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Increased Risk, Complex Investment Landscape Require Prudent Pension Management Practices

State retirement system performance, 2021 and 2022

The Pew Charitable Trusts

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Overview

Effective management of state pension investments is crucial to ensuring the sustainability of retirement benefits for millions of public sector employees, so The Pew Charitable Trusts has tracked state pension investment practices and outcomes since 2012. This chartbook is the latest installment of that work and offers a detailed analysis of recent investment trends, focusing on asset allocation, investment performance, and management fees for 73 major public pension plans in fiscal years 2021 and 2022.

This latest analysis finds that public pension plans have continued a trend, which began in earnest about 30 years ago, of increasing reliance on risky alternative investments, such as private equity, private debt, and real estate, rather than the traditional stocks, bonds, and cash investments that dominated retirement system portfolios in the past. In 2022, the combined share of equity and alternative investments reached 77% of total pension plan assets, compared with 74% in 2019. Although equities still make up the largest asset class, equity investments have declined significantly in recent years, decreasing from 47% of total assets in 2019 to 42% in 2022. That decrease was offset by a substantial expansion in alternative investments, from 27% to 35% of total assets.

Public pension plans' investment returns also fluctuated dramatically during the study period. In 2021, average returns for all pension plans reached a historic high of 27%. However, from this peak, returns plummeted by more than 30 percentage points, reaching -4.8% just one year later. This severe volatility closely mirrored the broader markets and underscores the risks inherent in plans' current investment strategies. Moreover, despite the dramatic stock market rally in 2021, pension funds' anticipated returns have declined steadily since 2010. Public pension plan administrators have cut their return assumptions to about 7%, adopting projections that more accurately reflect current economic conditions and past investment performance.

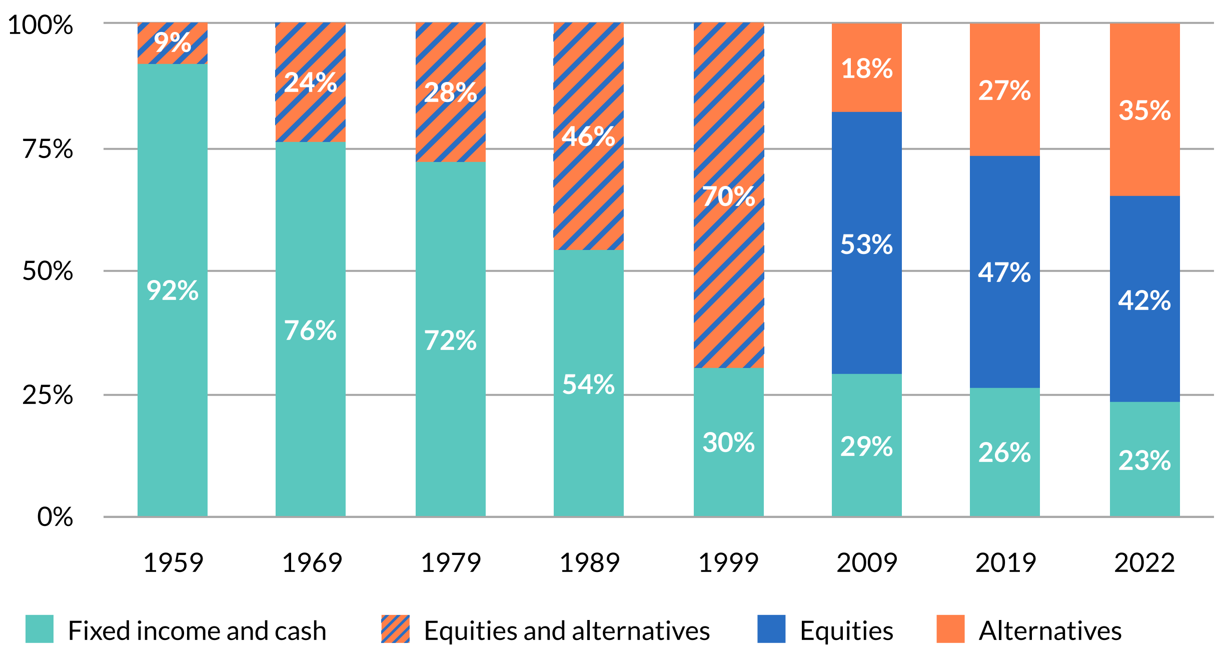
Further, in addition to the fiscal challenges associated with declining projected returns and riskier assets, public pension funds are facing rising costs associated with their increased use of alternative investments, which typically command higher fees than do traditional investments. In 2022, the studied retirement systems collectively reported more than $16.5 billion in fees and investment expenses, with a 50-state average of 0.35% of investments—a 35% increase since 2006. Pew's research also reveals that these fees significantly affect the total costs of pension investments. And as those costs rise, transparency in reporting becomes increasingly important to ensure accurate assessment of plan performance and management.

