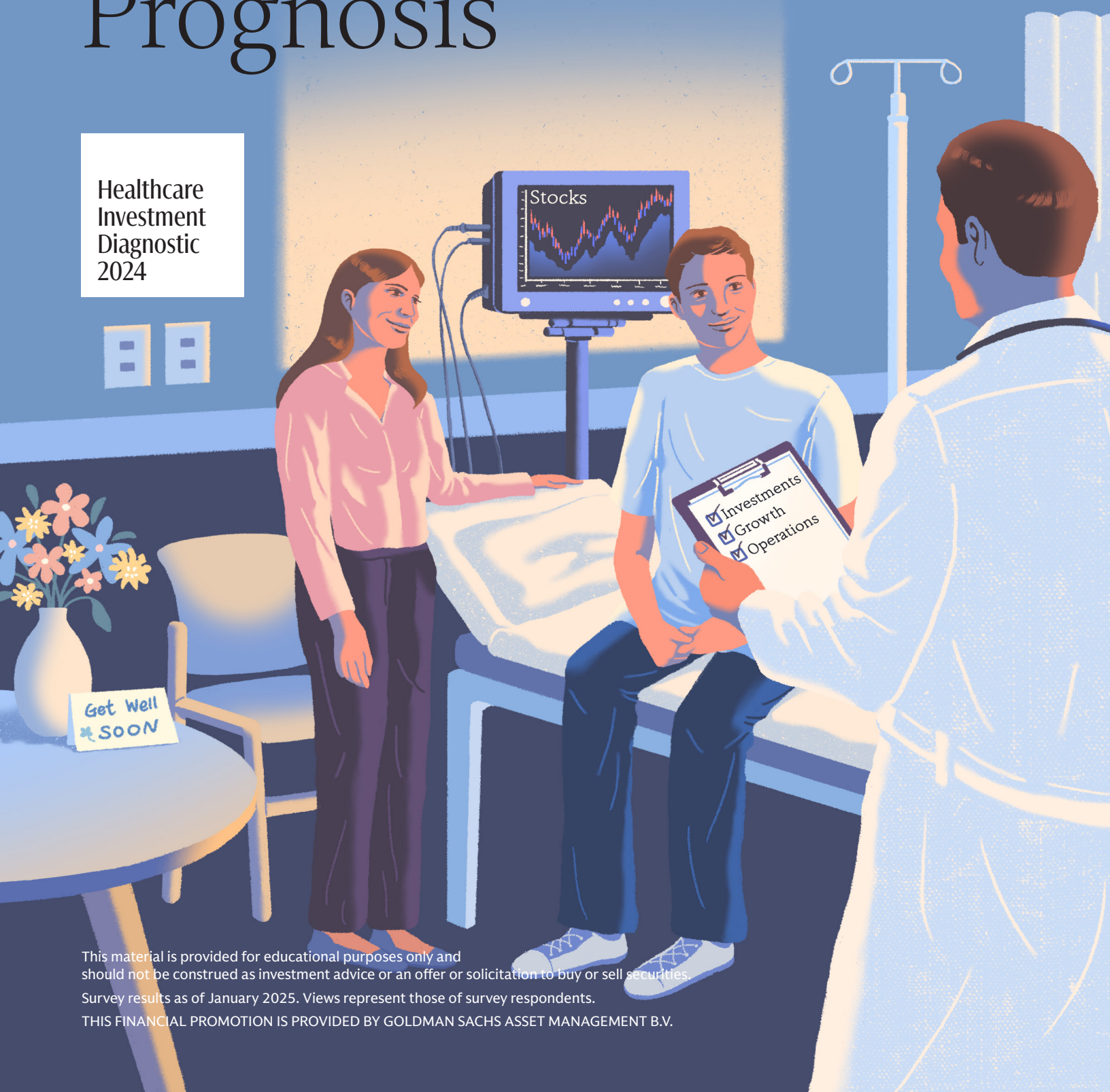


# Positive Prognosis

Healthcare Investment Diagnostic 2024



This material is provided for educational purposes only and should not be construed as investment advice or an offer or solicitation to buy or sell securities.

Survey results as of January 2025. Views represent those of survey respondents.

THIS FINANCIAL PROMOTION IS PROVIDED BY GOLDMAN SACHS ASSET MANAGEMENT B.V.

## Observations from Leading Healthcare Systems and Hospitals

The year 2024 left its mark as a year of impact – a year of global elections and the market’s acceptance of a higher interest rate regime. Amid an improving macro backdrop, risk assets performed well and US equity markets set new all-time highs.

For not-for-profit healthcare systems and hospitals, these factors helped bolster continued recovery, with some organizations now potentially well-positioned to grow and expand. Hence, with this year’s theme of Positive Prognosis, we explore how leading healthcare systems plan for the new year and beyond in our 2024 Healthcare Investment Diagnostic.

Three key themes we highlight in this report include:

**Growing Optimism:** Our respondents indicated a heightened level of optimism and confidence toward the macro, market, and operating environment; the growing optimistic view going forward represents a sharp distinction from respondent views expressed a year ago.

**Risk is Back in Favor:** Given the economic enthusiasm for the year ahead, our respondents expressed intention to increase allocations to risk assets (especially in alternative asset classes) at the expense of traditional diversifiers like fixed income and hedge funds.

**Dispersion Dynamics:** We continue to observe a wide range of actions and views from our respondents, stemming from different organizational considerations and outlooks. Regardless, respondents indicate that 2025 may be a year of actions to bolster positions of strength.

# Methodology and Respondents

## Methodology

Our seventh annual Healthcare Investment Diagnostic features insights from leading US healthcare systems and hospitals. It includes details of their macroeconomic and market outlooks, achieved and expected investment returns, asset allocations, resourcing, and operating forecasts.

For this year’s report, we surveyed 29 Chief Investment Officers (CIOs) and investment professionals across academic, children’s, single-state, as well as multi-state healthcare systems and hospitals, representing around \$229 billion of investments. As of

December 31, 2023, total assets under supervision by systems ranged from \$88 million to \$45 billion. The survey was conducted from September 2024 through January 2025, and views of our respondents may not reflect the latest outlook given potential market movements intra-period.

The investment pools covered in this study include Unrestricted Cash & Investments (UCI) and Defined Benefit (DB) plans grouped into cohorts of less than \$1 billion, \$1 to \$5 billion, and over \$5 billion in assets.

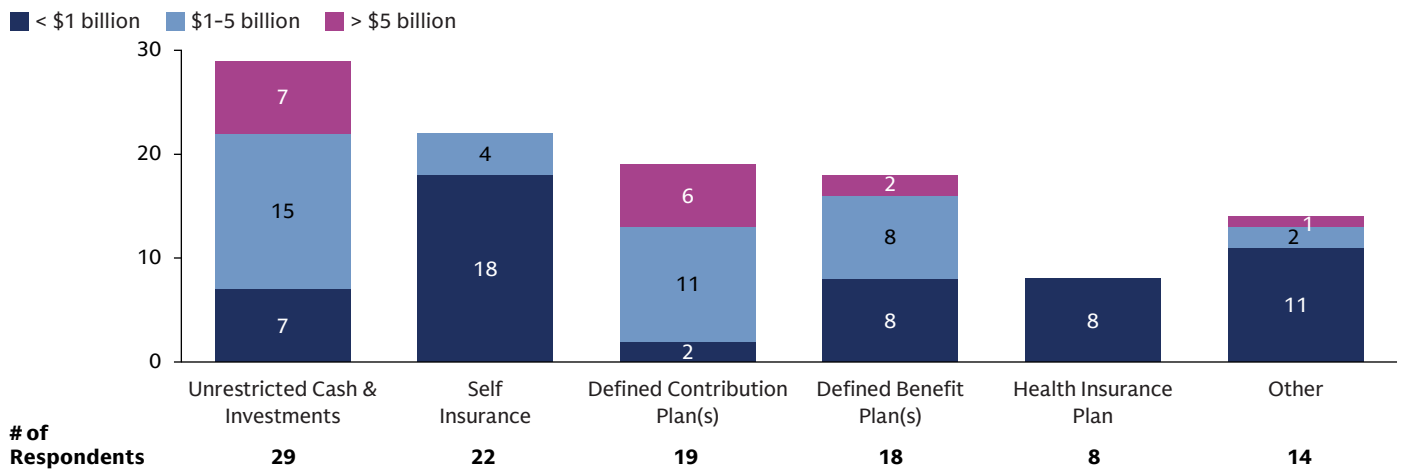
## Demographics

29

leading US-based healthcare systems and hospitals

\$229 bn  
in investments

## Number of Investment Pools by Size and Type



Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents. Assets under supervision as of December 31, 2023.

# Demographics

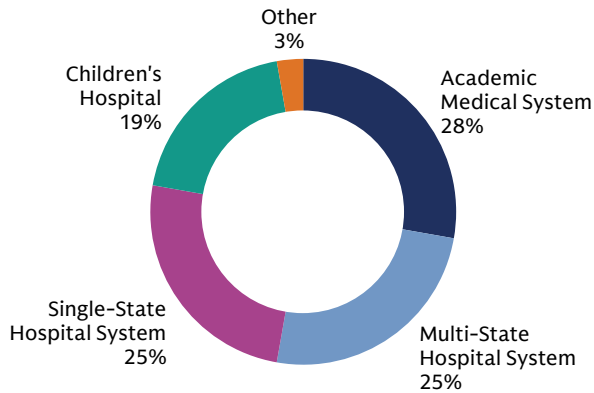
The academic medical system accounted for the highest proportion of respondents at 28%, followed by multi-state and single-state hospital systems at 25% each. Additionally, most of the responses came from individuals in the investment office.

