

The Hanover Insurance Group, Inc.

Second Quarter 2024 Results

July 31, 2024

To be read in conjunction with the press release dated July 31, 2024, and conference call scheduled for August 1, 2024.

Please also see important information regarding forward-looking statements and additional risks and uncertainties at the end of this presentation.

Strong Second Quarter 2024 Operating Highlights

- Combined ratio of 99.2%; combined ratio, excluding catastrophes⁽¹⁾, of 88.5%
- Catastrophe losses of \$157.1 million, or 10.7 points of the combined ratio
- Net premiums written increase of 5.1%*
- Renewal price increases⁽²⁾ of 18.5% in Personal Lines, 11.7% in Core Commercial and 11.7% in Specialty
- Rate increases⁽²⁾ of 16.6% in Personal Lines, 9.3% in Core Commercial and 8.2% in Specialty
- Loss and loss adjustment expense (LAE) ratio of 68.4%, 12.3 points below the prior-year quarter
- Current accident year loss and LAE ratio, excluding catastrophes⁽³⁾, of 58.9%, 3.4 points below the prior-year quarter, with improvement in each major segment
- Net investment income of \$90.4 million, up 3.2% from the prior-year quarter; excluding partnership income⁽⁴⁾, net investment income grew 19.5%
- Book value per share of \$70.96, up 1.1% from March 31, 2024, driven by earnings in the quarter, net of dividends
- Net and operating⁽⁵⁾ return on equity of 6.4% and 9.0% for the second quarter of 2024 and 12.4% and 12.0% for the first six months of 2024, respectively

(1) See information about this and other non-GAAP measures and definitions used throughout this presentation on the final pages of this document.

*Unless otherwise stated, net premiums written growth and other growth comparisons are to the same period of the prior year

The Hanover Insurance Group, Inc. may also be referred to as "The Hanover" or "the company" interchangeably throughout this presentation.

Consolidated Financial Results

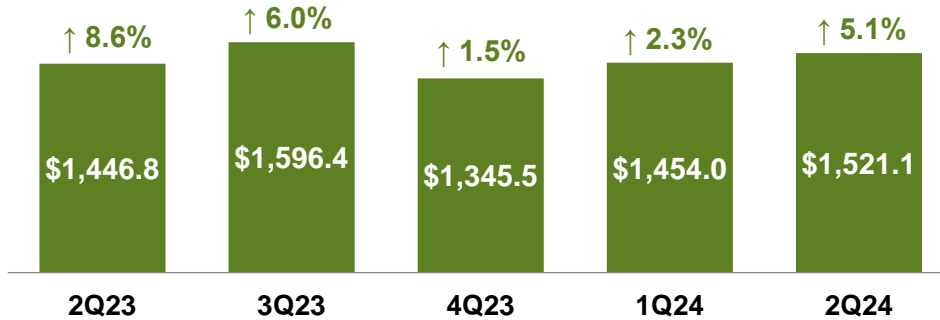
(\$ in millions, except per share amounts)

	Three months ended		Six months ended	
	June 30, 2023	June 30, 2024	June 30, 2023	June 30, 2024
Net income (loss)	(\$69.2)	\$40.5	(\$81.2)	\$156.0
<i>Per diluted/(basic) share</i>	<i>(\$1.94)</i>	<i>\$1.12</i>	<i>(\$2.27)</i>	<i>\$4.30</i>
Operating income (loss) before interest expense and income taxes ⁽⁶⁾	(\$79.4)	\$95.4	(\$66.2)	\$245.1
Operating income (loss) after income taxes	(\$68.3)	\$68.1	(\$63.7)	\$180.0
<i>Per diluted (basic) share</i>	<i>(\$1.91)</i>	<i>\$1.88</i>	<i>(\$1.78)</i>	<i>\$4.96</i>
Book value per share	\$62.62	\$70.96	\$62.62	\$70.96
<i>Book value per share, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax⁽⁷⁾</i>	<i>\$79.68</i>	<i>\$84.56</i>	<i>\$79.68</i>	<i>\$84.56</i>
Shareholders' equity	\$2,237.9	\$2,552.2	\$2,237.9	\$2,552.2
Debt	\$782.8	\$783.7	\$782.8	\$783.7
Total capital	\$3,020.7	\$3,335.9	\$3,020.7	\$3,335.9
Debt/total capital	25.9%	23.5%	25.9%	23.5%
Total assets	\$14,186.7	\$14,872.2	\$14,186.7	\$14,872.2
Net income (loss) return on average equity	(12.0)%	6.4%	(7.0)%	12.4%
Operating income (loss) return on average equity	(9.4)%	9.0%	(4.4)%	12.0%

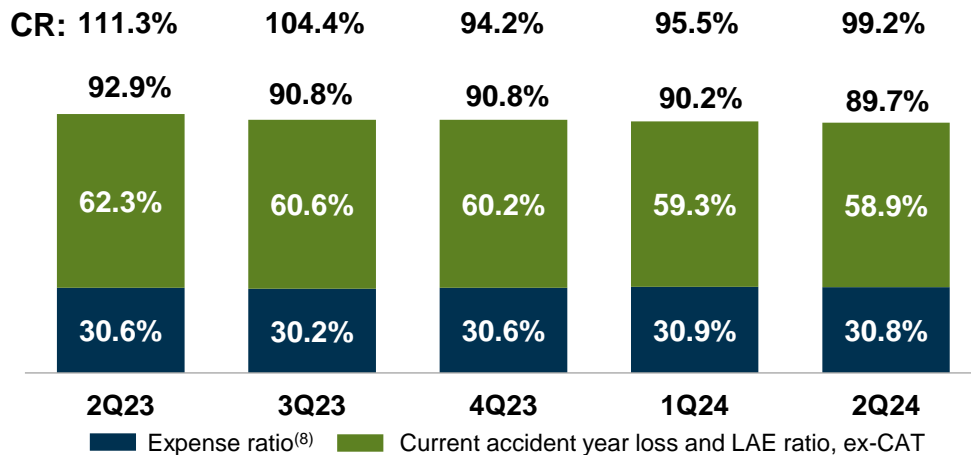
Second Quarter 2024 Underwriting Results

(\$ in millions)

Net premiums written and growth



Current accident year combined ratio, ex-CAT⁽¹⁾



- Combined ratio (CR) of 99.2% in the second quarter of 2024, improved 12.1 points from the prior-year quarter, driven by lower catastrophe losses, as well as improvement in the current accident year loss and LAE ratio, ex-CAT, in each major segment
- Catastrophe losses of \$157.1 million in the second quarter of 2024, or 10.7 points, largely driven by severe convective storm activity and primarily impacting Personal Lines
- Current accident year loss and LAE ratio, ex-CAT, of 58.9%, improved 3.4 points from the prior-year quarter, driven by tremendous improvement in Personal Lines, as well as strong, steady margins in Core Commercial and Specialty
- Prior-year reserve development, ex-CAT, was \$17.4 million favorable in the quarter, driven by favorability in property lines within Personal Lines and Core Commercial, and widespread favorability in Specialty
- Expense ratio increased 20 basis points compared to the prior-year quarter, primarily driven by continued strategic business investments in Specialty and increased variable compensation expenses
- Net premiums written increased 5.1%, accelerating growth from the first quarter 2024

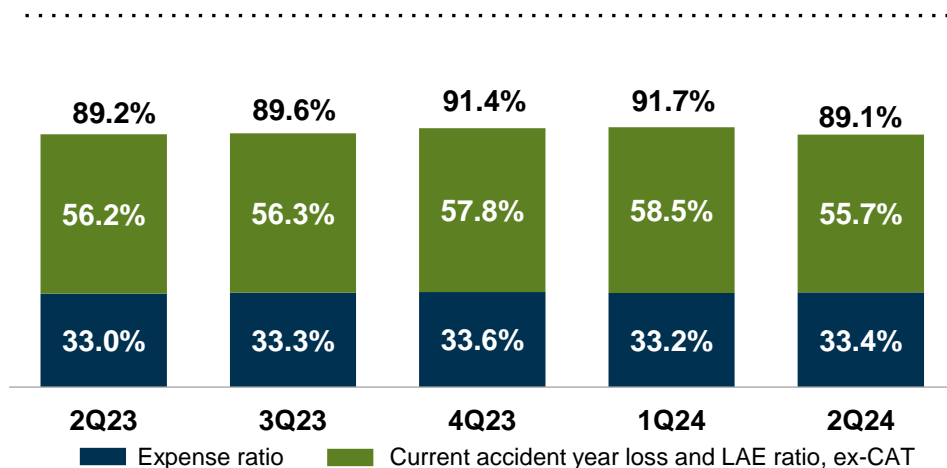
Core Commercial Underwriting Highlights

(\$ in millions)

