan population for union and non-union participants. We adjusted the improvement scale to utilize the Proxy SSA Long Term Improvement Rates, consistent with assumptions adopted by the Social Security Administration trustees, based on long-term historical experience. Currently, we believe this approach provides the best estimate of our future obligation. Most plan participants elect to receive plan benefits as a lump sum at the end of service, rather than an annuity. As such, the updated mortality tables had an immaterial effect on our pension obligation.

We expect that the net pension expense for our defined benefit pension plans included in earnings before income taxes will be approximately \$1.2 million higher in 2023 than the \$26.5 million in 2022, primarily due to a increase in the interest cost. We have used discount rates of 5.73%, 4.46% and 5.83% at December 31, 2022, in calculating our estimated 2023 net pension expense for the U.S. pension plans, non-U.S. pension plans and postretirement medical plans, respectively.

The assumed ranges for the annual rates of increase in health care costs were 7.25% for 2022, 7.50% for 2021 and 7.00% for 2020, with a gradual decrease to 5.00% for 2032 and future years. If actual costs are higher than those assumed, this will likely put modest upward pressure on our expense for retiree health care.

Plan Funding

Our funding policy for defined benefit plans is to contribute at least the amounts required under applicable laws and local customs. In 2022, we contributed \$18.7 million, to our defined benefit plans, compared to \$35.8 million in 2021. We expect to contribute approximately \$2 million to our non-U.S. pension plans in 2023, excluding direct benefits paid.

For further discussion of our pension and postretirement benefits, see Note 13 to our consolidated financial statements included in Item 8 of this Annual Report.

OUR CRITICAL ACCOUNTING ESTIMATES

The process of preparing financial statements in conformity with U.S. GAAP requires the use of estimates and assumptions to determine reported amounts of certain assets, liabilities, revenues and expenses and the disclosure of related contingent assets and liabilities. These estimates and assumptions are based upon information available at the time of the estimates or assumptions, including our historical experience, where relevant. The most significant estimates made by management include: timing and amount of revenue recognition; deferred taxes, tax valuation allowances and tax reserves; reserves for contingent loss; pension and postretirement benefits; and valuation of goodwill, indefinite-lived intangible assets and other long-lived assets. The significant estimates are reviewed at least

annually if not quarterly by management. Because of the uncertainty of factors surrounding the estimates, assumptions and judgments used in the preparation of our financial statements, actual results may differ from the estimates, and the difference may be material.

Our critical accounting policies are those policies that are both most important to our financial condition and results of operations and require the most difficult, subjective or complex judgments on the part of management in their application, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. We believe that the following represent our critical accounting policies. For a summary of all of our significant accounting policies, see Note 1 to our consolidated financial statements included in Item 8 of this Annual Report. Management and our external auditors have discussed our critical accounting estimates and policies with the Audit Committee of our Board of Directors.

Revenue Recognition

We recognize revenue when (or as) we satisfy a performance obligation by transferring control to a customer. Transfer of control is evaluated based on the customer's ability to direct the use of and obtain substantially all of the benefits of a performance obligation. Revenue is recognized either over time or at a point in time, depending on the specific facts and circumstances for each contract, including the terms and conditions of the contract as agreed with the customer and the nature of the products or services to be provided. Service-related revenues do not typically represent a significant portion contracts with our customers and do not meet the thresholds requiring separate disclosure.

Our primary method for recognizing revenue over time is the percentage of completion ("POC") method, whereby progress towards completion is measured by applying an input measure based on costs incurred to date relative to total estimated costs at completion. If control of the products and/or services does not transfer over time, then control transfers at a point in time. We determine the point in time that control transfers to a customer based on the evaluation of specific indicators, such as title transfer, risk of loss transfer, customer acceptance and physical possession. For a discussion related to revenue recognition refer to Note 2 included in Item 8 of this Annual Report.

Deferred Taxes, Tax Valuation Allowances and Tax Reserves

We recognize valuation allowances to reduce the carrying value of deferred tax assets to amounts that we expect are more likely than not to be realized. Our valuation allowances primarily relate to the deferred tax assets established for certain tax credit carryforwards, capital loss carryforwards, and net operating loss carryforwards for non-U.S. subsidiaries, and we evaluate the realizability of our deferred tax assets and adjust the amount of the valuation allowances, if necessary. We assess such factors as our forecast of future taxable income and available tax planning strategies that could be implemented to realize the net deferred tax assets in determining the sufficiency of our valuation allowances. Failure to achieve forecasted taxable income in the applicable tax jurisdictions could affect the ultimate realization of deferred tax assets and could result in an increase in our effective tax rate on future earnings. Implementation of different tax structures in certain jurisdictions could, if successful, result in future reductions of certain valuation allowances.

The amount of income taxes we pay is subject to ongoing audits by federal, state and foreign tax authorities, which often result in proposed assessments. Significant judgment is required in determining income tax provisions and evaluating tax positions. We establish reserves for open tax years for uncertain tax positions that may be subject to challenge by various tax authorities. The consolidated tax provision and related accruals include the impact of such reasonably estimable losses and related interest and penalties as deemed appropriate. Tax benefits recognized in the financial statements from uncertain tax positions are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement.

While we believe we have adequately provided for any reasonably foreseeable outcomes related to these matters, our future results may include favorable or unfavorable adjustments to our estimated tax liabilities. To the extent that the expected tax outcome of these matters changes, such changes in estimate will impact the income tax provision in the period in which such determination is made. For a discussion related to deferred taxes, tax valuation allowances and tax reserves refer to Note 18 included in Item 8 of this Annual Report.

Reserves for Contingent Loss

We are a defendant in a number of lawsuits that seek to recover damages for personal injury allegedly resulting from exposure to asbestos-containing products formerly manufactured and/or distributed by heritage companies of the Company. We have estimated that the liability for pending and future claims not yet asserted, and which are

probable and estimable, could be experienced through 2052, which represents the expected end of our asbestos liability exposure with no further ongoing claims expected beyond that date. In light of the uncertainties and variables inherent in the long-term projection of the total asbestos liability, as part of our ongoing review of asbestos claims, each year we will reassess the projected liability of unasserted asbestos claims to be filed through 2052, and we will continually reassess the time horizon over which a reasonable estimate of unasserted claims can be projected.

In connection with our ongoing review of asbestos-related claims, we have also reviewed the amount of potential insurance coverage for such claims, taking into account the remaining limits of such coverage, the number and amount of claims on our insurance from co-insured parties, ongoing litigation against the Company's insurers, potential remaining recoveries from insolvent insurers, the impact of previous insurance settlements and coverage available from solvent insurers not party to the coverage litigation. Continuously, we review ongoing insurance coverage available for a significant amount of the potential future asbestos-related claims and in the future could secure additional insurance coverage as deemed necessary. For a discussion pertaining to asbestos claims refer to Note 15 included in Item 8 of this Annual Report.

Liabilities are recorded for various non-asbestos contingencies arising in the normal course of business when it is both probable that a loss has been incurred and such loss is reasonably estimable. Assessments of reserves are based on information obtained from our independent and in-house experts, including recent legal decisions and loss experience in similar situations. The recorded legal reserves are susceptible to changes due to new developments regarding the facts and circumstances of each matter, changes in political environments, legal venue and other factors. Recorded environmental reserves could change based on further analysis of our properties, technological innovation and regulatory environment changes.

Pension and Postretirement Benefits

We provide pension and postretirement benefits to certain of our employees, including former employees, and their beneficiaries. The assets, liabilities and expenses we recognize and disclosures we make about plan actuarial and financial information are dependent on the assumptions and estimates used in calculating such amounts. The assumptions include factors such as discount rates, health care cost trend rates, inflation, expected rates of return on plan assets, retirement rates, mortality rates, turnover, rates of compensation increases and other factors.

The assumptions utilized to compute expense and benefit obligations are shown in Note 13 to our consolidated financial statements included in Item 8 of this Annual Report. These assumptions are assessed annually in consultation with independent actuaries and investment advisors as of December 31 and adjustments are made as needed. We evaluate prevailing market conditions and local laws and requirements in countries where plans are maintained, including appropriate rates of return, interest rates and medical inflation (health care cost trend) rates. We ensure that our significant assumptions are within the reasonable range relative to market data. The methodology to set our significant assumptions includes:

- Discount rates are estimated using high quality debt securities based on corporate or government bond yields with a duration matching the expected benefit payments. For the U.S. the discount rate is obtained from an analysis of publicly-traded investment-grade corporate bonds to establish a weighted average discount rate. For plans in the U.K. and the Eurozone we use the discount rate obtained from an analysis of AA-graded corporate bonds used to generate a yield curve. For other countries or regions without a corporate AA bond market, government bond rates are used. Our discount rate assumptions are impacted by changes in general economic and market conditions that affect interest rates on long-term high-quality debt securities, as well as the duration of our plans' liabilities.
- The expected rates of return on plan assets are derived from reviews of asset allocation strategies, expected long-term performance of asset classes, risks and other factors adjusted for our specific investment strategy. These rates are impacted by changes in general market conditions, but because they are long-term in nature, short-term market changes do not significantly impact the rates. Changes to our target asset allocation also impact these rates.
- The expected rates of compensation increase reflect estimates of the change in future compensation levels due to general price levels, seniority, age and other factors.

Depending on the assumptions used, the pension and postretirement expense could vary within a range of outcomes and have a material effect on reported earnings. In addition, the assumptions can materially affect benefit obligations and future cash funding. Actual results in any given year may differ from those estimated because of economic and other factors.

We evaluate the funded status of each retirement plan using current assumptions and determine the appropriate funding level considering applicable regulatory requirements, tax deductibility, reporting considerations, cash flow requirements and other factors. We discuss our funding assumptions with the Finance Committee of our Board of Directors.

Valuation of Goodwill, Indefinite-Lived Intangible Assets and Other Long-Lived Assets

The initial recording of goodwill and intangible assets requires subjective judgments concerning estimates of the fair value of the acquired assets. We test the value of goodwill, indefinite-lived intangible assets and long-lived assets for impairment as of December 31 each year or whenever events or circumstances indicate such assets may be impaired. The test for goodwill impairment involves significant judgment in estimating projections of fair value generated through future performance of each of the reporting units. We did not record a material impairment for goodwill, indefinite-lived intangible assets or long-lived assets in 2022, 2021 or 2020.

Due to uncertain market conditions and potential changes in strategy and product portfolio, it is possible that forecasts used to support asset carrying values may change in the future, which could result in non-cash charges that would adversely affect our financial condition and results of operations. For a discussion pertaining to goodwill, indefinite-lived intangible assets and long-lived assets refer to Note 1 included in Item 8 of this Annual Report.

ACCOUNTING DEVELOPMENTS

We have presented the information about accounting pronouncements not yet implemented in Note 1 to our consolidated financial statements included in Item 8 of this Annual Report.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We have market risk exposure arising from changes in foreign currency exchange rate movements. We are exposed to credit-related losses in the event of non-performance by counterparties to financial instruments, but we currently expect the counterparties will continue to meet their obligations given their current creditworthiness.

Foreign Currency Exchange Rate Risk

A substantial portion of our operations are conducted by our subsidiaries outside of the U.S. in currencies other than the U.S. dollar. The primary currencies in which we operate, in addition to the U.S. dollar, are the Argentine peso, Australian dollar, Brazilian real, British pound, Canadian dollar, Chinese yuan, Colombian peso, Euro, Hungarian forint, Indian rupee, Japanese yen, Mexican peso, Singapore dollar, Swedish krona, Russian ruble, Malaysian ringgit and Venezuelan bolivar. Almost all of our non-U.S. subsidiaries conduct their business primarily in their local currencies, which are also their functional currencies. Foreign currency exposures arise from translation of foreign-denominated assets and liabilities into U.S. dollars and from transactions, including firm commitments and anticipated transactions, denominated in a currency other than a non-U.S. subsidiary's functional currency. As a means of managing the volatility of foreign currency exposure with the Euro/U.S. dollar exchange rate, we entered into swaps associated with our Euro investment in certain of our international subsidiaries and were designated as net investment hedges. On December 22, 2022 all outstanding cross-currency swaps were terminated resulting in cash proceeds received of \$66.0 million. Routinely, we review our investments in foreign subsidiaries from a long-term perspective and use capital structuring techniques to manage our investment in foreign subsidiaries as deemed necessary. We realized net gains (losses) associated with foreign currency translation of \$(98.7) million, \$0.5 million and \$(15.2) million for the years ended December 31, 2022, 2021 and 2020, respectively, which are included in other comprehensive income (loss). The net loss in 2022 was primarily due to foreign currency translation adjustments resulting primarily from exchange rate movements of the Euro, British pound, Indian rupee, Chinese yuan and Mexican peso versus the U.S. dollar at December 31, 2022 as compared with 2021.

We employ a foreign currency risk management strategy to minimize potential changes in cash flows from unfavorable foreign currency exchange rate movements. Where available, the use of forward exchange contracts allows us to mitigate transactional exposure to exchange rate fluctuations as the gains or losses incurred on the forward exchange contracts will offset, in whole or in part, losses or gains on the underlying foreign currency exposure. Our policy allows foreign currency coverage only for identifiable foreign currency exposures. As of December 31, 2022, we had a U.S. dollar equivalent of \$459.2 million in aggregate notional amount outstanding in foreign exchange contracts with third parties, compared with \$425.2 million at December 31, 2021. Transactional currency gains and losses arising from transactions outside of our sites' functional currencies and changes in fair value of foreign exchange contracts are included in our consolidated results of operations. We recognized foreign currency net gains (losses) of \$9.7 million, \$(27.4) million and \$9.6 million for the years ended December 31, 2022, 2021 and 2020, respectively, which are included in other income (expense), net in the accompanying consolidated statements of income.

Based on a sensitivity analysis at December 31, 2022, a 10% change in the foreign currency exchange rates for the year ended December 31, 2022 would have impacted our net earnings by approximately \$7 million. At December 31, 2021, a 10% change in the foreign currency exchange rates for the year ended December 31, 2021 would have impacted our net earnings by approximately \$10 million. This calculation assumes that all currencies change in the same direction and proportion relative to the U.S. dollar and that there are no indirect effects, such as changes in non-U.S. dollar sales volumes or prices. This calculation does not take into account the impact of the foreign currency forward exchange contracts discussed above.

LIBOR

On March 5, 2021, the UK Financial Conduct Authority ("FCA"), which regulates LIBOR issued an announcement on the future cessation or loss of representativeness of LIBOR benchmark settings currently published by ICE Benchmark Administration. That announcement confirmed that LIBOR will either cease to be provided by any administrator or will no longer be representative after December 31, 2021 for all non-USD LIBOR reference rates, and for 1-Week and 2-Month USD LIBOR and after June 30, 2023 for other USD LIBOR reference rates. The U.S. Federal Reserve, in conjunction with the Alternative Reference Rate Committee, has proposed the replacement of U.S. dollar LIBOR rates with a new index calculated by short-term repurchase agreements backed by U.S. Treasury securities called SOFR. As a result of the expected LIBOR cessation, the Company amended its Credit Agreement on February 3, 2023 whereby it has replaced LIBOR references with SOFR as the benchmark reference rate.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Flowserve Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Flowserve Corporation and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of income, of comprehensive income, of shareholders’ equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with

generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill Impairment Test – Pump Reporting Unit

As described in Notes 1 and 5 to the consolidated financial statements, the Company's consolidated goodwill balance was \$1,168.1 million as of December 31, 2022. The goodwill balance associated with the pump reporting unit was approximately \$277 million. The value of goodwill is tested for impairment as of December 31 each year or whenever events or circumstances indicate goodwill may be impaired. If the carrying value of a reporting unit exceeds its fair value, the goodwill of that reporting unit is impaired and an impairment loss is recorded equal to the excess of the carrying value over its fair value. Fair value is estimated using a discounted cash flow analysis, which requires management to make various judgmental assumptions about future sales, operating margins, growth rates and discount rates.

The principal considerations for our determination that performing procedures relating to the goodwill impairment test of the pump reporting unit is a critical audit matter are (i) the significant judgment by management when estimating the fair value of the reporting unit; (ii) a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating management's significant assumptions related to the growth rate, operating margins and discount rate; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment test, including controls over the valuation of the pump reporting unit. These procedures also included, among others (i) testing management's process for estimating the fair value of the pump reporting unit, (ii) evaluating the appropriateness of the discounted cash flow analysis, (iii) testing the completeness and accuracy of underlying data used in the discounted cash flow analysis, and (iv) evaluating the significant assumptions used by management related to the growth rate, operating margins and discount rate. Evaluating management's assumptions related to growth rate and operating margins involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting units (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in evaluating the reasonableness of the discount rate assumption.

/s/ PricewaterhouseCoopers LLP
Dallas, Texas

March 7, 2023

We have served as the Company's auditor since 2000.

FLOWSERVE CORPORATION
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2022	2021
	(Amounts in thousands, except per share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 434,971	\$ 658,452
Accounts receivable, net.	868,632	739,210
Contract assets, net.	233,457	195,598
Inventories, net	803,198	678,287
Prepaid expenses and other	110,714	117,130
Total current assets	2,450,972	2,388,677
Property, plant and equipment, net	500,945	515,927
Operating lease right-of-use assets, net	174,980	193,863
Goodwill	1,168,124	1,196,479
Deferred taxes	149,290	44,049
Other intangible assets, net	134,503	152,463
Other assets, net	211,820	258,310
Total assets	<u>\$ 4,790,634</u>	<u>\$ 4,749,768</u>
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	\$ 476,747	\$ 410,062
Accrued liabilities	427,578	445,092
Contract liabilities	256,963	202,965
Debt due within one year	49,335	41,058
Operating lease liabilities	32,528	32,628
Total current liabilities	1,243,151	1,131,805
Long-term debt due after one year	1,224,151	1,261,770
Operating lease liabilities	155,196	166,786
Retirement obligations and other liabilities	309,529	352,062
Commitments and contingencies (See Note 15)		
Shareholders' equity:		
Common shares, \$1.25 par value	220,991	220,991
Shares authorized — 305,000		
Shares issued — 176,793 and 176,793, respectively		
Capital in excess of par value	507,484	506,386
Retained earnings	3,774,209	3,691,023
Treasury shares, at cost — 46,359 and 46,794 shares, respectively	(2,036,882)	(2,057,706)
Deferred compensation obligation	6,979	7,214
Accumulated other comprehensive loss	(647,788)	(563,589)
Total Flowserve Corporation shareholders' equity	1,824,993	1,804,319
Noncontrolling interests	33,614	33,026
Total equity	<u>1,858,607</u>	<u>1,837,345</u>
Total liabilities and equity	<u>\$ 4,790,634</u>	<u>\$ 4,749,768</u>

See accompanying notes to consolidated financial statements.

FLOWSERVE CORPORATION
CONSOLIDATED STATEMENTS OF INCOME

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands, except per share data)		
Sales	\$ 3,615,120	\$ 3,541,060	\$ 3,728,134
Cost of sales	(2,620,825)	(2,491,335)	(2,611,365)
Gross profit	994,295	1,049,725	1,116,769
Selling, general and administrative expense	(815,545)	(797,076)	(878,245)
Gain on sale of business	—	1,806	—
Net earnings from affiliates	18,469	16,304	11,753
Operating income	197,219	270,759	250,277
Interest expense	(46,247)	(57,617)	(56,185)
Loss on extinguishment of debt	—	(46,176)	(1,201)
Interest income	3,963	2,764	4,175
Other income (expense), net	(559)	(36,142)	5,226
Earnings before income taxes	154,376	133,588	202,292
(Provision for) benefit from income taxes	43,639	2,594	(61,417)
Net earnings, including noncontrolling interests	198,015	136,182	140,875
Less: Net earnings attributable to noncontrolling interests	(9,326)	(10,233)	(10,455)
Net earnings attributable to Flowserve Corporation	<u>\$ 188,689</u>	<u>\$ 125,949</u>	<u>\$ 130,420</u>
Net earnings per share attributable to Flowserve Corporation common shareholders:			
Basic	\$ 1.44	\$ 0.97	\$ 1.00
Diluted	1.44	0.96	1.00
Weighted average shares – basic	130,630	130,305	130,395
Weighted average shares – diluted	131,315	130,857	131,050

See accompanying notes to consolidated financial statements.

FLOWSERVE CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands)		
Net earnings, including noncontrolling interests.	\$198,015	\$136,182	\$140,875
Other comprehensive income (loss):			
Foreign currency translation adjustments, net of deferred taxes of			
\$(20,526), \$(875) and \$11,104 in 2022, 2021 and 2020, respectively . .	(98,658)	524	(15,185)
Pension and other postretirement effects, net of deferred taxes of			
\$(8,423), \$(7,474) and \$(311) in 2022, 2021 and 2020, respectively . .	15,309	45,058	(9,562)
Cash flow hedging activity, net of deferred taxes of \$286, \$0 and \$0 in			
2022, 2021 and 2020, respectively	<u>403</u>	<u>(848)</u>	<u>183</u>
Other comprehensive income (loss)	<u>(82,946)</u>	<u>44,734</u>	<u>(24,564)</u>
Comprehensive income, including noncontrolling interests	115,069	180,916	116,311
Comprehensive (income) attributable to noncontrolling interests	<u>(10,579)</u>	<u>(8,930)</u>	<u>(11,225)</u>
Comprehensive income attributable to Flowserve Corporation	<u>\$104,490</u>	<u>\$171,986</u>	<u>\$105,086</u>

See accompanying notes to consolidated financial statements.

