



Investment Outlook

A Lesson in Liabilities

Q2 2023

Macro Environment



Jason Shoup
Chief Investment Officer

“Gauging the economic impact from the fallout of the banking crisis is now the major unknown in the outlook.”

It is possible that the most intense phase of the banking crisis is finished. Policymakers appear to have succeeded in putting an end to deposit runs and bank failures in recent weeks by acting swiftly to provide liquidity. Nonetheless, this is no time for complacency. The risk remains that the bank crisis will smolder for months without any spectacular failures, yet gradually create grave implications for the economy and risk assets.

In contrast to the Great Financial Crisis, the focus of this banking crisis has so far been on the liability side of the balance sheet. In some ways, the last few weeks have felt like a cross between the 1946 American classic *It's a Wonderful Life* and HBO's hit comedy *Silicon Valley*. The deposit runs have occurred at tweet-speed and there has been no digital equivalent of *George Bailey* to appeal for calm. Consequently, there is a growing acknowledgment that mobile banking and social media may have exacerbated the crisis.

Without a doubt, the kneejerk reaction among policymakers will be a call for increased bank regulation. Already, the super-regional banks were poised to face a higher regulatory burden akin to that of the largest systemically important banks. It now appears probable that the regional banks with assets between \$100 billion and \$250 billion will also experience an increase in regulation. Meanwhile, efforts to loosen the regulatory burden on the largest banks will likely be shelved for the time being.

However, if policymakers conclude that this bank disaster was caused by insufficient regulation and a highly technologically savvy customer base, then they risk misdiagnosing the problem.

An important question that has not received enough attention is why bank deposits are under so much pressure in the first place. The answer can be found on the Fed's balance sheet, again on the liability side. As the Fed has reduced its asset portfolio through quantitative tightening (QT), its liabilities have also declined in tautological lockstep. The challenge is that the vast majority of the decline in liabilities has been a result of excess reserves, which are the deposits that banks hold at the Fed.

The reason that excess reserves are declining so quickly looks to be an unintended consequence of addressing negative rates. The Fed expanded the eligible counterparties on its Overnight Reverse Repo Facility (RRP) in mid-2021 to include government money funds as a way to shield them from breaking the buck. The RRP paid an overnight Fed Funds rate of 0% at the time, which was better than the negative yields on offer in the T-bill market. Yet as the Fed raised rates over the past year something unexpected happened: usage of the Fed's RRP surged. T-bills continue to under-yield the RRP, leading government money funds to continue using the RRP to produce the best rate for their customers. However, because the RRP is the Fed's other major liability, its continued use means that deposits are squeezed lower as the Fed balance sheet shrinks.

For its part, the Fed appears to be in a pickle. At this point, it is technically difficult to tweak the RRP in such a way as to make it less economically attractive without adding liquidity back

into the system — which the Fed fears would be counterproductive to its efforts to bring inflation down. The Fed also seems to believe that financial stability concerns can be managed separately from monetary policy decisions, and thus appears to prefer continuing with rate hikes and QT while dealing with bank stress with the other tools at its disposal.

Against this backdrop, it is difficult to see how small banks can easily navigate the current environment, particularly as excess reserves seem to be unequally distributed to the benefit of the largest banks. Unless banks start paying substantially more, deposits are likely to continue to migrate to money funds that invest in the Fed's RRP. Although the panic may have passed, it is difficult to see how America's thousands of small banks' profitability and desire to lend have not been significantly impaired.

Gauging the economic impact from the fallout of the banking crisis is now the major unknown in the outlook. Banks were already tightening lending requirements ahead of the March turbulence, according to the Fed's Senior Loan Officer Opinion Survey. It now seems a near certainty that lending conditions will tighten even further. Given that small banks tend to service the small businesses which employ the greatest share of the workforce, there would seem to be a straightforward pathway to a recession if the magnitude of the lending pullback is severe enough. That should be reason enough to stay cautious in the near term on the economy and risk assets such as credit, equities and commercial real estate.