This chartbook looks in depth at the evolving landscape of public pension plans in the United States, illustrating the decades-long shift toward riskier investments, the increasing volatility in performance, rising fees, and the cautious outlook for future returns. These findings underscore the need for prudent management and strategic adjustments to ensure that public pension plans can navigate the challenges and opportunities they face.

Figure 1

Equities, Alternative Assets Grew Steadily as a Share of Public Pension Allocations Over 6 Decades

Investments by asset category, 1959-2022



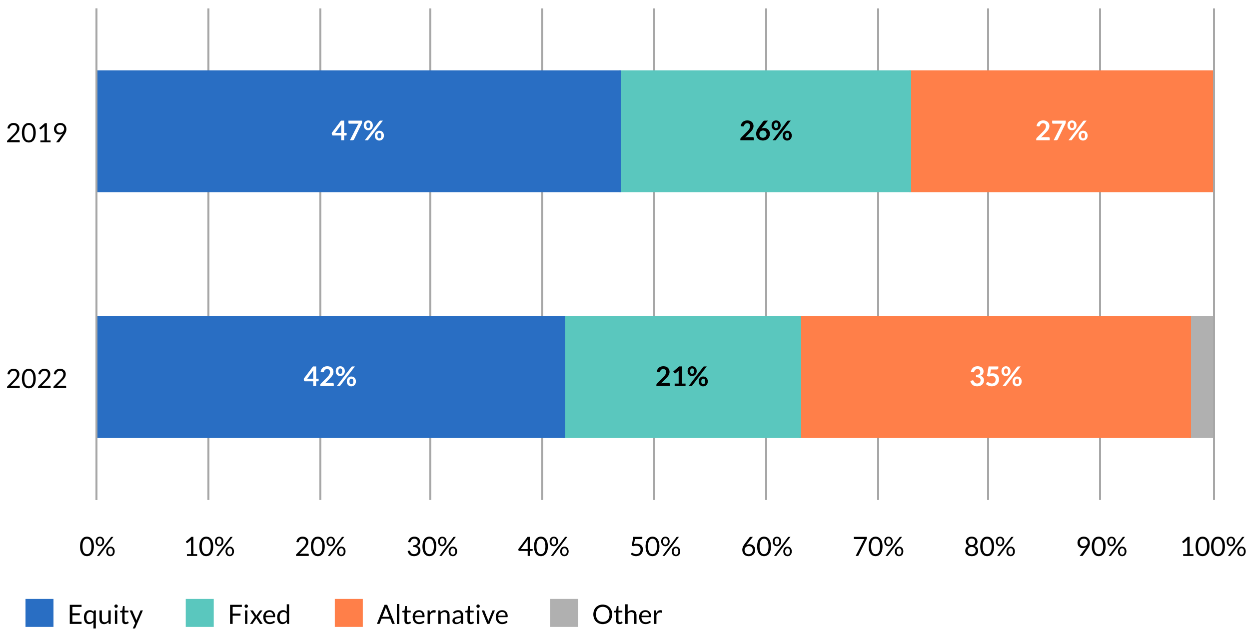
Sources: U.S. Board of Governors of the Federal Reserve System, financial accounts of the United States, 1959 to 2019; Pew analysis of state financial reports for 2022

Over the past six decades, public pension investing has evolved from a conservative, fixed-income-based approach—mainly investing in bonds and other vehicles that provide regular, predictable interest payments and return of principal at maturity—to a more diversified strategy that includes significant allocations to equities and alternative investments. As of 2022, equities and alternative assets accounted for 77% of public pension fund investments. These asset classes involve higher risk than more stable strategies, such as fixed income, because of their volatility.