FLOWSERVE CORPORATION

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

	Total Flowserve Corporation Shareholders' Equity									
	Common Stock		Capital in Excess of Par Value	Retained Earnings	Treasury Stock		Deferred Compensation Obligation	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests	Total Equity
	Shares	Amount			Shares	Amount				
	(Amounts in thousands)									
Balance — January 1, 2020	176,793	\$220,991	\$501,045	\$3,652,244	(46,262)	\$(2,051,583)	\$ 8,334	\$(584,292)	\$25,602	\$1,772,341
ASU No. 2016-13 - Measurement of Credit Losses on Financial Instruments (Topic 326)	—	—	—	(7,291)	—	—	—	—	—	(7,291)
Stock activity under stock plans . .	—	—	(26,070)	—	551	24,386	(2,170)	—	—	(3,854)
Stock-based compensation	—	—	27,252	—	—	—	—	—	—	27,252
Net earnings	—	—	—	130,420	—	—	—	—	10,455	140,875
Cash dividends declared (\$0.80 per share)	—	—	—	(104,830)	—	—	—	—	—	(104,830)
Repurchases of common shares . . .	—	—	—	—	(1,057)	(32,112)	—	—	—	(32,112)
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	—	(25,333)	769	(24,564)
Other, net	—	—	—	—	—	—	—	—	(6,496)	(6,496)
Balance — December 31, 2020 . .	176,793	\$220,991	\$502,227	\$3,670,543	(46,768)	\$(2,059,309)	\$ 6,164	\$(609,625)	\$30,330	\$1,761,321
Stock activity under stock plans . .	—	—	(25,320)	—	414	19,134	1,050	—	—	(5,136)
Stock-based compensation	—	—	29,479	—	—	—	29,479	—	—	—
Net earnings	—	—	—	125,949	—	—	—	—	10,233	136,182
Cash dividends declared (\$0.80 per share)	—	—	—	(105,469)	—	—	—	—	—	(105,469)
Repurchases of common shares . . .	—	—	—	—	(440)	(17,531)	—	—	—	(17,531)
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	—	46,036	(1,302)	44,734
Other, net	—	—	—	—	—	—	—	—	(6,235)	(6,235)
Balance — December 31, 2021 . .	176,793	\$220,991	\$506,386	\$3,691,023	(46,794)	\$(2,057,706)	\$ 7,214	\$(563,589)	\$33,026	\$1,837,345
Stock activity under stock plans . .	—	—	(24,432)	—	435	20,824	(235)	—	—	(3,843)
Stock-based compensation	—	—	25,530	—	—	—	—	—	—	25,530
Net earnings	—	—	—	188,689	—	—	—	—	9,326	198,015
Cash dividends declared (\$0.80 per share)	—	—	—	(105,503)	—	—	—	—	—	(105,503)
Repurchases of common shares . . .	—	—	—	—	—	—	—	—	—	—
Other comprehensive income (loss), net of tax	—	—	—	—	—	—	—	(84,199)	1,253	(82,946)
Other, net	—	—	—	—	—	—	—	—	(9,991)	(9,991)
Balance — December 31, 2022 . .	176,793	\$220,991	\$507,484	\$3,774,209	(46,359)	\$(2,036,882)	\$ 6,979	\$(647,788)	\$33,614	\$1,858,607

See accompanying notes to consolidated financial statements.

FLOWERVE CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands)		
Cash flows — Operating activities:			
Net earnings, including noncontrolling interests	\$ 198,015	\$ 136,182	\$ 140,875
Adjustments to reconcile net earnings to net cash provided (used) by operating activities:			
Depreciation	77,636	85,175	86,175
Amortization of intangible and other assets	13,317	14,647	14,578
Loss on extinguishment of debt	—	46,176	1,201
Stock-based compensation	25,530	29,478	27,252
Foreign currency, asset write downs and other non-cash adjustments . .	(27,758)	29,772	4,277
Change in assets and liabilities:			
Accounts receivable, net	(152,011)	(8,675)	45,648
Inventories, net	(147,492)	(32,124)	15,306
Contract assets, net	(41,768)	74,333	4,258
Prepaid expenses and other assets, net	17,461	1,302	34,262
Accounts payable	78,968	(19,505)	(22,571)
Contract liabilities	61,684	14,196	(34,066)
Accrued liabilities and income taxes payable	(5,226)	(13,948)	50,203
Retirement obligations and other	(1,430)	(15,690)	3,636
Net deferred taxes	(136,936)	(91,200)	(60,497)
Net cash flows provided (used) by operating activities	(40,010)	250,119	310,537
Cash flows — Investing activities:			
Capital expenditures	(76,287)	(54,936)	(57,405)
Proceeds from disposal of assets	4,422	2,663	15,705
Proceeds from termination of cross-currency swap	66,004	—	—
Affiliate investment activity	(225)	(7,204)	—
Net cash flows provided (used) by investing activities	(6,086)	(59,477)	(41,700)
Cash flows — Financing activities:			
Payments on senior notes	—	(1,243,548)	(191,258)
Proceeds from issuance of senior notes	—	498,280	498,280
Payments on long-term debt	(32,500)	(7,500)	—
Proceeds from issuance of long-term debt	—	300,000	—
Payments of deferred loan costs	—	(6,739)	(4,572)
Proceeds from short-term financing	45,000	—	—
Payments on short-term financing	(45,000)	—	—
Proceeds under other financing arrangements	1,733	1,408	2,285
Payments under other financing arrangements	(1,790)	(2,086)	(5,088)
Payments related to tax withholding for stock-based compensation	(4,683)	(5,984)	(4,607)
Repurchases of common shares	—	(17,531)	(32,112)
Payments of dividends	(104,549)	(104,604)	(104,159)
Other	(8,223)	(11,403)	(11,182)
Net cash flows provided (used) by financing activities	(150,012)	(599,707)	147,587
Effect of exchange rate changes on cash	(27,373)	(27,757)	7,870
Net change in cash and cash equivalents	(223,481)	(436,822)	424,294
Cash and cash equivalents at beginning of year	658,452	1,095,274	670,980
Cash and cash equivalents at end of year	<u>\$ 434,971</u>	<u>\$ 658,452</u>	<u>\$1,095,274</u>
Income taxes paid (net of refunds)	\$ 60,085	\$ 65,621	\$ 75,342
Interest paid	41,629	72,247	57,041

See accompanying notes to consolidated financial statements.

FLOWSERVE CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF DECEMBER 31, 2022 AND 2021 AND FOR THE
THREE YEARS ENDED DECEMBER 31, 2022

1. SIGNIFICANT ACCOUNTING POLICIES AND ACCOUNTING DEVELOPMENTS

We are principally engaged in the worldwide design, manufacture, distribution and service of industrial flow management equipment. We provide long lead time, custom and other highly-engineered pumps; standardized, general-purpose pumps; mechanical seals; engineered and industrial valves; related automation products; and services and solutions primarily for oil and gas, chemical, power generation, water management and other general industries requiring flow management products and services. Equipment manufactured and serviced by us is predominantly used in industries that deal with difficult-to-handle and corrosive fluids, as well as environments with extreme temperatures, pressure, horsepower and speed. Our business is affected by economic conditions in the United States (“U.S.”) and other countries where our products are sold and serviced, by the cyclical nature and competitive environment of our industries served, by the relationship of the U.S. dollar to other currencies and by the demand for and pricing of our customers’ end products.

Coronavirus Pandemic (“COVID-19”) — Over the past year, we continued to respond to the macroeconomics and global economic impacts caused by COVID-19. Many of our suppliers have experienced varying lengths of production and shipping delays related to the effects of COVID-19. These conditions have had an adverse impact on the speed at which we can manufacture and ship our products to customers, and have also led to an increase in logistics, transportation and freight costs. As a result of the macroeconomic impacts, we have also experienced labor constraints and inflationary pressures. The Company’s condensed consolidated financial statements presented reflect management’s estimates and assumptions regarding the effects of COVID-19 as of the date of the condensed consolidated financial statements.

Russia and Ukraine Conflict - In response to the ongoing military conflict in Ukraine, several countries, including the United States, have imposed economic sanctions and export controls on certain industry sectors and parties in Russia. As a result of this conflict, including the aforementioned sanctions and overall instability in the region, in February 2022 we stopped accepting new orders in Russia and temporarily suspended fulfillment of existing orders. In March 2022, we made the decision to permanently cease all Company operations in Russia. We have commenced the necessary actions to cease operations of our Russian subsidiary, including taking steps to cancel existing contracts with customers, terminate our approximately 50 Russia-based employees and terminate other related contractual commitments. As a result of the conflict and the resulting macroeconomic impacts we have also experienced supply shortages and inflationary pressures.

In 2021, our Russian subsidiary had approximately \$14 million of sales with an additional \$36 million of sales from certain of our other foreign subsidiaries into the Russian market. As of March 31, 2022, the net assets held on our Russian subsidiary’s balance sheet were \$2.7 million, including \$7.1 million of cash, \$3.6 million of accounts receivables, a \$9.3 million net intercompany payable position and other immaterial amounts. In addition, certain of our other foreign subsidiaries had open contracts with Russian customers that were subsequently cancelled for which revenue had been previously recognized over time utilizing the percentage of completion (“POC”) method. As a result of the above, in the first quarter of 2022 we recorded a \$20.2 million pre-tax charge (\$21.0 million after-tax) to reserve the asset positions of our Russian subsidiary (excluding cash) as of March 31, 2022, to record contra-revenue for previously recognized revenue and estimated cancellation fees on open contracts that were previously accounted for under POC and subsequently canceled, to establish a reserve for the estimated cost to exit the operations of our Russian subsidiary and to record a reserve for our estimated financial exposure on contracts that have or are anticipated to be cancelled.

We reevaluated our financial exposure as of December 31, 2022 and recorded an incremental \$13.6 million pre-tax charge (\$9.8 million after-tax) in the fourth quarter of 2022 for additional contract cancellation fees and to reserve our residual financial exposure due to increased Russia sanctions imposed during the latter part of 2022 and our decision to cancel backlog as a result of the additional sanctions.

The following table presents the above impacts of the Russia pre-tax charge:

(Amounts in thousands)	Year Ended December 31, 2022		
	Flowserve Pump Division	Flow Control Division	Consolidated Total
Sales	\$ (9,330)	\$ —	\$ (9,330)
Cost of sales (“COS”)	<u>7,442</u>	<u>1,418</u>	<u>8,860</u>
Gross loss	(16,772)	(1,418)	(18,190)
Selling, general and administrative expense (“SG&A”)	<u>13,977</u>	<u>1,720</u>	<u>15,697</u>
Operating loss	<u><u>\$(30,749)</u></u>	<u><u>\$(3,138)</u></u>	<u><u>\$(33,887)</u></u>

We continue to monitor the situation involving Russia and Ukraine and its impact on the rest of our global business. This includes the macroeconomic impact, including with respect to global supply chain issues and inflationary pressures. To date, these impacts have not been material to our business and we do not currently expect that any incremental impact in future quarters, including any financial impacts caused by our cancellation of customer contracts and ceasing of operations in Russia, will be material to the Company.

Acquisition — On February 9, 2023 the Company entered into a definitive agreement under which it will acquire all of the outstanding equity of Velan Inc., a manufacturer of highly engineered industrial valves, in an all cash transaction valued at approximately \$245 million. The transaction is subject to customary closing conditions, including applicable regulatory approvals and target shareholder approval, and is expected to close by the end of the second quarter of 2023.

Principles of Consolidation — The consolidated financial statements include the accounts of our company and our wholly and majority-owned subsidiaries. In addition, we consolidate any variable interest entities for which we are deemed to be the primary beneficiary. Noncontrolling interests of non-affiliated parties have been recognized for all majority-owned consolidated subsidiaries. Intercompany profits/losses, transactions and balances among consolidated entities have been eliminated from our consolidated financial statements.

In the ordinary course of our operations worldwide, we have entered into joint ventures and interests (collectively referred to as “affiliates”) to provide greater flexibility in delivering our products and services, gain access to markets and geographical locations and reduce exposure and diversify risk. Investments in affiliate companies with a noncontrolling ownership interests between 20% and 50%, are unconsolidated and are accounted for using the equity method, which approximates our equity interest in their underlying equivalent net book value under accounting principles generally accepted in the U.S. (“U.S. GAAP”). All equity method investments are reviewed for impairment whenever events and conditions indicate that a decrease in the value of an investment has occurred that is other than temporary. If impaired, an impairment loss representing the difference between our carrying value and fair value is recorded and the investment is written down to a new carrying value. Investment in affiliate companies where we own less than 20% are accounted for by the cost method, whereby income is only recognized in the event of dividend receipt. Investments accounted for by the cost method are tested for impairment if an impairment indicator is present.

Reclassifications — Certain reclassifications have been made to prior year financial information to conform to the current year presentation.

Use of Estimates — The process of preparing financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect reported amounts of certain assets, liabilities, revenues and expenses. We believe our estimates and assumptions are reasonable; however, actual results may differ materially from such estimates. The most significant estimates and assumptions are used in determining:

- Timing and amount of revenue recognition;
- Deferred taxes, tax valuation allowances and tax reserves;
- Reserves for contingent loss;
- Pension and postretirement benefits; and
- Valuation of goodwill, indefinite-lived intangible assets and other long-lived assets.

Revenue Recognition — The majority of our revenues relate to customer orders that typically contain a single commitment of goods or services which have lead times under a year. Longer lead time, more complex contracts with our customers typically have multiple commitments of goods and services, including any combination of designing, developing, manufacturing, modifying, installing and commissioning of flow management equipment and providing services and parts related to the performance of such products. We recognize revenue when (or as) we satisfy a performance obligation by transferring control to a customer. Transfer of control is evaluated based on the customer's ability to direct the use of and obtain substantially all of the benefits of a performance obligation. Revenue is recognized either over time or at a point in time, depending on the specific facts and circumstances for each contract, including the terms and conditions of the contract as agreed with the customer and the nature of the products or services to be provided. Service-related revenues do not typically represent a significant portion contracts with our customers and do not meet the thresholds requiring separate disclosure.

Our primary method for recognizing revenue over time is the percentage of completion ("POC") method, whereby progress towards completion is measured by applying an input measure based on costs incurred to date relative to total estimated costs at completion. If control of the products and/or services does not transfer over time, then control transfers at a point in time. We determine the point in time that control transfers to a customer based on the evaluation of specific indicators, such as title transfer, risk of loss transfer, customer acceptance and physical possession. For a detailed discussion related to revenue recognition refer to Note 2.

Cash and Cash Equivalents — We place temporary cash investments with financial institutions and, by policy, invest in those institutions and instruments that have minimal credit risk and market risk. These investments, with an original maturity of three months or less when purchased, are classified as cash equivalents. They are highly liquid and principal values are not subject to significant risk of change due to interest rate fluctuations.

Accounts Receivable, Allowance for Expected Credit Losses and Credit Risk — Trade accounts receivables are recorded at the invoiced amount and do not bear interest. We establish an allowance for expected credit losses on an aging schedule and according to historical losses as determined from our billings and collections history. Additionally, we consider factors that are specific to our customers' credit risk such as financial difficulties, liquidity issues, insolvency, and country and political risk. We also consider both the current and forecasted direction of macroeconomic conditions at the reporting date in estimating expected credit losses. Receivables are written off against the allowance in the period when the receivable is deemed to be uncollectible and further collection efforts have ceased. Subsequent recoveries of amounts previously written off are reflected as a reduction to credit impairment losses in the income statement.

Credit risks are mitigated by the diversity of our customer base across many different geographic regions and industries and by performing creditworthiness analyses on our customers. Additionally, we mitigate credit risk through letters of credit and advance payments received from our customers. We do not believe that we have any other significant concentrations of credit risk.

Inventories and Related Reserves — Inventories are stated at the lower of cost and net realizable value. Cost is determined by the first-in, first-out method. Reserves for excess and obsolete inventories are based upon our assessment of market conditions for our products determined by historical usage and estimated future demand. Due to the long life cycles of our products, we carry spare parts inventories that have historically low usage rates and provide reserves for such inventory based on demonstrated usage and aging criteria.

Income Taxes, Deferred Taxes, Tax Valuation Allowances and Tax Reserves — We account for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are calculated using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date. We record valuation allowances to reduce the carrying value of deferred tax assets to amounts that we expect are more likely than not to be realized. We assess existing deferred tax assets, net operating losses and tax credits by jurisdiction and expectations of our ability to utilize these tax attributes through a review of past, current and estimated future taxable income and establishment of tax planning strategies.

We provide deferred taxes for the temporary differences associated with our investment in foreign subsidiaries that have a financial reporting basis that exceeds tax basis, unless we can assert permanent reinvestment in foreign jurisdictions. Financial reporting basis and tax basis differences in investments in foreign subsidiaries consist of both unremitted earnings and losses, as well as foreign currency translation adjustments.

The amount of income taxes we pay is subject to ongoing audits by federal, state, and foreign tax authorities, which often result in proposed assessments. We establish reserves for open tax years for uncertain tax positions that may be subject to challenge by various tax authorities. The consolidated tax provision and related accruals include the impact of such reasonably estimable losses and related interest and penalties as deemed appropriate.

We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities. The determination is based on the technical merits of the position and presumes that each uncertain tax position will be examined by the relevant taxing authority that has full knowledge of all relevant information. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement.

Legal and Environmental Contingencies — Legal and environmental reserves are recorded based upon a case-by-case analysis of the relevant facts and circumstances and an assessment of potential legal obligations and costs. Amounts relating to legal and environmental liabilities are recorded when it is probable that a loss has been incurred and such loss is reasonably estimable. Assessments of legal and environmental costs are based on information obtained from our independent and in-house experts and our loss experience in similar situations. Estimates are updated as applicable when new information regarding the facts and circumstances of each matter becomes available. Legal fees associated with legal and environmental liabilities are expensed as incurred.

We are a defendant in a number of lawsuits that seek to recover damages for personal injury allegedly resulting from exposure to asbestos-containing products formerly manufactured and/or distributed by heritage companies of the Company. We have estimated that the liability for pending and future claims not yet asserted, and which are probable and estimable, could be experienced through 2052, which represents the expected end of our asbestos liability exposure with no further ongoing claims expected beyond that date. This estimate is based on the Company's historical claim experience and estimates of the number and resolution cost of potential future claims that may be filed based on anticipated levels of unique plaintiff asbestos-related claims in the U.S. tort system against all defendants, the diminished volatility and consistency of observable claims data, the period of time that has elapsed since we stopped manufacturing products that contained encapsulated asbestos and an expected downward trend in claims due to the average age of our claimants. This estimate is not discounted to present value. In light of the uncertainties and variables inherent in the long-term projection of the total asbestos liability, as part of our ongoing review of asbestos claims, each year we will reassess the projected liability of unasserted asbestos claims to be filed through 2052, and we will continually reassess the time horizon over which a reasonable estimate of unasserted claims can be projected.

We assess the sufficiency of the estimated liability for pending and future claims on an ongoing basis by evaluating actual experience regarding claims filed, settled and dismissed, and amounts paid in settlements. In addition to claims and settlement experience, we consider additional quantitative and qualitative factors such as changes in legislation, the legal environment and the Company's defense strategy. In connection with our ongoing review of asbestos-related claims, we have also reviewed the amount of potential insurance coverage for such claims, taking into account the remaining limits of such coverage, the number and amount of claims on our insurance from co-insured parties, ongoing litigation against the Company's insurers, potential remaining recoveries from insolvent insurers, the impact of previous insurance settlements and coverage available from solvent insurers not party to the coverage litigation. Continuously, we review ongoing insurance coverage available for a significant amount of the potential future asbestos-related claims and in the future could secure additional insurance coverage as deemed necessary.

The study from the Company's actuary, based on data as of August 31, 2022, provided for a range of possible future liability from approximately \$81.8 million to \$127.3 million. The Company does not believe any amount within the range of potential outcomes represents a better estimate than another given the many factors and assumptions inherent in the projections and therefore the Company has recorded the liability at the actuarial central estimate of approximately \$98.7 million as of December 31, 2022. In addition, the Company has recorded estimated insurance receivables of approximately \$42.5 million as of December 31, 2022. The amounts recorded for the

asbestos-related liability and the related insurance receivables are based on facts known at the time and a number of assumptions. However, projecting future events, such as the number of new claims to be filed each year, the length of time it takes to defend, resolve, or otherwise dispose of such claims, coverage issues among insurers and the continuing solvency of various insurance companies, as well as the numerous uncertainties surrounding asbestos litigation in the United States, could cause the actual liability and insurance recoveries for us to be higher or lower than those projected or recorded. Additionally, we have claims pending against certain insurers that, if resolved more favorably than reflected in the recorded receivables, would result in discrete gains in the applicable year. Changes recorded in the estimated liability and estimated insurance recovery based on projections of asbestos litigation and corresponding insurance coverage, result in the recognition of additional expense or income. For a discussion pertaining to the activity related to asbestos claims refer to Note 15.

Warranty Accruals — Warranty obligations are based upon product failure rates, materials usage, service delivery costs, an analysis of all identified or expected claims and an estimate of the cost to resolve such claims. The estimates of expected claims are generally a factor of historical claims and known product issues. Warranty obligations based on these factors are adjusted based on historical sales trends for the preceding 24 months.

Insurance Accruals — Insurance accruals are recorded for wholly or partially self-insured risks such as medical benefits and workers' compensation and are based upon an analysis of our claim loss history, insurance deductibles, policy limits and other relevant factors that are updated annually and are included in accrued liabilities in our consolidated balance sheets. The estimates are based upon information received from actuaries, insurance company adjusters, independent claims administrators or other independent sources. Receivables from insurance carriers are estimated using our historical experience with insurance recovery rates and estimates of future recoveries, which include estimates of coverage and financial viability of our insurance carriers. Estimated receivables are included in accounts receivable, net and other assets, net, as applicable, in our consolidated balance sheets.