Pension Solutions Monitor²



Chris Wroblewski, CFA
Senior Solutions Strategist

“US pension funding ratios increased over the first quarter of 2023.”

Our analysis of market movements impacting US corporate defined benefit pension plan leads us to estimate that pension funding ratios increased over the first quarter of 2023. Based on market movements, the average funding ratio is estimated to have increased from 98.3% to 100.3%.

Equity markets experienced strong performance over the quarter with global equities³ and the S&P 500 increasing 7.4% and 7.5%, respectively. Plan discount rates⁴ were estimated to have decreased roughly 32 basis points over the quarter with the Treasury component decreasing 33 basis points and the credit component widening 1 basis point. Plan assets with a traditional “50/50” asset allocation increased 6.6%. The strong asset performance outweighed the rise in liability values resulting in a 2.0% increase in funding ratios over the first quarter of 2023.

The fall in plan discount rates over the first quarter has primarily been due to falling Treasury yields. This has

caused liability values to increase; however, positive asset performance from fixed income and equity markets resulted in higher funding ratios for the average plan. We continue to see heightened demand for custom hedging strategies as a tool to lock in funded status gains. Plan sponsors continue to explore shorter duration strategies to better align with falling liability durations. We’ve also seen many plans elect to transition from a blunt hedging approach to a more refined, completion management approach in hopes of reducing the potential tracking error due to interest rate risk.

The Pension Solutions Monitor now assumes a typical liability profile using an approximate duration of 12 years and a 50% MSCI AC World Total Gross Index / 50% Bloomberg US Long Government/Credit Index investment strategy. Our analysis incorporates data from LGIM America research, ICE indices and Bloomberg.

Pension funded status market summary:

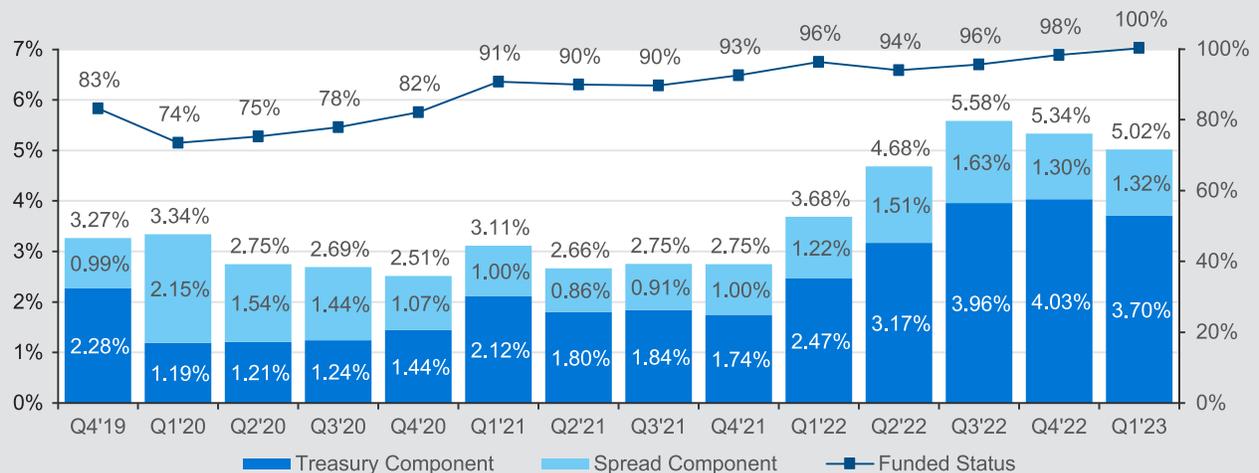
- Equity markets outperformed with global equities up roughly 7.4%.
- Plan liabilities increased due to lower discount rates.
- Funding ratio levels increased due to strong asset performance over the quarter.

Funded status risk - Q1 2023

Equities	↑
Interest rates	↓
Credit spreads	↑

Sources: LGIM America, ICE indices and Bloomberg. Data as of March 31, 2023.