	Three months ended June 30		Six months ended June 30	
	2023	2024	2023	2024
Net premiums written	\$486.8	\$513.4	\$1,052.1	\$1,095.8
<i>Growth</i>	7.2%	5.5%	7.3%	4.2%
Net premiums earned	\$515.6	\$537.4	\$1,023.0	\$1,066.3
Combined ratio	95.8%	91.8%	100.2%	92.8%
Catastrophe ratio	6.5%	3.1%	9.5%	3.5%
Combined ratio, ex-CAT	89.3%	88.7%	90.7%	89.3%
Prior-year development ratio	0.1%	(0.4)%	0.4%	(1.1)%
Current accident year combined ratio, ex-CAT	89.2%	89.1%	90.3%	90.4%

- Second quarter 2024 combined ratio, ex-CAT, improved 0.6 points from the prior-year quarter
- Net favorable prior-year reserve development, ex-CAT, of \$2.1 million, or 0.4 points, with favorability in each major line of business, mainly driven by property coverages
- Current accident year loss and LAE ratio, ex-CAT, improved 0.5 points from the prior-year quarter, supported by the successful execution of our margin improvement plan, including strong pricing
- Expense ratio increased 40 basis points compared to the prior-year quarter, primarily driven by an increase in variable compensation
- Maintaining attentive focus on current liability trends, which have remained within expectations, supported by:
 - Prior initiatives to de-emphasize industry classes most impacted by social inflation, particularly in large metro areas
 - Advantageous industry and geographic mix has driven substantial reduction in loss frequency relative to pre-pandemic periods
 - Prudent new business growth over the last several years, in reaction to challenging loss trends

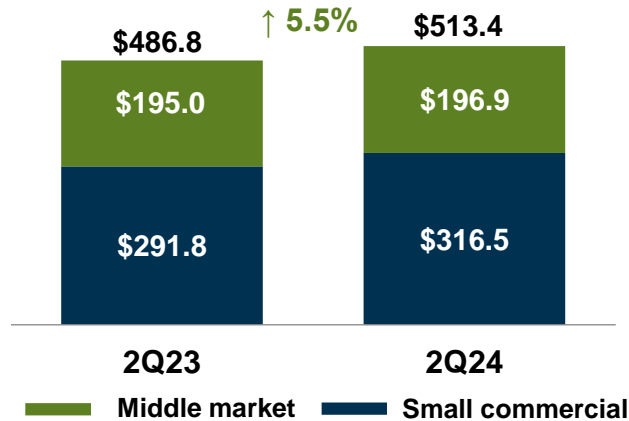
Current accident year combined ratio, ex-CAT



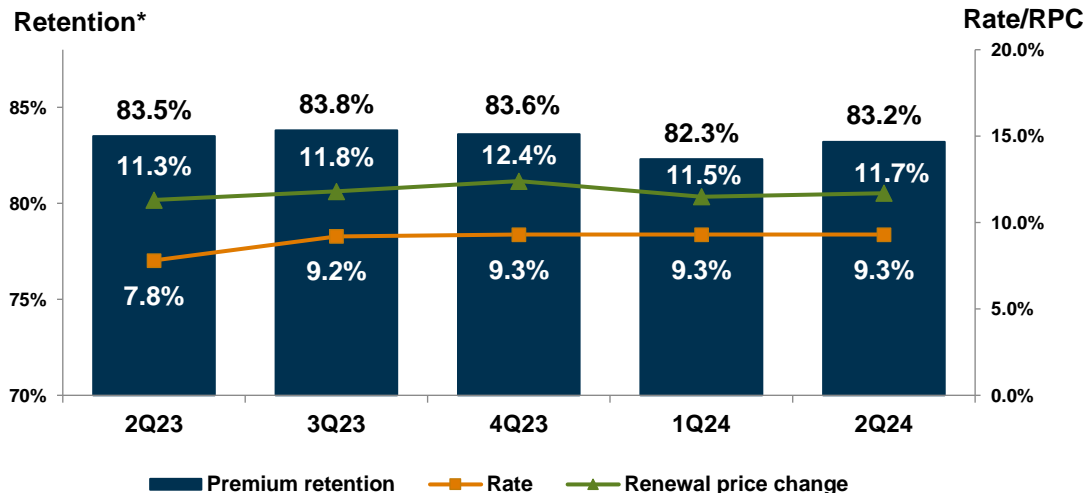
Core Commercial Growth Highlights

(\$ in millions)

Net premiums written and growth



- Net premiums written increased 5.5% in the second quarter, up from 3.0% in the first quarter of 2024. Second quarter growth driven by:
 - Growth of 8.5% in small commercial, propelled by strong pricing
 - Middle market growth of 1.0%, impacted by targeted non-renewals



- Renewal price increases of 11.7%, driven by consistent rate increases, as well as insurance-to-value and other exposure adjustments
 - Retention improved sequentially to 83.2%

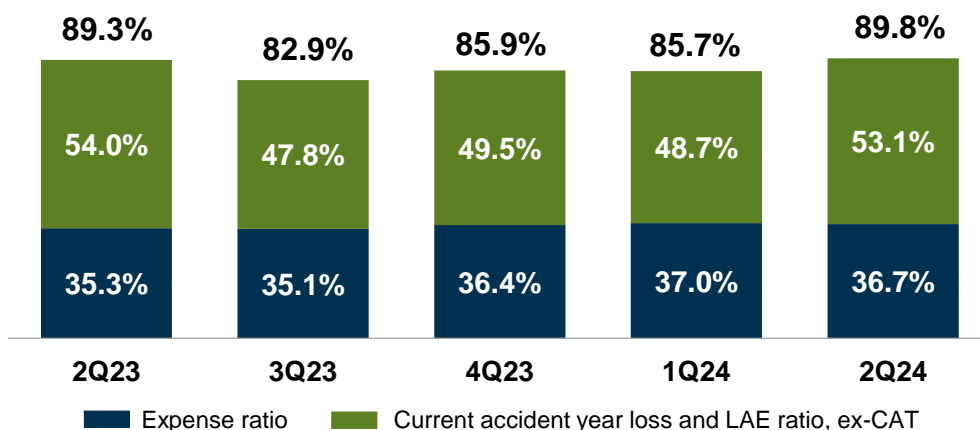
*Retention is defined as the ratio of net retained premium for the noted period to the premium available to renew over the same period

Specialty Underwriting Highlights

(\$ in millions)	Three months ended June 30		Six months ended June 30	
	2023	2024	2023	2024
Net premiums written	\$325.4	\$352.1	\$649.7	\$691.9
<i>Growth</i>	7.6%	8.2%	7.4%	6.5%
Net premiums earned	\$319.8	\$330.5	\$631.5	\$651.4
Combined ratio	88.4%	93.1%	89.2%	90.4%
Catastrophe ratio	2.8%	6.7%	4.8%	4.5%
Combined ratio, ex-CAT	85.6%	86.4%	84.4%	85.9%
Prior-year development ratio	(3.7)%	(3.4)%	(4.7)%	(1.9)%
Current accident year combined ratio, ex-CAT	89.3%	89.8%	89.1%	87.8%

