

# A deeper dive into risk, capital and returns: a primer on the insurance industry

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SLC Global Insurance Group analyzes the components driving the performance of insurers





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When you think about the amount of risk that insurance companies take, what likely comes to mind are the types of exposures they underwrite or the volatility of the assets included in their investment portfolios. But just as important to overall risk is the leverage these companies operate with, on both sides of the balance sheet. In this paper, we discuss how all of these components of risk influence the amount of capital an insurer might hold, the return it can earn relative to that capital and the amount of shareholder value it can create.

## Types of capital

Any discussion of risk should begin with a discussion of capital. For an insurance company, there are two types of capital: **required capital** and **actual capital**.

**Required capital** represents the amount of capital an insurer needs to hold to support all of the risks inherent in its business in order to meet its financial obligations to policyholders. The greater amount of risk an insurance company takes, the higher the required capital. Required capital is formulaic and is the product of the balance value of each type of risk and a prescribed risk factor, and is primarily segmented into two categories: underwriting and investment. For property and casualty (P&C) insurance companies, for whom claim payouts can be very uncertain with regards to both amount and timing, the majority of required capital supports underwriting risk. On the other hand, life insurance companies have claim payouts that are much more certain with regards to amount and timing, but operate with greater investment leverage. The majority of required capital for life insurers is to support investment risk as a result.

**Actual capital** is the amount of capital an insurance company holds. Most of the time it can be found on the company's balance sheet as the difference between its assets and its liabilities. For an insurer, actual capital – with certain adjustments – must exceed required capital. The amount of excess capital an insurer holds is measured by a capital adequacy ratio, which is the ratio of actual capital to required capital. Regulators calculate capital adequacy ratios (e.g., the National Association of Insurance Commissioners' Risk-Based Capital [RBC] ratio in the U.S., the Solvency Capital Ratio [SCR] under Solvency II in Europe and the Bermuda Solvency Capital Ratio [BSCR] in Bermuda), as do rating agencies (Best's Capital Adequacy Ratio [BCAR] from AM Best and the Capital Ratio from S&P Global Ratings). Both categories of ratio come with tiers: if regulatory capital adequacy ratios drop below certain thresholds, various levels of regulatory intervention are invoked, whereas rating agency capital adequacy ratios dropping below certain thresholds often come with downward pressure on ratings.

Capital adequacy ratios are only one of several considerations that influence rating agency ratings, but higher ratios generally result in higher ratings. However, there is a balance for insurers. Too low of a capital adequacy ratio puts them at risk for a ratings downgrade, and too high of a ratio could mean they may not be taking advantage of opportunities to deploy that capital, thereby sacrificing potential returns.



## Breaking down return on capital

Now that we've defined capital, let's look at how to view return on that capital. For simplicity, let's assume that the company has no debt, in which case we can use the term "capital" interchangeably with equity, shareholders' equity or policyholders' surplus. In this paper, we'll use the term return on equity (ROE), defined in the following:

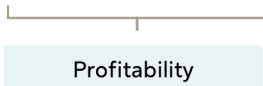
$$\text{ROE} = \left( \frac{\text{Net income}}{\text{Equity}} \right)$$

The two primary components of net income for an insurance company are underwriting income and investment income. The previous ROE formula can be broken down into these two components, enabling us to isolate the contribution to ROE from underwriting and the contribution to ROE from investments:

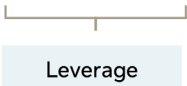
$$\text{ROE} = \left( \frac{\text{Underwriting income}}{\text{Equity}} \right) + \left( \frac{\text{Investment income}}{\text{Equity}} \right)$$

Furthermore, we can break down each of these components further in a way that shows that the contribution to ROE from each component is a function of profitability and leverage:

$$\left( \frac{\text{Underwriting income}}{\text{Equity}} \right) = \left( \frac{\text{Underwriting income}}{\text{Premium}} \right) \times \left( \frac{\text{Premium}}{\text{Equity}} \right)$$