Pension and Postretirement Obligations — Determination of pension and postretirement benefits obligations is based on estimates made by management in consultation with independent actuaries and investment advisors. Inherent in these valuations are assumptions including discount rates, expected rates of return on plan assets, retirement rates, mortality rates and rates of compensation increase and other factors all of which are reviewed annually and updated if necessary. Current market conditions, including changes in rates of return, interest rates and medical inflation rates, are considered in selecting these assumptions.

Actuarial gains and losses and prior service costs are recognized in accumulated other comprehensive loss as they arise and we amortize these costs into net pension expense over the remaining expected service period.

Property, Plant and Equipment and Depreciation — Property, plant and equipment are stated at historical cost, less accumulated depreciation. If asset retirement obligations exist, they are capitalized as part of the carrying amount of the asset and depreciated over the remaining useful life of the asset. The useful lives of leasehold improvements are the lesser of the remaining lease term or the useful life of the improvement. When assets are retired or otherwise disposed of, their costs and related accumulated depreciation are removed from the accounts and any resulting gains or losses are included in income from operations for the period. Depreciation is computed by the straight-line method based on the estimated useful lives of the depreciable assets, or in the case of assets under finance leases, over the related lease term. Generally, the estimated useful lives of the assets are:

Buildings and improvements	10 to 40 years
Machinery, equipment and tooling	3 to 14 years
Software, furniture and fixtures and other	3 to 7 years

Costs related to routine repairs and maintenance are expensed as incurred.

Leases — We have operating and finance leases for certain manufacturing facilities, offices, service and quick response centers, machinery, equipment and automobiles. Our leases have remaining lease terms of up to 30 years. The terms and conditions of our leases may include options to extend or terminate the lease which are considered and included in the lease term when these options are reasonably certain of exercise.

We determine if a contract is (or contains) a lease at inception by evaluating whether the contract conveys the right to control the use of an identified asset. For all classes of leased assets, we account for any non-lease

components in the contract together with the related lease component in the same unit of account. For lease contracts containing more than one lease component, we allocate the contract consideration to each of the lease components on the basis of relative standalone prices in order to identify the lease payments for each lease component.

Right-of-use (“ROU”) assets and lease liabilities are recognized in our consolidated balance sheets at the commencement date based on the present value of remaining lease payments over the lease term. Additionally, ROU assets include any lease payments made at or before the commencement date, as well as any initial direct costs incurred, and are reduced by any lease incentives received. In determining the discount rate used to measure the right-of-use asset and lease liability, we utilize the Company’s incremental borrowing rate and consider the term of the lease, as well as the geographic location of the leased asset. Our incremental borrowing country-specific rate is determined based on information available at the commencement date of the lease.

Operating leases are included in operating lease right-of-use assets, net and operating lease liabilities in our consolidated balance sheets. Finance leases are included in property, plant and equipment, debt due within one year and long-term debt due after one year in our consolidated balance sheets.

For all classes of leased assets, we have applied an accounting policy election to exclude short-term leases from recognition in our consolidated balance sheets. A short-term lease has a lease term of 12 months or less at the commencement date and does not include a purchase option that is reasonably certain of exercise. We recognize short-term lease expense in our consolidated income statements on a straight-line basis over the lease term. Our short-term lease expense and short-term lease commitments as of December 31, 2022 are immaterial.

We have certain lease contracts with terms and conditions that provide for variability in the payment amount based on changes in facts or circumstances occurring after the commencement date. These variable lease payments are recognized in our consolidated income statements as the obligation is incurred.

We have certain lease contracts where we provide a guarantee to the lessor that the value of an underlying asset will be at least a specified amount at the end of the lease. Estimated amounts expected to be paid for residual value guarantees are included in lease liabilities and ROU assets.

Internally Developed Software — We capitalize certain costs associated with the development of internal-use software. Generally, these costs are related to significant software development projects and are amortized over their estimated useful life, typically three to seven years, upon implementation of the software. We also capitalize certain costs incurred during the application development stage of implementation of cloud computing arrangements. Amounts capitalized for cloud arrangements are amortized on a straight-line basis over a period of three to seven years and are reported as a component of other long-term assets.

Intangible Assets — Intangible assets, excluding trademarks (which are considered to have an indefinite life), consist primarily of engineering drawings, patents, existing customer relationships, software, distribution networks and other items that are being amortized over their estimated useful lives generally ranging from four to 40 years. These assets are reviewed for impairment whenever events and circumstances indicate impairment may have occurred.

Valuation of Goodwill, Indefinite-Lived Intangible Assets and Other Long-Lived Assets — The value of goodwill and indefinite-lived intangible assets is tested for impairment as of December 31 each year or whenever events or circumstances indicate such assets may be impaired. The identification of our reporting units begins at the operating segment level and considered whether components one level below the operating segment levels should be identified as reporting units for purpose of testing goodwill for impairment based on certain conditions. These conditions included, among other factors, (i) the extent to which a component represents a business and (ii) the aggregation of economically similar components within the operating segments and resulted in three reporting units. Other factors that were considered in determining whether the aggregation of components was appropriate included the similarity of the nature of the products and services, the nature of the production processes, the methods of distribution and the types of industries served.

Accounting Standards Codification (“ASC”) 350 allows an optional qualitative assessment, prior to a quantitative assessment test, to determine whether it is more likely than not that the fair value of a reporting unit exceeds its carrying amount. We generally do not attempt a qualitative assessment and proceed directly to the quantitative test. If the carrying value of a reporting unit exceeds its fair value, the goodwill of that reporting unit is impaired and an impairment loss is recorded equal to the excess of the carrying value over its fair value. We estimate the fair value of our reporting units based on an income approach, whereby we calculate the fair value of

a reporting unit based on the present value of estimated future cash flows. A discounted cash flow analysis requires us to make various judgmental assumptions about future sales, operating margins, growth rates and discount rates, which are based on our budgets, business plans, economic projections, anticipated future cash flows and market participants.

We did not record an impairment of goodwill in 2022, 2021 or 2020. The pump reporting unit is a component of FPD reporting segment and is primarily focused on highly engineered custom and pre-configured pump products and systems. As of December 31, 2022 our pump reporting unit had approximately \$277 million of goodwill and an estimated fair value that exceeded its carrying value by approximately 65% as compared to estimated fair value that exceeded its carrying value by approximately 82% and 46% as of December 31, 2021 and 2020, respectively. The key factors considered in determining the estimated fair value of our reporting units included the annual operating plan and forecasted operating results, successful execution of our current continuous improvement and identified strategic initiatives, a constant cost of capital, continued stabilization and mid to long-term improvement of the macro-economic conditions of the oil and gas market, and a relatively stable global gross domestic product. Although we have concluded that there is no impairment on the goodwill associated with our pump reporting unit as of December 31, 2022, we will continue to closely monitor its performance and related market conditions for future indicators of potential impairment and reassess accordingly.

We also considered our market capitalization in our evaluation of the fair value of our goodwill. Our market capitalization as of December 31, 2022 was comparable with 2021 and did not indicate a potential impairment of our goodwill as of December 31, 2022.

Impairment losses for indefinite-lived intangible assets are recognized whenever the estimated fair value is less than the carrying value. Fair values are calculated for trademarks using a “relief from royalty” method, which estimates the fair value of a trademark by determining the present value of estimated royalty payments that are avoided as a result of owning the trademark. This method includes judgmental assumptions about sales growth and discount rates that have a significant impact on the fair value and are substantially consistent with the assumptions used to determine the fair value of our reporting unit discussed above. We did not record a material impairment of our trademarks in 2022, 2021 or 2020.

The recoverable value of other long-lived assets, including property, plant and equipment and finite-lived intangible assets, is reviewed when indicators of potential impairments are present. The recoverable value is based upon an assessment of the estimated future cash flows related to those assets, utilizing assumptions similar to those for goodwill. Additional considerations related to our long-lived assets include expected maintenance and improvements, changes in expected uses and ongoing operating performance and utilization.

Deferred Loan Costs — Deferred loan costs, consisting of fees and other expenses associated with debt financing, are amortized over the term of the associated debt using the effective interest method. Additional amortization is recorded in periods where optional prepayments on debt are made.

Fair Values of Financial Instruments — Our financial instruments are presented at fair value in our consolidated balance sheets, with the exception of our long-term debt. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or inputs are not available, valuation models may be applied.

Assets and liabilities recorded at fair value in our consolidated balance sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair values. Hierarchical levels, as defined by ASC 820, “Fair Value Measurements and Disclosures,” are directly related to the amount of subjectivity associated with the inputs to fair valuation of these assets and liabilities. An asset or a liability’s categorization within the fair value hierarchy is based on the lowest level of significant input to its valuation. Hierarchical levels are as follows:

Level I — Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Level II — Inputs (other than quoted prices included in Level I) are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument’s anticipated life.

Level III — Inputs reflect management’s best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

Recurring fair value measurements are limited to investments in derivative instruments. The fair value measurements of our derivative instruments are determined using models that maximize the use of the observable market inputs including interest rate curves and both forward and spot prices for currencies, and are classified as Level II under the fair value hierarchy. The fair values of our derivative instruments are included in Note 8.

Derivatives and Hedging Activities — We have a foreign currency derivatives and hedging policy outlining the conditions under which we can enter into financial derivative transactions. We do not use derivative instruments for trading or speculative purposes. All derivative instruments are recognized on the balance sheet at their fair values.

We employ a foreign currency economic hedging strategy to mitigate certain financial risks resulting from foreign currency exchange rate movements that impact foreign currency denominated receivables and payables, firm committed transactions and forecasted sales and purchases. The changes in the fair values are recognized immediately in other income (expense), net in the consolidated statements of income. See Note 8 for further discussion of forward exchange contracts.

We are exposed to risk from credit-related losses resulting from nonperformance by counterparties to our financial instruments. We perform credit evaluations of our counterparties under forward exchange contracts and expect all counterparties to meet their obligations. If necessary, we would adjust the values of our derivative contracts for our or our counterparties’ credit risks.

Foreign Currency Translation — Assets and liabilities of our foreign subsidiaries are translated to U.S. dollars at exchange rates prevailing at the balance sheet date, while income and expenses are translated at average rates for each month. Translation gains and losses are reported as a component of accumulated other comprehensive loss. Transactional currency gains and losses arising from transactions in currencies other than our sites’ functional currencies are included in our consolidated results of operations.

Transaction and translation gains and losses arising from intercompany balances are reported as a component of accumulated other comprehensive loss when the underlying transaction stems from a long-term equity investment or from debt designated as not due in the foreseeable future. Otherwise, we recognize transaction gains and losses arising from intercompany transactions as a component of income. Where intercompany balances are not long-term investment related or not designated as due beyond the foreseeable future, we may mitigate risk associated with foreign currency fluctuations by entering into forward exchange contracts.

Stock-Based Compensation — Stock-based compensation is measured at the grant-date fair value. The exercise price of stock option awards and the value of restricted shares, restricted share units and performance-based unit awards (collectively referred to as “Restricted Shares”) are set at the closing price of our common stock on the New York Stock Exchange on the date of grant, which is the date such grants are authorized by our Board of Directors. Restricted share units and performance-based units refer to restricted awards that do not have voting rights and accrue dividends, and are forfeited if vesting does not occur.

The intrinsic value of Restricted Shares, which is typically the product of share price at the date of grant and the number of Restricted Shares granted, is amortized on a straight-line basis to compensation expense over the periods in which the restrictions lapse based on the expected number of shares that will vest. We account for forfeitures as they occur resulting in the reversal of cumulative expense previously recognized.

Earnings Per Share — We use the two-class method of calculating Earnings Per Share (“EPS”), which determines earnings per share for each class of common stock and participating security as if all earnings for the period had been distributed. Unvested restricted share awards that earn non-forfeitable dividend rights qualify as participating securities and, accordingly, are included in the basic computation as such. Our unvested Restricted Shares participate on an equal basis with common shares; therefore, there is no difference in undistributed earnings allocated to each participating security.

Research and Development Expense — Research and development costs are charged to expense when incurred. Aggregate research and development costs included in SG&A were \$39.9 million, \$34.2 million and \$36.1 million in 2022, 2021 and 2020, respectively. Costs incurred for research and development primarily include salaries and benefits and consumable supplies, as well as rent, professional fees, utilities and the depreciation of property and equipment used in research and development activities.

Shipping and Handling Costs — Amounts billed to customers for reimbursement of shipping and handling costs are recorded as revenue when the related revenue is recognized and shipping and handling costs are recognized in Cost of sales. All other shipping and handling costs are recognized in Cost of sales in the period in which they are incurred.

Accounting Developments

Pronouncements Implemented

In November 2021, the FASB issued ASU No. 2021-10, “Government Assistance (Topic 832).” The amendments in this ASU do not change GAAP and, therefore, are not expected to result in a significant change in practice. Rather, the amendments aim to provide increased transparency by requiring business entities to disclose information about certain types of government assistance they receive in the notes to the financial statements. The amendments are effective for annual periods beginning after December 15, 2021 and can be applied either prospectively or retrospectively. The adoption of this ASU did not have a material impact on our consolidated balance sheets, consolidated statements of income or consolidated statements of cash flows.

Pronouncements Not Yet Implemented

In October 2021, the FASB issued ASU No. 2021-08, “Accounting for Contract Assets and Contract Liabilities from Contracts with Customers.” The amendments in this Update improve comparability for both the recognition and measurement of acquired revenue contracts with customers at the date of and after a business combination. The amendments are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years and should be applied prospectively to business combinations occurring on or after the effective date of the amendments. We do not expect the impact of this ASU to be material.

In September 2022, the FASB issued ASU No. 2022-04, “Liabilities—Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations.” The amendments require a buyer that uses supplier finance programs to make annual disclosures about the program’s key terms, the balance sheet presentation of related amounts, the confirmed amount outstanding at the end of the period, and associated roll-forward information. Only the amount outstanding at the end of the period must be disclosed in interim periods. The amendments are effective for all entities for fiscal years beginning after December 15, 2022 on a retrospective basis, including interim periods within those fiscal years, except for the requirement to disclose roll-forward information, which is effective prospectively for fiscal years beginning after December 15, 2023. We are evaluating the impact of this ASU on our disclosures.

2. REVENUE RECOGNITION

The majority of our revenues relate to customer orders that typically contain a single commitment of goods or services which have lead times under a year. Longer lead time, more complex contracts with our customers typically have multiple commitments of goods and services, including any combination of designing, developing, manufacturing, modifying, installing and commissioning of flow management equipment and providing services and parts related to the performance of such products. Control transfers over time when the customer is able to direct the use of and obtain substantially all of the benefits of our work as we perform. Service-related revenues do not typically represent a significant portion contracts with our customers and do not meet the thresholds requiring separate disclosure.

Our primary method for recognizing revenue over time is the percentage of completion (“POC”) method. Revenue from products and services transferred to customers over time accounted for approximately 13%, 15% and 22% of total revenue for the years ended December 31, 2022, 2021 and 2020, respectively. If control does not transfer over time, then control transfers at a point in time. We recognize revenue at a point in time at the level of each performance obligation based on the evaluation of certain indicators of control transfer, such as title transfer, risk of loss transfer, customer acceptance and physical possession. Revenue from products and services transferred to customers at a point in time accounted for approximately 87%, 85% and 78% of total revenue for the years ended December 31, 2022, 2021 and 2020, respectively.

Disaggregated Revenue

We conduct our operations through two business segments based on the type of product and how we manage the business:

- FPD designs and manufactures custom, highly-engineered pumps, pre-configured industrial pumps, pump systems, mechanical seals, auxiliary systems and replacement parts and related services; and
- FCD designs, manufactures and distributes a broad portfolio of engineered-to-order and configured-to-order isolation valves, control valves, valve automation products and related equipment.

Our revenue sources are derived from our original equipment manufacturing and our aftermarket sales and services. Our original equipment revenues are generally related to originally designed, manufactured, distributed and installed equipment that can range from pre-configured, short-cycle products to more customized, highly-engineered equipment (“Original Equipment”). Our aftermarket sales and services are derived from sales of replacement equipment, as well as maintenance, advanced diagnostic, repair and retrofitting services (“Aftermarket”). Each of our two business segments generate Original Equipment and Aftermarket revenues.

The following table presents our customer revenues disaggregated by revenue source:

(Amounts in thousands)	December 31, 2022		
	FPD	FCD	Total
Original Equipment	\$ 881,061	\$ 825,508	\$1,706,569
Aftermarket	1,636,939	271,612	1,908,551
	<u>\$2,518,000</u>	<u>\$1,097,120</u>	<u>\$3,615,120</u>

(Amounts in thousands)	December 31, 2021		
	FPD	FCD	Total
Original Equipment	\$ 899,519	\$ 804,744	\$1,704,263
Aftermarket	1,568,579	268,218	1,836,797
	<u>\$2,468,098</u>	<u>\$1,072,962</u>	<u>\$3,541,060</u>

(Amounts in thousands)	December 31, 2020		
	FPD	FCD	Total
Original Equipment	\$1,091,906	\$ 808,585	\$1,900,491
Aftermarket	1,581,799	245,844	1,827,643
	<u>\$2,673,705</u>	<u>\$1,054,429</u>	<u>\$3,728,134</u>

Our customer sales are diversified geographically. The following table presents our revenues disaggregated by geography, based on the shipping addresses of our customers:

(Amounts in thousands)	December 31, 2022		
	FPD	FCD	Total
North America ⁽¹⁾	\$1,060,393	\$ 472,467	\$1,532,860
Latin America ⁽¹⁾	222,878	23,575	246,453
Middle East and Africa	372,148	101,017	473,165
Asia Pacific	389,366	305,193	694,559
Europe	473,215	194,868	668,083
	<u>\$2,518,000</u>	<u>\$1,097,120</u>	<u>\$3,615,120</u>

(Amounts in thousands)	December 31, 2021		
	FPD	FCD	Total
North America ⁽¹⁾	\$ 955,283	\$ 389,766	\$1,345,049
Latin America ⁽¹⁾	211,150	30,554	241,704
Middle East and Africa	311,161	107,533	418,694
Asia Pacific	482,596	333,513	816,109
Europe	507,908	211,596	719,504
	<u>\$2,468,098</u>	<u>\$1,072,962</u>	<u>\$3,541,060</u>

	December 31, 2020		
	FPD	FCD	Total
(Amounts in thousands)			
North America ⁽¹⁾	\$1,039,285	\$ 429,572	\$1,468,857
Latin America ⁽¹⁾	191,517	26,393	217,910
Middle East and Africa	359,403	110,539	469,942
Asia Pacific	537,792	270,238	808,030
Europe	545,708	217,687	763,395
	<u>\$2,673,705</u>	<u>\$1,054,429</u>	<u>\$3,728,134</u>

(1) North America represents United States and Canada; Latin America includes Mexico.

On December 31, 2022, the aggregate transaction price allocated to unsatisfied (or partially unsatisfied) performance obligations related to contracts having an original expected duration in excess of one year was approximately \$652 million. We estimate recognition of approximately \$451 million of this amount as revenue in 2023 and an additional \$201 million in 2024 and thereafter.

Contract Balances

We receive payment from customers based on a contractual billing schedule and specific performance requirements as established in our contracts. We record billings as accounts receivable when an unconditional right to consideration exists. A contract asset represents revenue recognized in advance of our right to bill the customer under the terms of a contract. A contract liability represents our contractual billings in advance of revenue recognized for a contract.

The following table presents opening and closing balances of contract assets and contract liabilities, current and long-term, for the years ended December 31, 2022 and 2021:

(Amounts in thousands)	Contract Assets, net (Current)	Long-term Contract Assets, net ⁽¹⁾	Contract Liabilities (Current)	Long-term Contract Liabilities ⁽²⁾
Balance — January 1, 2021	\$ 277,734	\$ 1,139	\$ 194,227	\$ 822
Revenue recognized that was included in contract liabilities at the beginning of the period	—	—	(153,221)	—
Increase due to revenue recognized in the period in excess of billings	784,934	—	—	—
Increase due to billings arising during the period in excess of revenue recognized	—	—	165,990	—
Amounts transferred from contract assets to receivables	(848,031)	(2,329)	—	—
Currency effects and other, net	<u>(19,039)</u>	<u>1,616</u>	<u>(4,031)</u>	<u>(358)</u>
Balance — December 31, 2021	<u>\$ 195,598</u>	<u>\$ 426</u>	<u>\$ 202,965</u>	<u>\$ 464</u>
Revenue recognized that was included in contract liabilities at the beginning of the period	—	—	(143,736)	—
Increase due to revenue recognized in the period in excess of billings	660,039	—	—	—
Increase due to billings arising during the period in excess of revenue recognized	—	—	203,711	—
Amounts transferred from contract assets to receivables	(603,422)	(1,338)	—	—
Currency effects and other, net	<u>(18,758)</u>	<u>1,209</u>	<u>(5,977)</u>	<u>595</u>
Balance — December 31, 2022	<u>\$ 233,457</u>	<u>\$ 297</u>	<u>\$ 256,963</u>	<u>\$1,059</u>

(1) Included in other assets, net.

(2) Included in retirement obligations and other liabilities.

3. ALLOWANCE FOR EXPECTED CREDIT LOSSES

The allowance for credit losses is an estimate of the credit losses expected over the life of our financial assets and instruments. We assess and measure expected credit losses on a collective basis when similar risk characteristics exist, including market, geography, credit risk and remaining duration. Financial assets and instruments that do not share risk characteristics are evaluated on an individual basis. Our estimate of the allowance balance is assessed and quantified using internal and external valuation information relating to past events, current conditions and reasonable and supportable forecasts over the contractual terms of an asset.

