



this is why we choose Cincinnati

2022 ANNUAL REPORT ON
FORM 10-K



Cincinnati Financial Corporation stands among the 25 largest property casualty insurers in the nation, based on net written premiums. A select group of independent agencies actively markets our business, home and auto insurance in 46 states. Within this select group, we also seek to become the life insurance carrier of choice and to help agents and their clients – our policyholders – by offering leasing and financing services.

Three competitive advantages distinguish your company, positioning us to build shareholder value and long-term success:

1. Commitment to our network of professional independent insurance agencies and to their continued success
2. Operating structure that supports local decision making, showcasing the strength of our field claims service, field underwriting and field support services
3. Financial strength to fulfill our promises and be a consistent market for our agents' business, supporting stability and confidence

Learn more about where we are today and where we are headed by reviewing our publications on cinfin.com/investors.

this is why we choose Cincinnati

When their community was devastated by a tornado, independent insurance agents and brothers Roy and Keith Riley weren't sure what to expect when the dust settled. But the one thing they could be certain of was Cincinnati's fast and empathetic response. To their clients' claims — and their own.

Insurance is a relationship business. The Riley brothers know and trust the Cincinnati associates who serve their clients. That's why Roy and Keith chose a Cincinnati Insurance policy for themselves and why they recommend us to their clients.

Our national TV and digital advertising campaign includes the Rileys' story and those of other independent agents who also recommend Cincinnati Insurance as a top carrier. Read more about some of the agents who choose Cincinnati in our 2023 Annual Letter to Shareholders.

Where the agents you trust



place their trust.

[Learn More](#)



**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.

☐ 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 000-04604

Cincinnati Financial Corporation

(Exact name of registrant as specified in its charter)

Ohio
(State of incorporation)

31-0746871
(I.R.S. Employer Identification No.)

6200 S. Gilmore Road
Fairfield, Ohio 45014-5141
(Address of principal executive offices) (Zip Code)
(513) 870-2000
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, \$2.00 par	CINF	Nasdaq Global Select Market

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 emerging growth company. See definition 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. ☒

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 Act). Yes ☐ No ☒

The aggregate market value of voting stock held by nonaffiliates of the Registrant based on the closing price of \$118.98 per share as reported on Nasdaq Global Select Market on June 30, 2022, was \$18,533,373,847.

As of February 15, 2023, there were 157,240,556 shares of common stock outstanding.

Document Incorporated by Reference

Portions of the definitive Proxy Statement for Cincinnati Financial Corporation's Annual Meeting of Shareholders to be held on May 6, 2023, are incorporated by reference into Part III of this Form 10-K.

2022 ANNUAL REPORT ON FORM 10-K

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Part I

ITEM 1. Business

Cincinnati Financial Corporation – Introduction

We are an Ohio corporation formed in 1968. Our lead subsidiary, The Cincinnati Insurance Company, was founded in 1950. Our main business is property casualty insurance marketed through independent insurance agencies in 46 states. Our headquarters is in Fairfield, Ohio.

Cincinnati Financial Corporation owns 100% of four subsidiaries: The Cincinnati Insurance Company (Cincinnati Insurance), Cincinnati Global Underwriting Ltd.SM (Cincinnati Global), CSU Producer Resources Inc. and CFC Investment Company. In addition, the parent company has an investment portfolio, owns the headquarters property and is responsible for corporate borrowings and shareholder dividends.

The Cincinnati Insurance Company owns 100% of four additional insurance subsidiaries. Our standard market property casualty insurance group includes two of those subsidiaries – The Cincinnati Casualty Company and The Cincinnati Indemnity Company. This group writes a broad range of business, homeowner and auto policies. The Cincinnati Insurance Company also conducts the business of our reinsurance assumed operations, known as Cincinnati Re[®]. Other subsidiaries of The Cincinnati Insurance Company include: The Cincinnati Life Insurance Company (Cincinnati Life), which provides life insurance policies and fixed annuities; and The Cincinnati Specialty Underwriters Insurance Company (Cincinnati Specialty Underwriters), which offers excess and surplus lines insurance products. In this report and elsewhere we often refer to any or all of these five companies as The Cincinnati Insurance Companies.

Cincinnati Global owns 100% of Cincinnati Global Underwriting Agency Ltd.SM, a London-based, global specialty underwriter for Lloyd's Syndicate 318, and Cincinnati Global Dedicated No. 2 Ltd.SM, a Lloyd's corporate member and vehicle through which capital is provided by Cincinnati Financial Corporation and third-party names at Lloyd's.

The two noninsurance subsidiaries of Cincinnati Financial Corporation are CSU Producer Resources, which offers insurance brokerage services to our independent agencies so their clients can access our excess and surplus lines insurance products; and CFC Investment Company, which offers commercial leasing and financing services to our agencies, their clients and other customers.

Our filings with the U.S. Securities and Exchange Commission (SEC) are available on our website, cinfm.com/investors, as soon as possible after they have been filed with the SEC. Reports filed with the SEC may also be viewed at sec.gov. These filings include annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and exhibits and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934. In this report we reference various websites. These websites, including our own, are not incorporated by reference in this Annual Report on Form 10-K.

Periodically, we refer to estimated industry data so that we can give information about our performance versus the overall U.S. insurance industry. Unless otherwise noted, the industry data is prepared by A.M. Best, a leading insurance industry statistical, analytical and insurer financial strength and credit rating organization. Information from A.M. Best is presented on a statutory accounting basis for insurance company regulation in the United States of America. When we provide our results on a comparable statutory accounting basis, we label it as such; all other company data is presented in accordance with accounting principles generally accepted in the United States of America (GAAP).

Our Business and Our Strategy

Introduction

The Cincinnati Insurance Company was founded more than 70 years ago by four independent insurance agents. They established the mission that continues to guide all of the companies in the Cincinnati Financial Corporation family – to grow profitably and enhance the ability of local independent insurance agents to deliver quality financial protection to the people and businesses they serve by:

- providing insurance market stability through financial strength
- producing competitive, up-to-date products and services
- developing associates committed to superior service

At year-end 2022, a select group of independent agencies in 46 states actively marketed our property casualty insurance within their communities. Standard market commercial lines and excess and surplus lines policies were marketed in 42 of those states. Personal lines policies were marketed in 45 of those states. Within our select group of agencies, we also seek to become the life insurance carrier of choice and to help agents and their clients – our policyholders – by offering leasing and financing services.

Three competitive advantages distinguish our company, positioning us to build shareholder value and to be successful overall:

- Commitment to our professional independent insurance agencies and to their continued success
- Financial strength to fulfill our promises and be a consistent market for our agents' business, supporting stability and confidence
- Operating structure that supports local decision making, showcasing our claims excellence and allowing us to balance growth with underwriting discipline

Management and our board of directors has developed an agency-focused strategy that we believe positions our company for long-term success and value creation, while managing difficult economic, market or pricing cycles. We broadly group our key strategic initiatives into two areas of focus – managing insurance profitability and driving premium growth, as summarized below. Our strategic priorities include meeting the wants and needs of our agent customers, attracting and developing talented associates, achieving best-in-class field service and continually enhancing operational efficiency and effectiveness. To help guide our strategic efforts, we have placed an emphasis on innovation to accelerate operational improvement and to also favorably position us for the future. We find innovative ideas in many places, including: internally through management and other associates, with our traditional business partners and in the start-up business community.

- Manage insurance profitability – Implementation of these initiatives is intended to enhance underwriting expertise and knowledge, thereby increasing our ability to manage our business while also gaining efficiency. Better profit margins may be achieved with additional information and expanded pricing capabilities we can access with the use of technology and analytics. This includes segmentation efforts that emphasize identification and retention of insurance policies we believe have relatively stronger pricing, while seeking more aggressive renewal terms and conditions on policies we believe have relatively weaker pricing. Pricing property casualty insurance policies includes estimates for expected losses, loss expenses to settle claims and expenses from underwriting policies while also considering the time value of money related to expected cash flows and a reasonable profit margin. In addition to enhancing company efficiency and more quickly deploying product or service enhancements, improving internal processes also supports the ability of the independent agencies that represent us to grow profitably by allowing them to serve clients faster and to more efficiently manage agency expenses as we make it easier for them to do business with us.
- Drive premium growth – Implementation of these initiatives is intended to further penetrate each market we serve through our appointed independent agencies. Strategies aimed at specific market opportunities, along with service enhancements, can help our agents grow and increase our share of their business. This includes increasing opportunities for agencies to cross-serve their clients by providing updated products and services that aim to meet their life insurance needs. We continue to increase our capabilities to successfully underwrite both larger commercial policies, which we refer to as key accounts, and small business accounts that require greater efficiency. Premium growth initiatives also include expansion of Cincinnati Re and Cincinnati Global. Diversified growth also may reduce variability of losses from weather-related catastrophes.

Independent Insurance Agency Marketplace

The U.S. property casualty insurance industry is a highly competitive marketplace with more than 2,000 stock and mutual companies (carriers) operating independently or in groups.

For the most part, we compete with standard market insurance companies that market through independent insurance agents. Agencies marketing our commercial lines or personal lines products typically represent several standard market insurance carriers. We also compete with carriers that market through captive agents representing a single carrier or that market directly to consumers, sometimes offering a less broad range of insurance products. Some of our agencies describe their roles as brokers instead of agents. Distribution through independent insurance agents or brokers represents nearly 60% of overall U.S. property casualty insurance premiums and approximately 80% of commercial property casualty insurance premiums, according to studies by the Independent Insurance Agents and Brokers of America.

We are fully committed to the independent agency channel for marketing our insurance policies. For marketing standard lines insurance products, we choose independent agencies that share our philosophies. They generally do business person to person; offer broad, value-added services; and manage their agencies professionally, targeting long-term success. We develop our relationships with agencies, providing important knowledge of local market trends, opportunities and challenges.

Our associates work to support agencies with tools and resources that help communicate the value of choosing an independent insurance agent and our insurance policies to their clients and prospective clients. We help our agencies meet the broader needs of their clients and increase and diversify their revenues and profitability by offering insurance solutions beyond our standard market property casualty insurance products. We market life insurance products through the agencies that offer our property casualty products and through other independent life agencies that represent Cincinnati Life without also representing our other subsidiaries. We operate our own excess and surplus lines insurance brokerage firm and insurance carrier so that we can offer our excess and surplus lines products exclusively to the independent agencies who market our other property casualty insurance products. Insurers operating in the excess and surplus lines marketplace generally market business through nonaffiliated excess and surplus lines brokers.

The specialized nature of our other insurance operations helps avoid conflicts with the independent agency distribution channel. Cincinnati Re typically markets through broker organizations or similar intermediaries that specialize in reinsurance. Cincinnati Global markets its business through brokers and coverholders. Coverholders are entities that can be authorized by a Lloyd's syndicate to underwrite policies, manage risks, collect premiums or arrange claims settlements up to agreed upon limits.

The table below includes data about property casualty agency relationships that market our standard market insurance products. It does not include Lloyd's brokers or coverholders that source business for Cincinnati Global.

Agency Data	Years ended December 31,	
	2022	2021
Property casualty agency relationships, January 1	1,921	1,848
New appointments that market all or most of The Cincinnati Insurance Companies' products	145	155
New appointments that market only personal lines insurance products for Cincinnati Insurance	64	59
Changes due to consolidation and other	(146)	(141)
Property casualty agency relationships, December 31	1,984	1,921
Property casualty reporting locations	2,861	2,721
New relationship appointments	146	159
Active states	46	46

The annual total of agency new appointments may be partially offset by other changes in agency structures, such as consolidation through mergers or acquisitions. An increasing number of agencies have multiple, separately identifiable locations, reflecting their growth as well as consolidation of ownership within the independent

agency marketplace. The number of reporting agency locations indicates our agents' regional scope and the extent of our presence within our active states. The difference between new appointments in total and the number of new relationships represents either: new branch offices opened by existing Cincinnati agencies; or agencies that merged with another Cincinnati agency and we still believed would produce a meaningful amount of new business premiums.

On average, we have a 5.1% share of the standard lines property casualty insurance purchased through our reporting agency locations, according to 2021 data from agency surveys. Our share is 11.3% in reporting agency locations that have represented us for more than 10 years; 3.9% in agencies that have represented us for six to 10 years; 1.5% in agencies that have represented us for two to five years; and 0.4% in agencies that have represented us for one year or less.

Our largest single agency relationship accounted for approximately 0.6% of our total property casualty earned premiums in 2022. No aggregate locations under a single ownership structure accounted for more than 5% of our earned premiums in 2022.

Financial Strength

We believe that our financial strength and strong capital and surplus position, reflected in our insurer financial strength ratings, are clear, competitive advantages in the segments of the insurance marketplace that we serve. This strength supports the consistent, predictable performance that our policyholders, agents, associates and shareholders have always expected and received, helping us withstand significant challenges.

Effective capital management is an important part of creating long-term shareholder value, serving as a foundation to support other strategic areas focused on profitable growth of our insurance business. Our capital management philosophy is intended to preserve and build our capital while maintaining appropriate liquidity.

While the potential exists for short-term financial performance variability due to our exposures to possible natural or man-made catastrophes or to significant capital market losses, the rating agencies consistently assert that we have built appropriate financial strength and flexibility to manage that variability. We remain committed to strategies that emphasize being a consistent, stable market for our agents' business rather than seeking short-term benefits that might accrue by quick, opportunistic reaction to changes in market conditions.

We use various principles and practices such as diversification and enterprise risk management to maintain strong capital. For example, we maintain a diversified investment portfolio by reviewing and applying specific parameters and tolerances.

- Our \$12.132 billion fixed-maturity portfolio is diversified and exceeds total insurance reserves. The portfolio had an average rating of A2/A, and its fair value exceeded total insurance reserve liabilities by approximately 6% at December 31, 2022. No corporate bond exposure accounted for more than 0.9% of our fixed-maturity portfolio, and no municipal exposure accounted for more than 0.2%.
- The strength of our fixed-maturity portfolio provides an opportunity to invest for potential capital appreciation by purchasing equity securities. Our \$9.841 billion equity portfolio minimizes concentrations in single stocks or industries. At December 31, 2022, no single security accounted for more than 6.4% of our portfolio of publicly traded common stocks, and no single sector accounted for more than 27%.

Strong liquidity increases our flexibility through all periods to maintain our cash dividend and to continue to invest in and expand our insurance operations. At December 31, 2022, we held \$4.230 billion of our cash and invested assets at the parent-company level, of which \$3.974 billion, or 93.9%, was invested in common stocks, and \$121 million, or 2.9%, was cash and cash equivalents.

We minimize reliance on debt as a source of capital, with a debt-to-total-capital ratio of 7.4% at year-end 2022. Long-term debt at year-end 2022 totaled \$789 million, matching year-end 2021, and our short-term debt was \$50 million, down from \$54 million at the end of the prior year. The long-term debt consists of three nonconvertible, noncallable debentures, two due in 2028 and one in 2034. Ratings for our long-term debt are discussed in Item 7, Liquidity and Capital Resources, Long-Term Debt of Management's Discussion and Analysis.

At year-end 2022 and 2021, risk-based capital (RBC) for our standard market property casualty insurance, excess and surplus lines insurance and life insurance subsidiaries was strong, far exceeding regulatory requirements.

- We ended 2022 with a 1.1-to-1 ratio of property casualty premiums to surplus, a key measure of property casualty insurance company capacity and security. A lower ratio indicates more security for policyholders and greater capacity for growth by an insurer. We believe our ratio provides ample flexibility to diversify risk by expanding our operations into new geographies and product areas. The estimated industry average ratio was 0.8-to-1 at year-end 2022, based on industry data reported through the first nine months of 2022. On a statutory consolidated property casualty insurance basis, our ratio of investments in common stock, at fair value, to statutory capital and surplus was 83.7% at year-end 2022 compared with 83.6% at year-end 2021.
- We ended 2022 with a 9.5% ratio of life statutory adjusted risk-based surplus to liabilities, a key measure of life insurance company capital strength. A higher ratio indicates an insurer's stronger security for policyholders and capacity to support business growth. Our life insurance subsidiary's RBC at year-end 2022 was 6.1 times the authorized control level RBC.

(Dollars in millions)	Statutory Information	At December 31,	
		2022	2021
Standard market property casualty insurance subsidiary			
Statutory capital and surplus	\$	6,512	\$ 7,247
Risk-based capital		6,551	7,279
Authorized control level risk-based capital		1,186	1,093
Risk-based capital to authorized control level risk-based capital ratio		5.5	6.7
Written premium to surplus ratio		1.1	0.9

Cincinnati Financial Corporation's senior debt is rated by four independent rating firms. In addition, the rating firms award our property casualty and life operations insurance financial strength ratings based on their quantitative and qualitative analyses. These ratings assess an insurer's ability to meet financial obligations to policyholders and do not necessarily address all of the matters that may be important to shareholders. Ratings may be subject to revision or withdrawal at any time by the ratings agency, and each rating should be evaluated independently of any other rating.

At February 22, 2023, our insurance subsidiaries continued to be highly rated.

Insurer Financial Strength Ratings										
Rating agency	Standard market property casualty insurance subsidiary			Life insurance subsidiary			Excess and surplus lines insurance subsidiary			Outlook
	Rating Tier			Rating Tier			Rating Tier			
A.M. Best Company <i>ambest.com</i>	A+	Superior	2 of 16	A+	Superior	2 of 16	A+	Superior	2 of 16	Stable
Fitch Ratings <i>fitchratings.com</i>	A+	Strong	5 of 21	A+	Strong	5 of 21	-	-	-	Stable
Moody's Investors Service <i>moody's.com</i>	A1	Good	5 of 21	-	-	-	-	-	-	Stable
S&P Global Ratings <i>spratings.com</i>	A+	Strong	5 of 21	A+	Strong	5 of 21	-	-	-	Stable

On February 9, 2023, A.M. Best affirmed its ratings, continuing its stable outlook. On November 1, 2022, Fitch affirmed its ratings, continuing its stable outlook. On July 19, 2022, Moody's affirmed its ratings, continuing its stable outlook. On July 12, 2022, S&P affirmed its ratings, continuing its stable outlook.

Operating Structure

We offer our broad array of insurance products through the independent agency distribution channel. We recognize that locally based independent agencies have relationships in their communities and local marketplace intelligence that can lead to profitable business and policyholder satisfaction and loyalty. Several of our strategic initiatives are intended not only to help us compete but also to enhance support of agencies that represent us, thereby contributing to agency success. We seek to be a consistent and predictable property casualty carrier that agencies can rely on to serve their clients.

In our 10 highest volume states for consolidated property casualty premiums, 1,386 reporting agency locations wrote 50.1% of our 2022 consolidated property casualty earned premium volume compared with 1,359 locations and 52.1% in 2021. We continue efforts to geographically diversify our property casualty risks.

Our 10 largest states based on property casualty premium volume, excluding Cincinnati Re and Cincinnati Global, are shown in the table below.

(Dollars in millions)	Earned premiums	% of total earned	Agency locations	Average premium per location
Year ended December 31, 2022				
Ohio	\$ 930	13.4 %	257	\$ 3.6
Illinois	376	5.4	177	2.1
New York	327	4.7	184	1.8
North Carolina	314	4.5	113	2.8
Pennsylvania	308	4.4	155	2.0
Georgia	300	4.3	110	2.7
Indiana	279	4.0	127	2.2
Tennessee	220	3.2	74	3.0
Missouri	216	3.1	73	3.0
Texas	214	3.1	116	1.8

Field Focus Emphasizing Service

We rely on our force of 1,862 field associates to provide service and be accountable to our agencies for decisions we make at the local level. These associates live in the communities our agents serve, so they are readily available when agencies or policyholders need them. While their work is often conducted at the premises of the agency or policyholder, they also work from offices in their homes. Headquarters associates support agencies and field associates with underwriting, accounting, technology assistance, training and other services. Company executives and headquarters associates typically travel to visit agencies, strengthening the personal relationships we have with these organizations. Agents have opportunities for direct, personal conversations with our senior management team, and headquarters associates have opportunities to refresh their knowledge of marketplace conditions and field activities.

The field team is coordinated by field marketing representatives responsible for underwriting new commercial lines business. They are joined by field representatives specializing in claims, loss control, commercial lines key accounts, personal lines, excess and surplus lines, machinery and equipment, management liability and surety, premium audit and life insurance. The field team provides a variety of services, such as recommending specific actions to improve the safety of the policyholder's operations. We seek to develop long-term relationships by understanding the unique needs of each agency's clients, who are also our policyholders.

Technology enhances our service to agencies, allowing them to more easily access our systems and process business transactions. Policyholders can conveniently access pertinent policy information online, helping to reduce costs for agencies and the company. Technology and ongoing training also help our associates collaborate and process business efficiently, providing more time for personal service to agencies and their clients.

We also provide and continue to develop enhanced, tailored services offered at the time a claim is reported for an insured loss event. Those services include assisting with car rental or towing, arranging temporary housing and coordinating emergency repairs to homes so additional damage is minimized.

Our claims philosophy reflects our belief that we prosper as a company by responding to claims person to person, paying covered claims promptly, preventing false claims from unfairly adding to overall premiums and building financial strength to meet future obligations.

Our 862 locally based field claims associates, often referred to as field claims representatives, work from their homes and are assigned to specific agencies. They respond personally to policyholders and claimants and are equipped to handle a claim from nearly anywhere. We believe we have a competitive advantage because of the person-to-person approach and the resulting high level of service that our field claims representatives and Express Claims Center associates deliver. For field claims representatives handling excess and surplus lines claims, guidance is provided by headquarters-based excess and surplus lines claims managers. Claims may be reported directly to us by calling our claims call center, online via our company website or through the MyCincinnati app using a mobile device.

Catastrophe response teams are comprised of our experienced field claims representatives who have the authority they need to do their jobs. In times of widespread loss, our field claims representatives confidently and quickly resolve claims, with the ability to provide claims payments on the same day they inspect the loss. Technology helps to enable fast initial contact with policyholders and easy sharing of information and data among storm teams, headquarters associates and local field claims representatives. When hurricanes or other weather events are predicted, we can identify through mapping technologies the expected number of our policyholders that may be impacted by the event and choose to have catastrophe response team members travel to strategic locations near the expected impact area. They are then in position to quickly get to the affected area and begin providing service to policyholders.

Our 31 associates working in the Special Investigations Unit (SIU) include former law enforcement and claims professionals whose qualifications make them well suited to gathering facts to uncover potential fraud. While we believe our job is to pay what is due under each policy contract, we also want to prevent false claims from unfairly increasing overall premiums. Our SIU also operates a computer forensics lab that supports field investigation efforts in various ways including assistance with video evidence and data recovery.

We seek to attract and retain high-quality independent insurance agencies with knowledgeable, professional staff. In turn, we make an exceptionally strong commitment to assist them in keeping their knowledge up to date and educating new people they bring on board as they grow. This includes offering classes, usually at no cost to agencies, except travel-related expenses they may incur, and other training support. We also offer noninsurance financial services. We believe that providing these services enhances agency relationships with the company and their clients, increasing loyalty while diversifying the agency's revenues.

Human Capital

At the end of 2022, we employed 5,148 associates, including 3,214 headquarters associates who provide support to 1,862 field associates and 72 associates for Cincinnati Global. The associate voluntary turnover rate was 8% in 2022, 7% in 2021 and 3% in 2020.

We believe our compensation, training, technology, inclusive culture and career development opportunities help to attract and retain talented associates, which is critical to our strategy that emphasizes superior service to agencies and their clients, as described in this report. Our goal is to hire job candidates with promise, matching their strengths to positions within the company and providing resources to help them meet professional and personal goals. We are committed to providing equal opportunity for all associates, encouraging a work environment free from unlawful discrimination and harassment.

We use multiple channels to ensure we recruit a diverse workforce rich with ideas and knowledge. For example, we build relationships with future talent by partnering with career services departments, faculty and staff, and Diversity and Inclusion Offices at local and regional colleges and universities along with historically Black colleges and universities.

We offer a base pay level for all roles that is competitive, market-based and re-evaluated on a recurring basis. The base pay is complemented by a matching 401(k) program, annual cash bonus and stock ownership opportunities along with healthcare benefits to provide a comprehensive compensation and benefits package. In addition, we have many special programs that appeal to associates while aligning with our corporate values. We believe our voluntary turnover rate indicates overall associate satisfaction with their working environment, compensation and benefits.

We strive to offer equal pay for equal work and use independent consultants to conduct gender and ethnic minority pay equity studies examining total direct compensation, which consists of base salary, cash bonus and equity awards. Using a multivariate regression analysis, the independent studies in 2022 showed that we administer pay fairly and equitably because the factors used to make compensation decisions, such as role, salary grade, tenure and performance do in fact drive compensation awarded to each associate. More information about the studies is available in our Environmental, Social and Governance Report available on the Sustainability page of our website, cinfinc.com/sustainability, which is not incorporated by reference in this Annual Report on Form 10-K.

We offer all regular, full- and part-time associates the opportunity to participate in the CFC Savings Plan, our 401(k) plan. We also offer all full-time associates the opportunity to purchase health, prescription, vision and dental insurance. Associates enrolled in our health plan can receive a free biometric screening – either onsite at our headquarters or with their personal physician. The screening helps associates learn about their health and identify risk factors while earning a company contribution into their Health Savings Account.

While providing stock compensation at all levels of an organization may not be a common business practice, we firmly believe that stock ownership helps drive good decision making and encourages a long-term view by associates. We historically grant annual stock-based compensation to full-time, salaried associates in the form of stock options and restricted stock units that vest over time. In addition, each year all regular, full-time associates – salaried and hourly – are awarded one share of stock for each full calendar year of service, up to 10 shares, through our Holiday Stock Plan.

Additional information is available in our Environmental, Social and Governance Report available on the Sustainability page of our website, cinfinc.com/sustainability.

Insurance Products

We provide well-designed property casualty and life insurance products to bring policyholders convenience, discounts and a reduced risk of coverage gaps or disputes. For most agencies that represent us, we believe we offer insurance solutions for approximately 75% of the typical insurable risks of their clients. Products for various business lines within our reporting segments include insurance coverages for business property and liability, automobiles and homes.

The table below shows net written premiums by segment and business line at year-end 2022, 2021 and 2020. We discuss our insurance segments in their respective sections later in this report.

(Dollars in millions)	2022	2021	2020	Percent of total 2022
Segment:				
Commercial lines insurance	\$ 4,159	\$ 3,811	\$ 3,534	54.4 %
Personal lines insurance	1,831	1,594	1,503	23.9
Excess and surplus lines insurance	502	426	348	6.6
Life insurance	339	346	328	4.4
Other	815	648	479	10.7
Total net written premiums	<u>\$ 7,646</u>	<u>\$ 6,825</u>	<u>\$ 6,192</u>	<u>100.0 %</u>
Business line:				
Commercial lines insurance:				
Commercial casualty	\$ 1,444	\$ 1,315	\$ 1,205	18.9 %
Commercial property	1,212	1,090	1,019	15.9
Commercial auto	858	816	763	11.2
Workers' compensation	278	269	266	3.6
Other commercial	367	321	281	4.8
Total commercial lines insurance	<u>4,159</u>	<u>3,811</u>	<u>3,534</u>	<u>54.4</u>
Personal lines insurance:				
Personal auto	654	608	611	8.6
Homeowner	921	769	693	12.0
Other personal	256	217	199	3.3
Total personal lines insurance	<u>1,831</u>	<u>1,594</u>	<u>1,503</u>	<u>23.9</u>
Excess and surplus lines insurance	502	426	348	6.6
Life insurance:				
Term life insurance	226	218	202	3.0
Whole life insurance	47	47	43	0.6
Universal life and other	66	81	83	0.8
Subtotal	<u>339</u>	<u>346</u>	<u>328</u>	<u>4.4</u>
Other:				
Cincinnati Re	585	461	302	7.7
Cincinnati Global	230	187	177	3.0
Total net written premiums	<u>\$ 7,646</u>	<u>\$ 6,825</u>	<u>\$ 6,192</u>	<u>100.0 %</u>

Our Segments

Consolidated financial results primarily reflect the results of our five reporting segments. These segments are defined based on financial information we use to evaluate performance and to determine the allocation of assets.

- Commercial lines insurance
- Personal lines insurance
- Excess and surplus lines insurance
- Life insurance
- Investments

Revenues, income before income taxes and identifiable assets for each segment are shown in Item 8, Note 18 of the Consolidated Financial Statements. Some of that information is discussed in this section, where we explain the business operations of each segment. The financial performance of each segment is discussed in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations.

Commercial Lines Insurance Segment

In 2022, the commercial lines insurance segment contributed net earned premiums of \$4.024 billion, representing 61.4% of consolidated total revenues. This segment reported profit before income taxes of \$38 million. Commercial lines net earned premiums rose 10% in 2022 and 6% in 2021.

We believe that our commercial lines business is best measured and evaluated on a segment basis. However, we also provide selected line of business data to summarize growth and profitability trends separately for our business lines. The five commercial business lines are:

- Commercial casualty – Provides coverage to businesses against third-party liability from accidents occurring on their premises or arising out of their operations, including injuries sustained from products or liability related to professional services. Specialized casualty policies may include similar coverage such as umbrella liability or employment practices. The commercial casualty business line includes liability coverage written as part of commercial package policies.
- Commercial property – Provides coverage for loss or damage to buildings, inventory and equipment caused by covered causes of loss such as fire, wind, hail, water, theft and vandalism, as well as business interruption resulting from a covered loss. Commercial property also includes other coverages such as inland marine, which covers losses related to builder's risk, cargo or equipment. Various property coverages can be written as stand-alone policies or can be added to a commercial package policy.
- Commercial auto – Protects businesses against liability to others for both bodily injury and property damage, medical payments to insureds and occupants of their vehicles, physical damage to an insured's own vehicle from collision and various other perils, and damages caused by uninsured motorists.
- Workers' compensation – Covers employers for government-specified benefits from work-related injuries to employees.
- Other commercial lines – This includes several other types of insurance products for businesses, including:
 - Management liability and surety – Includes director and officer (D&O) liability insurance, which covers liability for actual or alleged errors in judgment, breaches of duty or other wrongful acts related to activities of organizations and can optionally include other liability coverages. We market primarily to nonprofit organizations, privately held businesses, healthcare organizations, financial institutions and educational institutions. The for-profit portion includes approximately 160 bank or savings and loan financial institutions, with none having assets of \$1 billion or more. The surety portion includes contract and commercial surety bonds for losses resulting from dishonesty, failure to perform and other acts and also includes fidelity bonds for fraudulent acts by specified individuals or dishonest acts by employees. Management liability coverage can also include cyber insurance as an affirmative coverage option on various insurance policies. We cede all of the related cyber insurance premiums to a reinsurer, therefore transferring substantially all of that risk. Ceded premiums for 2022 included \$47 million for cyber insurance.
 - Machinery and equipment – Specialized coverage provides protection for loss or damage to boilers and machinery, including production and computer equipment and business interruption, due to sudden and accidental mechanical breakdown, steam explosion or artificially generated electrical current.

Our history of emphasizing products and services that agencies can market to small or midsize businesses in their communities remains a critical piece of our strategy even as we expand our appetite to insure larger businesses. While some of our property casualty agencies market only our personal lines or management liability and surety products, approximately 85% offer some or all of our standard market commercial insurance products.

In 2022, our 10 highest volume commercial lines states generated 56.2% of our earned premiums compared with 56.7% in 2021. The aggregate number of reporting agency locations in our 10 highest volume states increased to 1,228 in 2022 from 1,174 in 2021.

Our 10 largest states based on commercial lines premium volume are shown in the table below.

(Dollars in millions)	Earned premiums	% of total earned	Agency locations	Average premium per location
Year ended December 31, 2022				
Ohio	\$ 570	14.2 %	243	\$ 2.3
Illinois	245	6.1	154	1.6
Pennsylvania	238	5.9	145	1.6
North Carolina	214	5.3	108	2.0
Indiana	190	4.7	123	1.5
New York	165	4.1	150	1.1
Virginia	163	4.1	77	2.1
Georgia	160	4.0	96	1.7
Tennessee	158	3.9	71	2.2
Missouri	157	3.9	61	2.6

For new commercial lines business, policy-by-policy underwriting and pricing is coordinated by our locally based field marketing representatives who are also responsible for selecting new independent agencies. Our agents and our team of field associates get to know the people and businesses in their communities and can make informed decisions about each risk.

Commercial lines policy renewals are managed by headquarters underwriters who are assigned to specific agencies and consult with local field associates as needed. As part of our team approach, headquarters underwriters also help oversee agency growth and profitability. They are responsible for formal issuance of all new business and renewal policies as well as policy endorsements. Further, the headquarters underwriters provide day-to-day customer service to agencies and our field marketing representatives by offering technical and industry expertise and product training, helping to determine underwriting eligibility and assisting with the mechanics of premium determination. We also continue a target markets emphasis to analyze opportunities and to develop new products and services, new coverage options and improvements to existing insurance products.

Understanding evolving market conditions is a critical function for our success, accomplished through both informal commentary and formal reviews. Informally, our field marketing representatives, underwriters and product development associates routinely receive market intelligence from a variety of channels, including from the agencies with which they work. This market information helps identify the top competitors and our market strengths and weaknesses. The information obtained encompasses pricing, breadth of coverage and use of underwriting guidelines.

Our historical emphasis on small to midsize businesses is reflected in the mix of our commercial lines premium volume by policy size. Approximately 70% of our commercial in-force policies have annual premiums of \$10,000 or less, accounting in total for approximately 15% of our 2022 commercial lines premium volume. The remainder of policies have annual premiums greater than \$10,000, including policies with annual premiums greater than \$100,000 that account for approximately 35% of our 2022 commercial lines premium volume. Our average commercial lines policy size is approximately \$15,000 in annual premiums.

Our commercial lines packages typically are offered on a three-year policy term for most insurance coverages – a key competitive advantage. In our experience, multi-year packages appeal to the quality-conscious insurance buyers who we believe are typical clients of our independent agents. Customized insurance programs on a three-year term complement the long-term relationships these policyholders typically have with their agents and with our company. By reducing annual administrative efforts, multi-year policies lower expenses for our company and for our agents. The commitment we make to policyholders encourages long-term relationships and reduces their need to annually re-evaluate their insurance carrier or agency. We believe that the advantages of three-year policies in

terms of improved policyholder convenience, increased account retention and reduced administrative costs outweigh the potential disadvantage of these policies, even in periods of rising rates.

Although we offer three-year policy terms, premiums for some coverages within those policies are adjustable at the anniversary for the next annual period, and policies may be canceled at any time at the discretion of the policyholder. Contract terms often provide that rates for property, general liability, inland marine and crime coverages, as well as policy terms and conditions, are fixed for the term of the policy. However, the exposure we insure is reviewed annually, near the policy anniversary date, and the amount of premiums may be adjusted based on changes to that exposure.

The general liability exposure basis may be audited annually. Commercial auto, workers' compensation, professional liability and most umbrella liability coverages within multi-year packages are rated at each of the policy's annual anniversaries for the next one-year period. The annual pricing could incorporate rate changes approved by state insurance regulatory authorities between the date the policy was written and its annual anniversary date, as well as changes in risk exposures and premium credits or debits relating to loss experience and other underwriting judgment factors. We estimate that approximately 75% of 2022 commercial premiums were subject to annual rating or were written on a one-year policy term. That 75% includes approximately one-third of policies offered on a three-year policy term that expire during any given year.

We believe our commercial lines insurance segment premiums reflect a higher concentration, relative to industry commercial lines premiums, in contractor-related businesses. Since economic activity related to construction, which can heavily influence insured exposures of contractors, may experience cycles that vary significantly with the economy as a whole, our commercial lines premium trends could vary from commercial lines premium trends for the property casualty insurance industry. In 2022, we estimated that 38% of our general liability premiums, and 35% of our workers' compensation premiums, came from the construction industry based on North American Industry Classification System (NAICS) codes.

Personal Lines Insurance Segment

The personal lines insurance segment contributed net earned premiums of \$1.689 billion to 2022 consolidated total revenues, or 25.8% of the total, and reported profit before income taxes of \$18 million. Personal lines net earned premiums rose 10% in 2022 and 5% in 2021.

We prefer to write personal lines coverage in accounts that include both auto and homeowner coverages as well as coverages that are part of our other personal business line. At the end of 2022, for example, approximately 83% of our homeowner policies were accompanied by a personal auto policy in the same account. As a result of our account-based approach, we believe that our personal lines business is best measured and evaluated on a segment basis. However, we provide line of business data to summarize growth and profitability trends separately for three business lines:

- Personal auto – Protects against liability to others for both bodily injury and property damage, medical payments to insureds and occupants of their vehicle, physical damage to an insured's own vehicle from collision and various other perils, and damages caused by uninsured motorists. In addition, many states require policies to provide first-party personal injury protection, frequently referred to as no-fault coverage.
- Homeowner – Protects against losses to dwellings and contents from a wide variety of perils, as well as liability arising out of personal activities both on and off the covered premises. We also offer coverage for condominium unit owners and renters.
- Other personal lines – This includes the other types of insurance products we offer to individuals, including dwelling fire, inland marine, personal umbrella liability and watercraft coverages.

At year-end 2022, we marketed personal lines insurance products through 2,076, or approximately 73%, of our 2,861 agency reporting locations. The 2,076 personal lines agency locations were in 45 of the 46 states in which we offered property casualty insurance. Those agencies produced approximately 1.0 million personal lines policies in force for us, representing approximately 400,000 policyholders.

Expansion of our personal lines insurance segment includes marketing through independent agencies to profitably grow our premiums for products and services offered to their high net worth personal lines clients. In 2022, our appointed agencies produced for us approximately \$919 million of net written premiums in total from policyholders with insured home values of \$1 million or more, up 39% from 2021. We estimate those policyholders represent approximately 25% of our total personal lines policyholders. Beginning in 2023, we're renaming our high net worth products and services, Cincinnati Private ClientSM. Private client is a term used in the financial services industry to describe people who have complex needs based on their affluence, investments and belongings. This change allows agencies and their customers to easily recognize that we stand ready to serve this client segment.

In 2022, our 10 highest volume personal lines states generated 64.5% of our earned premiums compared with 64.8% in 2021. In 2015, our 10 highest volume personal lines states generated 78.5% of our earned premiums. The reduction in that percentage indicates progress over time toward our long-term objective of geographic diversification through new states for our personal lines operation. The aggregate number of reporting agency locations in our 10 highest volume states decreased to 999 in 2022 from 1,002 in 2021.

Our 10 largest states based on personal lines premium volume are shown in the table below.

(Dollars in millions)	Earned premiums	% of total earned	Agency locations	Average premium per location
Year ended December 31, 2022				
Ohio	\$ 326	19.3 %	235	\$ 1.4
New York	133	7.9	108	1.2
Georgia	117	6.9	92	1.3
California	104	6.2	74	1.4
Illinois	96	5.7	131	0.7
North Carolina	75	4.5	91	0.8
Indiana	69	4.1	107	0.6
Alabama	63	3.8	56	1.1
Texas	52	3.1	62	0.8
Connecticut	51	3.0	43	1.2

New and renewal personal lines business reflects our risk-specific underwriting philosophy. Each agency selects personal lines business primarily from within the geographic territory that it serves, based in part on agency staff's knowledge of the risks in those communities or familiarity with the policyholder. We have personal lines field marketing representatives who have underwriting authority and visit agencies on a regular basis. They focus primarily on key states targeted for growth, reinforcing the advantages of our personal lines products and offering training in the use of our policy processing system. Personal lines activities are further supported by headquarters associates assigned to individual agencies.

Excess and Surplus Lines Insurance Segment

The excess and surplus lines segment contributed net earned premiums of \$485 million to 2022 consolidated total revenues, or 7.4% of the total, and reported profit before income taxes of \$48 million. Excess and surplus lines net earned premium increased 22% in both 2022 and 2021.

Our excess and surplus lines policies typically cover business risks with unique characteristics, such as the nature of the business or its claim history, that are difficult to profitably insure in the standard commercial lines market. Excess and surplus lines insurers have more flexibility in coverage terms and rates compared with standard lines companies, generally resulting in policies with higher rates and terms and conditions customized for specific risks, including restricted coverage where appropriate. We target small to midsized risks, and policyholders in many cases also have standard market insurance with one of our other subsidiaries. Our average excess and surplus lines policy size is approximately \$9,000 in annual premiums, and the majority have coverage limits of \$1 million or less. All of our excess and surplus lines policies are written for a maximum term of one year. Approximately 92% of our 2022 earned premiums for the excess and surplus lines insurance segment provided commercial casualty coverages and about 8% provided commercial property coverages. Those coverages are described below.

- **Commercial casualty** – Covers businesses for third-party liability from accidents occurring on their premises or arising out of their operations, including injuries sustained from products. Other coverages available include miscellaneous errors and omissions, professional liability and excess liability. Typical businesses covered include contractors, manufacturers, real estate owners and managers, retail, consultants, and bars or taverns. Policies covering liability at special events are also available.
- **Commercial property** – Insures buildings, inventory, equipment and business income from loss or damage due to causes such as fire, wind, hail, water, theft and vandalism. Examples of property we commonly insure with excess and surplus lines policies include temporarily vacant buildings, habitational, restaurants and relatively higher-hazard manufacturing classes.

At the end of 2022, we marketed excess and surplus lines insurance products in each of the 42 states in which we offer standard market commercial lines insurance. Offering excess and surplus lines helps agencies representing The Cincinnati Insurance Companies meet the insurance needs of their clients when coverage is unavailable in the standard market. By providing outstanding service, we can help agencies grow and prosper while also profitably growing our property casualty business.

In 2022, our 10 highest volume excess and surplus lines states generated 53.7% of our earned premiums, compared with 54.9% in 2021.

Our 10 largest states based on excess and surplus lines premium volume are shown in the table below.

(Dollars in millions)	Earned premiums	% of total earned
Year ended December 31, 2022		
Illinois	\$ 35	7.2 %
Ohio	35	7.2
Texas	32	6.6
New York	29	5.9
Pennsylvania	25	5.1
North Carolina	25	5.1
Georgia	23	4.8
Missouri	20	4.1
Indiana	19	4.0
Michigan	18	3.7

Agencies representing The Cincinnati Insurance Companies produce approximately \$5 billion in annual premiums for all carriers writing excess and surplus lines policies for their clients. We estimate that approximately half of that premium volume matches the targeted business types and coverages we offer through our excess and surplus lines insurance segment. We structured the operations of this segment to meet the needs of these agencies and to market exclusively through them.

Agencies have access to Cincinnati Specialty Underwriters' product line through CSU Producer Resources, the wholly owned insurance brokerage subsidiary of Cincinnati Financial Corporation. CSU Producer Resources has binding authority on all classes of business written through Cincinnati Specialty Underwriters and maintains appropriate agent and surplus lines licenses.

We seek to earn a share of each agency's best excess and surplus lines accounts by offering several unique benefits. Agency producers have direct access through CSU Producer Resources to a group of our underwriters who focus exclusively on excess and surplus lines business. Those underwriters can tap into broader services we offer to provide policyholders additional value and help producers build the relationship through experienced and responsive loss control services and claims handling. CSU Producer Resources gives extra support to our independent agency producers by remitting surplus lines taxes and stamping fees and retaining admitted market diligent search affidavits, where required. Agencies marketing through CSU Producer Resources instead of a competing brokerage generally receive a higher commission because use of our internal brokerage subsidiary eliminates some of the intermediary costs. This business is factored in their profit-sharing agreement with The Cincinnati Insurance Companies. We also offer prompt service, generally issuing approximately 95% of policies within 24 hours of a request to bind a policy.

Life Insurance Segment

The life insurance segment contributed \$295 million of net earned premiums, representing 4.5% of 2022 consolidated total revenues, and reported a gain before income taxes of \$28 million. Life insurance net earned premiums decreased 1% in 2022 and grew 3% in 2021.

The Cincinnati Life Insurance Company supports our agency-centered business model by deepening the relationships we have with agents while also diversifying revenue and profitability for both the agency and our company. We primarily focus on life products that feature a steady stream of premium payments and that have the potential for generating revenue growth through increasing demand. Pricing life insurance policies includes assumptions for mortality, persistency, expenses and investment earnings while also considering the time value of money related to expected cash flows and a reasonable profit margin.

Life Insurance Business Lines

Four lines of business that account for more than 99% of the life insurance segment's revenues are:

- Term life insurance – Policies under which a death benefit is payable only if the insured dies during a specific period of time. Policy options include a return of premium provision, a benefit equal to the sum of all paid base premiums that is payable if the insured person survives to the end of the term. The policies are fully underwritten using traditional and accelerated methods.
- Worksite products – Term life insurance, return of premium term life insurance and whole life insurance offered to employees through their employer. Premiums are collected by the employer using payroll deduction. Policies are issued using a simplified underwriting approach and on a guaranteed issue basis. Worksite insurance products provide our property casualty agency force with excellent cross-serving opportunities for both commercial and personal accounts.
- Whole life insurance – Policies that provide life insurance for the entire lifetime of the insured. The death benefit is guaranteed never to decrease and premiums are guaranteed never to increase. While premiums are fixed, they must be paid as scheduled. These policies provide guaranteed cash values that are available as loans collateralized by the cash surrender value. The policies are fully underwritten.
- Universal life insurance – Long-duration life insurance policies that are fully underwritten. Contract premiums are neither fixed nor guaranteed; however, the contract does specify a minimum interest crediting rate and a maximum cost of insurance charge and expense charge. The cash values, available as loans collateralized by the cash surrender value, are not guaranteed and depend on the amount and timing of actual premium payments and the amount of actual contract assessments.

In addition, Cincinnati Life markets:

- Deferred annuities that provide regular income payments that commence after the end of a specified period or when the annuitant attains a specified age. During the deferral period, any payments made under the contract accumulate at the crediting rate declared by the company but not less than a contract-specified guaranteed minimum interest rate. A deferred annuity may be surrendered during the deferral period for a cash value equal to the accumulated payments plus interest less the surrender charge, if any.
- Immediate annuities that provide some combination of regular income and lump-sum payments in exchange for a single premium.

Life Insurance Distribution

Cincinnati Life is licensed in 49 states and the District of Columbia. At year-end 2022, approximately 80% of our 1,984 property casualty agency relationships offered Cincinnati Life products to their clients. We also develop life business from approximately 366 other independent life insurance agencies. We are careful to solicit business from these other agencies in a manner that does not conflict with or compete with the marketing and sales efforts of our property casualty agencies.

When marketing through our property casualty agencies, we have specific competitive advantages:

- Because our property casualty operations are held in high regard, property casualty agency management is predisposed to consider selling our life products.
- Marketing efforts for both our property casualty and life insurance businesses are directed by our field marketing department, coordinated with our life field marketing representatives, which assures consistency of communication and operations. Life field marketing representatives are available to meet face-to-face with agency personnel and their clients as well. Our life headquarters underwriters and other associates are available to the agents and field team to assist in the placement of business.

We continue to emphasize the cross-serving opportunities of our life insurance, including term and worksite products, for the property casualty agency's personal and commercial accounts. In both the property casualty and independent life agency distribution systems, we enjoy the advantages of offering competitive, up-to-date products and providing personal attention in combination with financial strength and stability.

- Term life insurance is our largest life insurance product line. We continue to develop and offer term products with features our agents indicate are important, such as a return of premium benefit and an accelerated underwriting option.
- We also offer products addressing the needs of businesses with key person and buy-sell coverages. We offer quality, personal life insurance coverage to personal and commercial clients of our agencies.

Because of our strong capital position, we can offer a competitive product portfolio, including guaranteed products, giving our agents a marketing edge. Our life insurance company maintains strong insurer financial strength ratings: A.M. Best, A+ (Superior); Fitch, A+ (Strong); and S&P, A+ (Strong). Our life insurance company has chosen not to establish a Moody's rating.

In 2022, our five highest volume states for life insurance premiums, based on information contained in statements filed with state insurance departments, are shown in the table below.

(Dollars in millions)		
	Premiums	% of total
Year ended December 31, 2022		
Ohio	\$ 57	15.4 %
Pennsylvania	26	7.0
Illinois	22	6.0
Indiana	21	5.7
Georgia	21	5.5

Investments Segment

Revenues of the investments segment are primarily from net investment income and from net investment gains and losses from investment portfolios managed for the holding company and each of the operating subsidiaries.

Our investment department operates under risk guidelines set forth in our investment policy along with oversight of the investment committee of our board of directors. These guidelines set parameters for risk tolerances governing, among other items, the allocation of the portfolio as well as security and sector concentrations. These parameters are part of an integrated corporate risk management program. When allocating cash to various asset classes, we consider market-based factors such as risk adjusted after-tax yields as well as internal measures based in part on insurance department regulations and rating agency guidance.

The fair value of our investment portfolio was \$21.973 billion and \$24.337 billion at year-end 2022 and 2021, respectively, as shown in the table below. The overall portfolio decreased in fair value, due to a decrease in its unrealized gain position. The 2022 decreases reflected a general decline in equity markets and movement from a net unrealized gain position in our fixed-maturity investments to a net unrealized loss position, primarily due to an increase in interest rates, such as U.S. Treasury yields, and widening of corporate credit spreads.

(Dollars in millions)	At December 31, 2022				At December 31, 2021			
	Cost or amortized cost	Percent of total	Fair value	Percent of total	Cost or amortized cost	Percent of total	Fair value	Percent of total
Taxable fixed maturities	\$ 9,020	52.2 %	\$ 8,299	37.8 %	\$ 8,344	51.0 %	\$ 8,858	36.4 %
Tax-exempt fixed maturities	3,959	22.9	3,833	17.4	3,886	23.8	4,164	17.1
Common equities	3,851	22.3	9,454	43.0	3,697	22.6	10,862	44.6
Nonredeemable preferred equities	443	2.6	387	1.8	424	2.6	453	1.9
Total	\$ 17,273	100.0 %	\$ 21,973	100.0 %	\$ 16,351	100.0 %	\$ 24,337	100.0 %

The cash we generate from insurance operations historically has been invested in two broad categories of investments:

- Fixed-maturity investments – Includes taxable and tax-exempt bonds and redeemable preferred stocks. During 2022, the combined effect of a net decrease in unrealized gains, sales and calls of fixed-maturity securities in our portfolio offset net purchases. During 2021, net purchases offset a net decrease in unrealized gains, sales and calls.
- Equity investments – Includes common and nonredeemable preferred stocks. During 2022, the combined effect of a net decrease in fair value and sales of equity securities in our portfolio offset net purchases. During 2021, purchases and a net increase in fair value offset sales.

In addition to securities held in our investment portfolio at year-end 2022, other invested assets included \$337 million of private equity investments, \$47 million of real estate through direct property ownership and development projects in the United States, \$37 million held on deposit at Lloyd's and \$31 million of life policy loans.

Our investment portfolio is further described below. Additional information about the composition and valuation of investments is included in Item 8, Note 2, Investments, and Note 3, Fair Value Measurements, of the Consolidated Financial Statements. A detailed listing of our portfolio is updated on our website, cinfin.com/investors, each quarter when we report our quarterly financial results.

Fixed-Maturity Securities Investments

By maintaining a well-diversified fixed-maturity portfolio, we attempt to manage overall interest rate, reinvestment, credit and liquidity risk. We pursue a buy-and-hold strategy and do not attempt to make large-scale changes to the portfolio in anticipation of rate movements. By investing new money on a regular basis and analyzing risk-adjusted after-tax yields, we work to achieve a general laddering effect to our portfolio that may mitigate some of the effects of adverse interest rate movements.

At December 31, 2022, our investment-grade and noninvestment-grade fixed-maturity securities represented 80.1% and 4.2% of the portfolio, respectively. The remaining 15.7% represented fixed-maturity securities that were not rated by Moody's or S&P. Our nonrated securities include smaller municipal issues and private placement corporate securities. Many of these, although not rated by Moody's or S&P, are rated by the Securities' Valuation Office of the National Association of Insurance Commissioners (NAIC). Also included in this category are smaller public corporate securities, many of which carry a rating by an agency other than Moody's or S&P, such as Fitch or Kroll.

Other selected attributes of the fixed-maturity portfolio are shown in the table below. Additional maturity periods and other information for our fixed-maturity portfolio are shown in Item 8, Note 2 of the Consolidated Financial Statements.

	At December 31,	
	2022	2021
Weighted average yield-to-amortized cost	4.22 %	4.02 %
Weighted average maturity	7.4 yrs	8.0 yrs
Effective duration	4.7 yrs	4.8 yrs

The fair values of our taxable fixed-maturity securities portfolio at the end of the last two years were:

(Dollars in millions)	At December 31,	
	2022	2021
Investment-grade corporate	\$ 6,369	\$ 6,807
States, municipalities and political subdivisions	789	931
Noninvestment-grade corporate	500	690
Commercial mortgage-backed	234	273
United States government	191	123
Government-sponsored enterprises	183	8
Foreign government	33	26
Total	<u>\$ 8,299</u>	<u>\$ 8,858</u>

While our strategy typically is to buy and hold fixed-maturity investments to maturity, we monitor credit profiles and fair value movements when determining holding periods for individual securities. With the exception of U.S. agency issues, no individual issuer's securities accounted for more than 1.2% of the taxable fixed-maturity portfolio at year-end 2022. Investment-grade corporate bonds had an average rating of Baa1 by Moody's or BBB by S&P at year-end 2022. Our taxable fixed-maturity portfolio included \$234 million of commercial mortgage-backed securities with an average rating of Aa2/AA- at year-end 2022.

Relative to a broad bond market index such as the Barclay's Aggregate, we are most heavily exposed to the investment-grade corporate bond asset class. Within that asset class, we have a weighting of 42.7% for the financial sector, higher than the 38.8% weighting for the financial sectors of the Bank of America Merrill Lynch U.S. Corporate Index. Relative to the Barclay's Aggregate, we are overweight in the commercial mortgage-backed securities asset class while having no exposure to the much larger residential mortgage-backed market.

At December 31, 2022, we had \$3.833 billion of tax-exempt fixed-maturity securities with an average rating of Aa2/AA by Moody's and S&P. The portfolio is well diversified among approximately 1,700 municipal bond issuers. No single municipal issuer accounted for more than 0.6% of the tax-exempt fixed-maturity portfolio at year-end 2022.

Equity Securities Investments

After covering both our intermediate and long-range insurance obligations with fixed-maturity investments, we historically have used some available cash flow to invest in equity securities. Our equity securities portfolio includes common stocks and nonredeemable preferred stocks, primarily in larger-capitalization companies but sometimes in smaller entities with attractive growth prospects. Investments in equity securities have played an important role in achieving our portfolio objectives and have contributed to both growth of investment income and portfolio appreciation. We remain committed to our long-term equity focus, which we believe is a key factor to our company's long-term growth and stability. We believe our strategy of primarily investing in a diversified selection of high-quality, larger-capitalization, dividend-increasing companies generally results in reduced volatility relative to the broader equity markets.

For federal income tax purposes, taxes on gains from appreciated investments generally are not due until securities are sold. We believe that the appreciated value of equity securities, compared with the cost of securities that is generally used as a tax basis, is a useful measure to help evaluate how fair value can change over time. On this basis, the net unrealized investment gains at year-end 2022 consisted of a net gain position in our equity portfolio of \$5.547 billion. Events or factors such as economic growth or recession can affect the fair value of our equity securities.

At year-end 2022, Apple Inc. (Nasdaq:AAPL) was our largest single common stock investment, comprising 6.3% of our publicly traded common stock portfolio and 2.7% of the entire investment portfolio. The parent company held 42.0% of our common stock holdings (measured by fair value). The distribution of the portfolio among industry sectors is shown in the table below.

Common Stock Portfolio Industry Sector Distribution

Sector:	Percent of common stock portfolio			
	At December 31, 2022		At December 31, 2021	
	Cincinnati Financial	S&P 500 Industry Weightings	Cincinnati Financial	S&P 500 Industry Weightings
Information technology	26.5 %	25.7 %	31.1 %	29.2 %
Healthcare	15.0	15.8	13.5	13.3
Financial	13.6	11.7	14.2	10.7
Industrials	11.9	8.7	11.1	7.8
Consumer staples	8.8	7.2	6.9	5.9
Consumer discretionary	7.7	9.8	8.3	12.5
Materials	5.0	2.7	4.4	2.5
Energy	5.0	5.2	4.0	2.7
Utilities	2.9	3.2	2.2	2.5
Real estate	2.3	2.7	2.7	2.8
Telecomm services	1.3	7.3	1.6	10.1
Total	100.0 %	100.0 %	100.0 %	100.0 %

We evaluate nonredeemable preferred stocks in a manner similar to our evaluation of fixed-maturity investments, seeking attractive relative yields. We generally focus on investment-grade nonredeemable preferred stocks issued by companies with strong histories of paying common dividends, providing us with another layer of protection. Consideration is also given to nonredeemable preferred stocks that offer a dividend received deduction for income tax purposes. We purchased \$54 million and \$173 million of nonredeemable preferred stocks during 2022 and 2021, respectively.

Other

What we report as Other includes the noninvestment operations of the parent company and its noninsurer subsidiary, CFC Investment Company. At year-end 2022, this subsidiary had \$92 million in receivables related to its commercial leasing and financing services, compared with \$98 million in receivables at year-end 2021.

We also report as Other the results of Cincinnati Re, which has contracts, also referred to as treaties, with other insurance or reinsurance companies to assume a portion of their insured risk in exchange for a portion of premiums from insurance policies covering those risks. The treaties and their exposure to losses are diverse in nature, including various lines of business and geographies for the reinsured risks. Some of our treaties reflect a type of contract commonly referred to as participating or proportional, typically sharing premiums and losses between the reinsured entity and us, as reinsurer, on a pro rata basis. Some are a contract type commonly referred to as excess of loss, where we indemnify the reinsured entity only for losses exceeding a predetermined amount.

Net written premiums for Cincinnati Re totaled \$585 million in 2022, compared with \$461 million in 2021. Approximately 31% of 2022 net written premiums was for property exposures that include risk of loss from natural catastrophes and approximately 53% was for casualty exposures from various liability risks. The remainder of approximately 16% was a combination of what we consider to be more specialized coverages that include, but are not limited to, credit risk transfer related to residential mortgages, marine and energy risks and cyber risks.

Also reported as Other are the results of Cincinnati Global, our London-based global specialty underwriter for Lloyd's Syndicate 318, which we acquired on February 28, 2019. We expect it to continue contributing to future earnings and book value growth. In 2022, we expanded opportunities for appointed independent agencies to offer their clients insurance solutions in the Lloyd's market through our insurance brokerage, CSU Producer Resources. We launched the first of several planned products through a binder authority agreement between Cincinnati Global and CSU Producer Resources, enhancing our ability to serve more of our agent's clients and bring quality business to Cincinnati Global.

Net written premiums for Cincinnati Global totaled \$230 million in 2022, compared with \$187 million in 2021. We continued to diversify its premiums to reduce underwriting profit volatility effects of property insurance. Most of the 2022 premiums were for U.S. and international property exposures that include risk of loss from natural catastrophes, including approximately 61% classified as direct and facultative and 22% as binder, where binding authority has been granted to various coverholders. The coverholders are mostly in the U.S., and we believe they have the ability to successfully underwrite and manage risks. The remainder, approximately 17%, was for other classes of business that include trade credit, terrorism, political violence, specie coverage for high-value portable property and contingency insurance with coverage for film and entertainment risks or event cancellation.