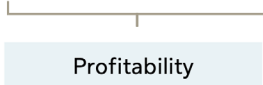


Profitability

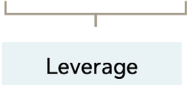


Leverage

$$\left( \frac{\text{Investment income}}{\text{Equity}} \right) = \left( \frac{\text{Investment income}}{\text{Invested assets}} \right) \times \left( \frac{\text{Invested assets}}{\text{Equity}} \right)$$



Profitability



Leverage

Now, let's put it all together by starting with profitability and leverage. We can show how the terms in the numerator and denominator cancel each other out to result in a simple formula for ROE:

$$\text{ROE} = \left( \boxed{\text{Underwriting margin}} \times \boxed{\text{Underwriting leverage}} \right) + \left( \boxed{\text{Investment yield}} \times \boxed{\text{Investment leverage}} \right)$$

$$\text{ROE} = \left( \frac{\text{Underwriting income}}{\text{Premium}} \times \frac{\text{Premium}}{\text{Equity}} \right) + \left( \frac{\text{Investment income}}{\text{Invested assets}} \times \frac{\text{Invested assets}}{\text{Equity}} \right)$$

$$\text{ROE} = \left( \frac{\text{Underwriting income}}{\text{Equity}} \right) + \left( \frac{\text{Investment income}}{\text{Equity}} \right)$$

$$\text{ROE} = \left( \frac{\text{Net income}}{\text{Equity}} \right)$$

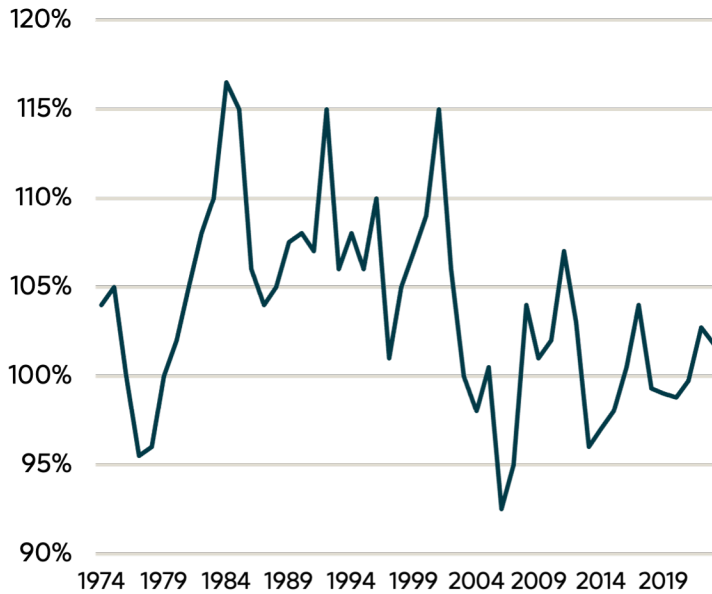


## The economics of 12% ROE

Having deconstructed ROE into its various components, we are now in a position to see how changes in those components over time have influenced ROE. For this exercise, we'll examine the P&C insurance industry.

On the underwriting side, given the cyclical nature of P&C insurance, underwriting margins have been through periods of ups and downs. Meanwhile, underwriting leverage has consistently decreased. The net result is lower contribution to ROE from underwriting over time.