Our primary exposure to expected credit losses is through our accounts receivable and contract assets. For these financial assets, we record an allowance for expected credit losses that, when deducted from the gross asset balance, presents the net amount expected to be collected. Primarily, our experience of historical credit losses provides the basis for our estimation of the allowance. We estimate the allowance based on an aging schedule and according to historical losses as determined from our history of billings and collections. Additionally, we adjust the allowance for factors that are specific to our customers' credit risk such as financial difficulties, liquidity issues, insolvency, and country and geopolitical risks. We also consider both the current and forecasted macroeconomic conditions as of the reporting date. As identified and needed, we adjust the allowance and recognize adjustments in the income statement each period. Accounts receivable are written off against the allowance in the period when the receivable is deemed to be uncollectible and further collection efforts have ceased. Subsequent recoveries of previously written off amounts are reflected as a reduction to credit impairment losses in the consolidated statements of income.

Contract assets represent a conditional right to consideration for satisfied performance obligations that become a receivable when the conditions are satisfied. Generally, contract assets are recorded when contractual billing schedules differ from revenue recognition based on timing and are managed through the revenue recognition process. Based on our historical credit loss experience, the current expected credit loss for contract assets is estimated to be approximately 1% of the asset balance.

The following table presents the changes in the allowance for expected credit losses for our accounts receivable and short-term contract assets as of December 31, 2022, 2021 and 2020:

(Amounts in thousands)	Accounts receivable	Short-term contract assets
Beginning balance, January 1, 2022	\$74,336	\$2,393
Charges to cost and expenses, net of recoveries.	12,530	2,785
Write-offs	(3,188)	—
Currency effects and other, net	(616)	641
Ending balance, December 31 , 2022	<u>\$83,062</u>	<u>\$5,819</u>
Beginning balance, January 1, 2021	\$75,176	\$3,205
Charges to cost and expenses, net of recoveries.	3,934	—
Write-offs	(2,015)	—
Currency effects and other, net	(2,759)	(812)
Ending balance, December 31 , 2021	<u>\$74,336</u>	<u>\$2,393</u>
Beginning balance, January 1, 2020	\$53,412	\$ 206
Adoption of ASU 2016-13.	6,970	2,779
Charges to cost and expenses, net of recoveries.	9,326	—
Currency effects and other, net	5,468	220
Ending balance, December 31 , 2020	<u>\$75,176</u>	<u>\$3,205</u>

Our allowance on long-term receivables, included in other assets, net, represent receivables with collection periods longer than 12 months and the balance primarily consists of reserved receivables associated with the national oil company in Venezuela. The following table presents the changes in the allowance for long-term receivables as of December 31, 2022, 2020 and 2020:

(Amounts in thousands)	2022	2021	2020
Beginning balance, January 1,	\$67,696	\$67,842	\$68,555
Adoption of ASU 2016-13	—	—	(679)
Currency effects and other, net	(1,319)	(146)	(34)
Ending balance, December 31,	<u>\$66,377</u>	<u>\$67,696</u>	<u>\$67,842</u>

We also have exposure to credit losses from off-balance sheet exposures, such as financial guarantees and standby letters of credit, where we believe the risk of loss is immaterial to our financial statements as of December 31, 2022.

4. LEASES

We had \$2.0 million and \$15.8 million of legally binding minimum lease payments for operating leases signed but not yet commenced as of December 31, 2022 and 2021. We did not have material subleases, leases that imposed significant restrictions or covenants, material related party leases or sale-leaseback arrangements.

In conjunction with our close process for the third quarter of 2022, the Company identified an accounting error related to certain operating real estate leases that have escalating rent payments which were not correctly recorded on a straight-line basis in the amount of \$6.4 million. Approximately \$5.8 million of the error impacted the Company's consolidated statements of income prior to adoption of ASU No. 2016-02, Leases (Topic 842) in 2019 and the remaining immaterial amount impacted each period subsequent to adoption. To correct the cumulative impact of the error the Company recorded an adjustment of \$6.4 million of incremental operating lease expense in the third quarter of 2022 (\$5.5 million classified as SG&A and \$0.9 million classified as COS), with the offsetting adjustment to reduce operating lease right-of-use assets, net on our condensed consolidated balance sheet for the period ended September 30, 2022. There was no impact to our statements of cash flows as a result of the correction of the error.

Other information related to our leases is as follows:

	December 31,	
	2022	2021
(Amounts in thousands)		
Finance Leases:		
ROU assets recorded under finance leases	\$ 33,427	\$ 28,416
Accumulated depreciation associated with finance leases	(15,851)	(12,227)
Total finance leases ROU assets, net ⁽¹⁾	<u>\$ 17,576</u>	<u>\$ 16,189</u>
Total finance leases liabilities ⁽²⁾	<u>\$ 17,939</u>	<u>\$ 16,477</u>

The costs components of operating and finance leases are as follows:

	December 31,		
	2022	2021	2020
(Amounts in thousands)			
Operating Lease Costs:			
Fixed lease expense ⁽³⁾	\$59,782	\$57,482	\$57,050
Variable lease expense ⁽³⁾	7,412	9,331	7,299
Total operating lease expense	<u>\$67,194</u>	<u>\$66,813</u>	<u>\$64,349</u>
Finance Lease Costs:			
Depreciation of finance lease ROU assets ⁽³⁾	\$ 5,984	\$ 5,374	\$ 5,392
Interest on lease liabilities ⁽⁴⁾	604	617	646
Total finance lease expense	<u>\$ 6,588</u>	<u>\$ 5,991</u>	<u>\$ 6,038</u>

(1) Included in property, plant and equipment, net

(2) Included in debt due within one year and long-term debt due after one year, accordingly

(3) Included in cost of sales and selling, general and administrative expense, accordingly

(4) Included in interest expense

Supplemental cash flows information related to our leases is as follows:

(Amounts in thousands, except lease term and discount rate)	December 31,		
	2022	2021	2020
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases ⁽¹⁾	\$57,712	\$61,240	\$66,478
Financing cash flows from finance leases ⁽²⁾	6,039	5,285	4,704
ROU assets obtained in exchange for lease obligations:			
Operating leases	\$26,581	\$35,542	\$62,425
Finance leases	7,906	4,177	13,124
Weighted average remaining lease term (in years):			
Operating leases	8 years	8 years	9 years
Finance leases	6 years	6 years	7 years
Weighted average discount rate (percent):			
Operating leases	4.0%	3.9%	4.2%
Finance leases	3.9%	3.4%	3.5%

(1) Included in our consolidated statement of cash flows, operating activities, prepaid expenses and other assets, net and retirement obligations and other

(2) Included in our consolidated statement of cash flows, financing activities, payments under other financing arrangements

Future undiscounted lease payments under operating and finance leases as of December 31, 2022, were as follows:

Year ending December 31,	Operating Leases	Finance Leases
	(Amounts in thousands)	
2023	38,724	5,767
2024	33,466	4,288
2025	26,466	3,092
2026	21,565	1,549
2027	18,895	694
Thereafter	81,007	4,955
Total future minimum lease payments	\$220,123	\$20,345
Less: Imputed interest	(32,399)	(2,406)
Total	<u>\$187,724</u>	<u>\$17,939</u>
Other current liabilities	\$ 32,528	\$ —
Operating lease liabilities	155,196	—
Debt due within one year	—	5,545
Long-term debt due after one year	—	12,394
Total	<u>\$187,724</u>	<u>\$17,939</u>

5. GOODWILL AND OTHER INTANGIBLE ASSETS

The changes in the carrying amount of goodwill for the years ended December 31, 2022 and 2021 are as follows:

	FPD	FCD	Total
	(Amounts in thousands)		
Balance as of December 31, 2020	\$805,055	\$419,831	\$1,224,886
Currency translation and other	(17,842)	(10,565)	(28,407)
Balance as of December 31, 2021	\$787,213	\$409,266	\$1,196,479
Currency translation and other	(14,940)	(13,415)	(28,355)
Balance as of December 31, 2022	<u>\$772,273</u>	<u>\$395,851</u>	<u>\$1,168,124</u>

The following table provides information about our intangible assets for the years ended December 31, 2022 and 2021:

		December 31, 2022		December 31, 2021	
	Useful Life (Years)	Ending Gross Amount	Accumulated Amortization	Ending Gross Amount	Accumulated Amortization
(Amounts in thousands, except years)					
Finite-lived intangible assets:					
Engineering drawings ⁽¹⁾	10-22	\$ 88,830	\$ (88,256)	\$ 89,699	\$ (86,275)
Existing customer relationships ⁽²⁾	5-10	79,472	(70,015)	82,420	(67,279)
Patents	9-16	25,639	(25,639)	26,339	(26,339)
Other	4-40	92,798	(49,481)	93,849	(46,436)
		<u>\$286,739</u>	<u>\$(233,391)</u>	<u>\$292,307</u>	<u>\$(226,329)</u>
Indefinite-lived intangible assets ⁽³⁾		\$ 82,640	\$ (1,485)	\$ 88,069	\$ (1,585)

(1) Engineering drawings represent the estimated fair value associated with specific acquired product and component schematics.

(2) Existing customer relationships acquired prior to 2011 had a useful life of five years.

(3) Accumulated amortization for indefinite-lived intangible assets relates to amounts recorded prior to the implementation date of guidance issued in ASC 350.

The following schedule outlines actual amortization expense recognized during 2022 and an estimate of future amortization based upon the finite-lived intangible assets owned at December 31, 2022:

	Amortization Expense
	(Amounts in thousands)
Actual for year ended December 31, 2022	\$11,436
Estimated for year ended December 31, 2023	9,715
Estimated for year ended December 31, 2024	5,616
Estimated for year ended December 31, 2025	2,174
Estimated for year ended December 31, 2026	2,038
Estimated for year ended December 31, 2027	2,038
Thereafter	31,767

Amortization expense for finite-lived intangible assets was \$13.4 million in 2021 and \$13.6 million in 2020.

6. INVENTORIES

Inventories, net consisted of the following:

	December 31,		
	2022	2021	2020
	(Amounts in thousands)		
Raw materials	\$360,039	\$318,348	321,600
Work in process.....	295,678	242,143	210,174
Finished goods	245,494	213,096	221,532
Less: Excess and obsolete reserve	(98,013)	(95,300)	(86,078)
Inventories, net	<u>\$803,198</u>	<u>\$678,287</u>	<u>\$667,228</u>

During 2022, 2021 and 2020, we recognized expenses of \$15.4 million, \$15.6 million and \$14.9 million, respectively, for excess and obsolete inventory. These expenses are included in COS in our consolidated statements of income.

7. STOCK-BASED COMPENSATION PLANS

Effective January 1, 2020, our shareholders approved the Flowserve Corporation 2020 Long-Term Incentive Plan (“2020 Plan”). The 2020 Plan replaces and supersedes the Flowserve Corporation Equity and Incentive Compensation Plan (“2010 Plan”) in its entirety. The 2020 Plan authorizes the issuance of 12,500,000 shares of our common stock in the form of restricted shares, restricted share units and performance-based units (collectively referred to as “Restricted Shares”), incentive stock options, non-statutory stock options, stock appreciation rights and bonus stock, in addition to any shares available for issuance or subject to forfeiture under the expired 2010 Plan. Of the shares of common stock authorized under the 2020 Plan and remaining shares under the 2010 Plan, 9,756,068 were available for issuance as of December 31, 2022. Restricted Shares primarily vest over a three year period. Restricted Shares granted to employees who retire and have achieved at least 55 years of age and 10 years of service continue to vest over the original vesting period (“55/10 Provision”).

Stock Options — Options granted to officers, other employees and directors allow for the purchase of common shares at the market value of our stock on the date the options are granted. Options generally become exercisable after three years. Options generally expire ten years from the date of the grant or within a short period of time following the termination of employment or cessation of services by an option holder. As of December 31, 2022, 114,943 stock options were outstanding and exercisable, with a grant date fair value of \$2.0 million recognized over three years and a weighted average exercise price of \$48.63. As of December 31, 2020, compensation associated with these stock options was fully earned. Using the Black-Scholes option pricing model to estimate the fair value of each option award, as of December 31, 2022 the total fair value of stock options vested was \$2.0 million. No stock options were exercised during the years ended December 31, 2022, 2021 or 2020. No stock options were granted, canceled or vested during years ended December 31, 2022, 2021 or 2020. The weighted average remaining contractual life of options outstanding at December 31, 2022, 2021 and 2020 was 4.3 years, 5.3 years and 6.3 years, respectively.

Restricted Shares — Generally, the restrictions on Restricted Shares do not expire for a minimum of one year and a maximum of three years, and shares are subject to forfeiture during the restriction period. Most typically, Restricted Share grants have staggered vesting periods over one to three years from grant date. The intrinsic value of the Restricted Shares, which is typically the product of share price at the date of grant and the number of Restricted Shares granted, is amortized on a straight-line basis to compensation expense over the periods in which the restrictions lapse.

Awards of Restricted Shares are valued at the closing market price of our common stock on the date of grant. The unearned compensation is amortized to compensation expense over the vesting period of the Restricted Shares, except for awards related to the 55/10 Provision which are expensed when granted. As of December 31, 2022 and 2021, we had \$18.0 million and \$24.2 million, respectively, of unearned compensation cost related to unvested Restricted Shares, which is expected to be recognized over a weighted-average period of approximately one year. The total fair value of Restricted Shares vested during the years ended December 31, 2022, 2021 and 2020 was \$23.5 million, \$25.2 million and \$26.4 million, respectively.

We recorded stock-based compensation for Restricted Shares as follows:

	<u>Year Ended December 31,</u>		
	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in millions)		
Stock-based compensation expense	\$25.5	\$29.5	\$27.3
Related income tax benefit	<u>(5.8)</u>	<u>(6.7)</u>	<u>(6.2)</u>
Net stock-based compensation expense	<u>\$19.7</u>	<u>\$22.8</u>	<u>\$21.1</u>

The following table summarizes information regarding Restricted Shares:

	<u>Year Ended December 31, 2022</u>	
	<u>Shares</u>	<u>Weighted Average Grant-Date Fair Value</u>
Number of unvested Restricted Shares:		
Outstanding — beginning of year	1,671,011	\$43.06
Granted	982,654	32.91
Vested	(549,129)	42.85
Canceled	<u>(406,757)</u>	<u>43.41</u>
Outstanding — end of year	<u>1,697,779</u>	<u>\$37.17</u>

Unvested Restricted Shares outstanding as of December 31, 2022, includes approximately 485,000 units with performance-based vesting provisions issuable in common stock and vest upon the achievement of predefined performance metrics. Targets for outstanding performance awards are based on our average return on invested capital, total shareholder return (“TSR”) or free cash flow as a percent of net income over a three-year period. Performance units issued in 2022 and 2021 include a secondary measure, relative total shareholder return, which can increase or decrease the number of vesting units by 15% depending on the Company’s performance versus peers. Performance units issued in 2020 have a vesting percentage between 0% and 200%, while the 2021 and 2022 performance units have a vesting percentage up to 230%. Compensation expense is recognized ratably over a cliff-vesting period of 36 months, based on the fair value of our common stock on the date of grant, adjusted for actual forfeitures. During the performance period, earned and unearned compensation expense is adjusted based on changes in the expected achievement of the performance targets for all performance-based units granted except for the TSR-based units. Vesting provisions range from 0 to approximately 1,067,000 shares based on performance targets. As of December 31, 2022, we estimate vesting of approximately 247,000 shares based on expected achievement of performance targets.

8. DERIVATIVES AND HEDGING ACTIVITIES

Our risk management and foreign currency derivatives and hedging policy specifies the conditions under which we may enter into derivative contracts. See Note 1 for additional information on our purpose for entering into derivatives and our overall risk management strategies. We enter into foreign exchange forward contracts to hedge our cash flow risks associated with transactions denominated in currencies other than the local currency of the operation engaging in the transaction.

Foreign exchange contracts had notional values of \$459.2 million and \$425.2 million at December 31, 2022 and 2021, respectively. At December 31, 2022, the length of foreign exchange contracts currently in place ranged from 3 days to 26 months.

We are exposed to risk from credit-related losses resulting from nonperformance by counterparties to our financial instruments. We perform credit evaluations of our counterparties under forward exchange contracts and expect all counterparties to meet their obligations. We have not experienced credit losses from our counterparties.

The fair values of foreign exchange contracts are summarized below:

	Year Ended December 31,	
	2022	2021
	(Amounts in thousands)	
Current derivative assets	\$2,207	\$ 740
Noncurrent derivative assets	66	2
Current derivative liabilities	4,422	2,924
Noncurrent derivative liabilities	63	82

Current and noncurrent derivative assets are reported in our consolidated balance sheets in prepaid expenses and other and other assets, net, respectively. Current and noncurrent derivative liabilities are reported in our consolidated balance sheets in accrued liabilities and retirement obligations and other liabilities, respectively.

The impact of net changes in the fair values of foreign exchange contracts are summarized below:

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands)		
Gains (losses) recognized in income	\$(6,173)	\$3,295	\$(10,294)

Gains and losses recognized in our consolidated statements of income for foreign exchange contracts are classified as other income (expense), net.

As a means of managing the volatility of foreign currency exposure with the Euro/U.S. dollar exchange rate, we entered into cross-currency swap agreements (“Swaps”) as a hedge of our Euro investment in certain of our international subsidiaries. Accordingly, on April 14, 2021 and March 9, 2021, we entered into Swaps, with both having termination dates of October 1, 2030 and the March 9, 2021 cross currency swap having an early termination date of March 11, 2025. Also, during the third quarter of 2020 we entered into a cross currency swap agreement with a termination date of October 1, 2030 and an early termination date of September 22, 2025. The swap agreements were designated as net investment hedges and classified as Level II under the fair value hierarchy. On December 20, 2022 all outstanding swap agreements were early terminated resulting in net cash proceeds received of \$66.0 million. Prior to the early termination the cross-currency swaps had a combined notional value of €423.2 million and a fair value of \$68.2 million.

The fair values of our cross-currency swaps are summarized below:

	Year Ended December 31,	
	2022	2021
	(Amounts in thousands)	
Other assets, net.	\$—	\$23,129

We excluded the interest accruals on the swaps from the assessment of hedge effectiveness and recognize the interest accruals in earnings within interest expense. For each reporting period, the change in the fair value of the swap attributable to changes in the spot rate and differences between the change in the fair value of the excluded components and the amounts recognized in earnings under the swap accrual process were reported in accumulated other comprehensive loss (“AOCL”) on our consolidated balance sheets. For the period ended December 31, 2022, an interest accrual of \$8.5 million was recognized within interest expense in our consolidated statements of income.

The cumulative net investment hedge (gain) loss, net of deferred taxes, under cross-currency swaps recorded in AOCL on our consolidated balance sheets are summarized below:

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands)		
(Gain) loss-included component ⁽¹⁾	\$(37,135)	\$(15,578)	\$ 6,067
(Gain) loss-excluded component ⁽²⁾	(11,875)	(2,111)	7,769
(Gain) loss recognized in AOCL.	<u>\$(49,010)</u>	<u>\$(17,689)</u>	<u>\$13,836</u>

(1) Change in the fair value of the swaps attributable to changes in spot rates.

(2) Change in the fair value of the swaps due to changes other than those attributable to spot rates.

In March 2015, we designated €255.7 million of our 1.25% EUR Senior Notes (“2022 Euro Senior Notes”) as a net investment hedge of our Euro investment in certain of our international subsidiaries. On September 22, 2020, we increased the designated hedged value on the 2022 Euro Senior Notes to €336.3 million, which reflected the remaining balance of the 2022 Euro Senior Notes. For each reporting period, the change in the carrying value due to the remeasurement of the effective portion is reported in AOCL on our consolidated balance sheets and the remaining change in the carrying value of the ineffective portion, if any, is recognized in other income (expense), net in our consolidated statements of income. As a result of the redemption of our 2022 Euro Senior Notes in the first quarter of 2021 we dedesignated the hedged value of our net investment hedge.

Prior to the dedesignation, the cumulative impact recorded in AOCL on our consolidated balance sheets from the change in carrying value due to the remeasurement of the effective portion of the net investment hedge are summarized below:

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands)		
Loss recorded in AOCL	\$—	\$(29,554)	\$(34,973)

Prior to the dedesignation of the net investment hedge, we used the spot method to measure the effectiveness of both net investment hedges and evaluate the effectiveness on a prospective basis at the beginning of each quarter. We did not record any ineffectiveness for the periods ended December 31, 2021 and 2020.

9. FAIR VALUE OF FINANCIAL INSTRUMENTS

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where available, fair value is based on observable market prices or parameters or derived from such prices or parameters. Where observable prices or inputs are not available, valuation models may be applied. Assets and liabilities recorded at fair value in our consolidated balance sheets are categorized based upon the level of judgment associated with the inputs used to measure their fair values. Recurring fair value measurements are limited to investments in derivative instruments. The fair value measurements of our derivative instruments are determined using models that maximize the use of the observable market inputs including interest rate curves and both forward and spot prices for currencies, and are classified as Level II under the fair value hierarchy. The fair values of our derivatives are included above in Note 8.

The carrying value of our financial instruments as reflected in our consolidated balance sheets approximates fair value, with the exception of our long-term debt. The estimated fair value of our long-term debt, excluding the Senior Notes, approximates the carrying value and is classified as Level II under the fair value hierarchy. The carrying value of our debt is included in Note 12. The estimated fair value of our Senior Notes at December 31, 2022 was \$790.5 million compared to the carrying value of \$989.2 million. The estimated fair value of the Senior Notes is based on Level I quoted market rates. The carrying amounts of our other financial instruments (i.e., cash and cash equivalents, accounts receivable, net and accounts payable) approximated fair value due to their short-term nature at December 31, 2022 and December 31, 2021.

10. DETAILS OF CERTAIN CONSOLIDATED BALANCE SHEET CAPTIONS

The following tables present financial information of certain consolidated balance sheets captions.