- Second quarter 2024 combined ratio, ex-CAT, increased 0.8 points from the prior-year quarter, driven by an increase in the expense ratio
- Expense ratio increased 1.4 points compared to the prior-year quarter to 36.7%, primarily driven by strategic business investments, including talent
- Net favorable prior-year reserve development, ex-CAT, of \$11.3 million, or 3.4 points, primarily driven by favorability in our professional and executive lines claims-made business
- Current accident year loss and LAE ratio, ex-CAT, improved 0.9 points from the prior-year quarter, in line with our expectations and low-50s underlying loss ratio target for the segment

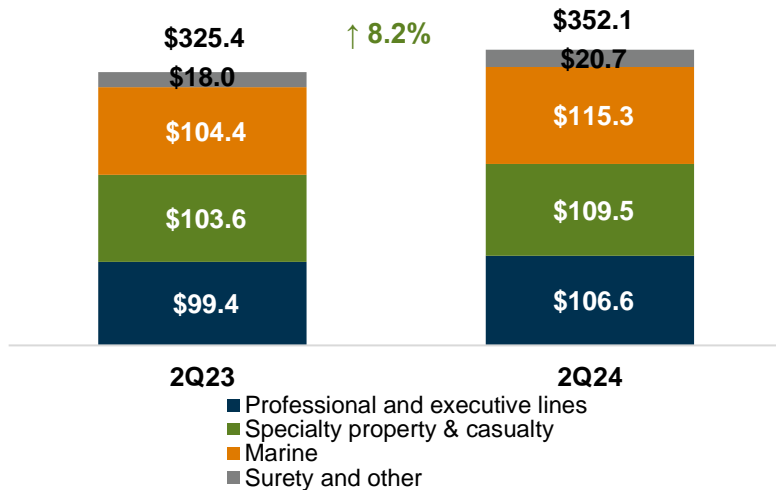
Current accident year combined ratio, ex-CAT



Specialty Growth Highlights

(\$ in millions)

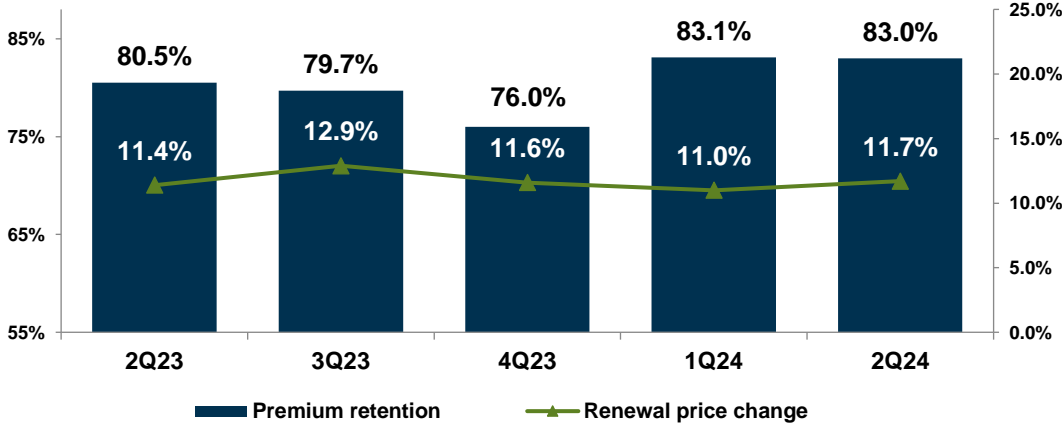
Net premiums written and growth



- Specialty net premiums written growth of 8.2% in the second quarter of 2024, with strong double-digit growth across many sub-segments
 - On track to deliver upper-single digit growth for 2024
- Seeing growth opportunities across multiple lines, including E&S and Marine

- Renewal price increases remain strong at 11.7%, driven by both property and liability pricing
 - Robust rate increases of 8.2%
 - Retention remained robust

Retention*



*Retention is defined as the ratio of net retained premium for the noted period to the premium available to renew over the same period

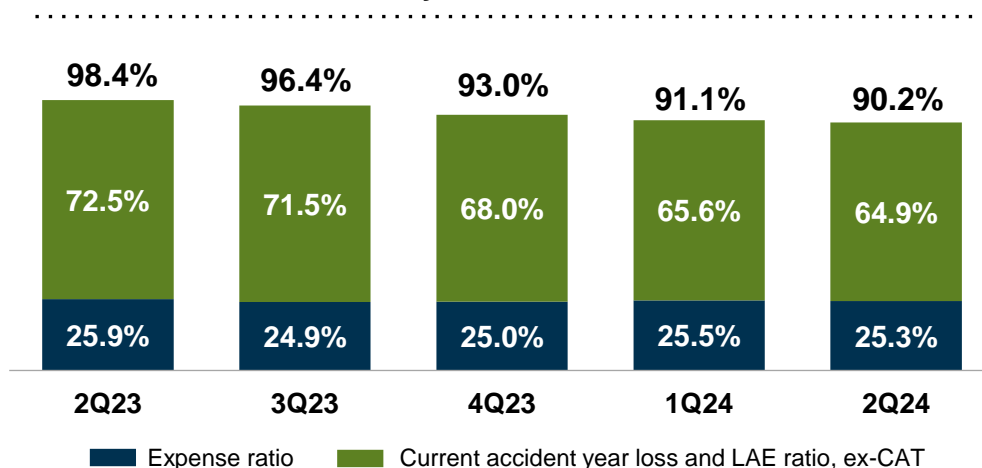
Personal Lines Underwriting Highlights

(\$ in millions)

	Three months ended June 30		Six months ended June 30	
	2023	2024	2023	2024
Net premiums written	\$634.6	\$655.6	\$1,166.5	\$1,187.4
<i>Growth</i>	10.1%	3.3%	10.1%	1.8%
Net premiums earned	\$576.3	\$605.3	\$1,137.2	\$1,204.1
Combined ratio	138.0%	109.1%	125.3%	105.0%
Catastrophe ratio	38.0%	19.6%	27.2%	14.8%
Combined ratio, ex-CAT	100.0%	89.5%	98.1%	90.2%
Prior-year development ratio	1.6%	(0.7)%	1.8%	(0.3)%
Current accident year combined ratio, ex-CAT	98.4%	90.2%	96.3%	90.5%

- Combined ratio, ex-CAT, improved 10.5 points from the prior-year quarter, primarily driven by strong improvement in the underlying loss ratio, as well as a lower expense ratio
- Current accident year loss and LAE ratio, ex-CAT, improved 7.6 points from the prior-year quarter
 - Auto improved 9.0 points compared to the prior-year quarter, driven by the benefit of earned pricing increases and moderating loss trends
 - Homeowners and Other improved 5.3 points compared to the prior-year quarter, driven by the benefit of rate earning in and normalizing large loss experience compared to the second quarter of 2023, partially offset by an increase in loss assumptions for umbrella
- Prior year reserve development, ex-CAT, was favorable \$4.0 million, or 0.7 points, with auto property favorability partially offset by reserve increases in umbrella, which is reported in homeowners and other

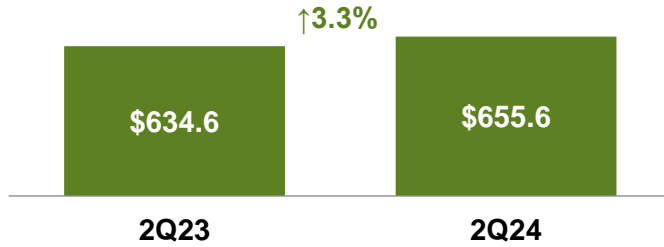
Current accident year combined ratio, ex-CAT