Figure 2

Pension Investments in Equities Dropped While Alternatives Grew Dramatically Over 3 Years

Pension plan allocations by asset class, 2019 and 2022



Sources: Annual comprehensive financial reports, 2019; state treasury reports; quarterly investment reports; and plan responses to data inquiries

Although equities remain the largest asset class in public pension portfolios, plans have decreased their reliance on equities and increased allocations to alternative investments in recent years. For example, from 2019 to 2022, the share of investments directed to equities dropped from 47% to 42% and the share in alternative assets grew from 27% to 35%.

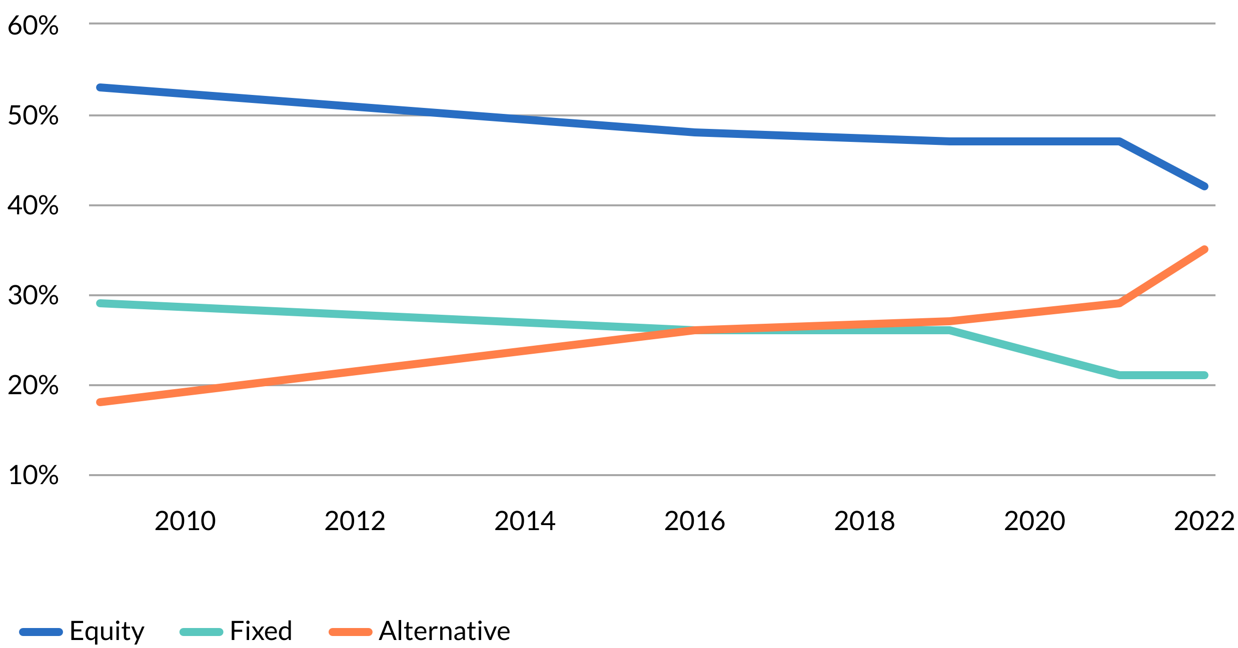
Pension plans have increased their investments in alternative asset classes to diversify their portfolios, which can reduce risk, and to pursue higher returns. Alternative investments offer higher yields than standard stocks and bonds, and because they tend to move independently of other markets, they may perform well even when traditional assets decline.[1]

However, despite helping to diversify portfolios and enhance prospects for returns, adding alternative asset classes often leads to greater complexity, cost, and volatility compared with traditional investments.