Figure 1 – Discount rates



Sources: LGIM America, ICE indices and Bloomberg. Data as of March 31, 2023.

Fixed Income Markets



Anthony Woodside, CFA, FRM
Head of US Fixed Income Strategy

“We enter the second quarter underweight corporate credit, with a preference for higher quality segments of the market.”

As most of us have learned from firsthand experience, resilience and fortitude cannot be accurately quantified during times of tranquility. On the contrary, the magnitude of these attributes is most apparent during periods of turmoil. We merely need to survey everyday life to find confirmation for this assertion littered across sports, relationships and, of course, central bank policy. As history has shown, tightening cycles tends to result in breaks within vulnerable segments of the economy, which ultimately coaxes policymakers to reverse course. Today’s developed market hiking cycle has been defined not only by its accelerated pace but also the emergence of visible cracks within the financial ecosystem. Specifically, market participants have witnessed disorderly unwinds across UK Liability Driven Investing (LDI), European bond fragmentation, cryptocurrencies, broader technology and most disturbingly, the banking system.

It has become increasingly clear that the global economy was lulled into a sense of complacency during the distortionary era of zero interest rate policy and bloated balance sheets. With central bank retrenchment in full effect, fragile business models that thrived during the old regime are being exposed with alarming regularity. However, this time around there is a critical difference - policymakers have not been quick to hit the reset button as they have prioritized reigning in inflation over burgeoning concerns around economic growth and asset returns.

The first quarter of the year can best be described as a tale of two periods. Robust data in January and February gave rise to a reacceleration narrative, with investors increasingly gravitating towards a ‘no-landing’ economic outcome. However, this optimism quickly took a backseat to the banking crisis in March which engulfed Silicon Valley Bank, Signature Bank, Silvergate and ultimately paved the way for UBS to acquire Credit Suisse. While interest rates were higher

and investment grade credit spreads tighter on a year-to-date basis by the end of February, both measures moved sharply in the opposite direction in March as risk aversion spiked.

In rates, yields fell aggressively across the curve in March, which culminated in 2-year yields declining by 40 basis points in the first quarter, while 10- and 30-year yields fell by roughly 40 and 30 basis points, respectively.¹ Although corporate credit came under pressure last month, this stress was not readily apparent in overall performance for the quarter. Total returns were positive across the board for investment grade and high yield credit indices, largely due to the rates tailwind. In investment grade credit, spreads are only modestly wider on the year, with the long credit notably outperforming the full market credit index due to positive supply/demand technicals and a lower allocation to banks. High yield held up even better (also benefiting from limited bank exposure) with spreads finishing the quarter tighter, reinforcing the view that investors continue to expect a rather benign default cycle.

When we step back to regain our equilibrium after a dizzying last three months, a few important observations stand out across the investment landscape. Firstly, after finally conforming to the Fed’s higher for longer narrative in February, investor defiance re-emerged in March. More specifically, expectations for the Fed policy rate at the end of 2023 plummeted from ~5.3% at the end of February to ~4.3% one month later, with rate cuts expected to commence in the second half of this year. At the same time, the Fed not only opted to hike rates by 25 basis points in March, but its new dot plot was also modestly more hawkish, exacerbating the disconnect between policymakers and market participants. In credit, despite the sell-off in March, decompression was largely absent across most rating cohorts. Lastly, we note that the uptick in volatility has been unevenly distributed across asset classes, as price action in equities has been significantly more subdued than market gyrations in fixed income. Equities even managed to outperform last month, with most sectors outside of financials registering positive returns.