### P&C insurance industry: combined ratio

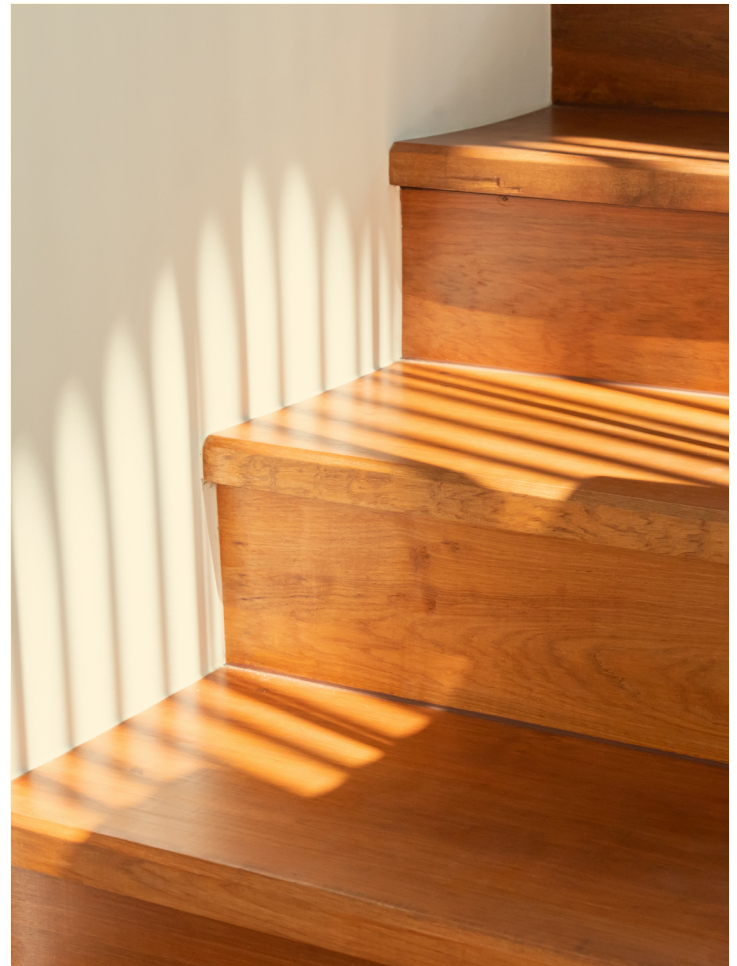


Sources: AM Best, S&P Global Market Intelligence.  
Data as of December 31, 2023.

### P&C insurance industry: operating leverage

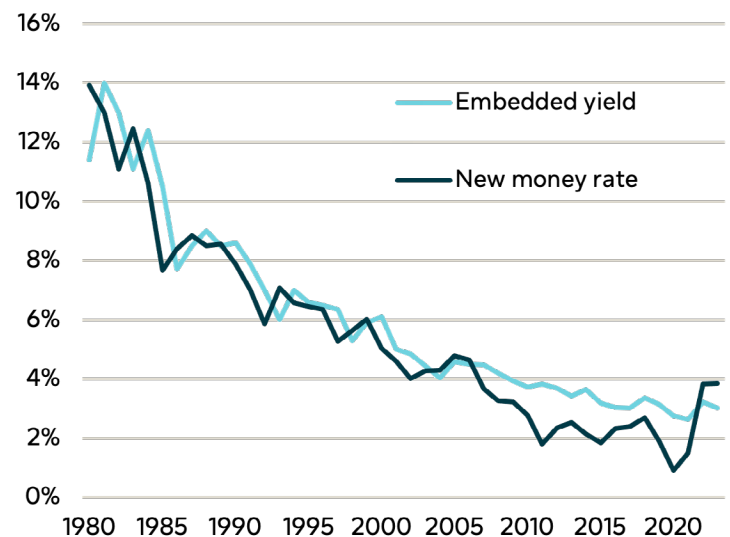
Year	Premium to surplus ratio
1975	2.50
1985	2.00
1990	1.50
2005	1.00
2015	0.75
2018	0.80
2021	0.70
2023	0.80

Sources: AM Best, S&P Global Market Intelligence, 2023.



On the investment side, new money yields consistently decreased for 40 years before the post-COVID reversal. Meanwhile, investment leverage has also come down. The net result is lower contribution from investments over time.