Figure 3

Alternative Investments Have Grown Steadily as a Share of Pension Plan Portfolios, Boosting Diversification

Aggregated allocations for 73 funds, by asset class, 2009-22



Sources: Annual comprehensive financial reports from 2008 to 2022; state treasury reports; quarterly investment reports; and plan responses to data inquiries

The shift toward alternative asset investment is not new; it began in the late 2000s, coinciding with the 2008 financial crisis, when many public pension plans started placing increased emphasis on diversifying their asset classes to balance growth and risk. From 2009 to 2022, alternative asset allocations rose from about 20% to 35%.

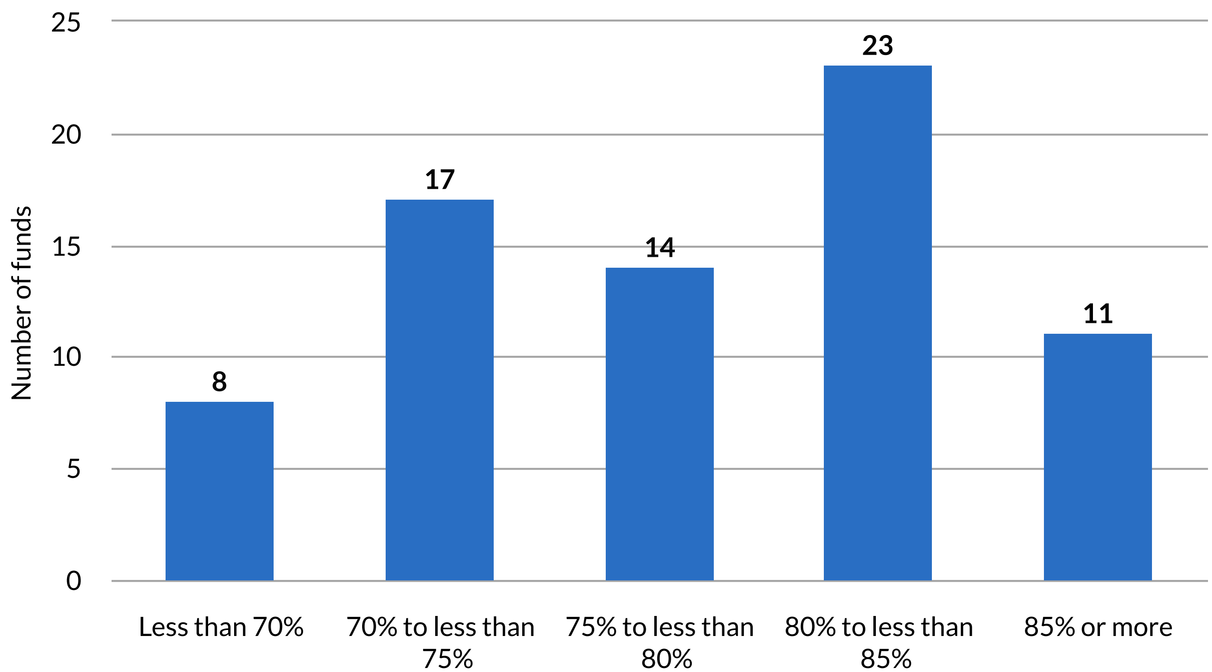
Consistent with this trend, pension plans are increasingly turning to private credit investment, a fast-growing segment within alternative assets. The California Public Employees' Retirement System, for instance, directed 5% to private debt as of 2022.[2]

In contrast, the share of equities across major public pension plans has consistently decreased, dropping from more than 53% to approximately 42% over that span.