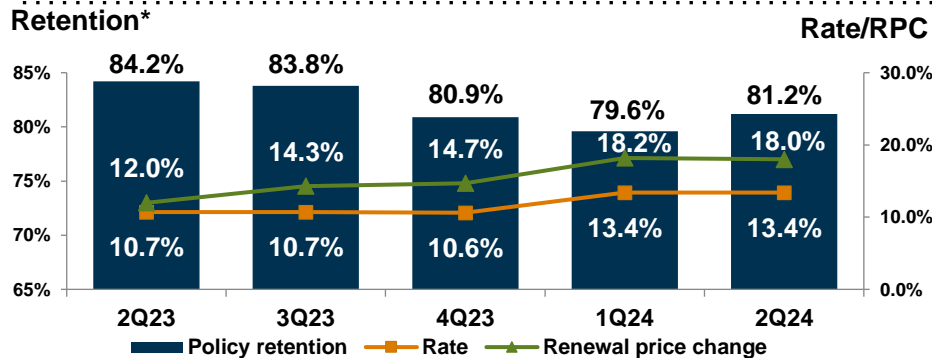
Personal Lines Growth Highlights

(\$ in millions)

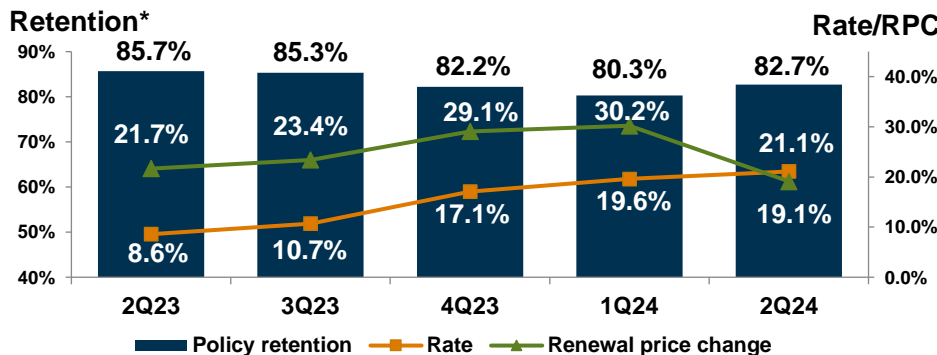
Net premiums written and growth



Personal auto



Homeowners



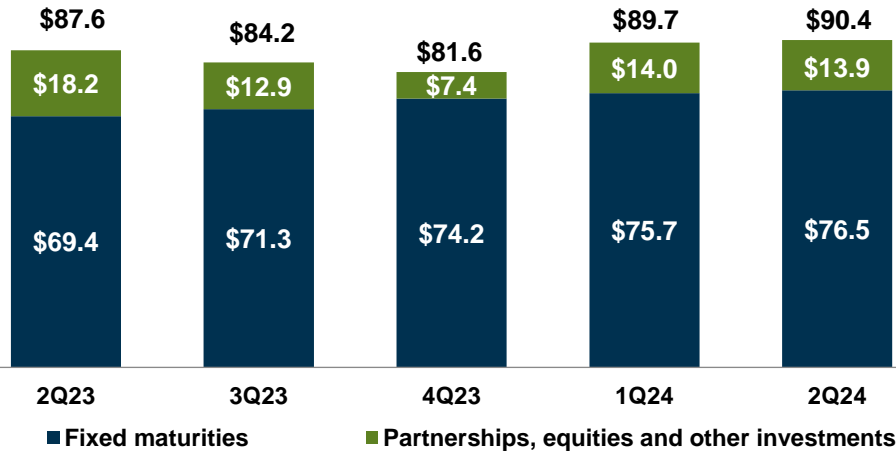
- Net premiums written growth of 3.3% compared to the prior-year quarter, as strong pricing increases were partially offset by the impact of margin improvement initiatives and targeted non-renewals, which led to lower PIF and retention compared to the prior-year quarter; retention increased 2.1 points sequentially
- Renewal price increases of 18.5%, including 19.1% in homeowners and 18.0% in auto
 - Homeowners renewal price increases slowed in the quarter as expected, as exposure increases ticked down driven by normalized ITV adjustments and implementation of deductible changes on the majority of target renewals
- PIF declined 2.1% sequentially from the first quarter of 2024, with a decline of 3.3% in the Midwestern United States, in line with expectations
- Expect growth to ramp up through the remainder of the year

*Retention is defined as the ratio of net retained policies for the noted period to those policies available to renew over the same period and includes policies that were cancelled and rewritten.

Net Investment Income Trends

(\$ in millions)

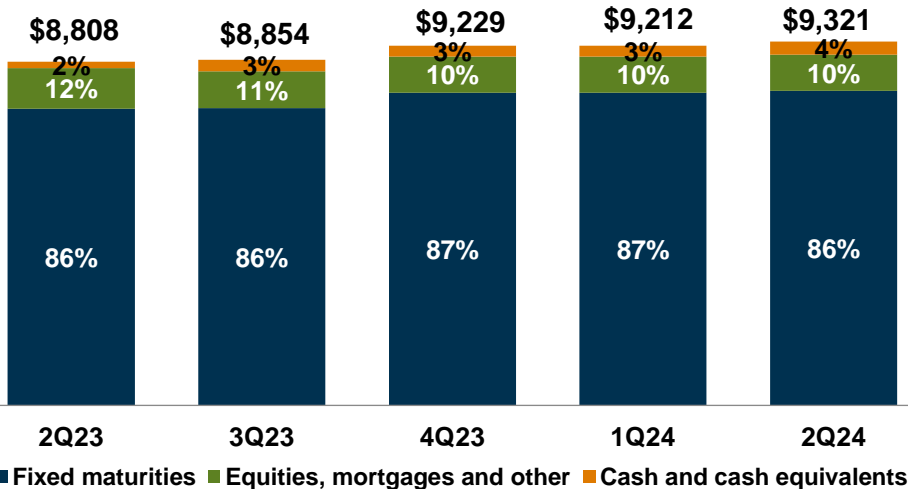
Net investment income*



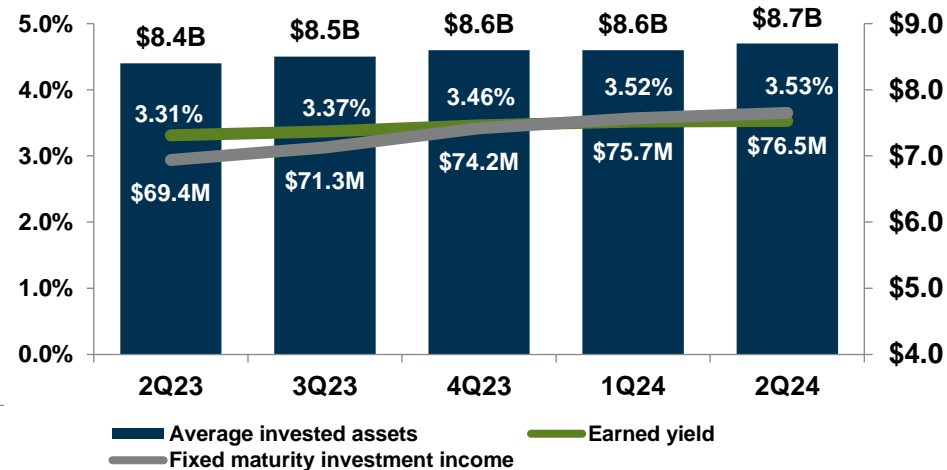
- Net investment income of \$90.4 million in the second quarter of 2024, up 3.2% from the prior-year quarter, reflecting:
 - Positive impact of higher interest rates and the continued investment of operational cashflows
 - Reduced partnership income was impacted by the comparison to the second quarter of 2023, which included a one-time \$6.8 million benefit, as well as underperformance in some funds in the second quarter of 2024
 - Excluding partnerships, net investment income increased 19.5% from the prior-year quarter

(\$ in millions)