Regulation

The business of insurance in the United States (U.S.) is primarily regulated by state law. All of our U.S. insurance company subsidiaries are domiciled in the state of Ohio except The Cincinnati Specialty Underwriters Insurance Company, which is domiciled in the state of Delaware. Each domestic insurance subsidiary is primarily governed by the insurance laws and regulations in its respective state of domicile. We also are subject to regulatory authorities of all states in which we write insurance. The state laws and regulations that have the most significant effect on our insurance operations and financial reporting are discussed below.

- **Insurance Holding Company Regulation** – We are regulated as an insurance holding company system in the respective states of domicile of our lead standard market property casualty company subsidiary and its surplus lines insurance subsidiary. These regulations require that we annually furnish financial and other information about the governance and operations of the individual companies within the holding company system. Information about the risks posed by any noninsurance company subsidiaries must also be disclosed. All transactions within a holding company system affecting insurers must be fair and equitable. Notice to the state insurance commissioner is required prior to the consummation of transactions affecting the ownership or control of an insurer and prior to certain material transactions between an insurer and any person or entity in its holding company group. In addition, some of those transactions cannot be consummated without the commissioner's prior approval.
- **Subsidiary Dividends** – The Cincinnati Insurance Company is fully owned by Cincinnati Financial Corporation. The dividend-paying capacity of The Cincinnati Insurance Company and its fully owned subsidiaries is regulated by the laws of the applicable state of domicile. Under these laws, our domestic insurance subsidiaries must provide a 10-day advance informational notice to the insurance commissioner for the domiciliary state prior to payment of any dividend or distribution to its shareholders. Generally, the most our domestic insurance subsidiaries can pay without prior regulatory approval is the greater of 10% of statutory capital and surplus or 100% of statutory net income for the prior calendar year.

The domestic insurance company subsidiaries must give 30 days of notice to, and obtain prior approval from, the state insurance commissioner before the payment of an extraordinary dividend as defined by the state's insurance code. You can find information about the dividends paid by our insurance subsidiary during 2022 in Item 8, Note 9 of the Consolidated Financial Statements.
- **Insurance Operations** – All of our domestic insurance subsidiaries are subject to licensing and supervision by departments of insurance in the states in which they do business. The nature and extent of such regulations vary, but generally are rooted in statutes that delegate regulatory, supervisory and administrative powers to state insurance departments. Such regulations, supervision and administration of the domestic insurance subsidiaries include: the standards of solvency that must be met and maintained; the licensing of insurers and their agents and brokers; the nature and limitations on investments; deposits of securities for the benefit of policyholders; regulation of standard market policy forms and premium rates; policy cancellations and nonrenewals; test audit programs; periodic examination of the affairs of insurance companies; annual and other reports required to be filed on the financial condition of insurers or for other purposes; requirements regarding reserves for unearned premiums, losses and other matters; the nature of and limitations on dividends to policyholders and shareholders; the nature and extent of required participation in insurance guaranty funds; the involuntary assumption of hard-to-place or high-risk insurance business, primarily workers' compensation insurance; and the collection, remittance and reporting of certain taxes and fees. Our primary insurance regulators in the U.S. have adopted the Model Audit Rule for annual statutory financial reporting. This regulation closely mirrors the Sarbanes-Oxley Act on matters such as auditor independence, corporate governance and internal controls over financial reporting. The regulation permits the audit committee of Cincinnati Financial Corporation's board of directors to also serve as the audit committee of each of our insurance subsidiaries for purposes of this regulation.
- **Insurance Guaranty Associations** – For certain obligations of insolvent insurance companies to policyholders and claimants, states assess each member insurer in an amount relative to the insurer's proportionate share of business written by all member insurers in the state. While the amount of such assessments has not been material in recent years, we cannot predict the amount and timing of any future assessments or refunds on our insurance subsidiaries under these laws.

- Shared Market and Joint Underwriting Plans – Assigned risk plans, reinsurance facilities and joint underwriting associations are mechanisms that generally provide applicants with various basic insurance coverages when they are not available in voluntary markets. States can require participation based upon the amount of an insurance company's voluntary market share, and underwriting results related to these pools could be adverse to our company.
- Statutory Accounting – For public reporting, domestic insurance companies prepare financial statements in accordance with GAAP. However, certain data also must be calculated according to statutory accounting rules as defined in the NAIC's Accounting Practices and Procedures Manual. While not a substitute for any GAAP measure of performance, statutory data frequently is used by industry analysts and other recognized reporting sources to facilitate comparisons of the performance of insurance companies.
- Insurance Reserves – State insurance laws require that property casualty and life insurers annually analyze the adequacy of reserves. Our appointed actuaries must submit an opinion that reserves are adequate for policy claims-paying obligations and related expenses.
- Investment Regulation – Insurance company investments must comply with laws and regulations pertaining to the type, quality and concentration of investments. Such laws and regulations permit investments in federal, state and municipal obligations, corporate bonds, preferred and common equity securities, mortgage loans, real estate and certain other investments, subject to specified limits and other qualifications.
- Risk-Based Capital Requirements – The NAIC's risk-based capital (RBC) requirements for property casualty and life insurers serve as an early warning tool for the NAIC and state regulators to identify companies that may be undercapitalized and may merit further regulatory action. The NAIC has a standard formula for annually assessing RBC. The formula for calculating RBC for property casualty companies takes into account asset and credit risks but places more emphasis on underwriting factors for reserving and pricing. The formula for calculating RBC for life insurance companies takes into account factors relating to insurance, business, asset and interest-rate risks.

Although the federal government and its regulatory agencies generally do not directly regulate the business of insurance, federal legislation and administrative rules adopted can affect our business. Privacy laws, such as the Gramm-Leach-Bliley Act, the Fair Credit Reporting Act and the Health Insurance Portability and Accounting Act (HIPAA) are the federal laws that most affect our day-to-day operations. These apply to us because we gather and use personal nonpublic information to underwrite insurance and process claims. We also are subject to other federal laws, such as the Terrorism Risk Insurance Act (TRIA), anti-money laundering statute (AML), the Nonadmitted and Reinsurance Reform Act (NRRA), the U.S. Foreign Corrupt Practices Act (FCPA), and the rules and regulations of the Office of Foreign Assets Control (OFAC).

Title V of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank) created the Federal Insurance Office to monitor the insurance industry and gather information to identify issues or gaps in the regulation of insurers that could contribute to a systemic crisis in the insurance industry that affects the United States' financial system and to recommend to the Financial Stability Oversight Council that it designate an insurer as a systemically significant entity requiring additional supervision by the Federal Reserve Board. We do not expect Dodd-Frank to result in federal oversight of our operations as a systemically significant entity.

We do not expect to have any material effects on our expenditures, earnings or competitive position as a result of compliance with any federal, state or local provisions enacted or adopted relating to the protection of the environment. We currently do not have any material estimated capital expenditures for environmental control facilities.

We operate in limited foreign jurisdictions. Our foreign insurance subsidiary, Cincinnati Global Underwriting Ltd., based in the United Kingdom (U.K.), holds a group of companies led by our managing agency, Cincinnati Global Underwriting Agency Ltd., of Lloyd's Syndicate 318, which is regulated by The Prudential Regulation Authority (PRA) and The Financial Conduct Authority (FCA). The PRA's primary objective with respect to insurers is to promote the safety and soundness of insurers for the protection of policyholders, while the FCA has three operational objectives: (i) to secure an appropriate degree of protection for consumers; (ii) to protect and enhance the integrity of the U.K. financial system; and (iii) to promote effective competition in the interests of consumers in the financial services markets. The PRA/FCA's Senior Managers and Certification Regime provides regulatory frameworks for standards of fitness and propriety, conduct and accountability for individuals in positions of responsibility at insurers. The PRA and FCA have also delegated certain additional regulatory responsibilities to the Council of Lloyd's. By virtue of Lloyd's international licenses, we can write business in various countries throughout the world. In each such country, we are subject to the laws and insurance regulations of that jurisdiction.

Our operations in the U.K. are further subject to regulations retained following the U.K.'s exit from the European Union (EU). Generally, these requirements were adopted by the EU and then implemented by enabling legislation in the member countries. Significant areas of oversight in the U.K. include capital, solvency and risk management requirements (Solvency II), competition law and antitrust regulation, intermediary and distribution regulation, gender discrimination and data protection and privacy (General Data Protection Regulation).

Enterprise Risk Management

We manage enterprise risk through formal risk management programs overseen by an executive officer of the company. Our ERM framework includes an enterprise risk management committee, which is responsible for overseeing risk activities and is comprised of senior executive-level risk owners from across the enterprise. The risk committee's activities are supported by a team of representatives from business areas that focus on identifying, evaluating and developing risk plans for emerging risks. A comprehensive report is provided quarterly to our chairman, president and chief executive officer and also to our board of directors and our senior executive team, as appropriate, on the status of risk metrics relative to identified tolerances and limits, risk assessments and risk plans. The use of operational audits, strategic plans and departmental business plans, as well as our culture of open communications and fundamental respect for our Code of Conduct, continue to help us manage risks on an ongoing basis.

We understand that a cybersecurity incident is just one example of an event that could affect our future performance. We work to keep our systems and data secure while continuing to increase our understanding of cybersecurity risk through risk management efforts and testing by third-party experts of our cybersecurity program structure and capabilities. Those efforts include blocking attempted cyber intrusions, defending against denial of service attacks, performing frequent vulnerability assessments and maintaining procedures to ensure timely notification of critical cybersecurity incidents and related disclosure controls. We also have developed procedures and reporting processes when we identify an attempted cyber intrusion to the systems of one of our independent agents. Cybersecurity matters are an important part of reporting to our executive management team, risk committee, disclosure committee and the board of directors, including its audit committee. Effects of cyberattacks can happen to any corporation and they can be significant, including additional costs for remediation, litigation and reputational damage.

Our risk management programs include a formalized risk appetite element and a risk identification and quantification process. The overall enterprise objective is to appropriately balance risk and reward to achieve an appropriate return on risk capital. Our key risks are discussed in Item 1A, Risk Factors, including risks related to natural catastrophes, investments and operations.

We continue to study emerging risks, including climate change risk and its potential financial effects on our results of operations and on those we insure. These effects include deterioration in the credit quality of our municipal or corporate bond portfolios and increased losses without sufficient corresponding increases in premiums. As with any risk, we seek to identify the extent of the risk exposure and possible actions to mitigate potential negative effects of risk at an enterprise level.

ITEM 1A. Risk Factors

Our business involves various risks and uncertainties that may affect achievement of our business objectives. Many of the risks could have ramifications across our organization. For example, while risks related to setting insurance rates and establishing and adjusting loss reserves are insurance activities, actual results differing from our assumptions, judgments or estimates in these areas could have an impact on our investment activities, growth and overall results.

The following discussion should be viewed as a starting point for understanding the significant risks we face. It is not a definitive summary of their potential impacts or of our strategies to manage and control the risks. Please see Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, for a discussion of those strategies.

If any risks or uncertainties discussed here develop into actual events, they could have a material adverse effect on our business, financial condition, results of operations or cash flows. In that case, the market price of our common stock could decline materially. The failure of our risk management strategies could have a material adverse impact on our consolidated financial condition, results of operations or cash flows.

Readers should carefully consider this information together with the other information we have provided in this report and in other reports and materials we file periodically with the Securities and Exchange Commission as well as news releases and other information we disseminate publicly.

Risks related to insurance operations

We rely primarily on independent insurance agents to distribute our products.

We market our main products, insurance policies for businesses and individuals, through independent, nonexclusive insurance agents. These agents are not obligated to promote our products and can and do sell our competitors' products. We must offer insurance products that meet the needs of these agents and their clients. We need to maintain good relationships with the agents who market our products. If we do not, these agents may market our competitors' products instead of ours, which may lead to us having a less desirable mix of business and could affect our results of operations.

In addition to our marketing of insurance policies for businesses and individuals, Cincinnati Re reinsures policies written by other insurance companies. This business is marketed through reinsurance intermediaries and is generally not offered by the typical independent agents who market our insurance policies.

Certain events or conditions could diminish our agents' desire to produce business for us and the competitive advantage that our independent agents enjoy, including:

- Downgrade of the financial strength ratings of our insurance subsidiaries. We believe our strong insurer financial strength ratings, in particular, the A+ (Superior) ratings from A.M. Best for our standard market property casualty insurance group and each subsidiary in that group, are an important competitive advantage. See Item 1, Our Business and Our Strategy, Financial Strength, for additional discussion of our financial strength ratings.
- Concerns that doing business with us is difficult or not profitable, perceptions that our level of service is no longer a distinguishing characteristic in the marketplace, perceptions that our products do not meet the needs of our agents' clients or perceptions that our business practices are not compatible with agents' business models.
- Mergers and acquisitions could result in a concentration of a significant amount of premium in one agency.
- Delays in the development, implementation, performance and benefits of technology systems and enhancements or independent agent perceptions that our technology solutions do not match their needs.

A reduction in the number of independent agencies marketing our products, the failure of agencies to successfully market our products or pay amounts due to us, changes in the strategy or operations of agencies or the choice of agencies to reduce their writings of our products could affect our results of operations if we were unable to replace them with agencies that produce adequate and profitable premiums.

Further, policyholders may choose a competitor's product rather than our own because of real or perceived differences in price, terms and conditions, coverage or service. If the quality of the independent agencies with which we do business were to decline, that also might cause policyholders to purchase their insurance through different agencies or channels. Consumers, especially in the personal insurance industry segment, may increasingly choose to purchase insurance from distribution channels other than independent insurance agents, such as direct marketers. Increased advertising by insurers, especially direct marketers, could cause consumers to shift their buying habits, bypassing independent agents altogether. Innovation, new or changing technologies and/or buying trends or consumer preferences could reduce or eliminate the need or demand for products we sell.

Premium revenues and underwriting profit could also be adversely affected by marked or prolonged economic downturns or other events. Economic events experienced during 2022 included elevated inflation, global supply chain disruptions, increasing interest rates, tightening credit markets and higher fuel costs.

Our credit ratings or financial strength ratings of our insurance subsidiaries could be downgraded.

A downgrade in one or more of our company's credit or debt ratings could adversely impact our borrowing costs or limit our access to capital. Financial strength ratings reflect a rating agency's opinion of our insurance subsidiaries' financial strength, operating performance, strategic position and ability to meet obligations to policyholders.

Our ratings are subject to periodic review and there is no assurance that our ratings will not be changed.

Rating agencies could change or expand their requirements or could find that our insurance subsidiaries no longer meet the criteria established for current ratings. If our property casualty or life insurance subsidiary insurer financial strength ratings were to be downgraded, our agents might find it more difficult to market our products or might choose to emphasize the products of other carriers.

We could experience an unusually high level of losses due to natural or man-made catastrophe, terrorism or epidemic events or risk concentrations.

Our insurance operations expose us to claims arising out of catastrophes. Catastrophes can be man-made or caused by natural perils. Man-made catastrophes to which we may be exposed include, but are not limited to, industrial accidents, terrorist attacks, cyberattacks, infrastructure failures, social unrest and riot. Other man-made events, such as hydraulic fracturing, could cause damage from earth movement or create environmental and/or health hazards. Natural peril catastrophe events to which we may be exposed include, but are not limited to, hurricanes, tornadoes, windstorms, earthquakes, landslides, hailstorms, flooding, severe winter weather and wildfires. Due to the nature of these events, we are unable to predict precisely the frequency or potential cost of catastrophe occurrences.

The extent of losses from a catastrophe is a function of both the total amount of insured and reinsured exposure in the area affected by the event and the severity of the event. Our ability to appropriately manage catastrophe risk depends partially on catastrophe models, which may be affected by inaccurate or incomplete data, the uncertainty of the frequency and severity of future events and the uncertain impact of climate change. Additionally, these models are recalibrated and changed over time, with more data availability and changing opinions regarding the effect of current or emerging loss patterns and conditions.

According to these models, probable maximum loss estimates from a single hurricane event that combine the effects of property casualty insurance written on a direct basis by The Cincinnati Insurance Companies, the Cincinnati Re reinsurance portfolio and risks insured by Cincinnati Global include the following amounts, net of amounts recoverable through reinsurance ceded and also income taxes, and including the effects of estimated reinstatement premiums: \$540 million for a once-in-a-100-year event and \$798 million for a once-in-a-250-year event. Please see Item 7, Liquidity and Capital Resources, 2023 Reinsurance Programs, for a discussion of modeled losses considered in evaluating our risk mitigation strategy, which includes our ceded reinsurance program.

The geographic regions in which we market insurance and reinsurance are exposed to numerous natural catastrophes, such as:

- Hurricanes in the gulf, eastern, southeastern and northeastern coastal regions.
- Earthquakes in many regions, most particularly in the New Madrid fault zone, California, the Northwest and Southwest.
- Tornadoes, wind and hail.
- Wildfires.

- Winter storms.
- On a worldwide basis, in the event of a severe catastrophic event or terrorist attack we may be exposed to material losses through our Cincinnati Re and Cincinnati Global operations.

The occurrence of terrorist attacks in the geographic areas we serve could result in substantially higher claims under our insurance policies than we have anticipated. Our insurance policies provide coverage for terrorism risk in all areas we serve, including Tier 1 and Tier 2 cities. We have exposure to small co-op utilities, water utilities, wholesale fuel distributors, small shopping malls and small colleges throughout our 46 active states and, because of the number of associates located there, our Fairfield, Ohio, headquarters. Additionally, our life insurance subsidiary could be adversely affected in the event of a terrorist event or an epidemic, particularly if the epidemic were to affect a broad range of the population, or affects the overall economy. Our associate health plan is self-funded and could similarly be affected.

Our results of operations would be adversely affected if the level of losses we experience over a period of time were to exceed our actuarially determined expectations. In addition, our financial condition may be adversely affected if we were required to sell securities prior to maturity or at unfavorable prices to pay an unusually high level of loss and loss expenses. Securities pricing might be even less favorable if a number of insurance or other companies and other investors needed to sell securities during a short period of time because of unusually high losses from catastrophic events.

Our geographic concentration links our performance to business, economic, environmental and regulatory conditions in certain states. We market our standard market property casualty insurance products in 46 states, but our business is concentrated in the Midwest and Southeast. We also have exposure in states where we do not actively market insurance when clients of our independent agencies have businesses or properties in multiple states or we provide insurance through Cincinnati Global and reinsurance through Cincinnati Re.

The Cincinnati Insurance Company continues to expand its Cincinnati Re reinsurance assumed operations and has staffed it with seasoned underwriting and analytical associates who strive to assume risks that we understand, both quantitatively and qualitatively. Business written includes treaties that provide coverage for property catastrophe and terrorism events on a worldwide basis. Based on treaties in effect at January 1, 2023, the largest loss exposure to us for Cincinnati Re is from natural catastrophe events. That exposure includes probable maximum loss estimates, on a marginal basis, of the following amounts: \$167 million for a once-in-a-100-year event and \$198 million for a once-in-a-250-year event. Those effects represent a single hurricane event and include the effects of income taxes, estimated reinstatement premiums and applicable reinsurance ceded, including any retrocessions for reinsurance assumed, and estimated reinstatement premiums. They are based on probable maximum loss estimates from the Applied Insurance Research Touchstone[®] version 10.0 catastrophe model. The marginal basis reflects diversification effects of the Cincinnati Re reinsurance portfolio and property casualty insurance written on a direct basis by The Cincinnati Insurance Companies. Ignoring diversification effects provided by those two components, on a standalone basis, probable maximum loss estimates for Cincinnati Re include the following amounts: \$204 million for a once-in-a-100-year event and \$244 million for a once-in-a-250-year event. If there is a high frequency of large property catastrophe or terrorism events, or a single extreme event, during the coverage period of these treaties, our financial position and results of operations could be materially affected.

Given its seasoned underwriting associates, we are also expanding Cincinnati Global, our global specialty underwriter with premiums primarily for U.S. and international property exposures. Cincinnati Global also writes North American and United Kingdom (U.K.) contingency and event cancellation coverage and worldwide credit and political risk coverage and political violence coverage. At January 1, 2023, the largest loss exposure to us for Cincinnati Global is from natural catastrophe events. Cincinnati Global's exposure from such events includes probable maximum loss estimates of the following amounts: \$71 million for a once-in-a-100-year event and \$106 million for a once-in-a-250-year event. Those effects are on a standalone basis and represent a single hurricane event and include the effects of income taxes, applicable reinsurance ceded and estimated reinstatement premiums. They are based on probable maximum loss estimates from the Applied Insurance Research Touchstone version 10.0 catastrophe model. If there is a high frequency of large property catastrophe or terrorism events, or a single extreme event, during the coverage period of its policies, our financial position and results of operations could be materially affected.

Additionally, the companies we invest in might be severely affected by a severe catastrophic event, terrorist attack, or epidemic event which could affect our financial condition and results of operations. Our reinsurers might experience significant losses, potentially jeopardizing their ability to pay losses we cede to them. It could also reduce the availability of reinsurance. If we cannot obtain adequate reinsurance or primary insurance coverage at a reasonable cost, it could constrain where we can write business or reduce the amount of business we can write in certain areas. We also may be exposed to state guaranty fund assessments if other carriers in a state cannot meet their obligations to policyholders. A catastrophe or epidemic event also could affect our operations by damaging our headquarters facility, injuring associates and visitors at our Fairfield, Ohio, headquarters or disrupting our associates' ability to perform their assigned tasks.

Climate change may adversely impact our results of operations and/or our financial position.

Global climate change from rising planet temperatures over the last several decades has been linked to a number of factors that contribute to the increased unpredictability, frequency, duration and severity of weather events, including: changing weather patterns, a rise in ocean temperatures and sea level rise. Further increases or persistence in these conditions would lead to higher overall losses, which we may not be able to recoup, particularly in a highly regulated and competitive environment, and higher reinsurance costs. Certain catastrophe models assume an increase in frequency and severity of certain weather or other events, which could result in a disproportionate impact on insurers with certain geographic concentrations of risk. This would also likely increase the risks of writing property insurance in coastal areas or areas susceptible to wildfires or flooding, particularly in jurisdictions that restrict pricing and underwriting flexibility. The threat of rising seas or other catastrophe losses as a result of global climate change may also cause property values in coastal or such other communities to decrease, reducing the total amount of insurance coverage that is required.

The outbreak of COVID-19 could result in an unusually high level of losses.

In March 2020, the outbreak of COVID-19, also known as the novel coronavirus SARS-CoV-2, was recognized as a pandemic by the World Health Organization. The outbreak was widespread in the United States, including in the markets in which we operate. Like many companies in the property casualty insurance industry, our property casualty subsidiaries were named as defendants in lawsuits seeking insurance coverage under commercial property insurance policies issued by the company for alleged losses resulting from the shutdown or suspension of their businesses due to the COVID-19 pandemic. Risks to our business include legislation or court decisions that extend business interruption insurance in commercial property coverage forms to cover claims for pure economic loss related to the COVID-19 pandemic. Legislative initiatives and pending litigation are ongoing in numerous jurisdictions, and we cannot provide assurance that we will not be impacted by adverse legislation or adverse judicial rulings in certain of these jurisdictions. These actions seek to extend coverage beyond the terms and conditions we intended for those policies, including policies that do not contain specific virus exclusions. Therefore we could be forced to pay claims when no coverage was contemplated and for which no premium was collected. If these actions are successful, the aggregate amount of these claims could have a material, adverse impact on our business, financial condition, reputation, results of operations and cash flows.

Our net losses and loss adjustment expenses are estimates and actual net losses could be higher.

Our estimates for COVID-19 losses and loss adjustment expenses represent our best estimates as of December 31, 2022, based upon information currently available. These estimates are based on reported claims, policy level reviews and recent judicial rulings. However, assumptions about coverage, liability and reinsurance continue to be subject to on-going judicial review and may be subject to further government action. While we believe our net reserves for losses and loss adjustment expenses for COVID-19 as of December 31, 2022, are adequate based on information available at this time, we continue to closely monitor reported claims, government actions, judicial decisions and changes in the levels of worldwide social disruption and economic activity arising from the pandemic and will adjust our estimates of gross and net losses as new information becomes available. Factors that affect our estimates of losses and loss adjustment expenses or our ability to reasonably estimate such losses include the number of policyholders that will ultimately submit claims or file lawsuits; the lack of submitted proofs of loss for allegedly covered claims; judicial rulings in similar litigation involving other companies in the insurance industry; difference in state law and developing case law; litigation trends, including varying legal theories advanced by policyholders; whether and to what degree any class of policyholders may be certified; and the inherent unpredictability of litigation. Such adjustments to our reserves for COVID-19 losses and loss adjustment expenses may be material to our results of operations, financial condition and cash flows.

Our ability to properly underwrite and price risks and increased competition could adversely affect our results.

Our financial condition, results of operations and cash flows depend on our ability to underwrite and set rates accurately for a full spectrum of risks. We establish our pricing based on assumptions about the level of losses that may occur within classes of business, geographic regions and other criteria.

To properly price our products, we must collect, properly analyze and use data to make decisions and take appropriate action; the data must be sufficient, reliable and accessible; Cincinnati Global has risks due to its reliance on coverholders in underwriting parts of its business; we need to develop appropriate rating methodologies and formulae; and we may need to identify and respond to trends quickly. We may overestimate or underestimate loss cost trends or these trends may unexpectedly change, leading to losing business by pricing risks above our competitors or charging rates too low to maintain profitability. Inflation trends, especially outside of historical norms, such as we experienced during 2022, may make it more difficult to determine adequate pricing. If rates are not accurate, we may not generate enough premiums to offset losses and expenses, or we may not be competitive in the marketplace.

Our ability to set appropriate rates could be hampered if states where we write business refuse to allow rate increases that we believe are necessary to cover the risks insured. A state could also hamper our ability to set appropriate rates if it no longer allowed us to use factors that we believe are predictive of loss, such as credit-based factors. Multiple states require us to purchase reinsurance from a mandatory reinsurance fund. Such reinsurance funds can create a credit risk for insurers if not adequately funded by the state and, in some cases, the existence of a reinsurance fund could affect the prices charged for our policies. The effect of these and similar arrangements could reduce our profitability in any given period or limit our ability to grow our business.

The insurance industry is cyclical and intensely competitive. From time to time, the industry goes through prolonged periods of intense competition during which it is more difficult to attract new business, retain existing business and maintain profitability. Competition in our insurance business is based on many factors, including:

- Competitiveness of premiums charged
- Relationships among carriers, agents, brokers and policyholders
- Underwriting and pricing methodologies that allow insurers to identify and appropriately price risks
- Compensation provided to agents
- Underwriting discipline
- Terms and conditions of insurance coverage
- Speed with which products are brought to market
- Product and marketing innovations, including advertising
- Technological competence and innovation
- Ability to control expenses
- Adequacy of financial strength ratings by independent rating agencies such as A.M. Best
- Quality of services and tools provided to agents and policyholders
- Claims satisfaction and reputation

We compete with major U.S., Bermudian, European, and other international insurers and reinsurers and with underwriting syndicates, some of which have greater financial, marketing and management resources than we do. Recent industry consolidation, including business combinations among insurance and other financial services companies, has resulted in larger competitors with even greater financial resources. We also compete with new companies that continue to enter the insurance and reinsurance markets. In addition, capital market participants have created alternative products that are intended to compete with reinsurance products that we sell through Cincinnati Re. Increased competition could result in fewer submissions, lower premium rates, and less favorable policy terms and conditions, which could reduce our underwriting margins and have a material adverse effect on our results of operations and financial condition.

If our pricing was incorrect or we were unable to compete effectively because of one or more of these factors, our premium writings could decline and our results of operations and financial condition could be materially adversely affected. Large competitors could intentionally disrupt the market by targeting certain lines or underpricing the market.

Please see the discussion of our Commercial Lines, Personal Lines, Excess and Surplus Lines and Life Insurance Segments in Item 1, Our Segments, for a discussion of our competitive position in the insurance marketplace.

Our pricing and capital models could be flawed.

We use various actuarial pricing methods, predictive pricing and underwriting models, stochastic models and/or forecasting techniques to help us understand our business, analyze risk and estimate future trends. The output of these techniques and models is used to assist us in making underwriting, pricing, reinsurance, reserving and capital decisions and helps us set our strategic direction. These models contain numerous assumptions, including the assumption that the data used is sufficient and accurate. They are also subject to uncertainties and limitations inherent in any statistical analysis. Actual results may be materially different from modeled output, resulting in pricing our products incorrectly, overestimating or underestimating reserves, or inaccurately forecasting the impact of modeled events on our results. This could materially adversely impact the results of our operations.

Our loss reserves, our largest liability, are based on estimates and could be inadequate to cover our actual losses.

Our consolidated financial statements are prepared using GAAP. These principles require us to make estimates and assumptions that affect the amounts reported in the Consolidated Financial Statements and accompanying Notes. Actual results could differ materially from those estimates. For a discussion of the significant accounting policies we use to prepare our financial statements, the material implications of uncertainties associated with the methods, assumptions and estimates underlying our critical accounting policies and the process used to determine our loss reserves, please refer to Item 8, Note 1 of the Consolidated Financial Statements, and Item 7, Critical Accounting Estimates, Property Casualty Insurance Loss and Loss Expense Reserves and Life Insurance Policy Reserves.

Our most critical accounting estimate is loss reserves. Loss reserves are the amounts we expect to pay for covered claims and expenses we incur to settle those claims. The loss reserves we establish in our financial statements represent an estimate of amounts needed to pay and administer claims arising from insured events that have already occurred, including events that have not yet been reported to us. Loss reserves are estimates and are inherently uncertain; they do not and cannot represent an exact measure of liability. Inflationary scenarios, especially scenarios outside of historical norms or regulatory changes that affect the assumptions underlying our critical accounting estimates, may make it more difficult to estimate loss reserves. Accordingly, our loss reserves for past periods could prove to be inadequate to cover our actual losses and related expenses. Any changes in these estimates are reflected in our results of operations during the period in which the changes are made. An increase in our loss reserves would decrease earnings, while a decrease in our loss reserves would increase earnings.

Unforeseen losses, or unintended coverages, the type and magnitude of which we cannot predict, may emerge. These additional losses could arise from changes in the legal environment, laws and regulations, climate change, catastrophic events, increases in loss severity or frequency, environmental claims, mass torts or other causes such as social inflation. Such future losses could be substantial. Inflationary scenarios may cause the cost of claims, especially medical claims, to rise, impacting reserve adequacy and our results of operations.

Our life policy reserves are also subject to uncertainty. Periods of higher death claims outside of long-term historical norms, such as the COVID-19 pandemic, and not anticipated within our actuarial models could make our life policy reserves inadequate to cover actual future death claims. Increases in estimates of future death claims would increase life policy reserve levels and in turn decrease earnings.

In addition to the risks stated above, Cincinnati Re reserves are subject to uncertainty because a reinsurer relies on the original underwriting decisions and claims reserving practices of ceding companies. As a result, we are subject to the risk that our ceding companies may not have adequately evaluated the risks reinsured by us and the premiums ceded may not adequately compensate us for the risks we assume. In addition, there is generally a longer lapse of time from the occurrence of the event to the reporting of the loss or benefit to the reinsurer and ultimate resolution or settlement of the loss. Similar risks exist for Cincinnati Global due to potential delays in loss reporting.

Because of the inherent uncertainties involved in setting reserves, we cannot provide assurance that our existing reserves or future reserves will prove adequate in light of subsequent events. Our results of operations and financial condition have in the past been, and in the future could be, materially affected by adverse loss development for events that we insured in prior periods.

International operations subject us to additional regulation and expose us to additional investment, political and economic risks.

We have international operations that expose us to a number of additional risks. These risks include restrictions such as price controls, capital controls, currency exchange limits, ownership limits and other restrictive or anti-competitive governmental actions or requirements, which could have an adverse effect on our business and reputation. Our business activities outside the United States, including the U.K., subject us to political and economic risks, including foreign currency and credit risk. Additionally, Cincinnati Global's operations will expand the products offered by us and could expose us to additional regulation or other risks.

Business activities outside the United States will subject us to additional domestic and foreign laws and regulations, including the Foreign Corrupt Practices Act, the U.K. Bribery Act and similar laws in other countries that prohibit the making of improper payments to foreign officials. In addition, insurers in the U.K. (including managing agents and members of Lloyd's of London) are subject to Solvency II and the U.K. regulatory regime, which itself includes rules promulgated by Lloyd's. Although we have policies and controls in place that are designed to ensure compliance with these laws and regulatory requirements, if those controls are ineffective and an employee or intermediary fails to comply with applicable laws and regulations, we could suffer civil and criminal penalties and our business and reputation could be adversely affected. Some countries have laws and regulations that lack clarity and, even with local expertise and effective controls, it can be difficult to determine the exact requirements of, and potential liability under, the local laws. Failure to comply with local laws in a particular market may result in substantial liability and could have a significant and negative effect not only on our business in that market but also on our reputation generally.

Business activities at Cincinnati Global are subject to Lloyd's approval of a business plan each year. There is risk that Cincinnati Global's plan will not be approved or will be limited. As a Lloyd's managing agent and syndicate, Cincinnati Global is exposed to various risks and their associated uncertainties, including Lloyd's rating agency ratings, reputation, and Cincinnati Global's obligation to maintain funds at Lloyd's to support its underwriting activities and periodic assessment of its capital, governance and other aspects of its business.

Developments relating to the Russian war against Ukraine could adversely affect our insurance operations or other financial matters.

We have limited direct exposure within our insurance operations to businesses or individuals in Russia or the Ukraine reported in our consolidated property casualty insurance catastrophe losses and loss expenses incurred, net of reinsurance. We do not have material exposure to investments subject to embargos or Russian reinsurance counterparties. However, the ongoing Russian war against Ukraine is impacting global economic, banking, commodity, and financial markets, exacerbating ongoing economic challenges, including inflation and supply chain disruption, which impacts insurance loss costs, premiums and investment valuation.

Developments relating to the United Kingdom leaving the European Union could adversely affect Cincinnati Global's operations.

The terms of the U.K.'s withdrawal from the European Union (Brexit) and the relationship between the U.K. and the European Union going forward can affect economic conditions, including the terms of trade between them. The ultimate impact of Brexit is uncertain and will depend on any agreements that the U.K. makes to retain access to European Union markets. Brexit could also lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which European Union laws to replace or replicate. These or other adverse consequences from Brexit could adversely affect the operations and business opportunities of Cincinnati Global.

With a view to mitigating the potential effects of Brexit on business underwritten through it, Lloyd's has set up an insurance company subsidiary in Belgium, Lloyd's Europe, underwriting European Economic Area insurance business via that subsidiary.

Our ability to obtain or collect on our reinsurance protection could affect our business, financial condition, results of operations or cash flows.

We buy property casualty and life reinsurance coverage to mitigate the liquidity risk and earnings volatility risk of an unexpected rise in claims severity or frequency from catastrophic events or a single large loss. The availability, amount and cost of reinsurance depend on market conditions and may vary significantly. If we were unable to obtain reinsurance on acceptable terms and in appropriate amounts, our business and financial condition could be adversely affected.

In addition, we are subject to credit risk with respect to our reinsurers. Although we purchase reinsurance to manage our risks and exposures to losses, this reinsurance does not discharge our direct obligations under the policies we write. We would remain liable to our policyholders even if we were unable to recover what we believe we are entitled to receive under our reinsurance contracts. Reinsurers might refuse or fail to pay losses that we cede to them, or they might delay payment. For long-tail claims, the creditworthiness of our reinsurers may change before we can recover amounts to which we are entitled. A reinsurer's insolvency, inability or unwillingness to make payments under the terms of its reinsurance agreement with our insurance subsidiaries could have a material adverse effect on our financial position, results of operations or cash flows.

Please see Item 7, Liquidity and Capital Resources, 2023 Reinsurance Ceded Programs, for a discussion of selected reinsurance transactions.

Risks related to investments or other financial matters

Financial disruption or a prolonged economic downturn could materially and adversely affect our investment performance.

Recent events, including the outbreak of COVID-19, global supply chain disruptions, increasing interest rate environment and inflationary pressures, have contributed to significant disruption and volatility for financial markets and decreased economic activity. Many companies experienced uncertainty and reduced liquidity. In the event that these conditions continue or result in a prolonged economic downturn or recession, they could further adversely impact our financial condition, results of operations or cash flows. Such adverse impacts may be material. These market conditions could also cause our investment income or the value of securities we own to decrease.

Our ability to achieve our performance objectives could be affected by changes in the financial, credit and capital markets or the general economy.

We invest premiums received from policyholders and other available cash to generate investment income and capital appreciation, while also maintaining sufficient liquidity to pay covered claims and operating expenses, service our debt obligations and pay dividends. The value of our invested assets is an important component of shareholders' equity, also known as book value. Changes in the valuation of invested assets can significantly affect changes in book value per share, a key performance objective as discussed in Item 7, Executive Summary of Management's Discussion and Analysis.

For fixed-maturity investments such as bonds, which represented 55.2% of the fair value of our investment portfolio at the end of 2022, the inverse relationship between interest rates and bond prices leads to falling bond values during periods of increasing interest rates. Significant increases in the general level of interest rates, such as we experienced during 2022, could have an adverse effect on our shareholders' equity.

Investment income is an important component of our revenues and net income. The ability to increase investment income and generate longer-term growth in book value is affected by factors beyond our control, such as: inflation, economic growth, interest rates, world political conditions, changes in laws and regulations, epidemic events, terrorism attacks or threats, adverse events affecting other companies in our industry or the industries in which we invest, market events leading to credit constriction, and other widespread unpredictable events. These events have in the past and may in the future adversely affect the economy generally and cause our investment income or the value of securities we own to decrease. Any significant decline in our investment income will have an adverse effect on our net income, and thereby on our shareholders' equity and our statutory capital and surplus. For a more detailed discussion of risks associated with our investments, please refer to Item 7A, Quantitative and Qualitative Disclosures About Market Risk.

We have issued life contracts with guaranteed minimum returns, referred to as bank-owned life insurance contracts (BOLIs). BOLI investment assets must meet certain criteria established by the regulatory authorities in the jurisdiction for which the group contract holder is subject. Therefore, sales of investments may be mandated to maintain compliance with these regulations, possibly requiring gains or losses to be recorded. We could experience losses if the assets in the accounts were less than liabilities at the time of maturity or termination.

We also have life policy reserves established for traditional life policies including term, whole and other products. Reserve variability could increase with the adoption of ASU 2018-12 as discussed in Item 8, Note 1 of the Consolidated Financial Statements, as reserves are based on certain cash flow assumptions as well as a discount rate assumption. This discount rate assumption is based on updated market value discount rates. Life policy reserves are required to be remeasured using an updated discount rate assumption quarterly. Remeasurement adjustments for the updated discount rate are recorded as an increase or decrease to life policy reserves with an offsetting increase or decrease to accumulated other comprehensive income (AOCI). As the discount rate increases during the quarter, life policy reserves decrease and AOCI increases. Conversely, as the discount rate decreases during the quarter, life policy reserves increase and AOCI decreases. A significant decrease in discount rates, relative to the prior quarter, could have an adverse effect on shareholders' equity.

Our investment performance also could suffer because of the types of investments, industry groups and/or individual securities in which we choose to invest. Market value changes related to these choices could cause a material change in our financial condition or results of operations.

At year-end 2022, common stock holdings made up 43.0% of our investment portfolio. Adverse news or events affecting the global or U.S. economy or the equity markets, such as we experienced during 2022, could affect our net income, book value and overall results, as well as our ability to pay our common stock dividend. See Item 7, Investments Results, and Item 7A, Quantitative and Qualitative Disclosures About Market Risk, for a discussion of our investment activities.

Deterioration in the banking sector or in banks with which we have relationships could affect our results of operations. Our ability to maintain or obtain short-term lines of credit could be affected if the banks from which we obtain these lines are acquired, fail or are otherwise negatively affected. We may lose premium revenue if a bank that owns appointed agencies were to change its strategies. We could experience increased losses in our director and officer liability line of business if claims were made against insured financial institutions.

A deterioration of credit and market conditions could also impair our ability to access credit markets and could affect existing or future lending arrangements.

Our overall results could be affected if a significant portion of our commercial lines or personal lines policyholders are adversely affected by marked or prolonged economic downturns and events such as a downturn in construction and related sectors, tightening credit markets and higher fuel costs experienced during 2022. Such events could make it more difficult for policyholders to finance new projects, complete projects or expand their businesses, leading to lower premiums from reduced payrolls and sales and lower purchases of equipment and vehicles. These events could also cause claims, including surety claims, to increase due to a policyholder's inability to secure necessary financing to complete projects or to collect on underlying lines of credit in the claims process. Such economic downturns and events could have a greater impact in the construction sector where we have a concentration of risks and in geographic areas that are hardest hit by economic downturns.

Deteriorating economic conditions could also increase the degree of credit risk associated with amounts due from independent agents who collect premiums for payment to us and could hamper our ability to recover amounts due from reinsurers.

Our status as an insurance holding company with no direct operations could affect our ability to pay dividends in the future.

Cincinnati Financial Corporation is a holding company that transacts substantially all of its business through its subsidiaries. Our primary assets are the stock in our operating subsidiaries and our investments. Consequently, our cash flow to pay cash dividends and interest on our long-term debt depends on dividends we receive from our operating subsidiaries and income earned on investments held at the parent-company level.

Dividends received from our lead insurance subsidiary are restricted by the insurance laws of Ohio, its domiciliary state. These laws establish minimum solvency and liquidity thresholds and limits. In 2023, the maximum dividend that may be paid without prior regulatory approval is limited to the greater of 10% of statutory capital and surplus or 100% of statutory net income for the prior calendar year, up to the amount of statutory unassigned capital and surplus as of the end of the prior calendar year. Dividends exceeding these limitations may be paid only with prior approval of the Ohio Department of Insurance. We might not be able to receive dividends from our insurance subsidiaries, or we might not receive dividends in the amounts necessary to meet our debt obligations or to pay dividends on our common stock without liquidating securities. This could affect our financial position.

Please see Item 1, Regulation, and Item 8, Note 9 of the Consolidated Financial Statements, for a discussion of insurance holding company dividend regulations.

General risk factors

Elevated inflation may negatively impact profit and the value of investments.

Inflation in various forms, such as we experienced in 2022, can reduce underwriting profitability due to higher losses and loss expenses to repair damaged autos or other property that we insure. Elevated inflation can also be in the form of social inflation of litigation costs, jury awards and settlement expectations. In addition to potential adverse effects on the fair value of our equity portfolio, inflationary pressures can also cause or contribute to, or are the result of, increases in interest rates, which would reduce the fair value of our fixed-maturity portfolio.

Our business depends on the uninterrupted operation of our facilities, systems and business functions.

Our business depends on our associates' ability to perform necessary business functions, such as processing new and renewal policies and handling claims. We increasingly rely on technology and systems to accomplish these business functions in an efficient and uninterrupted fashion. Our inability to access our headquarters facilities for certain critical functions or a failure of technology, telecommunications or other systems or the loss or failure of services provided by key vendors, could significantly impair our ability to perform such functions on a timely basis or affect the accuracy of transactions. If sustained or repeated, such a business interruption or system failure could result in a deterioration of our ability to write and process new and renewal business, serve our agents and policyholders, pay claims in a timely manner, collect receivables or perform other necessary business functions. If our disaster recovery and business continuity plans did not sufficiently consider, address or reverse the circumstances of an interruption or failure, this could result in a materially adverse effect on our operating results and financial condition.

Our ability to successfully execute business functions also depends on hiring and retaining the qualified associates we employ. Competition for high-quality executives and other key associates occurs within the insurance industry and from other industries. We also must effectively develop and manage associates, including providing training and resources. Such tools and information can allow them to effectively perform critical business functions and adapt to changing business needs. During some periods, such as we experienced in 2022, labor markets are tight and there is intense competition for associates qualified to execute important business functions. Many markets in which we operate are experiencing a low unemployment rate and labor shortages are affecting many industries. If we were unable to attract and retain certain associates, or if we fail to provide adequate training or resources, or fail to provide a work environment that is attractive to associates, we could limit the success of executing our strategic plans and vital business functions.

The effects of changes in industry practices, laws and regulations on our business are uncertain.

As industry practices and legal, judicial, legislative, regulatory, political, social and other environmental conditions change, unexpected and unintended issues related to insurance pricing, claims and coverage emerge. These issues may adversely affect our business by impeding our ability to obtain adequate rates for covered risks or otherwise extending coverage beyond our underwriting intent, by increasing the number or size of claims, by varying assumptions underlying our critical accounting estimates or by increasing duties owed to policyholders beyond contractual obligations. In some instances, unforeseeable emerging and latent claim and coverage issues and court decisions or legislative changes may not become apparent until sometime after we have issued the insurance policies that could be affected by the changes. As a result, the full extent of liability under our insurance contracts may not be known for many years after a policy is issued and our pricing and reserve estimates may not accurately reflect its effect.

We are required to adopt new or revised accounting standards issued by recognized authoritative organizations, including the Financial Accounting Standards Board (FASB) and the SEC. Future changes required to be adopted could change the current accounting treatment that we apply and could result in material adverse effects on our results of operations, financial position or cash flows.

Our investment income benefits from tax rate preferences for municipal bond interest and dividend income from equity securities. Market valuations for these securities also benefit from the tax-preference aspect of current tax laws, affecting the value of our investment portfolio and also shareholders' equity. Future changes in tax laws, or other changes such as regulations for applicability of alternative minimum taxes, could result in material adverse effects on our results of operations and financial condition.

The NAIC, state insurance regulators and state legislators continually re-examine existing laws and regulations governing insurance companies and insurance holding companies, specifically focusing on modifications to statutory accounting principles, interpretations of existing laws, regulations relating to product forms and pricing methodologies and the development of new laws and regulations that affect a variety of financial and nonfinancial components of our business. Any proposed or future legislation, regulation or NAIC initiatives, if adopted, may be more restrictive on our ability to conduct business than current regulatory requirements or may result in higher costs. The loss or significant restriction on the use of a particular variable, such as credit, in pricing and underwriting our products could lead to future unprofitability and increased costs.

Federal laws and regulations and the influence of international laws and regulations, including those that may be enacted in the wake of the financial and credit crises, may have adverse effects on our business, potentially including a change from a state-based system of regulation to a system of federal regulation, the repeal of the McCarran Ferguson Act, and/or measures under the Dodd-Frank Act that establish the Federal Insurance Office and provide for a determination that a nonbank financial company presents systemic risk and therefore should be subject to heightened supervision by the Federal Reserve Board. It is not known how this federal office will coordinate and interact with the NAIC and state insurance regulators. Adoption or implementation of any of these measures may restrict our ability to conduct our insurance business, govern our corporate affairs or increase our cost of doing business.

In addition, global climate change and global climate change transitions could lead to new or enhanced regulation, which may be difficult or costly to comply with, or impact assets that we invest in, which may result in realized and unrealized losses in future periods that could have a material adverse impact on our results of operations and/or financial position. It is not possible to foresee the impacts of potential future climate regulation, or which, if any, assets, industries or markets may be materially and adversely affected by global climate change and global climate change transitions, nor is it possible to foresee the magnitude of such effects.

The effects of such changes could adversely affect our results of operations. Please see Item 7, Critical Accounting Estimates, Property Casualty Insurance Loss and Loss Expense Reserves and Life Insurance Policy Reserves, for a discussion of our reserving practices.

Managing technology initiatives and meeting data security requirements are significant challenges.

We use technology to process, store, retrieve, evaluate and use customer and company data and information. Our information technology and telecommunications systems, in turn, interface with and rely upon third-party systems. We must be able to access our systems to provide insurance quotes, process premium payments, make changes to existing policies, file and pay claims, provide customer support, manage our investment portfolios, report on financial results and perform other necessary business functions. Systems failures or outages could compromise our ability to perform these business functions in a timely manner, which could harm our ability to conduct business and hurt our relationships with our business partners and customers. In the event of a disaster such as a natural catastrophe, a pandemic, civil unrest, an industrial accident, a cyberattack, a blackout, a terrorist attack (including conventional, nuclear, biological, chemical or radiological) or war, systems upon which we rely may be inaccessible to our associates or independent agents for an extended period of time. Even if our associates and independent agents are able to report to work, they may be unable to perform their duties for an extended period of time if our data or systems used to conduct our business are disabled or destroyed. While technology can streamline many business processes and ultimately reduce the costs of operations, technology initiatives present short-term cost and also have implementation and operational risks. In addition, we may have inaccurate expense projections, implementation schedules or expectations regarding the effectiveness and user acceptance of the end product.

These issues could escalate over time. If we were unable to find and retain associates with key technical knowledge, our ability to develop and deploy key technology solutions could be hampered.

Our systems have been, and will likely continue to be, subject to viruses or other malicious code, unauthorized access, cyber attacks, cyber frauds or other computer-related penetrations. While we take commercially reasonable measures to keep our systems and data secure, it is difficult or impossible to defend against every risk being posed by changing technologies as well as criminal and state-sponsored cybercrime and cyber threats. While we are not aware of having experienced a material breach of our cybersecurity systems, administrative, internal accounting and technical controls as well as other preventative actions may be insufficient to prevent security breaches to our systems or those of third parties with whom we do business. Increasing sophistication of cyber criminals and terrorists make keeping up with new threats difficult and could result in a breach. Patching and other measures to protect existing systems and servers could be inadequate, especially on systems that are being retired. Controls employed by our U.S., off-shore and cloud vendors could prove inadequate. We could also experience a breach by intentional or negligent conduct on the part of associates or other internal sources. Our systems and those of our third-party vendors may become vulnerable to damage or disruption due to circumstances beyond our or their control, such as from catastrophic events, power anomalies or outages, natural disasters, network failures, and viruses, ransomware and malware.

A breach of our security or the security of a vendor that results in unauthorized access to our data could expose us to a disruption or challenges relating to our daily operations as well as to data loss, litigation, damages, fines and penalties, significant increases in compliance costs and reputational damage. From time to time we have had to, and in the future we may need to, increase or expend resources to investigate or remediate vulnerabilities as a result of data security incidents. Such resources are costly in time and expense, and detract from resources spent on or are otherwise devoted to our core operations. In addition, depending on the nature of an incident, we may not be able to detect an incident readily, assess its severity or impact, or appropriately respond in a timely manner, which could increase our risk and exposures.

Any failure to protect the confidentiality of customer information could adversely affect our reputation or expose us to fines, penalties or litigation, which could have a material adverse effect on our business, financial condition and results of operations.

We necessarily collect, use and hold data concerning individuals and businesses with whom we have a relationship. We are required to safeguard the confidential personal information of our customers and applicants. We are subject to an increasing number of federal, state, local and international laws and regulations regarding privacy and data security, as well as contractual commitments. These laws and regulations are rapidly evolving, complex, vary significantly from jurisdiction to jurisdiction, and sometimes conflict. In the absence of updated, uniform federal privacy legislation, there is a growing trend in the states in which we operate, to adopt comprehensive privacy legislation that provides consumers with various privacy rights and imposes significant compliance burdens on covered companies. Failure to comply with data security or privacy laws or regulations could subject us to regulatory enforcement actions and fines, penalties, litigation, private rights of action or public statements against us by consumer advocacy groups or others if confidential customer information is misappropriated from our computer systems, those of our vendors or others with whom we do business, or otherwise. Despite the security measures that may be in place, any such systems may be vulnerable to the types of attacks and security incidents described above. Any well-publicized compromise of security could deter people from entering into transactions that involve transmitting confidential information, impart reputational or other harm, and/or have a material adverse effect on our business. Additionally, privacy legislation may make our business partners more reluctant to share information with us that is useful in conducting our business.

ITEM 1B. Unresolved Staff Comments

None

ITEM 2. Properties

Cincinnati Financial Corporation owns our headquarters building located on 107 acres of land in Fairfield, Ohio. This building has 1,508,200 square feet of total space. The property, including land is recorded in our financial statements at \$129 million at December 31, 2022, and is classified as Land, building and equipment, net, for company use. John J. & Thomas R. Schiff & Co. Inc., a related party, occupies 9,056 square feet (less than 1%). This property is used for the operations described in the Consolidated Financial Statements and accompanying Notes.

Cincinnati Financial Corporation owns Gilmore Pointe, located on the northwest corner of our headquarters property. This four-story building contains approximately 103,000 square feet of usable space. The property is recorded in the financial statements at \$4 million at December 31, 2022, and is classified as investment property in Other invested assets. At December 31, 2022, unaffiliated tenants occupied 86%, Cincinnati Financial affiliates occupied 14%.

The Cincinnati Insurance Company owns the CFC Winton Center used for multiple operations with approximately 48,000 square feet of total space, located approximately six miles from our headquarters. The property, including land, is recorded in our financial statements at \$8 million at December 31, 2022, and is classified as Land, building and equipment, net, for company use.

We lease office space located in London, United Kingdom, for our Cincinnati Global operations. We also lease office space throughout the United States to support our insurance operations.

ITEM 3. Legal Proceedings

Neither the company nor any of our subsidiaries are involved in any litigation believed to be material other than ordinary, routine litigation incidental to the nature of our business.

ITEM 4. Mine Safety Disclosures

This item is not applicable to the company.

Part II

ITEM 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

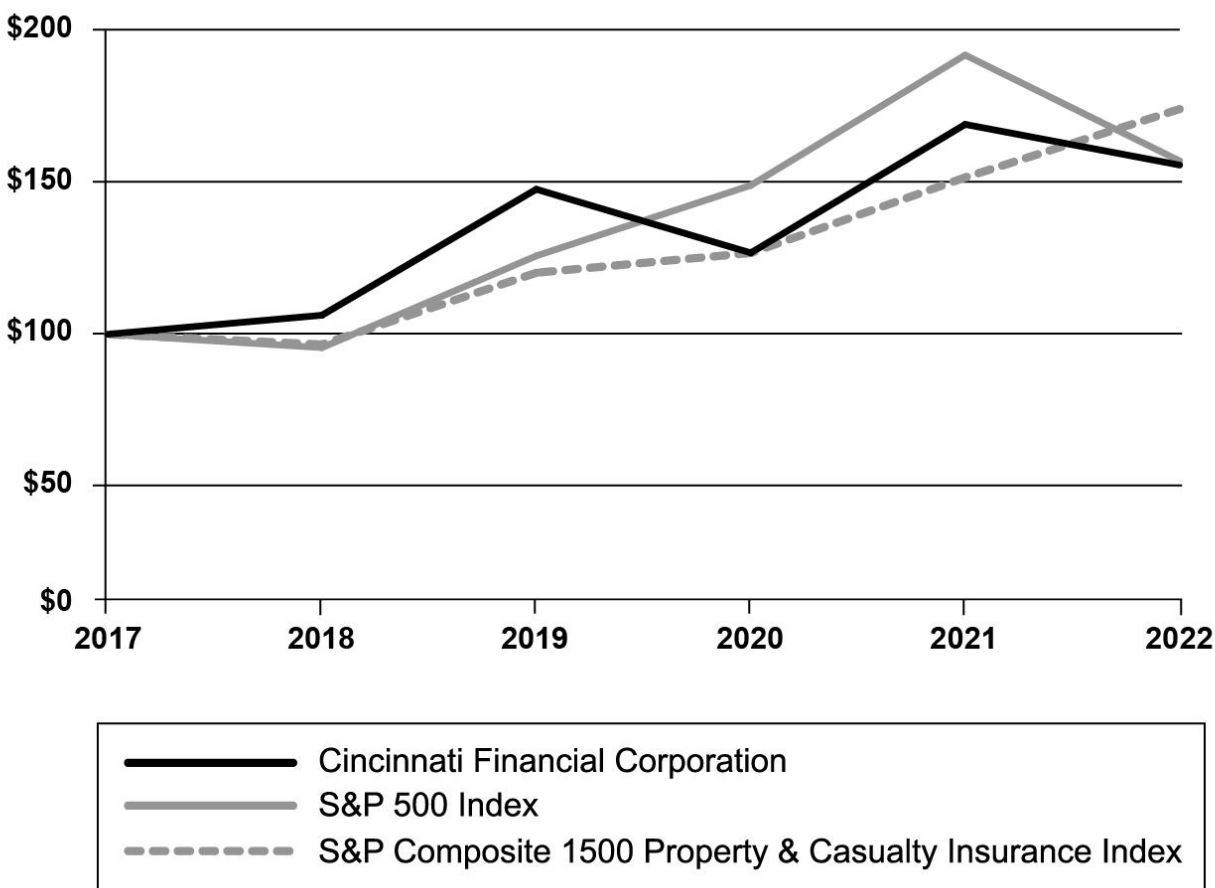
Cincinnati Financial Corporation had approximately 245,000 shareholders of record as of December 31, 2022. While approximately 13,700 shareholders are registered, the majority of shareholders are beneficial owners whose shares are held in "street name" by brokers and institutional accounts. We believe many of our independent agent representatives and most of the 5,148 associates of our subsidiaries own the company's common stock. Our common shares are traded under the symbol CINF on Nasdaq.

Cumulative Total Return

As depicted in the graph below, the five-year total return on a \$100 investment made December 31, 2017, assuming the reinvestment of all dividends, was 55.5% for Cincinnati Financial Corporation's common stock compared with 56.9% for the S&P 500 Index and 73.9% for the S&P Composite 1500 Property & Casualty Insurance Index.

The following graph depicts \$100 invested on December 31, 2017, in stock or index, including reinvestment of dividends. The years shown represent each respective fiscal year ending December 31.

Comparison of Five-Year Cumulative Total Return



The S&P 500 Index includes a representative sample of 500 leading companies in a cross section of industries of the U.S. economy. At year-end 2022, the S&P Composite 1500 Property & Casualty Insurance Index included 29 companies.

Issuances and Purchases of Equity Securities

The following summarizes securities authorized for issuance under our equity compensation plans as of December 31, 2022:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights at December 31, 2022	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plan (excluding securities reflected in column (a)) at December 31, 2022
	(a)	(b)	(c)
Equity compensation plans approved by security holders	3,608,347	\$ 86.21	4,556,968
Equity compensation plans not approved by security holders	—	—	—
Total	3,608,347	\$ 86.21	4,556,968

The number of securities remaining available for future issuance includes: 4,313,579 shares available for issuance under the Cincinnati Financial Corporation 2016 Stock Compensation Plan (the 2016 Plan) and 243,389 shares available for issuance of share grants under the Director's Stock Plan of 2018. The Cincinnati Financial Corporation 2012 Stock Compensation Plan expired in April 2022. The number of securities remaining available for future issuance assumes the number of securities to be issued from performance-based awards are issued at the target-level performance level. The 2016 Plan allows for issuance of stock options, service-based or performance-based restricted stock units, stock appreciation rights or other equity-based grants. Awards other than stock options granted from the 2016 Plan are counted as three shares against the plan for each one share of common stock actually issued. Additional information about share-based associate compensation granted under our equity compensation plans is available in Item 8, Note 17 of the Consolidated Financial Statements.

We discuss the factors that affect our ability to pay cash dividends and repurchase shares in Item 7, Liquidity and Capital Resources. Regulatory restrictions on dividends our insurance subsidiaries can pay to the parent company are discussed in Item 8, Note 9 of the Consolidated Financial Statements.