As shown on the previous page, most of our respondents had multiple pools of investment assets spanning UCI, DB plans,

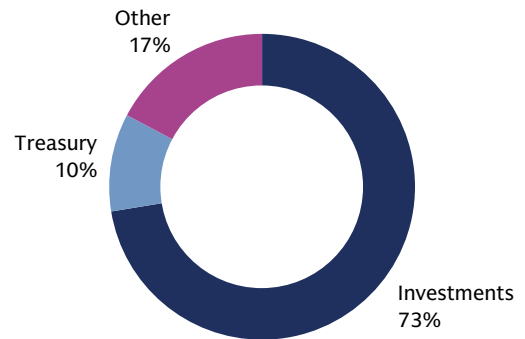
defined contribution (DC) plans, self insurance, health insurance plans, among others.

In line with previous years' results as well as the broader trend in the retirement space, we saw a greater number and larger size of DC plans relative to their DB plan counterparts. For our asset allocation analysis that follows, we will focus more specifically on the UCI and DB pools.

### Type of System (%)



### Role of Professional (%)



Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents.

# Facts at a Glance

## 93%

of our respondents expect positive returns for the S&P 500 index this year, an increase from 62% last year.

## 62%

of our respondents ranked geopolitical turmoil as their top concern. Geopolitical turmoil has been one of the top two concerns in each of the last three years.

## 1 in 2

respondents with a DB pension plan intend to increase the allocation to fixed income in their DB plan as part of a pension de-risking strategy.

## 65%

of our respondents plan to increase the allocation to private equity in their UCI pool.

Source: Goldman Sachs Asset Management. Survey results as of January 2025.  
Views represent those of survey respondents.

## Here Comes the Sun

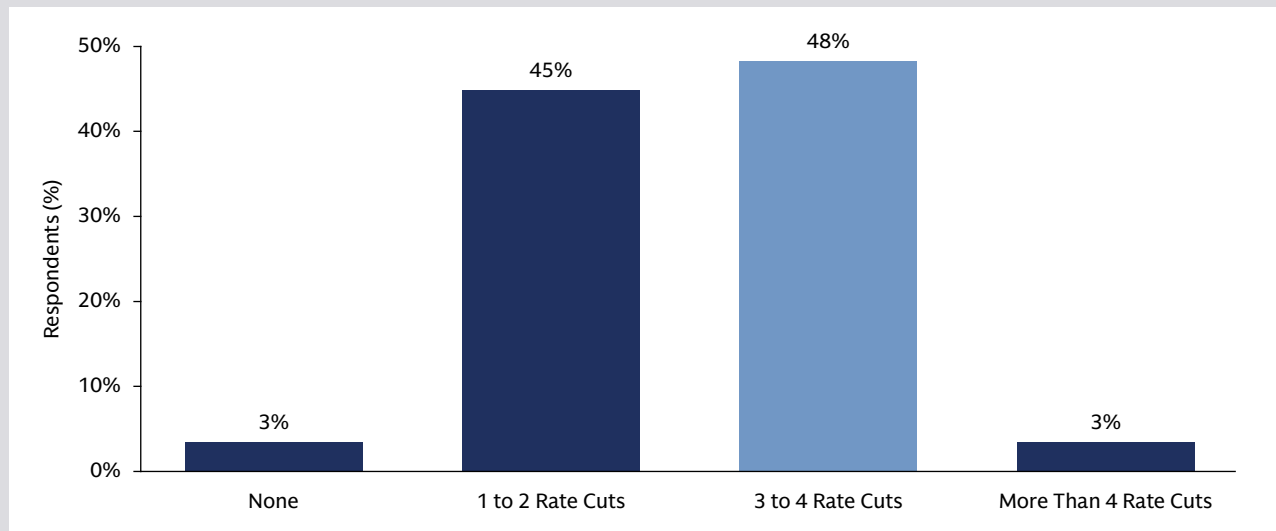
The US economy was expected to slow in 2024 but delivered a positive surprise, as reflected by resilient consumer spending and labor market strength. As a result, the Federal Reserve (Fed) initiated its rate cut cycle in September but at a slower pace than the market had previously expected. As of our publish date in March 2025, the Fed has delivered a total of 100 basis points in interest rate cuts.

When it comes to Fed actions in 2025, most of our respondents anticipate at least one rate cut, though the majority lean toward

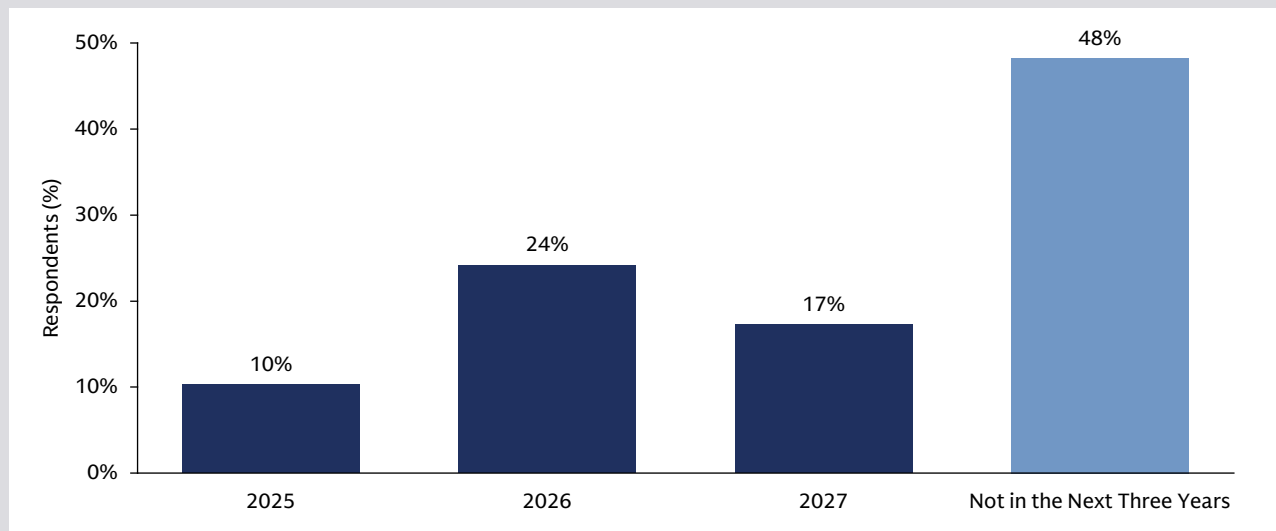
a more aggressive path of 3 to 4 cuts, signaling an expectation of accommodative policy. This optimism is mirrored in economic sentiment: nearly half of our respondents do not expect a US recession to happen in the next three years. The shift in view marks a turnaround from last year, when 62% anticipated an economic downturn in 2024.

Our respondents are now embracing a more positive macro outlook relative to last year.

**Expected Frequency of Rate Cuts by the Fed in 2025**



**Expected Timing of US Entering Next Recession**



Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents.

# Equity Gains Keep on Going

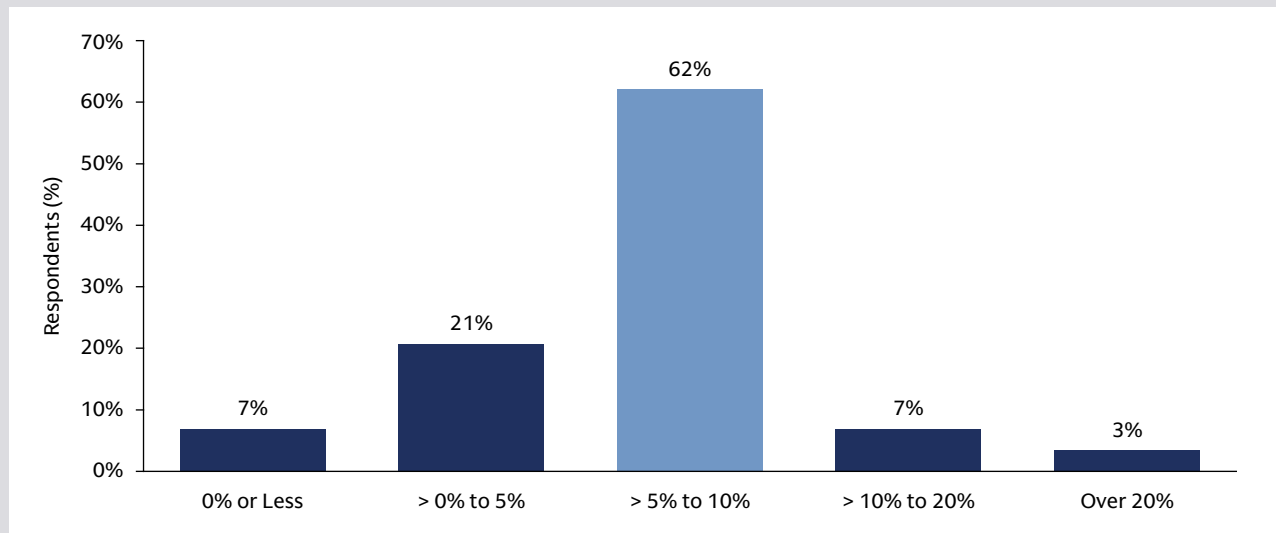
Global equity outshined other asset classes in 2024 with positive returns across the board. Zooming in, US large cap equity set all-time highs 59 times over the year and posted a second consecutive year of total returns over 20%, driven largely by the Magnificent 7.

Going forward, our respondents generally remained bullish on equity performance, though with a degree of dispersion. While 83% believe the S&P 500 will generate returns in the single-digits, 10% foresee returns over 10%, and 7% expect negative returns.

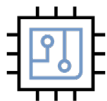
Nevertheless, our respondents are more bullish on equity market performance this year, with 93% expecting positive returns compared to only 67% last year.