Cash and invested assets



Fixed maturity investment portfolio trends



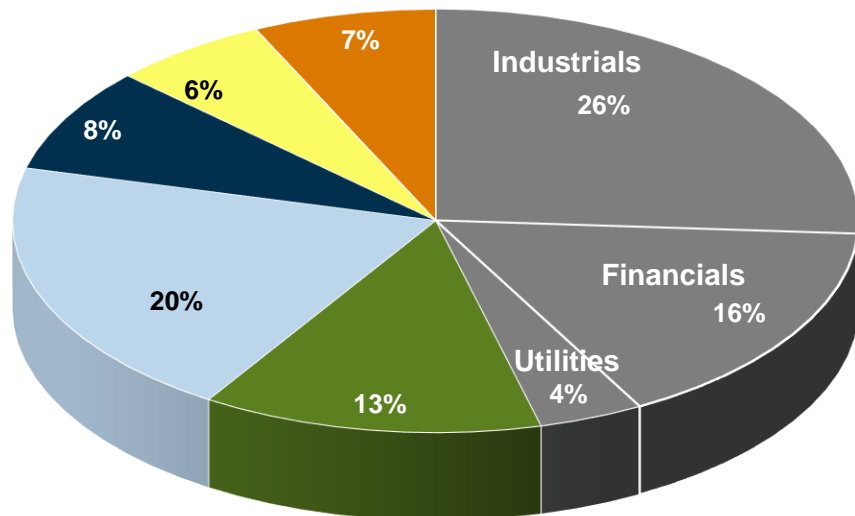
*Net investment income from partnerships, equities and other investments are presented net of investment expenses

Investment Portfolio – Total Invested Assets and Cash of \$9.3 Billion

As of June 30, 2024

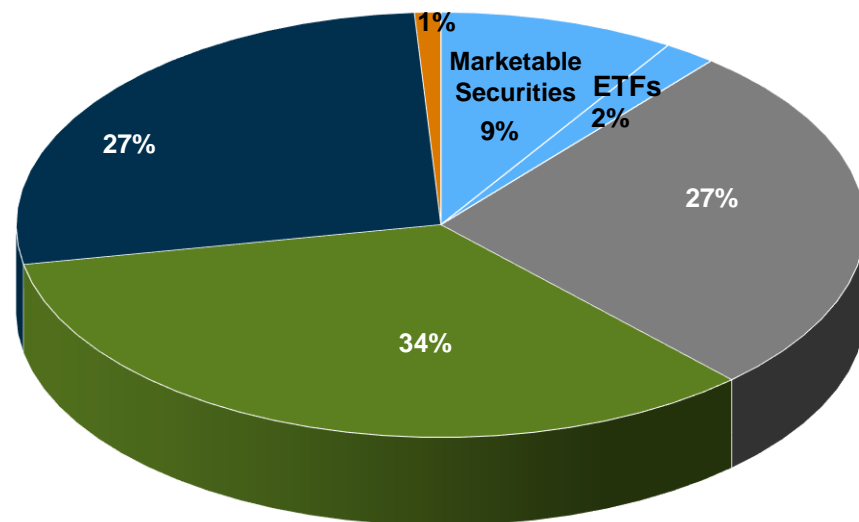
High quality, well-diversified investment portfolio

Fixed maturities: \$8.0 Billion



- Corporates
- Municipal (taxable)
- RMBS
- CMBS
- US Government
- ABS

Equities, cash and other: \$1.3 Billion



- Equities
- Limited partnerships
- Other
- Mortgage loans
- Cash and cash equivalents

High-quality, well-laddered fixed income portfolio

- 95% of fixed maturity securities are investment grade
- Weighted average quality: A+
- Duration: 4.1 years

About The Hanover

The Hanover Insurance Group, Inc. is the holding company for several property and casualty insurance companies, which together constitute one of the largest insurance businesses in the United States. The company provides exceptional insurance solutions through a select group of independent agents and brokers. Together with its agent partners, The Hanover offers standard and specialized insurance protection for small and mid-sized businesses, as well as for homes, automobiles, and other personal items. For more information, please visit hanover.com.

Forward-Looking Statements

Certain statements in this document and comments made by management may be “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, may be forward-looking statements. Words such as, but not limited to, “believes,” “anticipates,” “expects,” “intends,” “may,” “projects,” “projections,” “plan,” “likely,” “potential,” “targeted,” “forecasts,” “should,” “could,” “continue,” “outlook,” “guidance,” “modeling,” “target profitability,” “target margins,” “confident,” “will,” “line of sight,” and other similar expressions are intended to identify forward-looking statements. Forward-looking statements by their nature address matters that are, to different degrees, uncertain. The company cautions investors that any such forward-looking statements are estimates, beliefs, expectations and/or projections that involve significant judgment, and that historical results, trends and forward-looking statements are not guarantees and are not necessarily indicative of future performance. Actual results could differ materially from those anticipated.

These statements include, but are not limited to, the company’s statements regarding:

- The company’s outlook and its ability to achieve components or the sum of the respective period guidance on its future results of operations including: the combined ratio, excluding catastrophe losses; catastrophe losses; net investment income; growth of net premiums written and/or net premiums earned in total or by line of business; expense ratio; operating return on equity; interest rate assumptions and investment portfolio management, renewal price change, rate, and/or the effective tax rate;
- The company’s ability to deliver on expectations set forth related to target margins, target returns and/or return to target profitability in total or by line of business;
- The company’s ability to deliver on its long-term targets, including, but not limited to, return on equity;
- The impacts of general economic and sociopolitical conditions on the company’s operating and financial results, including, but not limited to, the impact on the company’s investment portfolio, changes in claims frequency as a result of fluctuations in economic activity, the potential impacts of inflation, and/or claims severity from higher cost of repairs due to, among other things, supply chain disruptions and inflation;
- Uses of capital for share repurchases, special or ordinary cash dividends, business investments or growth, or otherwise, and outstanding shares in future periods as a result of various share repurchase mechanisms, capital management framework, especially in the current environment, and overall comfort with liquidity and capital levels;
- Catastrophe modeling and variability of catastrophe losses due to risk concentrations, changes in weather patterns, severe weather including hurricanes, tornadoes and other windstorms, hail, flood, earthquakes, fire, explosions, severe winter weather and other convective storms, or terrorism, civil unrest, riots or other events, as well as the complexity in estimating losses from large catastrophe events due to delayed reporting of the existence, nature or extent of losses or where “demand surge,” regulatory assessments, litigation, coverage and technical complexities or other factors may significantly impact the ultimate amount of such losses;
- Current accident year losses and loss selections (picks), excluding catastrophes, and prior accident year loss reserve development patterns, particularly in complex “longer-tail” liability lines, as well as the inherent variability in short-tail property and non-catastrophe weather losses;
- Changes in frequency and loss severity trends in Core Commercial, Specialty and/or Personal Lines;
- Ability to manage the impact of inflationary pressures, global market disruptions, economic conditions, geopolitical events or otherwise, including, but not limited to, supply chain disruptions, labor shortages, and increases in cost of goods, services, labor, and materials;
- The confidence or concern that the current level of reserves is adequate and/or sufficient for future claim payments, whether due to losses that have been incurred but not reported, circumstances that delay the reporting of losses, business complexity, adverse judgments or developments with respect to case reserves, the difficulties and uncertainties inherent in projecting future losses from historical data, changes in replacement and medical costs, as well as complexities including legislative, regulatory or judicial actions that expand the intended scope of coverages, or other factors;
- Characterization of some business as being “more profitable” in light of inherent uncertainty of ultimate losses incurred, especially for “longer-tail” liability businesses;
- Efforts to manage expenses, including the company’s long-term expense savings targets, while allocating capital to business investment, which is at management’s discretion;
- Risks and uncertainties with respect to our ability to retain profitable policies in force and attract profitable policies and to increase rates commensurate with, or in excess of, loss trends;
- Mix improvement, underwriting initiatives, coverage restrictions, non-renewals, changes in terms and conditions, and pricing segmentation, among others, to grow businesses believed to be more profitable or reduce premiums attributable to products or lines of business or geographies believed to be less profitable; balance rate actions and retention; offset long-term and/or short-term loss trends due to increased frequency; increased “social inflation” from a more litigious environment and higher average cost of resolution; increased property replacement or repair costs; and/or social movements;
- The ability to generate growth in targeted segments through new agency appointments; rate increases (as a result of its market position, agency relationships or otherwise), retention improvements or new business; expansion into new geographies; new product introductions; or otherwise; and
- Investment returns and the effect of macro-economic interest rate trends and overall security yields, including the macro-economic impact of governmental and/or central banking initiatives taken in response to inflationary pressures, and geopolitical circumstances, on new money yields, as well as individual investment and overall investment returns.