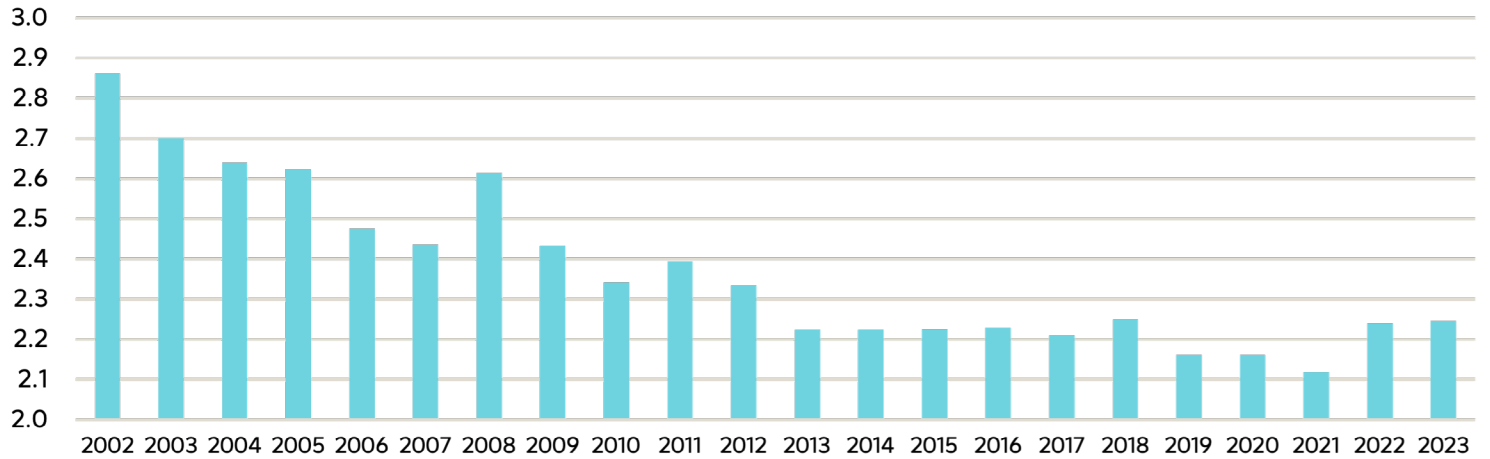
### P&C insurance industry: new money vs. embedded yields



Sources: AM Best, S&P Global Market Intelligence, 2023.  
Embedded yield = P&C pre-tax investment yield. New money rate = 10 year UST yield.



## P&C insurance industry: investment leverage



Source: S&P Global Market Intelligence, 2023.  
Investment leverage = invested assets/equity

To illustrate the impact of the decline in leverage and interest rates on ROE, the following exhibit shows the underwriting margin required to achieve a 12% ROE at various points in time. In 2024, a combined ratio of 93.5% (underwriting margin of 6.5%) would be required to achieve this level of profitability. In 2021, it was 90.5% (underwriting margin of 9.5%). Furthermore, in 1985, when leverage ratios and interest rates were much higher, companies could write at 107% combined ratio (underwriting margin of -7%) and still achieve a 12% ROE.

### Economics of a 12% ROE

Year	UW income/ premiums	x	Premiums/ equity	+	Inv. income/ invested assets	x	Invested assets/ equity	=	ROE
1985	-7.0%	x	2.0	+	8.0%	x	3.3	=	12%
2021	9.5%	x	0.7	+	2.6%	x	2.1	=	12%
2024	6.5%	x	0.8	+	3.0%	x	2.3	=	12%

Sources: AM Best, S&P Global Market Intelligence, SLC Management analysis, 2024.

## Value creation for insurance companies

Goals can differ by type and/or structure of a given insurance company, but a common objective amongst all insurers is to maximize risk-adjusted ROE. Let's look at publicly traded insurance companies to understand why.

A publicly traded insurance company's stock price is equal to the product of its book value per share and the price-to-book value multiple assigned to it by investors. Therefore, there are two ways these companies can create shareholder value:

1.

Grow **book value per share**, which is equal to shareholders' equity divided by the number of shares outstanding

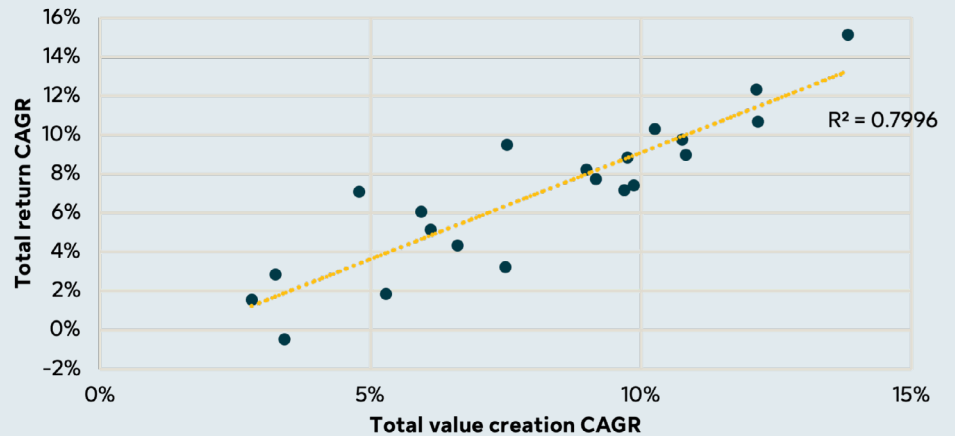
2.

