U.S. PUBLIC PENSIONS ARE BUILDING FOR THE LONG-TERM

How pension plans are reacting after a year of shocks

A report for Ortec Finance

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Introduction

U.S. public pension plans have been through a torrid year of investment volatility, rising inflation and increasing interest rates.

The Federal Reserve has raised rates nine times in succession taking the rate to 5% - the highest since 2007 – while CPI inflation climbed as high as 9.1% in June 2022. The most recent figure of 4.9% for April is good news but many analysts still expect further Federal Reserve rate rises.

The series of economic shocks helps explain why public pension plans last year averaged a negative return of -6.14%. That is dramatically below the 6.9% average assumed annual rate of return for the sector.*

There is good news – analysts such as the Equable Institute say that despite the challenges of last year U.S. public pension plans are currently in better shape than they were before the COVID-19 pandemic.*

However, it is undoubtedly the case that the sector is facing a tough period and the past three years have increased uncertainty and the pressure on pension plan managers.

It is against that background that Ortec Finance commissioned Pureprofile to take the temperature of the U.S. public pension sector with independent research** among 50 U.S. public sector pension fund managers responsible for a collective $1.315 trillion assets under management.

Our business is to model and map the relevant uncertainties in order to help pension funds monitor their goals and decisions. We design, build, and deliver high-quality software models for asset-liability management, risk management, impact investment, portfolio construction, performance measurement and attribution, and financial planning.

The study looked at a range of issues including attitudes to risk management, inflation hedging, stress testing and what U.S. public pensions believe will happen to inflation.

To support our study, we conducted analysis of publicly available data on the funding ratios of U.S. public pension plans to give a better understanding of the current situation.

It shows U.S. public pension plans face major challenges. However, our study demonstrates that they are getting to grips with the issues they face and are even optimistic about the future. We believe it makes fascinating reading and provides a snapshot of how U.S. public pension plans are building for the long-term after a series of short-term shocks.

The funded ratio challenge

Our analysis* shows that the average funded ratio for U.S. public pension plans was 77.89% in 2022, and collectively they had Total Accrued Liabilities of $6.369 trillion, and total Unfunded Liabilities of $1.445 trillion.

That figure is of course the average – last year one in seven (14%) of U.S. public pension plans had funded ratios of 60% or less and just one in eight (12%) had funded ratios of 100% or more.

The funded ratio is important. It reflects a pension fund's current financial position, expressing the ratio between available assets and liabilities, ultimately showing whether a pension fund holds enough reserves to pay out pension benefits to its current and future members.

The table below shows the spread of funded ratios for 225 public pension plans across the country ranging from as low as between 0% and 10% to between 170% and 180%.

Funded Ratio	**Count of U.S. Public Pension Plans**	**Percentage**
0% - 10%	1	0.44%
20% - 30%	5	2.22%
30% - 40%	2	0.89%
40% - 50%	8	3.56%
50% - 60%	16	7.11%
60% - 70%	37	16.44%
70% - 80%	56	24.89%
80% - 90%	42	18.67%
90% - 100%	31	13.78%
100% - 110%	21	9.33%
110% - 120%	4	1.78%
160% - 170%	1	0.44%
170% - 180%	1	0.44%
Grand Total	**225**	**100.00%**

Changing risk profiles

Our research shows one way pension plan managers are addressing the issue is through changes to their risk profile. As many as 94% we questioned say the risk profile of their plan increased last year. One in six say (16%) say it increased significantly.

More than four out of five (81%) of those questioned expect the increase in risk profiles to continue in the next 12 months with nearly one in three (32%) expecting a dramatic increase.

The biggest driver of pension fund risk identified by the study is interest rate movements with managers questioned saying this is the biggest concern for their fund followed by cash flow requirements and liquidity.

The volatility of investment markets was rated as the third most concerning risk, ahead of inflation which was rated fourth. Cybersecurity was rated as the fifth most concerning risk.

When asked about the pension plan's long-term objectives, almost all (96%) say they are feasible, and the same number of sponsors believe the risks facing their pension plans are within the agreed risk budget.

The future path of inflation

The recent fall in U.S. inflation from 6% to 4.9% will not have come as a surprise for pension plan managers.

The clear message from our research is that managers are convinced the U.S. economy is on the path to inflation moderation. Our research found near unanimity with 90% saying they are confident that inflation is on the decline.

Around half (52%) of the public sector pension plans questioned believe inflation could be 3.3% or lower within a year. Just 10% of public sector pension plan professionals interviewed believe the rate will be over 6% within a year.

WHERE WILL INFLATION BE BY JANUARY 2024?	HOW MANY PENSION PLAN MANAGERS EXPECT THIS RATE
2.3% to 2.5%	2%
2.5% to 2.7%	14%
2.7% to 3%	14%
3.1% to 3.3%	22%
3.3% to 4%	20%
4% to 4.5%	10%
4.5% to 5%	4%
5% to 6%	4%
More than 6%	10%

Our research found commodities have been the asset class that the U.S. public sector pension plans interviewed have relied on the most to help hedge against inflation over the past 12 months.