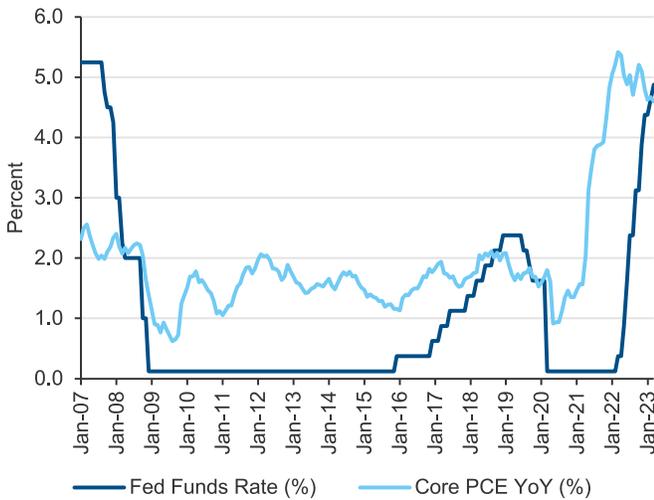
As we have argued for over a year, investors find themselves caught in a storm of profound macro changes. Heightened geopolitical tensions and a reorganization of supply chains have certainly created an uncertain backdrop, but no factor has been more disruptive than the seismic shift in monetary policy. While the Fed funds rate finally eclipsed core personal consumption expenditure (PCE) for the first time in this elevated inflation regime, policymakers continue to emphasize that price pressures remain too hot to soften their stance (see Figure 2).

When piecing together market clues, the strength in equities and the plunge in rates tells us that investors have brazenly slammed the ‘Fed put’ back on the table. In our view, the crisis in March increases the risk of a negative feedback loop from

the banking sector to the broader economy. Small banks have served as the primary driver of credit growth in the US and with heightened competition for deposits and more onerous regulatory burdens likely on the horizon, the adverse impact on profitability should accelerate the tightening already seen in lending standards. However, while we do not rule out the Fed abruptly cutting rates, we see limited upside in turning constructive on duration given the substantial repricing in rate expectations.

Similarly, we remain cautious on corporate credit for two principal reasons. The fallout in the banking sector has provided an emphatic rebuttal to the argument that the impending recession may lack a ‘problem sector.’ Additionally, our conviction in our sub-consensus view on growth has strengthened as we believe the Fed’s insistence on separating monetary policy from financial stability considerations increases the odds of serious accident. Much attention has been paid to the Fed’s hiking cycle, but the elephant in the room may be what policymakers choose to do with the balance sheet going forward. In summary, we enter the second quarter underweight corporate credit, with a preference for higher quality segments of the market. Moreover, we caution that security selection will be paramount as the resilience of business models will be tested amidst a turbulent economic backdrop.

Figure 2 – Fed Funds rate has finally eclipsed core PCE



Source: Bloomberg. Data as of April 12, 2023.

Equity Markets



Dave Chapman, CFA
Head of Portfolio Solutions

“Equity implied volatility remains somewhat elevated, presenting different tradeoffs and relative value propositions in the derivatives space.”

I am a University of Michigan alumnus and a borderline football lunatic, two traits that regularly conspire to push me to irrational emotional extremes. However, this has not always been the case. The early 2010s were dark days for Michigan football. The program was not good enough to win meaningful games, but it was successful enough to ward off painful but necessary changes. Michigan fans found themselves in a peculiar situation in which we lacked optimism but were not despondent due to our acceptance of losing the big games. In that moment, a popular Michigan sports blog adopted an unofficial mascot, Henri the Otter of Ennui. Ennui is defined as a feeling of listlessness and dissatisfaction arising from a lack of occupation or excitement. I am adopting him again here.

Last quarter, the NASDAQ and mega cap tech outperformed the more cyclically sensitive and smaller cap Russell 2000 Index. The narrative for this relative performance has been that declining real yields supported the longer duration cash flows of tech earnings, and also that falling real yields are indicative of lower future growth, significantly hindering the prospects of smaller, more levered firms. I find it difficult for those effects to be simultaneously true. Relatedly, rate markets are pricing in one more hike at the May Fed meeting, as well as nearly three cuts by January 2024. It is an oddly specific and steep path. However, these aspects of equity relative performance and Fed pricing are closely related.