Figure 4

Most Major State Pensions Had at Least 70% of Their Assets in Stocks, Alternative Investments

Allocations to risky assets by number of funds and share of portfolio, 2022



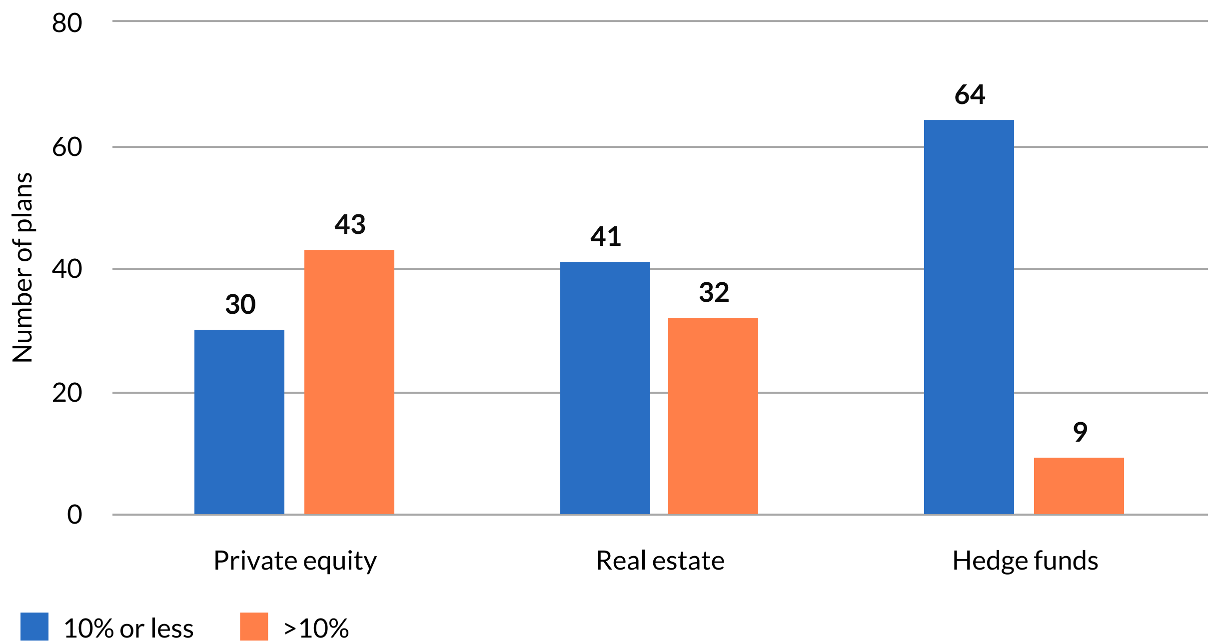
Sources: Annual comprehensive financial reports, 2022; state treasury reports; quarterly investment reports; and plan responses to data inquiries

State public pension funds employ varying asset allocation strategies, though the overall trend has been toward higher-risk investments. In 2022, 65 of the 73 plans studied had allocated at least 70% of their portfolios to equities and alternative investments. Of those 65 plans, 34—more than a third of all plans—had at least 80% of their portfolios invested in these asset classes. For example, the Kentucky Retirement Systems had the lowest allocations to risky assets at 46%, and the Arizona State Retirement System reported the highest at 98%.