The following summarizes shares purchased under our repurchase programs:

Period	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs	Maximum number of shares that may yet be purchased under the plans or programs
October 1-31, 2022	—	—	—	7,428,512
November 1-30, 2022	—	—	—	7,428,512
December 1-31, 2022	101,727	\$ 109.55	101,727	7,326,785
Totals	101,727	109.55	101,727	

We did not sell any of our shares that were not registered under the Securities Act during 2022. Our repurchase program does not have an expiration date. Our repurchase program was expanded on January 26, 2018, by 15 million shares. We have 7,326,785 shares available for purchase under our programs at December 31, 2022. During 2022, we repurchased 3,750,000 shares at an average price of \$109.33.

ITEM 6. [Reserved]

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Introduction

The purpose of Management's Discussion and Analysis is to provide an understanding of Cincinnati Financial Corporation's consolidated results of operations and financial condition. Our Management's Discussion and Analysis should be read in conjunction with Item 8, Consolidated Financial Statements and related Notes. We present per share data on a diluted basis unless otherwise noted, adjusting those amounts for all stock splits and stock dividends.

We begin with an executive summary of our results of operations, followed by other highlights and details about critical accounting estimates. In several instances, we refer to estimated industry data so that we can provide information on our performance within the context of the overall insurance industry. Unless otherwise noted, the industry data is prepared by A.M. Best, a leading insurance industry statistical, analytical and financial strength rating organization. Information from A.M. Best is presented on a statutory accounting basis for insurance company regulation in the United States of America. When we provide our results on a comparable statutory accounting basis, we label it as such; all other company data is presented in accordance with accounting principles generally accepted in the United States of America (GAAP).

Through The Cincinnati Insurance Company, Cincinnati Financial Corporation is one of the 25 largest property casualty insurers in the nation, based on net written premium volume for the first nine months of 2022, among approximately 2,000 U.S. stock and mutual insurer groups. We market our insurance products through a select group of independent insurance agencies in 46 states as discussed in Item 1, Our Business and Our Strategy.

The U.S. economy, the insurance industry and our company continue to face many challenges. Our long-term perspective has allowed us to address immediate challenges while also focusing on the major decisions that best position the company for success through all market cycles. We believe that this forward-looking view consistently benefits our shareholders, agents, policyholders and associates.

To measure our progress, we have defined a measure of value creation that we believe captures the contribution of our insurance operations, the success of our investment strategy and the importance we place on paying cash dividends to shareholders. We refer to this measure as our value creation ratio (VCR) and it is made up of two primary components: (1) our rate of growth in book value per share plus (2) the ratio of dividends declared per share to beginning book value per share. This measure, intended to be all-inclusive regarding changes in book value per share, uses originally reported book value per share in cases where book value per share has been adjusted, such as after the adoption of Accounting Standards Updates with a cumulative effect of a change in accounting.

The primary sources of our company's net income are summarized below. We discuss contributions to net income and VCR by source in Corporate Financial Highlights, followed by more detailed discussion in Financial Results.

- Underwriting profit (loss) – Includes revenues from earned premiums for insurance and reinsurance policies or contracts, reduced by losses and loss expenses from associated insurance coverages. Those revenues are further reduced by underwriting expenses associated with marketing policies or related to administration of our insurance operations. The net result represents an underwriting profit when revenues exceed losses and expenses.
- Investment income – Is generated primarily from investing the premiums collected for insurance policies sold, until funds are needed to pay losses for insurance claims or other expenses. Interest income from bonds or dividend income from stocks are the main categories of our investment income, with additional contribution from compounding effects over time.
- Investment gains and losses – Occur from appreciation or depreciation of invested assets over time. Gains or losses are generally recognized from changes in market values of equity securities without a sale or when invested assets are sold or become impaired.

Executive Summary

Our value creation ratio, defined above, is our primary performance target. VCR trends are shown in the table below.

	One year	Three-year % average	Five-year % average
Value creation ratio:			
As of December 31, 2022	(14.6)%	8.6 %	11.2 %
As of December 31, 2021	25.7	23.6	18.7
As of December 31, 2020	14.7	15.0	16.5

We are targeting an annual value creation ratio averaging 10% to 13% over the next five-year period. At negative 14.6% for 2022, our performance was significantly below the low end of that range. It was within the range for the five-year period, but below the range for the three-year period, both that ended in December 2022.

The table below shows the primary components of our value creation ratio on a percentage basis. Analysis of the components aids understanding of our financial performance. Our financial results are further analyzed in the Corporate Financial Highlights section below.

	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Pt. Change	Pt. Change
Value creation ratio major components:					
Net income before investment gains	5.2 %	9.7 %	5.5 %	(4.5)	4.2
Change in fixed-maturity securities, realized and unrealized gains	(10.1)	(1.5)	3.0	(8.6)	(4.5)
Change in equity securities, investment gains	(9.3)	16.8	7.5	(26.1)	9.3
Other	(0.4)	0.7	(1.3)	(1.1)	2.0
Value creation ratio	(14.6)%	25.7 %	14.7 %	(40.3)	11.0

The 2022 value creation ratio decreased by 40.3 percentage points, compared with 2021, and again included a significant contribution from operating results, as shown in the table above. The 2022 ratio decrease was primarily due to a reduction in overall net gains from our investment portfolio, with reductions of 26.1 percentage-points from our equity securities investment portfolio and 8.6 points from our fixed-maturity securities investment portfolio. The increase in 2021, compared with 2020, included improved operating results and a higher valuation for our investment portfolio.

We believe our value creation ratio is a useful measure. The table below shows calculations for VCR.

(Dollars are per share)	Years ended December 31,		
	2022	2021	2020
Value creation ratio:			
End of period book value*	\$ 67.01	\$ 81.72	\$ 67.04
Less beginning of period book value	81.72	67.04	60.55
Change in book value	(14.71)	14.68	6.49
Dividend declared to shareholders	2.76	2.52	2.40
Total value creation	\$ (11.95)	\$ 17.20	\$ 8.89
Value creation ratio from change in book value**	(18.0)%	21.9 %	10.7 %
Value creation ratio from dividends declared to shareholders***	3.4	3.8	4.0
Value creation ratio	(14.6)%	25.7 %	14.7 %

* Book value per share is calculated by dividing end of period total shareholders' equity by end of period shares outstanding

** Change in book value divided by the beginning of year book value

*** Dividend declared to shareholders divided by beginning of year book value

When looking at our longer-term objectives, we see three primary performance drivers for our value creation ratio:

- Premium growth – We believe over any five-year period our agency relationships and initiatives can lead to a property casualty written premium growth rate that exceeds the industry average. The compound annual growth rate of our net written premiums was 8.6% over the five-year period 2018 through 2022, exceeding the 7.3% estimated growth rate for the property casualty insurance industry, with 2022 representing industry data reported through the first nine months of 2022. The industry's growth rate excludes its mortgage and financial guaranty lines of business.
- Combined ratio – We believe our underwriting philosophy and initiatives can drive performance to achieve our underwriting profitability target of a GAAP combined ratio over any five-year period that consistently averages within the range of 95% to 100%. Our GAAP combined ratio averaged 94.9% over the five-year period 2018 through 2022, slightly better than the performance target range. Performance as measured by the combined ratio is discussed in Consolidated Property Casualty Insurance Results. Our statutory combined ratio averaged 94.3% over the five-year period 2018 through 2022, compared with an estimated 99.7% for the property casualty industry, with 2022 representing industry data reported through the first nine months of 2022. The industry's ratio again excludes its mortgage and financial guaranty lines of business.
- Investment contribution – We believe our investment philosophy and initiatives can drive investment income growth and lead to a total return on our equity investment portfolio over a five-year period that exceeds the five-year total return of the S&P 500 Index.
 - Investment income growth, on a pretax basis, had a compound annual growth rate of 5.1% over the five-year period 2018 through 2022.
 - Over the five years ended December 31, 2022, our equity portfolio compound annual total return was 11.1% compared with a compound annual total return of 9.4% for the Index. Our equity portfolio favors larger-capitalization, high-quality, dividend-growing stocks with a slight value orientation. For the year 2022, our equity portfolio total return was negative 10.9%, compared with negative 18.1% for the Index.

The board of directors is committed to rewarding shareholders directly through cash dividends and share repurchase authorizations. Through 2022, the company has increased the annual cash dividend rate for 62 consecutive years, a record we believe is matched by only seven other publicly traded U.S. companies. In addition to regular dividends, strong capital and excellent company performance has provided opportunities to further reward shareholders. The board regularly evaluates relevant factors in dividend-related decisions, and the 2022 increase to the regular dividend reflected confidence in our outstanding capital, liquidity and financial flexibility, as well as progress of our initiatives to improve earnings performance while growing insurance premium revenues. We discuss our financial position in more detail in Liquidity and Capital Resources.

Our view of the shareholder value we can create over the next five years relies largely on three assumptions – each highly dependent on the external environment. First, we anticipate our property casualty average insurance prices will increase in proportion to, or in excess of, our loss cost trends. Second, we assume that the economy can maintain a long-term growth track. Third, we assume that valuations of our marketable securities will vary within a typical range over time, based on historical trends. If those assumptions prove to be inaccurate, we may not be able to achieve our performance targets even if we accomplish our strategic objectives.

We discuss in Item 1A, Risk Factors, many potential risks to our business and our ability to achieve our qualitative and quantitative objectives.

Corporate Financial Highlights

In addition to the value creation ratio discussion and analysis in the Executive Summary, we further analyze our financial results in the sections below.

Balance Sheet Data

(Dollars in millions, except share data)	At December 31,	
	2022	2021
Total investments	\$ 22,425	\$ 24,666
Total assets	29,736	31,387
Short-term debt	50	54
Long-term debt	789	789
Shareholders' equity	10,531	13,105
Book value per share	67.01	81.72
Debt-to-total-capital ratio	7.4 %	6.0 %

Total investments decreased by 9% during 2022 on a fair value basis, and included a decrease in our securities portfolio valuation that offset a 6% increase in its cost basis. Entering 2023, we believe the portfolio continues to be well diversified and is well positioned to withstand short-term fluctuations. We discuss our investment strategy in Item 1, Investments Segment, and results for the segment in Investments Results. Total assets decreased by 5%, compared with year-end 2021. Shareholders' equity decreased by 20% and book value per share decreased by 18%, for reasons discussed in the preceding Executive Summary.

The amount of our debt obligations decreased by \$4 million in 2022, compared with 2021. Our 7.4% ratio of debt to total capital (debt plus shareholders' equity) at year-end 2022 increased by 1.4 percentage points compared with the prior-year ratio.

Income Statement and Per Share Data

(In millions, except per share data)	Years ended December 31,			2022-2021 Change %	2021-2020 Change %
	2022	2021	2020		
Earned premiums	\$ 7,219	\$ 6,482	\$ 5,980	11	8
Investment income, net of expenses (pretax)	781	714	670	9	7
Investment gains and losses, net (pretax)	(1,467)	2,409	865	nm	178
Total revenues	6,557	9,630	7,536	(32)	28
Net income (loss)	(486)	2,946	1,216	nm	142
Comprehensive income (loss)	(1,770)	2,825	1,537	nm	84
Net income (loss) per share - diluted	(3.06)	18.10	7.49	nm	142
Cash dividends declared per share	2.76	2.52	2.40	10	5
Diluted weighted average shares outstanding	158.8	162.7	162.4	(2)	0

A net loss of \$486 million in 2022 represented a decrease of \$3.432 billion, compared with net income for 2021, including a \$3.062 billion reduction in net investment gains on an after-tax basis. The reduced 2022 net income also included a decrease in property casualty underwriting income of \$467 million after taxes, as discussed below, and a \$55 million increase in investment income after taxes. Our investment operation's performance is discussed further in Investments Results. Net income in 2021 increased by \$1.730 billion, compared with 2020, including a \$1.220 billion increase for 2021 net investment gains after taxes. The increase in 2021 net income also included an increase in property casualty underwriting income of \$483 million after taxes and a \$37 million increase in investment income after taxes.

During 2022, SARS-CoV-2, also known as COVID-19 and recognized as a pandemic by the World Health Organization, continued to cause various effects in parts of the world. We believe it did not have a significant effect on our premium revenues during 2022 and there were no material changes to our estimates for incurred losses and expenses related to the pandemic. In 2021, it caused dampening economic effects in some areas where we

operate, while many areas experienced strengthening economic effects due to increased business activity and consumer spending. In 2020, it caused significant effects, including temporary closures of many businesses and reduced consumer spending due to shelter-in-place, stay-at-home and other governmental actions. Those orders and the uncertainty surrounding COVID-19 had broad financial market effects and caused significant market disruption and volatility, including to our investment portfolio during 2020.

As the pandemic unfolded in 2020 and continued into 2021, management met with the board of directors frequently to discuss matters such as our response to prioritize the health and safety of our associates, agents and policyholders. Discussion also included near-term and longer-term financial effects. As stay-at-home orders were enacted, we promptly and effectively transitioned most of our headquarters associates to working from home. We provided the technology necessary to keep the business running, as associates continued writing and collecting insurance premiums, responding to claims and performing other operational functions. They joined our field associates who already worked from home, providing agents and policyholders with outstanding service. At the end of 2021, most of our associates continued to work from home. During the first half of 2022, most of our headquarters associates transitioned to a hybrid work schedule, regularly alternating between work at our headquarters and work from remote locations.

While we believe the COVID-19 pandemic did not have a significant effect on our premium revenues for the last three quarters of 2021, in 2020 and early 2021 it slowed the growth of our premium revenues, including new business written premiums. Premium growth by segment is discussed below in Financial Results. For future periods, renewal premium or new business premium amounts could decline if the basis for policy premiums, such as sales and payrolls of businesses we insure, decrease as a result of the pandemic and a weakening economy. We are not able to determine premium effects for future periods.

During 2021, changes to our estimates for incurred losses and expenses related to the pandemic included a \$2 million increase in Cincinnati Re[®] losses, a \$1 million decrease in Cincinnati Global Underwriting Ltd.SM (Cincinnati Global) losses and an \$8 million decrease in ultimate credit losses related to uncollectible premiums. For full-year 2020, pandemic-related incurred losses and expenses totaled \$85 million. The total included \$30 million for legal expenses in defense of business interruption claims, \$19 million for Cincinnati Re losses, \$12 million for Cincinnati Global losses, \$8 million for credit losses related to uncollectible premiums and \$16 million for the Stay-at-Home policyholder credit for personal auto policies.

Factors used in estimating reserves for business interruption legal expenses included estimates for attorney fees associated with the defense of such lawsuits filed against the company; litigation trends of such cases, including responding to amended and replead cases and cases on appeal; and trends in judicial decisions in cases filed against the company and other insurers.

Approximately half of the losses for Cincinnati Re represent its estimated share from reinsurance treaties with companies that provided affirmative coverage for pandemic-related business interruption, and most of the remainder is an estimated share of treaties covering professional liability. Most of the losses for Cincinnati Global represent its share of potential losses from business interruption coverage for large risks with customized policy terms and conditions.

Most of our commercial property policies are written to preclude coverage for business interruption claims unless there is direct physical loss or damage to property. For this reason, most of our standard market commercial property policies in states where we actively write business do not contain a specific virus exclusion.

Loss experience for our insurance operations is influenced by many factors, as discussed in Critical Accounting Estimates, Property Casualty Insurance Loss and Loss Expense Reserves. Because of various factors that affect exposure to certain insurance losses, such as less miles driven for vehicles or reduced sales and payrolls for businesses, there could be a reduction in future losses, and in some cases a generally corresponding reduction in premiums. Also, there could be losses or legal expenses that increase or otherwise occur independently of changes in sales or payrolls of businesses we insure, due to pandemic effects or other factors. We are not able to determine loss effects for future periods.

As discussed in Investments Results, we reported a net investment loss in 2022, primarily due to a \$1.526 billion net unfavorable change in fair value for equity securities still held. In both 2021 and 2020, we reported net investment gains, including \$2.278 billion in 2021 and \$841 million in 2020 from net favorable changes in fair value for equity securities still held.

Contribution from Insurance Operations

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Consolidated property casualty data:					
Net written premiums	\$7,307	\$ 6,479	\$ 5,864	13	10
Earned premiums	6,924	6,184	5,691	12	9
Underwriting profit	140	731	119	(81)	514
				Pt. Change	Pt. Change
GAAP combined ratio	98.1 %	88.3 %	98.1 %	9.8	(9.8)
Statutory combined ratio	97.7	87.9	96.7	9.8	(8.8)
Written premium to statutory surplus	1.1	0.9	1.0	0.2	(0.1)

Property casualty net written premiums grew 13% and earned premiums grew 12% in 2022. The growth reflected average renewal price increases, premium growth initiatives and a higher level of insured exposures, including a contribution to net written premium growth of 3 percentage points from Cincinnati Re and Cincinnati Global in total. The 2021 growth rate for net written premiums was slower, but was driven by factors similar to 2022. Trends and related factors are discussed in Commercial Lines, Personal Lines and Excess and Surplus Lines Insurance Results.

Our property casualty insurance operations generated an underwriting profit for each of the three years ending in 2022. The \$591 million decrease in 2022, compared with excellent results in 2021, included higher current accident year loss and loss expenses before catastrophe losses, reflecting increased uncertainty of estimated ultimate losses, due in part to elevated paid losses reflecting economic or other forms of inflation. The 2022 decrease also included a \$135 million increase in losses from natural catastrophe events and \$276 million less benefit from net favorable reserve development on prior accident years before catastrophe losses. The \$612 million increase in 2021, compared with 2020, included a \$195 million decrease in losses from catastrophe events and \$265 million more benefit from net favorable reserve development on prior accident years before catastrophe losses.

We measure property casualty underwriting profitability primarily by the combined ratio. Our combined ratio measures the percentage of each earned premium dollar spent on claims plus all expenses related to our property casualty operations, all on a pretax basis. A lower ratio indicates more favorable results and better underlying performance. A ratio below 100% represents an underwriting profit. Initiatives to improve our combined ratio are discussed in Item 1, Our Business and Our Strategy, Strategic Initiatives. In 2022, 2021 and 2020, favorable development on reserves for claims that occurred in prior accident years helped offset other incurred losses and loss expenses. Reserve development is discussed further in Property Casualty Loss and Loss Expense Obligations and Reserves. Losses from weather-related catastrophes are another important item influencing the combined ratio and are discussed along with other factors in Financial Results for our property casualty business and related segments.

Our life insurance segment reported a gain of \$28 million in 2022 and a loss of \$16 million in 2021. We discuss results for the segment in Life Insurance Results. Most of this segment's investment income is included in our investments segment results. In addition to investment income, investment gains from the life insurance investment portfolio are also included in our investments segment results.

Critical Accounting Estimates

Cincinnati Financial Corporation's financial statements are prepared using U.S. GAAP. These principles require management to make estimates and assumptions that affect the amounts reported in the Consolidated Financial Statements and accompanying Notes. Actual results could differ materially from those estimates.

The significant accounting policies used in the preparation of the financial statements are discussed in Item 8, Note 1 of the Consolidated Financial Statements. In conjunction with that discussion, material implications of uncertainties associated with the methods, assumptions and estimates underlying the company's critical accounting policies are discussed below. The audit committee of the board of directors reviews the annual financial statements with management and the independent registered public accounting firm. These discussions cover the quality of earnings, review of reserves and accruals, reconsideration of the suitability of accounting principles, review of highly judgmental areas including critical accounting estimates, audit adjustments and such other inquiries as may be appropriate.

Property Casualty Insurance Loss and Loss Expense Reserves

We establish loss and loss expense reserves for our property casualty insurance business as balance sheet liabilities. Unpaid loss and loss expenses are the estimated amounts necessary to pay for and settle all outstanding insured claims, including incurred but not reported (IBNR) claims. These reserves account for unpaid loss and loss expenses as of a financial statement date.

For some lines of business that we write, a considerable and uncertain amount of time can elapse between the occurrence, reporting and payment of insured claims. The amount we will actually have to pay for such claims also can be highly uncertain. This uncertainty, together with the size of our reserves, makes the loss and loss expense reserves our most significant estimate. Gross loss and loss expense reserves were \$8.336 billion at year-end 2022 compared with \$7.229 billion at year-end 2021.

How Reserves Are Established

Our field claims representatives establish case reserves when claims are reported to the company to provide for our unpaid loss and loss expense obligation associated with known claims. Field claims managers supervise and review all claims with case reserves less than \$100,000. Additionally, a headquarters supervisor and regional claims manager review claims under \$100,000 if litigation or a certain specialty claim is involved. All claims with case reserves of \$100,000 or greater are reviewed and approved by experienced headquarters supervisors and regional claims managers. Upper-level headquarters claims managers also review case reserves of \$175,000 or more.

Our claims representatives base their case reserve estimates primarily upon case-by-case evaluations that consider:

- type of claim involved
- circumstances surrounding each claim
- policy provisions pertaining to each claim
- potential for subrogation or salvage recoverable
- general insurance reserving practices

Case reserves of all sizes are subject to review on a 90-day cycle, or more frequently if new information about a loss becomes available. As part of the review process, we monitor industry trends, cost trends, relevant court cases, legislative activity and other current events in an effort to ascertain new or additional loss exposures.

We also establish IBNR reserves to provide for all unpaid loss and loss expenses not accounted for by case reserves:

- For events designated as natural catastrophes resulting in losses incurred related to premiums written on a direct basis by The Cincinnati Insurance Companies, we calculate IBNR reserves directly as a result of an estimated IBNR claim count and an estimated average claim amount for each event. Once case reserves are established for a catastrophe event, we reduce the IBNR reserves. Our claims department management coordinates the assessment of these events and prepares the related IBNR reserve estimates. Such an assessment involves a comprehensive analysis of the nature of the event, of policyholder exposures within the affected geographic area and of available claims intelligence. Depending on the nature of the event, available claims intelligence could include surveys of field claims representatives within the affected geographic area, feedback from a catastrophe claims team sent into the area, as well as data on claims reported as of the financial statement date.

To determine whether an event is designated as a catastrophe, related to premiums written on a direct basis by The Cincinnati Insurance Companies, we generally use the catastrophe definition provided by Property Claims Service (PCS), a division of Insurance Services Office. PCS defines a catastrophe as an event that causes U.S., Puerto Rico and U.S. Virgin Islands damage of \$25 million or more in insured property losses and affects a significant number of policyholders and insureds.

- For events designated as natural catastrophes resulting in losses for Cincinnati Re and Cincinnati Global, we begin with a review of in-force policies, treaties and related limits likely to be affected by each event. For both Cincinnati Re and Cincinnati Global, use of information from third-party catastrophe models, industry estimates, and our own proprietary adjustments are used for the estimate of ultimate losses for each catastrophe event. Incurred losses from catastrophe events for both Cincinnati Re and Cincinnati Global can be designated catastrophes by PCS, or deemed as a catastrophe by the international insurance industry or, for Cincinnati Re, as reported by ceding companies. IBNR reserves are calculated as the difference between the estimate of the ultimate loss and loss expenses and the sum of total loss and loss expense payments and total case reserves.
- For asbestos and environmental claims, we calculate IBNR reserves by deriving an actuarially-based estimate of total unpaid loss and loss expenses. We then reduce the estimate by total case reserves. We discuss the reserve analysis that applies to asbestos and environmental reserves in Liquidity and Capital Resources, Asbestos and Environmental Loss and Loss Expense Reserves.
- For loss expenses that pertain primarily to salaries and other costs related to our claims department associates, also referred to as adjusting and other expense or AOE, we calculate reserves based on an analysis of the relationship between paid losses and paid AOE. Reserves for AOE are allocated to company, line of business and accident year based on a claim count algorithm. Claim counts reported and used in the reserving process are primarily measured by insurance coverages that are triggered when a loss occurs and a reserve is established. Coverages are defined as unique combinations of certain attributes such as line of business and cause of loss. Claims that are opened and closed without payment are included in the reported claim counts. Claim counts are presented on a direct basis only and do not reflect any assumed or ceded reinsurance.
- For all other claims and events, including reinsurance assumed or ceded, IBNR reserves are calculated as the difference between an actuarial estimate of the ultimate cost of total loss and loss expenses incurred reduced by the sum of total loss and loss expense payments and total case reserves estimated for individual claims. Reserve amounts for those other claims and events are significant, and represent the majority of amounts shown as IBNR reserves and loss expense reserves in the table included in Liquidity and Capital Resources, Property Casualty Loss and Loss Expense Obligations and Reserves. We discuss below the development of actuarially based estimates of the ultimate cost of total loss and loss expenses incurred.

Our actuarial staff applies significant judgment in selecting models and estimating model parameters when preparing reserve analyses. Unpaid loss and loss expenses are inherently uncertain as to timing and amount. Uncertainties relating to model appropriateness, parameter estimates and actual loss and loss expense amounts are referred to as model, parameter and process uncertainty, respectively. Our management and actuarial staff address these uncertainties in the reserving process in a variety of ways.

Our actuarial staff bases its IBNR reserve estimates for these losses primarily on the indications of methods and models that analyze accident year data. Accident year is the year in which an insured claim, loss or loss expense occurred. The specific methods and models that our actuaries have used for the past several years are:

- paid and reported loss development methods
- paid and reported loss Bornhuetter-Ferguson methods
- individual and multiple probabilistic trend family models

Our actuarial staff uses diagnostics to evaluate the appropriateness of the models and methods listed above. The appropriateness of these models and methods for estimating IBNR reserves tends to depend on the tail for a line of business. Tail refers to the time interval between a typical claim's occurrence and its settlement. The loss development and Bornhuetter-Ferguson methods, particularly the reported loss variations, tend to produce more appropriate IBNR reserve estimates for our short-tail lines such as homeowner and commercial property. For our mid-tail and long-tail lines, all models and methods provide useful insights.

Our actuarial staff also devotes significant time and effort to the estimation of model and method parameters. The loss development and Bornhuetter-Ferguson methods require the estimation of numerous loss development factors. The Bornhuetter-Ferguson methods also involve the estimation of numerous expected loss ratios by accident year. Models from the probabilistic trend family require the estimation of development trends, calendar year inflation trends and exposure levels. Consequently, our actuarial staff monitors a number of trends and measures to gain key business insights necessary for exercising appropriate judgment when estimating the parameters mentioned, such as:

- company and industry pricing
- company and industry exposure
- company and industry loss frequency and severity
- past large loss events
- company and industry premium
- company in-force policy count

These trends and measures also support the estimation of expected accident year loss ratios needed for applying the Bornhuetter-Ferguson methods and for assessing the reasonability of all IBNR reserve estimates computed. Our actuarial staff reviews these trends and measures quarterly, updating parameters derived from them as necessary.

Quarterly, our actuarial staff summarizes their reserve analysis by preparing an actuarial best estimate and a range of reasonable IBNR reserves intended to reflect the uncertainty of the estimate. An inter-departmental committee that includes our actuarial management team reviews the results of each quarterly reserve analysis. The committee establishes management's best estimate of IBNR reserves, which is the amount that is included in each period's financial statements. In addition to the information provided by actuarial staff, the committee also considers factors such as:

- large loss activity and trends in large losses
- new business activity
- judicial decisions
- general economic trends such as inflation
- trends in litigiousness and legal expenses
- product and underwriting changes
- changes in claims practices

The determination of management's best estimate, like the preparation of the reserve analysis that supports it, involves considerable judgment. Changes in reserving data or the trends and factors that influence reserving data may signal fundamental shifts or may simply reflect single-period anomalies. Even if a change reflects a fundamental shift, the full extent of the change may not become evident until years later. Moreover, since our methods and models do not explicitly relate many of the factors we consider directly to reserve levels, we typically cannot quantify the precise impact of such factors on the adequacy of reserves prospectively or retrospectively.

Due to the uncertainties described above, our ultimate loss experience could prove better or worse than our carried reserves reflect. To the extent that reserves are inadequate and increased, the amount of the increase is a charge in the period that the deficiency is recognized, raising our loss and loss expense ratio and reducing earnings. To the extent that reserves are redundant and released, the amount of the release is a credit in the period that the redundancy is recognized, reducing our loss and loss expense ratio and increasing earnings.

Key Assumptions – Loss Reserving

Our actuarial staff makes a number of key assumptions when using their methods and models to derive IBNR reserve estimates. Appropriate reliance on these key assumptions essentially entails determinations of the likelihood that statistically significant patterns in historical data may extend into the future. The four most significant of the key assumptions used by our actuarial staff and approved by management are:

- Emergence of loss and defense and cost containment expenses, also referred to as DCCE, on an accident year basis. Historical paid loss, reported loss and paid DCCE data for the business lines we analyze contain patterns that reflect how unpaid losses, unreported losses and unpaid DCCE as of a financial statement date will emerge in the future. Unless our actuarial staff or management identifies reasons or factors that invalidate the extension of historical patterns into the future, these patterns can be used to make projections necessary for estimating IBNR reserves. Our actuaries significantly rely on this assumption in the application of all methods and models mentioned above.
- Calendar year inflation. For long-tail and mid-tail business lines, calendar year inflation trends for future paid losses and paid DCCE do not vary significantly from a stable, long-term average. Our actuaries base reserve estimates derived from probabilistic trend family models on this assumption.
- Exposure levels. Historical earned premiums, when adjusted to reflect common levels of product pricing and loss cost inflation, can serve as a proxy for historical exposures. Our actuaries require this assumption to estimate expected loss ratios and expected DCCE ratios used by the Bornhuetter-Ferguson reserving methods. They may also use this assumption to establish exposure levels for recent accident years, characterized by "green" or immature data, when working with probabilistic trend family models.
- Claims having atypical emergence patterns. Characteristics of certain subsets of claims, such as high frequency, high severity, or mass tort claims, have the potential to distort patterns contained in historical paid loss, reported loss and paid DCCE data. When testing indicates this to be the case for a particular subset of claims, our actuaries segregate these claims from the data and analyze them separately. Subsets of claims that could fall into this category include hurricane claims or claims for other weather events where total losses we incurred were very large, individual large claims and asbestos and environmental claims.

These key assumptions have not changed since 2005, when our actuarial staff began using probabilistic trend family models to estimate IBNR reserves.

Paid losses, reported losses and paid DCCE are subject to random as well as systematic influences. As a result, actual paid losses, reported losses and paid DCCE are virtually certain to differ from projections. Such differences are consistent with what specific models for our business lines predict and with the related patterns in the historical data used to develop these models. As a result, management does not closely monitor statistically insignificant differences between actual and projected data.

Reserve Estimate Variability

Management believes that the standard error of a reserve estimate, a measure of the estimate's variability, provides the most appropriate measure of the estimate's sensitivity. The reserves we establish depend on the models we use and the related parameters we estimate in the course of conducting reserve analyses. However, the actual amount required to settle all outstanding insured claims, including IBNR claims, as of a financial statement date depends on stochastic, or random, elements as well as the systematic elements captured by our models and estimated model parameters. For the lines of business we write, process uncertainty – the inherent variability of loss and loss expense payments – typically contributes more to the imprecision of a reserve estimate than parameter uncertainty.

Consequently, a sensitivity measure that ignores process uncertainty would provide an incomplete picture of the reserve estimate's sensitivity. Since a reserve estimate's standard error accounts for both process and parameter uncertainty, it reflects the estimate's full sensitivity to a range of reasonably likely scenarios.

The table below provides standard errors and reserve ranges by major property casualty lines of business and in total for net loss and loss expense reserves as well as the potential effects on our net income, assuming a 21% federal tax rate. Standard errors and reserve ranges for assorted groupings of these lines of business cannot be computed by simply adding the standard errors and reserve ranges of the component lines of business, since such an approach would ignore the effects of product diversification. See Liquidity and Capital Resources, Property Casualty Loss and Loss Expense Obligations and Reserves, Range of Reasonable Reserves, for more details on our total reserve range. While the table reflects our assessment of the most likely range within which each line's actual unpaid loss and loss expenses may fall, one or more lines' actual unpaid loss and loss expenses could nonetheless fall outside of the indicated ranges.

(Dollars in millions)	Net loss and loss expense range of reserves				
	Carried reserves	Low point	High point	Standard error	Net income effect
At December 31, 2022					
Total	<u>\$ 7,931</u>	<u>\$ 7,393</u>	<u>\$ 8,099</u>	<u>\$ 353</u>	<u>\$ 279</u>
Commercial casualty	\$ 2,779	\$ 2,424	\$ 2,964	\$ 270	\$ 213
Commercial property	581	441	682	121	96
Commercial auto	834	791	877	43	34
Workers' compensation	983	870	1,037	83	66
Personal auto	321	300	343	22	17
Homeowners	353	330	375	23	18
Excess and surplus	731	679	783	55	43

Life Policy and Investment Contract Reserves

We establish the reserves for traditional life insurance policies based on expected expenses, mortality, morbidity, withdrawal rates and investment yields, including a provision for uncertainty. Once these assumptions are established, they generally are maintained throughout the lives of the contracts. We use both our own experience and industry experience adjusted for historical trends in arriving at our assumptions for expected mortality and morbidity. We use our own experience and historical trends for setting our assumptions for expected withdrawal rates and expenses. We base our assumptions for expected investment income on our own experience adjusted for current and future expected economic conditions.

We establish reserves for our universal life, deferred annuity and investment contracts equal to the cumulative account balances, which include premium deposits plus credited interest less charges and withdrawals. Some of our universal life insurance policies contain no-lapse guarantee provisions. For these policies, we establish a reserve in addition to the account balance based on expected no-lapse guarantee benefits and expected policy assessments.

Asset Impairment

Our investment portfolio is our largest asset. We monitor the fixed-maturity portfolio and all other assets for signs of credit-related or other impairment. We monitor decreases in the fair value of invested assets and the need for an allowance for credit losses for our fixed-maturity portfolio; allowances for expected credit losses on receivable and recoverable assets considering past events, current conditions and reasonable and supportable forecasts; an accumulation of company costs in excess of the amount originally expected to acquire or construct an asset; or other factors such as bankruptcy, deterioration of creditworthiness or failure to pay interest; and changes in legal factors or in the business climate.

The application of our invested assets impairment policy resulted in write-downs of impaired securities intended to be sold that reduced our income before income taxes by \$5 million in 2022, \$1 million in 2021 and \$78 million in 2020. Write-downs represent noncash charges to income and are reported as investment losses. The application of our non-invested assets impairment policy did not have a material effect on our financial condition in 2022 or 2021.

Our internal investment portfolio managers monitor their assigned portfolios. If a fixed-maturity security is valued below amortized cost, the portfolio managers undertake additional reviews. Such declines often occur in conjunction with events taking place in the overall economy and market, combined with events specific to the industry or operations of the issuing organization. Managers review quantitative measurements such as a declining trend in fair value and the extent of the fair value decline, as well as qualitative measures such as pending events, credit ratings and issuer liquidity. We are even more proactive when these declines in valuation are greater than might be anticipated when viewed in the context of overall economic and market conditions. We provide detailed information about fixed-maturity securities fair valued in a continuous loss position at year-end 2022 in Item 7A, Quantitative and Qualitative Disclosures About Market Risk.

An available for sale fixed maturity is impaired if the fair value of the security is below amortized cost. The impaired loss is charged to net income when we have the intent to sell the security or it is more likely than not we will be required to sell the security before recovery of the amortized cost. For impaired securities we intend to hold, an allowance for credit related losses is recorded in investment losses when the company determines a credit loss has been incurred based on certain factors such as adverse conditions, credit rating downgrades or failure of the issuer to make scheduled principal or interest payments. A credit loss is determined using a discounted cash flow analysis by comparing the present value of expected cash flows with the amortized cost basis, limited to the difference between fair value and amortized cost. Noncredit losses are recognized in other comprehensive income as a change in unrealized gains and losses on investments. We provide information about valuations of our invested assets in Item 8, Note 2 of the Consolidated Financial Statements.

Fair Value Measurements

Valuation of Financial Instruments

Fair value is defined as the exit price or the amount that would be (1) received to sell an asset or (2) paid to transfer a liability in an orderly transaction between marketplace participants at the measurement date. When determining an exit price, we must, whenever possible, rely upon observable market data.

We have categorized our financial instruments, based on the priority of the inputs to the valuation technique, into a three-level fair value hierarchy. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). If the inputs used to measure the financial instruments fall within different levels of the hierarchy, the categorization is based on the lowest level that is significant to the fair value measurement of the instrument. While we consider pricing data from outside services, we ultimately determine whether the data or inputs used by these outside services are observable or unobservable.

Financial assets and liabilities recorded in the Consolidated Balance Sheets are categorized based on the inputs to the valuation techniques as described in Item 8, Note 3 of the Consolidated Financial Statements.

Level 1 and Level 2 Valuation Techniques

Substantially all of the \$21.973 billion of securities in our investment portfolio at year-end 2022, measured at fair value, are classified as Level 1 or Level 2. Financial assets that fall within Level 1 and Level 2 are priced according to observable data from identical or similar securities that have traded in the marketplace. Also within Level 2 are securities that are valued by outside services or brokers where we have evaluated and verified the pricing methodology and determined that the inputs are observable.

Recent Accounting Pronouncements

Information about recent accounting pronouncements is provided in Item 8, Note 1 of the Consolidated Financial Statements.

Financial Results

Consolidated financial results primarily reflect the results of our five reporting segments. These segments are defined based on financial information we use to evaluate performance and to determine the allocation of assets.

- Commercial lines insurance
- Personal lines insurance
- Excess and surplus lines insurance
- Life insurance
- Investments

We report as Other the noninvestment operations of the parent company and its noninsurer subsidiary, CFC Investment Company. In addition, Other includes the financial results of our reinsurance assumed operations, known as Cincinnati Re, and our London-based global specialty underwriter known as Cincinnati Global.

We measure profit or loss for our commercial lines, personal lines, excess and surplus lines and life insurance segments based upon underwriting results (profit or loss), which represent net earned premium less loss and loss expenses, or contract holders' benefits incurred, and underwriting expenses on a pretax basis. We also evaluate results for our consolidated property casualty insurance operations. That is the total of our standard market segments (commercial lines and personal lines), our excess and surplus lines insurance segment, Cincinnati Re and Cincinnati Global. For analysis of our consolidated property casualty insurance results, it is important to include the earned premiums, loss and loss expenses and also underwriting expenses reported as Other. Underwriting results and segment pretax operating income are not substitutes for net income determined in accordance with GAAP.

For our consolidated property casualty insurance operations as well as the insurance segments, statutory accounting data and ratios are key performance indicators that we use to assess business trends and to make comparisons to industry results, since GAAP-based industry data generally is not as readily available.

Investments held by the parent company and the investment portfolios for the insurance subsidiaries are managed and reported as the investments segment, separate from our underwriting business. Net investment income and net investment gains and losses for our investment portfolios are discussed in the Investments Results.

The calculations of segment data are described in more detail in Item 8, Note 18, of the Consolidated Financial Statements. The following sections provide analysis and discussion of results of operations for each of the five segments.

Consolidated Property Casualty Insurance Results

Earned and net written premiums for our consolidated property casualty operations grew in 2022, reflecting average renewal price increases, a higher level of insured exposures and strategic initiatives for targeted growth. A key measure of property casualty profitability is underwriting profit or loss. Profit decreased in 2022, reflecting increased uncertainty of estimated ultimate losses, due in part to elevated paid losses reflecting economic or other forms of inflation. Our 2022 underwriting profit of \$140 million was \$591 million less than in 2021, including a \$135 million unfavorable effect from a higher amount of catastrophe losses, mostly caused by severe weather. Prior accident year loss experience before catastrophes during 2022 was less favorable than in 2021, and represented \$276 million of the 2022 underwriting profit decrease. Elevated inflation effects offset other factors that helped improve underwriting profitability, such as higher pricing and our ongoing initiatives to improve pricing precision and loss experience related to claims and loss control practices. Underwriting profit trends are discussed further below.

The table below highlights property casualty results, with analysis and discussion in the sections that follow. That analysis and discussion includes sections by segment.

Overview – Three-Year Highlights

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Earned premiums	\$6,924	\$ 6,184	\$ 5,691	12	9
Fee revenues	10	10	9	0	11
Total revenues	6,934	6,194	5,700	12	9
Loss and loss expenses from:					
Current accident year before catastrophe losses	4,171	3,462	3,243	20	7
Current accident year catastrophe losses	704	562	725	25	(22)
Prior accident years before catastrophe losses	(87)	(363)	(98)	76	(270)
Prior accident years catastrophe losses	(72)	(65)	(33)	(11)	(97)
Loss and loss expenses	4,716	3,596	3,837	31	(6)
Underwriting expenses	2,078	1,867	1,744	11	7
Underwriting profit	\$ 140	\$ 731	\$ 119	(81)	514
Ratios as a percent of earned premiums:				Pt. Change	Pt. Change
Current accident year before catastrophe losses	60.2 %	56.0 %	57.0 %	4.2	(1.0)
Current accident year catastrophe losses	10.2	9.1	12.7	1.1	(3.6)
Prior accident years before catastrophe losses	(1.3)	(5.9)	(1.7)	4.6	(4.2)
Prior accident years catastrophe losses	(1.0)	(1.1)	(0.6)	0.1	(0.5)
Loss and loss expenses	68.1	58.1	67.4	10.0	(9.3)
Underwriting expenses	30.0	30.2	30.7	(0.2)	(0.5)
Combined ratio	98.1 %	88.3 %	98.1 %	9.8	(9.8)
Combined ratio:	98.1 %	88.3 %	98.1 %	9.8	(9.8)
Contribution from catastrophe losses and prior years reserve development	7.9	2.1	10.4	5.8	(8.3)
Combined ratio before catastrophe losses and prior years reserve development	90.2 %	86.2 %	87.7 %	4.0	(1.5)

Performance highlights for consolidated property casualty operations include:

- Premiums – Agency renewal written premiums rose \$574 million or 11% in 2022 and continued to contribute to growth in earned premiums and net written premiums that rose in each of our property casualty insurance segments. The renewal premium increase was largely due to average renewal price increases and a higher level of insured exposures. Price increases with enhanced precision continue to benefit operating results.
- New business written premiums produced through agencies increased \$135 million in 2022, compared with 2021. Agents appointed during 2022 or 2021 produced a 2022 increase in standard lines new business of \$45 million.

Growth initiatives also favorably affect growth in subsequent years, particularly as newer agency relationships mature over time.

Expansion of Cincinnati Re produced \$585 million of 2022 net written premiums and contributed \$124 million of the growth in other written premiums, compared with 2021. Cincinnati Re assumes risks through reinsurance treaties and in some cases cedes part of the risk and related premiums to one or more unaffiliated reinsurance companies through transactions known as retrocessions. In 2022, earned premiums for Cincinnati Re totaled \$520 million.

Cincinnati Global also contributed to the increase in other written premiums. Net written premiums were \$230 million in 2022, and contributed \$43 million of the growth in other written premiums, compared with 2021. In 2022, earned premiums for Cincinnati Global totaled \$206 million.

Other written premiums also include premiums ceded to reinsurers as part of our ceded reinsurance program. An increase in ceded premiums, other than Cincinnati Re and Cincinnati Global premiums, reduced net written premium growth by \$51 million in 2022, including \$13 million for reinstatement premiums for our property catastrophe reinsurance treaty.

The table below analyzes premium revenue components and trends.

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Agency renewal written premiums	\$ 5,665	\$ 5,091	\$ 4,740	11	7
Agency new business written premiums	1,032	897	799	15	12
Other written premiums	610	491	325	24	51
Net written premiums	7,307	6,479	5,864	13	10
Unearned premium change	(383)	(295)	(173)	(30)	(71)
Earned premiums	\$ 6,924	\$ 6,184	\$ 5,691	12	9

- Combined ratio – The combined ratio increased by 9.8 percentage points in 2022, compared with 2021, including a 1.2 percentage-point increase in the ratio for catastrophe losses. The 2022 ratio for current accident year losses and loss expenses before catastrophes increased by 4.2 percentage points, reflecting inflation effects discussed below. The remainder of the 2022 combined ratio increase included 4.6 percentage points less benefit in the ratio for prior accident year losses and loss expenses before catastrophes. We further discuss ratios related to reserve development in the sections that follow the Catastrophe Losses Incurred table below.

The combined ratio increase and related decrease in property casualty underwriting income in 2022 included higher insured loss experience before catastrophe effects driven by various forms of inflation. Effects of the pandemic also contributed to increased uncertainty regarding ultimate losses. We believe the past two years distorted paid loss cost trends for reasons such as slowed activity for many businesses, reduced driving and closed courts that delayed progress on some litigated insurance claims. Until longer-term paid loss cost trends become more clear, we intend to remain prudent in reserving for estimated ultimate losses. As a result, incurred losses in 2022 for several lines of business were higher than in prior years and are further discussed in results for our commercial lines and personal lines insurance segments.

Elevated inflation was a driver of higher losses and loss expenses as costs have increased significantly to repair damaged autos or other property that we insure. In addition to inflation affecting historic loss patterns, we believe reduced driving during the pandemic resulted in a relatively low level of loss activity in 2021, distorting paid loss cost trends for autos. We also experienced higher losses for liability coverages for some of our lines of business, particularly for commercial umbrella insurance. We believe future property casualty underwriting results will continue to benefit from price increases and our ongoing initiatives to improve pricing precision and loss experience related to claims and loss control practices.

Our statutory combined ratio was 97.7% in 2022 compared with 87.9% in 2021 and 96.7% in 2020. The estimated statutory combined ratio for the property casualty industry, with the industry's ratio excluding its mortgage and financial guaranty lines of business and based on industry data reported through the first nine months of 2022, was 102.8% in 2022, 99.5% in 2021 and 98.8% in 2020. The contribution of catastrophe losses to our statutory combined ratio was 8.9 percentage points in 2022, 7.6 percentage points in 2021 and 11.2 percentage points in 2020, compared with industry estimates of 7.0, 7.7 and 8.0 percentage points, respectively, with 2022 representing industry data reported through the first nine months of 2022. Components of the combined ratio are discussed below.

Catastrophe loss trends are an important factor in assessing trends for overall underwriting results. Our 10-year historical annual average contribution of catastrophe losses to the combined ratio was 7.4 percentage points at December 31, 2022. Our five-year average was 8.6 percentage points.

Effective June 1, 2022, we restructured our reinsurance program for Cincinnati Re only, providing retrocession coverages with various triggers and unique features. That program included property catastrophe excess of loss coverage with a total available aggregate limit of \$30 million in excess of \$100 million per loss. Losses estimated for Hurricane Ian as of December 31, 2022, resulted in an estimated recovery of \$19 million. Ultimate loss experience could be lower or higher than that estimate. Reserve estimates are inherently uncertain and our proprietary adjustments and ultimate loss estimates will develop as more information is reported by affected ceding companies.

Effective in May 2022, to provide more capacity to retain risks, we added a quota share reinsurance arrangement for our personal lines risks in California that we insure through excess and surplus lines policies. Approximately 27% of the risk is reinsured through ceded premiums.

The following table shows catastrophe losses incurred for the past two calendar years, net of reinsurance, as well as the effect of loss development on prior period catastrophe reserves. We individually list declared catastrophe events for which our incurred losses reached or exceeded \$25 million. Included in all other 2022 catastrophes is an estimate of \$8 million for catastrophe losses and loss expenses incurred, net of reinsurance, for direct exposure within our Other insurance operation to businesses or individuals in Russia or Ukraine.

Catastrophe Losses Incurred

(Dollars in millions, net of reinsurance)

Dates	Events	Regions	Commercial lines	Personal lines	Excess and surplus lines	Other	Total
2022							
Jun. 11-17	Flood, Hail, Wind	Midwest, Northeast, South	18	18	—	—	36
Sep. 27 - Oct. 1	Flood, Hail, Wind	South (Ian)	28	42	—	133	203
Dec. 21-31	Flood, Freeze, Ice, Snow, Wind	Midwest, Northeast, South, West	110	46	2	3	161
All other 2022 catastrophes			151	130	3	20	304
Development on 2021 and prior catastrophes			(23)	(44)	(1)	(4)	(72)
Calendar year incurred total			<u>\$ 284</u>	<u>\$ 192</u>	<u>\$ 4</u>	<u>\$ 152</u>	<u>\$ 632</u>
2021							
Feb. 12-15	Flood, Freeze, Ice, Snow, Wind	South, West	\$ 9	\$ 5	\$ —	\$ 34	\$ 48
Feb. 16-20	Flood, Freeze, Ice, Snow, Wind	Midwest, Northeast, South	18	27	1	8	54
Mar. 24-26	Flood, Hail, Wind	Midwest, Northeast, South	12	18	—	—	30
Jun. 17-20	Flood, Hail, Wind	Midwest	10	16	—	—	26
Aug. 29 - Sep. 2	Flood, Hail, Wind	Northeast, South (Ida)	14	36	—	118	168
Dec. 10-12	Flood, Hail, Wind	Midwest, Northeast, South	40	22	—	—	62
All other 2021 catastrophes			65	94	2	13	174
Development on 2020 and prior catastrophes			(44)	(7)	—	(14)	(65)
Calendar year incurred total			<u>\$ 124</u>	<u>\$ 211</u>	<u>\$ 3</u>	<u>\$ 159</u>	<u>\$ 497</u>

Consolidated Property Casualty Insurance Loss and Loss Expenses

Loss and loss expenses include both net paid losses and reserve changes for unpaid losses as well as the associated loss expenses. For all property casualty lines of business in aggregate, net loss and loss expense reserves at December 31, 2022, were \$1.029 billion higher than at year-end 2021, including \$765 million for incurred but not reported (IBNR) reserves. The \$1.029 billion reserve increase raised year-end 2021 net loss and loss expense reserves by 15%, compared with a 12% increase in 2022 earned premiums.

Most of the incurred losses and loss expenses shown in the consolidated property casualty insurance results three-year highlights table are for the respective current accident years, with reserve development on prior accident years shown separately. Since less than half of our consolidated property casualty current accident year incurred losses and loss expenses represents net paid amounts, the majority represents reserves for our estimate of ultimate losses and loss expenses. These reserves develop over time, and we re-estimate previously reported reserves as we learn more about the development of the related claims. The table below illustrates that development. For example, the 65.1% accident year 2021 loss and loss expense ratio reported as of December 31, 2021, developed favorably by 1.6 percentage points to 63.5% due to claims settling for less than previously estimated, or due to updated reserve estimates for unpaid claims, as of December 31, 2022. Accident years 2021 and 2020 have both developed favorably, as indicated by the progression over time for the ratios in the table.

(Dollars in millions)

Accident year loss and loss expenses incurred and ratios to earned premiums:

Accident year:	2022	2021	2020	2022	2021	2020
as of December 31, 2022	\$ 4,875	\$ 3,928	\$ 3,562	70.4 %	63.5 %	62.6 %
as of December 31, 2021		4,024	3,686		65.1	64.8
as of December 31, 2020			3,968			69.7

Catastrophe loss trends, discussed above, accounted for some of the movement in the current accident year loss and loss expense ratio for 2022, compared with 2021. Catastrophe losses added 10.2 percentage points in 2022, 9.1 points in 2021 and 12.7 points in 2020 to the respective consolidated property casualty current accident year loss and loss expense ratios in the table above.

The 60.2% ratio for current accident year loss and loss expenses before catastrophe losses for 2022 increased 4.2 percentage points compared with the 56.0% accident year 2021 ratio measured as of December 31, 2021. The increase included a 0.7 percentage-point increase in the ratio for current accident year losses of \$1 million or more per claim, shown in the table below.

Reserve development on prior accident years continued to net to a favorable amount in 2022, and was primarily due to less-than-anticipated loss emergence on known claims. We recognized \$159 million of favorable development in 2022, compared with \$428 million in 2021 and \$131 million in 2020. Of the \$269 million decrease in 2022, compared with 2021, \$264 million was attributable to our commercial casualty, commercial property and commercial auto lines of business. Approximately 74% of our net favorable reserve development on prior accident years recognized during 2022 occurred in our workers' compensation and homeowner lines of business. In 2021, our commercial casualty, commercial property and workers' compensation lines of business were responsible for approximately 66% of the favorable reserve development. As discussed in Liquidity and Capital Resources, Property Casualty Loss and Loss Expense Obligations and Reserves, Property Casualty Insurance Development of Estimated Reserves by Accident Year, commercial casualty and workers' compensation are considered long-tail lines with the potential for revisions inherent in estimating reserves. Favorable development recognized during 2020 was primarily from our commercial casualty and workers' compensation lines of business. Development by accident year is further discussed in Liquidity and Capital Resources, Property Casualty Insurance Development of Estimated Reserves by Accident Year.

Consolidated Property Casualty Insurance Losses by Size

(Dollars in millions, net of reinsurance)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Current accident year losses greater than \$5,000,000	\$ 143	\$ 112	\$ 50	28	124
Current accident year losses \$1,000,000-\$5,000,000	325	257	202	26	27
Large loss prior accident year reserve development	75	95	42	(21)	126
Total large losses incurred	543	464	294	17	58
Losses incurred but not reported	377	(19)	310	nm	nm
Other losses excluding catastrophe losses	2,502	2,062	1,909	21	8
Catastrophe losses	612	472	670	30	(30)
Total losses incurred	<u>\$4,034</u>	<u>\$ 2,979</u>	<u>\$ 3,183</u>	<u>35</u>	<u>(6)</u>
Ratios as a percent of earned premiums:				Pt. Change	Pt. Change
Current accident year losses greater than \$5,000,000	2.1 %	1.8 %	0.9 %	0.3	0.9
Current accident year losses \$1,000,000-\$5,000,000	4.6	4.2	3.6	0.4	0.6
Large loss prior accident year reserve development	1.1	1.5	0.7	(0.4)	0.8
Total large loss ratio	7.8	7.5	5.2	0.3	2.3
Losses incurred but not reported	5.5	(0.3)	5.5	5.8	(5.8)
Other losses excluding catastrophe losses	36.2	33.4	33.4	2.8	0.0
Catastrophe losses	8.8	7.6	11.8	1.2	(4.2)
Total loss ratio	<u>58.3 %</u>	<u>48.2 %</u>	<u>55.9 %</u>	<u>10.1</u>	<u>(7.7)</u>

In 2022, total large losses incurred increased by \$79 million, or 17%, net of reinsurance, primarily due to an increase for our personal lines insurance segment. The corresponding 2022 ratio increased 0.3 percentage points, compared with 2021. The large loss data included in the table above does not include Cincinnati Re and Cincinnati Global. Our analysis of large losses incurred indicated no unexpected concentration of these losses and reserve increases by geographic region, policy inception, agency or field marketing territory. We believe the inherent volatility of aggregate loss experience for our portfolio of larger policies is greater than that of our portfolio of smaller policies, and we continue to monitor the volatility in addition to general inflationary trends in loss costs.

Consolidated Property Casualty Insurance Underwriting Expenses

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Commission expenses	\$1,319	\$ 1,168	\$ 1,042	13	12
Other underwriting expenses	753	694	692	9	0
Policyholder dividends	6	5	10	20	(50)
Total underwriting expenses	<u>\$2,078</u>	<u>\$ 1,867</u>	<u>\$ 1,744</u>	<u>11</u>	<u>7</u>
Ratios as a percent of earned premiums:				Pt. Change	Pt. Change
Commission expenses	19.1 %	18.9 %	18.3 %	0.2	0.6
Other underwriting expenses	10.8	11.2	12.2	(0.4)	(1.0)
Policyholder dividends	0.1	0.1	0.2	0.0	(0.1)
Total underwriting expense ratio	<u>30.0 %</u>	<u>30.2 %</u>	<u>30.7 %</u>	<u>(0.2)</u>	<u>(0.5)</u>

Consolidated property casualty commission expenses rose \$151 million, or 13%, in 2022, with profit-sharing commissions for agencies decreasing by \$5 million. The 2022 ratio of commission expenses as a percent of earned premiums increased by 0.2 percentage points, compared with 2021. The 2022 ratio for other underwriting expenses decreased by 0.4 percentage points, compared with 2021. Earned premiums rose at a faster pace than other underwriting expenses during 2022, and we continued to carefully manage expenses while also making strategic investments that include enhancement of underwriting expertise.

Commission expenses include our profit-sharing commissions, which are primarily based on one-year and three-year profitability of an agency's business. The aggregate profit trend for agencies that earn these profit-based commissions can differ from the aggregate profit trend for all agencies reflected in our consolidated property casualty results.

Salaries, benefits and payroll taxes for our associates account for approximately half of our property casualty other underwriting expenses. Most of our associates either provide direct service to the property casualty portion of our agencies' businesses or provide support to those associates.

Discussions below of our property casualty insurance segments provide additional details about our results.

Commercial Lines Insurance Results

Overview – Three-Year Highlights

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Earned premiums	\$4,024	\$ 3,674	\$ 3,476	10	6
Fee revenues	4	4	3	0	33
Total revenues	4,028	3,678	3,479	10	6
Loss and loss expenses from:					
Current accident year before catastrophe losses	2,530	2,125	2,055	19	3
Current accident year catastrophe losses	307	168	376	83	(55)
Prior accident years before catastrophe losses	(53)	(309)	(81)	83	(281)
Prior accident years catastrophe losses	(23)	(44)	(14)	48	(214)
Loss and loss expenses	2,761	1,940	2,336	42	(17)
Underwriting expenses	1,229	1,140	1,079	8	6
Underwriting profit	\$ 38	\$ 598	\$ 64	(94)	834
Ratios as a percent of earned premiums:				Pt. Change	Pt. Change
Current accident year before catastrophe losses	62.9 %	57.8 %	59.2 %	5.1	(1.4)
Current accident year catastrophe losses	7.6	4.6	10.8	3.0	(6.2)
Prior accident years before catastrophe losses	(1.3)	(8.4)	(2.3)	7.1	(6.1)
Prior accident years catastrophe losses	(0.6)	(1.2)	(0.4)	0.6	(0.8)
Loss and loss expenses	68.6	52.8	67.3	15.8	(14.5)
Underwriting expenses	30.6	31.0	31.0	(0.4)	0.0
Combined ratio	99.2 %	83.8 %	98.3 %	15.4	(14.5)
Combined ratio:	99.2 %	83.8 %	98.3 %	15.4	(14.5)
Contribution from catastrophe losses and prior years reserve development	5.7	(5.0)	8.1	10.7	(13.1)
Combined ratio before catastrophe losses and prior years reserve development	93.5 %	88.8 %	90.2 %	4.7	(1.4)

Performance highlights for the commercial lines insurance segment include:

- Premiums – Earned premiums and net written premiums rose in 2022, including a \$338 million, or 10%, increase in renewal written premiums that continued to include higher average pricing and a higher level of insured exposures. New business written premiums in 2022 increased \$29 million, or 5%, compared with 2021.
- Combined ratio – The 2022 combined ratio increased by 15.4 percentage points compared with 2021, including a 3.6 percentage-point increase in the ratio component for catastrophe losses. Development on prior accident years loss and loss expense reserves before catastrophes during 2022 was 7.1 percentage points less favorable than in 2021. The 2022 combined ratio also increased 5.1 points from current accident year loss and loss expenses before catastrophe losses, including 3.7 points from commercial umbrella coverages discussed below.