Additional Risks and Uncertainties

Investors are further cautioned and should consider the risks and uncertainties in the company's business that may affect such estimates and future performance that are discussed in the company's most recently filed reports on Form 10-K and Form 10-Q and other documents filed by The Hanover Insurance Group, Inc. with the Securities and Exchange Commission (SEC) and that are also available at www.hanover.com under "Investors." These risks and uncertainties include, but are not limited to:

- Changes in regulatory, legislative, economic, market and political conditions, particularly with respect to rates, the use of data, technology, artificial intelligence, cybersecurity, policy terms and conditions, restrictions on cancellations and/or non-renewals, payment flexibility, and regions where the company has geographical concentrations;
- Heightened financial market volatility, fluctuations in interest rates (which have a significant impact on the market value of our investment portfolio and thus our book value), inflationary pressures, default rates, difficult economic, market and political conditions and other factors that affect investment returns from the investment portfolio;
- Recessionary economic periods that may inhibit the company's ability to increase pricing or renew business, or otherwise impact the company's results, and which may be accompanied by higher claims activity in certain lines;
- Data security and privacy incidents, including, but not limited to, those resulting from a malicious cybersecurity attack on the company or its business partners and service providers, or intrusions into the company's network systems, including cloud-based data information storage, or data sources;
- Adverse claims experience, including those driven by large or increased frequency and/or severity of catastrophe events, including those related to hurricanes, tornadoes and other windstorms, hail flood, earthquakes, fire, explosions, severe winter weather and other convective storms, or due to terrorism, civil unrest, riots, or cybersecurity events (including from products not intended to provide cyber coverage);
- The limitations and assumptions used to model non-catastrophe property and casualty losses (particularly with respect to products with longer-tail liability lines, such as casualty and bodily injury claims, or involving emerging issues related to losses incurred as the result of new lines of business, such as cyber or financial institutions coverage, or reinsurance contracts and reinsurance recoverables), leading to potential adverse development of loss and loss adjustment expense reserves;
- Impacts of changing climate conditions and weather patterns causing higher levels of losses from weather events to persist and leading to new or enhanced regulations;
- Litigation and the possibility of adverse judicial decisions, including those which expand policy coverage beyond its intended scope and/or award "bad faith" or other non-contractual damages, and the impact of "social inflation" and third-party litigation funding affecting judicial awards and settlements;
- The ability to increase or maintain insurance rates in line with anticipated loss costs and/or governmental action, including mandates by state departments of insurance to either raise or lower rates, or provide credits or return premium to insureds;
- Investment impairments, which may be affected by, among other things, the company's ability and willingness to hold investment assets until they recover in value, as well as credit and interest rate risk, and general financial and economic conditions;
- Disruption of the independent agency channel or its operating model, including the impact of competition and consolidation in the industry and among agents and brokers, and the impact of artificial intelligence tools;
- Competition, particularly from competitors who have resource and capability advantages;
- The global macroeconomic environment, including inflation, recessionary effects, global trade disputes, war, energy market disruptions, equity price risk, and interest rate fluctuations, which, among other things, could result in reductions in market values of fixed maturities and other investments, and/or increases in loss costs;
- Adverse state and federal regulation, legislative and/or regulatory actions (including significant revisions to Michigan's automobile personal injury protection system and related litigation, and various regulations, orders and proposed legislation regarding bad faith, premium grace periods and returns, changes to policy terms and conditions, and rate actions);
- Financial ratings actions, in particular, downgrades to the company's ratings;
- Operational and technology risks and evolving technological and product innovation, including risks created by remote work environments, the evolving use of artificial intelligence, and cybersecurity threats;
- Uncertainties in estimating indemnification liabilities recorded in conjunction with obligations undertaken in connection with the sale of various businesses and discontinued operations; and
- The ability to collect from reinsurers, reinsurance availability and pricing, reinsurance terms and conditions, and the performance of the run-off voluntary property and casualty pools business (including those in the Other segment or in discontinued operations).

Investors should not place undue reliance on forward-looking statements, which speak only as of the date they are made and should understand the risks and uncertainties inherent in or particular to the company's business. The company does not undertake the responsibility to update or revise such forward-looking statements, except as required by law.

Non-GAAP Financial Measures

Non-GAAP Financial Measures

As discussed on page 40 of the company's Annual Report on Form 10-K for the year ended December 31, 2023, the company uses non-GAAP financial measures as important measures of its operating performance, including operating income (loss), operating income (loss) before interest expense and income taxes, operating income (loss) per diluted (basic) share, and components of the combined ratio, both excluding and/or including catastrophe losses, prior-year reserve development and the expense ratio. Management believes these non-GAAP financial measures are important indications of the company's operating performance. The definition of other non-GAAP financial measures and terms can be found in the 2023 Annual Report on pages 64-67.

Operating income (loss) and operating income (loss) per diluted (basic) share are non-GAAP measures. They are defined as net income (loss) excluding the after-tax impact of net realized and unrealized investment gains (losses), gains and/or losses on the repayment of debt, other non-operating items, and results from discontinued operations. Net realized and unrealized investment gains (losses), which include changes in the fair value of equity securities still held, are excluded for purposes of presenting operating income (loss), as they are, to a certain extent, determined by interest rates, financial markets and the timing of sales. Operating income (loss) also excludes net gains and losses from disposals of businesses, gains and losses related to the repayment of debt, costs to acquire businesses, restructuring costs, the cumulative effect of accounting changes, and certain other items. Operating income (loss) is the sum of the segment income (loss) from: Core Commercial, Specialty, Personal Lines, and Other, after interest expense and income taxes. In reference to one of the company's four reporting segments, "operating income (loss)" is the segment income (loss) before both interest expense and income taxes. The company also uses "operating income (loss) per diluted (basic) share" (which is after both interest expense and income taxes). Operating income per share is calculated by dividing operating income by the weighted average number of diluted shares of common stock. Operating loss per share is calculated by dividing operating loss by the weighted average number of basic shares of common stock due to antidilution. The company believes that metrics of operating income (loss) and operating income (loss) in relation to its four reporting segments provide investors with a valuable measure of the performance of the company's continuing businesses because they highlight the portion of net income (loss) attributable to the core operations of the business. Income (loss) from continuing operations is the most directly comparable GAAP measure for operating income (loss) (and operating income (loss) before income taxes) and measures of operating income (loss) that exclude the effects of catastrophe losses and/or prior-year reserve development. These non-GAAP measures should not be misconstrued as substitutes for income (loss) from continuing operations or net income (loss) determined in accordance with GAAP. A reconciliation of operating income (loss) to income (loss) from continuing operations and net income (loss) for the relevant periods is included on page 21 of this presentation.

Operating return on average equity (ROE) is a non-GAAP measure. See end note (5) for a detailed explanation of how this measure is calculated. Operating ROE is based on non-GAAP operating income (loss). In addition, the portion of shareholder equity attributed to unrealized appreciation (depreciation) on fixed maturity investments, net of tax, is excluded. The company believes this measure is helpful in that it provides insight to the capital used by, and results of, the continuing business exclusive of interest expense, income taxes, and other non-operating items. These measures should not be misconstrued as substitutes for GAAP ROE, which is based on net income (loss) and shareholders' equity of the entire company and without adjustments.

Book value per share is total shareholders' equity divided by the number of common shares outstanding. Book value per share excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, is total shareholders' equity excluding the after-tax effect of unrealized appreciation (depreciation) on fixed maturities and market risk divided by the number of common shares outstanding.

The company may provide measures of operating income (loss) and combined ratios that exclude the impact of catastrophe losses (which in all respects include prior accident year catastrophe loss development). A catastrophe is a severe loss, resulting from natural or manmade events including, but is not limited to, hurricanes, tornadoes and other windstorms, hail, flood, earthquakes, fire, explosions, severe winter weather and other convective storms, riots, and terrorism. Due to the unique characteristics of each catastrophe loss, there is an inherent inability to reasonably estimate the timing or loss amount in advance. The company believes a separate discussion excluding the effects of catastrophe losses is meaningful to understand the underlying trends and variability of earnings, loss and combined ratio results, among others.