Figure 5

Most Pension Funds' Alternative Assets Are in Private Equity and Real Estate

Use of alternative investments, by type and number of plans, 2022



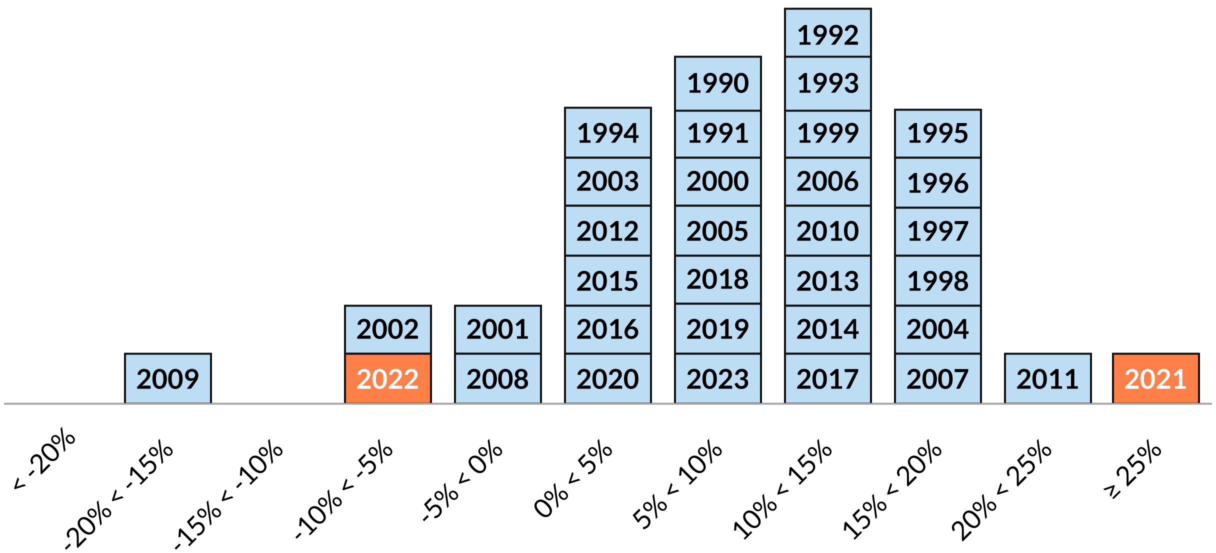
Sources: Annual comprehensive financial reports, 2022; state treasury reports; quarterly investment reports

Overall, pension funds are more likely to invest larger shares of their assets in private equity or real estate than in other alternatives, such as hedge funds. As of 2022, among individual funds, the share of total assets allocated to alternative investments ranged from zero to a substantial 64.4% of total assets. Specifically, 43 pension plans allocated more than 10% of assets to private equity, 32 plans invested more than 10% in real estate, and only nine plans allocated more than 10% to hedge funds.

Figure 6

After Historic Gains in 2021, Pension Investment Performance Declined Drastically in 2022

Median annual returns, fiscal years 1990-2023



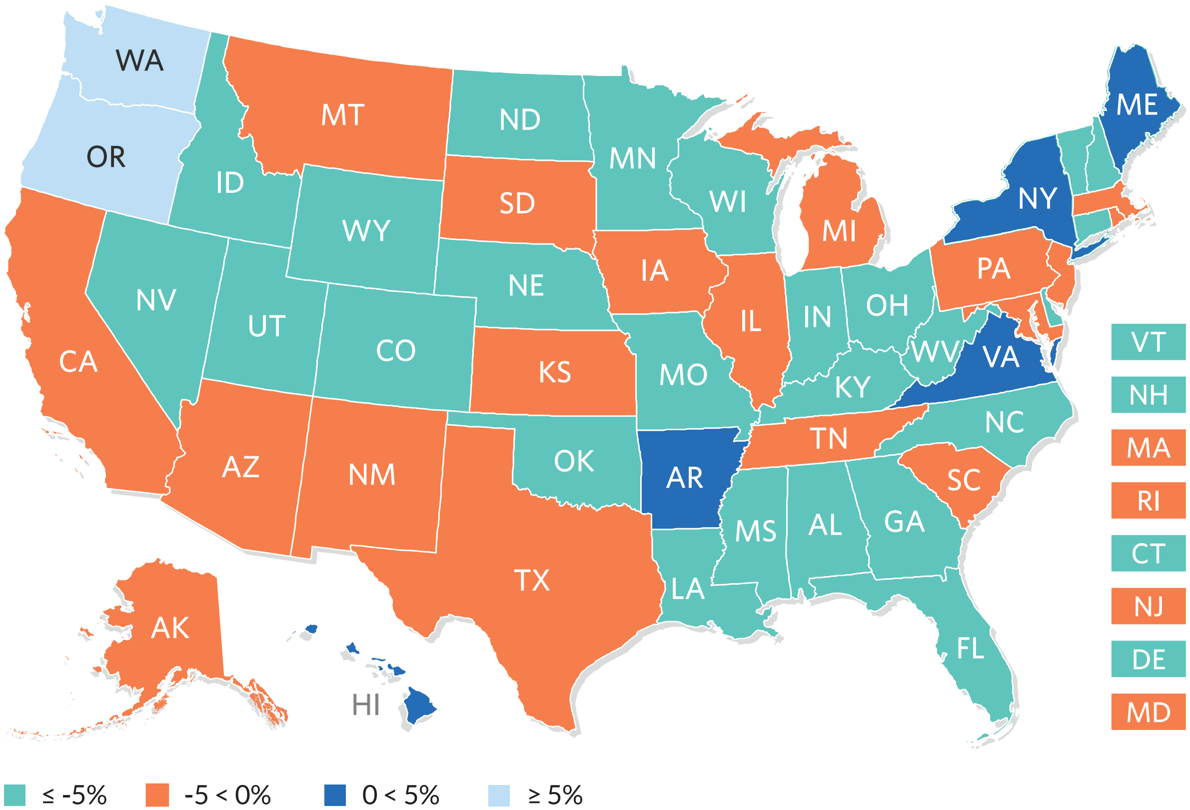
Source: Pew analysis of data from Wilshire Trust Universe Comparison Service (TUCS)