In isolation, rate cuts should support equities through looser monetary policy. However, both the Fed and equities respond to the same macro environment, and ultimately the ‘why’ of rate cuts is more important. Lowering rates for a given amount of growth could be good news (hence tech could rally), whereas a recessionary cut would be bad news (hence small cap could decline). Rate cuts were of little help to equities in the early 2000s, the Global Financial Crisis or the COVID-19 pandemic. When you’re worried about no cash flows, discounting them at a lower rate won’t save you. If

we're getting rate cuts this year, it's because of an unfolding recession, so we wouldn't expect the rate cuts to support equity markets.

This is the listlessness of equity market – the unusual macro environment and speed with which this cycle is developing appear to be exhausting investors and forcing them to rely reflexively on a playbook that may win the next game but ultimately results in a disappointing season. Investors are dissatisfied as positioning is very slightly bearish with a preference to de-risk and estimates of systematic flows oscillate with even minor market movements. Valuations are unattractive but not extreme. Early indications are for an okay earnings season. Not terrible. Not great. Just okay. Consensus estimates have been ticking higher over the past few weeks but remain down on the year.

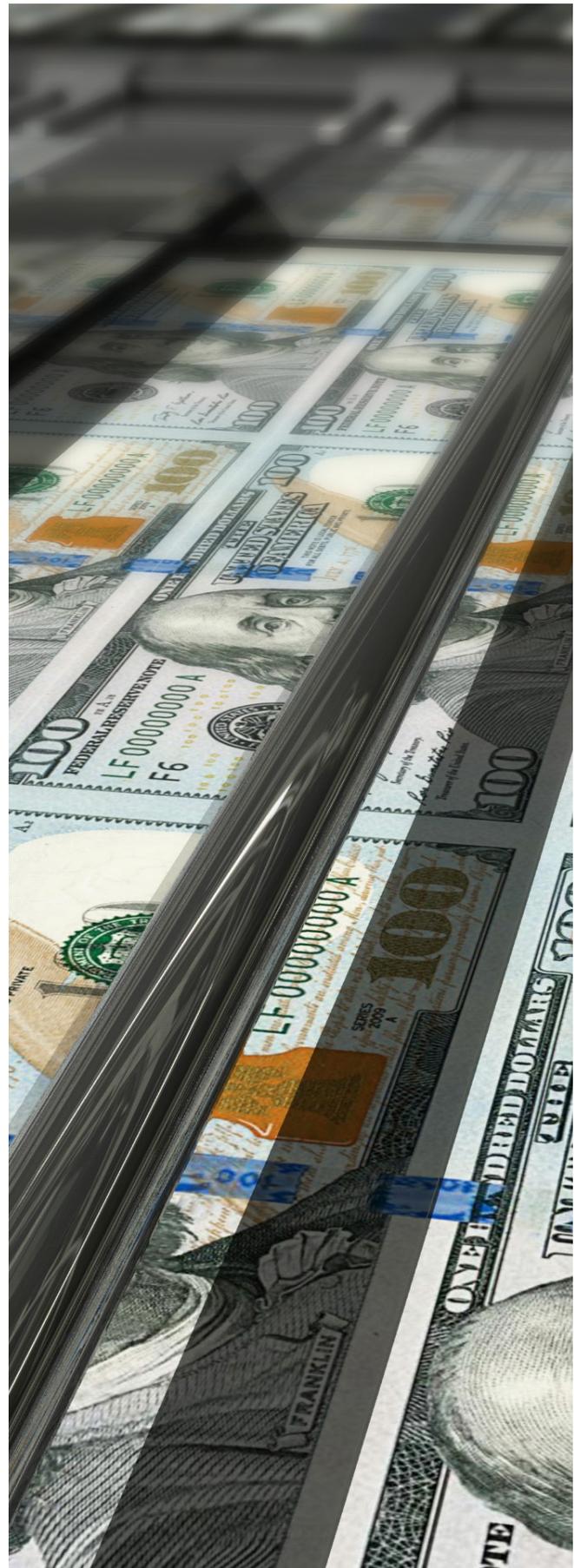
It is impossible to get excited about the current equity market. It's also difficult to be disheartened by a 7% year-to-date return and solid macro economic fundamentals. On the other hand, equities still have their rivalry with policy tightening. Fortunately, the playing field has shifted a bit, and good defense may be easier to execute. A simple measure of the equity risk premium shows that it is near its lowest level in recent history. The precipitous decline is largely due to the increase in short-term rates. The benefit to equity investors, then, is that holding cash is less punitive. Meanwhile, equity implied volatility remains somewhat elevated, presenting different tradeoffs and relative value propositions in the derivatives space.