Prior accident year reserve development, which can either be favorable or unfavorable, represents changes in the company's estimate of costs related to claims from prior years. Calendar year loss and loss adjustment expense (LAE) ratios determined in accordance with GAAP, excluding prior accident year reserve development, are sometimes referred to as "current accident year loss ratios." The company believes a discussion of loss and combined ratios, excluding prior accident year reserve development, is helpful since it provides insight into both estimates of current accident year results and the accuracy of prior-year estimates.

The loss and combined ratios in accordance with GAAP are the most directly comparable GAAP measures for the loss and combined ratios calculated excluding the effects of catastrophe losses and/or prior-year reserve development. The presentation of loss and combined ratios calculated excluding the effects of catastrophe losses and/or prior-year reserve development should not be misconstrued as substitutes for the loss and/or combined ratios determined in accordance with GAAP.

End notes

(1) Combined ratio, excluding catastrophes, and current accident year combined ratio, excluding catastrophes, are non-GAAP measures. The combined ratio (which includes catastrophe losses and prior-year loss reserve development) is the most directly comparable GAAP measure. This and other non-GAAP measures are used throughout this document. See the disclosure on the use of this and other non-GAAP measures under the heading “Forward-Looking Statements and Non-GAAP Financial Measures.” A reconciliation of the GAAP combined ratio to the combined ratio, excluding catastrophes, and to the current accident year combined ratio, excluding catastrophes, is shown below.

	Three months ended June 30, 2024			
	Core Commercial	Specialty	Personal Lines	Total
Total combined ratio (GAAP)	91.8%	93.1%	109.1%	99.2%
Less: Catastrophe ratio	3.1%	6.7%	19.6%	10.7%
Combined ratio, excluding catastrophe losses (non-GAAP)	88.7%	86.4%	89.5%	88.5%
Less: Prior-year reserve development ratio	(0.4)%	(3.4)%	(0.7)%	(1.2)%
Current accident year combined ratio, excluding catastrophe losses (non-GAAP)	<u>89.1%</u>	<u>89.8%</u>	<u>90.2%</u>	<u>89.7%</u>
	June 30, 2023			
Total combined ratio (GAAP)	95.8%	88.4%	138.0%	111.3%
Less: Catastrophe ratio	6.5%	2.8%	38.0%	18.5%
Combined ratio, excluding catastrophe losses (non-GAAP)	89.3%	85.6%	100.0%	92.8%
Less: Prior-year reserve development ratio	0.1%	(3.7)%	1.6%	(0.1)%
Current accident year combined ratio, excluding catastrophe losses (non-GAAP)	<u>89.2%</u>	<u>89.3%</u>	<u>98.4%</u>	<u>92.9%</u>
	Six months ended June 30, 2024			
	Core Commercial	Specialty	Personal Lines	Total
Total combined ratio (GAAP)	92.8%	90.4%	105.0%	97.3%
Less: Catastrophe ratio	3.5%	4.5%	14.8%	8.4%
Combined ratio, excluding catastrophe losses (non-GAAP)	89.3%	85.9%	90.2%	88.9%
Less: Prior-year reserve development ratio	(1.1)%	(1.9)%	(0.3)%	(1.0)%
Current accident year combined ratio, excluding catastrophe losses (non-GAAP)	<u>90.4%</u>	<u>87.8%</u>	<u>90.5%</u>	<u>89.9%</u>
	June 30, 2023			
Total combined ratio (GAAP)	100.2%	89.2%	125.3%	107.9%
Less: Catastrophe ratio	9.5%	4.8%	27.2%	15.6%
Combined ratio, excluding catastrophe losses (non-GAAP)	90.7%	84.4%	98.1%	92.3%
Less: Prior-year reserve development ratio	0.4%	(4.7)%	1.8%	(0.2)%
Current accident year combined ratio, excluding catastrophe losses (non-GAAP)	<u>90.3%</u>	<u>89.1%</u>	<u>96.3%</u>	<u>92.5%</u>

End notes continued

(2) Renewal price changes in Core Commercial and Specialty represent the average change in premium on renewed policies caused by the estimated net effect of base rate changes, discretionary pricing, specific inflationary changes or changes in policy level exposure or insured risks. Rate increases in Core Commercial and Specialty represent the average change in premium on renewed policies caused by the base rate changes, discretionary pricing, and inflation, excluding the impact of changes in policy level exposure or insured risks. Renewal price change in Personal Lines represents the average change in premium on policies charged at renewal caused by the net effects of filed rate, inflation adjustments or other changes in policy level exposure or insured risks, regardless of whether or not the policies are retained for the duration of their contractual terms. Rate change in Personal Lines is the estimated cumulative premium effect of approved rate actions applied to policies at renewal, regardless of whether or not policies are actually renewed. Accordingly, rate changes do not represent actual increases or decreases realized by the company. Personal Lines rate changes do not include inflation or changes in policy level exposure or insured risks.

(3) Current accident year loss and LAE ratio, excluding catastrophe losses, is a non-GAAP measure, which is equal to the loss and LAE ratio (loss ratio), excluding prior-year reserve development and catastrophe losses. The loss ratio (which includes losses, LAE, catastrophe losses and prior-year loss reserve development) is the most directly comparable GAAP measure. A reconciliation of the GAAP loss ratio to the current accident year loss and LAE ratio, excluding catastrophe losses is shown below.

Three months ended						
June 30, 2024						
	Core Commercial	Specialty	Personal Auto	Home & Other	Personal Lines	Total
Total loss and LAE ratio (GAAP)	58.4 %	56.4 %	70.1 %	102.8 %	83.8 %	68.4 %
Less:						
Prior-year reserve development ratio	(0.4)%	(3.4)%	(2.1)%	1.4 %	(0.7)%	(1.2)%
Catastrophe ratio	3.1 %	6.7 %	2.1 %	43.9 %	19.6 %	10.7 %
Current accident year loss and LAE ratio, excluding catastrophes (non-GAAP)	55.7 %	53.1 %	70.1 %	57.5 %	64.9 %	58.9 %
June 30, 2023						
Total loss and LAE ratio (GAAP)	62.8 %	53.1 %	84.3 %	151.6 %	112.1 %	80.7 %
Less:						
Prior-year reserve development ratio	0.1 %	(3.7)%	1.5 %	1.8 %	1.6 %	(0.1)%
Catastrophe ratio	6.5 %	2.8 %	3.7 %	87.0 %	38.0 %	18.5 %
Current accident year loss and LAE ratio, excluding catastrophes (non-GAAP)	56.2 %	54.0 %	79.1 %	62.8 %	72.5 %	62.3 %
Six months ended						
June 30, 2024						
	Core Commercial	Specialty	Personal Auto	Home & Other	Personal Lines	Total
Total loss and LAE ratio (GAAP)	59.5 %	53.6 %	71.6 %	90.8 %	79.6 %	66.5 %
Less:						
Prior-year reserve development ratio	(1.1)%	(1.9)%	(1.9)%	1.8 %	(0.3)%	(1.0)%
Catastrophe ratio	3.5 %	4.5 %	1.7 %	32.9 %	14.8 %	8.4 %
Current accident year loss and LAE ratio, excluding catastrophes (non-GAAP)	57.1 %	51.0 %	71.8 %	56.1 %	65.1 %	59.1 %
June 30, 2023						
Total loss and LAE ratio (GAAP)	67.3 %	53.9 %	81.9 %	124.2 %	99.3 %	77.3 %
Less:						
Prior-year reserve development ratio	0.4 %	(4.7)%	1.9 %	1.7 %	1.8 %	(0.2)%
Catastrophe ratio	9.5 %	4.8 %	2.4 %	62.6 %	27.2 %	15.6 %
Current accident year loss and LAE ratio, excluding catastrophes (non-GAAP)	57.4 %	53.8 %	77.6 %	59.9 %	70.3 %	61.9 %

End notes continued

(4) Net investment income, excluding limited partnership income, is a non-GAAP measure. Net investment income (which includes limited partnership income) is the most directly comparable GAAP measure. A reconciliation of GAAP net investment income to net investment income, excluding limited partnership income, is shown below.