Accounts Receivable, net — Accounts receivable, net were:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Trade accounts receivables	\$919,045	\$770,280
Less: allowance for expected credit losses	(66,444)	(55,264)
Other short-term receivables	32,649	43,266
Less: allowance for expected credit losses	(16,618)	(19,072)
Accounts receivable, net	<u>\$868,632</u>	<u>\$739,210</u>

Property, Plant and Equipment, net — Property, plant and equipment, net were:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Land	\$ 60,669	\$ 62,613
Buildings and improvements	425,019	441,627
Machinery, equipment and tooling	750,933	751,944
Software, furniture and fixtures and other	437,280	451,566
Gross property, plant and equipment	1,673,901	1,707,750
Less: accumulated depreciation	(1,172,956)	(1,191,823)
Property, plant and equipment, net	<u>\$ 500,945</u>	<u>\$ 515,927</u>

Accrued Liabilities — Accrued liabilities were:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Wages, compensation and other benefits	\$175,898	\$204,347
Commissions and royalties	18,526	21,911
Warranty costs and late delivery penalties	21,850	23,741
Sales and use tax	29,092	20,782
Income tax	32,968	47,186
Other	149,244	127,125
Accrued liabilities	<u>\$427,578</u>	<u>\$445,092</u>

“Other” accrued liabilities include professional fees, lease obligations, insurance, interest, freight, accrued cash dividends payable, legal and environmental matters, derivative liabilities, restructuring reserves and other items, none of which individually exceed 5% of current liabilities.

Retirement Obligations and Other Liabilities — Retirement obligations and other liabilities were:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Pension and postretirement benefits	\$142,204	\$188,999
Deferred taxes	7,901	9,169
Legal and environmental	90,207	86,561
Uncertain tax positions and other tax liabilities	37,604	37,013
Other	31,613	30,320
Retirement obligations and other liabilities	<u>\$309,529</u>	<u>\$352,062</u>

“Other” includes derivative liabilities, deferred compensation liabilities, asset retirement obligations, insurance-related liabilities and other items, none of which exceed 5% of retirement obligations and other liabilities.

11. EQUITY METHOD INVESTMENTS

We occasionally enter into joint venture arrangements with local country partners as our preferred means of entry into countries where barriers to entry may exist. Similar to our consolidated subsidiaries, these unconsolidated joint ventures generally operate within our primary businesses of designing, manufacturing, assembling and distributing fluid motion and control products and services. We have agreements with certain of these joint ventures that restrict us from otherwise entering the respective market and certain joint ventures produce and/or sell our products as part of their broader product offering. Net earnings from investments in unconsolidated joint ventures is reported in net earnings from affiliates in our consolidated statements of income. Given the integrated role of the unconsolidated joint ventures in our business, net earnings from affiliates is presented as a component of operating income.

As of December 31, 2022, we had investments in five joint ventures, one located in each of Chile, India, Saudi Arabia, South Korea and the United Arab Emirates that were accounted for using the equity method and are immaterial for disclosure purposes.

12. DEBT AND FINANCE LEASE OBLIGATIONS

Debt, including finance lease obligations, consisted of:

	December 31,	
	2022	2021
	(Amounts in thousands)	
3.50% USD Senior Notes due October 1, 2030, net of unamortized discount and debt issuance costs of \$5,055 and \$5,611 at December 31, 2022 and 2021, respectively . .	494,945	494,389
2.80% USD Senior Notes due January 15, 2032, net of unamortized discount and debt issuance costs of \$5,727 and \$6,273 at December 31, 2022 and 2021, respectively . .	494,273	493,727
Term Loan Facility, interest rate of 5.98% and 1.45%, net of debt issuance costs of \$444 and \$639 at December 31, 2022 and 2021, respectively	259,556	291,861
Finance lease obligations and other borrowings	<u>24,712</u>	<u>22,851</u>
Debt and finance lease obligations	1,273,486	1,302,828
Less amounts due within one year	<u>49,335</u>	<u>41,058</u>
Total debt due after one year	<u>\$1,224,151</u>	<u>\$1,261,770</u>

Scheduled maturities of our Senior Notes and other debt, are (amounts in thousands):

	Term Loan	Senior Notes and other debt	Total
	(Amounts in thousands)		
2023	\$ 39,830	\$ 9,335	\$ 49,165
2024	59,863	15,377	75,240
2025	59,905	—	59,905
2026	99,958	—	99,958
2027	—	—	—
Thereafter	<u>—</u>	<u>989,218</u>	<u>989,218</u>
Total	<u>\$259,556</u>	<u>\$1,013,930</u>	<u>\$1,273,486</u>

Senior Notes

On March 19, 2021, we redeemed the remaining \$400.9 million of our 2022 Euro Senior Notes and recorded a loss on early extinguishment of \$7.6 million in the first quarter of 2021, which included the impact of a \$6.6 million make-whole premium.

Senior Credit Facility

On September 13, 2021, we amended and restated our credit agreement (the “Amended and Restated Credit Agreement”) under our Senior Credit Facility (the “Credit Facility”) with Bank of America, N.A. and the other lenders to provide greater flexibility in maintaining adequate liquidity and access to available borrowings. The Amended and Restated Credit Agreement, (i) retained, from the previous credit agreement, the \$800.0 million unsecured Revolving Credit Facility (the “Revolving Credit Facility”), which includes a \$750.0 million sublimit for the issuance of letters of credit and a \$30.0 million sublimit for swing line loans ii) provides for an up to \$300 million unsecured Term Loan Facility (the “Term Loan”), (iii) extends the maturity date of the agreement to September 13, 2026, (iv) reduces commitment fees, (v) extends net leverage ratio covenant definition through the maturity of the agreement, and (vi) provides the ability to make certain adjustments to the otherwise applicable commitment fee, interest rate and letter of credit fees based on the Company’s performance against to-be-established key performance indicators with respect to certain of the Company’s environmental, social and governance targets.

The interest rates per annum applicable to the Revolving Credit Facility are unchanged under the Amended and Restated Credit Agreement. The interest rates per annum applicable to the Credit Facility, other than with respect to

swing line loans, are LIBOR plus between 1.000% to 1.750%, depending on our debt rating by either Moody's Investors Service, Inc. ("Moody's") or Standard & Poor's Financial Services LLC ("S&P"), or, at our option, the Base Rate (as defined in the Amended and Restated Credit Agreement) plus between 0.000% to 0.750% depending on our debt rating by either Moody's or S&P. At December 31, 2022, the interest rate on the Revolving Credit Facility was LIBOR plus 1.375% in the case of LIBOR loans and the Base Rate plus 0.375% in the case of Base Rate loans. In addition, a commitment fee is payable quarterly in arrears on the daily unused portions of the Credit Facility. The commitment fee will be between 0.080% and 0.250% of unused amounts under the Credit Facility depending on our debt rating by either Moody's or S&P. The commitment fee was 0.175% (per annum) during the period ended December 31, 2022.

Under the terms and conditions of the Amended and Restated Credit Agreement, interest rates per annum applicable to the Term Loan are stated as LIBOR plus between 0.875% to 1.625%, depending on the Company's debt rating by either Moody's or S&P, or, at the option of the Company, the Base Rate plus between 0.000% to 0.625% depending on the Company's debt rating by either Moody's or S&P.

As of December 31, 2022, and December 31, 2021, we had no revolving loans outstanding under the Senior Credit Facility. We had outstanding letters of credit of \$71.7 million and \$78.3 million at December 31, 2022, and December 31, 2021, respectively. After consideration of the financial covenants under our Senior Credit Facility and outstanding letters of credit, as of December 31, 2022, the amount available for borrowings under our Senior Credit Facility was limited to \$293.9 million. As of December 31, 2021, the amount available for borrowings under our Revolving Credit facility was \$614.2 million. We have scheduled repayments of \$10.0 million due in each of the subsequent four quarters through December 31, 2023.

Financial Covenants — Our compliance with the financial covenants under the Senior Notes and Senior Credit Facility are tested quarterly. We were in compliance with all covenants as of December 31, 2022.

13. PENSION AND POSTRETIREMENT BENEFITS

We sponsor several noncontributory defined benefit pension plans, covering substantially all U.S. employees and certain non-U.S. employees, which provide benefits based on years of service, age, job grade levels and type of compensation. Retirement benefits for all other covered employees are provided through contributory pension plans, cash balance pension plans and government-sponsored retirement programs. All funded defined benefit pension plans receive funding based on independent actuarial valuations to provide for current service and an amount sufficient to amortize unfunded prior service over periods not to exceed 30 years, with funding falling within the legal limits prescribed by prevailing regulation. We also maintain unfunded defined benefit plans that, as permitted by local regulations, receive funding only when benefits become due.

Our defined benefit plan strategy is to ensure that current and future benefit obligations are adequately funded in a cost-effective manner. Additionally, our investing objective is to achieve the highest level of investment performance that is compatible with our risk tolerance and prudent investment practices. Because of the long-term nature of our defined benefit plan liabilities, our funding strategy is based on a long-term perspective for formulating and implementing investment policies and evaluating their investment performance.

The asset allocation of our defined benefit plans reflects our decision about the proportion of the investment in equity and fixed income securities, and, where appropriate, the various sub-asset classes of each. At least annually, we complete a comprehensive review of our asset allocation policy and the underlying assumptions, which includes our long-term capital markets rate of return assumptions and our risk tolerances relative to our defined benefit plan liabilities.

The expected rates of return on defined benefit plan assets are derived from review of the asset allocation strategy, expected long-term performance of asset classes, risks and other factors adjusted for our specific investment strategy. These rates are impacted by changes in general market conditions, but because they are long-term in nature, short-term market changes do not significantly impact the rates.

Our U.S. defined benefit plan assets consist of a balanced portfolio of equity and fixed income securities. Our non-U.S. defined benefit plan assets include a significant concentration of United Kingdom ("U.K.") fixed income securities. We monitor investment allocations and manage plan assets to maintain acceptable levels of risk.

For all periods presented, we used a measurement date of December 31 for each of our U.S. pension plans, non-U.S. pension plans and postretirement medical plans.

U.S. Defined Benefit Plans

We maintain qualified and non-qualified defined benefit pension plans in the U.S. The qualified plan provides coverage for substantially all full-time U.S. employees who receive benefits, up to an earnings threshold specified by the U.S. Department of Labor. The non-qualified plans primarily cover a small number of employees including current and former members of senior management, providing them with benefit levels equivalent to other participants, but that are otherwise limited by U.S. Department of Labor rules. The U.S. plans are designed to operate as “cash balance” arrangements, under which the employee has the option to take a lump sum payment at the end of their service. The difference between total accumulated benefit obligation and total projected benefit obligation (“Benefit Obligation”) is immaterial.

The following are assumptions related to the U.S. defined benefit pension plans:

	Year Ended December 31,		
	2022	2021	2020
Weighted average assumptions used to determine Benefit Obligations:			
Discount rate	5.73%	3.00%	2.62%
Rate of increase in compensation levels	3.50	3.50	3.63
Weighted average assumptions used to determine net pension expense:			
Long-term rate of return on assets	5.75%	6.00%	6.00%
Discount rate	3.00	2.62	3.41
Rate of increase in compensation levels	3.50	3.50	3.56
Weighted-average interest crediting rates	3.79%	3.79%	3.79%

At December 31, 2022 as compared with December 31, 2021, we increased our discount rate from 3.00% to 5.73% based on an analysis of publicly-traded investment grade U.S. corporate bonds, which had a higher yield due to current market conditions. In determining 2022 expense, the expected rate of return on U.S. plan assets decreased to 5.75%, primarily based on our target allocations and expected long-term asset returns. The long-term rate of return assumption is calculated using a quantitative approach that utilizes unadjusted historical returns and asset allocation as inputs for the calculation. For all U.S. plans, we adopted the Pri-2012 mortality tables and the MP-2021 improvement scale published in October 2021. We applied the Pri-2012 tables based on the constituency of our plan population for union and non-union participants. We adjusted the improvement scale to utilize the Proxy SSA Long Term Improvement Rates, consistent with assumptions adopted by the Social Security Administration trustees, based on long-term historical experience. Currently, we believe this approach provides the best estimate of our future obligation. Most plan participants elect to receive plan benefits as a lump sum at the end of service, rather than an annuity. As such, the updated mortality tables had an immaterial effect on our pension obligation.

Net pension expense for the U.S. defined benefit pension plans (including both qualified and non-qualified plans) was:

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands)		
Service cost	\$ 24,680	\$ 25,162	\$ 25,893
Interest cost	13,157	11,952	15,100
Expected return on plan assets	(25,345)	(25,377)	(25,794)
Settlement (gain) loss	—	—	128
Amortization of unrecognized prior service cost	175	188	184
Amortization of unrecognized net loss	3,461	7,725	6,977
U.S. net pension expense	<u>\$ 16,128</u>	<u>\$ 19,650</u>	<u>\$ 22,488</u>

The following summarizes the net pension (liability) asset for U.S. plans:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Plan assets, at fair value	\$ 365,044	\$ 488,281
Benefit Obligation	<u>(382,959)</u>	<u>(471,825)</u>
Funded status	<u>\$ (17,915)</u>	<u>\$ 16,456</u>

The following summarizes amounts recognized in the balance sheet for U.S. plans:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Noncurrent assets.....	\$ —	\$22,398
Current liabilities.....	(232)	(170)
Noncurrent liabilities.....	(17,683)	(5,772)
Funded status.....	<u>\$(17,915)</u>	<u>\$16,456</u>

The following is a summary of the changes in the U.S. defined benefit plans' pension obligations:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Balance — January 1	\$471,825	\$487,418
Service cost	24,680	25,162
Interest cost	13,157	11,952
Plan amendments and settlements	179	—
Actuarial (gain) loss ⁽¹⁾	(87,791)	(11,208)
Benefits paid	<u>(39,091)</u>	<u>(41,499)</u>
Balance — December 31	<u>\$382,959</u>	<u>\$471,825</u>
Accumulated benefit obligations at December 31	\$382,488	\$471,024

(1) The actuarial gains in 2022 and 2021 primarily reflect the impact of changes in the discount rate.

The following table summarizes the expected cash benefit payments for the U.S. defined benefit pension plans in the future (amounts in millions):

2023.....	\$ 40.6
2024.....	39.1
2025.....	40.0
2026.....	40.4
2027.....	40.0
2028-2032.....	194.1

The following table shows the change in accumulated other comprehensive loss attributable to the components of the net cost and the change in Benefit Obligations for U.S. plans, net of tax:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Balance — January 1	\$(30,014)	\$(49,321)
Amortization of net loss	2,647	5,907
Amortization of prior service cost	134	144
Net gain (loss) arising during the year.....	(17,085)	13,256
Prior service cost arising during the year.....	<u>(137)</u>	<u>—</u>
Balance — December 31	<u>\$(44,455)</u>	<u>\$(30,014)</u>

Amounts recorded in accumulated other comprehensive loss consist of:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Unrecognized net loss	\$(43,725)	\$(29,344)
Unrecognized prior service cost	(730)	(670)
Accumulated other comprehensive loss, net of tax	<u>\$(44,455)</u>	<u>\$(30,014)</u>

The following is a reconciliation of the U.S. defined benefit pension plans' assets:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Balance — January 1	\$488,281	\$477,680
Gain (loss) on plan assets	(84,785)	31,501
Company contributions	639	20,599
Benefits paid	<u>(39,091)</u>	<u>(41,499)</u>
Balance — December 31	<u>\$365,044</u>	<u>\$488,281</u>

We contributed \$0.6 million and \$20.6 million to the U.S. defined benefit pension plans during 2022 and 2021, respectively.

All U.S. defined benefit plan assets are held by the qualified plan. The asset allocations for the qualified plan at the end of 2022 and 2021 by asset category, are as follows:

Asset category	Target Allocation at December 31,		Percentage of Actual Plan Assets at December 31,	
	2022	2021	2022	2021
Cash and cash equivalents	<u>1%</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>
Cash and cash equivalents	<u>1%</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>
Global Equity	20%	27%	21%	26%
Global Real Assets	<u>14%</u>	<u>15%</u>	<u>13%</u>	<u>16%</u>
Equity securities	<u>34%</u>	<u>42%</u>	<u>34%</u>	<u>42%</u>
Diversified Credit	14%	15%	18%	15%
Liability-Driven Investment	<u>51%</u>	<u>42%</u>	<u>47%</u>	<u>42%</u>
Fixed income	<u>65%</u>	<u>57%</u>	<u>65%</u>	<u>57%</u>

None of our common stock is directly held by our qualified plan. Our investment strategy is to earn a long-term rate of return consistent with an acceptable degree of risk and minimize our cash contributions over the life of the plan, while taking into account the liquidity needs of the plan. We preserve capital through diversified investments in high quality securities. Our current allocation target is to invest approximately 34% of plan assets in equity securities and 65% in fixed income securities. Within each investment category, assets are allocated to various investment strategies. Professional money management firms manage our assets, and we engage a consultant to assist in evaluating these activities. We periodically review the allocation target, generally in conjunction with an asset and liability study and in consideration of our future cash flow needs. We regularly rebalance the actual allocation to our target investment allocation.

Plan assets are invested in commingled funds. Our “Pension and Investment Committee” is responsible for setting the investment strategy and the target asset allocation for the plan’s assets. As the qualified plan approached fully funded status, we implemented a Liability-Driven Investing (“LDI”) strategy, which more closely aligns the duration of the plan’s assets with the duration of its liabilities. The LDI strategy results in an asset portfolio that more closely matches the behavior of the liability, thereby reducing the volatility of the plan’s funded status.

The plan's financial instruments, shown below, are presented at fair value. See Note 1 for further discussion on how the hierarchical levels of the fair values of the Plan's investments are determined. The fair values of our U.S. defined benefit plan assets were:

	At December 31, 2022				At December 31, 2021			
	Hierarchical Levels				Hierarchical Levels			
	Total	I	II	III	Total	I	II	III
	(Amounts in thousands)				(Amounts in thousands)			
Cash and cash equivalents	\$ 4,072	\$4,072	\$ —	\$—	\$ 6,192	\$6,192	\$ —	\$—
Commingled Funds:								
Equity securities								
Global Equity ^(a)	77,217	—	77,217	—	128,269	—	128,269	—
Global Real Assets ^(b)	46,476	—	46,476	—	79,089	—	79,089	—
Fixed income securities								
Diversified Credit ^(c)	64,877	—	64,877	—	71,100	—	71,100	—
Liability-Driven Investment ^(d)	172,402	—	172,402	—	203,631	—	203,631	—
	<u>\$365,044</u>	<u>\$4,072</u>	<u>\$360,972</u>	<u>\$—</u>	<u>\$488,281</u>	<u>\$6,192</u>	<u>\$482,089</u>	<u>\$—</u>

(a) Global Equity fund seeks to closely track the performance of the MSCI All Country World Index.

(b) Global Real Asset funds seek to provide exposure to the listed global real estate investment trusts and infrastructure markets.

(c) Diversified Credit funds seek to provide exposure to the high yield, emerging markets, bank loans and securitized credit markets.

(d) Liability-Driven Investment ("LDI") funds seek to invest in high quality fixed income securities that collectively closely match those found in discount curves used to value the plan's liabilities.

Non-U.S. Defined Benefit Plans

We maintain defined benefit pension plans, which cover some or all of our employees in the following countries: Austria, Belgium, Canada, France, Germany, India, Italy, Japan, Mexico, The Netherlands, Switzerland and the U.K. The assets of the plans in the U.K. (two plans), The Netherlands and Canada represent 90% of the total non-U.S. plan assets ("non-U.S. assets"). Details of other countries' plan assets have not been provided due to immateriality.

The following are assumptions related to the non-U.S. defined benefit pension plans:

	Year Ended December 31,		
	2022	2021	2020
Weighted average assumptions used to determine Benefit Obligations:			
Discount rate	4.46%	1.71%	1.23%
Rate of increase in compensation levels	3.61	3.18	3.11
Weighted average assumptions used to determine net pension expense:			
Long-term rate of return on assets	2.43%	2.37%	2.37%
Discount rate	1.71	1.23	1.61
Rate of increase in compensation levels	3.18	3.11	3.12
Weighted-average interest crediting rates	1.49%	1.41%	1.00%

At December 31, 2022, as compared with December 31, 2021, we increased our average discount rate for non-U.S. plans from 1.71% to 4.46% based on analysis of bonds and other publicly-traded instruments, by country, which had higher yields due to market conditions. To determine 2022 pension expense, our average expected rate of return on plan assets increased to 2.43% based on our target allocations and expected long-term asset returns. As the expected rate of return on plan assets is long-term in nature, short-term market fluctuations do not significantly impact the rate.

Many of our non-U.S. defined benefit plans are unfunded, as permitted by local regulation. The expected long-term rate of return on assets for funded plans was determined by assessing the rates of return for each asset class and is calculated using a quantitative approach that utilizes unadjusted historical returns and asset allocation as inputs for the calculation. We work with our actuaries to determine the reasonableness of our long-term rate of return assumptions by looking at several factors including historical returns, expected future returns, asset allocation, risks by asset class and other items.