Improve its **valuation multiple**

# 1.

**Book value per share** can grow through a number of ways – net income, appreciation in asset prices and share repurchase are three primary avenues for growth. Consequently, the higher a company’s ROE, the faster its book value per share increases. Assuming no change to the valuation multiple, stock price appreciation will equal book value per share growth. For this reason, the P&C industry over the long term has shown that company stock price growth is highly correlated with growth in book value per share plus dividends.

**P&C insurance – long-term stock price appreciation vs. book value per share growth (by compound annual growth rate [CAGR])**

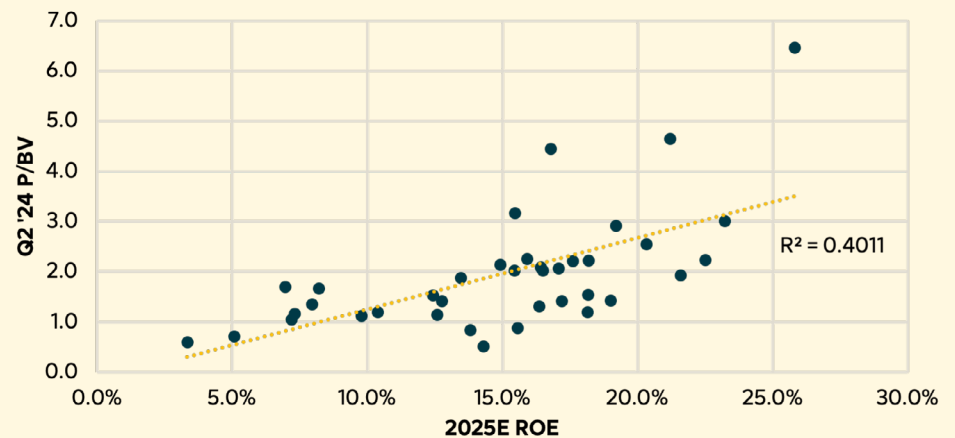


Sources: S&P Global Market Intelligence, SLC Management analysis.  
Total value creation = growth in book value per share plus dividends; Total return = growth in stock price  
Represents the 20-year period from January 1, 2004–December 31, 2023.

# 2.

**The valuation multiple** assigned to a publicly traded insurer is also strongly correlated to the company’s expected ROE. We can illustrate this by plotting forward ROE against price to book value per share, as follows:

**P&C insurance – Q2 2024 price-to-book value per share vs. expected 2025 return on equity**



Sources: S&P Global Market Intelligence, SLC Management analysis.  
P/BV represents 8/30/24 stock price divided by 6/30/24 book value per share.

All else being equal, a higher expected ROE should garner a higher valuation multiple. However, sometimes a company's shares can trade below the line (at a discounted valuation) or above the line (at a premium valuation). Possible reasons for a valuation discount include:

- Quality of book value – if investors have concerns about the adequacy of an insurer's loss reserves or the quality of its invested assets, the stock will trade at a discount to the implied price to book value multiple.
- Predictability of earnings – even if an insurer's projected and historical earnings are high, volatility would result in a valuation discount.
- Sustainability of ROE – if investors don't believe an insurer's ROE is sustainable over the long term, they won't give that company as much valuation credit.
- Financial leverage – if an insurer carries a high debt load, it may be deemed riskier, negatively impacting valuation.
- Investment portfolio – when investors measure ROE, they tend to use operating ROE, which excludes changes in realized and unrealized gains and losses. By doing so, they penalize companies that have higher allocations to equities and other growth assets.