Figure 3 – S&P earnings yield components minus 3-month T-bills



Source: LGIM America and Bloomberg. Data as of March 31, 2023.

In this context, we would strongly urge clients and investors to think about cash as a real option. A tactical allocation to cash can be evaluated against the purchase of a put outright, the holding of cash plus a call to preserve upside, or structures such as put-spread collars (which still price very attractively versus historical norms). We are happy to be a partner in evaluating a framework that illustrates these trade-offs (e.g., carry, certainty, explicit cost versus opportunity cost) against each investor's unique objectives.



Research



Dan Haut, CFA
Senior Research Analyst

“Banks will need to demonstrate liquidity, which they can do by increasing reserves, shortening the duration of securities holdings, issuing debt and increasing what they pay on deposits.”

Beware the Ides of March. And, apparently, the week before. The second and third largest bank failures in US history occurred in March, as well as the first failure and forced merger of a Global Systemically Important Financial Institution (GSIFs). Despite 14 years of regulations and stress testing, all three succumbed to the classic bank killer: lack of liquidity. We anticipate that regulators will take two key lessons from this episode.

The first lesson is how quickly deposits can be withdrawn in the digital age. Gone are the days when banks can slow a run by closing a teller window. The key liquidity ratio for regulators is the Liquidity Coverage Ratio (LCR), as it measures sources of liquidity to stressed outflows over a 30-day period. When deposit outflows occur in 30 hours, 30 days of liquidity become less important.

Fortunately, the Federal Reserve was able to restore some market stability by announcing the Bank Term Funding Program (BTFP). The one-year (to start) BTFP allows banks to pledge high quality collateral to the Federal Reserve at par values instead of current market values. The program brought relief and liquidity to banks that were encumbered by underwater securities and deposit outflows. Given the limited term of the BTFP, we expect banks and regulators will place a premium on immediate liquidity sources, such as reserves versus Treasuries and agency mortgage-backed securities (MBS).

The second lesson is the difficulty in resolving Silicon Valley Bank through the traditional FDIC process. It took two weeks to find a buyer instead of a weekend, and other banks have struggled to sell themselves. There are limited buyers of banks in the \$100-\$250 billion range, and market confidence is contingent on the speed of resolution.

The Federal Reserve has been undertaking a holistic review of regulations since last fall. We had expected stronger capital, liquidity, stress testing and loss absorbing debt rules to be applied to Category III super regional banks (\$250-\$700 billion in assets) to reflect the inability to resolve institutions of this size through the FDIC process. It is now likely that stricter rules will be imposed on Category IV banks (\$100-\$250 billion).

As we enter the most watched bank earnings season in a decade, we see challenges for smaller banks relative to the GSIFs and super regionals. Banks will need to demonstrate liquidity, which they can do by increasing reserves, shortening the duration of securities holdings, issuing debt and increasing what they pay on deposits. All these actions, along with higher regulatory compliance costs, will pressure margins and net interest income. The already more profitable GSIFs and super regionals have the benefit of diversification and the ability to spread the costs over more assets.

When it comes to bank deposits, the big are getting bigger. While the largest banks are perceived to be safer and net beneficiaries of deposits from smaller competitors, all banks must reconsider their liquidity models. The idea that banks only need to keep a small portion of deposits to meet demand while lending out the rest is at the heart of fractional banking. Changing assumptions, especially at smaller banks where more small and medium enterprises and middle market lending occurs, could meaningfully restrict credit availability and push more lending outside the banking system. While it is still early and unclear whether the worst of the stress in banks has passed, the effects of March 2023 will be felt in banking for years to come.