Net pension expense for non-U.S. defined benefit pension plans was:

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands)		
Service cost	\$ 5,984	\$ 7,336	\$ 7,052
Interest cost	6,506	5,544	6,572
Expected return on plan assets	(5,883)	(6,204)	(5,018)
Amortization of unrecognized net loss	2,729	4,509	4,315
Amortization of unrecognized prior service cost	293	300	262
Settlement loss and other	(75)	640	708
Non-U.S. net pension expense	<u>\$ 9,554</u>	<u>\$12,125</u>	<u>\$13,891</u>

The following summarizes the net pension liability for non-U.S. plans:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Plan assets, at fair value	\$ 172,276	\$ 275,941
Benefit Obligation	<u>(268,364)</u>	<u>(420,809)</u>
Funded status - Underfunded	<u>\$ (96,088)</u>	<u>\$(144,868)</u>

The following summarizes amounts recognized in the balance sheet for non-U.S. plans:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Noncurrent assets	\$ 15,305	\$ 22,655
Current liabilities	(6,877)	(7,205)
Noncurrent liabilities	<u>(104,516)</u>	<u>(160,318)</u>
Funded status	<u>\$ (96,088)</u>	<u>\$(144,868)</u>

The following is a reconciliation of the non-U.S. plans' defined benefit pension obligations:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Balance — January 1	\$ 420,809	\$469,998
Service cost	5,984	7,336
Interest cost	6,506	5,544
Employee contributions	71	74
Settlements and other	(7,944)	(3,140)
Actuarial gains ⁽¹⁾	(108,546)	(24,493)
Net benefits and expenses paid	(15,797)	(17,316)
Currency translation impact ⁽²⁾	<u>(32,719)</u>	<u>(17,194)</u>
Balance — December 31	<u>\$ 268,364</u>	<u>\$420,809</u>
Accumulated benefit obligations at December 31	<u>\$ 253,428</u>	<u>\$399,757</u>

(1) Actuarial gains primarily reflects the impact of changes in the discount rates for all plans.

(2) In 2022 and 2021, the currency translation gains reflects the strengthening of the U.S. dollar against the Euro and the British pound.

The following table summarizes the expected cash benefit payments for the non-U.S. defined benefit plans in the future (amounts in millions):

2023	\$15.1
2024	15.8
2025	16.5
2026	17.1
2027	18.0
2028-2032	91.9

The following table shows the change in accumulated other comprehensive loss attributable to the components of the net cost and the change in Benefit Obligations for non-U.S. plans, net of tax:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Balance — January 1	\$(70,581)	\$(97,246)
Amortization of net loss	2,450	4,207
Net gains arising during the year	21,099	17,995
Settlement losses	130	616
Prior service cost arising during the year	(233)	—
Currency translation impact and other	4,714	3,847
Balance — December 31	<u>\$(42,421)</u>	<u>\$(70,581)</u>

Amounts recorded in accumulated other comprehensive loss consist of:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Unrecognized net loss	\$(39,007)	\$(67,192)
Unrecognized prior service cost	(3,414)	(3,389)
Accumulated other comprehensive loss, net of tax	<u>\$(42,421)</u>	<u>\$(70,581)</u>

The following is a reconciliation of the non-U.S. plans' defined benefit pension assets:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Balance — January 1	\$275,941	\$287,308
Return on plan assets	(71,104)	1,631
Employee contributions	71	74
Company contributions	15,657	11,964
Settlements	(8,039)	(3,096)
Currency translation impact	(24,453)	(4,624)
Net benefits and expenses paid	<u>(15,797)</u>	<u>(17,316)</u>
Balance — December 31	<u>\$172,276</u>	<u>\$275,941</u>

UK pension plans contributed to the change in the non-US plan assets due to lower asset returns in 2022 and 2021, respectively. Our contributions to non-U.S. defined benefit pension plans in 2023 are expected to be approximately \$2 million, excluding direct benefits paid.

The asset allocations for the non-U.S. defined benefit pension plans at the end of 2022 and 2021 are as follows:

Asset category	Target Allocation at December 31,		Percentage of Actual Plan Assets at December 31,	
	2022	2021	2022	2021
Cash and cash equivalents	1%	—%	1%	—%
Cash and cash equivalents	1%	—%	1%	—%
North American Companies	—%	1%	—%	1%
Global Equity	—%	1%	—%	1%
Equity securities	—%	2%	—%	2%
U.K. Government Gilt Index	38%	42%	38%	42%
Liability-Driven Investment	12%	9%	12%	9%
Fixed income	50%	51%	50%	51%
Multi-asset	20%	20%	20%	20%
Buy-in Contracts	19%	20%	19%	20%
Other	10%	7%	10%	7%
Other types	49%	47%	49%	47%

None of our common stock is held directly by these plans. In all cases, our investment strategy for these plans is to earn a long-term rate of return consistent with an acceptable degree of risk and minimize our cash contributions over the life of the plan, while taking into account the liquidity needs of the plan and the legal requirements of the particular country. We preserve capital through diversified investments in high quality securities.

Asset allocation differs by plan based upon the plan's benefit obligation to participants, as well as the results of asset and liability studies that are conducted for each plan and in consideration of our future cash flow needs. Professional money management firms manage plan assets and we engage a consultant in the U.K. to assist in evaluation of these activities. The assets of the U.K. plans are overseen by a group of Trustees who review the investment strategy, asset allocation and fund selection. These assets are passively managed as they are invested in index funds that attempt to match the performance of the specified benchmark index.

The fair values of the non-U.S. assets were:

	At December 31, 2022				At December 31, 2021			
	Hierarchical Levels				Hierarchical Levels			
	Total	I	II	III	Total	I	II	III
	(Amounts in thousands)				(Amounts in thousands)			
Cash	\$ 2,134	\$2,134	\$ —	—	\$ 2,264	\$2,264	\$ —	—
Commingled Funds:								
Equity securities								
North American								
Companies ^(a)	—	—	—	—	2,609	—	2,609	—
Global Equity ^(b)	—	—	—	—	2,516	—	2,516	—
Fixed income securities								
U.K. Government Gilt								
Index ^(c)	65,650	—	65,650	—	115,450	—	115,450	—
Liability-Driven								
Investment ^(d)	20,849	—	20,849	—	25,387	—	25,387	—
Other Types of Investments:								
Multi-asset ^(e)	34,268	—	34,268	—	54,824	—	54,824	—
Buy-in Contracts ^(f)	32,313	—	—	32,313	54,896	—	—	54,896
Other ^(g)	17,062	—	—	17,062	17,995	—	—	17,995
	<u>\$172,276</u>	<u>\$2,134</u>	<u>\$120,767</u>	<u>\$49,375</u>	<u>\$275,941</u>	<u>\$2,264</u>	<u>\$200,786</u>	<u>\$72,891</u>

(a) North American Companies represents U.S. and Canadian large cap equity funds, which are managed to track their respective benchmarks (FTSE All-World USA Index and FTSE All-World Canada Index).

- (b) Global Equity represents actively managed global equity funds, taking a top-down strategic view on the different regions by analyzing companies based on fundamentals, market-driven, thematic and quantitative factors to generate alpha.
- (c) U.K. Government Gilt Index represents U.K. government issued fixed income investments which are passively managed to track their respective benchmarks.
- (d) LDI seeks to invest in fixed income securities that collectively closely match those found in discount curves used to value the plan's liabilities.
- (e) Multi-asset seeks an attractive risk-adjusted return by investing in a diversified portfolio of strategies, including equities and fixed income.
- (f) The Buy-in Contracts ("Contract" or "Contracts") represent assets held by plans, whereby the cost of providing benefits to plan participants is funded by the Contract. The Contracts are held by the plans for the benefit of plan participants in the Netherlands and U.K. The fair value of these assets are based on the current present value of accrued benefits and will fluctuate based on changes in the obligations associated with covered plan members as well as the assumptions used in the present value calculation. The fair value of asset held in the Netherlands Contract as of January 1, 2022 was \$24.3 million, with contributions and currency adjustments resulting in a fair value of \$15.7 million at December 31, 2022. Similarly, the fair value of asset held in the U.K. plan Contract as of January 1, 2022 was \$30.6 million, with contributions and currency adjustments resulting in a fair value of \$16.6 million at December 31, 2022.
- (g) Includes assets held by plans outside the United Kingdom, the Netherlands and Canada. Details have not been provided due to immateriality.

Defined Benefit Pension Plans with Accumulated Benefit Obligations in Excess of Plan Assets

The following summarizes key pension plan information regarding U.S. and non-U.S. plans whose accumulated benefit obligations exceed the fair value of their respective plan assets.

	December 31,	
	2022	2021
	(Amounts in thousands)	
Benefit Obligation	\$529,531	\$230,688
Accumulated benefit obligation	519,287	215,535
Fair value of plan assets	401,285	59,232

In 2021, the fair value of its plan assets exceeded the benefit obligation for the U.S. plan, and is not included in the table above.

Postretirement Medical Plans

We sponsor several defined benefit postretirement medical plans covering certain current retirees and a limited number of future retirees in the U.S. These plans provide for medical and dental benefits and are administered through insurance companies and health maintenance organizations. The plans include participant contributions, deductibles, co-insurance provisions and other limitations and are integrated with Medicare and other group plans. We fund the plans as benefits and health maintenance organization premiums are paid, such that the plans hold no assets in any period presented. Accordingly, we have no investment strategy or targeted allocations for plan assets. Benefits under our postretirement medical plans are not available to new employees or most existing employees.

The following are assumptions related to postretirement benefits:

	Year Ended December 31,		
	2022	2021	2020
Weighted average assumptions used to determine Benefit Obligation:			
Discount rate	5.83%	2.83%	2.32%
Weighted average assumptions used to determine net expense:			
Discount rate	2.83%	2.32%	3.27%

The assumed ranges for the annual rates of increase in medical costs used to determine net expense were 7.25% for 2022, 7.50% for 2021 and 7.00% for 2020, with a gradual decrease to 5.00% for 2032 and future years.

Net postretirement benefit cost for postretirement medical plans was:

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands)		
Interest cost	\$464	\$399	\$ 596
Amortization of unrecognized prior service cost	122	122	122
Amortization of unrecognized net (gain) loss	192	(21)	(132)
Net postretirement benefit expense	<u>\$778</u>	<u>\$500</u>	<u>\$ 586</u>

The following summarizes the accrued postretirement benefits liability for the postretirement medical plans:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Postretirement Benefit Obligation	<u>\$ 13,353</u>	<u>\$ 17,021</u>
Funded status	<u>\$(13,353)</u>	<u>\$(17,021)</u>

The following summarizes amounts recognized in the balance sheet for postretirement Benefit Obligation:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Current liabilities	\$ (2,086)	\$ (2,239)
Noncurrent liabilities	<u>(11,267)</u>	<u>(14,782)</u>
Funded status	<u>\$(13,353)</u>	<u>\$(17,021)</u>

The following is a reconciliation of the postretirement Benefit Obligation:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Balance — January 1	\$17,021	\$18,648
Interest cost	464	399
Employee contributions	792	874
Medicare subsidies receivable	—	67
Actuarial (gain) loss	(1,747)	1,225
Net benefits and expenses paid	<u>(3,177)</u>	<u>(4,192)</u>
Balance — December 31	<u>\$13,353</u>	<u>\$17,021</u>

The following presents expected benefit payments for future periods (amounts in millions):

	Expected Payments
2023	\$2.1
2024	1.9
2025	1.8
2026	1.6
2027	1.5
2028-2032	5.3

The following table shows the change in accumulated other comprehensive loss attributable to the components of the net cost and the change in Benefit Obligations for postretirement benefits, net of tax:

	<u>2022</u>	<u>2021</u>
	(Amounts in thousands)	
Balance — January 1	\$(2,072)	\$(1,213)
Amortization of net (gain) loss	147	(16)
Amortization of prior service cost	93	94
Net gain (loss) arising during the year	<u>1,336</u>	<u>(937)</u>
Balance — December 31	<u>\$ (496)</u>	<u>\$(2,072)</u>

Amounts recorded in accumulated other comprehensive loss consist of:

	<u>December 31,</u>	
	<u>2022</u>	<u>2021</u>
	(Amounts in thousands)	
Unrecognized net gain (loss)	\$ 55	\$(1,420)
Unrecognized prior service cost	<u>(551)</u>	<u>(652)</u>
Accumulated other comprehensive income, net of tax	<u>\$(496)</u>	<u>\$(2,072)</u>

We made contributions to the postretirement medical plans to pay benefits of \$2.4 million in 2022, \$3.3 million in 2021 and \$3.2 million in 2020. Because the postretirement medical plans are unfunded, we make contributions as the covered individuals' claims are approved for payment. Accordingly, contributions during any period are directly correlated to the benefits paid.

Defined Contribution Plans

We sponsor several defined contribution plans covering substantially all U.S. and Canadian employees and certain other non-U.S. employees. Employees may contribute to these plans, and these contributions are matched in varying amounts by us, including opportunities for discretionary matching contributions by us. Defined contribution plan expense was \$21.9 million in 2022, \$19.9 million in 2021 and \$20.0 million in 2020.

14. EARNINGS PER SHARE

The following is a reconciliation of net earnings of Flowserve Corporation and weighted average shares for calculating net earnings per common share. Earnings per weighted average common share outstanding was calculated as follows:

	<u>Year Ended December 31,</u>		
	<u>2022</u>	<u>2021</u>	<u>2020</u>
	(Amounts in thousands, except per share data)		
Net earnings of Flowserve Corporation	\$188,689	\$125,949	\$130,420
Dividends on restricted shares not expected to vest	<u>—</u>	<u>—</u>	<u>—</u>
Earnings attributable to common and participating shareholders	<u>\$188,689</u>	<u>\$125,949</u>	<u>\$130,420</u>
Weighted average shares:			
Common stock	130,591	130,277	130,373
Participating securities	<u>39</u>	<u>28</u>	<u>22</u>
Denominator for basic earnings per common share	130,630	130,305	130,395
Effect of potentially dilutive securities	<u>685</u>	<u>552</u>	<u>655</u>
Denominator for diluted earnings per common share	<u>131,315</u>	<u>130,857</u>	<u>131,050</u>
Net earnings per share attributable to Flowserve Corporation common shareholders:			
Basic	\$ 1.44	\$ 0.97	\$ 1.00
Diluted	1.44	0.96	1.00

Diluted earnings per share is based upon the weighted average number of shares as determined for basic earnings per share plus shares potentially issuable in conjunction with stock options, restricted shares, restricted share units and performance share units.

For the years ended December 31, 2022, 2021 and 2020, unvested restricted shares of 118,334, 156,578 and 375,203, respectively, were excluded from the computation of diluted earnings per share because the effect of their exercise would be anti-dilutive.

15. LEGAL MATTERS AND CONTINGENCIES

Asbestos-Related Claims

We are a defendant in a substantial number of lawsuits that seek to recover damages for personal injury allegedly caused by exposure to asbestos-containing products manufactured and/or distributed by our heritage companies in the past. Typically, these lawsuits have been brought against multiple defendants in state and federal courts. While the overall number of asbestos-related claims in which we or our predecessors have been named has generally declined in recent years, there can be no assurance that this trend will continue, or that the average cost per claim to us will not further increase. Asbestos-containing materials incorporated into any such products were encapsulated and used as internal components of process equipment, and we do not believe that significant emission of asbestos fibers occurred during the use of this equipment.

Our practice is to vigorously contest and resolve these claims, and we have been successful in resolving a majority of claims with little or no payment, other than legal fees. Activity related to asbestos claims during the periods indicated was as follows:

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Beginning claims, January 1, ⁽¹⁾	8,712	8,366	8,345
New claims	2,454	2,482	2,140
Resolved claims	(2,204)	(2,211)	(2,203)
Other ⁽²⁾	(823)	75	84
Ending claims, December 31, ⁽¹⁾	<u>8,139</u>	<u>8,712</u>	<u>8,366</u>

(1) Beginning and ending claims data in each period excludes inactive claims, as the Company considers it unlikely that inactive cases will be pursued further by the respective plaintiffs. A claim is classified as inactive either due to inactivity over a period of time or if designated as inactive by the applicable court.

(2) Represents the net change in claims as a result of the reclassification of active cases as inactive and inactive cases as active during the period indicated. Cases moved from active to inactive status are removed from the claims count without being accounted for as a "Resolved claim", and cases moved from inactive status to active status are added back to the claims count without being accounted for as a "New claim".

The following table presents the changes in the estimated asbestos liability as of December 31, 2022, 2021 and 2020:

(Amounts in thousands)	<u>2022</u>	<u>2021</u>	<u>2020</u>
Beginning balance, January 1,	\$94,423	\$99,530	\$97,979
Asbestos liability adjustments, net	14,782	4,783	8,642
Cash payment activity	(5,733)	(7,521)	(8,445)
Other, net	(4,820)	(2,369)	1,354
Ending balance, December 31,	<u>\$98,652</u>	<u>\$94,423</u>	<u>\$99,530</u>

The Company incurred expenses of approximately \$14.8 million, \$10.0 million and \$15.8 million during the periods ended December 31, 2022, 2021 and 2020, respectively, to defend, resolve or otherwise dispose of outstanding claims, including legal and other related expenses. These expenses are included within SG&A in the Consolidated Statements of Income.

The Company had cash inflows/(outflows) (net of insurance and/or indemnity) to defend, resolve or otherwise dispose of outstanding claims, including legal and other related expenses of approximately \$4.2 million, \$(4.7) million and \$4.8 million during the periods ended December 31, 2022, 2021 and 2020, respectively.

Historically, a high percentage of resolved claims have been covered by applicable insurance or indemnities from other companies, and we believe that a portion of existing claims should continue to be covered by insurance or indemnities, in whole or in part.

We believe that our reserve for asbestos claims and the receivable for recoveries from insurance carriers that we have recorded for these claims reflects reasonable and probable estimates of these amounts. Our estimate of our ultimate exposure for asbestos claims, however, is subject to significant uncertainties, including the timing, number and types of new claims, unfavorable court rulings, judgments or settlement terms and ultimate costs to settle. Additionally, the continued viability of carriers, may also impact the amount of probable insurance recoveries. We believe that these uncertainties could have a material adverse impact on our business, financial condition, results of operations and cash flows, though we currently believe the likelihood is remote.

Additionally, we have claims pending against certain insurers that, if in future periods are resolved more favorably than reflected in the recorded receivables, would result in discrete gains in the applicable year.

Other

We are currently involved as a potentially responsible party at four former public waste disposal sites in various stages of evaluation or remediation. The projected cost of remediation at these sites, as well as our alleged “fair share” allocation, will remain uncertain until all studies have been completed and the parties have either negotiated an amicable resolution or the matter has been judicially resolved. At each site, there are many other parties who have similarly been identified. Many of the other parties identified are financially strong and solvent companies that appear able to pay their share of the remediation costs. Based on our information about the waste disposal practices at these sites and the environmental regulatory process in general, we believe that it is likely that ultimate remediation liability costs for each site will be apportioned among all liable parties, including site owners and waste transporters, according to the volumes and/or toxicity of the wastes shown to have been disposed of at the sites. We believe that our financial exposure for existing disposal sites will not be materially in excess of accrued reserves.

We are also a defendant in a number of other lawsuits, including product liability claims, that are insured, subject to the applicable deductibles, arising in the ordinary course of business, and we are also involved in other uninsured routine litigation incidental to our business. We currently believe none of such litigation, either individually or in the aggregate, is material to our business, operations or overall financial condition. However, litigation is inherently unpredictable, and resolutions or dispositions of claims or lawsuits by settlement or otherwise could have an adverse impact on our financial position, results of operations or cash flows for the reporting period in which any such resolution or disposition occurs.

Although none of the aforementioned potential liabilities can be quantified with absolute certainty except as otherwise indicated above, we have established or adjusted reserves covering exposures relating to contingencies, to the extent believed to be reasonably estimable and probable based on past experience and available facts. While additional exposures beyond these reserves could exist, they currently cannot be estimated. We will continue to evaluate and update the reserves as necessary and appropriate.

16. WARRANTY RESERVE

We have recorded reserves for product warranty claims that are included in current liabilities. The following is a summary of the activity in the warranty reserve:

	Year Ended December 31,		
	2022	2021	2020
	(Amounts in thousands)		
Balance — January 1	\$ 23,893	\$ 27,944	\$ 30,854
Accruals for warranty expense, net of adjustments	17,342	19,179	21,701
Settlements made	(19,188)	(23,230)	(24,611)
Balance — December 31	<u>\$ 22,047</u>	<u>\$ 23,893</u>	<u>\$ 27,944</u>

17. SHAREHOLDERS' EQUITY

Dividends – Generally, our dividend date-of-record is in the last month of the quarter, and the dividend is paid the following month. Any subsequent dividends will be reviewed by our Board of Directors and declared in its discretion.

Dividends declared per share were as follows:

	Year Ended December 31,		
	2022	2021	2020
Dividends declared per share	\$0.80	\$0.80	\$0.80

Share Repurchase Program – In 2014, our Board of Directors approved a \$500.0 million share repurchase authorization. Our share repurchase program does not have an expiration date, and we reserve the right to limit or terminate the repurchase program at any time without notice.

We repurchased no shares of our outstanding common stock during the year ended December 31, 2022, compared to 440,000 repurchases of shares of our outstanding common stock for \$17.5 million and 1,057,115 repurchases of shares of our outstanding common stock for \$32.1 million during the years ended December 31, 2021 and 2020, respectively. As of December 31, 2022, we had \$96.1 million of remaining capacity under our current share repurchase program.