When estimating the ultimate cost of total loss and loss expenses, we consider many factors, including trends for inflation, historical paid and reported losses, large loss activity and other data or information for the industry or our company. Elevated inflation was a driver of higher losses and loss expenses as costs have increased significantly to repair damaged business property or autos that we insure. In addition to inflation causing deviations from historical loss patterns, we believe reduced driving during the pandemic resulted in a relatively low level of loss activity in 2021 and 2020, distorting paid loss cost trends for autos. Due to increased uncertainty regarding ultimate losses, we intend to remain prudent in reserving for estimated ultimate losses until longer-term loss cost trends become more clear.

Commercial umbrella coverages, part of our commercial casualty line of business that help protect businesses against liability from occurrences such as accidents or injuries, contributed significantly to the increase in 2022 ratios for losses and expenses. Incurred losses and loss expenses for commercial umbrella coverages of

\$416 million in 2022 increased \$249 million, or 149%, compared with 2021, due in part to net paid losses of \$223 million increasing \$101 million, or 83%, while earned premiums rose 10%. Severe losses from commercial auto accidents were the primary source of our commercial umbrella claims during 2022 and also in recent years.

Commercial umbrella paid loss experience is inherently variable. For example, net paid losses rose 80% in 2019 and 18% in 2021 while decreasing by 35% in both 2018 and 2020. Commercial umbrella net earned premiums were \$499 million for 2022 and represented approximately 35% of our commercial casualty premiums for both 2022 and 2021. The profile of coverage limits for policies in force at the end of 2022 included 43% with \$1 million of coverage per policy, 91% with \$5 million or less and 99% with \$10 million or less of coverage. Our commercial umbrella insurance coverages have a strong record of profitability for us, including an estimated combined ratio averaging below 85% for the five years ending in 2022.

Pricing precision and other initiatives to improve commercial lines underwriting profitability complement our business practices that continue to leverage the local presence of our field associates. Field marketing representatives meet with local agencies to assess each risk, determine limits of insurance and establish appropriate terms and conditions. They underwrite new business, with collaboration and expertise from headquarters associates as needed, while field loss control, machinery and equipment and claims representatives conduct on-site inspections. Field claims representatives also assist underwriters by preparing full reports on their first-hand observations of risk quality.

Our commercial lines statutory combined ratio was 98.5% in 2022, compared with 83.2% in 2021 and 97.5% in 2020. The contribution of catastrophe losses to our commercial lines statutory combined ratio was 7.0 percentage points in 2022, 3.4 percentage points in 2021 and 10.4 percentage points in 2020.

Commercial Lines Insurance Premiums

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Agency renewal written premiums	\$ 3,672	\$ 3,334	\$ 3,122	10	7
Agency new business written premiums	600	571	515	5	11
Other written premiums	(113)	(94)	(103)	(20)	9
Net written premiums	4,159	3,811	3,534	9	8
Unearned premium change	(135)	(137)	(58)	1	(136)
Earned premiums	<u>\$ 4,024</u>	<u>\$ 3,674</u>	<u>\$ 3,476</u>	10	6

We continue to refine our use of predictive analytics tools to improve pricing precision as we further segment commercial lines policies, emphasizing identification and retention of policies we believe have relatively stronger price adequacy. These tools better align individual insurance policy pricing to risk attributes, providing our underwriters with enhanced abilities to target profitability and to discuss pricing impacts with our agencies. We also continue to leverage our local relationships with agents through the efforts of our teams that work closely with them. We believe our field focus is unique and has several advantages, including providing us with quality intelligence on local market conditions. We seek to maintain appropriate pricing discipline for both new and renewal business as management continues to emphasize the importance of our agencies and underwriters assessing account quality to make careful decisions on a case-by-case basis whether to write as new business or renew a policy. Premium rate credits may be used to retain renewals of quality business and to earn new business, but we do so selectively in order to avoid commercial accounts that we believe have insufficient profit margins.

Our 10% increase in 2022 agency renewal written premiums included higher average pricing. We measure average changes in commercial lines renewal pricing as the rate of change in renewal premium for the new policy period compared with the premium for the expiring policy period, assuming no change in the level of insured exposures or policy coverage between those periods for respective policies. In 2022, our standard commercial lines policies averaged an estimated pricing change at a percentage in the mid-single-digit range, higher than 2021. Our average commercial lines pricing change includes the flat pricing effect of certain coverages within package policies written for a three-year term that were in force but did not expire during the period being measured. Therefore, the average commercial lines pricing change we report reflects a blend of policies that did not expire and other policies that did expire during the measurement period.

For only those commercial lines policies that did expire and were then renewed during 2022, we estimate that the average price increase was at a percentage near the high end of the mid-single-digit range. During 2022, we continued to further segment our commercial lines policies, emphasizing identification and retention of policies we believed had relatively stronger price adequacy. Conversely, we continued to seek more aggressive renewal terms and conditions on policies we believed had relatively weaker pricing, in turn retaining fewer of those policies.

Our 2022 increase of 10% for the commercial lines segment's agency renewal written premiums also included a higher level of insured exposures. Part of the insured exposure increase reflects our response to inflation effects that increase the cost of building materials to repair damaged commercial structures. We use building valuation software to automate much of that underwriting process and may also manually adjust premiums to reflect property costs. For our commercial property line of business, premium adjustments for such costs during 2022 were about double the level they were for the same period a year ago.

Changes in the economy can affect insured exposures that directly relate to premium amounts charged for some policies. For commercial accounts, we usually calculate initial estimates for general liability premiums based on estimated sales or payroll volume, while we calculate workers' compensation premiums based on estimated payroll volume. A change in sales or payroll volume generally indicates a change in demand for a business's goods or services, as well as a change in its exposure to risk. Policyholders who experience sales or payroll volume changes due to economic factors may also have other exposures requiring insurance, such as commercial auto or commercial property. Premium levels for these other types of coverages generally are not linked directly to sales or payroll volumes.

Premiums resulting from audits of actual sales or payrolls that confirmed or adjusted initial premium estimates are part of net written premiums and earned premiums. The contribution to our commercial lines earned premiums was \$127 million, \$47 million and \$41 million in 2022, 2021 and 2020, respectively. The contribution on a net written premium basis was \$101 million, \$44 million and \$53 million in 2022, 2021 and 2020, respectively. These net written premium amounts are included with agency renewal written premiums in the Commercial Lines Insurance Premiums table above.

In 2022, our commercial lines new business premiums written by our agencies increased \$29 million, or 5%, compared with 2021. New business premium volume in recent years has been significantly influenced by new agency appointments. Agencies appointed since the beginning of 2021 produced commercial lines new business written premiums of \$52 million, in aggregate, during 2022, up \$30 million from what they produced during 2021. All other agencies contributed the remaining \$548 million, down \$1 million from the \$549 million they produced in 2021.

For new business, our field associates are frequently in our agents' offices to: help judge the quality of each account; emphasize the Cincinnati value proposition; call on sales prospects with those agents; and provide appropriate quotes after carefully evaluating risk exposures. Some of our new business comes from accounts that are not new to the agent. We believe these seasoned accounts tend to be priced more accurately than business that is new to us and the agency. As we appoint new agencies who choose to move accounts to us, we report these accounts as new business to us.

Other written premiums primarily consist of premiums that are ceded to reinsurers and lower our net written premiums. An increase in ceded premiums reduced net written premium growth by \$26 million in 2022.

Commercial Lines Insurance Loss and Loss Expenses

Loss and loss expenses include both net paid losses and reserve changes for unpaid losses as well as the associated loss expenses. Most of the incurred losses and loss expenses shown in the commercial lines insurance segment three-year highlights table are for the respective current accident years, with reserve development on prior accident years shown separately. Since less than half of our commercial lines insurance segment current accident year incurred losses and loss expenses represents net paid amounts, the majority represents reserves for our estimate of ultimate losses and loss expenses. These reserves develop over time, and we re-estimate previously reported reserves as we learn more about development on the related claims. The table below illustrates that development. For example, the 62.4% accident year 2021 loss and loss expense ratio reported as of December 31, 2021, developed favorably by 1.6 percentage points to 60.8% due to claims settling for less than previously estimated, or due to updates to reserve estimates for unpaid claims, as of December 31, 2022. Accident years 2021 and 2020 for the commercial lines insurance segment have both developed favorably, as indicated by the progression over time of the ratios in the table.

(Dollars in millions)

Accident year loss and loss expenses incurred and ratios to earned premiums:

Accident year:	2022	2021	2020	2022	2021	2020
as of December 31, 2022	\$ 2,837	\$ 2,234	\$ 2,131	70.5 %	60.8 %	61.3 %
as of December 31, 2021		2,293	2,216		62.4	63.8
as of December 31, 2020			2,431			70.0

Catastrophe losses, as discussed in Consolidated Property Casualty Insurance Results, explain some of the movement in the current accident year loss and loss expense ratio for accident year 2022, compared with 2021. Catastrophe losses added 7.6 percentage points in 2022, 4.6 points in 2021 and 10.8 points in 2020 to the respective commercial lines current accident year loss and loss expense ratios in the table above.

The 62.9% ratio for current accident year loss and loss expenses before catastrophe losses for 2022 increased 5.1 percentage points compared with the 57.8% accident year 2021 ratio measured as of December 31, 2021. The increase included an increase in large losses incurred, described below, and the corresponding ratios for new losses above \$1 million, with a 0.6 percentage-point increase in the 2022 ratio. Other contributions included inflation effects that offset the favorable impact from various initiatives, such as those to improve pricing precision and loss experience related to claims and loss control practices.

Commercial lines reserve development on prior accident years of \$76 million in 2022 continued to net to a favorable amount and provided a smaller benefit than the \$353 million recognized in 2021. The \$277 million net decrease in 2022, compared with 2021, included \$144 million, \$66 million and \$54 million from our commercial casualty, commercial auto and commercial property lines of business, respectively. Most of our commercial lines net favorable reserve development on prior accident years recognized during 2022 occurred in our workers' compensation and commercial property lines of business. Unfavorable development recognized during 2022 for our commercial casualty lines of business totaled \$25 million, including \$41 million for commercial umbrella coverages. The \$41 million of net unfavorable development for commercial umbrella coverages included an unfavorable \$107 million for accident years 2018 through 2021 and a net favorable \$66 million for all accident years prior to 2018. Favorable development recognized during 2021 was mostly from our commercial casualty, commercial property and workers' compensation lines of business and during 2020 it was mostly from our commercial casualty and workers' compensation lines of business. As discussed in Critical Accounting Estimates, Property Casualty Insurance Loss and Loss Expense Reserves, stable historical paid loss patterns are a key assumption used to make projections necessary for estimating IBNR reserves. Development by accident year and other trends for commercial lines loss and loss expenses and the related ratios are further discussed in Liquidity and Capital Resources, Property Casualty Insurance Development of Estimated Reserves by Accident Year.

Commercial Lines Insurance Losses by Size

(Dollars in millions, net of reinsurance)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Current accident year losses greater than \$5,000,000	\$ 95	\$ 97	\$ 50	(2)	94
Current accident year losses \$1,000,000-\$5,000,000	237	185	135	28	37
Large loss prior accident year reserve development	63	96	36	(34)	167
Total large losses incurred	395	378	221	4	71
Losses incurred but not reported	304	(83)	240	nm	nm
Other losses excluding catastrophe losses	1,364	1,131	1,073	21	5
Catastrophe losses	275	116	350	137	(67)
Total losses incurred	<u>\$2,338</u>	<u>\$ 1,542</u>	<u>\$ 1,884</u>	<u>52</u>	<u>(18)</u>
Ratios as a percent of earned premiums:					
				Pt. Change	Pt. Change
Current accident year losses greater than \$5,000,000	2.4 %	2.6 %	1.4 %	(0.2)	1.2
Current accident year losses \$1,000,000-\$5,000,000	5.8	5.0	4.0	0.8	1.0
Large loss prior accident year reserve development	1.6	2.7	1.0	(1.1)	1.7
Total large loss ratio	9.8	10.3	6.4	(0.5)	3.9
Losses incurred but not reported	7.6	(2.3)	6.9	9.9	(9.2)
Other losses excluding catastrophe losses	33.9	30.8	30.8	3.1	0.0
Catastrophe losses	6.8	3.2	10.1	3.6	(6.9)
Total loss ratio	<u>58.1 %</u>	<u>42.0 %</u>	<u>54.2 %</u>	<u>16.1</u>	<u>(12.2)</u>

In 2022, total large losses incurred increased by \$17 million, or 4%, net of reinsurance. The corresponding 2022 ratio decreased 0.5 percentage points, compared with 2021, as premium growth outpaced growth in total large losses. The 2022 increase on a dollar basis was due to higher amounts for our commercial casualty and commercial auto lines of business, by \$28 million and \$25 million, respectively. The \$28 million 2022 increase for commercial casualty included \$21 million for commercial umbrella coverages, while the net amount for other coverages increased by \$7 million. In 2021, total large losses incurred and the corresponding ratio were higher than in 2020, largely due to higher amounts of large losses for our commercial casualty and commercial property lines of business. Our analysis indicated no unexpected concentration of these losses and reserve increases by geographic region, policy inception, agency or field marketing territory. We believe the inherent volatility of aggregate loss experience for our portfolio of larger policies is greater than that of our portfolio of smaller policies, and we continue to monitor the volatility in addition to general inflationary trends in loss costs.

Commercial Lines Insurance Underwriting Expenses

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Commission expenses	\$ 741	\$ 684	\$ 625	8	9
Other underwriting expenses	482	451	444	7	2
Policyholder dividends	6	5	10	20	(50)
Total underwriting expenses	<u>\$1,229</u>	<u>\$ 1,140</u>	<u>\$ 1,079</u>	<u>8</u>	<u>6</u>
Ratios as a percent of earned premiums:					
				Pt. Change	Pt. Change
Commission expenses	18.4 %	18.6 %	18.0 %	(0.2)	0.6
Other underwriting expenses	12.0	12.2	12.7	(0.2)	(0.5)
Policyholder dividends	0.2	0.2	0.3	0.0	(0.1)
Total underwriting expense ratio	<u>30.6 %</u>	<u>31.0 %</u>	<u>31.0 %</u>	<u>(0.4)</u>	<u>0.0</u>

Commercial lines commission expenses as a percent of earned premiums decreased in 2022, compared with 2021, primarily due to a decrease in the ratio for profit-sharing commissions for agencies. The ratio for 2021 increased compared with 2020, reflecting an increase in the ratio for profit-sharing commissions for agencies. In 2022, other underwriting expenses as a percent of earned premiums decreased, compared with 2021, reflecting ongoing

expense management efforts and premium growth outpacing growth in expenses. In 2021, other underwriting expenses as a percent of earned premiums decreased, compared with 2020, reflecting lower levels of uncollectible premiums, ongoing expense management efforts and higher earned premiums.

Commercial Lines Insurance Outlook

Renewal and new business pricing for commercial risks continues to experience significant competitive pressure, reinforcing the need for enhanced pricing analytics and careful risk selection. Despite challenging market conditions from strong competition, we believe we can manage our business and execute strategic initiatives to offset market pressures and profitably grow our commercial lines insurance segment.

We intend to grow our commercial lines segment through additional agency appointments, expansion of our local field presence, enhanced expertise and a robust product catalog that meets the needs of an even larger percentage of our agencies' total commercial portfolio. Our goal is to provide flexibility in our process so that we can deliver an industry-leading agency experience to all of our agents as we work to be the first and last solution when they are considering business placement.

We intend to keep marketing our products to a broad range of business classes with a total account approach, while also continuing improvement of our pricing precision and further segmentation among commercial lines policies. We intend to maintain our underwriting discipline and carefully manage our rate levels as well as our programs that seek to accurately match exposures with appropriate premiums. We will continue to evaluate each risk on a policy-by-policy basis, making decisions about rates, terms and conditions based on each account's individual characteristics. We believe that our initiatives to improve pricing precision and lower loss costs will continue to benefit commercial lines profitability during 2023, and that recent-year premium growth initiatives will continue to grow commercial lines premiums at a healthy pace.

Personal Lines Insurance Results

Overview – Three-Year Highlights

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Earned premiums	\$1,689	\$1,542	\$1,463	10	5
Fee revenues	4	4	4	0	0
Total revenues	1,693	1,546	1,467	10	5
Loss and loss expenses from:					
Current accident year before catastrophe losses	991	824	762	20	8
Current accident year catastrophe losses	236	218	233	8	(6)
Prior accident years before catastrophe losses	(17)	(43)	(10)	60	(330)
Prior accident years catastrophe losses	(44)	(7)	(8)	(529)	13
Loss and loss expenses	1,166	992	977	18	2
Underwriting expenses	509	457	443	11	3
Underwriting profit	\$ 18	\$ 97	\$ 47	(81)	106
Ratios as a percent of earned premiums:				Pt. Change	Pt. Change
Current accident year before catastrophe losses	58.7 %	53.4 %	52.1 %	5.3	1.3
Current accident year catastrophe losses	14.0	14.2	16.0	(0.2)	(1.8)
Prior accident years before catastrophe losses	(1.0)	(2.8)	(0.7)	1.8	(2.1)
Prior accident years catastrophe losses	(2.6)	(0.5)	(0.6)	(2.1)	0.1
Loss and loss expenses	69.1	64.3	66.8	4.8	(2.5)
Underwriting expenses	30.1	29.7	30.3	0.4	(0.6)
Combined ratio	99.2 %	94.0 %	97.1 %	5.2	(3.1)
Combined ratio:	99.2 %	94.0 %	97.1 %	5.2	(3.1)
Contribution from catastrophe losses and prior years reserve development	10.4	10.9	14.7	(0.5)	(3.8)
Combined ratio before catastrophe losses and prior years reserve development	88.8 %	83.1 %	82.4 %	5.7	0.7

Performance highlights for the personal lines insurance segment include:

- Premiums – Earned premiums and net written premiums continued to grow in 2022, largely due to increases in renewal written premiums that included higher average pricing and a higher level of insured exposures. Renewal written premiums rose \$167 million, or 12%, in 2022, compared with 2021. Net written premiums from high net worth policies in 2022 totaled approximately \$919 million, compared with \$663 million in 2021, including \$63 million and \$32 million, respectively, from excess and surplus lines homeowner policies. Our high net worth policies represented 50.2% of our 2022 personal lines net written premiums. In 2023, we renamed our high net worth products and services, Cincinnati Private ClientSM, a naming convention commonly used to describe clients with complex needs.
- Combined ratio – The 2022 combined ratio increased by 5.2 percentage points, compared with 2021, including a 2.3 percentage-point decrease in the ratio for catastrophe losses. Development on prior accident years' loss and loss expense reserves before catastrophes during 2022 was 1.8 percentage points less favorable than in 2021. The 2022 combined ratio also included an increase of 5.3 percentage points from current accident year loss and loss expenses before catastrophe losses, with our personal auto and homeowner lines of business each representing approximately 2 points.

When estimating the ultimate cost of total loss and loss expenses, we consider many factors, including trends in inflation, historical paid and reported losses, large loss activity and other data or information for the industry or our company. Elevated inflation was a driver of higher losses and loss expenses as costs have increased significantly to repair damaged autos or homes that we insure. In addition to inflation causing deviations from historical loss patterns, we believe reduced driving during the pandemic resulted in a relatively low level of loss activity in 2021 and 2020, distorting paid loss cost trends for autos. Due to increased uncertainty regarding ultimate losses, we

intend to remain prudent in reserving for estimated ultimate losses until longer-term loss cost trends become more clear. For example, personal auto incurred loss and loss expenses before catastrophe losses increased \$109 million, or 30%, in 2022, compared with the same period of 2021, in part due to paid losses before catastrophes increasing \$53 million, or 17%, while earned premiums rose 3%.

We have increased our pricing precision and implemented numerous rate increases in recent years to improve our personal lines insurance segment results. In addition, we have made greater use of higher minimum loss deductibles and enhanced our property inspection processes to verify condition and insurance to value. We have worked to improve our geographic diversification by expanding our personal lines operation to several states less prone to catastrophes.

Our personal lines statutory combined ratio was 97.7% in 2022, compared with 93.5% in 2021 and 96.4% in 2020. The contribution of catastrophe losses to our personal lines statutory combined ratio was 11.4 percentage points in 2022, 13.7 percentage points in 2021 and 15.4 percentage points in 2020.

Personal Lines Insurance Premiums

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Agency renewal written premiums	\$ 1,601	\$ 1,434	\$ 1,364	12	5
Agency new business written premiums	296	202	174	47	16
Other written premiums	(66)	(42)	(35)	(57)	(20)
Net written premiums	1,831	1,594	1,503	15	6
Unearned premium change	(142)	(52)	(40)	(173)	(30)
Earned premiums	\$ 1,689	\$ 1,542	\$ 1,463	10	5

Personal lines insurance is a strategic component of our overall relationship with most of our agencies and is an important component of our agencies' relationships with their clients. We believe agents recommend our personal insurance products to their clients who seek to balance quality and price and who are attracted by our superior claims service and the benefits of our package approach. We also believe our continuing efforts to improve pricing precision are helping us attract and retain more of our agencies' preferred business, while also obtaining higher rates for more thinly priced business.

The 12% increase in agency renewal written premiums in 2022 included the effect of various rate changes. We estimate that premium rates for our personal auto line of business increased at average percentages in the low-single-digit range during 2022, with some individual policies experiencing lower or higher rate changes based on enhanced pricing precision enabled by predictive models that consider characteristics of specific risks. We expect full-year 2023 written premiums will include an average rate increase of approximately 10% for our personal auto line of business. For our homeowner line of business, we estimate that rate increases during 2022 averaged in the mid-single-digit range. Similar to our personal auto line of business, that average varied widely by state, and some individual policies experienced lower or higher rate changes based on pricing precision and current rate level indications that helped determine appropriate premium rates.

The 12% increase in agency renewal written premiums in 2022 also included a higher level of insured exposures and other factors such as changes in policy deductibles or mix of business. Part of the insured exposure increase reflects our response to inflation effects that increase the cost of building materials to repair damaged homes. In recent years, prior to 2022, our homeowner policies used inflation factors that adjusted premiums for such costs annually and averaged increases in the mid-single-digit percentage range. Beginning in 2022, the adjustment occurred quarterly and the inflation factors were in the high-single-digit percentage range for the last three quarters of the year.

Personal lines new business written premiums grew by \$94 million, or 47%, during 2022, compared with 2021, including \$77 million from high net worth policies. Approximately \$21 million of the 2022 increase was from excess and surplus lines homeowner policies and \$56 million was from other high net worth policies. We believe we maintained underwriting and pricing discipline and growth was also supported by expanded use of enhanced pricing precision tools. Some of what we report as new business came from accounts that were not new to our agents. We believe our agents' seasoned accounts tend to be priced more accurately than business that may be less familiar to them.

Other written premiums primarily consist of premiums that are ceded to reinsurers and lower our net written premiums. An increase in ceded premiums reduced net written premium growth by \$23 million in 2022.

Personal Lines Insurance Loss and Loss Expenses

Loss and loss expenses include both net paid losses and reserve changes for unpaid losses as well as the associated loss expenses. Most of the incurred losses and loss expenses shown in the personal lines insurance segment three-year highlights table are for the respective current accident years, with reserve development on prior accident years shown separately. Since approximately two-thirds of our personal lines current accident year incurred losses and loss expenses represent net paid amounts, the remaining one-third represents reserves for our estimate of ultimate losses and loss expenses. These reserves develop over time, and we re-estimate previously reported reserves as we learn more about the development of the related claims. The table below illustrates that development. For example, the 67.6% accident year 2021 loss and loss expense ratio reported as of December 31, 2021, developed favorably by 3.4 percentage points to 64.2% due to claims settling for less than previously estimated, or due to updated reserve estimates for unpaid claims, as of December 31, 2022. Accident years 2021 and 2020 for the personal lines insurance segment have both developed favorably, as indicated by the progression over time for the ratios in the table.

(Dollars in millions)

Accident year loss and loss expenses incurred and ratios to earned premiums:

Accident year:	2022	2021	2020	2022	2021	2020
as of December 31, 2022	\$ 1,227	\$ 990	\$ 928	72.7 %	64.2 %	63.4 %
as of December 31, 2021		1,042	943		67.6	64.5
as of December 31, 2020			995			68.1

Catastrophe losses, as discussed in Consolidated Property Casualty Insurance Results, explain some of the movement in the current accident year loss and loss expense ratio for accident year 2022, compared with accident year 2021. Catastrophe losses added 14.0 percentage points in 2022, 14.2 points in 2021 and 16.0 points in 2020 to the respective personal lines current accident year loss and loss expense ratios in the table above. Personal lines catastrophe losses for 2022 resulted in a ratio higher than our 10.8% 10-year annual average for personal lines. Personal lines catastrophe losses are inherently volatile, as discussed above and in Consolidated Property Casualty Insurance Results.

The 58.7% ratio for current accident year loss and loss expenses before catastrophe losses for 2022 increased 5.3 percentage points compared with the 53.4% accident year 2021 ratio measured as of December 31, 2021. The increase included an increase in large losses incurred, described below, and the corresponding ratios for new losses above \$1 million, with a 2.0 percentage-point increase in the 2022 ratio. Other contributions included inflation effects that offset the favorable impact from various initiatives, such as those to improve pricing precision and loss experience related to claims and loss control practices.

Personal lines loss and loss expense reserve development on prior accident years recognized in 2022 was favorable by \$61 million, in aggregate, compared with \$50 million in 2021. The 2022 net favorable reserve development included \$54 million for our homeowner line of business. The 2021 net favorable reserve development included \$31 million for our personal auto line of business and \$14 million for our homeowner line of business. As discussed in Critical Accounting Estimates, Property Casualty Insurance Loss and Loss Expense Reserves, stable historical paid loss patterns are a key assumption used to make projections necessary for estimating IBNR reserves. Development by accident year and other trends for personal lines loss and loss expenses and the related ratios are further discussed in Liquidity and Capital Resources, Property Casualty Insurance Development of Estimated Reserves by Accident Year.

Personal Lines Insurance Losses by Size

(Dollars in millions, net of reinsurance)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Current accident year losses greater than \$5,000,000	\$ 48	\$ 15	\$ —	220	nm
Current accident year losses \$1,000,000-\$5,000,000	64	56	59	14	(5)
Large loss prior accident year reserve development	8	(4)	6	nm	nm
Total large losses incurred	120	67	65	79	3
Losses incurred but not reported	5	11	39	(55)	(72)
Other losses excluding catastrophe losses	700	588	523	19	12
Catastrophe losses	186	198	216	(6)	(8)
Total losses incurred	<u>\$ 1,011</u>	<u>\$ 864</u>	<u>\$ 843</u>	<u>17</u>	<u>2</u>
Ratios as a percent of earned premiums:				Pt. Change	Pt. Change
Current accident year losses greater than \$5,000,000	2.8 %	1.0 %	0.0 %	1.8	1.0
Current accident year losses \$1,000,000-\$5,000,000	3.8	3.6	4.0	0.2	(0.4)
Large loss prior accident year reserve development	0.5	(0.2)	0.4	0.7	(0.6)
Total large loss ratio	7.1	4.4	4.4	2.7	0.0
Losses incurred but not reported	0.3	0.7	2.7	(0.4)	(2.0)
Other losses excluding catastrophe losses	41.5	38.1	35.8	3.4	2.3
Catastrophe losses	11.0	12.8	14.7	(1.8)	(1.9)
Total loss ratio	<u>59.9 %</u>	<u>56.0 %</u>	<u>57.6 %</u>	<u>3.9</u>	<u>(1.6)</u>

In 2022, personal lines total large losses incurred increased by \$53 million, or 79%, net of reinsurance. The corresponding 2022 ratio increased 2.7 percentage points, compared with 2021. The 2022 increase was primarily due to a higher amount for our homeowner line of business. In 2021, total large losses increased on a dollar basis, compared with 2020, primarily due to a higher amount for umbrella coverage in our other personal line of business that was partially offset by a lower amount for our homeowner line of business. Our analysis indicated no unexpected concentration of these losses and reserve increases by risk category, geographic region, policy inception, agency or field marketing territory. We believe the inherent volatility of aggregate loss experience for our portfolio of larger policies is greater than that of our portfolio of smaller policies, and we continue to monitor the volatility in addition to general inflationary trends in loss costs.

Personal Lines Insurance Underwriting Expenses

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Commission expenses	\$ 327	\$ 292	\$ 266	12	10
Other underwriting expenses	182	165	177	10	(7)
Total underwriting expenses	<u>\$ 509</u>	<u>\$ 457</u>	<u>\$ 443</u>	<u>11</u>	<u>3</u>
Ratios as a percent of earned premiums:				Pt. Change	Pt. Change
Commission expenses	19.4 %	19.0 %	18.2 %	0.4	0.8
Other underwriting expenses	10.7	10.7	12.1	0.0	(1.4)
Total underwriting expense ratio	<u>30.1 %</u>	<u>29.7 %</u>	<u>30.3 %</u>	<u>0.4</u>	<u>(0.6)</u>

Personal lines commission expense as a percent of earned premiums increased in 2022, compared with 2021, primarily due to an increase in commissions for agencies other than profit-sharing commissions. The ratio for 2021 increased compared with 2020, largely due to an increase in the ratio for profit-sharing commissions for agencies. In 2022, other underwriting expenses as a percent of earned premiums matched 2021, reflecting ongoing expense management efforts, as the pace of premium growth was in line with growth in other expenses. Other underwriting expenses as a percent of earned premiums in 2021 decreased, compared with 2020, primarily due to 2020 including a \$16 million Stay-at-Home policyholder credit for personal auto policies.

Personal Lines Insurance Outlook

Various publications describing the U.S. property casualty industry in 2022 noted challenges, including elevated inflation, increasing loss costs and pricing pressures as insurers seek rate adequacy. We continue to respond with rate increases, pricing precision for individual risks and use of inflation factors that respond to higher costs to repair property. We believe we can continue to profitably grow premiums in our personal lines insurance segment through new agency appointments and ongoing focus on the high net worth personal lines market. Drivers of our profitable growth for our high net worth business also include selectively using non-admitted insurance property forms and rates in certain catastrophe-prone states and geographies.

Our high net worth initiative, along with various other actions to improve performance in our personal lines insurance segment, is discussed in greater detail in Personal Lines Insurance Results and also in Item 1, Our Business and Our Strategy, Strategic Initiatives and Our Segments, Personal Lines Insurance Segment.

Excess and Surplus Lines Insurance Results

Overview – Three-Year Highlights

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Earned premiums	\$ 485	\$ 398	\$ 325	22	22
Fee revenues	2	2	2	0	0
Total revenues	487	400	327	22	22
Loss and loss expenses from:					
Current accident year before catastrophe losses	319	240	187	33	28
Current accident year catastrophe losses	5	3	5	67	(40)
Prior accident years before catastrophe losses	(8)	7	7	nm	0
Prior accident years catastrophe losses	(1)	—	—	nm	0
Loss and loss expenses	315	250	199	26	26
Underwriting expenses	124	106	94	17	13
Underwriting profit	\$ 48	\$ 44	\$ 34	9	29
Ratios as a percent of earned premiums:				Pt. Change	Pt. Change
Current accident year before catastrophe losses	65.7 %	60.3 %	57.7 %	5.4	2.6
Current accident year catastrophe losses	1.0	0.6	1.3	0.4	(0.7)
Prior accident years before catastrophe losses	(1.7)	1.9	2.1	(3.6)	(0.2)
Prior accident years catastrophe losses	(0.2)	0.0	0.2	(0.2)	(0.2)
Loss and loss expenses	64.8	62.8	61.3	2.0	1.5
Underwriting expenses	25.6	26.7	28.7	(1.1)	(2.0)
Combined ratio	90.4 %	89.5 %	90.0 %	0.9	(0.5)
Combined ratio:	90.4 %	89.5 %	90.0 %	0.9	(0.5)
Contribution from catastrophe losses and prior years reserve development	(0.9)	2.5	3.6	(3.4)	(1.1)
Combined ratio before catastrophe losses and prior years reserve development	91.3 %	87.0 %	86.4 %	4.3	0.6

Our excess and surplus lines insurance segment includes results of The Cincinnati Specialty Underwriters Insurance Company and CSU Producer Resources Inc. Performance highlights for this segment include:

- Premiums – Earned premiums and net written premiums continued to grow during 2022, including higher renewal written premiums that included average renewal estimated price increases in the high-single-digit range. New business written premiums rose 10% in 2022, compared with 2021, and also contributed to premium growth.
- Combined ratio – The combined ratio increased by 0.9 percentage points in 2021, driven by an increase in the ratio for current accident year loss and loss expenses before catastrophe losses. Approximately 92% of our 2022 earned premiums for the excess and surplus lines insurance segment provided commercial casualty coverages for various insured liability losses that have experienced elevated inflation. Due to increased uncertainty regarding ultimate losses, we intend to remain prudent in reserving for estimated ultimate losses until longer-term loss cost trends become more clear. Incurred losses and loss expenses for excess and surplus lines commercial casualty coverages of \$302 million in 2022 increased \$69 million or 30%, compared with 2021, in part due to paid losses of \$82 million increasing \$20 million, or 32%, while earned premiums rose 23%. The ratio for prior accident year loss and loss expenses before catastrophe losses decreased, following a period where loss reserves for prior accident years were increased due to older claims settling for higher amounts than expected.

Excess and Surplus Lines Insurance Premiums

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Agency renewal written premiums	\$ 392	\$ 323	\$ 254	21	27
Agency new business written premiums	136	124	110	10	13
Other written premiums	(26)	(21)	(16)	(24)	(31)
Net written premiums	502	426	348	18	22
Unearned premium change	(17)	(28)	(23)	39	(22)
Earned premiums	\$ 485	\$ 398	\$ 325	22	22

The \$69 million increase in 2022 renewal premiums reflected the opportunity to renew many policies for the first time as well as higher renewal pricing. Average renewal estimated price increases were in the high-single-digit range during 2022. We measure average changes in excess and surplus lines renewal pricing as the rate of change in renewal premium for the new policy period compared with the premium for the expiring policy period, assuming no change in the level of insured exposures or policy coverage between those periods for respective policies.

New business written premiums in 2022 grew by \$12 million, or 10%, compared with 2021, as we continued to carefully underwrite each policy in a highly competitive market. Other written premiums in 2022 reduced net written premium growth by \$5 million more than in 2021, and are primarily premiums that are ceded to reinsurers and therefore reduce our net written premiums.

Excess and Surplus Lines Loss and Loss Expenses

Loss and loss expenses include both net paid losses and reserve changes for unpaid losses, as well as the associated loss expenses. The majority of the total incurred losses and loss expenses shown above in the three-year highlights table are for the respective current accident years, with reserve development on prior accident years shown separately. Since less than 20% of our excess and surplus lines current accident year incurred losses and loss expenses represents net paid amounts, a large majority represents reserves for our estimate of unpaid losses and loss expenses. These reserves develop over time, and we update our estimates of previously reported reserves as we learn more about the development of the related claims. The table below illustrates that development. For example, the 59.0% accident year 2020 loss and loss expense ratio reported as of December 31, 2020, did not change as of December 31, 2021, as favorable reserve development during 2021 was less than \$1 million. During 2022, it developed favorably by 4.2 percentage points to 54.8% due to claims settling for less than previously estimated, or due to updated reserve estimates for unpaid claims, as of December 31, 2022. Accident year 2021 for this segment developed unfavorably during 2022, as indicated by the progression over time of the ratios in the table.

(Dollars in millions)						
Accident year loss and loss expenses incurred and ratios to earned premiums:						
Accident year:	2022	2021	2020	2022	2021	2020
as of December 31, 2022	\$ 324	\$ 257	\$ 178	66.7 %	64.5 %	54.8 %
as of December 31, 2021		243	192		60.9	59.0
as of December 31, 2020			192			59.0

Catastrophe losses, as discussed in Consolidated Property Casualty Insurance Results, explain some of the movement among components of the current accident year loss and loss expense ratio for accident year 2022, compared with 2021. Catastrophe losses added 1.0 percentage point in 2022, 0.6 percentage points in 2021 and 1.3 percentage points in 2020 to the respective excess and surplus lines current accident year loss and loss expense ratios in the table above.

The 65.7% ratio for current accident year loss and loss expenses before catastrophe losses for 2022 increased by 5.4 percentage points compared with the 60.3% accident year 2021 ratio measured as of December 31, 2021. The increase included a 0.9 percentage-point increase in the ratio for current accident year losses of \$1 million or more per claim, shown in the table below.

Excess and surplus lines reserve development on prior accident years was a net favorable \$9 million for 2022 and a net unfavorable \$7 million for 2021. The net favorable amount for 2022 was primarily for accident year 2020. The 2021 unfavorable reserve development on prior accident years reflected what we believe are now adequate reserves for estimated ultimate losses and loss expenses, as reserves were increased due to older claims settling for higher amounts than expected.

We believe the loss and loss expense reserves for our excess and surplus lines business are adequate. The amount of outstanding reserves for our excess and surplus lines operation can be seen in a table in Liquidity and Capital Resources, Property Casualty Loss and Loss Expense Obligations and Reserves. One indication of how long it takes for most of the outstanding reserves to be settled is to measure outstanding reserves by accident year at different points in time, using Item 8, Note 4 of the Consolidated Financial Statements. For example, for accident years 2015, 2014 and 2013, in aggregate, after subtracting cumulative paid amounts from incurred amounts at December 31, 2015, reserves for estimated unpaid losses, plus the portion of loss expenses known as ALAE, equaled \$187 million. For those same accident years, at December 31, 2022, the reserve estimate for the remaining unpaid amount equaled \$5 million. As discussed in Critical Accounting Estimates, Property Casualty Insurance Loss and Loss Expense Reserves, stable historical paid loss patterns are a key assumption used to make projections necessary for estimating IBNR reserves. The inherent uncertainty in estimating reserves is discussed in Liquidity and Capital Resources, Property Casualty Insurance Loss and Loss Expense Obligations and Reserves. Development trends by accident year are further discussed in Property Casualty Insurance Development of Estimated Reserves by Accident Year.

Excess and Surplus Lines Insurance Losses by Size

	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
(Dollars in millions, net of reinsurance)					
Current accident year losses greater than \$5,000,000	\$ —	\$ —	\$ —	nm	nm
Current accident year losses \$1,000,000-\$5,000,000	24	16	8	50	100
Large loss prior accident year reserve development	4	3	—	33	nm
Total large losses incurred	28	19	8	47	138
Losses incurred but not reported	68	53	31	28	71
Other losses excluding catastrophe losses	127	97	95	31	2
Catastrophe losses	4	2	5	100	(60)
Total losses incurred	\$ 227	\$ 171	\$ 139	33	23
Ratios as a percent of earned premiums:					
				Pt. Change	Pt. Change
Current accident year losses greater than \$5,000,000	0.0 %	0.0 %	0.0 %	0.0	0.0
Current accident year losses \$1,000,000-\$5,000,000	5.0	4.1	2.5	0.9	1.6
Large loss prior accident year reserve development	0.8	0.6	0.0	0.2	0.6
Total large loss ratio	5.8	4.7	2.5	1.1	2.2
Losses incurred but not reported	14.0	13.4	9.5	0.6	3.9
Other losses excluding catastrophe losses	26.2	24.3	29.3	1.9	(5.0)
Catastrophe losses	0.8	0.6	1.4	0.2	(0.8)
Total loss ratio	46.8 %	43.0 %	42.7 %	3.8	0.3

In 2022, total large losses increased by \$9 million, net of reinsurance. The ratio for 2022 large losses as a percent of earned premiums increased by 1.1 percentage points, compared with 2021. That ratio for 2021 increased by 2.2 points, compared with 2020. Our analysis indicated no unexpected concentration of these losses and reserve increases by risk category, geographic region, policy inception, agency or field marketing territory. We believe the inherent volatility of aggregate loss experience for our portfolio of larger policies is greater than that of our portfolio of smaller policies, and we continue to monitor the volatility in addition to general inflationary trends in loss costs.

Excess and Surplus Lines Insurance Underwriting Expenses

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Commission expenses	\$ 81	\$ 70	\$ 58	16	21
Other underwriting expenses	43	36	36	19	0
Total underwriting expenses	<u>\$ 124</u>	<u>\$ 106</u>	<u>\$ 94</u>	17	13
Ratios as a percent of earned premiums:				Pt. Change	Pt. Change
Commission expenses	16.7 %	17.5 %	17.6 %	(0.8)	(0.1)
Other underwriting expenses	8.9	9.2	11.1	(0.3)	(1.9)
Total underwriting expenses ratio	<u>25.6 %</u>	<u>26.7 %</u>	<u>28.7 %</u>	<u>(1.1)</u>	<u>(2.0)</u>

Excess and surplus lines commission expense as a percent of earned premiums for 2022 decreased compared with 2021, largely due to a decrease in the ratio for profit-sharing commissions for agencies. The ratio for 2021 decreased slightly compared with 2020, despite a slight increase in the ratio for profit-sharing commissions for agencies. The ratio for other underwriting expenses decreased in both 2022 and 2021, reflecting ongoing expense management efforts and premium growth outpacing growth in expenses.

Excess and Surplus Lines Outlook

The excess and surplus lines market is expected to see the magnitude of rate increases moderate for risks that are casualty-driven. For property risks involving catastrophe exposures, premium rates in the foreseeable future are expected to be firm. New business opportunities are expected to increase as standard market insurance companies continue to re-underwrite business they previously took from the excess and surplus lines market and as larger excess and surplus lines companies re-underwrite their business with an emphasis on underwriting profitability. Firming is expected to continue for specific classes of business where loss costs are exceeding rates, such as habitational for property and general liability coverages and liquor liability for general liability coverages.

Industry reports suggest that there are opportunities for profitability and growth through greater use of technology. Technology and data are also being used by excess and surplus lines insurance companies to identify new exposures in emerging businesses that need insurance protection or other value-added services.

Our strategy of providing superior service is expected to continue to grow our excess and surplus lines insurance segment and to achieve profitability despite challenging market conditions. We intend to keep carefully selecting and pricing risks, providing prompt delivery of insurance quotes and policies and giving outstanding claims and loss control service from local field representatives who also handle the standard lines business for their assigned agencies. These local representatives are supported by headquarters underwriters and claims managers who specialize in excess and surplus lines.

Life Insurance Results

Overview – Three-Year Highlights

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Earned premiums	\$ 295	\$ 298	\$ 289	(1)	3
Fee revenues	4	5	2	(20)	150
Total revenues	299	303	291	(1)	4
Contract holders' benefits incurred	296	340	297	(13)	14
Investment interest credited to contract holders	(109)	(105)	(102)	(4)	(3)
Underwriting expenses incurred	84	84	85	—	(1)
Total benefits and expenses	271	319	280	(15)	14
Life insurance segment profit (loss)	\$ 28	\$ (16)	\$ 11	nm	nm

The COVID-19 pandemic did not have a significant effect on our life insurance segment earned premiums or underwriting expenses for any of the three years ending in 2022. However, the pandemic did contribute to an increase in death claims, primarily in 2021. It is possible we may continue to experience higher than projected future death claims due to the pandemic.

Performance highlights for the life insurance segment also included:

- Revenues – Earned premiums decreased 1% for the year 2022, as shown in the table below that includes details by major line of business. Our largest life insurance product line, term life insurance, rose 5%. Net in-force policy face amounts rose 4% to \$80.482 billion at year-end 2022 from \$77.493 billion at year-end 2021 and \$73.475 billion at year-end 2020.
- Profitability – The life insurance segment frequently reports only a small profit or loss because most of its investment income is included in the investments segment results. We include only investment income credited to contract holders (interest assumed in life insurance policy reserve calculations) in life insurance segment results. A profit of \$28 million for our life insurance segment in 2022, compared with a loss of \$16 million in 2021 and \$11 million of profit in 2020, was primarily due to more favorable impacts from the unlocking of interest rate and other actuarial assumptions and more favorable mortality experience. The life insurance segment has averaged an annual profit of \$6 million over the past five years.

Earned premiums decreased \$3 million in 2022, primarily due to a \$13 million decrease in universal life earned premiums. Universal life insurance earned premiums can vary, including from changes in interest rate or other actuarial assumptions. Earned premiums increased \$10 million in our term life insurance business in 2022. Growth in 2021 was primarily due to term life insurance.

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Term life insurance	\$ 220	\$ 210	\$ 197	5	7
Whole life insurance	46	46	43	0	7
Universal life and other	29	42	49	(31)	(14)
Net earned premiums	\$ 295	\$ 298	\$ 289	(1)	3

Products we market include term, whole and universal life insurance and also fixed annuities. In addition, we offer term and whole life insurance to employees at their worksite. These products provide our property casualty agency force with excellent cross-serving opportunities for both commercial and personal accounts.

Over the past several years, we have worked to maintain a portfolio of simple, yet competitive, products. Our product development efforts emphasize death benefit protection and guarantees. Distribution expansion within our property casualty insurance agencies remains a high priority. Our 34 life field marketing representatives work in partnership with our property casualty field marketing representatives. Approximately 65% of our term and other life insurance product premiums were generated through our property casualty insurance agency relationships.

Life insurance segment expenses consist principally of:

- Contract holders' benefits incurred, related to traditional life and interest-sensitive products, accounted for 77.9% of 2022 total benefits and expenses compared with 80.2% in 2021 and 77.7% in 2020. Total contract holders' benefits decreased as net death claims were lower in 2022, compared with 2021, and were slightly above our mortality projections.
- Underwriting expenses incurred, net of deferred acquisition costs, accounted for 22.1% of 2022 total benefits and expenses compared with 19.8% in 2021 and 22.3% in 2020. Expenses in 2022 matched 2021, compared with a decrease of 1% in earned premiums. Expenses in 2021 decreased 1%, compared with 3% growth in earned premiums. In 2022, unlocking of interest rate and other actuarial assumptions increased the amount of expenses deferred to future periods, decreasing underwriting expenses. In 2021, unlocking of interest rate and other actuarial assumptions decreased the amount of expenses deferred to future periods, increasing underwriting expenses.

Life insurance segment profitability depends largely on premium levels, the adequacy of product pricing, underwriting skill and operating efficiencies. This segment's results include only investment interest credited to contract holders (interest assumed in life insurance policy reserve calculations). The remaining investment income is reported in the investments segment results. The life investment portfolio is managed to earn target spreads between earned investment rates on general account assets and rates credited to policyholders. We consider the value of assets under management and investment income for the life investment portfolio as key performance indicators for the life insurance segment. We seek to maintain a competitive advantage with respect to benefits paid and reserve increases by consistently achieving better than average claims experience due to skilled underwriting.

We recognize that assets under management, capital appreciation and investment income are integral to evaluation of the success of the life insurance segment because of the long duration of life products. On a basis that includes investment income and investment gains or losses from life insurance-related invested assets, our life insurance subsidiary reported net income of \$66 million in 2022, compared with \$44 million in 2021 and \$32 million in 2020. The life insurance subsidiary portfolio had after-tax net investment losses of \$2 million in 2022, after-tax net investment gains of \$8 million in 2021 and after-tax net investment losses of \$21 million in 2020. Investment gains and losses are discussed under Investments Results. We exclude most of our life insurance company investment income from investments segment results.

Life Insurance Outlook

The markets for life and annuity products have both been impacted by inflation. Life insurance sales are likely to remain under pressure in the near term as potential clients have reduced discretionary income to spend. As inflation moderates and barring a moderate to severe recession, we expect to see good growth opportunities later in 2023. Fixed annuities have attracted a lot of attention due to market volatility and passage of the SECURE 2.0 Act of 2022. We expect to benefit when we introduce a new product in the first half of 2023. The current yield curve has allowed us to increase our net earned rate on new asset purchases and reinvestments, and we expect investment income to continue to grow unless a sharp recession compels the Federal Reserve to reverse course and usher in another round of quantitative easing.

We believe the worst of the pandemic is behind us. However, we recognize that there is uncertainty surrounding the long-term health impact of COVID-19 infections, higher rates of psychological stress and some concern that fewer medical screenings over the past few years may lead to higher rates of cancer in the future. All of these could adversely impact mortality results. Conversely, the recent favorable trends in mortality in our book could be an early indication that a significant number of death claims from 2021 and the first two months of 2022 were an acceleration of claims that will lead to favorable mortality results in the near term.

Investments Results

Overview – Three-Year Highlights

Investments Results

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Total investment income, net of expenses	\$ 781	\$ 714	\$ 670	9	7
Investment interest credited to contract holders	(109)	(105)	(102)	(4)	(3)
Investment gains and losses, net	(1,467)	2,409	865	nm	178
Investments profit, pretax	\$ (795)	\$ 3,018	\$ 1,433	nm	111

The investments segment contributes investment income and investments gains and losses to results of operations. Investment income is generally our primary source of pretax and after-tax profits.

- Investment income – Pretax investment income grew \$67 million, or 9%, in 2022, due to increases from dividends and interest income. Dividend income grew 12%, reflecting dividend rates that are rising more slowly, minor asset allocation adjustments in our equity portfolio and net purchases of equity securities from available funds. Interest income grew 7% in 2022, compared with 2021, as net purchases of fixed-maturity securities in recent years and rising bond yields are working to generally offset effects of the low interest rate environment of the past several years. Pretax investment income rose 7% in 2021, including increases in interest and dividend income. Average yields in the investment income table below are based on the average invested asset and cash amounts indicated in the table using fixed-maturity securities valued at amortized cost and all other securities at fair value.
- Investment gains and losses – We reported an investment loss in 2022, due to unfavorable changes in fair values of equity securities even though we continue to hold the securities or as otherwise required by GAAP. We reported an investment gain in 2021 and 2020, primarily due to favorable changes in fair values of equity securities.

We believe it is useful to analyze our overall investment performance by using total investment return over several years. Total investment return considers changes in unrealized gains and losses that are not included in net income, in addition to net investment income and investment gains and losses that are included in net income. Changes in unrealized gains and losses shown in the table below include other invested assets. Considering total investment gains and losses over several years helps evaluate performance since gains and losses may experience typical variability during shorter periods of time.

The table below shows total return based on assumptions that simplify cash flow timing that is commonly used in total return measures. This simplified calculation uses data shown in our consolidated financial statements or notes to those statements. Added to invested asset amounts from our consolidated balance sheets are 50% of annual amounts pertaining to invested asset categories included in net cash used in investing activities from our consolidated statements of cash flows. The cash flow amounts are reduced by net gains from investment portfolio securities sales or called bonds, with the net result reduced by 50% to represent estimated new cash invested during each respective year. All new cash is assumed to be invested at the midpoint of the year.

Total investment return of negative 9.2% in 2022 was significantly less than in 2021. The 2022 contribution from the investment income component was offset by the net unfavorable effect of the investment gains and losses components. Comparing contributions for 2022 with 2021, investment income rose \$67 million, investment gains decreased by \$3.876 billion and the invested assets net change in unrealized gains and losses decreased by \$1.405 billion. The base component of the return calculation, annual average invested assets, was up 14% in 2022. For 2021 compared with 2020, total investment return rose by 3.3 percentage points, primarily due to a more favorable net effect of the investment gains and losses. The base component of the return calculation, annual average invested assets, increased 10% in 2021.

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Invested assets beginning balance:					
Fixed maturities	\$13,022	\$12,338	\$11,698	6	5
Equity securities	11,315	8,856	7,752	28	14
Other invested assets	329	348	296	(5)	18
Invested assets beginning balance	24,666	21,542	19,746	15	9
Average acquisitions (dispositions), net	472	538	309	(12)	74
Annual average invested assets	<u>\$25,138</u>	<u>\$22,080</u>	<u>\$20,055</u>	14	10
Total investment return:					
Investment income, net of expenses	\$ 781	\$ 714	\$ 670	9	7
Investment gains and losses, net	(1,467)	2,409	865	nm	178
Total invested assets change in unrealized gains and losses	(1,639)	(234)	436	nm	nm
Total	<u>\$ (2,325)</u>	<u>\$ 2,889</u>	<u>\$ 1,971</u>	nm	47
Total return on invested assets, pretax	(9.2)%	13.1 %	9.8 %		

Investment Income

The primary drivers of investment income are highlighted below, followed by additional details of our investment results.

- Interest income increased by \$33 million, or 7%, in 2022, compared with 2021. The average fixed-maturity pretax yield decreased by less than 1 basis point but was offset by a larger fixed-maturity portfolio that rose 7% on an average amortized cost basis. Interest income in 2021 increased by \$22 million, compared with 2020, when that yield declined by approximately 1 basis point while the portfolio rose 8% on an amortized cost basis.
- Dividend income rose \$29 million, or 12%, in 2022, after also rising 12% in 2021. Increases in dividend payment rates for most of the holdings in our common stock portfolio during both 2022 and 2021 drove the increases in dividend income. An increase in funds invested in that portfolio during both 2022 and 2021 also favorably affected dividend income.

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Investment income:					
Interest	\$ 510	\$ 477	\$ 455	7	5
Dividends	275	246	220	12	12
Other	11	5	8	120	(38)
Less investment expenses	15	14	13	7	8
Investment income, pretax	781	714	670	9	7
Less income taxes	123	111	104	11	7
Total investment income, after-tax	\$ 658	\$ 603	\$ 566	9	7
Investment returns:					
Average invested assets plus cash and cash equivalents	\$24,775	\$23,215	\$20,670		
Average yield pretax	3.15 %	3.08 %	3.24 %		
Average yield after-tax	2.66	2.60	2.74		
Effective tax rate	15.8	15.5	15.5		
Fixed-maturity returns:					
Average amortized cost	\$12,605	\$11,771	\$11,210		
Average yield pretax	4.05 %	4.05 %	4.06 %		
Average yield after-tax	3.35	3.37	3.39		
Effective tax rate	17.1	16.8	16.6		

In 2022, we continued to invest available cash flow in both fixed income and equity securities in a manner that we believe balances current income needs with longer-term invested asset growth goals. While our bond portfolio more than covers our insurance reserve liabilities, we believe our diversified common stock portfolio of mainly blue chip, dividend-paying companies represents one of our best investment opportunities for the long term. We position our portfolio with consideration to both the low interest rate environment that has prevailed in recent years as well as the potential for a continuation of the 2022 spike in inflation and yields.

The table below summarizes pretax yield to amortized costs excluding any book value adjustments due to impairment for bonds in our fixed-maturity portfolio by various maturity periods.

At December 31, 2022	% Yield	Principal redemptions
Fixed-maturity yield profile:		
Expected to mature during 2023	3.80 %	\$ 788
Expected to mature during 2024	4.34	1,076
Expected to mature during 2025	4.59	1,309
Average yield and total expected redemptions from 2023 through 2025		<u>\$ 3,173</u>

The average pretax yield of 5.01% for fixed-maturity securities acquired during 2022, shown in the table below, was higher than the 4.22% average yield-to-amortized cost of the fixed-maturity securities portfolio at the end of 2022.

	Years ended December 31,	
	2022	2021
Average pretax yield-to-amortized cost on new fixed maturities:		
Acquired taxable fixed maturities	5.26 %	3.52 %
Acquired tax-exempt fixed maturities	3.94	2.65
Average total fixed maturities acquired	5.01	3.47

We discussed our portfolio strategies in Item 1, Investments Segment. We discuss risks related to our investment income and our fixed-maturity and equity investment portfolios in Item 7A, Quantitative and Qualitative Disclosures About Market Risk.

Total Investment Gains and Losses

Investment gains and losses are recognized on the sales of investments, for certain changes in fair values of securities even though we continue to hold the securities or as otherwise required by GAAP. The change in fair value for equity securities still held is reported in net income, as disclosed in Note 1, Summary of Significant Accounting Policies. Total investment gains and losses in 2022 included \$1.526 billion of net losses from the recognition of fair value changes of equity securities still held that prior to 2018 would have been reported in other comprehensive income (OCI) instead of net income. Change in unrealized gains or losses for fixed-maturity securities are included as a component of OCI. Accounting requirements for the allowance for credit losses and impairment charges for write-downs of impaired securities in the fixed-maturity portfolio are disclosed in Item 8, Note 1, Summary of Significant Accounting Policies. The factors we consider when evaluating impairments are also discussed in Critical Accounting Estimates, Asset Impairment.

The timing of gains or losses from sales can have a material effect on results in any given period. However, such gains or losses usually have little, if any, effect on total shareholders' equity because most equity and fixed-maturity investments are carried at fair value.

As appropriate, we buy, hold or sell both fixed-maturity and equity securities on an ongoing basis to help achieve our portfolio objectives. We generally purchase fixed-maturity securities with the intention to hold until maturity. If they no longer meet our investment criteria, they are divested. Sales of fixed-maturity securities are usually due to a change in credit fundamentals. The pretax total investment loss in 2022 was due to unfavorable changes in fair values of equity securities and a net unfavorable change in unrealized gains or losses for fixed-maturity securities, even though we continue to hold the securities. In 2021 and 2020, pretax total investment gains were largely due to favorable changes in fair values of equity securities, as shown in the table below. Additional information about investment gains or losses is included in Item 8, Note 2 of the Consolidated Financial Statements.

The table below summarizes total investment gains and losses, before taxes.

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Investment gains and losses			
Equity securities:			
Investment gains and losses on securities sold, net	\$ 16	\$ 4	\$ 79
Unrealized gains and losses on securities still held, net	(1,526)	2,278	841
Subtotal	(1,510)	2,282	920
Fixed-maturity securities:			
Gross realized gains	6	36	16
Gross realized losses	(4)	(5)	(3)
Write-down of impaired securities	(5)	(1)	(78)
Subtotal	(3)	30	(65)
Other	46	97	10
Total investment gains and losses reported in net income	\$ (1,467)	\$ 2,409	\$ 865
Change in unrealized investment gains and losses reported in OCI			
Fixed-maturity securities	(1,639)	(234)	436
Total	\$ (3,106)	\$ 2,175	\$ 1,301

Write-downs of impaired securities from the investment portfolio by the asset classes we described in Item 1, Our Segments, Investments Segment, are summarized below:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Taxable fixed maturities:			
Impairment amount	\$ 5	\$ —	\$ 77
New amortized cost	\$ 8	\$ —	\$ 78
Percent to total amortized cost owned	— %	— %	1 %
Number of impaired securities written down	2	—	13
Percent to number of securities owned	— %	— %	2 %
Tax-exempt fixed maturities:			
Impairment amount	\$ —	\$ 1	\$ 1
New amortized cost	\$ 1	\$ 2	\$ 1
Percent to total amortized cost owned	— %	— %	— %
Number of impaired securities written down	1	5	1
Percent to number of securities owned	— %	— %	— %
Totals:			
Impairment amount	\$ 5	\$ 1	\$ 78
New amortized cost	\$ 9	\$ 2	\$ 79
Percent to total amortized cost owned	— %	— %	1 %
Number of impaired securities written down	3	5	14
Percent to number of securities owned	— %	— %	1 %

Write-downs of impaired securities from the investment portfolio by industry are summarized as follows:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Fixed maturities:			
Energy	\$ —	\$ —	\$ 62
Real estate	5	—	13
Consumer goods	—	—	1
Municipal	—	1	1
Technology & Electronics	—	—	1
Total fixed maturities	\$ 5	\$ 1	\$ 78

Investments Outlook

During 2022, the Federal Reserve aggressively increased rates to combat inflation that proved to be more than transitory. Combined with credit spreads widening, these pressures helped to drive down bond values while equity market volatility spiked, and stock values correspondingly dropped over the course of the year.