1. Source: Bloomberg
2. For illustrative purposes only. LGIM America prepares the Pension Solutions Monitor data assuming a typical liability profile using an approximate duration of 12 years and a 50% MSCI AC World Total Gross Index / 50% Bloomberg US Long Government/Credit Index investment strategy, incorporating data sourced from LGIM America, ICE, MSCI and Bloomberg. These results are based on simulated or hypothetical assumptions that have certain inherent limitations. Unlike the results in an actual performance record, these results do not represent actual trading. Because these trades have not actually been executed, these results may have under- or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity. Simulated or hypothetical trading programs in general are also subject to the fact that they are designed with the benefit of hindsight. No representation is being made that any account will or is likely to achieve profits or losses similar to these being shown.
3. "Global equities" referred to here is represented by the MSCI AC World Total Gross Index.
4. Discount rates based on a blend of the Intercontinental Exchange Mature US Pension Plan AAA-A and Intercontinental Exchange Retired US Pension Plan AAA-A discount curves.

Disclosures

This material is intended to provide only general educational information and market commentary. Views and opinions expressed herein are as of the date set forth above and may change based on market and other conditions. The material may not be reproduced or distributed. The material is for informational purposes only and is not intended as a solicitation to buy or sell any securities or other financial instrument or to provide any investment advice or service. Legal & General Investment Management America, Inc. does not guarantee the timeliness, sequence, accuracy or completeness of information included. Past performance should not be taken as an indication or guarantee of future performance and no representation, express or implied, is made regarding future performance.

Certain of the information contained herein represents or is based on forward-looking statements or information, including descriptions of anticipated market changes and expectations of future activity. Forward-looking statements and information are inherently uncertain and actual events or results may differ from those projected. Therefore, undue reliance should not be placed on such forward-looking statements and information. There is no guarantee that LGIM America's investment or risk management processes will be successful.

In certain strategies, LGIM America might utilize derivative securities which inherently include a higher risk than other investments strategies. Investors should consider these risks with the understanding that the strategy may not be successful and work in all market conditions. Reference to an index does not imply that an LGIM America portfolio will achieve returns, volatility or other results similar to the index. You cannot invest directly in an index, therefore, the composition of a benchmark index may not reflect the manner in which an LGIM America portfolio is constructed in relation to expected or achieved returns, investment holdings, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility, or tracking error targets, all of which are subject to change over time.

Reference to an index does not imply that an LGIM America portfolio will achieve returns, volatility or other results similar to the index. You cannot invest directly in an index, therefore, the composition of a benchmark index may not reflect the manner in which an LGIM America portfolio is constructed in relation to expected or achieved returns, investment holdings, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility, or tracking error targets, all of which are subject to change over time.

Certain portfolios in the strategy may not adhere to all transactions described in this commentary. Additional information about the strategy and its objectives is available upon request. Certain of the information contained herein represents or is based on forward-looking statements or information, including descriptions of anticipated market changes and expectations of future activity. Forward-looking statements and information are inherently uncertain and actual events or results may differ from those projected. Therefore, undue reliance should not be placed on such forward-looking statements and information. There is no guarantee that LGIM America's investment or risk management processes will be successful.

Unless otherwise stated, references herein to "LGIM", "we" and "us" are meant to capture the global conglomerate that includes Legal & General Investment Management Ltd. (a U.K. FCA authorized adviser), LGIM International Limited (a U.S. SEC registered investment adviser and U.K. FCA authorized adviser), Legal & General Investment Management America, Inc. (a U.S. SEC registered investment adviser) and Legal & General Investment Management Asia Limited (a Hong Kong SFC registered adviser). The LGIM Stewardship Team acts on behalf of all such locally authorized entities.

© Legal & General Investment Management America 2023. All rights reserved.