We acknowledge that equity concentration risk has been a concern for some investors. Nonetheless, we do not believe it precludes future equity gains. Our Goldman Sachs Asset Management Multi-Asset Solutions team forecasts average annual total returns for the S&P 500 of 7.4% over the next decade.<sup>1</sup>

## Expected S&P 500 Total Return in 2025



## Our 2025 US Equity Market Outlook & Themes<sup>2</sup>



### Technological Disruption

Key Drivers

- Artificial Intelligence (AI)
- Beneficiaries of AI



### Economic Security

Key Drivers

- Industrials and Energy Sectors
- Real Estate Sector



### Health Care Innovation

Key Drivers

- Weight Loss Drug Development
- Health Technology Innovation

Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents. “Magnificent 7” refers to a group of high-performing technology companies – Alphabet, Amazon, Apple, Meta Platforms, Microsoft, Nvidia, and Tesla – that are influential companies in the US equity market due to market capitalization. “Bullish” describes financial market sentiment that’s characterized by optimism.

1. Forecast as of Q4 2024. The economic and market forecasts presented herein have been generated by Goldman Sachs Asset Management for informational purposes as of the date of this presentation. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

2. Views generated by our colleagues in the Goldman Sachs Asset Management Fundamental Equity team and are as of December 31, 2024. For illustrative purposes only. There is no guarantee that objectives will be met.

# Higher Rates & Tighter Spreads for Longer?

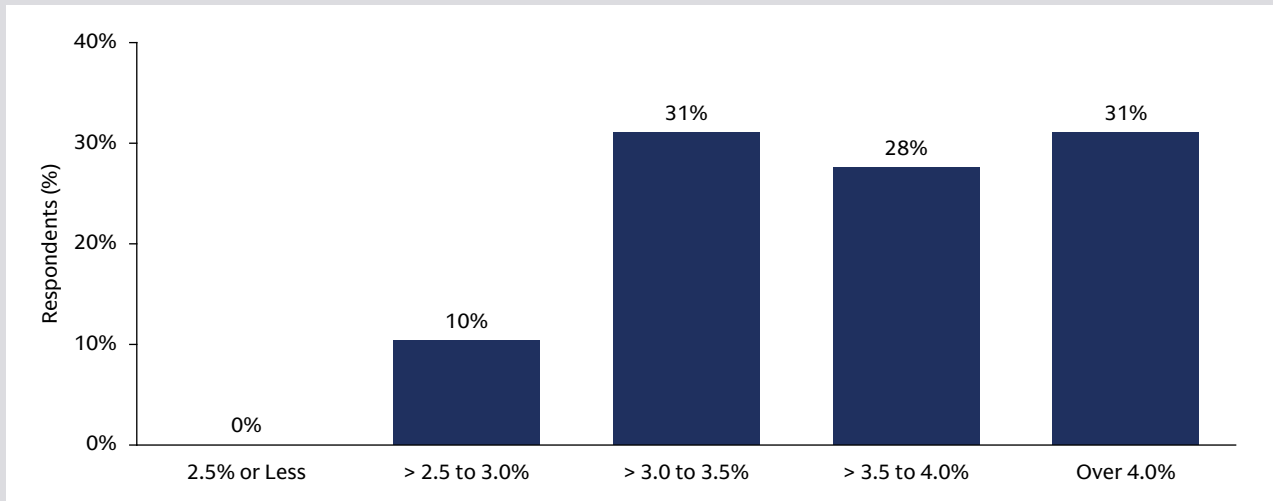
Interest rates remained elevated in 2024 on the back of cooling but sticky inflation prints and a resilient US economy. At the same time, credit spreads narrowed to record lows toward year-end 2024 as investors showed increasing confidence in the market going forward.

Our respondents foresee rates to remain elevated over the next year. Additionally, as the macro and market conditions continued to shift during our survey period, our respondents increasingly held the view of a higher-for-longer rate environment as many

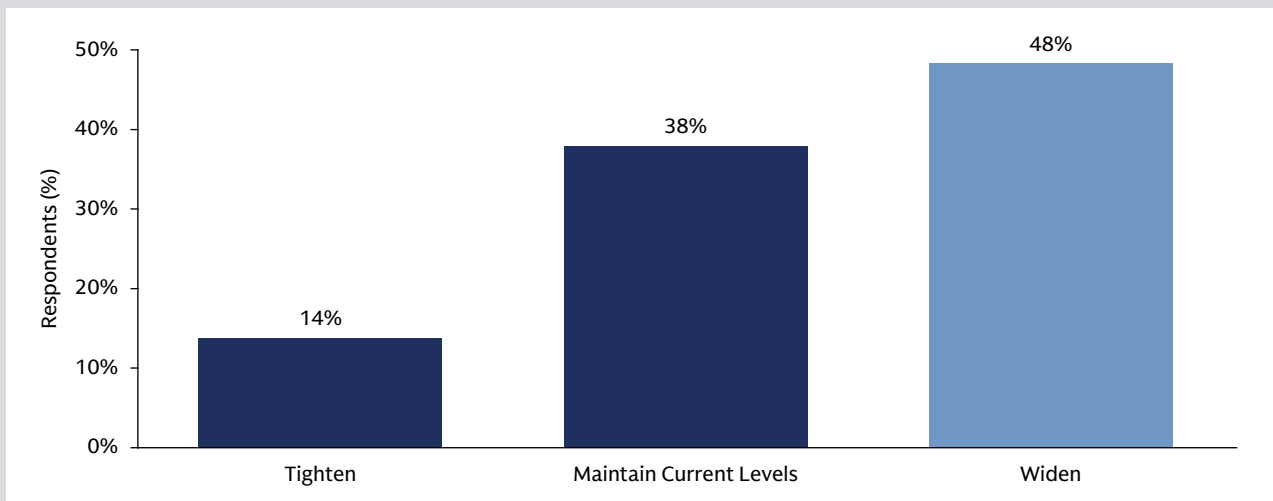
of the later entries expect 10Y yields at over 4.0% at year-end 2025. Views also diverge on expected credit spread movements, with almost half foreseeing spreads to widen and 14% anticipating spreads to tighten further.

Our Goldman Sachs Asset Management Fixed Income team believes a combination of healthy fundamental factors may keep US sovereign bond yields elevated in the near term but expect the Fed to continue its easing cycle in 2025. We believe healthy macro conditions are also in place to help keep spreads tighter for longer.

**Expected 10Y US Treasury Yield at Year-End 2025**



**Expected Credit Spread Movements in 2025**



Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

# Accelerating Ahead

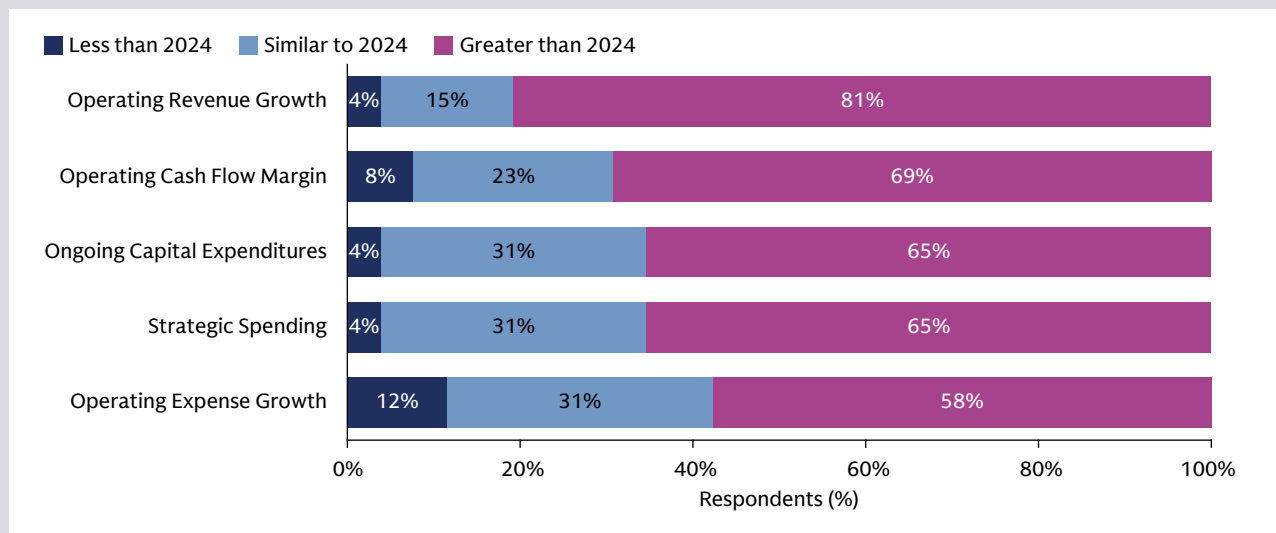
Healthcare systems are bracing for a busy 2025, with optimism fueling expectations for increased activity across the sector. Our respondents predict robust growth in not-for-profit healthcare operations and project steady – or even rising – merger and acquisition (M&A) activity.

Our respondents' view on the M&A market remains largely in line with our colleagues in Investment Banking that the demand for M&A dealmaking is expected "to grow as the cost of capital comes down and markets absorb potential policy changes in 2025."<sup>1</sup> Though it is worth noting that our respondents' view

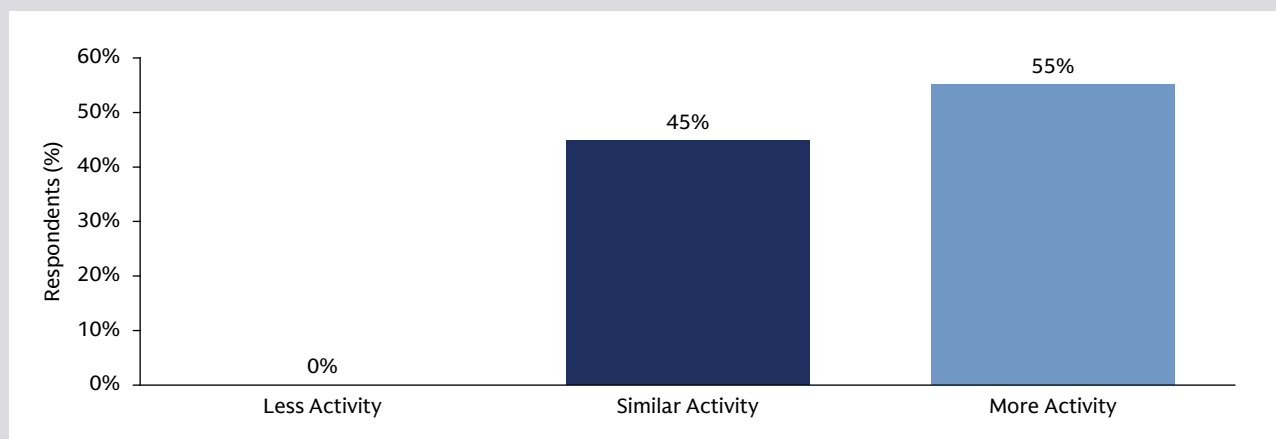
on spreads widening in 2025 earlier in the report may add an element of risk for the M&A market and a more selective approach to transactions.