We took advantage of the increase in interest rates during 2022 but maintained a balanced approach to our allocation between bonds and stocks. We will continue our focus on near-term income generation with an eye to long-term book value growth within the framework of our corporate liquidity objectives as well as adherence to insurance department regulations and consideration of rating agency commentary. We discuss our portfolio strategies in Item 1, Our Segments, Investments Segment.

Other

Total revenues in 2022 and 2021 for our Other operations increased, compared with the respective prior-year periods, primarily due to earned premiums of Cincinnati Re and Cincinnati Global. Other also includes noninvestment operations of the parent company and its commercial leasing and financial services subsidiary, CFC Investment Company. Total expenses for Other also increased in 2022 and 2021, primarily due to losses and loss expenses and underwriting expenses from Cincinnati Re and Cincinnati Global.

Other loss in the table below represents losses before income taxes. For each year shown, Other loss was largely driven by interest expense from debt of the parent company. Net results for the combination of Cincinnati Re and Cincinnati Global were an underwriting profit of approximately \$36 million in 2022 and underwriting losses of approximately \$8 million in 2021 and \$26 million in 2020. The underwriting loss in 2020 included \$31 million of pandemic-related incurred losses and expenses, as discussed in Corporate Financial Highlights of Management's Discussion and Analysis.

Cincinnati Re represented 72% of Other earned premiums in 2022 and 36% of underwriting profit. Earned premiums in 2022, compared with 2021, grew 33%. The mix of 2022 earned premiums for Cincinnati Re by primary type of insured exposures included 53% for casualty, 33% for property and 14% for specialty. Cincinnati Re in total generated an underwriting profit of \$13 million in 2022 and \$3 million in 2020 and had an underwriting loss of \$32 million in 2021.

Cincinnati Global represented 28% of Other earned premiums in 2022 and 64% of underwriting profit. In 2022, earned premiums rose 16%, compared with 2021. Underwriting profit for Cincinnati Global was \$23 million in 2022 and \$24 million in 2021, following an underwriting loss of \$29 million in 2020.

(Dollars in millions)	Years ended December 31,			2022-2021	2021-2020
	2022	2021	2020	Change %	Change %
Interest and fees on loans and leases	\$ 7	\$ 7	\$ 6	0	17
Earned premiums	726	570	427	27	33
Other revenues	3	3	4	0	(25)
Total revenues	736	580	437	27	33
Interest expense	53	53	54	0	(2)
Loss and loss expenses	474	414	325	14	27
Underwriting expenses	216	164	128	32	28
Operating expenses	23	20	20	15	0
Total expenses	766	651	527	18	24
Other loss	<u>\$ (30)</u>	<u>\$ (71)</u>	<u>\$ (90)</u>	58	21

Taxes

We had a \$207 million income tax benefit in 2022, compared with income tax expense of \$724 million in 2021 and \$283 million in 2020. The corporate effective tax rate for 2022 was 29.9% compared with 19.7% in 2021 and 18.9% in 2020.

The changes in our effective tax rate between periods were primarily due to large changes in our net investment gains and losses included in income for the periods, and changes in underwriting income and investment income.

Historically, we have pursued a strategy of investing some portion of cash flow in tax-advantaged, fixed-maturity securities and some in equity securities to minimize our overall tax liability and maximize after-tax earnings. See Item 1, Our Segments, Fixed-Maturity Securities Investments, for further discussion on municipal bond purchases in our fixed-maturity investment portfolio.

For tax years after 2017, for our property casualty insurance subsidiaries, approximately 75% of interest from tax-advantaged, fixed-maturity investments and approximately 40% of dividends from qualified equities are exempt from federal tax after applying proration. For our noninsurance companies, the dividend received deduction exempts 50% of dividends from qualified equities. Our life insurance company does not own tax-advantaged, fixed-maturity investments or equities subject to the dividend received deduction.

Our effective tax rate reconciliation is found in Item 8, Note 11 of the Consolidated Financial Statements.

Liquidity and Capital Resources

We seek to maintain prudent levels of liquidity and financial strength for the protection of our policyholders, creditors and shareholders. We manage liquidity at two levels to meet the short- and long-term cash requirements of business obligations and growth needs. The first is the liquidity of the parent company. The second is the liquidity of our lead insurance subsidiary. Management of liquidity at both levels is essential because each has different funding needs and sources, and each is subject to certain regulatory guidelines and requirements.

The COVID-19 pandemic did not have a significant effect on our cash flows. In addition to our historically positive operating cash flow to meet the needs of operations, we have the ability to slow investing activities if such need arises or to sell a portion of our high-quality, liquid investment portfolio. We also have additional capacity to borrow on our revolving short-term line of credit, as described further below.

Parent Company Liquidity

At December 31, 2022, the parent company had \$4.177 billion in cash and marketable securities, providing strong liquidity to fund cash outflows, as needed. The payment of dividends to shareholders is largely based upon receiving subsidiary dividends. Alternatively, we could sell investments or use our line of credit to support the dividend payment.

The parent company's primary sources of cash inflows are dividends from our lead insurance subsidiary, investment income and sale proceeds from investments. The parent company's cash outflows are primarily interest and principal payments on long- and short-term debt, dividends to shareholders, common stock repurchases, deposits at Lloyd's and general operating expenses. The table below shows a summary, by the direct cash flow method, of the major sources and uses of cash flow of the parent company.

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Sources of liquidity:			
Subsidiary dividends received	\$ 729	\$ 598	\$ 550
Investment income received	99	90	81
Proceeds from stock options exercised	10	13	7
Return of funds on deposit from Lloyd's	—	117	5
Uses of liquidity:			
Shareholders' dividend payments	\$ 423	\$ 395	\$ 375
Share repurchases	410	144	261
Debt interest payments	53	52	54
Payment of funds on deposit at Lloyd's	—	14	47

We expect 2023 parent company sources of cash flow to be similar to 2022. Use of liquidity for share repurchases are discretionary depending on cash availability and capital management decisions. In addition, the subsidiaries have the discretion to pay dividends to the parent company. Cincinnati Global is required to maintain certain capital funding requirements with Lloyd's, which the parent company may deposit on its behalf. These funding requirements may fluctuate based on the profitability of Cincinnati Global and syndicate solvency capital requirements as set by Lloyd's, which may result in return of funds on deposit. Other than share repurchases and funding at Lloyd's, the majority of expenditures for the parent company have been consistent during the last three years, and we expect future expenditures to remain stable.

Insurance Subsidiary Liquidity

The parent company's lead insurance subsidiary largely represents the operations of the property casualty segments. The primary sources of cash inflows are collection of premiums, investment income, maturity of fixed-income securities and sale proceeds from investments. Property casualty insurance premiums generally are received before losses are paid under the policies purchased with those premiums. Cash outflows are primarily loss and loss expenses, commissions, salaries, taxes, operating expenses and investment purchases. Over the three-year period ended December 31, 2022, premium receipts and investment income have been more than sufficient to pay claims and operating expenses. Excess cash flows were partially used to pay dividends to the parent company. We are not aware of any known trends that would materially change historical cash flow results, other than fluctuations in catastrophe claims and other large losses, either individually or in aggregate.

The table below shows a summary of operating cash flow for property casualty insurance (direct method). Historically, annual variation in operating cash flow has been largely related to changes in amounts of catastrophe losses.

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Premiums collected	\$ 7,054	\$ 6,309	\$ 5,828
Loss and loss expenses paid	(3,687)	(3,094)	(3,183)
Commissions and other underwriting expenses paid	(2,132)	(1,842)	(1,785)
Cash flow from underwriting	1,235	1,373	860
Investment income received	529	497	456
Cash flow from operations	<u>\$ 1,764</u>	<u>\$ 1,870</u>	<u>\$ 1,316</u>

Other Sources of Liquidity

Cash in excess of operating requirements is invested in fixed-maturity and equity securities. Cash generated from investment income provides an important investment contribution to cash flow and liquidity. The sale of investments could provide an additional source of liquidity at either the parent company or insurance subsidiary level, if required. In addition to possible sales of investments, proceeds of calls or maturities of fixed-maturity securities also can provide liquidity. During the five-year period beginning in 2023, fair value of \$4.543 billion, or 37.4%, of our fixed-maturity portfolio is scheduled to mature. At December 31, 2022, we had \$9.454 billion of common stock securities, with \$3.974 billion, or 42.0%, held by the parent company.

Financial resources of the parent company also could be made available to our insurance subsidiaries, if circumstances required it. This flexibility would include our ability to access the capital markets and short-term bank borrowings. We generally have minimized our reliance on debt financing, although we may use the line of credit to fund short-term cash needs.

Long-Term Debt

We provide details of our three long-term notes in Item 8, Note 8 of the Consolidated Financial Statements. None of the notes are encumbered by rating triggers. The total principal amount of our long-term debt at December 31, 2022, was \$793 million and included:

- \$28 million aggregate principal amount of 6.900% senior debentures due 2028.
- \$391 million aggregate principal amount of 6.920% senior debentures due 2028.
- \$374 million aggregate principal amount of 6.125% senior debentures due 2034.

The company's senior debt is rated investment grade by four independent rating agencies. None of the rating agencies made changes to our debt ratings in 2022. At February 22, 2023, our debt ratings from the rating agencies were: a from A.M. Best, A- from Fitch, A3 from Moody's and BBB+ from S&P.

Note Payable

At December 31, 2022, we had a \$300 million line of credit with commercial banks, with \$50 million and \$54 million borrowed at December 31, 2022 and 2021, respectively. That unsecured revolving line of credit has an accordion feature giving us the option to double the \$300 million amount, under the same terms and conditions. Terms and conditions of the agreement include a debt-to-total capital maximum of 35% and the agreement has no net worth covenant. It was due to expire on February 4, 2024, with the option of two one-year extensions. We exercised both one-year options to extend the term of the line of credit by two additional years to February 4, 2026.

At year-end 2022, we were in compliance with all covenants under the credit agreement and believe we will remain in compliance. The credit agreement provides alternative interest charges based on the type of borrowing and our debt rating. The interest rate charged is adjusted LIBOR plus an applicable margin. The agreement contains successor LIBOR rate language, which will require an amendment to reflect the new replacement rate. We intend to amend our line of credit agreement during the first half of 2023 to replace the LIBOR rate with the Secured Overnight Financing Rate (SOFR) plus a credit spread adjustment.

Capital Resources

Capital resources, consisting of shareholders' equity and total debt, represent our overall financial strength to support current obligations and growth in our insurance businesses. At December 31, 2022, we had total capital of \$11.370 billion. Shareholders' equity was \$10.531 billion, a decrease of \$2.574 billion, or 20%, from the prior year. Our total debt was \$839 million, down \$4 million from a year ago. We seek to maintain a solid financial position and provide capital flexibility by keeping our ratio of debt to total capital moderate. At year-end 2022, the ratio was 7.4%, compared with 6.0% at year-end 2021.

At times we enter into letter of credit agreements to support our Cincinnati Re and Cincinnati Global operations. We have an unsecured letter of credit agreement to provide a portion of the capital needed to support Cincinnati Global's obligations at Lloyd's. The amount of this unsecured letter of credit agreement was \$94 million with no amounts drawn at December 31, 2022.

At the discretion of the board of directors, the company can return capital directly to shareholders as discussed below.

- Dividends to shareholders – The ability of our company to continue paying cash dividends is subject to factors the board of directors deems relevant. While the board and management believe there is merit to sustaining the company's long record of dividend increases, our first priority is the company's financial strength. Over the past 10 years, the company has paid an average of 35% of net income as dividends. Through 2022, the board had increased our cash dividend for 62 consecutive years. The board's decision in January 2023 to increase the dividend demonstrated confidence in the company's strong capital, liquidity, financial flexibility and initiatives to grow earnings.
- Common stock repurchase – Generally, our board believes that share repurchases can help fulfill our commitment to enhancing shareholder value. Consequently, the board has authorized the repurchase of outstanding shares, giving management discretion to purchase shares at reasonable prices in light of circumstances at the time of purchase. Our approach has been to hold capital adequate to support future growth of our insurance operations and repurchase shares at management's discretion. Repurchases are intended to offset the issuance of shares through equity compensation plans, primarily due to vesting of service-based restricted stock units of equity awards granted in the past. The amount of future repurchases may be more, or less, than the past, depending

on circumstances and discretion exercised by management. Our corporate Code of Conduct restricts repurchases during certain time periods. The details of the repurchase authorizations and activity are described in Item 5, Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Obligations

We pay obligations to customers, suppliers and associates in the normal course of our business operations. Some are contractual obligations that define the amount, circumstances and/or timing of payments. We have other commitments for business expenditures; such as \$384 million we expect to fund for our private equity and real estate investments, however, the amount, circumstances and/or timing of our other commitments are not dictated by contractual arrangements.

Contractual Obligations

At December 31, 2022, we estimated our significant future contractual obligations as follows:

(Dollars in millions)	Year	Years	There-	
Payment due by period	2023	2024-2027	after	Total
Gross property casualty loss and loss expense payments	\$ 3,052	\$ 4,294	\$ 990	\$ 8,336
Gross life policyholder obligations	79	360	5,744	6,183
Long-term debt	—	—	793	793
Interest on long-term debt	52	208	163	423
Profit-sharing commissions	189	—	—	189
Other liabilities	140	84	3	227
Total	<u>\$ 3,512</u>	<u>\$ 4,946</u>	<u>\$ 7,693</u>	<u>\$ 16,151</u>

Liquidity and Capital Resources Outlook

At December 31, 2022, we had \$1.264 billion in cash and cash equivalents. During 2023, our lead insurance subsidiary may pay \$651 million in dividends to our parent company without regulatory approval. That strong liquidity and our consistent cash flows give us the flexibility to meet current obligations and commitments while building value by prudently investing where we see potential for both current income and long-term return. Our cash and cash equivalents provide adequate financial cushion when short-term operating results do not meet our objectives.

A long-term perspective governs our liquidity and capital resources decisions, with the goal of benefiting our policyholders, agents, shareholders and associates over time. Our underwriting philosophy and initiatives can drive performance to achieve our underwriting profitability target of a GAAP combined ratio over any five-year period that consistently averages within the range of 95% to 100%. Our GAAP combined ratio averaged 94.9% over the five-year period 2018 through 2022, resulting in strong underwriting profits.

In any year, we consider the most likely source of pressure on liquidity would be an unusually high level of catastrophe loss payments within a short period of time. There could be additional obligations for our insurance operations due to increasing severity or frequency of noncatastrophe claims. To address the risk of unusually large insurance loss obligations, including catastrophe events, we maintain property casualty reinsurance contracts with highly rated reinsurers, as discussed under 2023 Reinsurance Ceded Programs. We also monitor the financial condition of our reinsurers because their insolvency could jeopardize a portion of our \$640 million reinsurance recoverable asset at December 31, 2022. Parent-company liquidity could also be constrained by Ohio regulatory requirements that restrict the dividends insurance subsidiaries can pay.

Economic weakness also has the potential to affect our liquidity and capital resources in a number of different ways, including delinquent payments from agencies, defaults on interest payments by fixed-maturity holdings in our portfolio, dividend reductions by holdings in our equity portfolio or declines in the market value of holdings in our portfolio.

LIBOR Discontinuation

We have identified our population of contracts that contain a LIBOR reference and determined our exposure to be minimal. Our identification is primarily related to our line of credit, investments in floating rate securities and late fee provisions. We will continue to work with counterparties to determine alternative rates for each contract identified prior to June 30, 2023.

Off-Balance-Sheet Arrangements

We do not use any special-purpose financing vehicles or have any undisclosed off-balance-sheet arrangements (as that term is defined in applicable SEC rules) that are reasonably likely to have a current or future material effect on the company's financial condition, results of operation, liquidity, capital expenditures or capital resources.

Property Casualty Loss and Loss Expense Obligations and Reserves

Our estimate of future gross property casualty loss and loss expense payments of \$8.336 billion is lower than loss and loss expense reserves of \$8.400 billion reported on our balance sheet at December 31, 2022. The \$64 million difference is due to certain life and health loss reserves. Reserving practices are discussed in Critical Accounting Estimates, Property Casualty Insurance Loss and Loss Expense Reserves.

For the business lines in the commercial and personal lines insurance segments, and in total for the excess and surplus lines insurance segment and for other parts of our property casualty insurance operations, the following table details gross reserves among case, IBNR and loss expense reserves, net of salvage and subrogation. The \$1.107 billion increase in total gross reserves was primarily due to a \$245 million increase in case loss reserves and a \$771 million increase in IBNR loss reserves. The increase in total gross reserves included \$326 million for our commercial casualty line of business, \$219 million for Cincinnati Re and \$176 million for excess and surplus lines.

Property Casualty Gross Loss and Loss Expense Reserves

(Dollars in millions)

	Loss reserves		Loss expense reserves	Total gross reserves	Percent of total
	Case reserves	IBNR reserves			
At December 31, 2022					
Commercial lines insurance:					
Commercial casualty	\$ 1,163	\$ 938	\$ 722	\$ 2,823	33.9 %
Commercial property	301	256	71	628	7.5
Commercial auto	449	258	131	838	10.1
Workers' compensation	434	521	85	1,040	12.4
Other commercial	98	16	125	239	2.9
Subtotal	2,445	1,989	1,134	5,568	66.8
Personal lines insurance:					
Personal auto	222	64	64	350	4.2
Homeowner	189	138	49	376	4.5
Other personal	99	86	5	190	2.3
Subtotal	510	288	118	916	11.0
Excess and surplus lines	302	256	195	753	9.0
Cincinnati Re	156	639	6	801	9.6
Cincinnati Global	163	132	3	298	3.6
Total	\$ 3,576	\$ 3,304	\$ 1,456	\$ 8,336	100.0 %
At December 31, 2021					
Commercial lines insurance:					
Commercial casualty	\$ 1,059	\$ 734	\$ 704	\$ 2,497	34.5 %
Commercial property	357	82	62	501	6.9
Commercial auto	419	220	124	763	10.6
Workers' compensation	442	503	85	1,030	14.3
Other commercial	91	9	116	216	3.0
Subtotal	2,368	1,548	1,091	5,007	69.3
Personal lines insurance:					
Personal auto	211	53	60	324	4.5
Homeowner	168	102	44	314	4.3
Other personal	84	87	5	176	2.4
Subtotal	463	242	109	814	11.2
Excess and surplus lines	233	186	158	577	8.0
Cincinnati Re	117	460	5	582	8.1
Cincinnati Global	150	97	2	249	3.4
Total	\$ 3,331	\$ 2,533	\$ 1,365	\$ 7,229	100.0 %

Asbestos and Environmental Loss and Loss Expense Reserves

We carried \$92 million of net loss and loss expense reserves for asbestos and environmental claims at year-end 2022, compared with \$88 million at year-end 2021. The asbestos and environmental claims amounts for each respective year constituted less than 2.0% of total net loss and loss expense reserves at these year-end dates.

We believe our exposure to asbestos and environmental claims is limited, largely because our reinsurance retention was \$500,000 or below prior to 1987. We also were predominantly a personal lines company in the 1960s and 1970s, when asbestos and pollution exclusions were not widely used by commercial lines insurers. During the 1980s and early 1990s, commercial lines grew as a percentage of our overall business and our exposure to asbestos and environmental claims grew accordingly. Over that period, we endorsed to or included in most policies an asbestos and environmental exclusion.

Additionally, since 2002, we have revised policy terms where permitted by state regulation to limit our exposure to mold claims prospectively and further reduce our exposure to other environmental claims generally. Finally, we have not engaged in any mergers or acquisitions through which such a liability could have been assumed. We continue to monitor our claims for evidence of material exposure to other mass tort classes, but we have found no such credible evidence to date.

Reserving data for asbestos and environmental claims has characteristics that limit the usefulness of the methods and models used to analyze loss and loss expense reserves for other claims. Specifically, asbestos and environmental loss and loss expenses for different accident years do not emerge independently of one another as loss development and Bornhuetter-Ferguson methods assume. In addition, asbestos and environmental loss and loss expense data available to date did not reflect a well-defined tail, greatly complicating the identification of an appropriate probabilistic trend family model. At year-end 2022, we used a weighted average of a paid survival ratio method and report year method to estimate reserves for IBNR asbestos and environmental claims. Our exposure to such claims is limited; we believe a weighted average of both methods produces a sufficient level of reserves.

Gross Property Casualty Loss and Loss Expense Payments

While we believe that historical performance of property casualty and life loss payment patterns is a reasonable source for projecting future claim payments, there is inherent uncertainty in this estimate of contractual obligations. We believe that we could meet our obligations under a significant and unexpected change in the timing of these payments because of the liquidity of our invested assets, strong financial position and access to lines of credit.

Our estimates of gross property casualty loss and loss expense payments do not include reinsurance receivables or ceded losses. As discussed in 2023 Reinsurance Ceded Programs, we purchase reinsurance to mitigate our property casualty risk exposure. Ceded property casualty reinsurance unpaid receivables of \$405 million at year-end 2022 are an offset to our gross property casualty loss and loss expense obligations. Our reinsurance program mitigates the liquidity risk of a single large loss or an unexpected rise in claim severity or frequency due to a catastrophic event. Reinsurance does not relieve us of our obligation to pay covered claims. The financial strength of our reinsurers is important because our ability to recover losses under our reinsurance agreements depends on the financial viability of the reinsurers.

We direct our associates to settle claims and pay losses as quickly as is practical, and we made \$3.687 billion of net claim payments during 2022. At year-end 2022, total net property casualty reserves of \$7.931 billion reflected \$3.397 billion in unpaid amounts on reported claims (case reserves), \$1.442 billion in loss expense reserves and \$3.092 billion in estimates of claims that were incurred but had not yet been reported (IBNR). The specific amounts and timing of obligations related to case reserves and associated loss expenses are not set contractually. The amounts and timing of obligations for IBNR claims and related loss expenses are unknown. We discuss our methods of establishing loss and loss expense reserves and our belief that reserves are adequate in Critical Accounting Estimates, Property Casualty Insurance Loss and Loss Expense Reserves.

The historical pattern of using premium receipts for the payment of loss and loss expenses has enabled us to extend slightly the maturities of our investment portfolio beyond the estimated settlement date of the loss reserves. The effective duration of our consolidated property casualty fixed-maturity portfolio was 4.8 years at year-end 2022. By contrast, the duration of our loss and loss expense reserves was approximately 3.0 years. We believe this difference in duration does not affect our ability to meet current obligations because cash flow from operations is sufficient to meet these obligations. In addition, investment holdings could be sold, if necessary, to meet higher than anticipated loss and loss expenses.

Range of Reasonable Reserves

The company established a reasonably likely range for net loss and loss expense reserves of \$7.393 billion to \$8.099 billion at year-end 2022, with the company carrying net reserves of \$7.931 billion. The range was \$6.446 billion to \$7.014 billion at year-end 2021, with the company carrying net reserves of \$6.902 billion. Our loss and loss expense reserves are not discounted for the time-value of money, but we have reduced the reserves by an estimate of the amount of salvage and subrogation payments we expect to recover.

The low point of each year's range corresponds to approximately one standard error below each year's mean reserve estimate, while the high point corresponds to approximately one standard error above each year's mean reserve estimate. We discussed management's reasons for basing reasonably likely reserve ranges on standard errors in Critical Accounting Estimates, Reserve Estimate Variability.

The ranges reflect our assessment of the most likely unpaid loss and loss expenses at year-end 2022 and 2021. However, actual unpaid loss and loss expenses could nonetheless fall outside of the indicated ranges.

Management's best estimate of total loss and loss expense reserves as of year-end 2022 and 2021 was consistent with the corresponding actuarial best estimate.

Property Casualty Insurance Development of Estimated Reserves by Accident Year

The following table shows net reserve changes at year-end 2022, 2021 and 2020 by property casualty segment and accident year:

(Dollars in millions)	Commercial lines	Personal lines	E&S lines	Other	Totals
As of December 31, 2022					
2021 accident year	\$ (59)	\$ (52)	\$ 14	\$ 1	\$ (96)
2020 accident year	(85)	(15)	(14)	(10)	(124)
2019 accident year	64	4	(2)	6	72
2018 accident year	26	2	(1)	(5)	22
2017 accident year	(5)	—	(2)	(3)	(10)
2016 accident year	(10)	(2)	(2)	(1)	(15)
2015 and prior accident years	(7)	2	(2)	(1)	(8)
(Favorable)/unfavorable	<u>\$ (76)</u>	<u>\$ (61)</u>	<u>\$ (9)</u>	<u>\$ (13)</u>	<u>\$ (159)</u>
As of December 31, 2021					
2020 accident year	\$ (215)	\$ (52)	\$ —	\$ (16)	\$ (283)
2019 accident year	(58)	—	7	(5)	(56)
2018 accident year	(42)	5	—	(7)	(44)
2017 accident year	(19)	4	1	2	(12)
2016 accident year	(11)	(1)	1	(6)	(17)
2015 accident year	—	(1)	(1)	—	(2)
2014 and prior accident years	(8)	(5)	(1)	—	(14)
(Favorable)/unfavorable	<u>\$ (353)</u>	<u>\$ (50)</u>	<u>\$ 7</u>	<u>\$ (32)</u>	<u>\$ (428)</u>
As of December 31, 2020					
2019 accident year	\$ (51)	\$ (22)	\$ (2)	\$ (5)	\$ (80)
2018 accident year	(44)	(3)	—	(9)	(56)
2017 accident year	(4)	3	(1)	(6)	(8)
2016 accident year	4	1	8	(5)	8
2015 accident year	(10)	—	1	—	(9)
2014 accident year	4	1	1	—	6
2013 and prior accident years	6	2	—	—	8
(Favorable)/unfavorable	<u>\$ (95)</u>	<u>\$ (18)</u>	<u>\$ 7</u>	<u>\$ (25)</u>	<u>\$ (131)</u>

Overall favorable development for consolidated property casualty reserves of \$159 million in 2022 illustrated the potential for revisions inherent in estimating reserves, especially for long-tail lines such as commercial casualty and workers' compensation. As noted in Critical Accounting Estimates, Key Assumptions Loss Reserving, our models predict that actual loss and loss expense emergence will differ from projections, and we do not attempt to monitor or identify such normal variations. The table in Property Casualty Loss and Loss Expense Obligations and Reserves shows reserves by segment and lines of business and the components of gross reserves among case, IBNR and loss expense reserves.

Favorable reserve development was \$63 million for our workers' compensation line of business, \$54 million for our homeowner line of business and \$44 million for our commercial property line of business, together accounting for approximately 101% of the overall total. Unfavorable, or adverse, reserve development included \$25 million for our commercial casualty line of business and \$23 million for our commercial auto line of business. Drivers of significant reserve development typically reflect loss emergence on known claims that was more favorable or less favorable than previously anticipated for various lines of business and are discussed below.

- Commercial casualty – During 2022, we experienced unfavorable development on prior accident years in aggregate, driven by commercial umbrella coverages. Loss emergence for commercial umbrella claims rose significantly, much more than anticipated. Due to increased uncertainty regarding ultimate losses, we intend to remain prudent in reserving for estimated ultimate losses until longer-term loss cost trends become more clear. During 2021, commercial casualty net reserve development was favorable. We continue to watch this line so we can detect changes in trends as they reoccur.
- Workers' compensation – We continue to see favorable reserve development, for all prior accident years in aggregate. During 2022 and 2021, the trend for estimated payments to be made in future calendar years was stable compared with 2020. However, we continue to monitor this line closely, as a sudden increase in trend for future payments has a highly leveraged effect.
- Commercial auto – Ultimate losses developed unfavorably during calendar year 2022, for all prior accident years in aggregate. We believe inflation in 2022 and reduced driving during the pandemic caused deviations from historical loss patterns. Due to increased uncertainty regarding ultimate losses, we intend to remain prudent in reserving for estimated ultimate losses until longer-term loss cost trends become more clear. Net reserve development was favorable in 2021 following several years of unfavorable reserve development related to increased business activity after a period of economic recession. As the economy recovered, we believe we were slow to recognize some of the higher loss cost effects in reserve estimates for at least part of that period.
- Commercial property and homeowner – Loss emergence was less than anticipated for both 2022 and 2021. Nearly half of the favorable reserve development for both years related to natural catastrophe events with inherently variable loss patterns.

In consideration of the data's credibility, we analyze commercial and personal umbrella liability reserves together and then allocate the derived total reserve estimate to the commercial and personal coverages. Consequently, the umbrella factors that contributed to commercial lines reserve development also contributed to personal lines reserve development through the other personal line, of which personal umbrella coverages are a part.

For the excess and surplus lines insurance segment, the table showing reserves by segment and lines of business in Property Casualty Loss and Loss Expense Obligations and Reserves, shows the components of gross reserves among case, IBNR and loss expense reserves. Total gross reserves increased \$176 million from year-end 2021, largely due to the increase in premiums and exposures for this segment, as we discussed in Excess and Surplus Lines Insurance Results. Net reserve development was a favorable \$9 million during 2022, following adverse development of \$7 million for both 2021 and 2020. Adverse reserve development during 2021 and 2020 reflected more prudent reserving, as claims on average remained open longer than previously expected. Favorable reserve development following a period of adverse development, or vice-versa, shown in the table above, illustrates the potential for revisions inherent in estimating reserves.

Life Insurance Policyholder Obligations and Reserves

Gross Life Insurance Policyholder Obligations

Our estimates of life, annuity and disability policyholder obligations reflect future estimated cash payments to be made to policyholders for future policy benefits, policyholders' account balances and separate account liabilities. These estimates include death and disability income claims, policy surrenders, policy maturities, annuity payments, minimum guarantees on separate account products, commissions and premium taxes offset by expected future deposits and premiums on in-force contracts. Further, these estimates are based on mortality, morbidity and lapse assumptions reflective of our recent experience and expectations of future payment obligations.

Our estimates of gross life, annuity and disability obligations do not reflect net recoveries from reinsurance agreements. Ceded life reinsurance receivables were \$197 million at year-end 2022. As discussed in 2023 Reinsurance Programs, we purchase reinsurance to mitigate our life insurance risk exposure. At year-end 2022, ceded death benefits represented approximately 33.0% of our total gross policy face amounts in force.

These estimated cash outflows are undiscounted with respect to interest. As a result, the sum of the cash outflows for all years of \$6.183 billion (total of life insurance obligations) exceeds the liabilities recorded in life policy and investment contract reserves and separate accounts for future policy benefits and claims of \$3.949 billion (total of life insurance policy reserves and separate account policy reserves). A significant portion of the difference can be attributed to the time value of money and changes in mortality, morbidity and lapse assumptions between the date the liabilities were originally established and the current date.

We have made significant assumptions to determine the estimated undiscounted cash flows of these policies and contracts that include mortality, morbidity, timing of claims, future lapse rates and interest crediting rates. Due to the significance of the assumptions used, the amounts presented could materially differ from actual results.

Life Insurance Reserves

Gross life policy reserves were \$3.059 billion at year-end 2022, compared with \$3.014 billion at year-end 2021. The increase was primarily due to reserves for traditional life insurance contracts. We establish reserves for traditional life insurance policies based on expected expenses, mortality, morbidity, withdrawal rates and investment yields, including a provision for uncertainty. Once these assumptions are established, they generally are maintained throughout the lives of the contracts. We use both our own experience and industry experience adjusted for historical trends in arriving at our assumptions for expected mortality and morbidity. We use our own experience and historical trends for setting our assumptions for expected withdrawal rates and expenses. We base our assumptions for expected investment income on our own experience adjusted for current and future expected economic conditions.

We establish reserves for our universal life, deferred annuity and investment contracts equal to the cumulative account balances, which include premium deposits plus credited interest less charges and withdrawals. Some of our universal life insurance policies contain no-lapse guarantee provisions. For these policies, we establish a reserve in addition to the account balance based on expected no-lapse guarantee benefits and expected policy assessments.

We regularly review our life insurance business to ensure that any deferred acquisition cost associated with the business is recoverable and that our actuarial liabilities (life insurance segment reserves) make sufficient provision for future benefits and related expenses.

2023 Reinsurance Ceded Programs

A single large loss or an unexpected rise in claims severity or frequency due to a catastrophic event is a risk to the company's liquidity and financial strength. To control such losses, we limit marketing property casualty insurance in specific geographic areas and monitor our exposure in certain coastal regions. Examples of this include limiting our earthquake writings in the New Madrid region or leveraging more restrictive terms and conditions through the use of our excess and surplus company in higher risk areas for wildfire or hurricane.

Loss exposures in these areas have been identified as a major contributor to our catastrophe probable maximum loss estimates. The table below includes probable maximum loss estimates for the peril of hurricane.

These estimates were subsequently reduced, in large part due to less exposure from southeastern U.S. homeowner policies. We also continually review aggregate exposures to large disasters and purchase reinsurance protection to cover these exposures. For business other than Cincinnati Re and Cincinnati Global, we use the Risk Management Solutions (RMS) and Applied Insurance Research (AIR) models to evaluate exposures to a once-in-a-100-year and a once-in-a-250-year event to help determine appropriate reinsurance coverage programs. In conjunction with these activities, we also continue to evaluate information provided by our reinsurance broker. Examples include deterministic modeling of probable maximum loss contribution from growth in new geographic territories.

To help determine appropriate reinsurance coverage for hurricane, earthquake and tornado/hail exposures, for business other than Cincinnati Re and Cincinnati Global we use the RMS and AIR models to estimate the probable maximum loss from a single event or multiple events occurring in a one-year period. The models are proprietary in nature, and the vendors that provide them periodically update the models, sometimes resulting in significant changes to their estimate of probable maximum loss. As of the end of 2022, both models indicated that a hurricane event represents our largest amount of exposure to losses. The table below summarizes estimated probabilities and the corresponding probable maximum loss from a single hurricane event occurring in a one-year period, for business other than Cincinnati Re and Cincinnati Global, and indicates the effect of such losses on consolidated shareholders' equity at December 31, 2022. Net losses are net of reinsurance, estimated reinstatement premiums and income taxes, assuming a 21% federal tax rate, and assume our 2023 reinsurance programs apply.

(Dollars in millions)	RMS Model			AIR Model		
	Gross losses	Net losses	Percent of total equity	Gross losses	Net losses	Percent of total equity
Probability at December 31, 2022						
2.0% (1 in 50 year event)	\$ 488	\$ 247	2.3 %	\$ 512	\$ 249	2.4 %
1.0% (1 in 100 year event)	776	326	3.1	785	319	3.0
0.4% (1 in 250 year event)	1,306	619	5.9	1,271	563	5.3
0.2% (1 in 500 year event)	1,893	1,056	10.0	1,750	900	8.5

The modeled losses according to RMS in the table are based on its RiskLink version 22 catastrophe model and use a long-term storm catalog methodology. The modeled losses according to AIR in the table are based on its AIR Touchstone® version 10.0 catastrophe model and use a long-term methodology. The AIR and RMS storm catalogs include decades of documented weather events used in simulations for probable maximum loss projections.

Reinsurance mitigates the risk of highly uncertain exposures and limits the maximum net loss that can arise from large risks or risks concentrated in areas of exposure. Management's decisions about the appropriate structure of reinsurance protection and level of risk retention are affected by various factors, including changes in our underwriting practices, capacity to retain risks and reinsurance market conditions.

Reinsurance does not relieve us of our obligation to pay covered claims. The financial strength of our reinsurers is important because our ability to recover for losses covered under any reinsurance agreement depends on the financial viability of the reinsurer.

For 2023, the primary participants on our standard market property and casualty per-risk and per-occurrence reinsurance ceded programs include Hannover Ruck SE, Swiss Reinsurance America Corporation, Munich Reinsurance America, Partner Reinsurance Company of the U.S. and Transatlantic Reinsurance Company, all of which had A.M. Best insurer financial strength ratings of A (Excellent) or better as of December 31, 2022. Our property catastrophe program is subscribed through a broker by reinsurers from the United States, Bermuda, London and the European markets. The largest participant in our property catastrophe program, representing approximately 19% of total participation, is the Lloyd's of London placement that features numerous syndicates. Some of the other reinsurers with large participation in the program include Lancashire Insurance Company Limited, Partner Reinsurance Company Ltd., Mapfre Re and R&V Versicherung AG.

The following table shows our five largest property casualty reinsurance receivable amounts by reinsurer at year-end 2022 and 2021. Michigan Catastrophic Claims Association is a mandatory nonprofit association which runs a reinsurance program funded by an annual premium assessment per vehicle. This assessment covers Michigan's automobile no-fault policies, which provide unlimited lifetime coverage for medical expenses resulting from auto accidents. The A.M. Best insurer financial strength ratings as of the end of the two most recent years are also shown for each of those reinsurers that have an applicable rating.

(Dollars in millions)	2022		2021	
	Total receivable	A.M. Best Rating	Total receivable	A.M. Best Rating
Name of reinsurer				
Munich Reinsurance America	\$ 41	A+	\$ 52	A+
Michigan Catastrophic Claims Association	37	NA	39	NA
Swiss Reinsurance America Corporation	34	A+	41	A+
General Reinsurance Corporation	32	A++	30	A++
Hartford Steam Boiler Inspection & Insurance Company	30	A++	23	A++

Primary components of the 2023 property and casualty reinsurance program are summarized below. The premium estimates below occurred near the beginning of each respective year, when direct written premiums that were subject to applicable reinsurance treaties were also estimated.

- Property per risk treaty – The primary purpose of the property treaty is to provide capacity up to \$50 million, adequate for the majority of the risks we write. It also includes protection for extra-contractual liability coverage losses. We retain the first \$10 million of each loss. Losses between \$10 million and \$50 million are reinsured at 100%. The 2023 ceded premium estimate was \$54 million, compared with \$41 million for the 2022 estimate.
- Property excess treaty – We purchased a property reinsurance treaty that provides an additional \$50 million in protection for certain property losses. This treaty, along with the property per risk treaty, provides a total of \$100 million of protection. The 2023 ceded premium estimate was approximately \$6 million, compared with \$4 million for the 2022 estimate.
- Casualty per occurrence treaty – The casualty treaty provides capacity up to \$25 million. Similar to the property treaty, it provides sufficient capacity to cover the vast majority of casualty accounts we insure and also includes protection for extra-contractual liability coverage losses. We retain the first \$10 million of each loss. Losses between \$10 million and \$25 million are reinsured at 100%. The 2023 ceded premium estimate was \$19 million, compared with \$15 million for the 2022 estimate.
- Casualty excess treaty – We purchase a casualty reinsurance treaty that provides an additional \$45 million in protection for certain casualty losses. This treaty, along with the casualty per occurrence treaty, provides a total of \$70 million of protection for workers' compensation, extra-contractual liability coverage and clash coverage losses, which would apply when a single occurrence involves multiple policyholders of The Cincinnati Insurance Companies or multiple coverages for one insured. The 2023 ceded premium estimate was approximately \$4 million, compared with \$3 million for the 2022 estimate.
- Property catastrophe treaty – To protect against catastrophic events such as wind and hail, winter storms, hurricanes or earthquakes, we purchased property catastrophe reinsurance with a limit up to \$1.100 billion. This treaty and our property and casualty treaties contain exclusions for communicable disease and cyber losses. This treaty also contains an exclusion for terrorism which varies in level of coverage across the program. Aggregation of losses into one event, sometimes referred to as an hours clause, varies by peril. For example, the general provision in this treaty is 168 hours, but it is 120 hours for a wind event and 96 hours for a riot or civil commotion event. Losses from the same occurrence can be aggregated into one limit over the hour period applicable to the peril causing the loss and applied to the treaty towards recovery. The treaty contains one reinstatement provision. The 2023 ceded premium estimate was \$49 million, compared with \$47 million for the 2022 estimate. We retain the first \$200 million of any loss, and a share of losses up to \$1.100 billion. The percentage share we retain for each layer of coverage is indicated below:
 - 58.1% of losses between \$200 million and \$300 million
 - 17.7% of losses between \$300 million and \$400 million
 - 14.4% of losses between \$400 million and \$600 million
 - 41.1% of losses between \$600 million and \$800 million
 - 47.6% of losses between \$800 million and \$900 million
 - 53.8% of losses between \$900 million and \$1.100 billion

After reinsurance, our maximum exposure to a catastrophic event that causes \$1.100 billion in covered losses in 2023 would be \$542 million, compared with retention of \$499 million in 2022 for an event causing \$1.100 billion in covered losses. The largest catastrophe loss event in our history occurred during 2011 from a May 20-27 storm system that included a tornado in Joplin, Missouri, and that also included significant losses from hail in the Dayton, Ohio, area. Our losses from that storm were estimated to be \$226 million, before reinsurance, based on updated estimates as of December 31, 2017. The second largest catastrophe loss event in our history occurred during 2022 from a December 21-31 winter storm system that affected many states in the U.S. Our losses from that storm were estimated to be \$206 million, before reinsurance, as of December 31, 2022.

Individual risks with insured values in excess of \$100 million, as identified in the policy, are handled through a different reinsurance mechanism. We typically reinsure property coverage for individual risks with insured values between \$100 million and \$250 million under an automatic facultative agreement. For risks with property values exceeding \$250 million, we negotiate the purchase of facultative coverage on an individual certificate basis. For casualty coverage on individual risks with limits exceeding \$25 million, facultative reinsurance coverage is

placed on an individual certificate basis. For risks with casualty limits that are between \$25 million and \$27 million, we sometimes forego facultative reinsurance and retain an additional \$2 million of loss exposure.

Terrorism coverage at various levels has been secured in most of our reinsurance agreements. The broadest coverage for this peril is found in the property and casualty working treaties, the property per risk treaty and the casualty per occurrence treaty, which provide coverage for commercial and personal risks. A portion of our property catastrophe treaty provides terrorism coverage for personal risks, and coverage for commercial risks with total insured values of \$25 million or less. For insured values between \$10 million and \$100 million, there also may be coverage in the property working treaty.

A form of reinsurance is also provided through The Terrorism Risk Insurance Act of 2002 (TRIA). TRIA was originally signed into law on November 26, 2002, and extended on several occasions. The most recent extension was signed into law on December 20, 2019, and is scheduled to expire on December 31, 2027. TRIA provides a temporary federal backstop for losses related to the writing of the terrorism peril in property casualty insurance policies. Under regulations promulgated under this statute, insurers are required to offer terrorism coverage for certain lines of property casualty insurance, including property, commercial multi-peril, fire, ocean marine, inland marine, liability, aircraft and workers' compensation. In the event of a terrorism event defined by TRIA, the federal government would reimburse terrorism claim payments subject to the insurer's deductible. The deductible is calculated as a percentage of subject written premiums for the preceding calendar year. Our deductible in 2022 was \$658 million (20% of 2021 subject premiums), and we estimate it is \$708 million (20% of 2022 subject premiums) for 2023.

Reinsurance protection for the company's surety business is covered under a separate treaty with many of the same reinsurers that write the property casualty working treaties.

Reinsurance protection for cyber coverage is also through a separate treaty. We offer cyber insurance as an affirmative coverage option on various insurance policies written on a direct basis and subsequently cede all of the related cyber insurance premiums to a reinsurer, therefore transferring substantially all of that risk.

Effective in May 2022, to provide more capacity to retain risks, we added a quota share reinsurance arrangement for our personal lines risks in California that we insure through excess and surplus lines policies. Approximately 27% of the risk is reinsured through ceded premiums.

Effective June 1, 2022, we restructured our reinsurance program for Cincinnati Re only, providing retrocession coverages with various triggers and unique features. That program included property catastrophe excess of loss coverage with a total available aggregate limit of \$30 million in excess of \$100 million per loss.

Reinsurance protection for Cincinnati Global's business is also provided through separate treaties.

The Cincinnati Specialty Underwriters Insurance Company has separate property and casualty reinsurance treaties for 2023 through its parent, The Cincinnati Insurance Company. Primary components of the treaties include:

- Property per risk treaty – The property treaty provides limits up to \$5 million, which is adequate capacity for the risk profile we insure. It also includes protection for extra-contractual liability coverage losses. Cincinnati Specialty Underwriters retains the first \$1 million of any policy loss. Losses between \$1 million and \$5 million are reinsured at 100% by The Cincinnati Insurance Company.
- Casualty treaties – The casualty treaty is written on an excess of loss basis and provide limits up to \$6 million, which is adequate capacity for the risk profile we insure. A second treaty layer of \$5 million excess of \$6 million is written to provide coverage for extra contractual obligations or clash exposures. The maximum retention for any one casualty loss is \$2 million by Cincinnati Specialty Underwriters. Losses on a per occurrence basis between \$2 million and \$6 million and extra contractual and clash losses between \$6 million and \$11 million are reinsured at 100% by The Cincinnati Insurance Company.
- Basket retention – Cincinnati Specialty Underwriters has purchased this coverage to limit their retention to \$1 million in the event that the same occurrence results in both a property and a casualty loss.
- Property catastrophe treaty – As a subsidiary of The Cincinnati Insurance Company, Cincinnati Specialty Underwriters is a named insured under our corporate property catastrophe treaty. All terms and conditions of this reinsurance coverage apply to policies underwritten by Cincinnati Specialty Underwriters.

For property risks with limits exceeding \$5 million or casualty risks with limits exceeding \$6 million, underwriters place facultative reinsurance coverage on an individual certificate basis.

Cincinnati Life, our life insurance subsidiary, purchases reinsurance under separate treaties with many of the same reinsurers that write the property casualty working treaties. Our corporate retention is \$1 million on a single life. For most of our core term life insurance line of business, we retain no more than a \$500,000 exposure on a single policy, ceding the balance using excess over retention mortality coverage, and retaining the policy reserve. Because of the conservative nature of statutory reserving principles, retaining the policy reserve unduly depresses our statutory earnings and requires a large commitment of our capital. Effective November 1, 2015, we increased our retention to \$1 million for issue ages up to 61 years on new term life insurance sales. For issue ages 61 years or older, our retention remains \$500,000. For term life insurance business written prior to 2005, we retain 10% to 25% of each term policy, not to exceed \$500,000, ceding the balance of mortality risk and policy reserve.

We also have catastrophe reinsurance coverage on our life insurance operations that reimburses us for covered net losses in excess of \$14 million. Our recovery is capped at \$75 million for losses per occurrence.

The following table shows our five largest life reinsurance receivable amounts by reinsurer at year-end 2022 and 2021. Insurer financial strength ratings are also shown.

(Dollars in millions)							
Name of reinsurer	2022			2021			Rating
	Total receivable	Rating agency	Rating	Total receivable	Rating Agency	Rating	
Swiss Re Life & Health America, Inc.	\$ 64	A.M. Best	A+	\$ 66	A.M. Best	A+	
General Re Life Corporation	46	A.M. Best	A++	44	A.M. Best	A++	
Lincoln National Life Insurance Company	28	A.M. Best	A	30	A.M. Best	A+	
Employers Reassurance Corporation	15	S&P	BBB+	15	S&P	BBB+	
Hannover Life Reassurance Co. of America	13	A.M. Best	A+	5	A.M. Best	A+	

Safe Harbor Statement

This is our “Safe Harbor” statement under the Private Securities Litigation Reform Act of 1995. Our business is subject to certain risks and uncertainties that may cause actual results to differ materially from those suggested by the forward-looking statements in this report. Some of those risks and uncertainties are discussed in Item 1A, Risk Factors.

Factors that could cause or contribute to such differences include, but are not limited to:

- Effects of the COVID-19 pandemic that could affect results for reasons such as:
 - Securities market disruption or volatility and related effects such as decreased economic activity and continued supply chain disruptions that affect our investment portfolio and book value
 - An unusually high level of claims in our insurance or reinsurance operations that increase litigation-related expenses
 - An unusually high level of insurance losses, including risk of legislation or court decisions extending business interruption insurance in commercial property coverage forms to cover claims for pure economic loss related to the COVID-19 pandemic
 - Decreased premium revenue and cash flow from disruption to our distribution channel of independent agents, consumer self-isolation, travel limitations, business restrictions and decreased economic activity
 - Inability of our workforce, agencies or vendors to perform necessary business functions
- Ongoing developments concerning business interruption insurance claims and litigation related to the COVID-19 pandemic that affect our estimates of losses and loss adjustment expenses or our ability to reasonably estimate such losses, such as:
 - The continuing duration of the pandemic and governmental actions to limit the spread of the virus that may produce additional economic losses
 - The number of policyholders that will ultimately submit claims or file lawsuits
 - The lack of submitted proofs of loss for allegedly covered claims
 - Judicial rulings in similar litigation involving other companies in the insurance industry
 - Differences in state laws and developing case law
 - Litigation trends, including varying legal theories advanced by policyholders
 - Whether and to what degree any class of policyholders may be certified
 - The inherent unpredictability of litigation
- Unusually high levels of catastrophe losses due to risk concentrations, changes in weather patterns (whether as a result of global climate change or otherwise), environmental events, war or political unrest, terrorism incidents, cyberattacks, civil unrest or other causes
- Increased frequency and/or severity of claims or development of claims that are unforeseen at the time of policy issuance, due to inflationary trends or other causes
- Inadequate estimates or assumptions, or reliance on third-party data used for critical accounting estimates
- Declines in overall stock market values negatively affecting our equity portfolio and book value
- Prolonged low interest rate environment or other factors that limit our ability to generate growth in investment income or interest rate fluctuations that result in declining values of fixed-maturity investments, including declines in accounts in which we hold bank-owned life insurance contract assets
- Domestic and global events, such as Russia's invasion of Ukraine, resulting in capital market or credit market uncertainty, followed by prolonged periods of economic instability or recession, that lead to:
 - Significant or prolonged decline in the fair value of a particular security or group of securities and impairment of the asset(s)
 - Significant decline in investment income due to reduced or eliminated dividend payouts from a particular security or group of securities
 - Significant rise in losses from surety or director and officer policies written for financial institutions or other insured entities
- Our inability to manage Cincinnati Global or other subsidiaries to produce related business opportunities and growth prospects for our ongoing operations
- Recession, prolonged elevated inflation or other economic conditions resulting in lower demand for insurance products or increased payment delinquencies

- Ineffective information technology systems or discontinuing to develop and implement improvements in technology may impact our success and profitability
- Difficulties with technology or data security breaches, including cyberattacks, that could negatively affect our or our agents' ability to conduct business; disrupt our relationships with agents, policyholders and others; cause reputational damage, mitigation expenses and data loss and expose us to liability under federal and state laws
- Difficulties with our operations and technology that may negatively impact our ability to conduct business, including cloud-based data information storage, data security, cyberattacks, remote working capabilities, and/or outsourcing relationships and third-party operations and data security
- Disruption of the insurance market caused by technology innovations such as driverless cars that could decrease consumer demand for insurance products
- Delays, inadequate data developed internally or from third parties, or performance inadequacies from ongoing development and implementation of underwriting and pricing methods, including telematics and other usage-based insurance methods, or technology projects and enhancements expected to increase our pricing accuracy, underwriting profit and competitiveness
- Intense competition, and the impact of innovation, technological change and changing customer preferences on the insurance industry and the markets in which we operate, could harm our ability to maintain or increase our business volumes and profitability
- Changing consumer insurance-buying habits and consolidation of independent insurance agencies could alter our competitive advantages
- Inability to obtain adequate ceded reinsurance on acceptable terms, amount of reinsurance coverage purchased, financial strength of reinsurers and the potential for nonpayment or delay in payment by reinsurers
- Inability to defer policy acquisition costs for any business segment if pricing and loss trends would lead management to conclude that segment could not achieve sustainable profitability
- Inability of our subsidiaries to pay dividends consistent with current or past levels
- Events or conditions that could weaken or harm our relationships with our independent agencies and hamper opportunities to add new agencies, resulting in limitations on our opportunities for growth, such as:
 - Downgrades of our financial strength ratings
 - Concerns that doing business with us is too difficult
 - Perceptions that our level of service, particularly claims service, is no longer a distinguishing characteristic in the marketplace
 - Inability or unwillingness to nimbly develop and introduce coverage product updates and innovations that our competitors offer and consumers expect to find in the marketplace
- Actions of insurance departments, state attorneys general or other regulatory agencies, including a change to a federal system of regulation from a state-based system, that:
 - Impose new obligations on us that increase our expenses or change the assumptions underlying our critical accounting estimates
 - Place the insurance industry under greater regulatory scrutiny or result in new statutes, rules and regulations
 - Restrict our ability to exit or reduce writings of unprofitable coverages or lines of business
 - Add assessments for guaranty funds, other insurance-related assessments or mandatory reinsurance arrangements; or that impair our ability to recover such assessments through future surcharges or other rate changes
 - Increase our provision for federal income taxes due to changes in tax law
 - Increase our other expenses
 - Limit our ability to set fair, adequate and reasonable rates
 - Place us at a disadvantage in the marketplace
 - Restrict our ability to execute our business model, including the way we compensate agents
- Adverse outcomes from litigation or administrative proceedings, including effects of social inflation on the size of litigation awards
- Events or actions, including unauthorized intentional circumvention of controls, that reduce our future ability to maintain effective internal control over financial reporting under the Sarbanes-Oxley Act of 2002

- Unforeseen departure of certain executive officers or other key employees due to retirement, health or other causes that could interrupt progress toward important strategic goals or diminish the effectiveness of certain longstanding relationships with insurance agents and others
- Our inability, or the inability of our independent agents, to attract and retain personnel in a competitive labor market, impacting the customer experience and altering our competitive advantages
- Events, such as an epidemic, natural catastrophe or terrorism, that could hamper our ability to assemble our workforce at our headquarters location or work effectively in a remote environment

Further, our insurance businesses are subject to the effects of changing social, global, economic and regulatory environments. Public and regulatory initiatives have included efforts to adversely influence and restrict premium rates, restrict the ability to cancel policies, impose underwriting standards and expand overall regulation. We also are subject to public and regulatory initiatives that can affect the market value for our common stock, such as measures affecting corporate financial reporting and governance. The ultimate changes and eventual effects, if any, of these initiatives are uncertain.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk

Introduction

Market risk is the potential for a decrease in securities value resulting from broad yet uncontrollable forces such as inflation, economic growth, interest rates, world political conditions or other widespread unpredictable events. It is comprised of many individual risks that, when combined, create a macroeconomic impact. The company accepts and manages risks in its investment portfolio as part of the means of achieving portfolio objectives. Some of the risks are:

- Political – the potential for a decrease in value due to the real or perceived impact of governmental policies or conditions
- Regulatory – the potential for a decrease in value due to the impact of legislative proposals or changes in laws or regulations
- Economic – the potential for a decrease in value due to changes in general economic factors (recession, inflation, deflation, etc.)
- Revaluation – the potential for a decrease in value due to a change in relative value (change in market multiple) of the market brought on by general economic factors
- Interest-rate – the potential for a decrease in value of a security or portfolio due to its sensitivity to changes (increases or decreases) in the general level of interest rates

Company-specific risk is the potential for a particular issuer to experience a decline in value due to the impact of sector or market risk on the holding or because of issues specific to the firm:

- Fraud – the potential for a negative impact on an issuer's performance due to actual or alleged illegal or improper activity of individuals it employs
- Credit – the potential for deterioration in an issuer's financial profile due to specific company issues, problems it faces in the course of its operations or industry-related issues
- Default – the possibility that an issuer will not make a required payment (interest payment or return of principal) on its debt. Generally this occurs after its financial profile has deteriorated (credit risk) and it no longer has the means to make its payments

The investment committee of the board of directors monitors the investment risk management process primarily through its executive oversight of our investment activities. We take an active approach to managing market and other investment risks, including the accountabilities and controls over these activities. Actively managing these market risks is integral to our operations and could require us to change the character of future investments purchased or sold or require us to shift the existing asset portfolios to manage exposure to market risk within acceptable ranges.

Sector risk is the potential for a negative impact on a particular industry due to its sensitivity to factors that make up market risk. Market risk affects general supply or demand factors for an industry and affects companies within that industry to varying degrees.

Risks associated with the asset classes described in Item 1, Our Segments, Investments Segment, can be summarized as follows (H – high, A – average, L – low):

	Taxable fixed maturities	Tax-exempt fixed maturities	Common equities	Nonredeemable preferred equities
Political	A	H	A	A
Regulatory	A	A	A	A
Economic	A	A	H	A
Revaluation	H	H	H	H
Interest rate	H	H	A	H
Fraud	A	L	A	A
Credit	A	L	A	A
Default	A	L	A	A

Fixed-Maturity Securities Investments

For investment-grade corporate bonds, the inverse relationship between interest rates and bond prices leads to falling bond values during periods of increasing interest rates. We address this risk by attempting to construct a generally laddered maturity schedule that allows us to reinvest cash flows at prevailing rates. Although the potential for a worsening financial condition, and ultimately default, does exist with investment-grade corporate bonds, we address this risk by performing credit analysis and monitoring as well as maintaining a diverse portfolio of holdings.

The primary risk related to high-yield corporate bonds is credit risk. A weak financial profile can lead to rating downgrades from the credit rating agencies, which can put further downward pressure on bond prices. Interest rate risk, while significant, is less of a factor with high-yield corporate bonds, as valuation is related more directly to underlying operating performance than to general interest rates. This puts more emphasis on the financial results achieved by the issuer rather than on general economic trends or statistics within the marketplace. We address this concern by analyzing issuer- and industry-specific financial results and by closely monitoring holdings within this asset class.

The primary risks related to tax-exempt bonds are interest rate risk and political risk associated with the specific economic environment within the political boundaries of the issuing municipal entity. We address these concerns by focusing on municipalities' general-obligation debt and on essential-service bonds. Essential-service bonds derive a revenue stream from municipal services that are vital to the people living in the area (water service, sewer service, etc.). Another risk related to tax-exempt bonds is regulatory risk or the potential for legislative changes that would negate the benefit of owning tax-exempt bonds. We monitor regulatory activity for situations that may negatively affect current holdings and our ongoing strategy for investing in these securities.

The final, less significant risk is our exposure to credit risk for a portion of the tax-exempt portfolio that has support from corporate entities. Examples are bonds insured by corporate bond insurers or bonds with interest payments made by a corporate entity through a municipal conduit or authority. Our decisions regarding these investments primarily consider the underlying municipal situation. The existence of third-party insurance is intended to reduce risk in the event of default. In circumstances in which the municipality is unable to meet its obligations, risk would be increased if the insuring entity were experiencing financial duress. Because of our diverse exposure and selection of higher-rated entities with strong financial profiles, we do not believe this is a material concern as we discuss in Item 1, Our Segments, Investments Segment.

Interest Rate Sensitivity Analysis

Because of our strong shareholders' equity, long-term investment horizon and ability to hold most fixed-maturity investments to maturity, we believe the company is well-positioned if interest rates were to rise. A higher rate environment would provide the opportunity to invest cash flow in higher-yielding securities, while reducing the likelihood of untimely redemptions of currently callable securities. While higher interest rates would be expected to increase the number of fixed-maturity holdings fair valued below 100% of amortized cost, we believe lower fixed-maturity security values due solely to interest rate changes would not signal a decline in credit quality.

Our dynamic financial planning model uses analytical tools to assess market risks. As part of this model, the effective duration of the fixed-maturity portfolio is continually monitored by our investment department to evaluate the theoretical impact of interest rate movements.

The table below summarizes the effect of hypothetical changes in interest rates on fair value of our fixed-maturity portfolio.