Some 70% of those interviewed said their plans had increased their allocation to commodities to help with hedging compared with 52% who had increased allocations to infrastructure and 40% who put more into gold. Just 42% said they had increased allocations to inflation-linked bonds.

Inflation hedging has been a success

U.S. public sector pension plan managers are confident that their plans are well hedged against inflation but still have worries about possible risk scenarios.

Around 86% say their plan is well hedged against inflation – more than a quarter (26%) believe their plan is 'very well' hedged. Just 12% believe the hedging at their plan is average.

The confidence in inflation hedging is not leading to complacency – managers are still active in changing asset allocations to hedge against inflation. Around two out of three (66%) think they will increase allocations to commodities to help with this, while 50% will boost allocation to infrastructure investing. Some 32% will increase allocations to inflation linked bonds and 38% will increase allocations to gold to hedge against inflation.

They still have concerns about the risk of stagflation – the combination of low growth and high inflation – for their investment strategies. Some 48% of those surveyed say they are very concerned while 50% say they are quite concerned. All those surveyed expect to see a change in actuarial assumptions on the expected inflation or discount rate.

But more scenario modeling and stress testing is needed

The managers we interviewed believe the plans they support will spend more on scenario modeling and stress testing in the next two years to help manage the increased risk of market shocks. There is an increased appetite for investment in tools that help generate and analyze plausible risk–return scenarios.

Over the next two years 90% of the public sector pension professionals interviewed say the plans they work for will spend more on tools in this area.

That may partly be explained by the benefits managers have seen from their use of scenario modeling and stress testing. Around 44% say they are very effective and 56% say they are mostly effective at asset liability management (ALM).

Currently 44% outsource their asset liability management (ALM) studies entirely to third parties, and 54% say they outsource partially.

When asked to assess their in-house ALM capability, 26% interviewed rated their teams excellent; with the remainder describing them as good or average.

Just 20% of those surveyed say they take both assets and liabilities into account when assessing risk. Around 42% say they look solely at liabilities while 38% only consider assets.

Conclusion

Many pension plans saw the value of their assets fall last year in what was a tough time for markets. Market shocks continue to dominate the investment climate and the degree of uncertainty is extremely high for U.S. public sector pension plan sponsors. On a basic level this has decreased the likelihood of U.S. public pension plans meeting their liabilities and being able to pay pensioners.

There is good news as U.S. public sector pension plan managers are largely convinced that inflation as a major issue is fading away with the U.S. economy firmly on the path to inflation moderation. There is genuine optimism that lower inflation will become well-established with very few managers expecting it to be as high as it currently is within a year or two.

While public sector pension plan managers are generally confident that they have addressed inflation by hedging on their funds, they aren't getting complacent. More work is being done in terms of asset allocations with commodities emerging as the clear favorite for increased exposure in the year ahead and there are some lingering worries that the U.S. economy will not achieve the soft landing of lower inflation and rising growth.

Many U.S. public sector pension plans have acted to manage their balance sheet effectively in order to achieve long-term objectives while dealing with the short-term risk from inflation. Strategic asset allocation decisions are however, becoming increasingly complex as a result of the ever-growing number of asset classes and investment strategies, and the unique risks associated with them.

The major challenge, however, remains that funding ratios are under pressure. This stresses the importance of asset-liability management to improve the long-term financial position of the plans.

The stochastic models currently available to sponsors and their advisors, including the Monte Carlo simulations, are too simplistic and may generate results that do not fully account for major economic and market shock events - such as COVID-19. It makes sense to increase spending on advanced tools that offer more realistic and useful insights in changing market conditions.

An ideal model would be adaptive and time-varying, and able to account for current market conditions and factor in uneven distributions of results in real-time. Strategic asset allocation decisions are however, becoming increasingly complex as a result of the ever-growing number of asset classes and investment strategies, and the unique risks associated with them.

About the research

- * U.S. public pensions data from analysis by Ortec Finance of Home (equable.org) reports
- ** Ortec Finance commissioned independent research company Pureprofile to interview 50 U.S. public sector pension fund managers responsible for a collective $1.315 trillion assets under management. The survey was conducted during April 2023.

About Ortec Finance

Ortec Finance is the leading provider of technology and solutions for risk and return management. It is Ortec Finance's purpose to enable people to manage the complexity of investment decisions.

This is accomplished via the delivery of leading technologies and solutions for investment decision-making to financial institutions around the world. Ortec Finance's strength lies in an effective combination of advanced models, innovative technology, and in- depth market knowledge. This combination of skills and expertise supports investment professionals in achieving a better risk-return ratio and thus better results.

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