18. INCOME TAXES

The provision (benefit) for income taxes consists of the following:

	Year Ended December 31,		
	2022	2021	2020
(Amounts in thousands)			
Current:			
U.S. federal	\$ 45,130	\$ 66,486	\$ 40,234
Foreign	40,876	29,987	42,487
State and local	6,177	1,478	5,894
Total current provision (benefit)	92,183	97,951	88,615
Deferred:			
U.S. federal	(88,498)	(92,021)	(50,038)
Foreign	(42,756)	(4,339)	26,742
State and local	(4,568)	(4,185)	(3,902)
Total deferred provision (benefit)	(135,822)	(100,545)	(27,198)
Total provision (benefit)	<u>\$ (43,639)</u>	<u>\$ (2,594)</u>	<u>\$ 61,417</u>

The provision for income taxes differs from the statutory corporate rate due to the following:

	Year Ended December 31,		
	2022	2021	2020
(Amounts in millions)			
Statutory federal income tax at 21%	\$ 32.4	\$ 28.1	\$39.2
Base Erosion and Anti-abuse Tax	(7.6)	7.6	—
Foreign impact, net	(22.3)	(158.0)	0.1
Change in valuation allowances	(50.5)	146.6	26.9
State and local income taxes, net	1.6	(2.7)	2.0
Reversal of deferred tax liabilities following legal entity reorganizations	—	(22.6)	—
Research and development credit	(1.0)	(3.6)	(5.2)
Non-deductible items	2.3	4.4	1.8
U.S. federal tax return to accrual adjustments, not separately disclosed in other categories	1.8	(0.8)	(1.6)
Recognition of compensation costs related to restricted shares	2.4	(1.3)	1.0
Intercompany profit in inventory	(2.0)	(0.3)	0.3
Other, net	(0.7)	—	(3.1)
Total	<u>(43.6)</u>	<u>(2.6)</u>	<u>61.4</u>
Effective tax rate	<u>(28.3)%</u>	<u>(1.9)%</u>	<u>30.4%</u>

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act of 2017 (the “Tax Reform Act”), which provided the base-erosion and anti-abuse tax (“BEAT”) provision which effectively creates a new minimum tax on certain deductible payments to foreign affiliates. For the year ended December 31, 2022, we are not subject to BEAT tax, and the previously recorded 2021 BEAT tax was reversed in 2022 following finalization of the 2021 U.S. federal income tax return.

For the year ended December 31, 2022, the change in valuation allowances is driven mainly by the release of the valuation allowance against our deferred tax assets in Germany and Mexico partially offset by a valuation allowance establishment in Argentina as well as the release of the valuation allowance on our U.S. foreign tax credit carryforwards on general category income. The Company determined that the net deferred tax assets in Germany and Mexico are realizable based on recent history of profitability and future income projections. In addition, we determined that the U.S. foreign tax credit carryforwards on general category income were realizable based on the development of a tax planning strategy.

For the year ended December 31, 2021, the net foreign impact is driven mainly by the Hungarian net operating loss and foreign tax credit carryforward that are both fully offset in the change in valuation allowance (see discussion below).

For the years ended December 31, 2022, 2021 and 2020 we have asserted indefinite reinvestment on certain earnings of our foreign subsidiaries. As of December 31, 2022, we had not recorded approximately \$24.5 million of deferred tax liabilities associated with remaining unremitted earnings considered indefinitely reinvested, specifically related to foreign withholding taxes that would be due upon repatriation of the designated earnings to the U.S. While the company has estimated the foreign withholding tax impact related to distributing earnings currently deemed permanently reinvested, the calculation of the potential US tax consequences associated with the distribution of earnings currently deemed permanently reinvested is impracticable.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the consolidated deferred tax assets and liabilities were:

	December 31,	
	2022	2021
	(Amounts in thousands)	
Deferred tax assets related to:		
Net operating loss carryforwards	\$ 183,541	\$ 200,196
Credit and capital loss carryforwards	197,774	185,832
Warranty and accrued liabilities	49,302	26,116
Section 59(e) capitalized expenses	54,486	43,434
Other.	168,933	161,418
Total deferred tax assets	654,036	616,996
Valuation allowances	(356,557)	(415,962)
Net deferred tax assets.	<u>\$ 297,479</u>	<u>\$ 201,034</u>
Deferred tax liabilities related to:		
Goodwill and intangibles.	\$(123,088)	\$(123,133)
Foreign undistributed earnings	(11,154)	(15,529)
Operating lease right-of-use-assets	(20,453)	(25,556)
Other.	(1,395)	(1,936)
Total deferred tax liabilities.	<u>(156,090)</u>	<u>(166,154)</u>
Deferred tax asset (liabilities), net	<u>\$ 141,389</u>	<u>\$ 34,880</u>

We had \$1,475.0 million of U.S. and foreign net operating loss carryforwards at December 31, 2022. Of this total, \$19.8 million are state net operating losses. State net operating losses generated in the U.S., if unused, will expire in 2027. \$234.0 million of our foreign net operating losses carry forward without expiration. Our Hungarian net operating loss of \$1,089.0 million that has a full valuation allowance (see discussion below), if unused, will expire

in 2025. The remaining foreign net operating losses of \$132.1 million that do not carry forward without expiration, if unused, will expire between 2023-2033. Additionally, we had \$93.5 million of foreign tax credit carryforwards at December 31, 2022, that have a valuation allowance on the foreign branch category income (see discussion below), if unused, will expire between 2026-2032.

The following schedule presents the changes in deferred tax asset valuation allowance as follows:

<u>(Amounts in thousands)</u>	<u>Balance at beginning of year</u>	<u>Additions charged to cost and expenses</u>	<u>Additions charged to other accounts - currency effects and other, net</u>	<u>Deductions from reserve</u>	<u>Balance at end of year</u>
Year Ended December 31, 2022					
Deferred tax asset valuation allowance ⁽¹⁾ : . .	\$415,962	\$ 36,822	\$(11,775)	\$(84,452)	\$356,557
Year Ended December 31, 2021					
Deferred tax asset valuation allowance ⁽¹⁾ : . .	287,410	178,203	(15,572)	(34,079)	415,962
Year Ended December 31, 2020					
Deferred tax asset valuation allowance ⁽¹⁾ : . .	266,414	49,950	(529)	(28,425)	287,410

(1) Deductions from reserve result from the release of valuation allowances on deferred tax assets, expiration or utilization of net operating losses and foreign tax credits previously reserved. Additions to reserve result from the establishment of valuation allowances on deferred tax assets, generation of net operating losses and foreign tax credits.

The Company maintains a full valuation allowance against the net deferred tax assets in certain foreign jurisdictions as of December 31, 2022. As of each reporting date, management considers new evidence, both positive and negative that could affect its view of the future realization of net deferred tax assets. It is possible that within the next 12 months there may be sufficient positive evidence to release a portion or all of the remaining valuation allowance in those foreign jurisdictions. Release of the valuation allowance would result in a benefit to income tax expense for the period the release is recorded, which could have a material impact on net earnings. The timing and amount of the potential valuation allowance release are subject to significant management judgment and the level of profitability achieved.

Our valuation allowances primarily relate to the deferred tax assets established for U.S. foreign tax credit carryforwards on foreign branch category income of \$45.2 million, Hungarian net operating loss carryforward of \$98.0 million, a foreign capital loss carryforward of \$100.0 million, and other foreign deferred tax assets of \$113.4 million. The Hungarian net operating loss carryforward was a result of a local statutory impairment of investments in subsidiaries in 2021. It is more likely than not that the loss will not be utilized within its five year carryforward period and, therefore, has a full valuation allowance. The foreign capital loss carryforward was the result of a reorganization of certain foreign subsidiaries in 2019. Due to its capital nature, it is more likely than not that the loss will not be utilized within its ten year carryforward period and, therefore, has a full valuation allowance.

Earnings before income taxes comprised:

	<u>Year Ended December 31,</u>		
	<u>2022</u>	<u>2021</u>	<u>2020</u>
	<u>(Amounts in thousands)</u>		
U.S.	\$ 63,508	\$ (52,915)	\$ 73,109
Foreign	90,868	186,504	129,183
Total	<u>\$154,376</u>	<u>\$133,589</u>	<u>\$202,292</u>

A tabular reconciliation of the total gross amount of unrecognized tax benefits, excluding interest and penalties, is as follows (in millions):

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Balance — January 1	\$49.9	\$54.8	\$40.6
Gross amount of increase (decrease) in unrecognized tax benefits resulting from tax positions taken:			
During a prior year	5.4	8.0	3.8
During the current period	5.8	4.5	11.1

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Decreases in unrecognized tax benefits relating to:			
Settlements with taxing authorities	(5.5)	(10.2)	(0.2)
Lapse of the applicable statute of limitations	(4.1)	(5.1)	(2.5)
Increase (decrease) in unrecognized tax benefits relating to foreign currency translation adjustments	<u>(1.3)</u>	<u>(2.1)</u>	<u>2.0</u>
Balance — December 31	<u>\$50.2</u>	<u>\$ 49.9</u>	<u>\$54.8</u>

The amount of gross unrecognized tax benefits at December 31, 2022, was \$71.1 million, which includes \$20.9 million of accrued interest and penalties. Of this amount \$57.5 million, if recognized, would favorably impact our effective tax rate.

With limited exception, we are no longer subject to U.S. federal income tax audits for years through 2017, state and local income tax audits for years through 2016 or foreign income tax audits for years through 2015. We are currently under examination for various years in Canada, China, Germany, India, Indonesia, Italy, Kenya, Madagascar, Malaysia, Mexico, the Philippines, Saudi Arabia, the U.S. and Venezuela.

It is reasonably possible that within the next 12 months the effective tax rate will be impacted by the resolution of some or all of the matters audited by various taxing authorities. It is also reasonably possible that we will have the statute of limitations close in various taxing jurisdictions within the next 12 months. As such, we estimate we could record a reduction in our tax expense up to approximately \$12 million within the next 12 months.

19. BUSINESS SEGMENT INFORMATION

Our business segments share a focus on industrial flow control technology and have a high number of common customers. These segments also have complementary product offerings and technologies that are often combined in applications that provide us a net competitive advantage. Our segments also benefit from our global footprint and our economies of scale in reducing administrative and overhead costs to serve customers more cost effectively.

We conduct our operations through two business segments based on type of product and how we manage the business:

- FPD for custom, highly-engineered pumps, pre-configured industrial pumps, pump systems, mechanical seals, auxiliary systems and replacement parts and related services; and
- FCD for engineered and industrial valves, control valves, actuators and controls and related services.

Our corporate headquarters does not constitute a separate division or business segment. Amounts classified as “Eliminations and All Other” include corporate headquarters costs and other minor entities that do not constitute separate segments. Inter segment sales and transfers are recorded at cost plus a profit margin, with the sales and related margin on such sales eliminated in consolidation.

The following is a summary of the financial information of our reportable segments as of and for the years ended December 31, 2022, 2021 and 2020 reconciled to the amounts reported in the consolidated financial statements.

	<u>FPD</u>	<u>FCD</u>	<u>Subtotal— Reportable Segments</u>	<u>Eliminations and All Other</u>	<u>Consolidated Total</u>
(Amounts in thousands)					
Year Ended December 31, 2022:					
Sales to external customers	\$2,518,000	\$1,097,120	\$3,615,120	\$ —	\$3,615,120
Intersegment sales	4,508	3,489	7,997	(7,997)	—
Segment operating income (loss)	207,957	113,417	321,374	(124,155)	197,219
Depreciation and amortization	49,654	18,931	68,585	22,368	90,953
Identifiable assets	3,110,733	1,269,690	4,380,423	410,211	4,790,634
Capital expenditures	34,295	17,178	51,473	24,814	76,287

	FPD	FCD	Subtotal— Reportable Segments	Eliminations and All Other	Consolidated Total
(Amounts in thousands)					
Year Ended December 31, 2021:					
Sales to external customers	\$2,468,098	\$1,072,962	\$3,541,060	\$ —	\$3,541,060
Intersegment sales	2,750	2,924	5,674	(5,674)	—
Segment operating income (loss)	243,203	119,651	362,854	(92,095)	270,759
Depreciation and amortization	51,094	21,286	72,380	27,442	99,822
Identifiable assets	2,927,346	1,223,316	4,150,662	599,106	4,749,768
Capital expenditures	21,575	12,283	33,858	21,078	54,936

	FPD	FCD	Subtotal— Reportable Segments	Eliminations and All Other	Consolidated Total
(Amounts in thousands)					
Year Ended December 31, 2020:					
Sales to external customers	\$2,673,705	\$1,054,429	\$3,728,134	\$ —	\$3,728,134
Intersegment sales	1,965	3,120	5,085	(5,085)	—
Segment operating income (loss)	270,960	125,573	396,533	(146,256)	250,277
Depreciation and amortization	52,390	21,949	74,339	26,414	100,753
Identifiable assets	3,039,069	1,308,136	4,347,205	967,472	5,314,677
Capital expenditures	21,714	14,043	35,757	21,648	57,405

Geographic Information — We attribute sales to different geographic areas based on our facilities' locations. Long-lived assets are classified based on the geographic area in which the assets are located and exclude deferred taxes, goodwill and intangible assets. Sales and long-lived assets by geographic area are as follows:

Year Ended December 31, 2022				
	Sales	Percentage	Long-Lived Assets	Percentage
(Amounts in thousands, except percentages)				
United States	\$1,536,961	42.5%	\$412,896	46.6%
EMA ⁽¹⁾	1,210,436	33.5%	274,511	30.9%
Asia ⁽²⁾	524,952	14.5%	144,206	16.2%
Other ⁽³⁾	342,771	9.5%	56,132	6.3%
Consolidated total	<u>\$3,615,120</u>	<u>100.0%</u>	<u>\$887,745</u>	<u>100.0%</u>

Year Ended December 31, 2021				
	Sales	Percentage	Long-Lived Assets	Percentage
(Amounts in thousands, except percentages)				
United States	\$1,376,771	38.9%	\$476,176	49.2%
EMA ⁽¹⁾	1,270,326	35.9%	298,426	30.8%
Asia ⁽²⁾	557,314	15.7%	141,810	14.6%
Other ⁽³⁾	336,649	9.5%	51,688	5.4%
Consolidated total	<u>\$3,541,060</u>	<u>100.0%</u>	<u>\$968,100</u>	<u>100.0%</u>

	Year Ended December 31, 2020			
	Sales	Percentage	Long-Lived Assets	Percentage
	(Amounts in thousands, except percentages)			
United States	\$1,463,680	39.3%	\$455,622	46.2%
EMA ⁽¹⁾	1,385,245	37.2%	336,577	34.1%
Asia ⁽²⁾	535,440	14.4%	138,947	14.1%
Other ⁽³⁾	343,769	9.1%	55,278	5.6%
Consolidated total	<u>\$3,728,134</u>	<u>100.0%</u>	<u>\$986,424</u>	<u>100.0%</u>

(1) “EMA” includes Europe, the Middle East and Africa. U. K. accounted for approximately 10% for 2022, 10% for 2021 and 9% for 2020, of consolidated long-lived assets. No other individual country within this group represents 10% or more of consolidated totals for any period presented.

(2) “Asia” includes Asia and Australia. No individual country within this group represents 10% or more of consolidated totals for any period presented.

(3) “Other” includes Canada and Latin America. No individual country within this group represents 10% or more of consolidated totals for any period presented.

Net sales to international customers, including export sales from the U.S., represented approximately 62% of total sales in 2022, 67% of total sales in 2021 and 65% of total sales in 2020.

Major Customer Information — We have a large number of customers across a large number of manufacturing and service facilities and do not have sales to any individual customer that represent 10% or more of consolidated sales for any of the years presented.

20. ACCUMULATED OTHER COMPREHENSIVE LOSS

The following presents the components of accumulated other comprehensive loss (AOCL), net of related tax effects:

	2022				2021			
	Foreign currency translation items ⁽¹⁾	Pension and other post-retirement effects	Cash flow hedging activity ⁽²⁾	Total ⁽¹⁾	Foreign currency translation items ⁽¹⁾	Pension and other post-retirement effects	Cash flow hedging activity ⁽²⁾	Total ⁽¹⁾
(Amounts in thousands)								
Balance - January 1	\$(456,025)	\$(101,665)	\$(1,336)	\$(559,026)	\$(456,549)	\$(146,723)	\$ (488)	\$(603,760)
Other comprehensive income (loss) before reclassifications ⁽³⁾	(98,658)	16,684	314	(81,660)	524	34,960	—	35,484
Amounts reclassified from AOCL	—	(1,375)	89	(1,286)	—	10,098	(848)	9,250
Net current-period other comprehensive income (loss) ⁽³⁾	(98,658)	15,309	403	(82,946)	524	45,058	(848)	44,734
Balance - December 31	<u>\$(554,683)</u>	<u>\$(86,356)</u>	<u>\$(933)</u>	<u>\$(641,972)</u>	<u>\$(456,025)</u>	<u>\$(101,665)</u>	<u>\$(1,336)</u>	<u>\$(559,026)</u>

(1) Includes foreign currency translation adjustments attributable to noncontrolling interests of \$5.8 million, \$4.6 million and \$5.9 million for December 31, 2022, 2021 and 2020, respectively. Also includes the cumulative impacts from the changes in fair value of our cross-currency swaps, which were \$49.0 million, \$17.7 million and \$(13.8) million for December 31, 2022, 2021 and 2020, respectively.

(2) Other comprehensive loss before reclassifications and amounts reclassified from AOCL to interest expense related to designated cash flow hedges.

(3) Amounts in parentheses indicate an increase to AOCL.

The following table presents the reclassifications out of AOCL:

(Amounts in thousands)	Affected line item in the statement of income	2022 ⁽¹⁾	2021 ⁽¹⁾
Pension and other postretirement effects			
Amortization of actuarial losses ⁽²⁾	Other income (expense), net	\$(6,382)	\$(12,213)
Prior service costs ⁽²⁾	Other income (expense), net	(591)	(610)
Settlements and other ⁽²⁾	Other income (expense), net	(75)	(640)
	Tax benefit (expense)	<u>8,423</u>	<u>3,365</u>
	Net of tax	<u>\$ 1,375</u>	<u>\$(10,098)</u>
Cash flow hedging activity			
Amortization of Treasury rate lock	Interest income (expense)	\$ (117)	\$ 848
	Tax benefit (expense)	<u>28</u>	<u>—</u>
	Net of tax	<u>\$ (89)</u>	<u>\$ 848</u>

(1) Amounts in parentheses indicate decreases to income. None of the reclassification amounts have a noncontrolling interest component.

(2) These AOCL components are included in the computation of net periodic pension cost. See Note 13 for additional details.

21. REALIGNMENT PROGRAMS

In the second quarter of 2020, we identified and initiated certain realignment activities to right-size our organizational operations based on the current business environment, with the overall objective to reduce our workforce costs, including manufacturing optimization through the consolidation of certain facilities (“Realignment Program”). The realignment activities consist of restructuring and non-restructuring charges. Restructuring charges represent costs associated with the relocation of certain business activities and facility closures and include related severance costs. Non-restructuring charges are primarily employee severance associated with the workforce reductions. Severance costs primarily include costs associated with involuntary termination benefits. Expenses are primarily reported in cost of sales (“COS”) or selling, general and administrative (“SG&A”), as applicable, in our consolidated statements of income. The total investment in these activities is approximately \$95 million with the vast majority of the charges incurred in 2020 and 2021. There are certain remaining realignment activities that are being evaluated, but have not yet been finalized and therefore not included in the anticipated total investment.

Generally, the aforementioned charges will be paid in cash, except for asset write-downs, which are non-cash charges. The following is a summary of total charges, net of adjustments, incurred related to our Realignment Program:

(Amounts in thousands)	December 31, 2022				
	FPD	FCD	Subtotal— Reportable Segments	All Other	Consolidated Total
Restructuring Charges					
COS	\$ 768	\$ 93	\$ 861	\$ —	\$ 861
SG&A	<u>—</u>	<u>(4)</u>	<u>(4)</u>	<u>—</u>	<u>(4)</u>
	<u>\$ 768</u>	<u>\$ 89</u>	<u>\$ 857</u>	<u>\$ —</u>	<u>\$ 857</u>
Non-Restructuring Charges					
COS	\$(530)	\$ 86	\$(444)	\$ (61)	\$ (505)
SG&A	<u>148</u>	<u>(391)</u>	<u>(243)</u>	<u>(274)</u>	<u>(517)</u>
	<u>\$(382)</u>	<u>\$(305)</u>	<u>\$(687)</u>	<u>\$(335)</u>	<u>\$(1,022)</u>
Total Realignment Charges					
COS	\$ 238	\$ 179	\$ 417	\$ (61)	\$ 356
SG&A	<u>148</u>	<u>(395)</u>	<u>(247)</u>	<u>(274)</u>	<u>(521)</u>
Total	<u>\$ 386</u>	<u>\$(216)</u>	<u>\$ 170</u>	<u>\$(335)</u>	<u>\$ (165)</u>

	December 31, 2021				
	FPD	FCD	Subtotal- Reportable Segments	All Other	Consolidated Total
(Amounts in thousands)					
Restructuring Charges					
COS	\$ 8,046	\$ 811	\$ 8,857	\$ —	\$ 8,857
SG&A	665	(9)	656	—	656
	<u>\$ 8,711</u>	<u>\$ 802</u>	<u>\$ 9,513</u>	<u>\$ —</u>	<u>\$ 9,513</u>
Non-Restructuring Charges					
COS	\$ 6,203	\$1,196	\$ 7,399	\$ 590	\$ 7,989
SG&A	368	708	1,076	3,913	4,989
	<u>\$ 6,571</u>	<u>\$1,904</u>	<u>\$ 8,475</u>	<u>\$4,503</u>	<u>\$12,978</u>
Total Realignment and Transformation Charges					
COS	\$14,249	\$2,007	\$16,256	\$ 590	\$16,846
SG&A	1,033	699	1,732	3,913	5,645
Total	<u>\$15,282</u>	<u>\$2,706</u>	<u>\$17,988</u>	<u>\$4,503</u>	<u>\$22,491</u>

The following is a summary of total inception to date charges, net of adjustments, related to the Realignment Program:

	Inception to Date				
	FPD	FCD	Subtotal- Reportable Segments	All Other	Consolidated Total
(Amounts in thousands)					
Restructuring Charges					
COS	\$26,642	\$2,131	\$28,773	\$ —	\$28,773
SG&A	716	328	1,044	(16)	1,028
	<u>\$27,358</u>	<u>\$2,459</u>	<u>\$29,817</u>	<u>\$ (16)</u>	<u>\$29,801</u>
Non-Restructuring Charges					
COS	\$24,877	\$ 808	\$25,685	\$ 581	\$26,266
SG&A	11,197	4,871	16,068	21,521	37,589
	<u>\$36,074</u>	<u>\$5,679</u>	<u>\$41,753</u>	<u>\$22,102</u>	<u>\$63,855</u>
Total Realignment Charges					
COS	\$51,519	\$2,939	\$54,458	\$ 581	\$55,039
SG&A	11,913	5,199	17,112	21,505	38,617
Total	<u>\$63,432</u>	<u>\$8,138</u>	<u>\$71,570</u>	<u>\$22,086</u>	<u>\$93,656</u>

Restructuring charges represent costs related to employee severance at closed facilities, contract termination costs, asset write-downs and other costs. Contract termination costs include costs related to the termination of operating leases or other contract termination costs. Asset write-downs include accelerated depreciation of fixed assets, accelerated amortization of intangible assets, divestiture of certain non-strategic assets and inventory write-downs. Other costs generally include costs related to employee relocation, asset relocation, vacant facility costs (i.e., taxes and insurance) and other charges.