(Dollars in millions)	Effect from interest rate change in basis points				
	-200	-100	—	100	200
At December 31, 2022	\$ 13,300	\$ 12,714	\$ 12,132	\$ 11,548	\$ 10,974
At December 31, 2021	\$ 14,327	\$ 13,656	\$ 13,022	\$ 12,399	\$ 11,768

The effective duration of the fixed-maturity portfolio was 4.7 years at year-end 2022, down from 4.8 years at year-end 2021. A 100-basis-point movement in interest rates would result in an approximately 4.8% change in the fair value of the fixed-maturity portfolio. Generally speaking, the higher a bond is rated, the more directly correlated movements in its fair value are to changes in the general level of interest rates, exclusive of call features. The fair values of average- to lower-rated corporate bonds are additionally influenced by the expansion or contraction of credit spreads.

In the dynamic financial planning model, the selected interest rate change of 100 to 200 basis points represents our views of a shift in rates that is quite possible over a one-year period. The rates modeled should not be considered a prediction of future events as interest rates may be much more volatile in the future. The analysis is not intended to provide a precise forecast of the effect of changes in rates on our results or financial condition, nor does it take into account any actions that we might take to reduce exposure to such risks.

Equity Securities Investments

Our equity portfolio is subject to a variety of risk factors encompassed under the umbrella of market risk. General economic swings influence the performance of the underlying industries and companies within those industries. Industry- and company-specific risks also have the potential to substantially affect the value of our portfolio. Our investment guidelines help address these risks by diversifying the portfolio and establishing parameters to help manage exposures.

The table below summarizes the effect of hypothetical changes in market prices on fair value of our equity portfolio.

(Dollars in millions)	Effect from market price change in percent						
	-30%	-20%	-10%	—	10%	20%	30%
At December 31, 2022	\$ 6,889	\$ 7,873	\$ 8,857	\$ 9,841	\$ 10,825	\$ 11,809	\$ 12,793
At December 31, 2021	\$ 7,921	\$ 9,052	\$ 10,184	\$ 11,315	\$ 12,447	\$ 13,578	\$ 14,710

Our equity holdings represented \$9.841 billion in fair value. No holding had a fair value greater than 6.4% of our \$9.454 billion publicly traded common stock portfolio. We had 42 holdings among nine different sectors each with a fair value greater than \$100 million. See Item 1, Our Segments, Investments Segment and Item 8, Note 2 of the Consolidated Financial Statements, for additional details on our holdings.

The primary risks related to preferred stocks are similar to those related to investment-grade corporate bonds. Rising interest rates adversely affect market values due to the normal inverse relationship between interest rates and bond prices. Credit risk exists due to the subordinate position of preferred stocks in the capital structure. We minimize this risk by primarily purchasing investment-grade preferred stocks of issuers with a strong history of paying a common stock dividend.

Application of Asset Impairment Policy

As discussed in Item 7, Critical Accounting Estimates, Asset Impairment, our fixed-maturity investment portfolio is evaluated for credit-related impairments. The company's asset impairment committee monitors a number of significant factors for indications of investments with a fair value below the carrying amount that may not be recoverable. The application of our impairment policy resulted in write-downs of impaired securities intended to be sold that reduced our income before income taxes by \$5 million in 2022, \$1 million in 2021 and \$78 million in 2020. Impairments are discussed in Item 7, Investments Results.

We expect the number of fixed-maturity securities with a fair value below 100% of amortized cost to fluctuate as interest rates rise or fall and credit spreads expand or contract due to prevailing economic conditions. Further, cost or amortized cost for some securities have been revised due to impairment charges recognized in prior periods. At year-end 2022, 3,272 of the 4,521 fixed-maturity securities we owned had a fair value below 100% of cost or amortized cost compared with 278 of the 4,329 at year-end 2021 and 128 of the 4,128 at year-end 2020.

The 3,272 holdings fair valued below cost or amortized cost at year-end 2022 represented 78.8% of our fixed-maturity portfolio and \$908 million in unrealized losses.

- 2,080 of these holdings were fair valued between 90% and 100% of cost or amortized cost. The value of these securities fluctuates primarily because of changes in interest rates. The fair value of these 2,080 securities was \$6.907 billion at year-end 2022, and they accounted for \$267 million in unrealized losses.
- 1,143 of these holdings were fair valued between 70% and 90% of cost or amortized cost. The fair value of these holdings was \$2.592 billion, and they accounted for \$611 million in unrealized losses.
- 49 of these holdings had a fair value below 70% of cost or amortized cost. The fair value of these holdings was \$61 million, and they accounted for \$30 million in unrealized losses.

The following table summarizes the length of time securities in the investment portfolio have been in a continuous unrealized loss position.

(Dollars in millions)	Less than 12 months		12 months or more		Total	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
At December 31, 2022						
Fixed-maturity securities:						
Corporate	\$ 5,651	\$ 412	\$ 661	\$ 168	\$ 6,312	\$ 580
States, municipalities and political subdivisions	2,600	274	77	29	2,677	303
Commercial mortgage-backed	215	13	14	3	229	16
United States government	146	3	41	2	187	5
Government-sponsored enterprises	123	3	3	—	126	3
Foreign government	25	1	4	—	29	1
Total	<u>\$ 8,760</u>	<u>\$ 706</u>	<u>\$ 800</u>	<u>\$ 202</u>	<u>\$ 9,560</u>	<u>\$ 908</u>
At December 31, 2021						
Fixed-maturity securities:						
Corporate	\$ 861	\$ 13	\$ 15	\$ —	\$ 876	\$ 13
States, municipalities and political subdivisions	105	2	2	1	107	3
Commercial mortgage-backed	10	—	11	—	21	—
United States government	48	—	—	—	48	—
Government-sponsored enterprises	7	—	—	—	7	—
Foreign government	16	—	—	—	16	—
Total	<u>\$ 1,047</u>	<u>\$ 15</u>	<u>\$ 28</u>	<u>\$ 1</u>	<u>\$ 1,075</u>	<u>\$ 16</u>

The following table summarizes and classifies securities based on fair values relative to amortized cost:

(Dollars in millions)

	Number of issues	Amortized cost	Fair value	Gross unrealized gain (loss)	Gross investment income
At December 31, 2022					
Taxable fixed maturities:					
Fair valued below 70% of amortized cost	34	\$ 64	\$ 43	\$ (21)	\$ 2
Fair valued at 70% to less than 100% of amortized cost	1,998	8,310	7,570	(740)	331
Fair valued at 100% and above of amortized cost	172	646	686	40	33
Investment income on securities sold in current year	—	—	—	—	20
Total	2,204	9,020	8,299	(721)	386
Tax-exempt fixed maturities:					
Fair valued below 70% of amortized cost	15	27	18	(9)	1
Fair valued at 70% to less than 100% of amortized cost	1,225	2,067	1,929	(138)	61
Fair valued at 100% and above of amortized cost	1,077	1,865	1,886	21	59
Investment income on securities sold in current year	—	—	—	—	3
Total	2,317	3,959	3,833	(126)	124
Fixed-maturities summary:					
Fair valued below 70% of amortized cost	49	91	61	(30)	3
Fair valued at 70% to less than 100% of amortized cost	3,223	10,377	9,499	(878)	392
Fair valued at 100% and above of amortized cost	1,249	2,511	2,572	61	92
Investment income on securities sold in current year	—	—	—	—	23
Total	4,521	\$ 12,979	\$ 12,132	\$ (847)	\$ 510
At December 31, 2021					
Fixed-maturities summary:					
Fair valued below 70% of amortized cost	—	\$ —	\$ —	\$ —	\$ —
Fair valued at 70% to less than 100% of amortized cost	278	1,091	1,075	(16)	17
Fair valued at 100% and above of amortized cost	4,051	11,139	11,947	808	427
Investment income on securities sold in current year	—	—	—	—	33
Total	4,329	\$ 12,230	\$ 13,022	\$ 792	\$ 477

ITEM 8. Financial Statements and Supplementary Data

Responsibility for Financial Statements

We have prepared the consolidated financial statements of Cincinnati Financial Corporation and our subsidiaries for the year ended December 31, 2022, in accordance with accounting principles generally accepted in the United States of America (GAAP).

We are responsible for the integrity and objectivity of these financial statements. The amounts, presented on an accrual basis, reflect our best estimates and judgment. These statements are consistent in all material aspects with other financial information in the Annual Report on Form 10-K. Our accounting system and related internal controls are designed to assure that our books and records accurately reflect the company's transactions in accordance with established policies and procedures as implemented by qualified personnel.

Our board of directors has established an audit committee of independent outside directors. We believe these directors are free from any relationships that could interfere with their independent judgment as audit committee members.

The audit committee meets periodically with management, our independent registered public accounting firm and our internal auditors to discuss how each is handling its respective responsibilities. The audit committee reports its findings to the board of directors. The audit committee recommends to the board the annual appointment of the independent registered public accounting firm. The audit committee reviews with this firm the scope of the audit assignment and the adequacy of internal controls and procedures.

Deloitte & Touche LLP, our independent registered public accounting firm, audited the consolidated financial statements of Cincinnati Financial Corporation and subsidiaries for the year ended December 31, 2022. Deloitte & Touche LLP met with our audit committee to discuss the results of its audit. They have the opportunity to discuss the adequacy of internal controls and the quality of financial reporting without management present.

Management's Annual Report on Internal Control Over Financial Reporting

The management of Cincinnati Financial Corporation and its subsidiaries is responsible for establishing and maintaining adequate internal controls, designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America (GAAP). The company's internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP and that receipts and expenditures of the company are being made only in accordance with authorizations of management and the directors of the company; and
- 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.

All internal control systems, no matter how well designed, have inherent limitations, including the possibility of human error and the circumvention of overriding controls. Accordingly, even effective internal control can provide only reasonable assurance with respect to financial statement preparation and presentation. Further, because of changes in conditions, the effectiveness of internal control may vary over time.

The company's management assessed the effectiveness of the company's internal control over financial reporting as of December 31, 2022, as required by Section 404 of the Sarbanes Oxley Act of 2002. Management's assessment was based on the criteria established in the Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and was designed to provide reasonable assurance that the company maintained effective internal control over financial reporting as of December 31, 2022. The assessment led management to conclude that, as of December 31, 2022, the company's internal control over financial reporting was effective based on those criteria.

The company's independent registered public accounting firm has issued an audit report on our internal control over financial reporting as of December 31, 2022.

/S/ Steven J. Johnston
Steven J. Johnston, FCAS, MAAA, CFA, CERA
Chairman and Chief Executive Officer

/S/ Michael J. Sewell
Michael J. Sewell, CPA
Chief Financial Officer, Executive Vice President and Treasurer
(Principal Accounting Officer)

February 23, 2023

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Cincinnati Financial Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Cincinnati Financial Corporation and subsidiaries (the "Company") as of December 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and the schedules listed in the Index at Item 15(c) (collectively referred to as the "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 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 COSO.

Basis for Opinions

The Company's management is responsible for these 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 the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on these financial statements and an opinion 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 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 financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the 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 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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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 Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the 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.

Property and Casualty Insurance Loss and Loss Expense Reserves - Refer to Note 4 to the financial statements.

Critical Audit Matter Description

The Company's property and casualty insurance loss and loss expense reserves for long-tailed lines of business, such as workers' compensation, commercial casualty and certain other liability lines (referred to as "loss and loss expense reserves"), are determined by the Company using actuarial methods, models, assumptions, and judgment to estimate the reserves ("actuarial estimates") required to pay for and settle all outstanding insured claims, including incurred but not reported (IBNR) claims, as of the financial statement date. The actuarial estimates of loss and loss expense reserves are subject to review and adjustment by Company management.

Loss and loss expense reserves are inherently uncertain as to timing and amount and the recorded loss and loss expense reserves may vary materially from the actual ultimate cost of claims. Given the subjectivity in estimating ultimate loss and loss expense reserves, due to uncertainties concerning the future emergence of loss and loss expenses, inflation trends, and the judicial environment, among other factors, auditing loss and loss expense reserves involved an especially high degree of auditor judgment, including the need to involve our actuarial specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to loss and loss expense reserves included the following, among others:

- We tested the effectiveness of controls related to loss and loss expense reserves, including those over the review of actuarial methods, models, assumptions and judgments used, and management's review of the estimates.
- We tested the underlying data that served as the basis for the actuarial analyses, including historical claims data, to test the reasonableness of key inputs to the actuarial estimates.
- With the assistance of our actuarial specialists, we used the Company's claims data and other inputs, to develop a range of independent estimates for the loss and loss expense reserves. We used these independent estimates to assess the reasonableness of the Company's reserves by comparing our estimates to the Company's recorded loss and loss expense reserves.
- We compared the Company's prior year estimates of expected incurred losses to actual experience during the current year to identify potential bias in the determination of loss and loss expense reserves.

/S/ DELOITTE & TOUCHE LLP
Cincinnati, Ohio
February 23, 2023

We have served as the Company's auditor since 1980.

Cincinnati Financial Corporation and Subsidiaries

Consolidated Balance Sheets

(Dollars in millions, except per share data)		December 31, 2022	December 31, 2021
Assets			
Investments			
Fixed maturities, at fair value (amortized cost: 2022—\$12,979; 2021—\$12,230)	\$	12,132	\$ 13,022
Equity securities, at fair value (cost: 2022—\$4,294; 2021—\$4,121)		9,841	11,315
Other invested assets		452	329
Total investments		22,425	24,666
Cash and cash equivalents		1,264	1,139
Investment income receivable		160	144
Finance receivable		92	98
Premiums receivable		2,322	2,053
Reinsurance recoverable		640	570
Prepaid reinsurance premiums		79	78
Deferred policy acquisition costs		1,014	905
Land, building and equipment, net, for company use (accumulated depreciation: 2022—\$322; 2021—\$303)		202	205
Other assets		646	570
Separate accounts		892	959
Total assets	\$	29,736	\$ 31,387
Liabilities			
Insurance reserves			
Loss and loss expense reserves	\$	8,400	\$ 7,305
Life policy and investment contract reserves		3,059	3,014
Unearned premiums		3,689	3,271
Other liabilities		1,229	1,092
Deferred income tax		1,045	1,744
Note payable		50	54
Long-term debt and lease obligations		841	843
Separate accounts		892	959
Total liabilities		19,205	18,282
Commitments and contingent liabilities (Note 16)			
Shareholders' Equity			
Common stock, par value—\$2 per share; (authorized: 2022 and 2021—500 million shares; issued: 2022 and 2021—198.3 million shares)		397	397
Paid-in capital		1,392	1,356
Retained earnings		11,702	12,625
Accumulated other comprehensive income		(636)	648
Treasury stock, at cost (2022—41.2 million shares and 2021—38.0 million shares)		(2,324)	(1,921)
Total shareholders' equity		10,531	13,105
Total liabilities and shareholders' equity	\$	29,736	\$ 31,387

Accompanying Notes are an integral part of these Consolidated Financial Statements.

Cincinnati Financial Corporation and Subsidiaries

Consolidated Statements of Income

(Dollars in millions, except per share data)

	Years ended December 31,		
	2022	2021	2020
Revenues			
Earned premiums	\$ 7,219	\$ 6,482	\$ 5,980
Investment income, net of expenses	781	714	670
Investment gains and losses, net	(1,467)	2,409	865
Fee revenues	14	15	11
Other revenues	10	10	10
Total revenues	<u>6,557</u>	<u>9,630</u>	<u>7,536</u>
Benefits and Expenses			
Insurance losses and contract holders' benefits	5,012	3,936	4,134
Underwriting, acquisition and insurance expenses	2,162	1,951	1,829
Interest expense	53	53	54
Other operating expenses	23	20	20
Total benefits and expenses	<u>7,250</u>	<u>5,960</u>	<u>6,037</u>
Income (Loss) Before Income Taxes	<u>(693)</u>	<u>3,670</u>	<u>1,499</u>
Provision (Benefit) for Income Taxes			
Current	148	247	147
Deferred	(355)	477	136
Total provision (benefit) for income taxes	<u>(207)</u>	<u>724</u>	<u>283</u>
Net Income (Loss)	<u>\$ (486)</u>	<u>\$ 2,946</u>	<u>\$ 1,216</u>
Per Common Share			
Net income (loss)—basic	\$ (3.06)	\$ 18.29	\$ 7.55
Net income (loss)—diluted	(3.06)	18.10	7.49

Accompanying Notes are an integral part of these Consolidated Financial Statements.

Cincinnati Financial Corporation and Subsidiaries

Consolidated Statements of Comprehensive Income

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Net Income (Loss)	\$ (486)	\$ 2,946	\$ 1,216
Other Comprehensive Income (Loss)			
Change in unrealized gains and losses on investments, net of tax (benefit) of \$(347), \$(50) and \$92, respectively	(1,292)	(184)	344
Amortization of pension actuarial gains and losses and prior service cost, net of tax (benefit) of \$2, \$14 and \$(7), respectively	7	54	(25)
Change in life deferred acquisition costs, life policy reserves and other, net of tax of \$0, \$2 and \$1, respectively	1	9	2
Other comprehensive income (loss)	(1,284)	(121)	321
Comprehensive Income (Loss)	\$ (1,770)	\$ 2,825	\$ 1,537

Accompanying Notes are an integral part of these Consolidated Financial Statements.

Cincinnati Financial Corporation and Subsidiaries

Consolidated Statements of Shareholders' Equity

(Dollars in millions)

	Years ended December 31,		
	2022	2021	2020
Common Stock			
Beginning of year	\$ 397	\$ 397	\$ 397
Share-based awards	—	—	—
End of year	<u>397</u>	<u>397</u>	<u>397</u>
Paid-In Capital			
Beginning of year	1,356	1,328	1,306
Share-based awards	(10)	(14)	(15)
Share-based compensation	37	33	31
Other	9	9	6
End of year	<u>1,392</u>	<u>1,356</u>	<u>1,328</u>
Retained Earnings			
Beginning of year	12,625	10,085	9,257
Cumulative effect of change in accounting for credit losses as of January 1, 2020	—	—	(2)
Adjusted beginning of year	12,625	10,085	9,255
Net income (loss)	(486)	2,946	1,216
Dividends declared	(437)	(406)	(386)
End of year	<u>11,702</u>	<u>12,625</u>	<u>10,085</u>
Accumulated Other Comprehensive Income			
Beginning of year	648	769	448
Other comprehensive income (loss)	(1,284)	(121)	321
End of year	<u>(636)</u>	<u>648</u>	<u>769</u>
Treasury Stock			
Beginning of year	(1,921)	(1,790)	(1,544)
Share-based awards	14	18	15
Shares acquired - share repurchase authorization	(410)	(144)	(261)
Shares acquired - share-based compensation plans	(10)	(8)	(5)
Other	3	3	5
End of year	<u>(2,324)</u>	<u>(1,921)</u>	<u>(1,790)</u>
Total Shareholders' Equity	<u>\$ 10,531</u>	<u>\$ 13,105</u>	<u>\$ 10,789</u>

(In millions)

Common Stock - Shares Outstanding			
Beginning of year	160.3	160.9	162.9
Share-based awards	0.5	0.6	0.5
Shares acquired - share repurchase authorization	(3.8)	(1.2)	(2.5)
Shares acquired - share-based compensation plans	—	(0.1)	(0.1)
Other	0.1	0.1	0.1
End of year	<u>157.1</u>	<u>160.3</u>	<u>160.9</u>

Accompanying Notes are an integral part of these Consolidated Financial Statements.

Cincinnati Financial Corporation and Subsidiaries

Consolidated Statements of Cash Flows

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Cash Flows From Operating Activities			
Net income (loss)	\$ (486)	\$ 2,946	\$ 1,216
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation, amortization and other	127	118	109
Investment gains and losses, net	1,493	(2,353)	(851)
Interest credited to contract holders	43	45	43
Deferred income tax expense	(355)	477	136
Changes in:			
Premiums and reinsurance receivable	(340)	(240)	(23)
Deferred policy acquisition costs	(96)	(73)	(39)
Other assets	28	(11)	(26)
Loss and loss expense reserves	1,095	559	599
Life policy and investment contract reserves	77	99	116
Unearned premiums	418	311	172
Other liabilities	88	128	(5)
Current income tax receivable/payable	(40)	(25)	44
Net cash provided by operating activities	<u>2,052</u>	<u>1,981</u>	<u>1,491</u>
Cash Flows From Investing Activities			
Sale, call or maturity of fixed maturities	1,113	1,461	1,091
Sale of equity securities	430	136	515
Purchase of fixed maturities	(1,901)	(2,388)	(1,382)
Purchase of equity securities	(466)	(313)	(699)
Changes in finance receivables	7	(2)	(15)
Investment in buildings and equipment	(15)	(15)	(20)
Change in other invested assets, net	(101)	64	(50)
Net cash used in investing activities	<u>(933)</u>	<u>(1,057)</u>	<u>(560)</u>
Cash Flows From Financing Activities			
Payment of cash dividends to shareholders	(423)	(395)	(375)
Shares acquired - share repurchase authorization	(410)	(144)	(261)
Changes in note payable	(4)	—	15
Proceeds from stock options exercised	10	13	7
Contract holders' funds deposited	70	85	85
Contract holders' funds withdrawn	(144)	(146)	(159)
Other	(93)	(98)	(110)
Net cash used in financing activities	<u>(994)</u>	<u>(685)</u>	<u>(798)</u>
Net change in cash and cash equivalents	125	239	133
Cash and cash equivalents at beginning of year	1,139	900	767
Cash and cash equivalents at end of year	<u>\$ 1,264</u>	<u>\$ 1,139</u>	<u>\$ 900</u>
Supplemental Disclosures of Cash Flow Information			
Interest paid	\$ 53	\$ 52	\$ 53
Income taxes paid	165	257	84
Noncash Activities			
Equipment acquired under finance lease obligations	\$ 17	\$ 12	\$ 19
Share-based compensation	27	26	19
Other assets and other liabilities	115	87	57

Accompanying Notes are an integral part of these Consolidated Financial Statements.

Notes to Consolidated Financial Statements

NOTE 1 – Summary of Significant Accounting Policies

Nature of Operations

Cincinnati Financial Corporation (CFC) operates through The Cincinnati Insurance Company and Cincinnati Global Underwriting Ltd.SM (Cincinnati Global) insurance subsidiaries and two complementary subsidiary companies.

The Cincinnati Insurance Company leads our insurance group that also includes two subsidiaries: The Cincinnati Casualty Company and The Cincinnati Indemnity Company. This group markets a broad range of standard market commercial and personal policies. The group focuses on delivery of quality customer service to our select group of 1,984 independent insurance agencies with 2,861 reporting locations across 46 states. Other subsidiaries of The Cincinnati Insurance Company include: The Cincinnati Life Insurance Company, which markets life insurance and fixed annuities; and The Cincinnati Specialty Underwriters Insurance Company, which offers excess and surplus lines property casualty insurance products. The Cincinnati Insurance Company also conducts the business of our reinsurance assumed operations, Cincinnati Re[®].

The two CFC complementary subsidiaries are CSU Producer Resources Inc., which provides insurance brokerage services to our independent agencies so their clients can access our excess and surplus lines insurance products, and CFC Investment Company, which offers commercial leasing and financing services to our agents, their clients and other customers.

The company continues to monitor the impact of the coronavirus (SARS-CoV-2 or COVID-19) pandemic outbreak. The estimated pandemic-related incurred losses and expenses were immaterial in 2022 and 2021 and \$85 million in 2020. The company cannot predict the impact the pandemic will have on its future consolidated financial position, results of operations and cash flows, however the impact could be material.

Basis of Presentation

Our consolidated financial statements include the accounts of the parent and its wholly owned subsidiaries and are presented in conformity with accounting principles generally accepted in the United States of America (GAAP). Foreign exchange rates related to Cincinnati Global's operations did not have a material impact to our consolidated financial statements. All intercompany balances and transactions have been eliminated in consolidation.

The preparation of the consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect amounts reported in the consolidated financial statements and accompanying notes. Our actual results could differ from those estimates.

Investments

Our portfolio investments are primarily in publicly traded fixed-maturity and equity security investments. Fixed-maturity investments (taxable bonds, tax-exempt bonds, redeemable preferred equities and commercial mortgage-backed securities) classified as available for sale and equity investments (common and nonredeemable preferred equities) are recorded at fair value in the consolidated financial statements. Changes in fair value of fixed-maturity securities are reported in other comprehensive income while equity securities are reported in net income. The number of fixed-maturity securities with fair values below 100% of amortized cost can be expected to fluctuate as interest rates rise or fall. Because of our strong capital and long-term investment horizon, our general intent is to hold fixed-maturity investments until maturity, regardless of short-term fluctuations in fair values.

An available for sale fixed maturity is impaired if the fair value of the security is below amortized cost. The impaired loss is charged to net income when we have the intent to sell the security or it is more likely than not we will be required to sell the security before recovery of the amortized cost. For impaired securities we intend to hold, an allowance for credit related losses is recorded in investment losses when the company determines a credit loss has been incurred based on certain factors such as adverse conditions, credit rating downgrades or failure of the issuer to make scheduled principal or interest payments. A credit loss is determined using a discounted cash flow analysis by comparing the present value of expected cash flows with the amortized cost basis, limited to the difference between fair value and amortized cost. Noncredit losses are recognized in other comprehensive income as a change in unrealized gains and losses on investments. As securities are sold, we recognize the gain or loss in income based on the trade date.

Included within our other invested assets were \$337 million and \$227 million of private equity investments, \$47 million and \$36 million of real estate through direct property ownership and development projects in the United States, \$37 million and \$35 million held on deposit at Lloyd's and \$31 million and \$31 million of life policy loans at December 31, 2022 and 2021, respectively. The private equity investments provide their financial statements to us and generally report investments on their balance sheets at fair value. We use the equity method of accounting for private equity and real estate development investments. Lloyd's deposits primarily consist of highly liquid short-term investment instruments. Life policy loans are carried at the receivable value.

Investment income, net of expenses, consists mainly of interest and dividends. We record interest on an accrual basis and record dividends at the ex-dividend date. We amortize premiums and discounts on fixed-maturity securities using the effective interest method over the expected life of the security.

Fair Value Disclosures

Fair value is defined as the exit price or the amount that would be (1) received to sell an asset or (2) paid to transfer a liability in an orderly transaction between marketplace participants at the measurement date. When determining an exit price, we rely upon observable market data whenever possible. We primarily base fair value for investments in equity and fixed-maturity securities (including redeemable preferred stock and assets held in separate accounts) on quoted market prices or on prices from the company's nationally recognized pricing vendors, outside resources that supply global securities pricing, dividend, corporate action and descriptive information to support fund pricing, securities operations, research and portfolio management. The company obtains and reviews the pricing services' valuation methodologies and related inputs and validates these prices by replicating a sample across each asset class using a discounted cash flow model. When a price is not available from these sources, as in the case of securities that are not publicly traded, we determine the fair value using various inputs including quotes from independent brokers. The fair value of investments not priced by the company's nationally recognized pricing vendors is immaterial.

For the purpose of Accounting Standards Codification (ASC) 825, *Financial Instruments* disclosure, we estimate the fair value of our long-term senior notes on market pricing of similar debt instruments that are actively trading. We estimate the fair value of our note payable on the year-end outstanding balance because it is short term and tied to a variable interest rate. We estimate the fair value of liabilities for investment contracts and annuities using discounted cash flow calculations across a wide range of economic interest rate scenarios with a provision for our nonperformance risk. We estimate the fair value for policyholder loans on insurance contracts using a discounted cash flow model. Determination of fair value for structured settlements assumes the discount rates used to calculate the present value of expected payments are the risk-free spot rates plus an A3 rated bond spread for financial issuers at December 31, 2022, to account for nonperformance risk. See Note 3, Fair Value Measurements, for further details.

Cash and Cash Equivalents

Cash and cash equivalents are highly liquid instruments that include liquid debt instruments with original maturities of less than three months. These are carried at cost, which approximates fair value.

Property Casualty Insurance

The consolidated property casualty companies actively write property casualty insurance through independent agencies in 46 states. Our 10 largest states generated 50.1% and 52.1% of total earned premiums in 2022 and 2021, respectively. Ohio, our largest state, accounted for 13.4% and 14.4% of total earned premiums in 2022 and 2021, respectively. Illinois, New York, North Carolina, Pennsylvania, Georgia and Indiana each accounted for between 4% and 6% of total earned premiums in 2022. Our largest single agency relationship accounted for approximately 0.6% of our total property casualty earned premiums in 2022. No aggregate agency relationship locations under a single ownership structure accounted for more than 5% of our total property casualty earned premiums in 2022. We record revenues for installment charges as fee revenues in the consolidated statements of income.

Property casualty written premiums are deferred and recorded as earned premiums primarily on a pro rata basis over the terms of the policies. We record as unearned premiums the portion of written premiums that applies to unexpired policy terms. Expenses associated with successfully acquiring insurance policies – commissions, premium taxes and underwriting costs – are deferred and amortized over the terms of the policies. We assess recoverability of deferred acquisition costs at a level consistent with the way we acquire, service and manage

insurance policies and measure profitability. We analyze our acquisition cost assumptions to reflect actual experience, and we evaluate potential premium deficiencies.

Certain property casualty policies are not entered into policy underwriting systems as of the effective date of coverage. An estimate is recorded for these unprocessed written premiums. A large majority of the estimate is unearned and has no material impact on earned premiums.

An allowance for credit losses on uncollectible property casualty premiums is updated and reviewed on a quarterly basis. The allowance for credit losses was \$13 million, \$14 million, \$19 million and \$9 million at December 31, 2022, 2021, 2020 and January 1, 2020 (date of adoption), respectively. A significant portion of the increase in the allowance to \$19 million at December 31, 2020, was due to consideration of pandemic-related factors. Other changes in the amount for each period were immaterial.

We establish reserves to cover the expected cost of claims, losses and expenses related to investigating, processing and resolving claims. Although the appropriate amount of reserves is inherently uncertain, we base our decisions on past experience and current facts. Reserves are based on claims reported prior to the end of the year and estimates of incurred but not reported (IBNR) claims. We regularly review and update reserves using the most current information available. Any resulting adjustments are reflected in current calendar year insurance losses and policyholder benefits. We estimate that we may recover some of our costs through salvage and subrogation.

Policyholder Dividends

Certain workers' compensation policies include the possibility of a policyholder earning a return of a portion of premium in the form of a policyholder dividend. The dividend generally is calculated by determining the profitability of a policy year along with the associated premium. We reserve for all probable future policyholder dividend payments. We record policyholder dividends as other underwriting expenses.

Life Insurance

We offer several types of life insurance and we account for each according to the duration of the contract. Short-duration life and health contracts are written to cover claims that arise during a short, fixed term of coverage. We generally have the right to change the amount of premium charged or cancel the coverage at the end of each contract term. We record premiums for short-duration life and health contracts similarly to property casualty contracts.

Long-duration contracts are written to provide coverage for an extended period of time. Traditional long-duration contracts require policyholders to pay scheduled gross premiums, generally not less frequently than annually, over the term of the coverage. Premiums for these contracts, such as whole life insurance are recognized as revenue when due. Some traditional long-duration contracts, such as ten-pay whole life insurance, have premium payment periods shorter than the period over which coverage is provided. For these contracts, the excess of premium over the amount required to pay expenses and benefits is recognized over the term of the coverage rather than over the premium payment period.

We establish a liability for traditional long-duration contracts as we receive premiums. The amount of this liability is the present value of future expenses and benefits less the present value of future net premiums. Net premium is the portion of gross premium required to provide for all expenses and benefits. We estimate future expenses and benefits and net premium using assumptions for expected expenses, mortality, morbidity, withdrawal rates and investment income. We include a provision for deviation, meaning we allow for some uncertainty in making our assumptions. We establish our assumptions when the contract is issued, and we generally maintain those assumptions for the life of the contract. We use both our own experience and industry experience, adjusted for historical trends, in arriving at our assumptions for expected mortality, morbidity and withdrawal rates. We use our own experience and historical trends for setting our assumption for expected expenses. We base our assumption for expected investment income on our own experience, adjusted for current and future economic conditions.

We capitalize acquisition costs for traditional long-duration contracts. We charge these capitalized costs associated with successfully acquiring traditional long-duration contract insurance policies in proportion to premium revenue recognized. We use the same assumptions used in establishing the liability for the contract. We update our acquisition cost assumptions periodically to reflect actual experience, and we evaluate our deferred acquisition costs for recoverability.

Universal life contracts are long-duration contracts for which contractual provisions are not fixed, unlike whole life insurance. Universal life contracts allow policyholders to vary the amount of premium, within limits, without our consent. However, we may vary the mortality, expense charges and the interest crediting rate, within limits, used to accumulate policy values. We do not record universal life premiums as revenue. Instead we recognize as revenue the mortality charges, administration charges and surrender charges when received. Some of our universal life contracts assess administration charges in the early years of the contract that are compensation for services we will provide in the later years of the contract. These administration charges are deferred and are recognized over the period when we provide those future services. We maintain a policy reserve liability equal to the policyholder account value. There is no provision for adverse deviation. Some of our universal life policies contain no-lapse guarantee provisions. For these policies, we establish a reserve in addition to the account balance, based on expected no-lapse guarantee benefits and expected policy assessments.

We capitalize acquisition costs associated with successfully acquiring universal life long-duration contracts. We charge these capitalized costs to expenses over the term of coverage of the contract in accordance with the recognition of gross profit from the contract or notional benefit base. When we charge deferred policy acquisition costs to expenses, we use assumptions based on our best estimates of long-term experience. We review and modify these assumptions on a regular basis.

An allowance for credit losses on uncollectible life insurance premiums is updated and reviewed on a quarterly basis. At December 31, 2022, 2021 and 2020, the allowance, including changes in the amount for each period, was immaterial.

Separate Accounts

We have issued universal life contracts with guaranteed minimum returns, referred to as bank-owned life insurance contracts (BOLIs). A BOLI is designed so the bank is the policy owner and the policy beneficiary. We legally segregate and record as separate accounts the assets and liabilities for some of our BOLIs, based on the specific contract provisions. We guarantee minimum investment returns, account values and death benefits for our separate account BOLIs. Our other BOLIs are general account products.

We carry the assets of separate account BOLIs at fair value. The liabilities on separate account BOLIs primarily are the contract holders' claims to the related assets and are carried at an amount equal to the contract holders' account value. At December 31, 2022, the current fair value of the contract holders' account value exceeded the current fair value of the BOLI invested assets and cash by approximately \$64 million. At December 31, 2021, the current fair value of the BOLI invested assets and cash exceeded the current fair value of the contract holders' account value by approximately \$79 million. If the BOLI projected fair value were to fall below the value we guaranteed, a liability would be established with a corresponding charge to the company's earnings.

Generally, investment income and investment gains and losses of the separate accounts accrue directly to the contract holder, and we do not include them in the consolidated statements of income. Revenues and expenses related to separate accounts consist of contractual fees and mortality, surrender and expense risk charges. Also, each separate account BOLI includes a negotiated capital gain and loss sharing arrangement between the company and the bank. A percentage of each separate account's investment gains and losses representing contract fees and assessments accrues to us and is transferred from the separate account to our general account and is recognized as revenue or expense. We record as revenues separate account investment management fees in fee revenues of the consolidated statements of income.

Reinsurance

The Cincinnati Insurance Company offers reinsurance assumed for casualty (predominantly domestic exposure), specialty and property (worldwide exposure). Treaties are written on a pro rata and excess of loss basis. We also continue to assume risk with limited exposure as a reinsurer for involuntary state pools.

Written premium is recorded, net of contract specific retrocessions, on an ultimate estimate basis and primarily earned on a pro rata basis over the coverage period of the treaty. Expenses are recorded as per contract terms and deferred over the earning period of the premium.

We establish known loss reserves when reported. We establish reserves for losses in excess of reported activity in the form of IBNR. Reserves are established using actuarial analysis, which includes models and methods

traditionally used for the types of exposures written. We establish reserves for event specific occurrences using modeling data and company specific data when available.

We enter into other reinsurance transactions to reduce risk and uncertainty by buying property casualty reinsurance and retrocessional reinsurance as well as life reinsurance. Reinsurance and retrocessional reinsurance contracts do not relieve us from our obligation to policyholders, but rather help protect our financial strength to perform that duty. All of these ceded reinsurance contracts transfer the economic risk of loss.

Premiums that we cede are deferred and recorded as earned premiums on a pro rata basis over the terms of the contracts. We estimate loss amounts recoverable from our reinsurers based on the reinsurance policy terms. Historically, our claims with reinsurers have been paid.

An allowance for credit losses on uncollectible reinsurance premiums and recoverable assets is updated and reviewed on a quarterly basis. At December 31, 2022, 2021 and 2020, the allowances, including changes in the amount for each period, were immaterial.

Income Taxes

We calculate deferred income tax liabilities and assets using tax rates in effect when temporary differences in taxable income and financial statement income are expected to reverse. We recognize deferred income taxes for numerous temporary differences between our taxable income and financial statement income and other changes in shareholders' equity. Such temporary differences relate primarily to unrealized gains and losses on investments and differences in the recognition of deferred acquisition costs, unearned premiums, insurance reserves, international earnings and basis differences in the carrying value of investments held. We charge deferred income taxes associated with balances that impact other comprehensive income, such as unrealized gains and losses of fixed-maturity investments, to shareholders' equity in accumulated other comprehensive income (AOCI). We charge deferred taxes associated with other differences to income.

See Note 11, Income Taxes, for further detail on our uncertain tax positions and other income tax items. Although no Internal Revenue Service (IRS) penalties currently are accrued, if incurred, they would be recognized as a component of income tax expense.

Earnings per Share

Net income per common share is based on the weighted average number of common shares outstanding during each of the respective years. We calculate net income per common share (diluted) assuming the exercise or conversion of share-based awards using the treasury stock method.

Land, Building and Equipment

We record land at cost, and record building and equipment at cost less accumulated depreciation. Equipment held under finance leases also is classified as property and equipment with the related lease obligations recorded as liabilities. We capitalize and amortize costs for internally developed computer software during the application development stage. These costs generally consist of external consulting fees and internal payroll-related costs. Our depreciation is based on estimated useful lives (ranging from three to 39.5 years) using straight-line and accelerated methods. Depreciation expense was \$33 million for 2022, 2021 and 2020. We review our accumulated depreciation for our building, equipment and software assets and write off fully depreciated assets for obsolescence and nonuse. We monitor land, building and equipment and software assets for potential impairments. Indicators of potential impairments may include a significant decrease in the fair values of the assets, considerable cost overruns on projects, a change in legal factors or business climate or other factors that indicate that the carrying amount may not be recoverable or useful. There were no recorded land, building and equipment impairments for 2022, 2021 or 2020.

Finance Receivables

Our leasing subsidiary provides auto and equipment direct financing (leases and loans) to commercial and individual clients. We generally transfer ownership of the property to the client as the terms of the leases expire. Our lease contracts contain bargain purchase options. We account for these leases and loans as sales-type leases. We capitalize and amortize lease or loan origination costs over the life of the financing, using the effective interest method. These costs may include, but are not limited to finder fees, broker fees, filing fees and the cost of credit reports. We record income as other revenues over the financing term using the effective interest method in the consolidated statements of income. An allowance for credit losses on finance receivables is updated and reviewed on a quarterly basis. At December 31, 2022, 2021 and 2020, the allowance, including changes in the amount for each period, was immaterial.

Employee Benefit Pension Plan

We sponsor a qualified defined benefit pension plan that was modified during 2008. We closed entry into the pension plan, and only participants 40 years of age or older could elect to remain in the plan. Our pension expenses are based on certain actuarial assumptions and also are composed of several components that are determined using the projected unit credit actuarial cost method. Refer to Note 13, Employee Retirement Benefits, for more information about our defined benefit pension plan.

Share-Based Compensation

We grant qualified and nonqualified share-based compensation under authorized plans. The stock options generally vest on a graded scale over three years following the date of grant and are exercisable over 10-year periods. We grant service-based restricted stock units that cliff vest three years after the date of grant as well as service-based restricted stock units that vest ratably over the three-year vesting term. We also grant performance-based restricted stock units that vest if certain market conditions are attained. In 2022, the CFC compensation committee approved share-based awards including incentive stock options, nonqualified stock options, service-based restricted and performance-based restricted stock units. See Note 17, Share-Based Associate Compensation Plans, for further details.

Goodwill and Intangible Assets

We recognize goodwill and intangible assets generated through acquisitions within other assets in the consolidated balance sheets. Goodwill arises when the fair value of consideration transferred exceeds the fair value of the net identifiable assets acquired at the acquisition date. Goodwill and intangible assets with an indefinite life are not amortized. Intangible assets with a definite life are amortized on a straight-line basis over the estimated useful lives as follows: broker relationships, 15 years; internally developed technology, five years; value of business acquired, over the remaining coverage period of the underlying insurance contracts, which expired during 2020. We test for impairments on an annual basis or more frequently if events or circumstances indicate that the asset might be impaired. The company performed its annual impairment test on goodwill and intangibles at September 30, which did not result in the recognition of an impairment loss. The company held goodwill of \$30 million and intangible assets with an indefinite life of \$31 million at December 31, 2022 and 2021, respectively.

Subsequent Events

There were no subsequent events requiring adjustment to the consolidated financial statements or disclosure.

Pending Accounting Updates

ASU 2018-12, Financial Services - Insurance (Topic 944): Targeted Improvements to the Accounting for Long-Duration Contracts

In August 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-12, *Financial Services - Insurance (Topic 944): Targeted Improvements to the Accounting for Long-Duration Contracts*. ASU 2018-12 requires changes to the measurement and disclosure of long-duration insurance contracts. In November 2020, the FASB issued an ASU that delayed the effective date of ASU 2018-12 to interim and annual reporting periods beginning after December 15, 2022.

Related to the company's term and whole life products included in life policy and investment contract reserves, the new guidance requires that cash flow assumptions be reviewed at least annually to determine any necessary updates. Additionally, the discount rate assumption is required to be updated quarterly based on upper-medium grade fixed-income instrument yields (market value discount rates). The life policy and investment contract reserves balance is adjusted through insurance losses and contract holders' benefits for cash flow assumption updates and through AOCI for discount rate updates.

These ASUs also amend the previous guidance related to life deferred policy acquisition costs by requiring amortization of those costs on a constant level basis for a group of contracts that approximates straight-line and the removal of shadow deferred policy acquisition costs for universal life and deferred annuity products. These ASUs also require entities to provide additional disclosures including disaggregated rollforwards of the life policy and investment contract reserves, separate account liabilities and life deferred policy acquisition costs.

We adopted these ASUs on a modified retrospective basis on January 1, 2023, resulting in an after-tax increase to shareholders' equity of approximately \$30 million. Quarterly updates to the life policy and investment contract reserves and corresponding adjustments to shareholders' equity due to changes in the market value discount rates and other assumptions in subsequent periods could be material.

NOTE 2 – Investments

The following table provides amortized cost, gross unrealized gains, gross unrealized losses and fair value for our fixed-maturity securities:

(Dollars in millions)				
	Amortized cost	Gross unrealized		Fair value
		gains	losses	
At December 31, 2022				
Fixed-maturity securities:				
Corporate	\$ 7,412	\$ 37	\$ 580	\$ 6,869
States, municipalities and political subdivisions	4,901	24	303	4,622
Commercial mortgage-backed	250	—	16	234
United States government	196	—	5	191
Government-sponsored enterprises	186	—	3	183
Foreign government	34	—	1	33
Total	<u>\$ 12,979</u>	<u>\$ 61</u>	<u>\$ 908</u>	<u>\$ 12,132</u>
At December 31, 2021				
Fixed-maturity securities:				
Corporate	\$ 7,043	\$ 467	\$ 13	\$ 7,497
States, municipalities and political subdivisions	4,768	330	3	5,095
Commercial mortgage-backed	264	9	—	273
United States government	121	2	—	123
Government-sponsored enterprises	8	—	—	8
Foreign government	26	—	—	26
Total	<u>\$ 12,230</u>	<u>\$ 808</u>	<u>\$ 16</u>	<u>\$ 13,022</u>

The net unrealized investment losses in our fixed-maturity portfolio at December 31, 2022, are primarily due to an increase in U.S. Treasury yields and widening of corporate credit spreads. Our commercial mortgage-backed securities had an average rating of Aa2/AA- and Aa2/AA at December 31, 2022 and 2021, respectively.

The table below provides fair values and unrealized losses by investment category and by the duration of the securities' continuous unrealized loss positions:

(Dollars in millions)	Less than 12 months		12 months or more		Total	
	Fair value	Unrealized losses	Fair value	Unrealized losses	Fair value	Unrealized losses
At December 31, 2022						
Fixed-maturity securities:						
Corporate	\$ 5,651	\$ 412	\$ 661	\$ 168	\$ 6,312	\$ 580
States, municipalities and political subdivisions	2,600	274	77	29	2,677	303
Commercial mortgage-backed	215	13	14	3	229	16
United States government	146	3	41	2	187	5
Government-sponsored enterprises	123	3	3	—	126	3
Foreign government	25	1	4	—	29	1
Total	<u>\$ 8,760</u>	<u>\$ 706</u>	<u>\$ 800</u>	<u>\$ 202</u>	<u>\$ 9,560</u>	<u>\$ 908</u>
At December 31, 2021						
Fixed-maturity securities:						
Corporate	\$ 861	\$ 13	\$ 15	\$ —	\$ 876	\$ 13
States, municipalities and political subdivisions	105	2	2	1	107	3
Commercial mortgage-backed	10	—	11	—	21	—
United States government	48	—	—	—	48	—
Government-sponsored enterprises	7	—	—	—	7	—
Foreign government	16	—	—	—	16	—
Total	<u>\$ 1,047</u>	<u>\$ 15</u>	<u>\$ 28</u>	<u>\$ 1</u>	<u>\$ 1,075</u>	<u>\$ 16</u>

Contractual maturity dates for fixed-maturity securities were:

(Dollars in millions)	Amortized cost	Fair value	% of fair value
At December 31, 2022			
Maturity dates:			
Due in one year or less	\$ 713	\$ 709	5.8 %
Due after one year through five years	3,966	3,834	31.6
Due after five years through ten years	3,533	3,357	27.7
Due after ten years	4,767	4,232	34.9
Total	<u>\$ 12,979</u>	<u>\$ 12,132</u>	<u>100.0 %</u>

Actual maturities may differ from contractual maturities when there is a right to call or prepay obligations with or without call or prepayment penalties.

At December 31, 2022 and 2021, the company had fixed-maturity securities with a fair value of \$107 million and \$119 million, respectively, on deposit with various states in compliance with regulatory requirements. In addition, cash and fixed-maturity securities deposited with third parties used as collateral to secure liabilities on behalf of insureds, cedants and other creditors had a fair value of \$135 million and \$116 million at December 31, 2022 and 2021, respectively. At December 31, 2022 and 2021, the company had common equities with a fair value of \$101 million and \$84 million, respectively, held in Lloyd's trust accounts to provide a portion of the capital needed to support Cincinnati Global's operations.

In the normal course of investing activities, the company enters into investments in limited partnerships, including private equity, real estate investments and asset-backed securities issued by third-parties. The company's maximum exposure to loss with respect to these investments is limited to the investment carrying values included in the company's consolidated balance sheets and any unfunded commitments.

The following table provides investment income and investment gains and losses:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Investment income:			
Interest	\$ 510	\$ 477	\$ 455
Dividends	275	246	220
Other	11	5	8
Total	796	728	683
Less investment expenses	15	14	13
Total	<u>\$ 781</u>	<u>\$ 714</u>	<u>\$ 670</u>
Investment gains and losses, net:			
Equity securities:			
Investment gains and losses on securities sold, net	\$ 16	\$ 4	\$ 79
Unrealized gains and losses on securities still held, net	(1,526)	2,278	841
Subtotal	(1,510)	2,282	920
Fixed-maturity securities:			
Gross realized gains	6	36	16
Gross realized losses	(4)	(5)	(3)
Write-down of impaired securities	(5)	(1)	(78)
Subtotal	(3)	30	(65)
Other	46	97	10
Total	<u>\$ (1,467)</u>	<u>\$ 2,409</u>	<u>\$ 865</u>

The fair value of our equity portfolio was \$9.841 billion and \$11.315 billion at December 31, 2022 and 2021, respectively. At December 31, 2022 and 2021, Apple, Inc. (Nasdaq:AAPL), an equity holding, was our largest single investment holding with a fair value of \$597 million and \$862 million, which was 6.3% and 7.9% of our publicly traded common equities portfolio and 2.7% and 3.5% of the total investment portfolio, respectively.

At December 31, 2022, the allowance for credit losses on fixed-maturity securities was \$1 million. Changes in the amount during the period were also \$1 million. There were three fixed-maturity securities that were written down to fair value, due to an intention to be sold, primarily in the real estate sector. At December 31, 2022, 3,272 fixed-maturity securities with a total unrealized loss of \$908 million were in an unrealized loss position. Of that total, 49 fixed-maturity securities had fair values below 70% of amortized cost.

At December 31, 2021, the allowance for credit losses on fixed-maturity securities, including changes in the amount during the period, was immaterial. There were five fixed-maturity securities that were written down to fair value, due to an intention to be sold, in the municipal sector. At December 31, 2021, 278 fixed-maturity securities with a total unrealized loss of \$16 million were in an unrealized loss position. Of that total, no fixed-maturity securities had fair values below 70% of amortized cost.

At December 31, 2020, there were no fixed-maturity securities with an allowance for credit losses. There were 14 fixed-maturity securities that were written down to fair value, due to an intention to be sold, in the energy, real estate, consumer goods, municipal and technology & electronics sectors. At December 31, 2020, 128 fixed-maturity securities with a total unrealized loss of \$10 million had been in an unrealized loss position. Of that total, no fixed-maturity securities had fair values below 70% of amortized cost.

NOTE 3 – Fair Value Measurements

Fair Value Hierarchy

The fair value hierarchy gives the highest priority to quoted prices with readily available independent data in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable market inputs (Level 3). When various inputs for measurement fall within different levels of the fair value hierarchy, the lowest observable input that has a significant impact on fair value measurement is used. Our valuation techniques have not changed from those used at December 31, 2021, and ultimately management determines fair value. Financial instruments reported at fair value in our consolidated financial statements are categorized based upon the following characteristics or inputs to the valuation techniques:

- Level 1 – Financial assets and liabilities for which inputs are observable and are obtained from reliable quoted prices for identical assets or liabilities in active markets. This is the most reliable fair value measurement and includes, for example, active exchange-traded equity securities.
- Level 2 – Financial assets and liabilities for which values are based on quoted prices in markets that are not active or for which values are based on similar assets and liabilities that are actively traded. This also includes pricing models for which the inputs are corroborated by market data.
 - The technique used for the Level 2 fixed-maturity securities is the application of market-based modeling. The inputs used for all classes of fixed-maturity securities listed in the table below include relevant market information by asset class, trade activity of like securities, marketplace quotes, benchmark yields, spreads off benchmark yields, interest rates, U.S. Treasury or swap curves, yield to maturity and economic events. Specific to commercial mortgage-backed securities, key inputs also include prepayment and default projections based on past performance of the underlying collateral and current market data. Level 2 fixed-maturity securities are priced by a nationally recognized pricing vendor.
 - The Level 2 nonredeemable preferred equities technique used is the application of market-based modeling. The inputs used, similar to those used by the pricing vendor for our fixed-maturity securities, include relevant market information, trade activity of like securities, yield to maturity, corporate action notices and economic events. Level 2 nonredeemable preferred equities are priced by a nationally recognized pricing vendor.
- Level 3 – Financial assets and liabilities for which values are based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement. Level 3 inputs include the following:
 - Quotes from brokers or other external sources that are not considered binding;
 - Quotes from brokers or other external sources where it cannot be determined that market participants would in fact transact for the asset or liability at the quoted price; or
 - Quotes from brokers or other external sources where the inputs are not deemed observable.

The following tables illustrate the fair value hierarchy for those assets measured at fair value on a recurring basis at December 31, 2022 and 2021. We do not have any liabilities carried at fair value.

(Dollars in millions)

At December 31, 2022	Level 1	Level 2	Level 3	Total
Fixed maturities, available for sale:				
Corporate	\$ —	\$ 6,869	\$ —	\$ 6,869
States, municipalities and political subdivisions	—	4,622	—	4,622
Commercial mortgage-backed	—	234	—	234
United States government	191	—	—	191
Government-sponsored enterprises	—	183	—	183
Foreign government	—	33	—	33
Subtotal	191	11,941	—	12,132
Common equities	9,454	—	—	9,454
Nonredeemable preferred equities	—	387	—	387
Separate accounts taxable fixed maturities	—	815	—	815
Top Hat savings plan mutual funds and common equity (included in Other assets)	57	—	—	57
Total	\$ 9,702	\$ 13,143	\$ —	\$ 22,845
At December 31, 2021				
Fixed maturities, available for sale:				
Corporate	\$ —	\$ 7,497	\$ —	\$ 7,497
States, municipalities and political subdivisions	—	5,095	—	5,095
Commercial mortgage-backed	—	273	—	273
United States government	123	—	—	123
Government-sponsored enterprises	—	8	—	8
Foreign government	—	26	—	26
Subtotal	123	12,899	—	13,022
Common equities	10,862	—	—	10,862
Nonredeemable preferred equities	—	453	—	453
Separate accounts taxable fixed maturities	—	948	—	948
Top Hat savings plan mutual funds and common equity (included in Other assets)	64	—	—	64
Total	\$ 11,049	\$ 14,300	\$ —	\$ 25,349

We also held Level 1 cash and cash equivalents of \$1.264 billion and \$1.139 billion at December 31, 2022 and 2021, respectively. Level 3 assets reported at fair value in our consolidated financial statements are not material, and therefore no further disclosures are provided.

Fair Value Disclosure for Assets and Liabilities Not Carried at Fair Value

The disclosures below are presented to provide information about the effects of current market conditions on financial instruments that are not reported at fair value in our consolidated financial statements.

The following table shows fair values of our note payable and long-term debt:

(Dollars in millions)					
At December 31, 2022	Level 1	Level 2	Level 3	Total	
Note payable	\$ —	\$ 50	\$ —	\$	50
6.900% senior debentures, due 2028	—	29	—		29
6.920% senior debentures, due 2028	—	418	—		418
6.125% senior notes, due 2034	—	388	—		388
Total	\$ —	\$ 885	\$ —	\$	885
At December 31, 2021					
Note payable	\$ —	\$ 54	\$ —	\$	54
6.900% senior debentures, due 2028	—	34	—		34
6.920% senior debentures, due 2028	—	501	—		501
6.125% senior notes, due 2034	—	510	—		510
Total	\$ —	\$ 1,099	\$ —	\$	1,099

Fair value of the note payable was determined based upon the outstanding balance at December 31, 2022 and 2021, because it is short term and tied to a variable interest rate. Fair value of the long-term debt was determined under the fair value measurements and disclosure accounting rules based on market pricing of similar debt instruments that are actively traded. We determine fair value for our debt the same way that we value corporate fixed maturities in our investment portfolio. Fair value can vary with macroeconomic conditions. Regardless of the fluctuations in fair value, the outstanding principal amount of our long-term debt was \$793 million at December 31, 2022 and 2021. None of the long-term debt is encumbered by rating triggers. The note payable and long-term debt were classified as Level 2 as an active market does not exist, but fair value is determined based on observable inputs.

The following table shows the fair value of our life policy loans, included in other invested assets:

(Dollars in millions)					
At December 31, 2022	Level 1	Level 2	Level 3	Total	
Life policy loans	\$ —	\$ —	\$ 37	\$	37
At December 31, 2021					
Life policy loans	\$ —	\$ —	\$ 44	\$	44

Outstanding principal and interest for these life policy loans totaled \$31 million at December 31, 2022 and 2021. To determine the fair value, we make the following significant assumptions: (1) the discount rates used to calculate the present value of expected payments are the risk-free spot rates, as nonperformance risk is minimal; and (2) the loan repayment rate by which policyholders pay off their loan balances is in line with past experience.

The following table shows fair value of our deferred annuities and structured settlements included in life policy and investment contract reserves:

(Dollars in millions)					
At December 31, 2022	Level 1		Level 2		Total
Deferred annuities	\$	—	\$	—	\$ 621
Structured settlements		—		143	143
Total	\$	—	\$	143	\$ 764
At December 31, 2021					
Deferred annuities	\$	—	\$	—	\$ 778
Structured settlements		—		201	201
Total	\$	—	\$	201	\$ 979

Recorded reserves for the deferred annuities were \$735 million and \$762 million at December 31, 2022 and 2021, respectively. Recorded reserves for the structured settlements were \$129 million and \$136 million at December 31, 2022 and 2021, respectively.

Fair values for deferred annuities were calculated based upon internally developed models because active markets and observable inputs do not exist. To determine the fair value, we made the following significant assumptions: (1) the discount rates used to calculate the present value of expected payments are the risk-free spot rates plus an A3 rated bond spread for financial issuers at December 31, 2022 and 2021, to account for nonperformance risk; (2) the rate of interest credited to policyholders is the portfolio net earned interest rate less a spread for expenses and profit; and (3) additional lapses occur when the credited interest rate is exceeded by an assumed competitor credited rate, which is a function of the risk-free rate of the economic scenario being modeled.

Fair values for structured settlements were calculated based on internally developed models which assume the discount rates used to calculate the present value of expected payments are the risk-free spot rates plus an A3 rated bond spread for financial issuers at December 31, 2022 and 2021, to account for nonperformance risk. The structured settlements were classified as Level 2, as an active market does not exist, but fair value is based on observable inputs.

NOTE 4 – Property Casualty Loss and Loss Expenses

We use actuarial methods, models, assumptions and judgment to estimate, as of a financial statement date, the property casualty loss and loss expense reserves required to pay for and settle all outstanding insured claims, including IBNR claims, as of that date. The actuarial estimate is subject to review and adjustment by an inter-departmental committee that includes actuarial, claims, underwriting, loss prevention and finance management. This committee is familiar with relevant company and industry business, claims and underwriting trends, as well as general economic and legal trends that could affect future loss and loss expense payments. The amount we will actually have to pay for claims can be highly uncertain. This uncertainty, together with the size of our reserves, makes the loss and loss expense reserves our most significant estimate.

Our reserving process takes into account known facts and interpretations of circumstances and factors including the type of claim, policy provisions pertaining to each claim, potential subrogation or salvage recoverable, large loss activity and trends, new business activity, judicial decisions, economic conditions, changes in law and regulation and product and underwriting changes. There have been no significant changes in methodologies and assumptions used in calculating loss and loss expense reserves for all years presented. There were no material additional premiums or return premiums accrued for as a result of prior-year effects.

Our claims representatives establish case reserves when claims are reported to provide for our unpaid loss and loss expense obligation associated with individual claims.

For events designated as natural catastrophes resulting in losses incurred related to direct premiums, we calculate IBNR reserves directly as a result of an estimated claim counts and estimated average dollar amount per claim for each event. Once individual case reserves are established for a catastrophe event, we reduce the IBNR reserves.

Our actuarial staff uses generally accepted actuarial methods and models to derive ultimate loss and IBNR reserve estimates. The time interval between a claims occurrence and its settlement is one of the crucial attributes when estimating ultimate losses and IBNR reserves.

Due to the uncertainties inherent with loss reserves, our ultimate loss experience could prove better or worse than what our carried reserves reflect. To the extent that reserves are inadequate and are required to be increased, the amount of the increase is a charge in that period, raising our loss and loss expense ratio and reducing earnings. To the extent that reserves are redundant and are required to be released, the amount of the release is a credit in that period, reducing our loss and loss expense ratio and increasing earnings.