Overall, our respondents believe the appetite for dealmaking is alive and well, with sponsors and organizations gearing up to potentially capitalize on operational growth opportunities. As capital flows back into the market, healthcare systems are positioning themselves in an effort to seize the moment and accelerate ahead in operations.

## Expected Change in Operational Factors Relative to 2024



## Expected Level of M&A Activity in Industry Relative to 2024



Source: Goldman Sachs Investment Banking and Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents. Goldman Sachs Asset Management leverages the resources of Goldman Sachs & Co. LLC subject to legal, internal and regulatory restrictions.

1. Read more in our Goldman Sachs Investment Banking 2025 M&A Outlook Report [here](#).

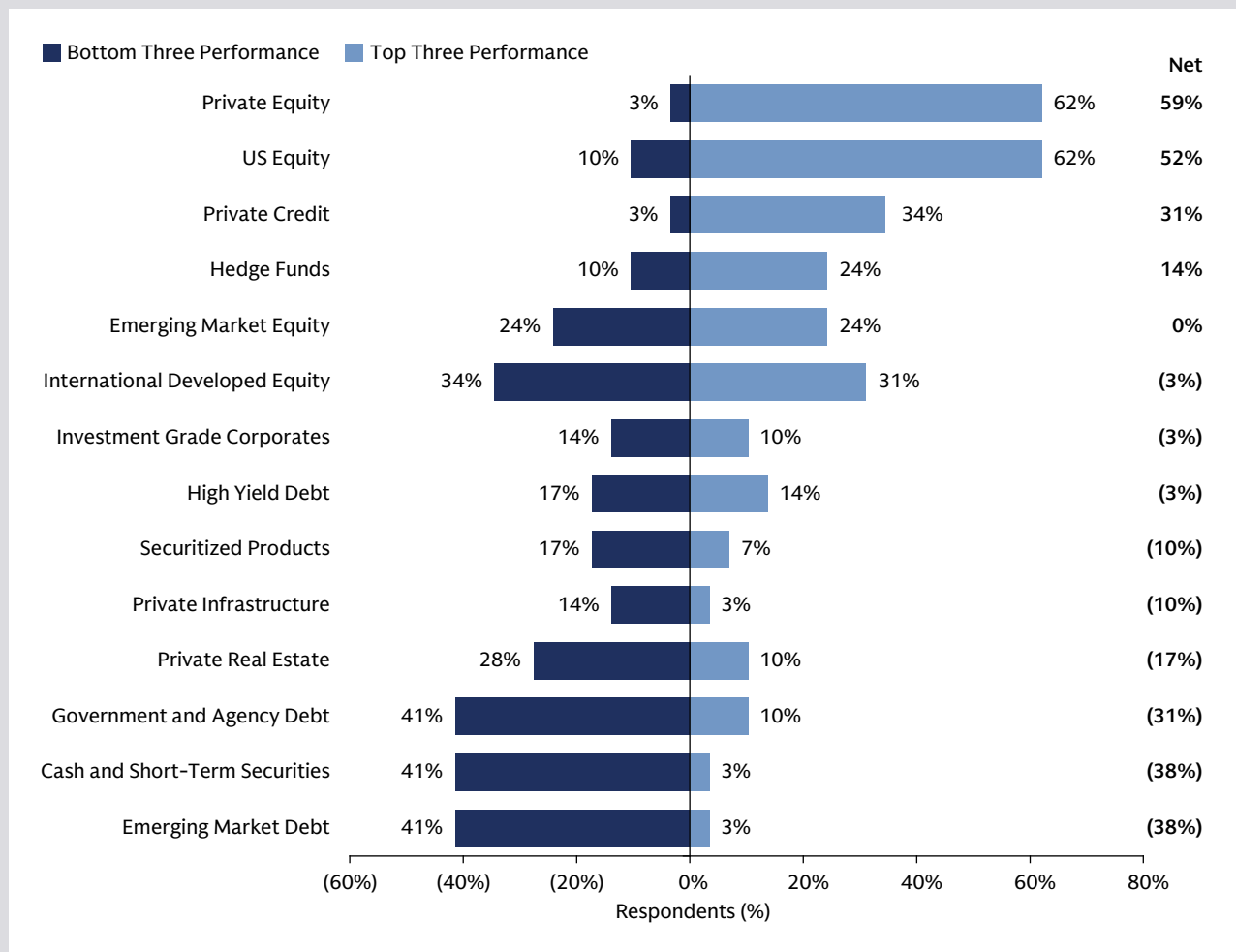
# From Balanced to Bold

Our respondents are shaking off caution and leaning back into growth, as private equity, US equity, and private credit emerge as the top contenders for expected performance in 2025, signaling a decisive shift toward pro-risk strategies. In contrast, emerging market debt, cash, and government and agency debt are largely viewed as expected laggards.

The asset class performance outlook lies consistent with the overall optimistic sentiment identified earlier. In terms of year-over-year trends, our respondents consistently held a positive outlook for US equity and private credit performances, though

private equity emerges as their top favored asset class this year. Of particular note is the divergent views on non-US equity, both developed and emerging. About one third of our respondents believed international developed equity would be one of the top three performers in 2025, while almost an equal amount postulated that it would be in the bottom three. Almost a quarter of all respondents had emerging market equity in the top 3 with an equal amount in the bottom 3. The dispersion in asset performance outlook indicates to us that healthcare investors may have some dramatically differing views on the outlook for non-US equity.

**Expected Asset Class Performance in 2025<sup>1</sup>**

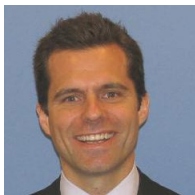
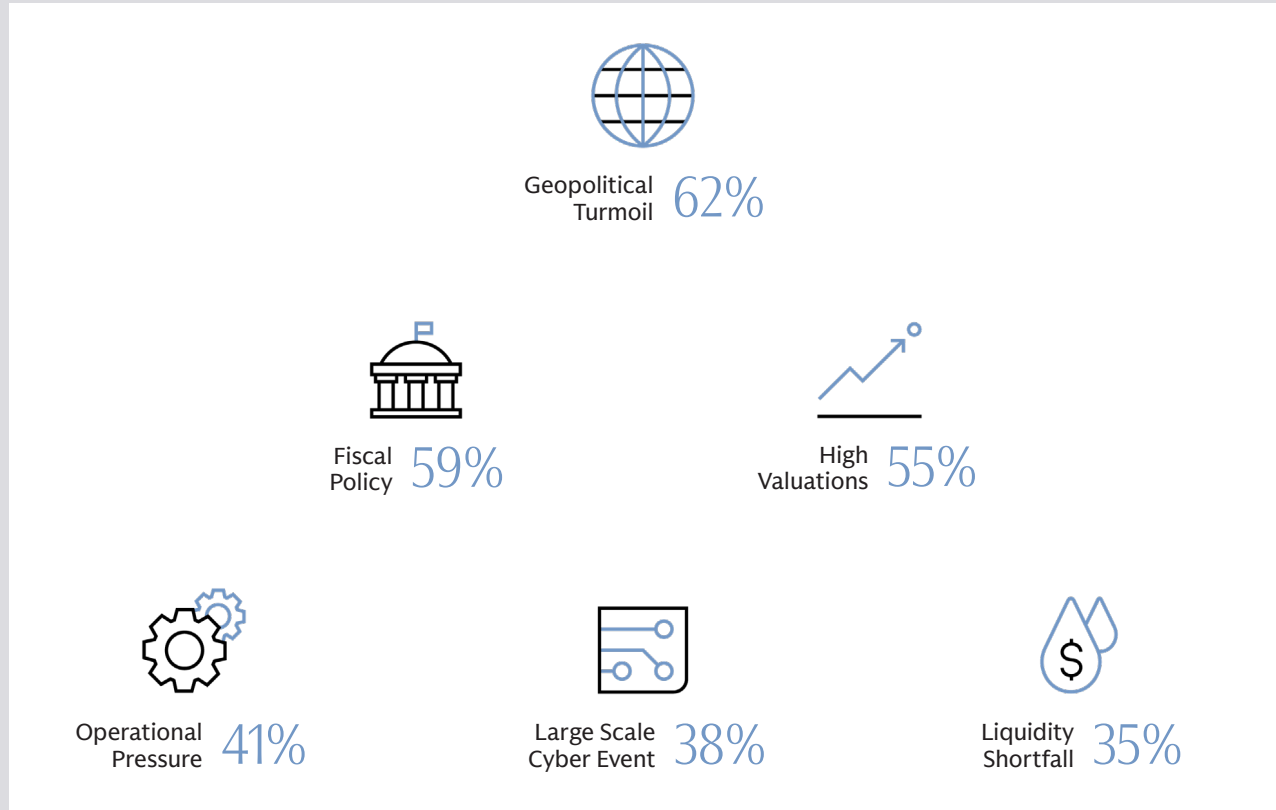


Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents.

1. Respondents were asked to select three best and worst asset classes, respectively. Net represents top three performance selection less bottom three performance selection.