(\$ in millions)	Period ended	
	June 30	June 30
	2023	2024
Net investment income	\$ 87.6	\$ 90.4
Less: Limited partnership income	13.1	1.4
Net investment income, excluding limited partnership income	\$ 74.5	\$ 89.0
Increase in net investment income		3.2 %
Increase in net investment income, excluding limited partnership income		19.5 %

End notes continued

(5) Operating return on average equity (operating ROE) is a non-GAAP measure. Operating ROE is calculated by dividing annualized operating income (loss) after tax for the applicable period (see end note (6)), by average shareholders' equity, excluding unrealized appreciation (depreciation) on fixed maturity investments, net of tax, for the period presented. Total shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, is also a non-GAAP measure. Total shareholders' equity is the most directly comparable GAAP measure and is reconciled below. For the calculation of operating ROE, the average of beginning and ending shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, is used for the period as shown in the table below.

(\$ in millions)	Period Ended						
	December 31 2022	March 31 2023	June 30 2023	September 30 2023	December 31 2023	March 31 2024	June 30 2024
Total shareholders' equity (GAAP)	\$ 2,333.7	\$ 2,389.0	\$ 2,237.9	\$ 2,116.3	\$ 2,465.6	\$ 2,522.7	\$ 2,552.2
Less: net unrealized appreciation (depreciation) on fixed maturity investments, net of tax	(637.4)	(545.2)	(610.0)	(720.9)	(462.4)	(495.5)	(488.7)
Total shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax	\$ 2,971.1	\$ 2,934.2	\$ 2,847.9	\$ 2,837.2	\$ 2,928.0	\$ 3,018.2	\$ 3,040.9
Quarter-to-date Averages							
Average shareholders' equity (GAAP)			\$ 2,313.5				\$ 2,537.5
Average shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax			\$ 2,891.1				\$ 3,029.6
Year-to-date Averages							
Average shareholders' equity (GAAP)			\$ 2,320.2				\$ 2,513.5
Average shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax			\$ 2,917.7				\$ 2,995.7

(\$ in millions)	Three months ended		Six months ended	
	June 30		June 30	
<i>Net Income (Loss) ROE</i>	2023	2024	2023	2024
Net income (loss) (GAAP)	\$ (69.2)	\$ 40.5	\$ (81.2)	\$ 156.0
Annualized net income (loss)*	(276.8)	162.0	(162.4)	312.0
Average shareholders' equity	2,313.5	2,537.5	2,320.2	2,513.5
Net income (loss) return on equity	<u>(12.0)%</u>	<u>6.4 %</u>	<u>(7.0)%</u>	<u>12.4 %</u>
<i>Operating Income (Loss) ROE</i>				
Operating income (loss) after income taxes	\$ (68.3)	\$ 68.1	\$ (63.7)	\$ 180.0
Annualized operating income (loss), net of tax* (end note (6))	(273.2)	272.4	(127.4)	360.0
Average shareholders' equity, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax	2,891.1	3,029.6	2,917.7	2,995.7
Operating income (loss) return on equity	<u>(9.4)%</u>	<u>9.0 %</u>	<u>(4.4)%</u>	<u>12.0 %</u>

*For three months ended June 30, 2023, and 2024, annualized net income (loss) and operating income (loss) after income taxes is calculated by multiplying three months ended net income (loss) and operating income (loss) after income taxes, respectively, by 4. For six months ended June 30, 2023, and 2024, annualized net income (loss) and operating income (loss) after taxes is calculated by multiplying six months ended net income (loss) and operating income (loss) after taxes, respectively, by 2.

End notes continued

(6) Operating income (loss) and operating income (loss) per diluted (basic) share are non-GAAP measures. The following table provides the reconciliation of operating income (loss) and operating income (loss) per diluted (basic) share to the most directly comparable GAAP measures, income (loss) from continuing operations and income (loss) from continuing operations per diluted (basic) share, respectively, which are reconciled to net income (loss) and net income (loss) per diluted (basic) share, respectively.

The Hanover Insurance Group, Inc.	Three months ended June 30				Six months ended June 30			
	2024		2023		2024		2023	
	\$ Amount	Per Share (Diluted)	\$ Amount	Per Share* (Diluted)	\$ Amount	Per Share (Diluted)	\$ Amount	Per Share* (Diluted)
<i>(\$ in millions, except per share data)</i>								
Operating income (loss)								
Core Commercial	\$ 83.2		\$ 60.1		\$ 154.7		\$ 71.3	
Specialty	42.6		54.4		101.4		102.7	
Personal Lines	(30.4)		(194.1)		(11.5)		(240.7)	
Other	-		0.2		0.5		0.5	
Total	95.4		(79.4)		245.1		(66.2)	
Interest expense	(8.6)		(8.6)		(17.1)		(17.1)	
Operating income (loss) before income taxes	86.8	\$ 2.39	(88.0)	\$ (2.46)	228.0	\$ 6.28	(83.3)	\$ (2.33)
Income tax benefit (expense) on operating income	(18.7)	(0.51)	19.7	0.55	(48.0)	(1.32)	19.6	0.55
Operating income (loss) after income taxes	68.1	1.88	(68.3)	(1.91)	180.0	4.96	(63.7)	(1.78)
Non-operating items:								
Net realized gains (losses) from sales and other	(30.4)	(0.84)	0.1	-	(31.7)	(0.87)	(1.0)	(0.04)
Net change in fair value of equity securities	1.1	0.03	(1.1)	(0.03)	7.6	0.21	(8.2)	(0.23)
Impairments on investments:								
Credit-related impairments	(3.5)	(0.10)	(1.7)	(0.05)	(3.2)	(0.09)	(6.2)	(0.17)
Losses on intent to sell securities	(1.7)	(0.04)	-	-	(1.7)	(0.05)	(10.3)	(0.29)
	(5.2)	(0.14)	(1.7)	(0.05)	(4.9)	(0.14)	(16.5)	(0.46)
Other non-operating items	(1.0)	(0.03)	-	-	(2.4)	(0.06)	0.8	0.03
Income tax benefit on non-operating items	7.8	0.21	1.0	0.03	7.3	0.20	6.6	0.18
Income (loss) from continuing operations, net of taxes	40.4	1.11	(70.0)	(1.96)	155.9	4.30	(82.0)	(2.30)
Discontinued operations (net of taxes):								
Income from discontinued life business	0.1	0.01	-	-	0.1	-	-	-
Income from discontinued Chaucer business	-	-	0.8	0.02	-	-	0.8	0.03
Net income (loss)	\$ 40.5	\$ 1.12	\$ (69.2)	\$ (1.94)	\$ 156.0	\$ 4.30	\$ (81.2)	\$ (2.27)
Dilutive weighted average shares outstanding		36.3		36.0		36.3		36.1
Basic weighted average shares outstanding		36.0		35.7		35.9		35.7

*Per share data is calculated using basic shares outstanding due to antidilution.

End notes continued

(7) Book value per share, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, is a non-GAAP measure. Book value per share is the most directly comparable GAAP measure and is reconciled in the table below.

	Period ended		
	June 30 2023	March 31 2024	June 30 2024
Book value per share	\$ 62.62	\$ 70.22	\$ 70.96
Less: Net unrealized appreciation (depreciation) on fixed maturity investments, net of tax, per share	(17.06)	(13.79)	(13.60)
Book value per share, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax	\$ 79.68	\$ 84.01	\$ 84.56
<u>Versus prior quarter</u>			
Change in book value per share			1.1 %
Change in book value per share, excluding net unrealized appreciation (depreciation) on fixed maturity investments, net of tax			0.7 %

(8) Here, and throughout this document, the expense ratio is reduced by installment and other fee revenues for purposes of the ratio calculation.