This table summarizes activity for our consolidated property casualty loss and loss expense reserves:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Gross loss and loss expense reserves, January 1	\$ 7,229	\$ 6,677	\$ 6,088
Less reinsurance recoverable	327	277	342
Net loss and loss expense reserves, January 1	6,902	6,400	5,746
Net incurred loss and loss expenses related to:			
Current accident year	4,875	4,024	3,968
Prior accident years	(159)	(428)	(131)
Total incurred	4,716	3,596	3,837
Net paid loss and loss expenses related to:			
Current accident year	1,592	1,379	1,493
Prior accident years	2,095	1,715	1,690
Total paid	3,687	3,094	3,183
Net loss and loss expense reserves, December 31	7,931	6,902	6,400
Plus reinsurance recoverable	405	327	277
Gross loss and loss expense reserves, December 31	\$ 8,336	\$ 7,229	\$ 6,677

At December 31, 2022, 2021 and 2020, the reserve for loss and loss expense in the consolidated balance sheets also included \$64 million, \$76 million and \$69 million, respectively, for certain life and health loss and loss expense reserves. Additional disclosures for reserves related to these health claims are not material and therefore not provided.

During 2022, we experienced \$159 million of favorable development on prior accident years including \$76 million of favorable development in commercial lines, \$61 million of favorable development in personal lines and \$9 million of favorable development in excess and surplus lines. Within commercial lines, we recognized favorable development of \$63 million for the workers' compensation line and \$44 million for the commercial property line due to reduced uncertainty of prior accident year loss and loss expense for these lines. This was partially offset by unfavorable development of \$25 million for the commercial casualty line and \$23 million for the commercial auto line. Within personal lines, we recognized favorable reserve development of \$54 million for the homeowner line of business.

During 2021, we experienced \$428 million of favorable development on prior accident years including \$353 million of favorable development in commercial lines, \$50 million of favorable development in personal lines and \$7 million of unfavorable development in excess and surplus lines. Within commercial lines, we recognized favorable development of \$120 million for the commercial casualty line, \$97 million for the commercial property line, \$66 million for the workers' compensation line and \$43 million for the commercial auto line due to reduced uncertainty of prior accident year loss and loss expense for these lines. Within personal lines, we recognized favorable reserve development of \$31 million in personal auto and \$14 million for the homeowner line of business.

During 2020, we experienced \$131 million of favorable development on prior accident years including \$95 million of favorable development in commercial lines, \$18 million of favorable development in personal lines and \$7 million of unfavorable development in excess and surplus lines. Within commercial lines, we recognized favorable development \$54 million for the commercial casualty line, \$39 million for the workers' compensation line and \$16 million for the commercial property line due to reduced uncertainty of prior accident year loss and loss expense for these lines. This was partially offset by unfavorable development of \$17 million for the commercial auto line. Within personal lines, we recognized favorable reserve development of \$15 million in personal auto and \$5 million for the homeowner line of business.

Included in our lines of business are asbestos and environmental claims. We carried \$92 million and \$88 million of net loss and loss expense reserves for asbestos and environmental claims at December 31, 2022 and 2021, respectively. The asbestos and environmental claims amounts for each respective year constituted less than 2.0% of total net loss and loss expense reserves at these year-end dates. We believe our exposure to asbestos and environmental claims is limited, largely because our reinsurance retention was \$500,000 or below prior to 1987. We also were predominantly a personal lines company in the 1960s and 1970s. During the 1980s and early 1990s, commercial lines grew as a percentage of our overall business and our exposure to asbestos and environmental claims grew accordingly. Over that period, we included an asbestos and environmental exclusion in almost all policies or endorsed the exclusion to the policies. We have no exposure to asbestos and environmental claims related to our acquisition of Cincinnati Global. We continue to monitor our claims for evidence of material exposure to other mass tort classes but have found no such credible evidence to date.

The following table provides a reconciliation of the property casualty incurred losses and allocated loss adjustment expenses (ALAE) development and paid losses and ALAE development information at December 31, 2022.

(Dollars in millions)

	Cumulative incurred losses and ALAE as reported within the triangles, net of reinsurance	Cumulative paid losses and ALAE as reported within the triangles, net of reinsurance	Liabilities for loss and ALAE for accident years not presented in the triangles, net of reinsurance	Total liabilities for loss and ALAE, net of reinsurance	Reinsurance recoverable on unpaid losses	Total liabilities for gross loss and loss expense reserves
Commercial casualty	\$ 5,932	\$ 3,396	\$ 86	\$ 2,622	\$ 43	\$ 2,665
Workers' compensation	1,865	1,215	311	961	57	1,018
Commercial auto	2,332	1,581	40	791	5	796
Commercial property	3,312	2,774	15	553	47	600
Personal auto	1,831	1,557	13	287	28	315
Homeowner	2,275	1,952	6	329	8	337
Excess and surplus	1,272	587	2	687	37	724
Other lines						1,512
Total liabilities for loss and ALAE reserves						7,967
Unallocated loss adjustment expense reserves						369
Gross loss and loss expense reserves						\$ 8,336

For all lines of business, the claim counts reported are primarily measured by insurance coverages that are triggered when a loss occurs and a reserve is established. For this purpose, coverages are defined as unique combinations of certain attributes such as line of business and cause of loss. Claims that are opened and closed without payment are included in the reported claim counts. Claim counts are presented on a direct basis only and do not reflect any assumed or ceded reinsurance.

In the following tables, commercial casualty, workers' compensation and excess and surplus lines each disclose 10 accident years of loss and ALAE reserves and the cumulative number of reported claims. Commercial auto, commercial property, personal auto and homeowner each disclose five accident years of loss and ALAE reserves and the cumulative number of reported claims consistent with the number of years for which claims incurred typically remain outstanding.

Commercial Casualty

The following table shows the commercial casualty incurred and paid losses and ALAE development by accident year. The table also shows the IBNR reserves plus expected development on reported losses and claim frequency:

(Dollars in millions, reported claims in thousands)											As of December 31, 2022		
Incurred losses and ALAE, net of reinsurance for the years ended December 31,											Total of incurred but not reported liabilities plus expected development on reported losses	Cumulative number of reported claims	
Accident Year	Unaudited												
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022			
2013	\$ 448	\$ 443	\$ 431	\$ 416	\$ 413	\$ 407	\$ 391	\$ 386	\$ 385	\$ 381	\$ 9	20	
2014		503	496	479	476	479	465	469	466	462	10	21	
2015			533	526	529	516	508	502	504	496	14	22	
2016				563	574	557	555	554	538	531	32	22	
2017					610	597	577	571	555	554	51	21	
2018						650	641	622	588	612	77	22	
2019							672	643	607	669	124	20	
2020								674	629	606	188	14	
2021									714	697	338	13	
2022										924	613	10	
Total										\$5,932			
Cumulative paid losses and ALAE, net of reinsurance													
2013	\$ 35	\$ 90	\$ 159	\$ 232	\$ 286	\$ 312	\$ 337	\$ 348	\$ 355	\$ 366			
2014		34	97	172	287	338	390	409	421	437			
2015			38	108	200	287	362	404	424	453			
2016				46	126	228	331	395	434	466			
2017					48	122	234	320	392	437			
2018						44	148	253	345	441			
2019							39	134	259	394			
2020								33	102	242			
2021									31	123			
2022										37			
Total										3,396			
All outstanding liabilities before 2013, net of reinsurance											86		
Liabilities for loss and ALAE, net of reinsurance											\$2,622		

The following table shows the average annual percentage payout of incurred losses for the commercial casualty line of business:

Average annual percentage payout of incurred losses by age, net of reinsurance (unaudited)											
Years	1	2	3	4	5	6	7	8	9	10	
Average annual percentage payout	6.9%	14.0%	18.9%	18.7%	13.5%	8.4%	5.1%	3.8%	2.7%	2.4%	

Workers' Compensation

The following table shows the workers' compensation incurred and paid losses and ALAE development by accident year. The table also shows the IBNR reserves plus expected development on reported losses and claim frequency:

(Dollars in millions, reported claims in thousands)											As of December 31, 2022		
Incurred losses and ALAE, net of reinsurance for the years ended December 31,											Total of incurred but not reported liabilities plus expected development on reported losses	Cumulative number of reported claims	
Accident Year	Unaudited												
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022			
2013	\$ 264	\$ 246	\$ 221	\$ 212	\$ 208	\$ 205	\$ 202	\$ 201	\$ 204	\$ 204	\$ 16	20	
2014		261	233	214	203	201	198	197	202	202	16	19	
2015			246	220	208	195	179	173	173	171	23	17	
2016				230	218	206	188	183	183	183	24	16	
2017					218	208	190	183	172	167	27	15	
2018						222	207	199	186	179	28	15	
2019							224	215	202	188	41	14	
2020								204	190	172	55	11	
2021									202	190	49	11	
2022										209	84	10	
Total										\$ 1,865			
Cumulative paid losses and ALAE, net of reinsurance													
2013	\$ 61	\$ 119	\$ 144	\$ 157	\$ 164	\$ 168	\$ 170	\$ 174	\$ 177	\$ 179			
2014		56	110	134	148	157	162	165	168	171			
2015			47	93	115	129	134	137	139	139			
2016				46	97	119	131	141	146	148			
2017					45	88	106	114	119	122			
2018						48	95	115	127	133			
2019							49	94	115	122			
2020								37	68	82			
2021									37	82			
2022										37			
Total										1,215			
All outstanding liabilities before 2013, net of reinsurance											311		
Liabilities for loss and ALAE, net of reinsurance											\$ 961		

The following table shows the average annual percentage payout of incurred losses for the workers' compensation line of business:

Average annual percentage payout of incurred losses by age, net of reinsurance (unaudited)											
Years	1	2	3	4	5	6	7	8	9	10	
Average annual percentage payout	24.8%	25.4%	11.2%	6.1%	3.8%	2.2%	1.3%	1.0%	1.3%	0.9%	

Commercial Auto

The following table shows the commercial auto incurred and paid losses and ALAE development by accident year. The table also shows the IBNR reserves plus expected development on reported losses and claim frequency:

(Dollars in millions, reported claims in thousands)						As of December 31, 2022	
Incurred losses and ALAE, net of reinsurance for the years ended December 31,						Total of incurred but not reported liabilities plus expected development on reported losses	Cumulative number of reported claims
Accident Year	Unaudited				2022		
	2018	2019	2020	2021			
2018	\$ 453	\$ 442	\$ 442	\$ 440	\$ 444	\$ 9	49
2019		452	451	453	469	18	46
2020			424	391	384	37	36
2021				470	477	91	39
2022					558	181	37
Total					\$ 2,332		
Cumulative paid losses and ALAE, net of reinsurance							
2018	\$ 184	\$ 266	\$ 337	\$ 378	\$ 411		
2019		183	268	333	395		
2020			154	214	280		
2021				179	278		
2022					217		
Total					1,581		
All outstanding liabilities before 2018, net of reinsurance					40		
Liabilities for loss and ALAE, net of reinsurance					\$ 791		

The following table shows the average annual percentage payout of incurred losses for the commercial auto line of business. Commercial auto includes both physical damage and liability losses. A majority of the incurred losses paid after year 2 are the result of liability losses.

Average annual percentage payout of incurred losses by age, net of reinsurance (unaudited)					
Years	1	2	3	4	5
Average annual percentage payout	39.4%	18.3%	15.6%	11.1%	7.8%

Commercial Property

The following table shows the commercial property incurred and paid losses and ALAE development by accident year. The table also shows the IBNR reserves plus expected development on reported losses and claim frequency:

(Dollars in millions, reported claims in thousands)						As of December 31, 2022	
Incurred losses and ALAE, net of reinsurance for the years ended December 31,						Total of incurred but not reported liabilities plus expected development on reported losses	Cumulative number of reported claims
Accident Year	Unaudited				2022		
	2018	2019	2020	2021			
2018	\$ 630	\$ 603	\$ 590	\$ 597	\$ 596	\$ 4	18
2019		621	606	600	598	6	17
2020			855	742	719	29	24
2021				607	586	15	14
2022					813	195	13
Total					\$ 3,312		
Cumulative paid losses and ALAE, net of reinsurance							
2018	\$ 386	\$ 559	\$ 576	\$ 589	\$ 592		
2019		413	561	579	590		
2020			489	637	672		
2021				326	527		
2022					393		
Total					2,774		
All outstanding liabilities before 2018, net of reinsurance					15		
Liabilities for loss and ALAE, net of reinsurance					\$ 553		

The following table shows the average annual percentage payout of incurred losses for the commercial property line of business:

Average annual percentage payout of incurred losses by age, net of reinsurance (unaudited)					
Years	1	2	3	4	5
Average annual percentage payout	61.1%	27.2%	3.6%	2.0%	0.4%

Personal Auto

The following table shows the personal auto incurred and paid losses and ALAE development by accident year. The table also shows the IBNR reserves plus expected development on reported losses and claim frequency:

(Dollars in millions, reported claims in thousands)						As of December 31, 2022	
Incurred losses and ALAE, net of reinsurance for the years ended December 31,						Total of incurred but not reported liabilities plus expected development on reported losses	Cumulative number of reported claims
Accident Year	Unaudited				2022		
	2018	2019	2020	2021			
2018	\$ 424	\$ 398	\$ 395	\$ 398	\$ 401	\$ 3	111
2019		399	383	380	383	4	102
2020			305	281	277	7	71
2021				350	343	14	80
2022					427	58	80
Total					\$ 1,831		
Cumulative paid losses and ALAE, net of reinsurance							
2018	\$ 262	\$ 327	\$ 358	\$ 379	\$ 391		
2019		250	314	346	363		
2020			186	225	248		
2021				219	278		
2022					277		
Total					1,557		
All outstanding liabilities before 2018, net of reinsurance					13		
Liabilities for loss and ALAE, net of reinsurance					\$ 287		

The following table shows the average annual percentage payout of incurred losses for the personal auto line of business. Personal auto includes both physical damage and liability losses. A majority of the incurred losses paid after year 2 are the result of liability losses.

Average annual percentage payout of incurred losses by age, net of reinsurance (unaudited)					
Years	1	2	3	4	5
Average annual percentage payout	65.2%	16.1%	8.2%	4.9%	2.8%

Homeowner

The following table shows the homeowner incurred and paid losses and ALAE development by accident year. The table also shows the IBNR reserves plus expected development on reported losses and claim frequency:

(Dollars in millions, reported claims in thousands)						As of December 31, 2022	
Incurred losses and ALAE, net of reinsurance for the years ended December 31,						Total of incurred but not reported liabilities plus expected development on reported losses	Cumulative number of reported claims
Accident Year	Unaudited				2022		
	2018	2019	2020	2021			
2018	\$ 370	\$ 386	\$ 387	\$ 388	\$ 386	\$ 1	24
2019		432	421	422	418	2	22
2020			497	475	470	7	23
2021				495	449	15	19
2022					552	120	17
Total					\$ 2,275		
Cumulative paid losses and ALAE, net of reinsurance							
2018	\$ 268	\$ 368	\$ 378	\$ 381	\$ 384		
2019		303	391	407	411		
2020			326	434	453		
2021				285	405		
2022					299		
Total					1,952		
All outstanding liabilities before 2018, net of reinsurance					6		
Liabilities for loss and ALAE, net of reinsurance					\$ 329		

The following table shows the average annual percentage payout of incurred losses for the homeowner line of business:

Average annual percentage payout of incurred losses by age, net of reinsurance (unaudited)					
Years	1	2	3	4	5
Average annual percentage payout	65.8%	24.2%	3.5%	0.9%	0.7%

Excess and Surplus Lines

The following table shows the excess and surplus lines incurred and paid losses and ALAE development by accident year. The table also shows the IBNR reserves plus expected development on reported losses and claim frequency:

(Dollars in millions, reported claims in thousands)											As of December 31, 2022		
Incurred losses and ALAE, net of reinsurance for the years ended December 31,											Total of incurred but not reported liabilities plus expected development on reported losses	Cumulative number of reported claims	
Accident Year	Unaudited												
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022			
2013	\$ 74	\$ 64	\$ 54	\$ 45	\$ 42	\$ 41	\$ 41	\$ 41	\$ 40	\$ 41	\$ —	2	
2014		95	82	75	64	60	59	59	58	56	1	2	
2015			96	81	73	67	65	66	65	61	1	2	
2016				93	87	84	82	90	91	88	2	3	
2017					104	95	95	94	94	91	5	3	
2018						116	109	110	108	107	14	3	
2019							137	135	141	139	28	3	
2020								172	172	160	51	3	
2021									217	235	98	3	
2022										294	198	2	
Total										\$ 1,272			
Cumulative paid losses and ALAE, net of reinsurance													
2013	\$ 7	\$ 12	\$ 20	\$ 27	\$ 32	\$ 34	\$ 37	\$ 39	\$ 39	\$ 40			
2014		9	17	27	37	43	48	51	53	55			
2015			8	19	29	41	51	54	56	58			
2016				10	21	39	51	62	75	81			
2017					11	23	41	57	68	77			
2018						11	26	50	62	75			
2019							13	34	55	79			
2020								16	37	56			
2021									17	45			
2022										21			
Total										587			
All outstanding liabilities before 2013, net of reinsurance											2		
Liabilities for loss and ALAE, net of reinsurance											\$ 687		

The following table shows the average annual percentage payout of incurred losses for the excess and surplus lines insurance segment. Excess and surplus lines consist mostly of commercial casualty and commercial property coverages. A majority of the incurred losses paid after year 2 are the result of commercial casualty losses.

Average annual percentage payout of incurred losses by age, net of reinsurance (unaudited)											
Years	1	2	3	4	5	6	7	8	9	10	
Average annual percentage payout	11.3%	13.7%	18.1%	16.1%	12.7%	9.1%	5.2%	3.3%	1.7%	2.8%	

NOTE 5 – Life Policy and Investment Contract Reserves

We establish the reserves for traditional life insurance policies based on expected expenses, mortality, morbidity, withdrawal rates, timing of claim presentation and investment yields, including a provision for uncertainty. Once these assumptions are established, they generally are maintained throughout the lives of the contracts. We use both our own experience and industry experience, adjusted for historical trends, in arriving at our assumptions for expected mortality, morbidity and withdrawal rates as well as for expected expenses. We base our assumptions for expected investment income on our own experience adjusted for current and future economic conditions.

We establish reserves for the company's universal life, deferred annuity and structured settlement policies equal to the cumulative account balances, which include premium deposits plus credited interest less charges and withdrawals. Some of our universal life policies contain no-lapse guarantee provisions. For these policies, we establish a reserve in addition to the account balance, based on expected no-lapse guarantee benefits and expected policy assessments.

This table summarizes our life policy and investment contract reserves:

(Dollars in millions)	At December 31,	
	2022	2021
Life policy reserves:		
Ordinary/traditional life	\$ 1,451	\$ 1,376
Other	54	52
Subtotal	1,505	1,428
Investment contract reserves:		
Deferred annuities	735	762
Universal life	682	679
Structured settlements	129	136
Other	8	9
Subtotal	1,554	1,586
Total life policy and investment contract reserves	\$ 3,059	\$ 3,014

NOTE 6 – Deferred Policy Acquisition Costs

Expenses directly related to successfully acquired insurance policies – primarily commissions, premium taxes and underwriting costs – are deferred and amortized over the terms of the policies. We update our acquisition cost assumptions periodically to reflect actual experience, and we evaluate the costs for recoverability. The table below shows the deferred policy acquisition costs and asset reconciliation:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Property casualty:			
Deferred policy acquisition costs asset, January 1	\$ 602	\$ 542	\$ 512
Capitalized deferred policy acquisition costs	1,383	1,211	1,087
Amortized deferred policy acquisition costs	(1,303)	(1,151)	(1,057)
Deferred policy acquisition costs asset, December 31	<u>\$ 682</u>	<u>\$ 602</u>	<u>\$ 542</u>
Life:			
Deferred policy acquisition costs asset, January 1	\$ 303	\$ 263	\$ 262
Capitalized deferred policy acquisition costs	60	59	58
Amortized deferred policy acquisition costs	(44)	(46)	(49)
Shadow deferred policy acquisition costs	13	27	(8)
Deferred policy acquisition costs asset, December 31	<u>\$ 332</u>	<u>\$ 303</u>	<u>\$ 263</u>
Consolidated:			
Deferred policy acquisition costs asset, January 1	\$ 905	\$ 805	\$ 774
Capitalized deferred policy acquisition costs	1,443	1,270	1,145
Amortized deferred policy acquisition costs	(1,347)	(1,197)	(1,106)
Shadow deferred policy acquisition costs	13	27	(8)
Deferred policy acquisition costs asset, December 31	<u>\$ 1,014</u>	<u>\$ 905</u>	<u>\$ 805</u>

No premium deficiencies were recorded in the consolidated statements of income in 2022, 2021 and 2020, as the sum of the anticipated loss and loss expenses, policyholder dividends and unamortized deferred acquisition expenses did not exceed the related unearned premiums and anticipated investment income.

NOTE 7 – Note Payable

We have one unsecured revolving credit facility through multiple commercial banks that expires on February 4, 2026. The borrowing capacity is \$300 million with an additional \$300 million accordion feature. Terms and conditions of the agreement include a debt-to-total capital maximum of 35%. We had no compensating balance requirements on short-term debt for either 2022 or 2021. The line of credit had \$50 million and \$54 million drawn at December 31, 2022 and 2021, respectively. The interest rate charged on our borrowings on this credit agreement ranged from 0.99% to 5.00% during 2022 and ranged from 0.97% to 1.03% during 2021. In addition, we have letters of credit related to our Cincinnati Re and Cincinnati Global operations with no amounts drawn at December 31, 2022 and 2021.

NOTE 8 – Long-Term Debt and Lease Obligations

This table summarizes the principal amounts of our long-term debt excluding unamortized discounts, none of which are encumbered by rating triggers:

(Dollars in millions)			Book value		Principal amount	
Interest rate	Year of issue		At December 31,		At December 31,	
			2022	2021	2022	2021
6.900%	1998	Senior debentures, due 2028	\$ 27	\$ 27	\$ 28	\$ 28
6.920%	2005	Senior debentures, due 2028	391	391	391	391
6.125%	2004	Senior notes, due 2034	371	371	374	374
Total			<u>\$ 789</u>	<u>\$ 789</u>	<u>\$ 793</u>	<u>\$ 793</u>

The finance lease term for equipment and autos is three to six years while the operating lease term for real estate properties is typically five years. Lease obligations totaled \$52 million and \$54 million in 2022 and 2021, respectively. Below are the lease obligations we expect to pay through 2028 and thereafter including \$4 million of interest for finance and operating leases:

(Dollars in millions)		Years ended December 31,					
		2023	2024	2025	2026	2027	2028 and thereafter
Finance lease obligations		\$ 16	\$ 12	\$ 8	\$ 6	\$ 3	\$ 2
Operating lease obligations		2	2	2	1	1	1
Total lease obligations		<u>\$ 18</u>	<u>\$ 14</u>	<u>\$ 10</u>	<u>\$ 7</u>	<u>\$ 4</u>	<u>\$ 3</u>

The following table provides lease cost and other information:

(Dollars in millions)		Years ended December 31,		
		2022	2021	2020
Lease cost:				
Finance lease cost		\$ 14	\$ 15	\$ 15
Operating lease cost		5	4	4
Total lease cost		<u>\$ 19</u>	<u>\$ 19</u>	<u>\$ 19</u>
Other information finance leases:				
Finance cash outflows		\$ 15	\$ 15	\$ 15
Weighted average discount rate		3.20%	2.46%	2.62%
Weighted average remaining lease term in years		3.49	3.45	3.67
Other information operating leases:				
Operating cash outflows		\$ 4	\$ 4	\$ 8
Weighted average discount rate		3.44%	2.86%	3.65%
Weighted average remaining lease term in years		4.53	4.37	4.84

NOTE 9 – Shareholders’ Equity and Dividend Restrictions

Declared cash dividends per share were \$2.76, \$2.52 and \$2.40 for the years ended December 31, 2022, 2021 and 2020, respectively.

Our lead insurance subsidiary, The Cincinnati Insurance Company, paid dividends to the parent company of \$729 million, \$583 million and \$550 million in 2022, 2021 and 2020, respectively. State regulatory requirements restrict the dividends insurance subsidiaries can pay. Generally, the most our lead insurance subsidiary can pay without prior regulatory approval is the greater of 10% of statutory capital and surplus or 100% of statutory net income for the prior calendar year. Dividends exceeding these limitations may be paid only with approval of the insurance department of the domiciliary state. During 2023, the total that our lead insurance subsidiary may pay in dividends is approximately \$651 million.

Dividend payments from Cincinnati Global to the parent company are subject to regulation by U.K. law. Cincinnati Global paid no dividends to the parent company in 2022, 2021 or 2020.

Accumulated Other Comprehensive Income

The table below shows beginning and end of year accumulated other comprehensive income (AOCI) for investments, pension obligations, life deferred acquisition costs, life policy reserves and other. The changes from the beginning of year to the end of year are the result of changes to other comprehensive income or loss (OCI).

(Dollars in millions)	2022			2021			2020		
	Before tax	Income tax	Net	Before tax	Income tax	Net	Before tax	Income tax	Net
Investments:									
AOCI, January 1	\$ 792	\$ 165	\$ 627	\$ 1,026	\$ 215	\$ 811	\$ 590	\$ 123	\$ 467
OCI before investment gains and losses, net, recognized in net income	(1,642)	(347)	(1,295)	(204)	(44)	(160)	371	78	293
Investment gains and losses, net, recognized in net income	3	—	3	(30)	(6)	(24)	65	14	51
OCI	(1,639)	(347)	(1,292)	(234)	(50)	(184)	436	92	344
AOCI, December 31	\$ (847)	\$ (182)	\$ (665)	\$ 792	\$ 165	\$ 627	\$ 1,026	\$ 215	\$ 811
Pension obligations:									
AOCI, January 1	\$ 27	\$ 7	\$ 20	\$ (41)	\$ (7)	\$ (34)	\$ (9)	\$ —	\$ (9)
OCI excluding amortization recognized in net income	12	2	10	62	12	50	(35)	(7)	(28)
Amortization recognized in net income	(3)	—	(3)	6	2	4	3	—	3
OCI	9	2	7	68	14	54	(32)	(7)	(25)
AOCI, December 31	\$ 36	\$ 9	\$ 27	\$ 27	\$ 7	\$ 20	\$ (41)	\$ (7)	\$ (34)
Life deferred acquisition costs, life policy reserves and other:									
AOCI, January 1	\$ 1	\$ —	\$ 1	\$ (10)	\$ (2)	\$ (8)	\$ (13)	\$ (3)	\$ (10)
OCI before investment gains and losses, net, recognized in net income	1	—	1	11	2	9	3	1	2
Investment gains and losses, net, recognized in net income	—	—	—	—	—	—	—	—	—
OCI	1	—	1	11	2	9	3	1	2
AOCI, December 31	\$ 2	\$ —	\$ 2	\$ 1	\$ —	\$ 1	\$ (10)	\$ (2)	\$ (8)
Summary of AOCI:									
AOCI, January 1	\$ 820	\$ 172	\$ 648	\$ 975	\$ 206	\$ 769	\$ 568	\$ 120	\$ 448
Investments OCI	(1,639)	(347)	(1,292)	(234)	(50)	(184)	436	92	344
Pension obligations OCI	9	2	7	68	14	54	(32)	(7)	(25)
Life deferred acquisition costs, life policy reserves and other OCI	1	—	1	11	2	9	3	1	2
Total OCI	(1,629)	(345)	(1,284)	(155)	(34)	(121)	407	86	321
AOCI, December 31	\$ (809)	\$ (173)	\$ (636)	\$ 820	\$ 172	\$ 648	\$ 975	\$ 206	\$ 769

Investments gains and losses, net, and life deferred acquisition costs, life policy reserves and other investment gains and losses, net, are recorded in the investment gains and losses, net, line item in the consolidated statements of income. Amortization on pension obligations is recorded in the insurance losses and contract holders' benefits and underwriting, acquisition and insurance expenses line items in the consolidated statements of income.

NOTE 10 – Reinsurance

Primary components of our property casualty reinsurance assumed operations include involuntary and voluntary assumed as well as contracts from our reinsurance assumed operations, known as Cincinnati Re. Primary components of our ceded reinsurance include a property per risk treaty, property excess treaty, casualty per occurrence treaty, casualty excess treaty, property catastrophe treaty and retrocessions on our reinsurance assumed operations. Management's decisions about the appropriate level of risk retention are affected by various factors, including changes in our underwriting practices, capacity to retain risks and reinsurance market conditions.

The table below summarizes our consolidated property casualty insurance net written premiums, earned premiums and incurred loss and loss expenses:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Direct written premiums	\$ 7,002	\$ 6,229	\$ 5,756
Assumed written premiums	619	515	335
Ceded written premiums	(314)	(265)	(227)
Net written premiums	<u>\$ 7,307</u>	<u>\$ 6,479</u>	<u>\$ 5,864</u>
Direct earned premiums	\$ 6,677	\$ 5,996	\$ 5,623
Assumed earned premiums	561	443	285
Ceded earned premiums	(314)	(255)	(217)
Earned premiums	<u>\$ 6,924</u>	<u>\$ 6,184</u>	<u>\$ 5,691</u>
Direct incurred loss and loss expenses	\$ 4,495	\$ 3,352	\$ 3,699
Assumed incurred loss and loss expenses	396	366	184
Ceded incurred loss and loss expenses	(175)	(122)	(46)
Incurred loss and loss expenses	<u>\$ 4,716</u>	<u>\$ 3,596</u>	<u>\$ 3,837</u>

Our life insurance company purchases reinsurance for protection of a portion of risks that are written. Primary components of our life reinsurance program include individual mortality coverage, aggregate catastrophe and accidental death coverage in excess of certain deductibles.

The table below summarizes our consolidated life insurance earned premiums and contract holders' benefits incurred:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Direct earned premiums	\$ 373	\$ 374	\$ 362
Ceded earned premiums	(78)	(76)	(73)
Earned premiums	<u>\$ 295</u>	<u>\$ 298</u>	<u>\$ 289</u>
Direct contract holders' benefits incurred	\$ 386	\$ 423	\$ 359
Ceded contract holders' benefits incurred	(90)	(83)	(62)
Contract holders' benefits incurred	<u>\$ 296</u>	<u>\$ 340</u>	<u>\$ 297</u>

The ceded benefits incurred can vary depending on the type of life insurance policy held and the year the policy was issued.

NOTE 11 – Income Taxes

The significant components of deferred tax assets and liabilities included in the consolidated balance sheets at December 31 were as follows:

(Dollars in millions)	At December 31,	
	2022	2021
Deferred tax assets:		
Unearned premiums	\$ 148	\$ 131
Loss and loss expense reserves	106	92
Net operating loss on international earnings	28	34
Deferred international earnings	16	31
Other	55	50
Deferred tax assets before valuation allowance	353	338
Valuation allowance for international operations	31	53
Deferred tax assets net of valuation allowance	322	285
Deferred tax liabilities:		
Investment gains and other, net	992	1,684
Deferred acquisition costs	171	155
Life policy reserves	112	116
Investments	31	38
Other	61	36
Total gross deferred tax liabilities	1,367	2,029
Net deferred income tax liability	\$ 1,045	\$ 1,744

Deferred tax assets and liabilities reflect temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amount recognized for tax purposes.

Deferred tax assets are reduced by a valuation allowance when management believes it is more likely than not that some, or all, of the deferred tax assets will not be realized. After considering all positive and negative evidence of taxable income in the carryback and carryforward periods as permitted by law, we believe it is more likely than not that all of the deferred tax assets on our U.S. domestic operations will be realized. As a result, we have no valuation allowance at December 31, 2022 and 2021, for our U.S. domestic operations. As more fully discussed below, we do carry a valuation allowance on the deferred tax assets related to Cincinnati Global.

For financial reporting purposes, income (loss) before income taxes includes the following components:

(Dollars in millions)	For the years ended December 31,		
	2022	2021	2020
United States	\$ (718)	\$ 3,644	\$ 1,521
International	25	26	(22)
Total income (loss) before income taxes	\$ (693)	\$ 3,670	\$ 1,499

The provision (benefit) for income taxes consists of:

(Dollars in millions)	For the years ended December 31,		
	2022	2021	2020
Provision (benefit) for income taxes:			
Current – United States federal	\$ 148	\$ 248	\$ 147
International	—	(1)	—
Total current	148	247	147
Deferred – United States federal	(355)	477	136
International	—	—	—
Total deferred	(355)	477	136
Total provision (benefit) for income taxes	\$ (207)	\$ 724	\$ 283

The differences between the 21% statutory federal income tax rate and our effective income tax rate were as follows:

(Dollars in millions)	Years ended December 31,					
	2022		2021		2020	
Tax at statutory rate:	\$ (146)	21.0 %	\$ 771	21.0 %	\$ 315	21.0 %
Increase (decrease) resulting from:						
Tax-exempt income from municipal bonds	(20)	2.9	(20)	(0.5)	(20)	(1.3)
Dividend received exclusion	(21)	3.0	(20)	(0.5)	(17)	(1.1)
Release of unrecognized tax benefit	(34)	4.9	—	—	—	—
Other	14	(1.9)	(7)	(0.3)	5	0.3
Provision (benefit) for income taxes	\$ (207)	29.9 %	\$ 724	19.7 %	\$ 283	18.9 %

The provision (benefit) for federal income taxes is based upon the filing of a consolidated income tax return for the company and its domestic subsidiaries within the United States. At December 31, 2022 and 2021, we had no operating or capital loss carryforwards in the United States. As more fully discussed below, Cincinnati Global, has operating loss carryforwards in the United Kingdom.

In response to the COVID-19 pandemic, various stimulus legislation was enacted in 2021 and 2020. We have evaluated the pandemic-related legislation enacted in 2021 and 2020 and the result of such legislation was immaterial to our financial statements.

Enactment of the Inflation Reduction Act of 2022

The Inflation Reduction Act of 2022 (Tax Act) was enacted on August 16, 2022. Along with other changes, the Tax Act created a new corporate alternative minimum tax (AMT) for certain corporations based on 15% of adjusted financial statement income for the taxable year. Even though we expect to be an applicable corporation for the purposes of the AMT in 2023, we do not expect the enactment of the Tax Act to have a material impact on our financial statements. In addition, the Tax Act imposes a 1% excise tax on corporate stock repurchases. The effective date of these two provisions was January 1, 2023.

Unrecognized Tax Benefits

During 2022, we received favorable guidance from the Internal Revenue Service (IRS) supporting our tax position related to our unrecognized tax benefit set up in 2018. As a result of this guidance, we released our \$34 million gross unrecognized tax benefit liability at December 31, 2022. The \$34 million release is recognized as an additional income tax benefit and is shown separately in our effective income tax rate reconciliation. The following is a tabular reconciliation of the total amounts of unrecognized tax benefits:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Gross unrecognized tax benefits, January 1	\$ 34	\$ 34	\$ 34
Gross increase in prior year positions	—	—	—
Gross decrease in prior year positions	(34)	—	—
Gross increase in current year positions	—	—	—
Settlements with tax authorities	—	—	—
Lapse of statute of limitations	—	—	—
Gross unrecognized tax benefits, December 31	\$ —	\$ 34	\$ 34

During 2022, the Congressional Joint Committee on Taxation completed its review of our 2017 tax return and related carryback claims with no change to our returns as filed. In January 2023, the IRS completed their review of our 2018 tax return with an immaterial decrease to our tax liability as originally filed.

The statute of limitations for federal tax purposes has closed for tax years ended December 31, 2016 and earlier. However, as a result of certain net operating loss carryback claims we have filed related to the tax year ended December 31, 2017, the IRS has a limited ability to assess tax for the 2015 tax year. During 2022, we held an opening conference with the IRS to begin their audit of our 2021 and 2020 tax years.

In addition to our IRS filings, we file income tax returns with immaterial amounts in various state jurisdictions and record these amounts in our provision for income taxes for both current and deferred taxes. The statute of limitations for state income tax purposes has closed for tax years ended December 31, 2018 and earlier.

Cincinnati Global operates in the United Kingdom and as such, is subject to tax in that jurisdiction. The statute of limitations for tax return review by His Majesty's Revenue and Customs (HMRC) has closed for tax years ended December 31, 2020 and earlier. There are currently no tax returns under review by HMRC.

Income taxes paid in our consolidated statements of cash flows are shown net of refunds received. We received no refunds in 2022, 2021 or 2020.

Cincinnati Global

Cincinnati Global's operating results for the year ended December 31, 2022, decreased their net deferred assets by \$22 million with an offsetting decrease of \$22 million to their valuation allowance. Cincinnati Global had a net deferred tax asset of \$31 million and an offsetting valuation allowance of \$31 million at December 31, 2022.

Deferred tax assets are reduced by a valuation allowance when management believes it is more likely than not that some, or all, of the deferred tax assets will not be realized. After considering all positive and negative evidence, we believe it was appropriate to set up a valuation allowance for purposes of our opening Cincinnati Global balance sheet and is appropriate to carry a valuation allowance at December 31, 2022, 2021 and 2020.

The following is a tabular reconciliation of the total amounts of our Cincinnati Global valuation allowance:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Valuation allowance, January 1	\$ 53	\$ 56	\$ 41
Current year operations	(22)	(3)	15
Valuation allowance, December 31	<u>\$ 31</u>	<u>\$ 53</u>	<u>\$ 56</u>

At December 31, 2022 and 2021, Cincinnati Global had operating loss carryforwards in the United States of \$5 million and \$8 million and in the United Kingdom of \$109 million and \$130 million, respectively. These Cincinnati Global losses can only be utilized within the Cincinnati Global group in both the United States and in the United Kingdom and cannot offset the income of our domestic operations in the United States.

NOTE 12 – Net Income (Loss) Per Common Share

Basic earnings per share are computed based on the weighted average number of common shares outstanding. Diluted earnings per share are computed based on the weighted average number of common and dilutive potential common shares outstanding using the treasury stock method. The table shows calculations for basic and diluted earnings per share:

(In millions, except per share data)	Years ended December 31,		
	2022	2021	2020
Numerator:			
Net income (loss)—basic and diluted	\$ (486)	\$ 2,946	\$ 1,216
Denominator:			
Basic weighted-average common shares outstanding	158.8	161.0	161.2
Effect of share-based awards:			
Stock options	—	1.1	0.7
Nonvested shares	—	0.6	0.5
Diluted weighted-average shares	158.8	162.7	162.4
Earnings (loss) per share:			
Basic	\$ (3.06)	\$ 18.29	\$ 7.55
Diluted	(3.06)	18.10	7.49
Number of anti-dilutive share-based awards	2.2	0.8	1.4

The sources of dilution of our common shares are certain equity-based awards as discussed in Note 17, Share-Based Associate Compensation Plans. The above table includes the number of anti-dilutive share-based awards at year-end 2022, 2021 and 2020. In accordance with Accounting Standards Codification 260, *Earnings per Share*, the assumed exercise of share-based awards were excluded from the computation of diluted loss per share for the year-ended 2022, because their exercise would have anti-dilutive effects.

NOTE 13 – Employee Retirement Benefits

We sponsor a qualified defined benefit pension plan that we closed entry into for new associates as of June 30, 2008, and only participants 40 years of age or older as of August 31, 2008, could elect to continue to participate. During 2008, we changed the form of retirement benefit we offer some associates to a company match on contributions to a 401(k) plan as further explained below. For participants remaining in the pension plan, we continue to fund future benefit obligations. Benefits for the defined benefit pension plan are based on years of credited service and compensation level. Contributions are based on the prescribed method defined in the Pension Protection Act. Our net periodic benefit cost is based on certain actuarial assumptions and also is composed of several components that are determined using the projected unit credit actuarial cost method. The qualified plan has been amended to allow for distribution of vested balances to terminated participants.

We sponsor a defined contribution plan (401(k) plan) for eligible associates with matching company contributions totaling \$24 million, \$22 million and \$22 million during the years 2022, 2021 and 2020, respectively. Associates who are not accruing benefits under the pension plan are eligible to receive the company match of up to 6% of cash compensation. Participants vest in the company match for the 401(k) plan after three years of eligible service.

We maintain a supplemental executive retirement plan (SERP) with a benefit obligation of \$8 million at year-end 2022 and \$9 million at year-end 2021, which is included in the projected benefit obligation. The company also makes available to a select group of associates the CFC Top Hat Savings Plan, a nonqualified deferred compensation plan, which had a fair value of \$57 million and \$64 million at December 31, 2022 and 2021, respectively. Company matching contributions to the CFC Top Hat Savings Plan totaled approximately \$1 million for the years 2022, 2021 and 2020, respectively.

Defined Benefit Pension Plan Assumptions

We evaluate our pension plan assumptions annually and update them as necessary. This is a summary of the weighted-average assumptions used to determine our benefit obligations at December 31 for the plans:

	Qualified Pension Plan		SERP	
	2022	2021	2022	2021
Discount rate	5.34 %	2.97 %	5.42 %	2.90 %
Rate of compensation increase	4.50	2.25-3.25	4.50	2.25-3.25

To determine the discount rate for each plan, a theoretical settlement portfolio of high-quality rated corporate bonds was chosen to provide payments approximately matching the plan's projected benefit payments. A single interest rate for each plan was determined resulting in a discounted value of the plan's benefit payments that equates to the market value of the selected bonds. The discount rate is reflective of current market interest rate conditions and our plan's liability characteristics. Based on this analysis, we increased the rate from the prior year by 2.37 percentage points for the qualified pension plan and by 2.52 percentage points for the SERP. Compensation increase assumptions reflect anticipated rates of inflation, real return on wage growth and merit and promotional increases. The mortality assumption is updated annually to reflect the updated mortality scales. The Pri-2012 tables with Scale MP-2021 was used for the years 2022 and 2021 and Scale MP-2020 was used for 2020.

This is a summary of the weighted-average assumptions used to determine our net periodic benefit cost for the plans:

	Qualified Pension Plan			SERP		
	2022	2021	2020	2022	2021	2020
Discount rate	2.97 %	2.68 %	3.40 %	2.90 %	2.52 %	3.33 %
Expected return on plan assets	7.00	7.00	7.00	n/a	n/a	n/a
Rate of compensation increase	2.25-3.25	2.25-3.25	2.25-3.25	2.25-3.25	2.25-3.25	2.25-3.25

The discount rate was increased by 0.29 percentage points for the qualified pension plan and 0.38 percentage points for the SERP due to market interest rate conditions at the beginning of 2022. The discount rate assumptions for our benefit obligation generally track with high-quality rated corporate bond yields chosen in our theoretical settlement portfolio, and yearly adjustments reflect any changes to those bond yields. We believe the expected

return on plan assets is representative of the expected long-term rate of return on these assets, which is consistent with 2022 expectations of interest rates and based partially on the fact that the plan's common stock holdings pay dividends. We review historical actual return on plan assets when determining our expected long-term rate of return. Total portfolio return for 2022 was negative 8.9% and for 2021 was 24.5%. Our compensation increase assumptions in 2022 reflect anticipated rates of inflation, real return on wage growth and merit and promotional increases.

Benefit obligation activity using an actuarial measurement date for our qualified pension plan and SERP at December 31 follows:

(Dollars in millions)	At December 31,	
	2022	2021
Change in projected benefit obligation:		
Benefit obligation, January 1	\$ 362	\$ 387
Service cost	9	10
Interest cost	10	10
Actuarial gain	(70)	(5)
Benefits paid	(29)	(41)
Other	—	1
Projected benefit obligation, December 31	<u>\$ 282</u>	<u>\$ 362</u>
Change in plan assets:		
Fair value of plan assets, January 1	\$ 397	\$ 357
Actual return on plan assets	(36)	78
Employer contribution	—	3
Benefits paid	(29)	(41)
Fair value of plan assets, December 31	<u>\$ 332</u>	<u>\$ 397</u>
Funded status, December 31	<u>\$ 50</u>	<u>\$ 35</u>
Accumulated benefit obligation	<u>\$ 264</u>	<u>\$ 338</u>

Our funded status for 2022 compared to 2021 improved primarily due to increases in actuarial gain from increases in discount rates, offset by lower year over year return on plan assets. Effective January 1, 2021, the lump sum basis was changed from a Pension Benefit Guaranty Corporation (PBGC) rate, which is no longer being published by the PBGC after December 31, 2020, and mortality rates based on GAM83 tables with minor adjustments, to Internal Revenue Code (IRC) Section 417(e) interest rates and IRC Section 417(e) mortality rates, updated annually and projected into the future. The lump sum annual update resulted in an immaterial change at December 31, 2021.

A reconciliation follows of the funded status for our qualified plan and SERP at the end of the measurement period to the amounts recognized in the consolidated balance sheets at December 31:

(Dollars in millions)	At December 31,	
	2022	2021
Pension amounts recognized in the consolidated balance sheets:		
Other assets	\$ 50	\$ 35
Total	<u>\$ 50</u>	<u>\$ 35</u>
Pension amounts recognized in accumulated other comprehensive income:		
Net actuarial gain	\$ 36	\$ 27
Total	<u>\$ 36</u>	<u>\$ 27</u>

Below are the components of our net periodic benefit cost, as well as other changes in plan assets and benefit obligations recognized in other comprehensive income for our qualified plan and SERP at December 31:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Net periodic benefit cost:			
Service cost	\$ 9	\$ 10	\$ 9
Non-service costs (benefit):			
Interest cost	10	10	12
Expected return on plan assets	(22)	(21)	(21)
Amortization of actuarial loss and prior service cost	—	6	3
Other	(3)	1	3
Net periodic benefit cost	<u>\$ (6)</u>	<u>\$ 6</u>	<u>\$ 6</u>
Other changes in plan assets and benefit obligations recognized in other comprehensive income:			
Current year actuarial (gain) loss	\$ (12)	\$ (62)	\$ 38
Amortization of actuarial gain (loss)	3	(7)	(6)
Current year prior service cost	—	1	—
Total recognized in other comprehensive (income) loss	<u>\$ (9)</u>	<u>\$ (68)</u>	<u>\$ 32</u>
Total recognized in net periodic benefit cost and other comprehensive (income) loss	<u>\$ (15)</u>	<u>\$ (62)</u>	<u>\$ 38</u>

The 2022 change in the amount recognized in other comprehensive income from 2021 is largely due to changes in the actuarial gain resulting from increases in discount rates, offset by a decrease of return on plan assets.

Service costs and non-service costs (benefit) are allocated in the same proportion primarily to underwriting, acquisition and insurance expenses line item with the remainder allocated to the insurance losses and contract holders' benefits line item on the consolidated statements of income for 2022, 2021 and 2020.

Defined Benefit Pension Plan Assets

The pension plan assets are managed to maximize total return over the long term while providing sufficient liquidity and current return to satisfy the cash flow requirements of the plan. The plan's day-to-day investment decisions are managed by our internal investment department; however, overall investment strategies are discussed with our employee benefits committee. Our investment strategy is to weight our portfolio towards large-cap, high-quality, dividend-growing equities that we have historically favored. As our plan matures and interest rates normalize, we expect a greater allocation to fixed-income securities to better align asset and liability market risks. Our fixed-maturity bond portfolio is investment grade. The plan does not engage in derivative transactions.

Excluding cash, during 2022 we held approximately 85% of our pension portfolio in domestic common equity investments. The remainder of the portfolio consisted of 11% in United States government fixed-maturity

investments, 2% in both domestic corporate fixed-maturity investments and states, municipalities and taxable political subdivisions fixed-maturity investments. Our common equity portfolio consisted of 25% in the information technology sector, 19% in the financial sector, 16% in the healthcare sector, and 14% in the industrial sector, at year-end 2022. No additional sectors accounted for 10% or more of our common equity portfolio balance at year-end 2022.

Investments in securities are valued based on the fair value hierarchy outlined in Note 3, Fair Value Measurements. The pension plan did not have any liabilities carried at fair value during the years ended December 31, 2022 and 2021. The following table shows the fair value hierarchy for those assets measured at fair value on a recurring basis at December 31, 2022 and 2021. Excluded from the table below is cash on hand of \$43 million and \$16 million at December 31, 2022 and 2021, respectively.

(Dollars in millions)						
At December 31, 2022	Level 1		Level 2		Level 3	Total
Fixed maturities, available for sale:						
United States government	\$	31	\$	—	\$	31
Corporate		—		7		7
States, municipalities and political subdivisions		—		6		6
Total fixed maturities, available for sale		31		13		44
Common equities		245		—		245
Total	\$	276	\$	13	\$	289
At December 31, 2021						
Fixed maturities, available for sale:						
United States government	\$	31	\$	—	\$	31
Corporate		—		11		11
States, municipalities and political subdivisions		—		7		7
Total fixed maturities, available for sale		31		18		49
Common equities		332		—		332
Total	\$	363	\$	18	\$	381

Our pension plan assets included 100,610 and 202,337 shares of the company's common stock at December 31, 2022 and 2021, which had a fair value of \$10 million and \$23 million at December 31, 2022 and 2021, respectively. The defined benefit pension plan did not purchase any of our common stock during 2022 or 2021. The defined benefit pension plan sold 101,727 shares of our common stock during 2022 and did not sell any shares during 2021. The company paid less than \$1 million in both 2022 and 2021 in cash dividends on our common stock to the pension plan.

We estimate \$6 million of benefit payments from the SERP during 2023. We expect to make the following benefit payments for our qualified plan and SERP, reflecting expected future service:

(Dollars in millions)		Years ended December 31,					
		2023	2024	2025	2026	2027	2028 - 2032
Expected future benefit payments	\$	57	\$ 20	\$ 23	\$ 28	\$ 27	\$ 140

NOTE 14 – Statutory Accounting Information

Insurance companies' statutory financial statements are presented on the basis of accounting practices prescribed or permitted by applicable state insurance departments of domicile. Insurance companies use statutory accounting practices (SAP) as recognized by various states. We have adopted the National Association of Insurance Commissioners' (NAIC) *Accounting Practices and Procedures* manual, version effective January 1, 2001, and updates through the current year as a component of prescribed or permitted practices by laws of the state of domicile. The primary differences between SAP and GAAP include the valuation of investment gains and losses, expensing of policy acquisition costs, actuarial assumptions for life insurance reserves and deferred income taxes based on differences in statutory and taxable income.

Statutory net income and capital and surplus are determined in accordance with SAP prescribed or permitted by insurance regulatory authorities for five legal entities, our lead insurance subsidiary and its four insurance subsidiaries. Statutory capital and surplus for our insurance subsidiary, The Cincinnati Insurance Company, includes capital and surplus of its four insurance subsidiaries. All capital and surplus amounts exceed statutory risk-based capital requirements. The statutory net income and statutory capital and surplus are presented below:

(Dollars in millions)	Net income			Capital and surplus	
	Years ended December 31,			At December 31,	
	2022	2021	2020	2022	2021
The Cincinnati Insurance Company	\$ 520	\$ 929	\$ 466	\$ 6,512	\$ 7,247
The Cincinnati Casualty Company	14	15	14	495	500
The Cincinnati Indemnity Company	4	5	3	126	126
The Cincinnati Specialty Underwriters Insurance Company	61	47	42	542	571
The Cincinnati Life Insurance Company	64	41	27	326	270

NOTE 15 – Transactions With Affiliated Parties

We paid certain officers and directors, or insurance agencies of which they are shareholders, commissions of \$9 million, \$8 million and \$7 million on premium volume of \$47 million, \$47 million and \$45 million for 2022, 2021 and 2020, respectively.

NOTE 16 – Commitments and Contingent Liabilities

The company, through its insurance subsidiaries, is involved in claims litigation arising in the ordinary course of conducting its business, both as a liability insurer defending or providing indemnity for third-party claims brought against insureds and as an insurer defending coverage claims brought against it. The company accounts for such activity through the establishment of unpaid loss and loss expense reserves. Subject to the uncertainties discussed in Note 4, Property Casualty Loss and Loss Expenses, and in the discussion in the balance of this Note, we believe that the ultimate liability, if any, with respect to such ordinary-course claims litigation, after consideration of provisions made for potential losses, costs of defense, and reinsurance recoveries, is immaterial to our consolidated financial position, results of operations and cash flows.

Beginning in April 2020, like many companies in the property casualty insurance industry, the company's property casualty subsidiaries, were named as defendants in lawsuits seeking insurance coverage under commercial property insurance policies issued by the company for alleged losses resulting from the shutdown or suspension of their businesses due to the COVID-19 pandemic. Although the allegations vary, the plaintiffs generally seek a declaration of insurance coverage, damages for breach of contract in unspecified amounts for claim denials, interest and attorney fees. Some of the lawsuits also allege that the insurance claims were denied in bad faith or otherwise in violation of state laws and seek extra-contractual or punitive damages.

The company denies the allegations in these lawsuits and intends to continue to vigorously defend the lawsuits. The company maintains that it has no coverage obligations with respect to these lawsuits for business income allegedly lost by the plaintiffs due to the COVID-19 pandemic based on the terms of the applicable insurance policies. Although the policy terms vary, in general, the claims at issue in these lawsuits were denied because the policyholder identified no direct physical loss or damage to property at the insured premises, and the governmental orders that led to the complete or partial shutdown of the business were not due to the existence of any direct physical loss or damage to property in the immediate vicinity of the insured premises and did not prohibit access to the insured premises, as required by the terms of the insurance policies. Depending on the individual policy, additional policy terms and conditions may also prohibit coverage, such as exclusions for pollutants, ordinance or law, loss of use, and acts or decisions. The company's standard commercial property insurance policies generally did not contain a specific virus exclusion.

In addition to the inherent difficulty in predicting litigation outcomes, the COVID-19 pandemic business income coverage lawsuits present a number of uncertainties and contingencies that are not yet known, including how many policyholders will ultimately file claims, the number of lawsuits that will be filed, the extent to which any class may be certified, and the size and scope of any such classes. The legal theories advanced by plaintiffs vary by case as do the state laws that govern the policy interpretation. These lawsuits are at various stages of litigation, including several that continue to be amended; many that have been dismissed; several that may be refiled; and others that have been dismissed by trial courts and appealed. While appellate decisions issued to date generally have been favorable for the insurance industry and the company, many remain to be decided. In some jurisdictions, many cases have been stayed pending appellate decisions in their state or federal circuit. Accordingly, little discovery has occurred on pending cases. In addition, business income calculations depend upon a wide range of factors that are particular to the circumstances of each individual policyholder and, here, virtually none of the plaintiffs have submitted proofs of loss or otherwise quantified or factually supported any allegedly covered loss. Moreover, the company's experience shows that demands for damages often bear little relation to a reasonable estimate of potential loss. Accordingly, management cannot now reasonably estimate the possible loss or range of loss, if any. Nonetheless, given the number of claims and potential claims, the indeterminate amounts sought, and the inherent unpredictability of litigation, it is possible that adverse outcomes, if any, in the aggregate could have a material adverse effect on the company's consolidated financial position, results of operations and cash flows.

The company and its subsidiaries also are occasionally involved in other legal and regulatory proceedings, some of which assert claims for substantial amounts. These actions include, among others, putative class actions seeking certification of state or national classes. Such proceedings have alleged, for example, improper depreciation of labor costs in repair estimates. The company's insurance subsidiaries also are occasionally parties to individual actions in which extra-contractual damages, punitive damages or penalties are sought, such as claims alleging bad faith handling of insurance claims or writing unauthorized coverage or claims alleging discrimination by former or current associates.

On a quarterly basis, we review these outstanding matters. Under current accounting guidance, we establish accruals when it is probable that a loss has been incurred and we can reasonably estimate its potential exposure. The company accounts for such probable and estimable losses, if any, through the establishment of legal expense reserves. Based on our quarterly review, we believe that our accruals for probable and estimable losses are reasonable and that the amounts accrued do not have a material effect on our consolidated financial position, results of operations and cash flows. However, if any one or more of these matters results in a judgment against us or settlement for an amount that is significantly greater than the amount accrued, the resulting liability could have a material effect on the company's consolidated financial position, results of operations and cash flows. Based on our most recent review, our estimate for any other matters for which the risk of loss is not probable, but more than remote, is immaterial.

NOTE 17 – Share-Based Associate Compensation Plans

Four equity compensation plans currently permit us to grant various types of equity awards. We currently grant incentive stock options, nonqualified stock options, service-based restricted stock units and performance-based restricted stock units to associates, including some with market-based performance objectives under our shareholder-approved plans. We also have a Holiday Stock Plan that permits annual awards of one share of common stock to each full-time associate for each full calendar year of service up to a maximum of 10 shares. One of our equity compensation plans permits us to grant stock to our outside directors as a component of their annual compensation. We used treasury shares for share-based compensation award issues or exercises during 2022 and 2021.

Share-based compensation cost after tax was \$29 million, \$26 million and \$25 million for the years ended December 31, 2022, 2021 and 2020, respectively. The related income tax benefit recognized was \$7 million, \$6 million and \$6 million for the years ended December 31, 2022, 2021 and 2020, respectively. Options exercised during the years ended December 31, 2022, 2021 and 2020, had intrinsic value of \$21 million, \$24 million and \$15 million, respectively. Intrinsic value is the market price less the exercise price. Options vested during the years ended December 31, 2022, 2021 and 2020, had total intrinsic value of \$2 million, \$15 million and \$7 million, respectively.

As of December 31, 2022, we had \$39 million of unrecognized total compensation cost related to nonvested stock options and restricted stock unit awards. That cost will be recognized over a weighted-average period of 1.8 years.

Stock Options

Stock options are granted to associates at an exercise price equal to the fair value as determined by the average high and low sales price reported on the Nasdaq Global Select Market for the grant date and are exercisable over 10-year periods. The stock options generally vest ratably over a three-year period. In determining the share-based compensation amounts, we estimate the fair value of each option granted on the date of grant using the Black Scholes pricing model. We make the following assumptions to develop the Black Scholes pricing model as follows:

- Weighted-average expected term is based on historical experience of similar awards with consideration for current exercise trends.
- Expected volatility is based on our stock price over a historical period that approximates the expected term.
- Dividend yield is determined by dividing the annualized per share dividend by the stock price on the date of grant.
- Risk-free rates are the implied yield currently available on zero-coupon U.S. Treasury issues with a remaining term approximating the expected term.

The following weighted average assumptions were used in determining fair value for option grants issued:

	2022	2021	2020
Weighted-average expected term	7-9 years	7-9 years	7-8 years
Expected volatility	26.34-28.87%	25.56-27.81%	16.89-17.13%
Dividend yield	2.23%	2.62%	2.15%
Risk-free rates	1.90-1.92%	0.97-1.26%	1.40-1.41%
Weighted-average fair value of options granted during the period	\$30.34	\$19.64	\$15.45

Below is a summary of option information for the year 2022:

(Dollars in millions, except exercise price. Shares in thousands)

	Shares	Weighted-average exercise price	Aggregate intrinsic value	Weighted-average remaining contractual life
Outstanding option shares at January 1, 2022	3,552	\$ 78.52		
Granted	469	123.94		
Exercised	(330)	59.55		
Forfeited or expired	(83)	75.95		
Outstanding option shares at December 31, 2022	<u>3,608</u>	86.21	\$ 73	5.74 years
Options exercisable at end of period	2,763	\$ 78.04	\$ 71	4.90 years

Cash received from the exercise of options was \$10 million, \$13 million and \$7 million for the years ended December 31, 2022, 2021 and 2020, respectively. We acquired 80,538, 77,947 and 50,751 shares totaling \$10 million, \$8 million and \$5 million, respectively, from associates in consideration for option exercises during 2022, 2021 and 2020. The weighted-average remaining contractual life for options expected to vest as of December 31, 2022, was 8.48 years.