The following is a summary of restructuring charges, net of adjustments, for our restructuring activities. Restructuring charges incurred related to our Realignment Program:

	December 31, 2022				
	Severance	Contract Termination	Asset Write- Downs	Other	Total
(Amounts in thousands)					
COS	\$122	\$327	\$273	\$139	\$861
SG&A	(4)	—	—	—	(4)
Total	<u>\$118</u>	<u>\$327</u>	<u>\$273</u>	<u>\$139</u>	<u>\$857</u>

(Amounts in thousands)	December 31, 2021				
	<u>Severance</u>	<u>Contract Termination</u>	<u>Asset Write-Downs</u>	<u>Other</u>	<u>Total</u>
COS	\$ 964	\$34	\$2,683	\$5,176	\$8,857
SG&A	<u>167</u>	<u>—</u>	<u>—</u>	<u>489</u>	<u>656</u>
Total	<u>\$1,131</u>	<u>\$34</u>	<u>\$2,683</u>	<u>\$5,665</u>	<u>\$9,513</u>

The following is a summary of total inception to date charges, net of adjustments, related to our Realignment Program:

(Amounts in thousands)	Inception to Date				
	<u>Severance</u>	<u>Contract Termination</u>	<u>Asset Write-Downs</u>	<u>Other</u>	<u>Total</u>
COS	\$16,324	\$413	\$4,368	\$7,668	\$28,773
SG&A	<u>247</u>	<u>—</u>	<u>14</u>	<u>767</u>	<u>1,028</u>
Total	<u>\$16,571</u>	<u>\$413</u>	<u>\$4,382</u>	<u>\$8,435</u>	<u>\$29,801</u>

The following represents the activity, primarily severance, related to the restructuring reserve for the Realignment Programs for the years ended December 31, 2022 and 2021:

(Amounts in thousands)	<u>2022</u>	<u>2021</u>
Balance at January 1,	\$ 4,868	\$ 18,255
Charges	584	6,829
Cash expenditures	(3,518)	(18,942)
Other non-cash adjustments, including currency	<u>(969)</u>	<u>(1,274)</u>
Balance at December 31,	<u>\$ 965</u>	<u>\$ 4,868</u>

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) are designed to provide reasonable assurance that the information, which we are required to disclose in the reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the U.S. SEC rules and forms, and that such information is accumulated and communicated to our management, including our Principal Executive Officer and Principal Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

In connection with the preparation of this Annual Report on Form 10-K for the year ended December 31, 2022, our management, under the supervision and with the participation of our Principal Executive Officer and our Principal Financial Officer, carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2022. Based on this evaluation, our Principal Executive Officer and Principal Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2022.

Management’s Report on Internal Control Over Financial Reporting

Our management, under the supervision and with the participation of our Principal Executive Officer and Principal Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States (“U.S. GAAP”). Internal control over financial reporting includes policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Under the supervision and with the participation of our Principal Executive Officer and Principal Financial Officer, our management conducted an assessment of our internal control over financial reporting as of December 31, 2022, based on the criteria established in Internal Control - Integrated Framework (2013), issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, our management concluded our internal control over financial reporting was effective as of December 31, 2022, based on criteria in *Internal Control - Integrated Framework* (2013) issued by the COSO.

The effectiveness of our internal control over financial reporting as of December 31, 2022, has been audited by PricewaterhouseCoopers LLP, our independent registered public accounting firm, as stated in their report, which is included herein.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect our internal control over financial reporting.

Other

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with existing policies or procedures may deteriorate.

ITEM 9B. *OTHER INFORMATION*

None.

ITEM 9C. *DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS*

Not applicable.

PART III

ITEM 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

The information required in this Item 10 is incorporated by reference to all information under the captions “Security Ownership of Directors and Certain Executive Officers,” “Security Ownership of Certain Beneficial Owners,” “Proposal One: Election of Directors,” “Executive Officers,” “Shareholder Proposals and Nominations,” “Delinquent Section 16(a) Reports,” to the extent applicable, and “Certain Relationships and Related Transactions” in our definitive Proxy Statement relating to our 2023 annual meeting of shareholders.

We have adopted a Code of Conduct that applies to all of our directors, officers and employees, including our Principal Executive, Principal Financial and Principal Accounting Officers, or persons performing similar functions. Our Code of Conduct is available on the Company’s website at www.flowserve.com under the “Investors - Corporate Governance” caption. We intend to disclose future amendments to certain provisions of the Code of Conduct, and waivers of the Code of Conduct granted to executive officers and directors, on the website within four business days following the date of the amendment or waiver.

ITEM 11. *EXECUTIVE COMPENSATION*

The information required in this Item 11 is incorporated by reference to all information under the captions “Executive Compensation,” “Proposal Two: Advisory Vote to Approve Executive Compensation,” “Delinquent Section 16(a) Reports,” to the extent applicable, “Security Ownership of Directors and Certain Executive Officers,” “Compensation Committee Interlocks and Insider Participation” and “Certain Relationships and Related Transactions” in our definitive Proxy Statement relating to our 2023 annual meeting of shareholders.

ITEM 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS*

The information required in this Item 12 is incorporated by reference to all information under the captions “Security Ownership of Directors and Certain Executive Officers,” “Security Ownership of Certain Beneficial Owners,” “Equity Compensation Plan Information” and “Executive Compensation” in our definitive Proxy Statement relating to our 2023 annual meeting of shareholders.

ITEM 13. *CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE*

The information required in this Item 13 is incorporated by reference to all information under the captions “Role of the Board; Corporate Governance Matters,” “Board Committees” and “Certain Relationships and Related Transactions” in our definitive Proxy Statement relating to our 2023 annual meeting of shareholders.

ITEM 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

The information required in this Item 14 is incorporated by reference to all information under the caption “Other Audit Information” in our definitive Proxy Statement relating to our 2023 annual meeting of shareholders.

PART IV

ITEM 15. *EXHIBITS AND FINANCIAL STATEMENT SCHEDULES*

(a) Documents filed as a part of this Annual Report:

1. *Consolidated Financial Statements*

The following consolidated financial statements and notes thereto are filed as part of this Annual Report:

Report of Independent Registered Public Accounting Firm (PCAOB ID 238)

Flowserve Corporation Consolidated Financial Statements:

Consolidated Balance Sheets at December 31, 2022 and 2021:

For each of the three years in the period ended December 31, 2022:

Consolidated Statements of Income

Consolidated Statements of Comprehensive Income

Consolidated Statements of Shareholders' Equity

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

2. *Consolidated Financial Statement Schedules*

None

Financial statement schedules not included in this Annual Report have been omitted because they are not applicable or the required information is shown in the consolidated financial statements or notes thereto.

3. *Exhibits*

The exhibits of this Annual Report on Form 10-K included herein are set forth below.

Exhibit No.	Description
3.1	Restated Certificate of Incorporation of Flowserve Corporation, as amended and restated effective May 20, 2021 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated May 25, 2021).
3.2	Flowserve Corporation By-Laws, as amended and restated effective August 16, 2022 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated August 17, 2022).
4.1	Senior Indenture, dated September 11, 2012, by and between Flowserve Corporation and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated September 11, 2012).
4.2	First Supplemental Indenture, dated September 11, 2012, by and among Flowserve Corporation, certain of its subsidiaries and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated September 11, 2012).
4.3	Second Supplemental Indenture, dated November 1, 2013, by and among Flowserve Corporation, certain of its subsidiaries and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated November 1, 2013).
4.4	Third Supplemental Indenture, dated March 17, 2015, by and among Flowserve Corporation, certain of its subsidiaries and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated March 17, 2015).
4.5	Fourth Supplemental Indenture, dated September 21, 2020, between Flowserve Corporation and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K dated September 22, 2020).

Exhibit No.	Description
4.6	Fifth Supplemental Indenture, dated September 23, 2021, by and between Flowserve Corporation and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated September 23, 2021).
4.7	Description of Registrant's Securities (incorporated by reference to Exhibit 4.5 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) dated February 18, 2020).
10.1	Amended and Restated Credit Agreement, dated as of September 13, 2021, among Flowserve Corporation, Bank of America, N.A., as swing line lender, a letter of credit issuer and administrative agent, and the other lenders and sing line lenders referred to therein (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated September 13, 2021).
10.2+	First Amendment to Amended and Restated Credit Agreement, dated as of February 3, 2023, among Flowserve Corporation, Bank of American, N.A., as administrative agent, and the other lenders referred to therein.
10.3	Amended and Restated Flowserve Corporation Director Cash Deferral Plan, effective January 1, 2009 (incorporated by reference to Exhibit 10.7 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2008).*
10.4	Amended and Restated Flowserve Corporation Director Stock Deferral Plan, dated effective January 1, 2009 (incorporated by reference to Exhibit 10.8 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2008).*
10.5	Trust for Non-Qualified Deferred Compensation Benefit Plans, dated February 11, 2011 (incorporated by reference to Exhibit 10.8 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2010).*
10.6	Flowserve Corporation Deferred Compensation Plan (incorporated by reference to Exhibit 10.23 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2000).*
10.7	Amendment No. 1 to the Flowserve Corporation Deferred Compensation Plan, as amended and restated, effective June 1, 2000 (incorporated by reference to Exhibit 10.50 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2002).*
10.8	Amendment to the Flowserve Corporation Deferred Compensation Plan, dated December 14, 2005 (incorporated by reference to Exhibit 10.70 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2004).*
10.9	Amendment No. 3 to the Flowserve Corporation Deferred Compensation Plan, as amended and restated effective June 1, 2000 (incorporated by reference to Exhibit 10.22 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2007).*
10.10	Flowserve Corporation Senior Management Retirement Plan, amended and restated effective November 2, 2018 (incorporated by reference to Exhibit 10.13 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2018).*
10.11	Flowserve Corporation Supplemental Executive Retirement Plan, amended and restated effective November 2, 2018 (incorporated by reference to Exhibit 10.14 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2018).*
10.12	Flowserve Corporation Equity and Incentive Compensation Plan (incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A (File No. 001-13179) dated April 3, 2009).*
10.13	Flowserve Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A (File No. 001-13179) dated April 11, 2019).*
10.14+	Amendment to Flowserve Corporation 2020 Long-Term Incentive Plan, dated December 8, 2022.*
10.15	Form of Indemnification Agreement for all Directors and Officers (incorporated by reference to Exhibit 10.47 to the Registrant's Annual Report on Form 10-K (File No. 001-13179) for the year ended December 31, 2015).
10.16	Offer Letter, dated as of February 6, 2017, by and between Flowserve Corporation and R. Scott Rowe (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated as of February 8, 2017).*

Exhibit No.	Description
10.17	Flowserve Corporation Change In Control Severance Plan, amended and restated effective November 2, 2018 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended September 30, 2018).*
10.18	Flowserve Corporation Executive Officer Severance Plan, as amended and restated effective August 17, 2022 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended September 30, 2022).*
10.19	Flowserve Corporation Annual Incentive Plan, as amended and restated effective August 17, 2022 (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended September 30, 2022).*
10.20	Form of Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended June 30, 2020).*
10.21+	Form of 2023 Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (Annual Award).*
10.22	Form of 2021 Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (Retention Award) (incorporated by reference to Exhibit 10.23 to the Registrant's Annual report on Form 10-K (File No. 001-13179) for the year ended December 31, 2021).*
10.23	Form of 2022 Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended March 31, 2022).*
10.24	Form of Performance Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (TSR) (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended June 30, 2020).*
10.25	Form of Performance Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (ROIC) (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended June 30, 2020).*
10.26+	Form of 2023 Performance Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan.*
10.27	Form of 2022 Performance Restricted Stock Unit Agreement for certain officers pursuant to the Flowserve Corporation 2020 Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended March 31, 2022).*
10.28	Amendment to Performance Restricted Stock Unit Agreements under the Flowserve Corporation 2020 Long-Term Incentive Plan by and between Flowserve Corporation and R. Scott Rowe dated April 19, 2022 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-13179) for the quarter ended June 30, 2022).*
14.1	Flowserve Corporation Employee Code of Conduct (incorporated by reference to Exhibit 14.1 to the Registrant's Current Report on Form 8-K (File No. 001-13179) dated as of August 15, 2019).
21.1+	Subsidiaries of the Registrant.
23.1+	Consent of PricewaterhouseCoopers LLP.
31.1+	Certification of Principal Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2+	Certification of Principal Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1++	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2++	Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

Exhibit No.	Description
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	The cover page from the Company's Annual Report on Form 10-K for the year ended December 31, 2022, formatted in Inline XBRL (included as Exhibit 101).

* Management contract or compensatory plans or arrangement.

+ Filed herewith.

++ Furnished herewith.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 7, 2023

FLOWSERVE CORPORATION

By: /s/ R. Scott Rowe

R. Scott Rowe

President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated.

Signature	Title	Date
<u>/s/ David E. Roberts</u> David E. Roberts	Non-Executive Chairman of the Board	March 7, 2023
<u>/s/ R. Scott Rowe</u> R. Scott Rowe	President, Chief Executive Officer and Director (Principal Executive Officer)	March 7, 2023
<u>/s/ Amy B. Schwetz</u> Amy B. Schwetz	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	March 7, 2023
<u>/s/ Scott K. Vopni</u> Scott K. Vopni	Vice President and Chief Accounting Officer (Principal Accounting Officer)	March 7, 2023
<u>/s/ Sujeet Chand</u> Sujeet Chand	Director	March 7, 2023
<u>/s/ Ruby R. Chandy</u> Ruby R. Chandy	Director	March 7, 2023
<u>/s/ Gayla J. Delly</u> Gayla J. Delly	Director	March 7, 2023
<u>/s/ John R. Friedery</u> John R. Friedery	Director	March 7, 2023
<u>/s/ John L. Garrison</u> John L. Garrison	Director	March 7, 2023
<u>/s/ Michael C. McMurray</u> Michael C. McMurray	Director	March 7, 2023
<u>/s/ Kenneth I. Siegel</u> Kenneth I. Siegel	Director	March 7, 2023
<u>/s/ Carlyn R. Taylor</u> Carlyn R. Taylor	Director	March 7, 2023

CORPORATE INFORMATION

Executive Officers

R. Scott Rowe

President and Chief Executive Officer

Elizabeth L. Burger

Senior Vice President,
Chief Human Resources Officer

Lamar L. Duhon

President,
Flowserve Pumps Division

Susan C. Hudson

Senior Vice President,
Chief Legal Officer
and Corporate Secretary

Amy B. Schwetz

Senior Vice President,
Chief Financial Officer

Kirk R. Wilson

President,
Flow Control Division

John (Jay) E. Roueche, III

Vice President,
Treasurer and Investor Relations

Scott K. Vopni

Vice President,
Chief Accounting Officer

Board of Directors

David E. Roberts

Non-Executive Chairman of the Board
Former Chief Executive Officer, Gavilan Resources, LLC

R. Scott Rowe

President and CEO, Flowserve Corporation

Sujeet Chand

Former Senior Vice President and Chief Technology Officer,
Rockwell Automation

AUDIT COMMITTEE
FINANCE & RISK COMMITTEE

Ruby R. Chanday

Former President, Industrial Division, Pall Corporation

FINANCE & RISK COMMITTEE (CHAIR)
CORPORATE GOVERNANCE & NOMINATING COMMITTEE

Gayla J. Delly

Former President and CEO, Benchmark Electronics, Inc.

ORGANIZATION & COMPENSATION COMMITTEE
CORPORATE GOVERNANCE & NOMINATING COMMITTEE (CHAIR)

John R. Friedery

Former Senior Vice President, Ball Corporation
President, Metal Beverage Packaging, Americas & Asia

CORPORATE GOVERNANCE & NOMINATING COMMITTEE
ORGANIZATION & COMPENSATION COMMITTEE

John L. Garrison

Chairman, President and CEO, Terex Corporation

ORGANIZATION & COMPENSATION COMMITTEE (CHAIR)
CORPORATE GOVERNANCE & NOMINATING COMMITTEE

Michael C. McMurray

Executive Vice President and Chief Financial Officer,
LyondellBasell Industries N.V.

AUDIT COMMITTEE (CHAIR)
ORGANIZATION & COMPENSATION COMMITTEE

Thomas B. Okray

Executive Vice President and Chief Financial Officer,
Eaton Corporation

AUDIT COMMITTEE

Kenneth I. Siegel

Senior Vice President, Loews Corporation

AUDIT COMMITTEE
FINANCE & RISK COMMITTEE

Carlyn R. Taylor

Global Co-Leader of Corporation Finance, FTI Consulting
Chairperson, FTI Capital Advisors

AUDIT COMMITTEE
FINANCE & RISK COMMITTEE

Corporate Information

World Headquarters

5215 North O'Connor Blvd
Suite 700
Irving, Texas 75039
Telephone: 972-443-6500
Facsimile: 972-443-6800

Transfer Agent

For stock and legal transfers, changes of address,
lost stock certificates, elimination of duplicate
mailings of shareholder information or general
inquiries about stock ownership, contact:

EQ Shareowner Services
1110 Centre Point Curve, Suite 101
Mendota Heights, MN 55120-4100

Stock Exchange Listing

Flowserve Corporation common stock is listed on
the New York Stock Exchange (NYSE) and traded
under the symbol FLS. The company's records
show that at March 13, 2023, 131,144,533 shares
of Flowserve common stock were outstanding

(excluding treasury shares). On March 13, 2023,
the company's records showed approximately 893
shareholders of record.

**Availability of Forms Filed with the
Securities and Exchange Commission**

Shareholders may obtain, without charge,
copies of the following documents as filed with
the Securities and Exchange Commission:

- Annual Reports on Form 10-K
- Quarterly Reports on Form 10-Q
- Current Reports on Form 8-K
- Changes in Beneficial Ownership
- Proxy Statements

Copies may be obtained by accessing the
company's website or by providing a
written request for such copies or additional
information about Flowserve operating or
financial performance to:

Investor Relations
Flowserve Corporation
5215 North O'Connor Blvd, Suite 700
Irving, Texas 75039
972-443-6500
investorrelations@flowserve.com

To obtain additional information on Flowserve,
please visit the company's website at
www.flowserve.com.

**Firms That Have Provided Equity Research
Coverage on Flowserve Include:**

Bank of America Merrill Lynch
Citi
Cowen & Co.
Jeffries
Goldman Sachs & Co.
Mizuho Securities USA LLC
Morgan Stanley
Oppenheimer & Co.
RBC Capital Markets
Robert W. Baird & Co.
Stifel Nicolaus & Co.
UBS Equities

Flowserve, Accord, Anchor Darling, Argus, Atbmac, Autamax, BW Seals,
Byron Jackson, Calder, Durametallic, Durco, Edward, GASPAC, IDP,
INNOMAG, Interseal, IPS, Kämmer, Lawrence, Limitorque, Logix, McCANNA,
NAF, Niigata Worthington, Noble Alloy, Norbro, Nordstrom, Pac-Seal,
PMV, Science, Serck Audco, SIH, TKL, United Centrifugal, Valbart, Valtek,
Worcester Controls and Worthington are all trademarks
of Flowserve Corporation.



North America

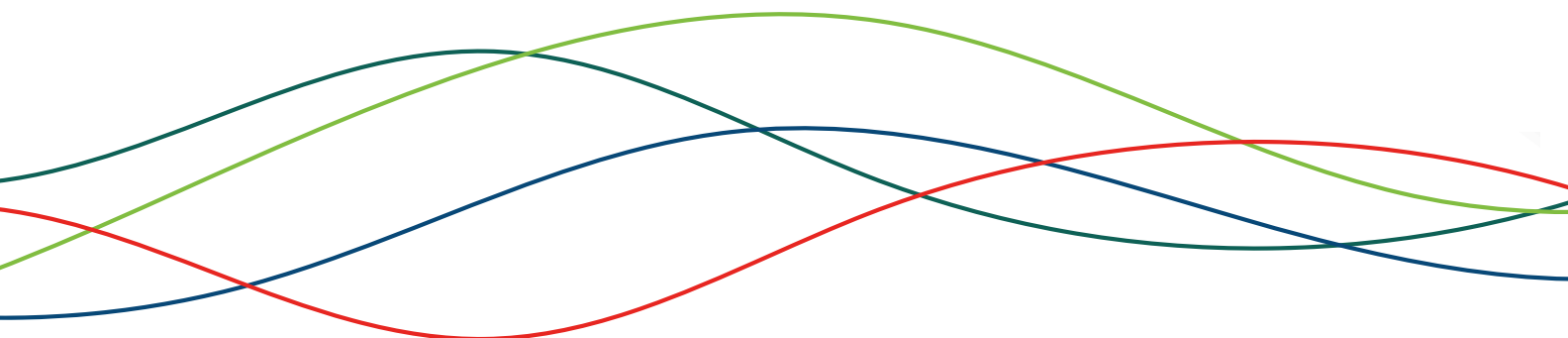
Latin America

Europe

Middle East

Africa

Asia Pacific



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Irving, Texas 75039

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