# Monitoring Macro...and More

## Top Concerns about Risks in 2025<sup>1</sup> (% of Respondent Selections)



“Amid elevated geopolitical tensions and a litany of other concerns in the market, we are partnering with healthcare clients to assess enterprise risks stemming from different sources of volatility. With 65% of respondents expecting more ongoing capital expenditures and strategic spending in the year ahead, it is important that healthcare investors find ways to create liquidity during drawdowns while maintaining solid returns through the market cycle. In our view, a package of dynamically managed strategies that can produce uncorrelated alpha and asymmetric payouts during bouts of market volatility may make sense.”

**Scott Konicki**  
Head of Midwest Institutional Client Coverage

Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents.

1. Respondents were asked to express level of concern about different risks in 2025. Data shown reflects sum pf “extremely concerned” and “very concerned” responses for each risk. While top eight concerns are highlighted, other options included inflation, not achieving return targets, labor costs, recession, AI and disruption, overcommitment to private markets, and credit quality deterioration.

# Tipping Point for Pensions

Multiple years of strong equity performance and higher interest rates have allowed many DB pension plans to reach a healthy state in funded levels, and some have enjoyed a fully-funded status for a few years now.

Consistent with market trends, many of our respondents are considering taking actions in their DB pension plans to de-risk and immunize the pension against potential market movements. Notably, 9 respondents out of the 18 healthcare systems that

currently maintain a DB pension are planning to increase their pension’s asset allocation to fixed income, and many are also considering lump sum offerings and risk transfers.

Our pension strategists at Goldman Sachs Asset Management believe that we will see an acceleration of plan sponsor de-risking actions given the current state of the system. If our views are correct, 2025 may mark a significant turning point for the US DB pension system.

## Key Statistics

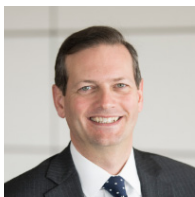
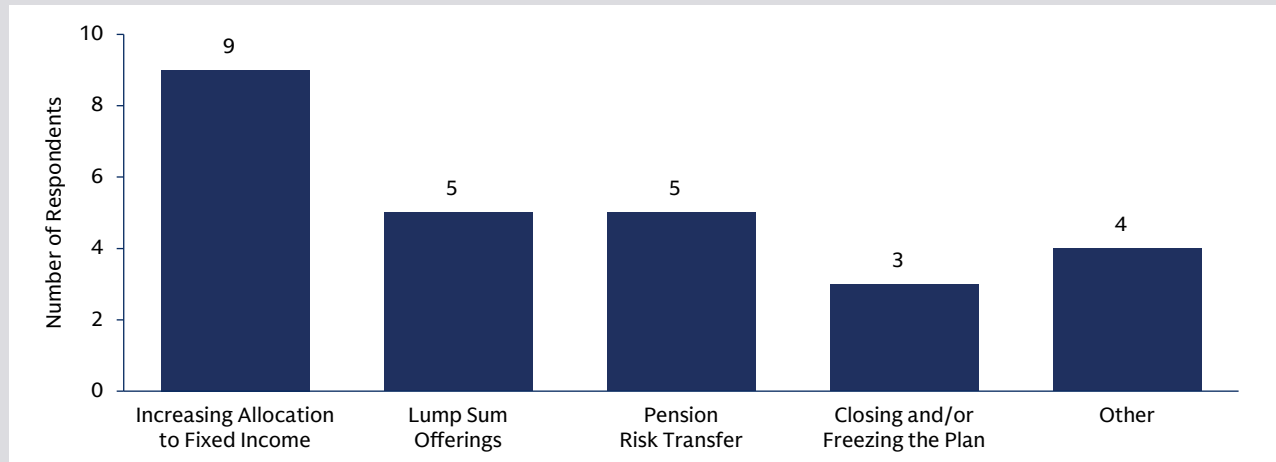
18

Respondents reported DB pension asset pools

92%

Median DB pension plan funded level

## Foreseeable Future Pension De-Risking Actions<sup>1</sup>



“Given a position of strength in the pension system, we believe we have reached somewhat of a tipping point that may lead many pension plan sponsors to revisit their strategies for their DB plans in 2025 and beyond.”

**Michael Moran, CFA**  
Senior Pension Strategist

Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents.

1. Respondents were asked to select all (if any) future de-risking action(s) in the pension plan that may apply.

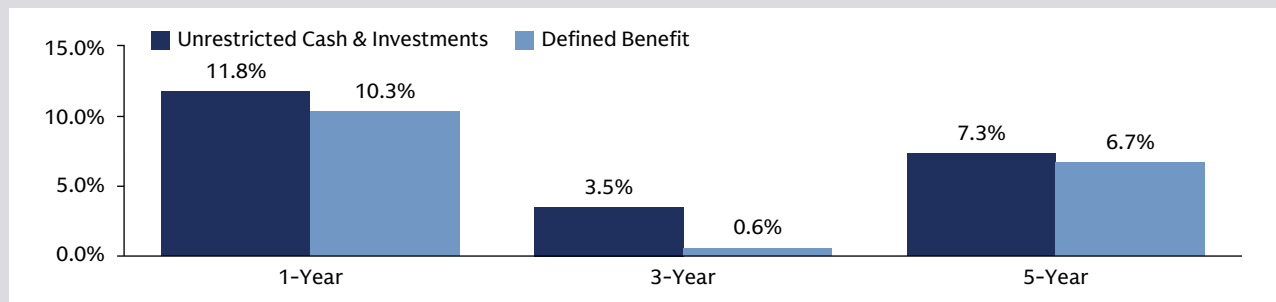
# UCI Led the Way

Investment returns for UCI pools exceeded those of DB pools across all time periods, including the 6-month period ending June 30, 2024. The outperformance was driven partly by UCI pools' higher allocations to public equity, which saw strong performance in the past two years. One item of note, however, is the range of investment returns individual organizations observed in their investment pools, especially across DB pools.

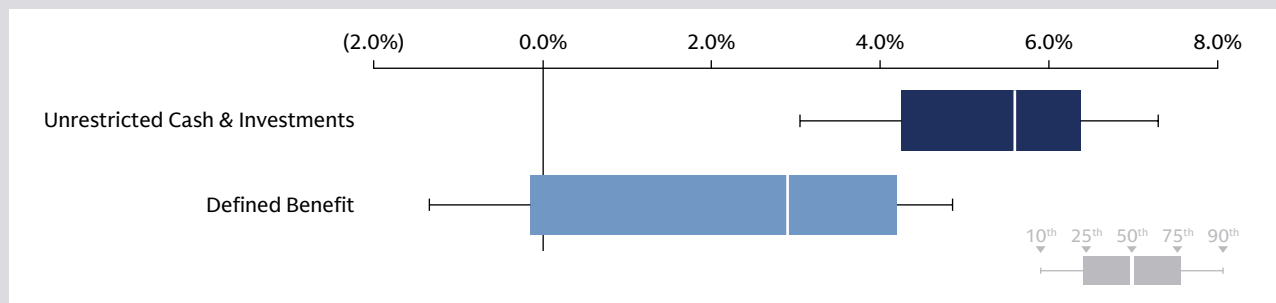
As for expected return on asset (EROA) assumptions, we believe it is worth noting that a change in the respondent

composition plays a role in the divergent year-over-year changes. For UCI, we saw a continued hike in EROA assumptions, though the magnitude of increase is dampened partly due to respondent composition. For DB plans, a decrease in median EROA assumptions was likely driven in part by the same reasoning. When we analyzed the data for just respondents that participated in each of our surveys the past two years, EROA assumptions increased for both UCI and DB pools.

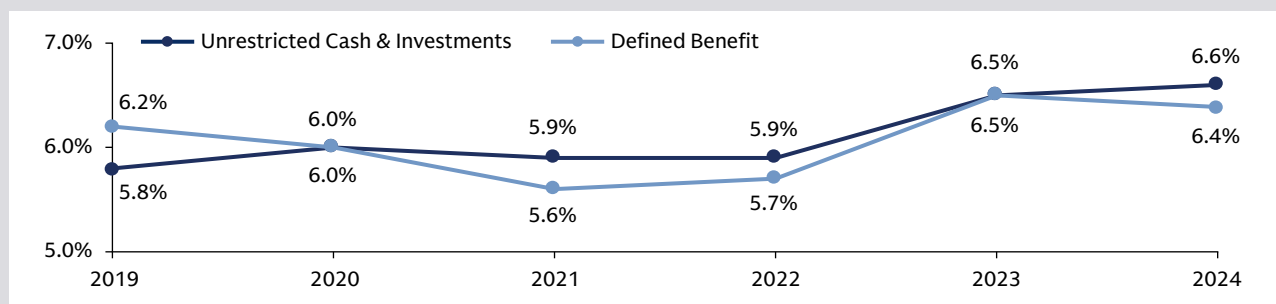
**Median Realized Returns by Asset Pool<sup>1</sup>**



**Net Actual Investment Return Range for 6-Month Period Ending June 30, 2024**



**Median Forward-looking Return Expectations<sup>2</sup>**



Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents.