Under all active shareholder approved plans, a total of 17.3 million shares were authorized to be granted. At December 31, 2022, 4.6 million shares remained available for future issuance under the plans. During 2022, we granted 11,563 shares of common stock to our directors for 2021 board service fees.

Restricted Stock Units

Service-based restricted stock units granted to associates are valued at fair value of the shares on the date of grant less the present value of the dividends that holders of restricted stock units do not receive on the shares underlying the restricted stock units during the vesting period. Service-based restricted stock units generally cliff vest three years after the date of grant. We also grant restricted stock units which vest on a three year ratable vesting schedule. Service-based restricted stock units vested during the year had an intrinsic value of \$32 million, \$26 million and \$30 million for the years ended December 31, 2022, 2021 and 2020, respectively.

We have performance-based awards that vest on the first day of March after a three-calendar-year performance period. These awards vest according to the level of three-year total shareholder return achieved compared with a peer group over a three-year performance period with payouts ranging from 0% to 200% for awards granted in 2022, 2021 and 2020. Three-year total shareholder return is calculated by using annualized total return of a stock to an investor due to capital gain appreciation plus reinvestment of all dividends.

For the three-year performance period ended December 31, 2022, our total shareholder return exceeded one of our eight peers. We expect no payout of these shares to occur in March of 2023. During 2022, we issued 52,335 shares of performance-based restricted stock units at the target-level performance hurdle for the three-year performance period ended December 31, 2021, as our total shareholder return exceeded six of nine peers in our 2019 peer group. We issued 113,648 shares of performance-based restricted stock units during 2021 at the maximum-level performance hurdle for the three-year performance period ended December 31, 2020, as our total shareholder return exceeded eight of nine peers in our 2018 peer group. Performance-based awards vested during the year had an intrinsic value of \$6 million, \$11 million and \$5 million for the years ended December 31, 2022, 2021 and 2020, respectively.

These performance-based awards are valued using a Monte-Carlo valuation on the date of grant, which uses a risk-neutral framework to model future stock price movements based upon the risk-free rate of return, the volatility of each peer and the pairwise correlations of each peer being modeled. Compensation cost is recognized regardless of whether the market-based performance objective has been satisfied. We make assumptions to develop the Monte-Carlo model as follows:

- Correlation coefficients are based upon the stock price data used to calculate the historical volatilities. The correlation coefficients are used to model the way the price of each entity's stock tends to move in relation to each other.

- Expected volatility is based on each company's historical volatility using daily stock price observations with the period commensurate with the performance measurement period.
- Dividend yield assumption is based on our current expected annual cash dividend and the valuation date stock price.
- Risk-free rates are equal to the yield, as of the measurement date, of the zero-coupon U.S. Treasury bill that is commensurate with the performance measurement period.

The following assumptions were used in determining fair value for performance-based grants issued:

	2022	2021	2020
Expected term	2.86 years	2.85 years	2.86 years
Expected volatility	30.09-49.28%	29.50-47.26%	15.88-25.13%
Dividend yield	2.19%	2.62%	2.15%
Risk-free rates	1.64%	0.20%	1.30%

Below is a summary of service-based and performance-based share information, assuming a target payout for performance-based shares, for the year 2022:

(Shares in thousands)				
	Service-based shares	Weighted- average grant date fair value	Performance-based shares	Weighted- average grant date fair value
Nonvested at January 1, 2022	634	\$ 90.01	139	\$ 103.16
Granted	176	116.22	68	140.50
Vested	(256)	81.73	(52)	87.97
Forfeited or canceled	(31)	101.24	—	—
Nonvested at December 31, 2022	<u>523</u>	<u>102.26</u>	<u>155</u>	<u>124.69</u>

NOTE 18 – Segment Information

We operate primarily in two industries, property casualty insurance and life insurance. Our chief operating decision maker regularly reviews our reporting segments to make decisions about allocating resources and assessing performance. Our reporting segments are:

- Commercial lines insurance
- Personal lines insurance
- Excess and surplus lines insurance
- Life insurance
- Investments

We report as Other the noninvestment operations of the parent company and its noninsurer subsidiary, CFC Investment Company. We also report as Other the underwriting results of Cincinnati Re and Cincinnati Global.

Revenues come primarily from unaffiliated customers:

- All four insurance segments record revenues from insurance premiums earned.
- Fee revenues for the commercial, personal and excess and surplus insurance segments primarily represent installment fees. Fee revenues for the life insurance segment represent separate account investment management fees.
- Our investments' revenues consist of pretax net investment income and investment gains and losses.
- Other revenues are primarily finance income and earned premiums of Cincinnati Re and Cincinnati Global.

Income or loss before income taxes for each segment is reported based on the nature of that business area's operations:

- Income before income taxes for the insurance segments is defined as underwriting profit or loss.
 - For commercial lines, personal lines and excess and surplus lines insurance segments, we calculate underwriting profit or loss as premiums earned and fee revenue minus loss and loss expenses and underwriting expenses incurred.
 - For the life insurance segment, we calculate underwriting profit or loss as premiums earned and fee revenue, minus contract holders' benefits and expenses incurred, plus investment interest credited to contract holders.
- Income before income taxes for the investments segment is net investment income plus investment gains and losses for investments of the entire company, minus investment interest credited to contract holders of the life insurance segment.
- Loss before income taxes for the Other category is primarily due to interest expense from debt of the parent company, operating expenses of our headquarters and premiums earned minus loss and loss expenses and underwriting expenses of Cincinnati Re and Cincinnati Global.

We do not separately report the identifiable assets of property casualty insurance for the commercial, personal and excess and surplus lines segments or for Cincinnati Re because we do not use that measure to analyze performance. We include all investment portfolio assets, regardless of ownership, in the investments segment.

Segment information is summarized in the following table:

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Revenues:			
Commercial lines insurance			
Commercial casualty	\$ 1,416	\$ 1,270	\$ 1,165
Commercial property	1,136	1,043	1,010
Commercial auto	842	794	755
Workers' compensation	284	268	271
Other commercial	346	299	275
Commercial lines insurance premiums	4,024	3,674	3,476
Fee revenues	4	4	3
Total commercial lines insurance	4,028	3,678	3,479
Personal lines insurance			
Personal auto	626	609	615
Homeowner	829	726	658
Other personal	234	207	190
Personal lines insurance premiums	1,689	1,542	1,463
Fee revenues	4	4	4
Total personal lines insurance	1,693	1,546	1,467
Excess and surplus lines insurance	485	398	325
Fee revenues	2	2	2
Total excess and surplus lines insurance	487	400	327
Life insurance premiums	295	298	289
Fee revenues	4	5	2
Total life insurance	299	303	291
Investments			
Investment income, net of expenses	781	714	670
Investment gains and losses, net	(1,467)	2,409	865
Total investment revenue	(686)	3,123	1,535
Other			
Premiums	726	570	427
Other	10	10	10
Total other revenue	736	580	437
Total revenues	\$ 6,557	\$ 9,630	\$ 7,536
Income (loss) before income taxes:			
Insurance underwriting results			
Commercial lines insurance	\$ 38	\$ 598	\$ 64
Personal lines insurance	18	97	47
Excess and surplus lines insurance	48	44	34
Life insurance	28	(16)	11
Investments	(795)	3,018	1,433
Other	(30)	(71)	(90)
Total income (loss) before income taxes	\$ (693)	\$ 3,670	\$ 1,499
Identifiable assets:			
	December 31,	December 31,	
	2022	2021	
Property casualty insurance	\$ 5,178	\$ 4,421	
Life insurance	1,522	1,590	
Investments	22,133	24,481	
Other	903	895	
Total	\$ 29,736	\$ 31,387	

ITEM 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

We had no disagreements with the independent registered public accounting firm on accounting and financial disclosure during the last two fiscal years.

ITEM 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures – The company maintains disclosure controls and procedures (as that term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act)).

Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. The company's management, with the participation of the company's chief executive officer and chief financial officer, has evaluated the effectiveness of the design and operation of the company's disclosure controls and procedures as of December 31, 2022. Based upon that evaluation, the company's chief executive officer and chief financial officer concluded that the design and operation of the company's disclosure controls and procedures provided reasonable assurance that the disclosure controls and procedures are effective to ensure that:

- information required to be disclosed in the company's reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and
- such information is accumulated and communicated to the company's management, including its chief executive officer and chief financial officer, as appropriate, to allow for timely decisions regarding required disclosures.

Changes in Internal Control over Financial Reporting – During the three months ended December 31, 2022, there were no changes in our internal controls over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. There was no significant impact to our internal controls over financial reporting while the majority of our headquarters associates transitioned to a hybrid work schedule, regularly alternating between work at our headquarters and work from remote locations. We are continually monitoring and assessing any potential impact on the design and operating effectiveness of our internal controls over financial reporting, caused by or related to the pandemic. Management's Annual Report on Internal Control Over Financial Reporting and the Report of the Independent Registered Public Accounting Firm are set forth in Item 8.

ITEM 9B. Other Information

None

ITEM 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

This item is not applicable to the company.

Part III

Our Proxy Statement will be filed with the SEC no later than April 30, 2023, in preparation for the 2023 Annual Meeting of Shareholders scheduled for May 6, 2023. As permitted in Paragraph G(3) of the General Instructions for Form 10-K, we are incorporating by reference, to that statement, portions of the information required by Part III as noted in Item 10 through Item 14 below.

ITEM 10. Directors, Executive Officers and Corporate Governance

- a) The following sections of our Proxy Statement for our 2023 Annual Meeting of Shareholders to be held May 6, 2023, are incorporated herein by reference: “Delinquent Section 16(a) Reports,” “Information about the Board of Directors,” and “Governance of Your Company.”
- b) Information about the “Code of Ethics for Senior Financial Officers” appeared in the 2004 Proxy Statement as an appendix and is available at cinfin.com/investors. Our Code of Ethics applies to those who are responsible for preparing and disclosing our financial information. This includes our chief executive officer, chief financial officer and others performing similar functions.
- c) Set forth below is information concerning the company's executive officers who are not also directors of the company, as of February 23, 2023.

Name and Age as of February 23, 2023	Primary Title(s) and Business Responsibilities Since February 2018	Executive Officer Since
Roger A. Brown, FSA, MAAA, CLU (51)	Senior vice president and chief operating officer of The Cincinnati Life Insurance Company. Responsible for life insurance underwriting and operations.	2016
Teresa C. Cracas, Esq. (57)	Chief risk officer and executive vice president of The Cincinnati Insurance Company. Senior vice president until 2022. Responsible for strategic planning and risk management, including oversight of modeling for financial analysis, property casualty reserving and pricing, strategic innovation, reinsurance assumed operations and the activities of Cincinnati Global Underwriting Ltd., a London-based, global specialty underwriter for Lloyd's Syndicate 318.	2011
Angela O. Delaney (54)	Senior vice president of The Cincinnati Insurance Company. Responsible for property casualty insurance sales and marketing operations since 2019, including management of field underwriters and independent agency relationships. Field sales supervisor for Idaho, Iowa, Montana, Oregon, South Dakota and Washington from 2017 to 2019.	2020
Donald J. Doyle, Jr., CPCU, AIM (56)	Senior vice president of The Cincinnati Insurance Company. Responsible for excess and surplus lines underwriting and operations of The Cincinnati Specialty Underwriters Insurance Company and CSU Producer Resources Inc.	2008
Sean M. Givler, CIC, CRM (47)	Senior vice president of The Cincinnati Insurance Company. Responsible for standard market commercial lines underwriting and operations, including management liability and surety insurance, machinery and equipment insurance, loss control and premium audit. Until 2019, responsible for sales and marketing, including management of field underwriters and independent agency relationships.	2017
Theresa A. Hoffer (61)	Senior vice president and treasurer of The Cincinnati Insurance Company since 2016. Responsible for corporate accounting and SEC reporting operations.	2017
John S. Kellington (61)	Chief information officer and executive vice president of The Cincinnati Insurance Company. Senior vice president until 2022. Responsible for enterprise technology platforms and related activities.	2010

Name and Age as of February 23, 2023	Primary Title(s) and Business Responsibilities Since February 2018	Executive Officer Since
Lisa A. Love, Esq. (63)	Chief legal officer, executive vice president and corporate secretary of Cincinnati Financial Corporation. Senior vice president and general counsel until 2022. Responsible for corporate legal, governance and compliance activities, including oversight of regulatory and compliance, shareholder services, government relations, litigation and contract administration.	2011
Marc J. Schambow, CPCU, AIM, ASLI (57)	Chief claims officer and senior vice president of The Cincinnati Insurance Company. Responsible for all headquarters and field claims operations, including special investigations and claims administration. Until 2020, vice president of field claims.	2022
Michael J. Sewell, CPA (59)	Chief financial officer, principal accounting officer, executive vice president and treasurer of Cincinnati Financial Corporation. Senior vice president until 2022. Chief operating officer of CFC Investment Company, a commercial lease and finance subsidiary. Responsible for oversight of all accounting, finance, financial reporting, purchasing, investor relations, administrative services and facilities maintenance and security.	2011
Steven A. Soloria, CFA, CPCU (56)	Chief investment officer and senior vice president of The Cincinnati Insurance Company. Responsible for all investment operations. Vice president of investments until 2022.	2023
Stephen M. Spray (56)	President of Cincinnati Financial Corporation. Responsible for executive oversight of life insurance, commercial and personal standard market and excess and surplus lines property and casualty insurance sales, marketing, underwriting, related field services, relationships with independent agents, ceded reinsurance programs, corporate communications and human resources. Chief insurance officer of The Cincinnati Insurance Company and its property casualty subsidiaries until 2022. Until 2019, senior vice president responsible for commercial lines underwriting and operations.	2012
William H. Van Den Heuvel (56)	Senior vice president of The Cincinnati Insurance Company. Responsible for all aspects of personal lines operations, including underwriting, insurance regulatory filings, product management and risk management.	2014

ITEM 11. Executive Compensation

The “Compensation of Named Executive Officers and Directors,” section of our Proxy Statement for our Annual Meeting of Shareholders to be held May 6, 2023, is incorporated herein by reference. It includes the “Report of the Compensation Committee,” “Compensation Committee Interlocks and Insider Participation” and the “Compensation Discussion and Analysis.”

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

- a) The “Security Ownership of Principal Shareholders and Management” section of our Proxy Statement for our Annual Meeting of Shareholders to be held May 6, 2023, is incorporated herein by reference.
- b) Information on securities authorized for issuance under equity compensation plans appears in Part II, Item 5, Market for the Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities. Additional information on share-based compensation under our equity compensation plans is available in Item 8, Note 17 of the Consolidated Financial Statements.

ITEM 13. Certain Relationships and Related Transactions, and Director Independence

The following sections of our Proxy Statement for our Annual Meeting of Shareholders to be held May 6, 2023, are incorporated herein by reference: “Governance of Your Company – Director Independence” and “Governance of Your Company – Certain Relationships and Transactions.”

ITEM 14. Principal Accounting Fees and Services

The “Audit-Related Matters,” section of our Proxy Statement for our Annual Meeting of Shareholders to be held May 6, 2023, is incorporated herein by reference. It includes the “Proposal 5 – Ratification of Selection of Independent Registered Public Accounting Firm,” “Report of the Audit Committee,” “Fees Billed by the Independent Registered Public Accounting Firm” and “Services Provided by the Independent Registered Public Accounting Firm.”

Part IV

ITEM 15. Exhibit and Financial Statement Schedules

- a) Financial Statements – information contained in Part II, Item 8, of this report, Page 118 to Page 174
- b) Exhibits – see Index of Exhibits, Page 192
- c) Financial Statement Schedules
 - Schedule I – Summary of Investments – Other Than Investments in Related Parties, Page 181
 - Schedule II – Condensed Financial Statements of Parent Company, Page 183
 - Schedule III – Supplementary Insurance Information, Page 186
 - Schedule IV – Reinsurance, Page 188
 - Schedule V – Valuation and Qualifying Accounts, Page 189
 - Schedule VI – Supplementary Information Concerning Property Casualty Insurance Operations, Page 190

ITEM 16. Form 10-K Summary

This item is not applicable to the company.

Schedule I

Cincinnati Financial Corporation and Subsidiaries Summary of Investments - Other Than Investments in Related Parties

(Dollars in millions)	At December 31, 2022		
Type of investment	Cost or amortized cost	Fair value	Balance sheet
Fixed maturities:			
States, municipalities and political subdivisions:			
The Cincinnati Insurance Company	\$ 3,401	\$ 3,271	\$ 3,271
The Cincinnati Casualty Company	243	230	230
The Cincinnati Indemnity Company	48	46	46
The Cincinnati Life Insurance Company	459	383	383
The Cincinnati Specialty Underwriters Insurance Company	688	640	640
Cincinnati Financial Corporation	62	52	52
Total	4,901	4,622	4,622
United States government:			
The Cincinnati Insurance Company	139	135	135
The Cincinnati Casualty Company	1	1	1
The Cincinnati Indemnity Company	1	1	1
Cincinnati Global Underwriting Ltd.	55	54	54
Total	196	191	191
Government-sponsored enterprises:			
The Cincinnati Insurance Company	15	15	15
The Cincinnati Casualty Company	5	5	5
The Cincinnati Indemnity Company	2	2	2
The Cincinnati Life Insurance Company	145	142	142
The Cincinnati Specialty Underwriters Insurance Company	10	10	10
Cincinnati Global Underwriting Ltd.	9	9	9
Total	186	183	183
Foreign government:			
The Cincinnati Insurance Company	10	10	10
Cincinnati Global Underwriting Ltd.	24	23	23
Total	34	33	33
All other corporate bonds:			
The Cincinnati Insurance Company	3,794	3,527	3,527
The Cincinnati Casualty Company	96	85	85
The Cincinnati Indemnity Company	33	31	31
The Cincinnati Life Insurance Company	3,283	3,045	3,045
The Cincinnati Specialty Underwriters Insurance Company	323	287	287
Cincinnati Global Underwriting Ltd.	104	102	102
Cincinnati Financial Corporation	29	26	26
Total	7,662	7,103	7,103
Total fixed maturities	\$ 12,979	\$ 12,132	\$ 12,132

Schedule I (continued)

Cincinnati Financial Corporation and Subsidiaries

Summary of Investments - Other Than Investments in Related Parties

Type of investment	At December 31, 2022		
	Cost or amortized cost	Fair value	Balance sheet
Equity securities:			
Common equities:			
The Cincinnati Insurance Company	\$ 1,925	\$ 5,013	\$ 5,013
The Cincinnati Casualty Company	59	162	162
The Cincinnati Indemnity Company	18	40	40
The Cincinnati Specialty Underwriters Insurance Company	102	238	238
CSU Producer Resources Inc.	17	27	27
Cincinnati Financial Corporation	1,730	3,974	3,974
Total	3,851	9,454	9,454
Nonredeemable preferred equities:			
The Cincinnati Insurance Company	426	372	372
The Cincinnati Life Insurance Company	13	11	11
Cincinnati Financial Corporation	4	4	4
Total	443	387	387
Total equity securities	\$ 4,294	\$ 9,841	\$ 9,841
Other invested assets:			
Policy loans:			
The Cincinnati Life Insurance Company	\$ 31	—	\$ 31
Deposits at Lloyd's:			
Cincinnati Global Underwriting Ltd.	32	—	32
Cincinnati Financial Corporation	5	—	5
Private equity:			
The Cincinnati Insurance Company (1)	288	—	288
The Cincinnati Life Insurance Company (1)	5	—	5
Cincinnati Financial Corporation (1)	44	—	44
Real estate:			
The Cincinnati Insurance Company (1)	38	—	38
The Cincinnati Life Insurance Company (1)	5	—	5
Cincinnati Financial Corporation (1)	4	—	4
Total other invested assets	\$ 452	—	\$ 452
Total investments	\$ 17,725	—	\$ 22,425

Notes to Schedule I:

(1) These other invested assets are accounted for under the equity method.

Schedule II

Cincinnati Financial Corporation (parent company only)

Condensed Balance Sheets

(Dollars in millions)	At December 31,	
	2022	2021
Assets		
Investments		
Fixed maturities, at fair value (amortized cost: 2022—\$91; 2021—\$64)	\$ 78	\$ 64
Equity securities, at fair value (cost: 2022—\$1,734; 2021—\$1,660)	3,978	4,778
Other invested assets	53	46
Total investments	4,109	4,888
Cash and cash equivalents	121	211
Equity in net assets of subsidiaries	7,396	9,292
Investment income receivable	11	9
Land, building and equipment, net, for company use (accumulated depreciation: 2022—\$156; 2021—\$147)	136	140
Income tax receivable	5	—
Other assets	116	108
Due from subsidiaries	102	106
Total assets	<u>\$ 11,996</u>	<u>\$ 14,754</u>
Liabilities		
Dividends declared but unpaid	\$ 108	\$ 101
Deferred federal income tax	480	664
Long-term debt	789	789
Other liabilities	88	95
Total liabilities	<u>1,465</u>	<u>1,649</u>
Shareholders' Equity		
Common stock	397	397
Paid-in capital	1,392	1,356
Retained earnings	11,702	12,625
Accumulated other comprehensive income	(636)	648
Treasury stock, at cost	(2,324)	(1,921)
Total shareholders' equity	<u>10,531</u>	<u>13,105</u>
Total liabilities and shareholders' equity	<u>\$ 11,996</u>	<u>\$ 14,754</u>

This condensed financial information should be read in conjunction with the Consolidated Financial Statements and Notes included in Part II, Item 8.

Schedule II (continued)

Cincinnati Financial Corporation (parent company only) Condensed Statements of Income and Comprehensive Income

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Revenues			
Investment income, net of expenses	\$ 101	\$ 91	\$ 81
Investment gains and losses, net	(790)	1,058	556
Other revenue	15	15	15
Total revenues	(674)	1,164	652
Expenses			
Interest expense	53	53	54
Other expenses	33	32	34
Total expenses	86	85	88
Income (Loss) Before Income Taxes and Earnings of Subsidiaries	(760)	1,079	564
Provision (Benefit) for Income Taxes	(161)	217	111
Net Income (Loss) Before Earnings of Subsidiaries	(599)	862	453
Increase in equity of subsidiaries	113	2,084	763
Net Income (Loss)	\$ (486)	\$ 2,946	\$ 1,216
Other Comprehensive Income (Loss), Net of Taxes			
Change in unrealized gain on securities	(10)	1	—
Amortization of pension actuarial gains (losses) and prior service costs	7	54	(25)
Other Comprehensive Income (Loss), Net of Taxes Before Other Comprehensive Income (Loss) of Subsidiaries	(3)	55	(25)
Other comprehensive income (loss) of subsidiaries	(1,281)	(176)	346
Other comprehensive income (loss)	(1,284)	(121)	321
Comprehensive Income (Loss)	<u>\$ (1,770)</u>	<u>\$ 2,825</u>	<u>\$ 1,537</u>

This condensed financial information should be read in conjunction with the Consolidated Financial Statements and Notes included in Part II, Item 8.

Schedule II (continued)

Cincinnati Financial Corporation (parent company only)

Condensed Statements of Cash Flows

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Cash Flows From Operating Activities			
Net income	\$ (486)	\$ 2,946	\$ 1,216
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization and other	9	10	11
Investment gains and losses, net	792	(1,034)	(552)
Dividends from subsidiaries	729	598	550
Changes in:			
Increase in equity of subsidiaries	(113)	(2,084)	(763)
Current federal income taxes	(6)	6	(3)
Deferred income tax	(183)	220	91
Other assets	(7)	5	—
Other liabilities	1	—	1
Intercompany receivable for operations	28	5	34
Net cash provided by operating activities	<u>764</u>	<u>672</u>	<u>585</u>
Cash Flows From Investing Activities			
Sale, call or maturity of fixed maturities	1	22	1
Sale of equity securities	192	25	307
Purchase of fixed maturities	(30)	(19)	(23)
Purchase of equity securities	(187)	(82)	(372)
Investment in buildings and equipment	(4)	(6)	(11)
Change in other invested assets, net	(4)	108	(42)
Net cash (used in) received from investing activities	<u>(32)</u>	<u>48</u>	<u>(140)</u>
Cash Flows From Financing Activities			
Payment of cash dividends to shareholders	(423)	(395)	(375)
Shares acquired - share repurchase authorization	(410)	(144)	(261)
Proceeds from stock options exercised	10	13	7
Other	1	1	3
Net cash used in financing activities	<u>(822)</u>	<u>(525)</u>	<u>(626)</u>
Net change in cash and cash equivalents	<u>(90)</u>	<u>195</u>	<u>(181)</u>
Cash and cash equivalents at beginning of year	<u>211</u>	<u>16</u>	<u>197</u>
Cash and cash equivalents at end of year	<u>\$ 121</u>	<u>\$ 211</u>	<u>\$ 16</u>

This condensed financial information should be read in conjunction with the Consolidated Financial Statements and Notes included in Part II, Item 8.

Schedule III

Cincinnati Financial Corporation and Subsidiaries Supplementary Insurance Information

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Deferred policy acquisition costs:			
Commercial lines insurance	\$ 372	\$ 345	\$ 317
Personal lines insurance	168	145	136
Excess and surplus lines insurance	37	33	28
Other	105	79	61
Total property casualty insurance	682	602	542
Life insurance	332	303	263
Total	<u>\$ 1,014</u>	<u>\$ 905</u>	<u>\$ 805</u>
Gross future policy benefits, losses, claims and expense losses:			
Commercial lines insurance	\$ 5,568	\$ 5,007	\$ 4,881
Personal lines insurance	916	814	739
Excess and surplus lines insurance	753	577	446
Other	1,099	831	611
Total property casualty insurance	8,336	7,229	6,677
Life insurance	3,082	3,037	2,938
Total (1)	<u>\$ 11,418</u>	<u>\$ 10,266</u>	<u>\$ 9,615</u>
Gross unearned premiums:			
Commercial lines insurance	\$ 2,021	\$ 1,857	\$ 1,714
Personal lines insurance	994	850	797
Excess and surplus lines insurance	236	207	175
Other	437	356	273
Total property casualty insurance	3,688	3,270	2,959
Life insurance	1	1	1
Total (1)	<u>\$ 3,689</u>	<u>\$ 3,271</u>	<u>\$ 2,960</u>
Other policy claims and benefits payable:			
Commercial lines insurance	\$ —	\$ —	\$ —
Personal lines insurance	—	—	—
Excess and surplus lines insurance	—	—	—
Other	—	—	—
Total property casualty insurance	—	—	—
Life insurance	41	53	46
Total (1)	<u>\$ 41</u>	<u>\$ 53</u>	<u>\$ 46</u>
Earned premiums:			
Commercial lines insurance	\$ 4,024	\$ 3,674	\$ 3,476
Personal lines insurance	1,689	1,542	1,463
Excess and surplus lines insurance	485	398	325
Other	726	570	427
Total property casualty insurance	6,924	6,184	5,691
Life insurance	295	298	289
Total	<u>\$ 7,219</u>	<u>\$ 6,482</u>	<u>\$ 5,980</u>

Schedule III (continued)

Cincinnati Financial Corporation and Subsidiaries Supplementary Insurance Information

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Investment income, net of expenses:			
Commercial lines insurance	\$ —	\$ —	\$ —
Personal lines insurance	—	—	—
Excess and surplus lines insurance	—	—	—
Other	—	—	—
Total property casualty insurance (2)	509	457	431
Life insurance	171	166	158
Total	<u>\$ 680</u>	<u>\$ 623</u>	<u>\$ 589</u>
Benefits, claims losses and settlement expenses:			
Commercial lines insurance	\$ 2,761	\$ 1,940	\$ 2,336
Personal lines insurance	1,166	992	977
Excess and surplus lines insurance	315	250	199
Other	474	414	325
Total property casualty insurance	4,716	3,596	3,837
Life insurance	296	340	297
Total	<u>\$ 5,012</u>	<u>\$ 3,936</u>	<u>\$ 4,134</u>
Amortization of deferred policy acquisition costs:			
Commercial lines insurance	\$ 769	\$ 703	\$ 664
Personal lines insurance	311	276	256
Excess and surplus lines insurance	79	63	51
Other	144	109	86
Total property casualty insurance	1,303	1,151	1,057
Life insurance	44	46	49
Total (3)	<u>\$ 1,347</u>	<u>\$ 1,197</u>	<u>\$ 1,106</u>
Underwriting, acquisition and insurance expenses:			
Commercial lines insurance	\$ 460	\$ 437	\$ 415
Personal lines insurance	198	181	187
Excess and surplus lines insurance	45	43	43
Other	72	55	42
Total property casualty insurance	775	716	687
Life insurance	40	38	36
Total (3)	<u>\$ 815</u>	<u>\$ 754</u>	<u>\$ 723</u>
Net written premiums:			
Commercial lines insurance	\$ 4,159	\$ 3,811	\$ 3,534
Personal lines insurance	1,831	1,594	1,503
Excess and surplus lines insurance	502	426	348
Other	815	648	479
Total property casualty insurance	7,307	6,479	5,864
Accident and health insurance	2	2	2
Total	<u>\$ 7,309</u>	<u>\$ 6,481</u>	<u>\$ 5,866</u>

Notes to Schedule III:

- (1) The sum of gross future policy benefits, losses, claims and expense losses, gross unearned premiums and other policy claims and benefits payable is equal to the sum of Loss and loss expense reserves, Life policy reserves and investment contract reserves and Unearned premiums reported in the company's consolidated balance sheets.
- (2) This segment information is not regularly allocated to segments and reviewed by company management in making decisions about resources to be allocated to the segments or to assess their performance.
- (3) The sum of amortization of deferred policy acquisition costs and other underwriting and insurance expenses is equal to Underwriting, acquisition and insurance expenses in the consolidated statements of income.

Schedule IV

Cincinnati Financial Corporation and Subsidiaries Reinsurance

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Gross amounts:			
Life insurance in force	\$ 120,147	\$ 116,697	\$ 111,756
Earned premiums			
Commercial lines insurance	\$ 4,150	\$ 3,777	\$ 3,578
Personal lines insurance	1,755	1,586	1,503
Excess and surplus lines insurance	510	417	341
Other	262	216	201
Total property casualty insurance	6,677	5,996	5,623
Life insurance	373	374	362
Total	\$ 7,050	\$ 6,370	\$ 5,985
Ceded amounts to other companies:			
Life insurance in force	\$ 39,665	\$ 39,204	\$ 38,281
Earned premiums			
Commercial lines insurance	\$ 137	\$ 115	\$ 109
Personal lines insurance	67	45	41
Excess and surplus lines insurance	25	19	16
Other	85	76	51
Total property casualty insurance	314	255	217
Life insurance	78	76	73
Total	\$ 392	\$ 331	\$ 290
Assumed amounts from other companies:			
Life insurance in force	\$ —	\$ —	\$ —
Earned premiums			
Commercial lines insurance	\$ 11	\$ 12	\$ 7
Personal lines insurance	1	1	1
Excess and surplus lines insurance	—	—	—
Other	549	430	277
Total property casualty insurance	561	443	285
Life insurance	—	—	—
Total	\$ 561	\$ 443	\$ 285
Net amounts:			
Life insurance in force	\$ 80,482	\$ 77,493	\$ 73,475
Earned premiums			
Commercial lines insurance	\$ 4,024	\$ 3,674	\$ 3,476
Personal lines insurance	1,689	1,542	1,463
Excess and surplus lines insurance	485	398	325
Other	726	570	427
Total property casualty insurance	6,924	6,184	5,691
Life insurance	295	298	289
Total	\$ 7,219	\$ 6,482	\$ 5,980
Percentage of amounts assumed to net:			
Life insurance in force	— %	— %	— %
Earned premiums			
Commercial lines insurance	0.3 %	0.3 %	0.2 %
Personal lines insurance	0.1	0.1	0.1
Excess and surplus lines insurance	—	—	—
Other	75.6	75.4	64.9
Total property casualty insurance	8.1	7.2	5.0
Life insurance	—	—	—
Total	7.8	6.8	4.8

Schedule V

Cincinnati Financial Corporation and Subsidiaries Valuation and Qualifying Accounts

(Dollars in millions)	At December 31,		
	2022	2021	2020
Allowance for credit losses (1):			
Beginning balance, January 1	\$ 16	\$ 22	\$ 8
Cumulative effect of change in accounting for credit losses as of January 1, 2020, pretax	—	—	3
Additions charged to costs and expenses	15	14	19
Deductions	(14)	(20)	(8)
Ending balance, December 31	\$ 17	\$ 16	\$ 22
Deferred tax valuation allowance:			
Beginning balance, January 1	\$ 53	\$ 56	\$ 41
Additions charged to costs and expenses	—	—	15
Deductions	(22)	(3)	—
Ending balance, December 31	31	53	56
Total valuation and qualifying accounts	\$ 48	\$ 69	\$ 78

Notes to Schedule V:

(1) Includes allowances for credit losses related to premiums receivable, reinsurance recoverable, finance receivables and fixed-maturity securities.

Schedule VI

Cincinnati Financial Corporation and Subsidiaries Supplementary Information Concerning Property Casualty Insurance Operations

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Deferred policy acquisition costs:			
Commercial lines insurance	\$ 372	\$ 345	\$ 317
Personal lines insurance	168	145	136
Excess and surplus lines insurance	37	33	28
Other	105	79	61
Total	<u>\$ 682</u>	<u>\$ 602</u>	<u>\$ 542</u>
Reserves for unpaid claims and claim adjustment expenses:			
Commercial lines insurance	\$ 5,568	\$ 5,007	\$ 4,881
Personal lines insurance	916	814	739
Excess and surplus lines insurance	753	577	446
Other	1,099	831	611
Total	<u>\$ 8,336</u>	<u>\$ 7,229</u>	<u>\$ 6,677</u>
Reserve discount deducted	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Gross unearned premiums:			
Commercial lines insurance	\$ 2,021	\$ 1,857	\$ 1,714
Personal lines insurance	994	850	797
Excess and surplus lines insurance	236	207	175
Other	437	356	273
Total	<u>\$ 3,688</u>	<u>\$ 3,270</u>	<u>\$ 2,959</u>
Earned premiums:			
Commercial lines insurance	\$ 4,024	\$ 3,674	\$ 3,476
Personal lines insurance	1,689	1,542	1,463
Excess and surplus lines insurance	485	398	325
Other	726	570	427
Total	<u>\$ 6,924</u>	<u>\$ 6,184</u>	<u>\$ 5,691</u>
Investment income, net of expenses:			
Commercial lines insurance	\$ —	\$ —	\$ —
Personal lines insurance	—	—	—
Excess and surplus lines insurance	—	—	—
Other	—	—	—
Total (1)	<u>\$ 509</u>	<u>\$ 457</u>	<u>\$ 431</u>

Note to Schedule VI:

(1) This segment information is not regularly allocated to segments and not reviewed by company management in making decisions about resources to be allocated to the segments or to assess their performance.

Schedule VI (continued)

Cincinnati Financial Corporation and Subsidiaries

Supplementary Information Concerning Property Casualty Insurance Operations

(Dollars in millions)	Years ended December 31,		
	2022	2021	2020
Loss and loss expenses incurred related to current accident year:			
Commercial lines insurance	\$ 2,837	\$ 2,293	\$ 2,431
Personal lines insurance	1,227	1,042	995
Excess and surplus lines insurance	324	243	192
Other	487	446	350
Total	<u>\$ 4,875</u>	<u>\$ 4,024</u>	<u>\$ 3,968</u>
Loss and loss expenses incurred related to prior accident years:			
Commercial lines insurance	\$ (76)	\$ (353)	\$ (95)
Personal lines insurance	(61)	(50)	(18)
Excess and surplus lines insurance	(9)	7	7
Other	(13)	(32)	(25)
Total	<u>\$ (159)</u>	<u>\$ (428)</u>	<u>\$ (131)</u>
Amortization of deferred policy acquisition costs:			
Commercial lines insurance	\$ 769	\$ 703	\$ 664
Personal lines insurance	311	276	256
Excess and surplus lines insurance	79	63	51
Other	144	109	86
Total	<u>\$ 1,303</u>	<u>\$ 1,151</u>	<u>\$ 1,057</u>
Paid loss and loss expenses:			
Commercial lines insurance	\$ 2,211	\$ 1,806	\$ 1,969
Personal lines insurance	1,071	914	921
Excess and surplus lines insurance	145	118	112
Other	260	256	181
Total	<u>\$ 3,687</u>	<u>\$ 3,094</u>	<u>\$ 3,183</u>
Net written premiums:			
Commercial lines insurance	\$ 4,159	\$ 3,811	\$ 3,534
Personal lines insurance	1,831	1,594	1,503
Excess and surplus lines insurance	502	426	348
Other	815	648	479
Total	<u>\$ 7,307</u>	<u>\$ 6,479</u>	<u>\$ 5,864</u>

Index of Exhibits

Exhibit No.	Exhibit Description
3.1	Amended and Restated Articles of Incorporation of Cincinnati Financial Corporation (incorporated by reference to the company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2017, Exhibit 3.1)
3.2	Amended and Restated Code of Regulations of Cincinnati Financial Corporation, as of May 5, 2018 (incorporated by reference to the company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, Exhibit 3.2)
4.1	Indenture with The Bank of New York Trust Company (incorporated by reference to the company's Current Report on Form 8-K dated November 2, 2004, filed with respect to the issuance of the company's 6.125% Senior Notes due November 1, 2034)
4.2	Supplemental Indenture with The Bank of New York Trust Company (incorporated by reference to the company's Current Report on Form 8-K dated November 2, 2004, filed with respect to the issuance of the company's 6.125% Senior Notes due November 1, 2034)
4.3	Second Supplemental Indenture with The Bank of New York Trust Company (incorporated by reference to the company's Current Report on Form 8-K dated May 9, 2005, filed with respect to the completion of the company's exchange offer and rescission offer for its 6.90% senior debentures due 2028)
4.4	Form of 6.125% Exchange Note Due 2034 (included in Exhibit 4.2)
4.5	Form of 6.92% Debentures Due 2028 (included in Exhibit 4.3)
4.6	Indenture with the First National Bank of Chicago (subsequently assigned to The Bank of New York Trust Company) (incorporated by reference to the company's registration statement on Form S-3 filed on May 20, 1998 (File No. 333-51677))
4.7	Form of 6.90% Debentures Due 2028 (included in Exhibit 4.6)
4.8	Description of Registered Securities
10.1	Cincinnati Financial Corporation Nonemployee Director Stock Plan of 2018 (incorporated by reference to the company's definitive Proxy Statement dated March 21, 2018)
10.2	First Amendment to Cincinnati Financial Corporation Nonemployee Director Stock Plan of 2018 (incorporated by reference to Exhibit 10.6 filed with the company's Annual Report on Form 10-K dated February 25, 2021)
10.3	Cincinnati Financial Corporation Nonemployee Director Deferred Compensation Plan (incorporated by reference to Exhibit 10.6 filed with the company's Annual Report on Form 10-K dated February 25, 2021)
10.4	Cincinnati Financial Corporation Stock Option Plan No. VII (incorporated by reference to the company's definitive Proxy Statement dated March 8, 2002) (File No. 000-04604)
10.5	Cincinnati Financial Corporation Annual Incentive Compensation Plan of 2009, Amended and Restated on January 29, 2021 (incorporated by reference to Exhibit 10.6 filed with the company's Annual Report on Form 10-K dated February 25, 2021)
10.6	Cincinnati Financial Corporation Annual Incentive Compensation Plan of 2009, Amended and Restated on January 29, 2022 (incorporated by reference to the company's Exhibit 10.6 filed with the company's Annual Report on Form 10-K dated February 24, 2022)
10.7	Cincinnati Financial Corporation 2006 Stock Compensation Plan (incorporated by reference to the company's definitive Proxy Statement dated March 30, 2006)
10.8	Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to the company's definitive Proxy Statement dated March 16, 2012)
10.9	Cincinnati Financial Corporation 2016 Stock Compensation Plan (incorporated by reference to the company's Definitive Proxy Statement dated March 16, 2016, Appendix B)
10.10	First Amendment of Cincinnati Financial Corporation 2016 Stock Compensation Plan (incorporated by reference to Exhibit 99.1 filed with the Company's current report on Form 8-K dated April 11, 2016)
10.11	Amended and Restated Cincinnati Financial Corporation Supplemental Retirement Plan dated January 1, 2009 (incorporated by reference to Exhibit 10.7 filed with the company's Annual Report on Form 10-K dated February 27, 2013)
10.12	Form of Incentive Stock Option Agreement for the 2006 Stock Compensation Plan (incorporated by reference to Exhibit 10.3 filed with the company's Current Report on Form 8-K dated October 20, 2006)

Exhibit No.	Exhibit Description
10.13	<u>Form of Nonqualified Stock Option Agreement for the 2006 Stock Compensation Plan (incorporated by reference to Exhibit 10.4 filed with the company's Current Report on Form 8-K dated October 20, 2006)</u>
10.14	<u>Form of Incentive Stock Option Agreement for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K dated February 21, 2013)</u>
10.15	<u>Form of Nonqualified Stock Option Agreement for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.2 filed with the company's Current Report on Form 8-K dated February 21, 2013)</u>
10.16	<u>Form of Restricted Stock Unit Agreement (service based) for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.3 filed with the company's Current Report on Form 8-K dated February 21, 2013)</u>
10.17	<u>Form of Restricted Stock Unit Agreement (service based/ratable) for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K dated February 13, 2015)</u>
10.18	<u>Form of Restricted Stock Unit Agreement (performance based) for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.4 filed with the company's Current Report on Form 8-K dated February 21, 2013)</u>
10.19	<u>Form of Incentive Compensation Agreement for the Cincinnati Financial Corporation Incentive Compensation Plan of 2009 (as amended January 31, 2014) (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.20	<u>Form of Incentive Stock Option Agreement for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.2 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.21	<u>Form of Nonqualified Stock Option Agreement for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.3 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.22	<u>Form of Restricted Stock Unit Agreement (service based/cliff) for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.4 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.23	<u>Form of Restricted Stock Unit Agreement (service based/ratable) for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.5 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.24	<u>Form of Restricted Stock Unit Agreement (performance-based) for the Cincinnati Financial Corporation 2012 Stock Compensation Plan (incorporated by reference to Exhibit 10.6 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.25	<u>Form of Incentive Stock Option Agreement for the Cincinnati Financial Corporation 2016 Stock Compensation Plan (incorporated by reference to Exhibit 10.7 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.26	<u>Form of Nonqualified Stock Option Agreement for the Cincinnati Financial Corporation 2016 Stock Compensation Plan (incorporated by reference to Exhibit 10.8 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.27	<u>Form of Restricted Stock Unit Agreement (service based/cliff) for the Cincinnati Financial Corporation 2016 Stock Compensation Plan (incorporated by reference to Exhibit 10.9 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.28	<u>Form of Restricted Stock Unit Agreement (service based/ratable) for the Cincinnati Financial Corporation 2016 Stock Compensation Plan (incorporated by reference to Exhibit 10.10 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.29	<u>Form of Restricted Stock Unit Agreement (performance based) for the Cincinnati Financial Corporation 2016 Stock Compensation Plan (incorporated by reference to Exhibit 10.11 filed with the company's Current Report on Form 8-K dated January 30, 2017)</u>
10.30	<u>Amended and Restated Cincinnati Financial Corporation Top Hat Savings Plan dated January 1, 2018 (incorporated by reference to Exhibit 10.31 filed with the company's Form 10-K dated February 23, 2018)</u>
10.31	<u>Cincinnati Financial Corporation Executive Deferred Compensation Agreement by and between the Cincinnati Financial Corporation and Michael J. Sewell, dated as of October 25, 2011 (incorporated by reference to Exhibit 10.2 filed with the company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2011)</u>

Exhibit No.	Exhibit Description
10.32	Amended and Restated Credit Agreement by and among Cincinnati Financial Corporation, CFC Investment Company, PNC Bank, N.A. as Administrative Agent, PNC Capital Markets LLC, as Sole Bookrunner and Joint Lead Arranger, Fifth Third Bank, N.A., as Joint Lead Arranger and Syndication Agent, The Huntington National Bank and U.S. Bank, N.A., as Documentation Agents, dated May 13, 2014 (incorporated by reference to the company's Current Report on Form 8-K dated May 13, 2014, Exhibit 10.1)
10.33	First Amendment of the Amended and Restated Credit Agreement by and among Cincinnati Financial Corporation, CFC Investment Company, PNC Bank, N.A. as Administrative Agent, PNC Capital Markets LLC, as Sole Bookrunner and Joint Lead Arranger, Fifth Third Bank, N.A., as Joint Lead Arranger and Syndication Agent, The Huntington National Bank and U.S. Bank, N.A., as Documentation Agents, dated February 8, 2016 (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K dated February 8, 2016)
10.34	Second Amendment of the Amended and Restated Credit Agreement by and among Cincinnati Financial Corporation, CFC Investment Company, PNC Bank, N.A., as Administrative Agent, PNC Capital Markets, LLC, as Sole Bookrunner and Joint Lead Arranger, Fifth Third Bank, N.A. as Joint Lead Arranger and Syndication Agent, The Huntington National Bank and U.S. Bank, N.A. as Documentation Agents, dated March 31, 2016 (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K dated April 4, 2016)
10.35	Third Amendment of the Amended and Restated Credit Agreement by and among Cincinnati Financial Corporation, CFC Investment Company, PNC Bank, N.A., as Administrative Agent, PNC Capital Markets, LLC, as Sole Bookrunner and Joint Lead Arranger, Fifth Third Bank, N.A. as Joint Lead Arranger and Syndication Agent, The Huntington National Bank and U.S. Bank, N.A. as Documentation Agents, dated February 4, 2019 (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K dated February 6, 2019)
10.36	Fourth Amendment of the Amended and Restated Credit Agreement by and among Cincinnati Financial Corporation, CFC Investment Company, PNC Bank, N.A., as Administrative Agent, PNC Capital Markets, LLC, as Sole Bookrunner and Joint Lead Arranger, Fifth Third Bank, N.A. as Joint Lead Arranger and Syndication Agent, The Huntington National Bank and U.S. Bank, N.A. as Documentation Agents, dated February 26, 2019 (incorporated by reference to Exhibit 10.6 filed with the company's Current Report on Form 8-K dated February 28, 2019)
10.37	Limited Consent to Credit Agreement, dated December 6, 2019, among Cincinnati Financial Corporation, CFC Investment Company, PNC Bank, N.A., Fifth Third Bank, N.A., The Huntington National Bank, U.S. Bank, N.A., and Branch Banking and Trust Company (incorporated by reference to Exhibit 10.6 filed with the company's Current Report on Form 8-K, dated December 6, 2019)
10.38	Limited Consent to Credit Agreement, dated December 11, 2020, among Cincinnati Financial Corporation, CFC Investment Company, PNC Bank, N.A., Fifth Third Bank, N.A., The Huntington National Bank, U.S. Bank, N.A., and Branch Banking and Trust Company (incorporated by reference to Exhibit 10.7 filed with the company's Current Report on Form 8-K, dated December 11, 2020)
10.39	Reimbursement Agreement for Letters of Credit by and between Bank of Nova Scotia and The Cincinnati Insurance Company, dated October 15, 2018 (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K/A dated November 14, 2019)
10.40	Letter of Credit Facility Agreement by and between Cincinnati Financial Corporation, as Borrower, and The Bank of Nova Scotia, as Bank, dated February 25, 2019 (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K dated February 28, 2019)
10.41	Amendment Letter No. 1 to the Letter of Credit Facility Agreement, dated November 4, 2019 (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K, dated November 5, 2019)
10.42	Amendment Letter No. 2 to the Letter of Credit Facility Agreement, dated October 30, 2020 (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K, dated November 2, 2020)
10.43	Amendment Letter No. 3 to the Letter of Credit Facility Agreement, dated November 2, 2021 (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K, dated November 3, 2021)
10.44	Amendment Letter No. 4 to the Letter of Credit Facility Agreement, dated October 31, 2022 (incorporated by reference to Exhibit 10.1 filed with the company's Current Report on Form 8-K, dated October 31, 2022)
11	Statement re: Computation of per share earnings for the years ended December 31, 2021, 2020, and 2019, contained in Part II, Item 8, Note 12, to the Consolidated Financial Statements
14	Cincinnati Financial Corporation Code of Ethics for Senior Financial Officers (incorporated by reference to the company's definitive Proxy Statement dated March 18, 2004 (File No. 000-04604))

Exhibit No.	Exhibit Description
21	Cincinnati Financial Corporation subsidiaries contained in Part I, Item 1, of this report
23	Consent of Independent Registered Public Accounting Firm
31A	Certification pursuant to Section 302 of the Sarbanes Oxley Act of 2002 – Chief Executive Officer
31B	Certification pursuant to Section 302 of the Sarbanes Oxley Act of 2002 – Chief Financial Officer
32	Certification pursuant to Section 906 of the Sarbanes Oxley Act of 2002
101.INS	The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

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.

Cincinnati Financial Corporation

/S/ Michael J. Sewell

By: Michael J. Sewell, CPA
 Title: Chief Financial Officer, Executive Vice President and Treasurer
 (Principal Accounting Officer)
 Date: February 23, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been duly signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/S/ Steven J. Johnston	Chairman, Chief Executive Officer and Director	February 23, 2023
Steven J. Johnston		
/S/ Michael J. Sewell	Chief Financial Officer, Executive Vice President and Treasurer	February 23, 2023
Michael J. Sewell		
/S/ Thomas J. Aaron	Director	February 23, 2023
Thomas J. Aaron		
/S/ Nancy C. Benacci	Director	February 23, 2023
Nancy C. Benacci		
/S/ Linda W. Clement-Holmes	Director	February 23, 2023
Linda W. Clement-Holmes		
/S/ Dirk J. Debbink	Director	February 23, 2023
Dirk J. Debbink		
/S/ David P. Osborn	Director	February 23, 2023
David P. Osborn		
/S/ Jill P. Meyer Pratt	Director	February 23, 2023
Jill P. Meyer Pratt		
/S/ Gretchen W. Schar	Director	February 23, 2023
Gretchen W. Schar		
/S/ Charles O. Schiff	Director	February 23, 2023
Charles O. Schiff		
/S/ Douglas S. Skidmore	Director	February 23, 2023
Douglas S. Skidmore		
/S/ John F. Steele, Jr.	Director	February 23, 2023
John F. Steele, Jr.		
/S/ Larry R. Webb	Director	February 23, 2023
Larry R. Webb		

EXHIBIT 31A

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES OXLEY ACT OF 2002

I, Steven J. Johnston, certify that:

1. I have reviewed this Annual Report on Form 10-K of Cincinnati Financial Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
- a) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 23, 2023

/S/ Steven J. Johnston
Steven J. Johnston, FCAS, MAAA, CFA, CERA
Chairman and Chief Executive Officer

EXHIBIT 31B

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES OXLEY ACT OF 2002

I, Michael J. Sewell, certify that:

1. I have reviewed this Annual Report on Form 10-K of Cincinnati Financial Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
- a) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 23, 2023

/S/ Michael J. Sewell
Michael J. Sewell, CPA
Chief Financial Officer, Executive Vice President and Treasurer
(Principal Accounting Officer)

EXHIBIT 32

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES OXLEY ACT OF 2002

The certification set forth below is being submitted in connection with this report on Form 10-K for the purpose of complying with Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and Section 1350 of Chapter 63 of Title 18 of the United States Code.

Steven J. Johnston, the chief executive officer, and Michael J. Sewell, the chief financial officer, of Cincinnati Financial Corporation each certifies that, to the best of his knowledge:

1. the report fully complies with the requirements of Section 13(a) or 15(d) of the Exchange Act; and
2. the information contained in the report fairly presents, in all material respects, the financial condition and results of operations of Cincinnati Financial Corporation.

Date: February 23, 2023

/S/ Steven J. Johnston
Steven J. Johnston, FCAS, MAAA, CFA, CERA
Chairman and Chief Executive Officer

/S/ Michael J. Sewell
Michael J. Sewell, CPA
Chief Financial Officer, Executive Vice President and Treasurer
(Principal Accounting Officer)

CINCINNATI FINANCIAL CORPORATION DIRECTORS

As of February 23, 2023



T.J. Aaron



L.W. Clement-Holmes



S.J. Johnston



D.P. Osborn



C.O. Schiff



J.F. Steele, Jr.



N.C. Benacci



D.J. Debbink



J.P. Meyer



G.W. Schar



D.S. Skidmore



L.R. Webb

Thomas J. Aaron, CPA

Executive Vice President and
Chief Financial Officer (Ret.)
Community Health Systems
(Operator of general acute care hospitals)
Director since 2019 (A)

Nancy C. Benacci, CFA, NACD.DC

Head of Equity Research (Ret.)
KeyBanc Capital Markets
(Investment bank)
Director since 2020 (A)(I)

Linda W. Clement-Holmes

Chief Information Officer (Ret.)
The Procter & Gamble Company
(Consumer products)
Director since 2010 (A)(C)(N)

Dirk J. Debbink

Chairman
MSI General Corporation
(Design/build construction firm)
Director** since 2012 (A)(E)(I)(N*)

Steven J. Johnston, FCAS, MAAA, CFA, CERA

Chairman and Chief Executive Officer
Cincinnati Financial Corporation
Director since 2011 (E*)(I*)

Jill P. Meyer, Esq.

Chief Executive Officer
Cincinnati USA Regional Chamber
(Metro business chamber)
Director since 2019 (N)

David P. Osborn, CFA

President
Osborn Williams & Donohoe LLC
(Independent registered
investment adviser)
Director since 2013 (A)(C*)(I)

Gretchen W. Schar

Executive Vice President and
Chief Financial and Administrative
Officer (Ret.)
Arbonne International LLC
(Beauty and nutritional products)
Director since 2002 (A*)(C)(N)

Charles O. Schiff

Executive Vice President, Secretary
and Treasurer
John J. & Thomas R. Schiff & Co. Inc.
(Independent insurance agency)
Director since 2020 (I)

Douglas S. Skidmore

Chief Executive Officer
Skidmore Sales & Distributing
Company Inc.
(Food ingredient distributor)
Director since 2004 (E)(N)

John F. Steele, Jr.

Chairman and Chief Executive Officer
Hilltop Basic Resources Inc.
(Supplier of aggregates and concrete)
Director since 2005 (E)

Larry R. Webb, CPCU

President (Ret.)
Webb Insurance Agency Inc.
(Independent insurance agency)
Director since 1979 (E)(I)

Directors Emeriti

James E. Benoski
Gregory T. Bier, CPA (Ret.)
Michael Brown
Kenneth C. Lichtendahl
W. Rodney McMullen
John J. Schiff, Jr., CPCU
Thomas R. Schiff
Frank J. Schultheis
David B. Sharrock
John M. Shepherd
Kenneth W. Stecher
Alan R. Weiler, CPCU
E. Anthony Woods
William H. Zimmer

(A) Audit Committee (C) Compensation Committee
(E) Executive Committee (I) Investment Committee
(N) Nominating Committee
* Committee Chair
** Lead Director

William F. Bahl, CFA, CIC 1951 – 2022

In September 2022, we lost a long-time director and dear friend, Bill Bahl. A director since 1995, Bill was the corporation's lead independent director, serving as chair of the nominating committee and as a member of the audit, executive and investment committees. He also served as a director of the company's U.S. insurance subsidiaries. Throughout his tenure, Bill developed a deep understanding of what makes our company unique, including our independent agency focus and our equity investing and dividend paying strategies. He personified our corporate culture of living by the Golden Rule, treating others as he would wish to be treated and always placing the company's interests above his own.



SHAREHOLDER INFORMATION

ANNUAL MEETING

Shareholders are invited to attend the Annual Meeting of Shareholders of Cincinnati Financial Corporation at 9:30 a.m. ET, on Saturday, May 6, 2023, at the Cincinnati Art Museum, 953 Eden Park Drive, Cincinnati, Ohio. You may listen to an audio webcast of the event by visiting cinfin.com/investors.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Deloitte & Touche LLP
50 West Fifth St., Suite 200
Cincinnati, Ohio 45202

SHAREHOLDER SERVICES

Equiniti Trust Company is the transfer agent and administrator for all registered shareholder accounts. Services available to registered shareholder accounts include dividend direct deposit, Shareholder Investment Plan (including dividend reinvestment), direct registration of shares and electronic delivery. Registered shareholders may also access your individual account at shareowneronline.com, where you can complete transactions online at any time, including changing your address, opting out of receiving paper statements, changing your current dividend reinvestment option and viewing recent transactions.

CONTACT INFORMATION

You may direct communications to Cincinnati Financial Corporation's Chief Legal Officer, Executive Vice President and Corporate Secretary Lisa A. Love, Esq. for sharing with the appropriate individual(s). Or, you may directly contact the following areas:

Investors: Investor Relations responds to investor inquiries about the company and its performance.

Dennis E. McDaniel, CPA, CMA, CFM, CPCU – Vice President, Investor Relations Officer
513-870-2768 or investor_inquiries@cinfin.com

Shareholders: Shareholder Services administers the company's stock compensation plans and fulfills requests for shareholder materials.

C. Brandon McIntosh, CEP, CPA – Assistant Vice President, Shareholder Services
513-870-2639 or shareholder_inquiries@cinfin.com

Equiniti Trust Company provides the company's stock transfer and recordkeeping services, including assisting registered shareholders with updating account information or enrolling in shareholder plans.

1110 Centre Pointe Curve, Suite 101, Mendota Heights, MN 55120
866-638-6443 or visit shareowneronline.com then *Contact Us*

Media: Corporate Communications assists media representatives seeking information or comment from the company or its subsidiaries.

Betsy E. Ertel, CPCU, AIM, API – Vice President, Corporate Communications
513-603-5323 or media_inquiries@cinfin.com

COMMON STOCK PRICE AND DIVIDEND DATA

Common shares are traded under the symbol CINF on the Nasdaq Global Select Stock Market.

(Source: Nasdaq Global Select Market)	2022	2021	2020	2019	2018
Year-end closing price	\$102.39	\$113.93	\$87.37	\$105.15	\$77.42
Ordinary cash dividends declared....	\$2.76	\$2.52	\$2.40	\$2.24	\$2.12

CINCINNATI FINANCIAL CORPORATION

The Cincinnati Insurance Company
The Cincinnati Casualty Company
The Cincinnati Indemnity Company
The Cincinnati Life Insurance Company
The Cincinnati Specialty Underwriters Insurance Company

CSU Producer Resources Inc.
CFC Investment Company
Cincinnati Global Underwriting Ltd.
Cincinnati Global Underwriting Agency Ltd.

MAILING ADDRESS

P.O. Box 145496
Cincinnati, Ohio 45250-5496

STREET ADDRESS

6200 South Gilmore Road
Fairfield, Ohio 45014-5141

Phone: 888-242-8811 or 513-870-2000
Email: cfc_corporate@cinfin.com
Web: cinfin.com