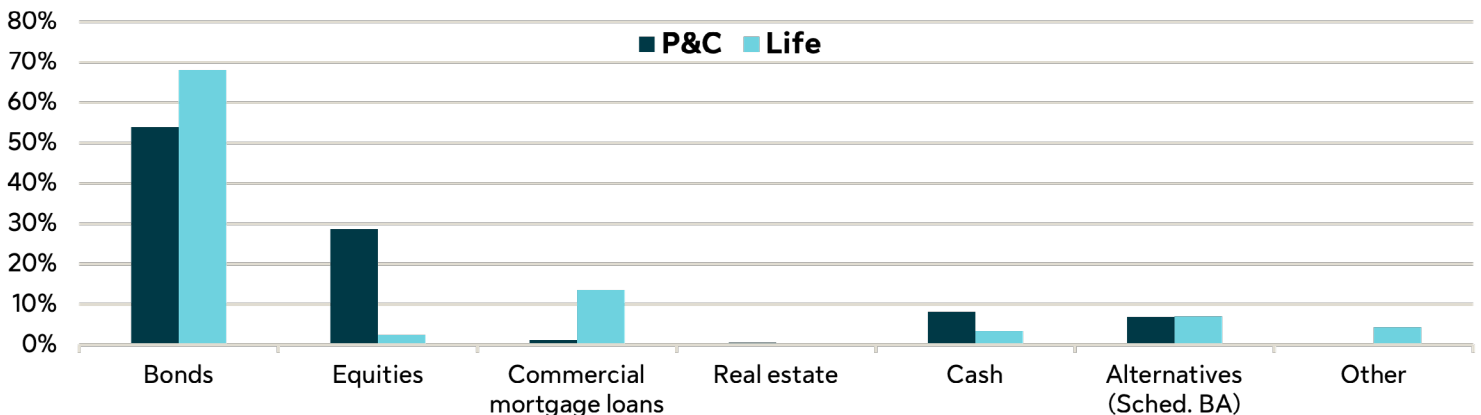
## A closer look at asset allocation

As just described, despite some exceptions investors tend to pay more for insurers with investment returns that flow through operating income. In our view, companies that have heavier allocations to equities and other growth assets may not get full credit for it when it comes to valuation. The type of investment earnings that tends to get full valuation credit is income: for bonds this is investment income, and for equities this is dividend income.

For most insurers, this generally isn't a big issue as the majority of their investment portfolios consist of fixed income assets. The following graphs show the overall asset allocation for the life and P&C insurance industries as of year-end 2023

amongst various asset class exposures. Because life insurance liability payouts tend to be more predictable and longer tailed, a duration matching approach is used, and life insurer portfolios have a greater focus on less liquid, longer duration fixed income. P&C liabilities are shorter-tailed and payouts are more variable, so a cash flow approach to asset allocation is more frequently utilized. Consequently, P&C portfolios tend to be shorter duration, more liquid and with larger allocations to equities. In addition, life insurers operate with significantly higher investment leverage ratios. For that reason, the risk profile of their investments tends to be higher quality than their P&C counterparts.

### Insurance industry asset allocation



Sources: S&P Global Market Intelligence, SLC Management analysis.  
Data as of December 31, 2023.



Over the past decade, there has been a growing trend amongst insurers to increase allocations to income-oriented alternative asset classes, such as non-investment grade public credit, private credit, real estate and infrastructure. Most of these assets come with higher yields than traditional fixed income and have the added benefit of improving portfolio diversification. Interest in these asset classes began in the low rate environment following the Global Financial Crisis as companies searched for yield. While rates have moved higher off those lows, interest in these asset classes has continued for several reasons:

- The spread advantage and diversification benefits still remain intact.
- Investors have a greater understanding of the risk/reward of these asset classes and have gained a level of comfort with them.
- In a higher rate environment, these asset classes can potentially offer expected returns in line with or higher than equities.

Furthermore, if investors are giving more valuation credit to income-oriented alternative asset classes given their income focus, that makes for a compelling argument for the trend toward alternatives to continue.



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