1. As of December 31, 2023. Respondents were asked for net annualized returns where applicable.

2. For 2019 through 2022, mid-point of expected return buckets were used to estimate median expected return.

# The Great Balancing Act: Asset Allocation in Flux

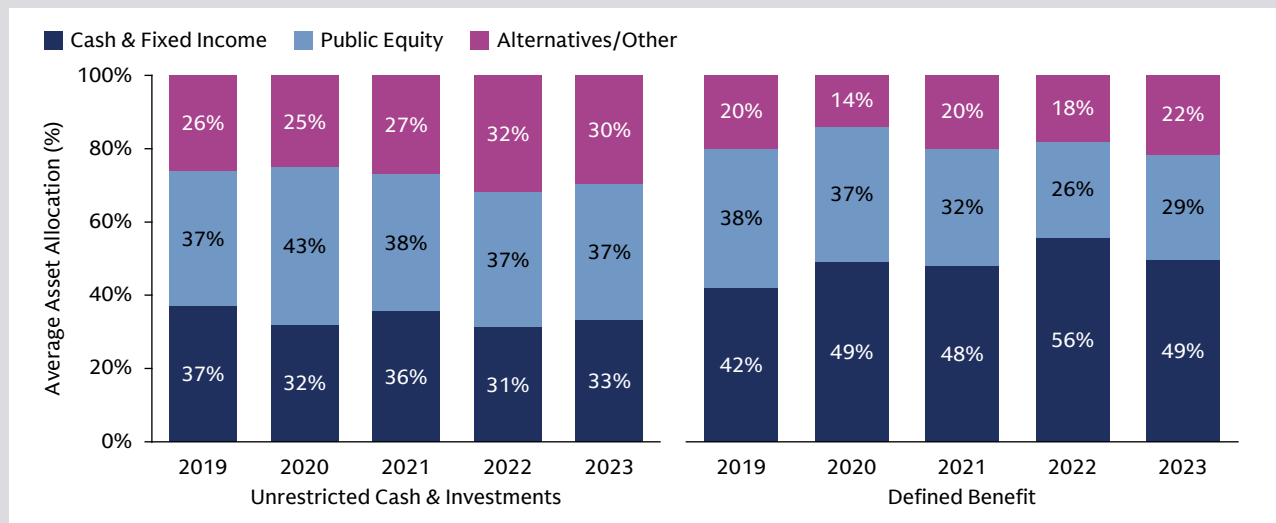
Across both UCI and DB pools, we have seen asset allocation shifts over time. However, we also recognize the impact of the denominator effect from the 2022 market drawdown. In particular, cash & fixed income and alternative asset allocations may have been overstated relative to targets at year-end 2022, normalizing back in the most recent data as equity markets recovered.

For UCI pools, our respondents continued to increase allocation to alternative asset classes at the expense of cash and fixed

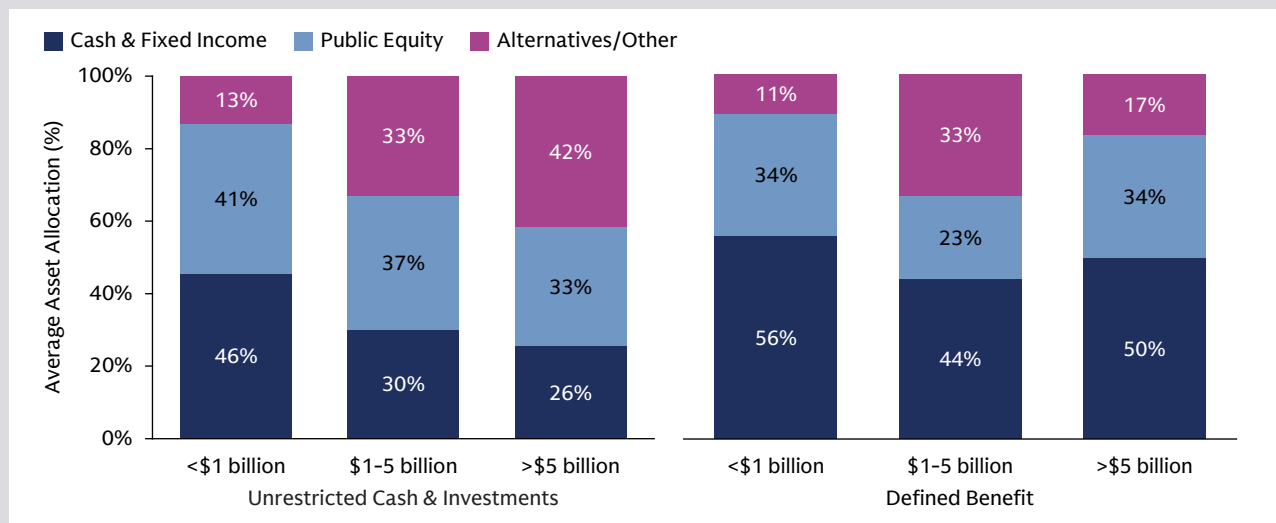
income. As for DB plans, given an improved funded status for many, we are seeing consistent allocations to immunizing fixed income assets from growth assets like public equity and alternatives, in line with our respondents' views on foreseeable future pension de-risking actions earlier.

Asset pool size also mattered in the investor's ability and choice to take on risk, as we see larger asset pools for both UCI and DB have higher allocations to alternatives.

## Equal-Weighted Average Asset Allocation



## Equal-Weighted Average Asset Allocation by Size



Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents. Figures may not sum to 100% due to rounding.

## Climbing Down the Credit Spectrum for Yield

Our respondents maintain a diversified mix of asset allocation across the risk and liquidity spectrum tailored to each pool's goals and objectives. In 2023, asset allocation movements were generally a product of normalization after a year of market turbulence in 2022.

For UCI, sub-asset class breakdown remained largely static, though we observe substantial allocation shifts within fixed income. Our respondents increased their exposure to non-core fixed income relative to the year prior at the expense of core

fixed income, hedge funds, and other alternatives.

On the DB side, risk asset allocations grew partly due to strong equity market performance and the denominator effect mentioned earlier, though our respondents increased allocations to hedge funds, non-core fixed income, and other public equity (which may include global equity). Government and agency debt, on the other hand, reverted down 9 percentage points to 10% of portfolio allocation from last year's high.

### Equal-Weighted Average Asset Allocation<sup>1</sup>

	Unrestricted Cash & Investments	Defined Benefit
<b>Cash &amp; Short-Term Securities</b>	<b>7%</b>	<b>3%</b>
<b>Fixed Income</b>	<b>26%</b>	<b>46%</b>
Investment Grade Corporates	12%	29%
Government and Agency Debt	5%	10%
High Yield Debt	2%	1%
Emerging Market Debt	1%	0%
Securitized Products	2%	0%
Other Public Fixed Income	5%	6%
<b>Public Equity</b>	<b>37%</b>	<b>29%</b>
US Equity	21%	13%
International Developed Equity	10%	7%
Emerging Market Equity	3%	2%
Other Public Equity	3%	6%
<b>Alternatives/Other</b>	<b>30%</b>	<b>22%</b>
Hedge Funds	11%	9%
Private Equity	10%	7%
Private Credit	3%	1%
Private Infrastructure	1%	0%
Private Real Estate	2%	2%
Other Alternatives	2%	2%

Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents. Figures may not sum to 100% due to rounding.

1. As of December 31, 2023.

# Risk on, Diversification out

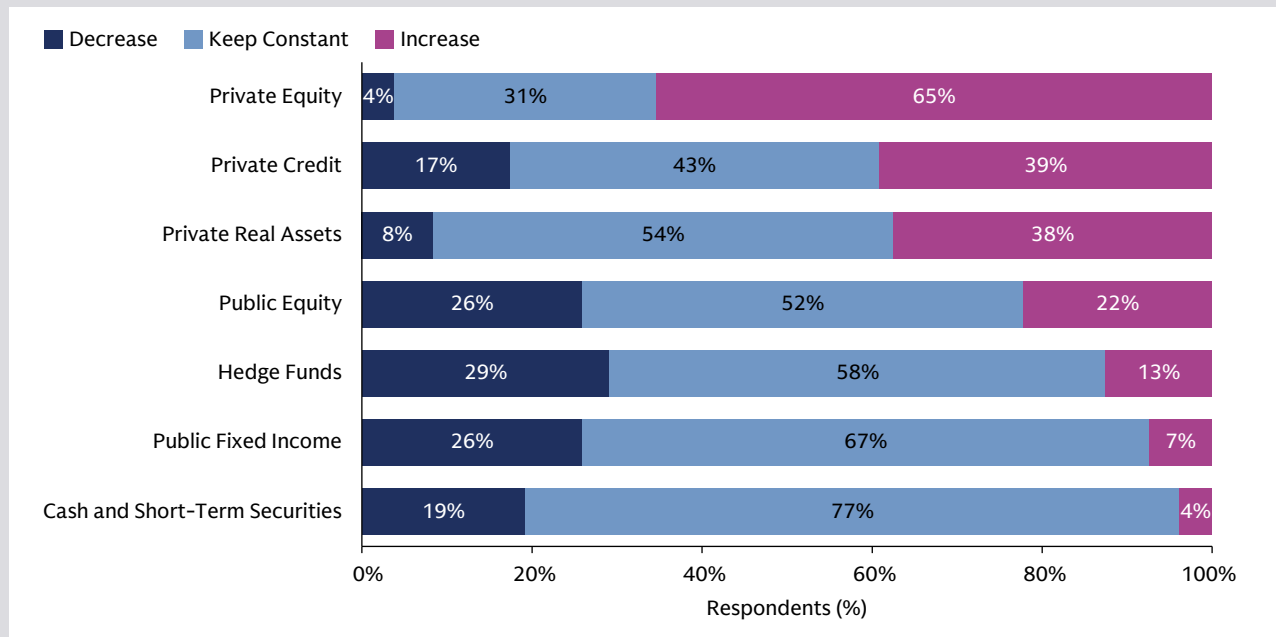
Going forward, our respondents indicated a desire to scale up on investing in risk asset classes such as private assets and public equity in UCI pools. Although it is also worth noting that a not insignificant group of respondents intend to decrease public equity allocations in 2025. On the other hand, some of our respondents may be decreasing allocations to hedge funds, fixed income, and cash. Intended asset allocation changes represent a broader shift in strategy focus, as investors balance their pursuit of higher returns against the potential risks of reduced diversification.

Since the inception of our survey in 2018, our respondents have consistently indicated an intention to increase allocations to private assets, which remains consistent with our house view that


investors “on net remain below allocation targets across private market strategies, with a large uptick in private credit under-allocation”.<sup>1</sup>

Our Goldman Sachs Asset Management Public Investing team believes 2025 is a year of continued global expansion, further easing of inflation, and continued central bank actions. We believe key investing themes for 2025 will include a broadening out of the equity market beyond US large cap growth, focusing on income generation across both fixed income and equity markets, and leveraging data and technology in an effort to deliver investment returns.


## Intended UCI Asset Allocation Changes in 2025




## Key Investment Themes in 2025 from Our Investing Teams




Broaden out on Equity



Leverage Data & Technology



Focus on Income



Explore Alternative Returns

Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents.