Historically, public pension plans' median annual investment returns have clustered between 10% and 15%. Against this backdrop, 2021 stands out, with returns reaching a median of 27%. However, that year's remarkable performance was followed by a drastic decline; returns plummeted to a median of -7.8% in 2022. This sharp contrast highlights the volatility of pension fund investments and the challenges that fund managers face in maintaining consistent returns year over year.

Figure 7

Most States' 2022 Pension Fund Investment Returns Were Below Zero

Retirement system performance by state, 2022



Note: Pension plans across states have varying fiscal year-end dates. For example, some states may report returns through June, while others might use a March cutoff. This variation may influence observed outcomes.

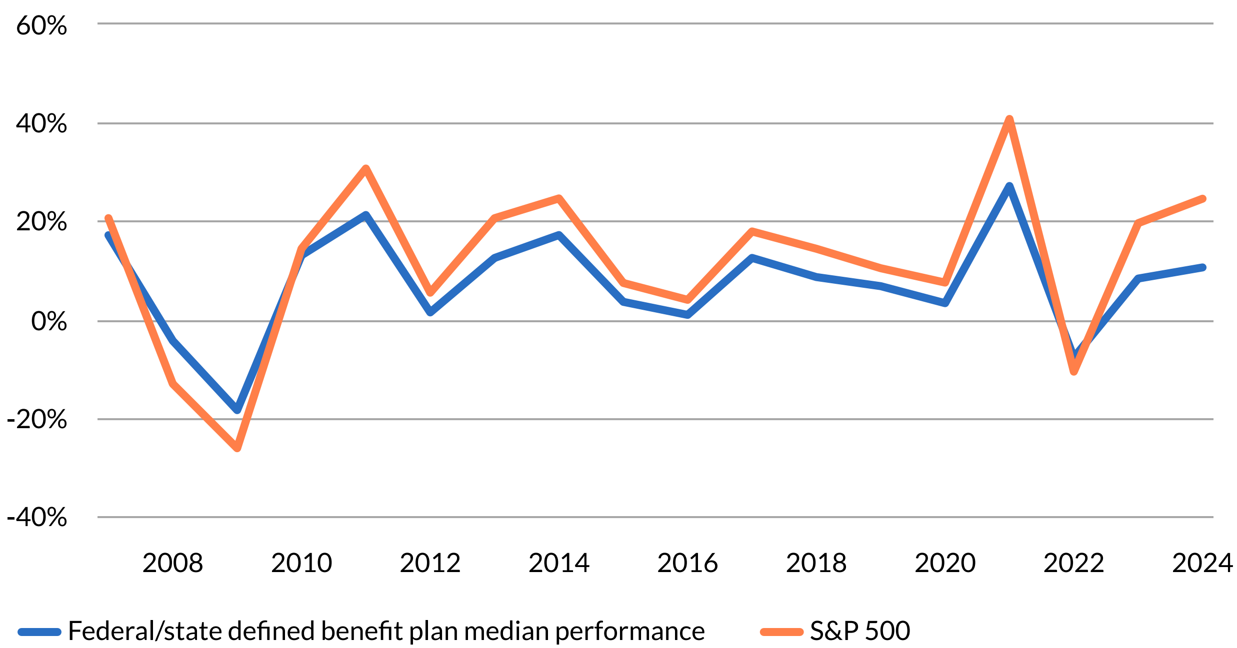
Sources: Annual comprehensive financial reports, 2022; state treasury reports; quarterly investment reports; and plan responses to data inquiries