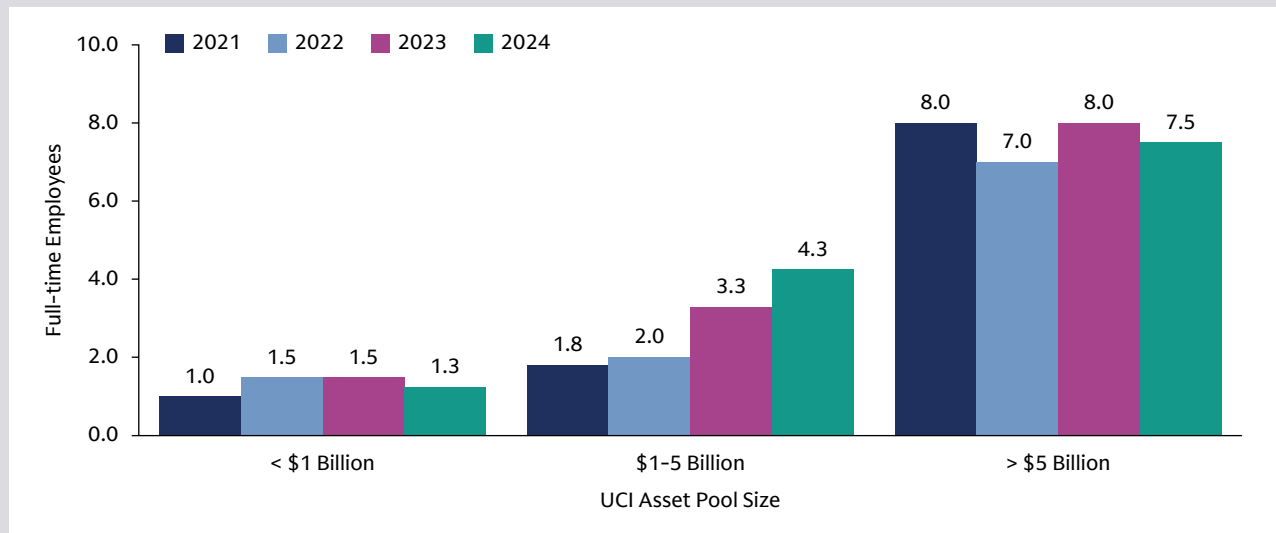
1. For more information, please refer to our “2024 Private Markets Diagnostic Survey: Charting New Routes” [here](#).

# Managing Cost-Consciously

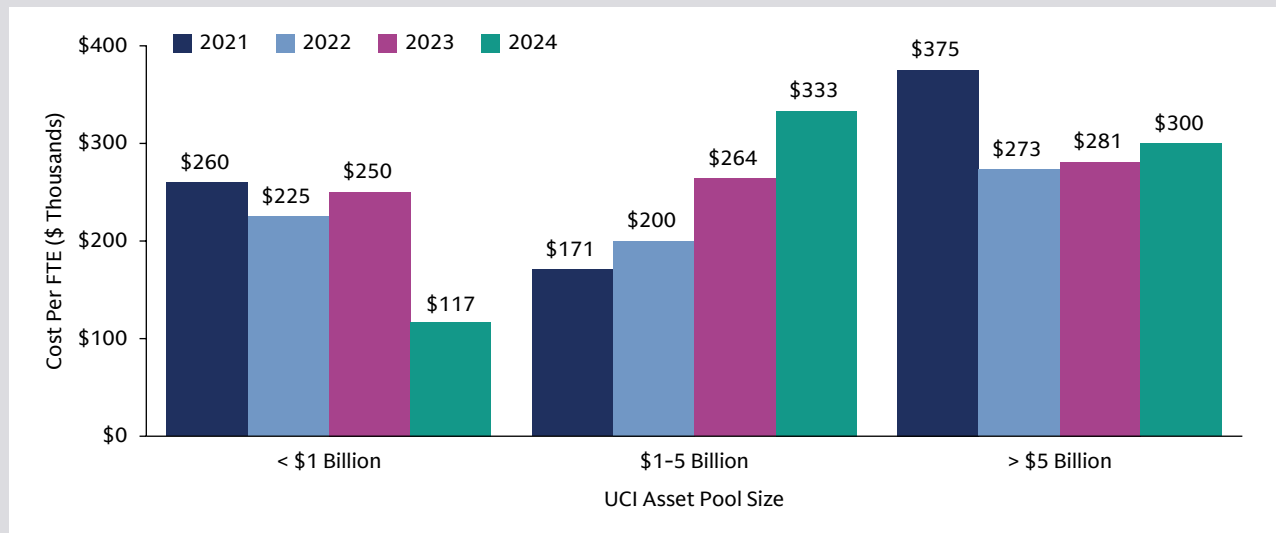
Healthcare organizations continue to maintain in-house capabilities to manage investments of their investment pools. Similar to previous years, organizations with larger UCI pools tend to have more employees with investment responsibilities, though one key trend to highlight is the consistent increase in employee head count for the \$1-5 billion pool, whereas the smaller and larger pools tend to have a more stabilized number of employees.

The median cost per employee for UCI pools sized \$1-5 billion exceeded that of the larger pool for the first time since 2020. On the other hand, organizations with smaller UCI pools (< \$1 billion) cut their median cost per employee by 47% this year, though respondent composition changes year-over-year played a role for the decrease. When we analyzed the data for just respondents that participated in each of our surveys the past two years, median cost per full-time employee rose for all three UCI asset pool sizes.

**Median Number of Full-Time Employees**



**Median Cost Per Full-Time Employee**



Source: Goldman Sachs Asset Management. Survey results as of January 2025. Views represent those of survey respondents.

# Disclosures

## Risk Considerations

Equity securities are more volatile than bonds and subject to greater risks.

Equity investments are subject to market risk, which means that the value of the securities in which it invests may go up or down in response to the prospects of individual companies, particular sectors and/or general economic conditions. Different investment styles (e.g., “growth” and “value”) tend to shift in and out of favor, and, at times, the strategy may underperform other strategies that invest in similar asset classes. The market capitalization of a company may also involve greater risks (e.g. “small” or “mid” cap companies) than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements, in addition to lower liquidity.

Investments in fixed income securities are subject to the risks associated with debt securities generally, including credit, liquidity, interest rate, prepayment and extension risk. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond’s price. The value of securities with variable and floating interest rates are generally less sensitive to interest rate changes than securities with fixed interest rates. Variable and floating rate securities may decline in value if interest rates do not move as expected. Conversely, variable and floating rate securities will not generally rise in value if market interest rates decline. Credit risk is the risk that an issuer will default on payments of interest and principal. Credit risk is higher when investing in high yield bonds, also known as junk bonds. Prepayment risk is the risk that the issuer of a security may pay off principal more quickly than originally anticipated. Extension risk is the risk that the issuer of a security may pay off principal more slowly than originally anticipated. All fixed income investments may be worth less than their original cost upon redemption or maturity.

High yield fixed income securities are considered speculative, involve greater risk of default, and tend to be more volatile than investment grade fixed income securities.

Investments in foreign securities entail special risks such as currency, political, economic, and market risks. These risks are heightened in emerging markets.

An investment in real estate securities is subject to greater price volatility and the special risks associated with direct ownership of real estate.

Investments in commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity.

Alternative investments often are speculative, typically have higher fees than traditional investments, often include a high degree of risk and are suitable only for eligible, long-term investors who are willing to forgo liquidity and put capital at risk for an indefinite period. They may be highly illiquid and can engage in leverage and other speculative practices that may increase volatility and risk of loss.

Alternative Investments by their nature, involve a substantial degree of risk, including the risk of total loss of an investor’s capital. Fund performance can be volatile. There may be conflicts of interest between the Alternative Investment Fund and other service providers, including the investment manager and sponsor of the Alternative Investment. Similarly, interests in an Alternative Investment are highly illiquid and generally are not transferable without the consent of the sponsor, and applicable securities and tax laws will limit transfers.

## Index Benchmark

S&P 500 Index is the Standard & Poor’s 500 Composite Stock Prices Index of 500 stocks, an unmanaged index of common stock prices.

## General Disclosures

THESE MATERIALS ARE PROVIDED SOLELY ON THE BASIS THAT THEY WILL NOT CONSTITUTE INVESTMENT ADVICE AND WILL NOT FORM A PRIMARY BASIS FOR ANY PERSON’S OR PLAN’S INVESTMENT DECISIONS, AND GOLDMAN SACHS IS NOT A FIDUCIARY WITH RESPECT TO ANY PERSON OR PLAN BY REASON OF PROVIDING THE MATERIAL OR CONTENT HEREIN. PLAN FIDUCIARIES SHOULD CONSIDER THEIR OWN CIRCUMSTANCES IN ASSESSING ANY POTENTIAL INVESTMENT COURSE OF ACTION.

THIS MATERIAL DOES NOT CONSTITUTE AN OFFER OR SOLICITATION IN ANY JURISDICTION WHERE OR TO ANY PERSON TO WHOM IT WOULD BE UNAUTHORIZED OR UNLAWFUL TO DO SO.

Volatility is a measure of variation of a financial instrument’s price.

There is no guarantee that objectives will be met.

Prospective investors should inform themselves as to any applicable legal requirements and taxation and exchange control regulations in the countries of their citizenship, residence or domicile which might be relevant.

Goldman Sachs does not provide legal, tax or accounting advice, unless explicitly agreed between you and Goldman Sachs (generally through certain services offered only to clients of Private Wealth Management). Any statement contained in this presentation concerning U.S. tax matters is not intended or written to be used and cannot be used for the purpose of avoiding penalties imposed on the relevant taxpayer. Notwithstanding anything in this document to the contrary, and except as required to enable compliance with applicable securities law, you may disclose to any person the U.S. federal and state income tax treatment and tax structure of the transaction and all materials of any kind (including tax opinions and other tax analyses) that are provided to you relating to such tax treatment and tax structure, without Goldman Sachs imposing any limitation of any kind. Investors should be aware that a determination of the tax consequences to them should take into account their specific circumstances and that the tax law is subject to change in the future or retroactively and investors are strongly urged to consult with their own tax advisor regarding any potential strategy, investment or transaction.

**Past performance does not guarantee future results, which may vary. The value of investments and the income derived from investments will fluctuate and can go down as well as up. A loss of principal may occur.**

The views expressed herein are as of 01/31/2025 and subject to change in the future. Individual portfolio management teams for Goldman Sachs Asset Management may have views and opinions and/or make investment decisions that, in certain instances, may not always be consistent with the views and opinions expressed herein.

This information discusses general market activity, industry or sector trends, or other broad-based economic, market or political conditions and should not be construed as research or investment advice. This material has been prepared by Goldman Sachs Asset Management and is not financial research nor a product of Goldman Sachs Global Investment Research (GIR). It was not prepared in compliance with applicable provisions of law designed to promote the independence of financial analysis and is not subject to a prohibition on trading following the distribution of financial research. The views and opinions expressed may differ from those of Goldman Sachs Global Investment Research

or other departments or divisions of Goldman Sachs and its affiliates. Investors are urged to consult with their financial advisors before buying or selling any securities. This information may not be current and Goldman Sachs Asset Management has no obligation to provide any updates or changes.

Economic and market forecasts presented herein reflect a series of assumptions and judgments as of the date of this presentation and are subject to change without notice. These forecasts do not take into account the specific investment objectives, restrictions, tax and financial situation or other needs of any specific client. Actual data will vary and may not be reflected here. These forecasts are subject to high levels of uncertainty that may affect actual performance. Accordingly, these forecasts should be viewed as merely representative of a broad range of possible outcomes. These forecasts are estimated, based on assumptions, and are subject to significant revision and may change materially as economic and market conditions change. Goldman Sachs has no obligation to provide updates or changes to these forecasts. Case studies and examples are for illustrative purposes only.

Although certain information has been obtained from sources believed to be reliable, we do not guarantee its accuracy, completeness or fairness. We have relied upon and assumed without independent verification, the accuracy and completeness of all information available from public sources.

This material is provided for informational purposes only and should not be construed as investment advice or an offer or solicitation to buy or sell securities. This material is not intended to be used as a general guide to investing, or as a source of any specific investment recommendations, and makes no implied or express recommendations concerning the manner in which any client's account should or would be handled, as appropriate investment strategies depend upon the client's investment objectives.

**United States:** In the United States, this material is offered by and has been approved by Goldman Sachs Asset Management, L.P., which is a registered investment adviser with the Securities and Exchange Commission.

**United Kingdom:** In the United Kingdom, this material is a financial promotion and has been approved by Goldman Sachs Asset Management International, which is authorized and regulated in the United Kingdom by the Financial Conduct Authority.

**European Economic Area (EEA):** This marketing communication is disseminated by Goldman Sachs Asset Management B.V., including through its branches ("GSAM BV"). GSAM BV is authorised and regulated by the Dutch Authority for the Financial Markets (Autoriteit Financiële Markten, Vijzelgracht 50, 1017 HS Amsterdam, The Netherlands) as an alternative investment fund manager ("AIFM") as well as a manager of undertakings for collective investment in transferable securities ("UCITS"). Under its licence as an AIFM, the Manager is authorized to provide the investment services of (i) reception and transmission of orders in financial instruments; (ii) portfolio management; and (iii) investment advice. Under its licence as a manager of UCITS, the Manager is authorized to provide the investment services of (i) portfolio management; and (ii) investment advice. Information about investor rights and collective redress mechanisms are available on [www.gsam.com/responsible-investing](http://www.gsam.com/responsible-investing) (section Policies & Governance). Capital is at risk. Any claims arising out of or in connection with the terms and conditions of this disclaimer are governed by Dutch law.

**Switzerland:** For Qualified Investor use only – Not for distribution to general public. This is marketing material. This document is provided to you by Goldman Sachs Bank AG, Zürich. Any future contractual relationships will be entered into with affiliates of Goldman Sachs Bank

AG, which are domiciled outside of Switzerland. We would like to remind you that foreign (Non-Swiss) legal and regulatory systems may not provide the same level of protection in relation to client confidentiality and data protection as offered to you by Swiss law.

**Asia excluding Japan:** Please note that neither Goldman Sachs Asset Management (Hong Kong) Limited ("GSAMHK") or Goldman Sachs Asset Management (Singapore) Pte. Ltd. (Company Number: 201329851H) ("GSAMS") nor any other entities involved in the Goldman Sachs Asset Management business that provide this material and information maintain any licenses, authorizations or registrations in Asia (other than Japan), except that it conducts businesses (subject to applicable local regulations) in and from the following jurisdictions: Hong Kong, Singapore, India and China. This material has been issued for use in or from Hong Kong by Goldman Sachs Asset Management (Hong Kong) Limited and in or from Singapore by Goldman Sachs Asset Management (Singapore) Pte. Ltd. (Company Number: 201329851H).

**Australia:** This material is distributed in Australia and New Zealand by Goldman Sachs Asset Management Australia Pty Ltd ABN 41 006 099 681, AFSL 228948 ('GSAMA') and is intended for viewing only by wholesale clients in Australia for the purposes of section 761G of the Corporations Act 2001 (Cth) and to clients who either fall within any or all of the categories of investors set out in section 3(2) or sub-section 5(2CC) of the Securities Act 1978, fall within the definition of a wholesale client for the purposes of the Financial Service Providers (Registration and Dispute Resolution) Act 2008 (FSPA) and the Financial Advisers Act 2008 (FAA), and fall within the definition of a wholesale investor under one of clause 37, clause 38, clause 39 or clause 40 of Schedule 1 of the Financial Markets Conduct Act 2013 (FMCA) of New Zealand (collectively, a "NZ Wholesale Investor"). GSAMA is not a registered financial service provider under the FSPA. GSAMA does not have a place of business in New Zealand. In New Zealand, this document, and any access to it, is intended only for a person who has first satisfied GSAMA that the person is a NZ Wholesale Investor. This document is intended for viewing only by the intended recipient. This document may not be reproduced or distributed to any person in whole or in part without the prior written consent of GSAMA.

To the extent that this document contains any statement which may be considered to be financial product advice in Australia under the Corporations Act 2001 (Cth), that advice is intended to be given to the intended recipient of this document only, being a wholesale client for the purposes of the Corporations Act 2001 (Cth).

Any advice provided in this document is provided by either of the following entities. They are exempt from the requirement to hold an Australian financial services licence under the Corporations Act of Australia and therefore do not hold any Australian Financial Services Licences, and are regulated under their respective laws applicable to their jurisdictions, which differ from Australian laws. Any financial services given to any person by these entities by distributing this document in Australia are provided to such persons pursuant to the respective ASIC Class Orders and ASIC Instrument mentioned below.

Goldman Sachs Asset Management, LP (GSAML), Goldman Sachs & Co. LLC (GSCO), pursuant ASIC Class Order 03/1100; regulated by the US Securities and Exchange Commission under US laws.

Goldman Sachs Asset Management International (GSAMI), Goldman Sachs International (GSI), pursuant to ASIC Class Order 03/1099; regulated by the Financial Conduct Authority; GSI is also authorized by the Prudential Regulation Authority, and both entities are under UK laws.

Goldman Sachs Asset Management (Singapore) Pte. Ltd. (GSAMS), pursuant to ASIC Class Order 03/1102; regulated by the Monetary Authority of Singapore under Singaporean laws

Goldman Sachs Asset Management (Hong Kong) Limited (GSAMHK), pursuant to ASIC Class Order 03/1103 and Goldman Sachs (Asia) LLC (GSALLC), pursuant to ASIC Instrument 04/0250; regulated by the Securities and Futures Commission of Hong Kong under Hong Kong laws

No offer to acquire any interest in a fund or a financial product is being made to you in this document. If the interests or financial products do become available in the future, the offer may be arranged by GSAMA in accordance with section 911A(2)(b) of the Corporations Act. GSAMA holds Australian Financial Services Licence No. 228948. Any offer will only be made in circumstances where disclosure is not required under Part 6D.2 of the Corporations Act or a product disclosure statement is not required to be given under Part 7.9 of the Corporations Act (as relevant).

FOR DISTRIBUTION ONLY TO FINANCIAL INSTITUTIONS, FINANCIAL SERVICES LICENSEES AND THEIR ADVISERS. NOT FOR VIEWING BY RETAIL CLIENTS OR MEMBERS OF THE GENERAL PUBLIC.

Canada: This presentation has been communicated in Canada by GSAM LP, which is registered as a portfolio manager under securities legislation in all provinces of Canada and as a commodity trading manager under the commodity futures legislation of Ontario and as a derivatives adviser under the derivatives legislation of Quebec. GSAM LP is not registered to provide investment advisory or portfolio management services in respect of exchange-traded futures or options contracts in Manitoba and is not offering to provide such investment advisory or portfolio management services in Manitoba by delivery of this material.

Japan: This material has been issued or approved in Japan for the use of professional investors defined in Article 2 paragraph (31) of the Financial Instruments and Exchange Law ("FIEL"). Also, Any description regarding investment strategies on collective investment scheme under Article 2 paragraph (2) item 5 or item 6 of FIEL has been approved only for Qualified Institutional Investors defined in Article 10 of Cabinet Office Ordinance of Definitions under Article 2 of FIEL.

### **Confidentiality**

No part of this material may, without Goldman Sachs Asset Management's prior written consent, be (i) copied, photocopied or duplicated in any form, by any means, or (ii) distributed to any person that is not an employee, officer, director, or authorized agent of the recipient.

©2025 Goldman Sachs. All rights reserved.

Date of First Use: March 20, 2025.

Compliance Code: 414160-OTU-2218318.



Explore more insights on [am.gs.com](https://am.gs.com)