Although most plans recorded negative returns averaging -4.8% in 2022, state-level performance varied in part because of the diverse strategies and asset allocations that states employ. Despite the overall negative trend, some states navigated the turbulent market conditions more effectively than others did. For example, Oklahoma had a difficult year, with returns of about -12%, while Oregon achieved returns of 6.3%.

Figure 8

Equity Investments and Public Pension Fund Yields Are Strongly Correlated, Highly Volatile

Average annual stock market and retirement system returns, 2007-24



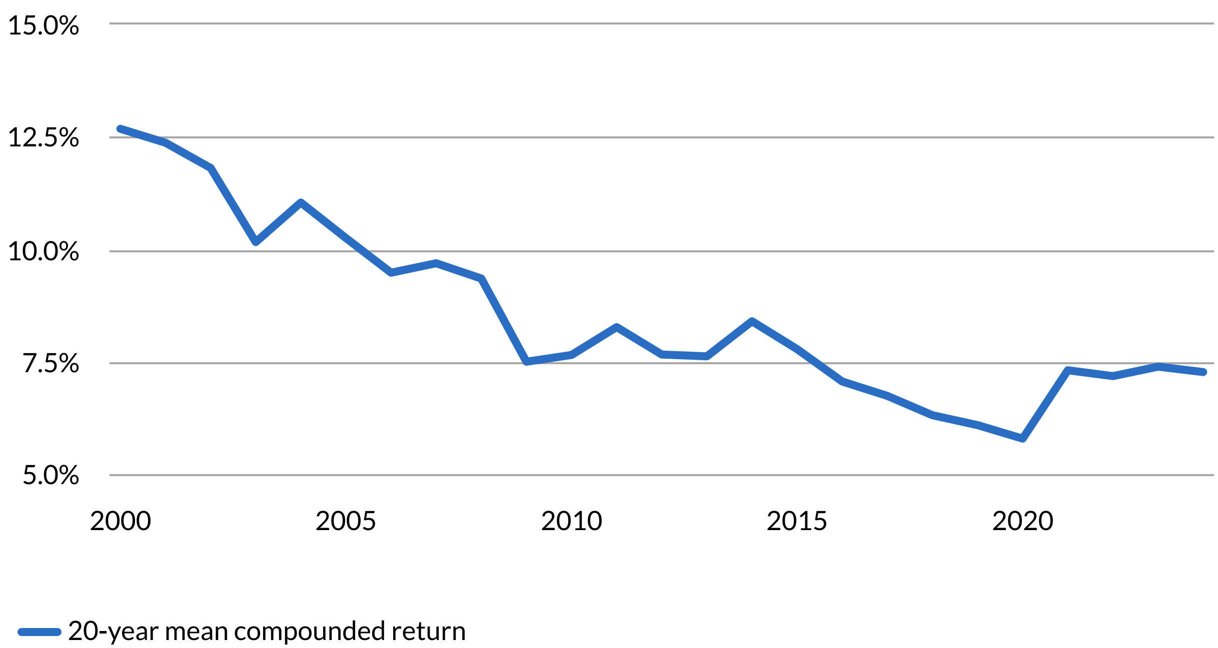
Source: Pew analysis of data from Wilshire Trust Universe Comparison Service (TUCS)

Public pension plan performance closely follows broader market conditions and, despite increasingly diverse portfolios, remains highly susceptible to market volatility. Although plans often turn to alternative assets because they do not move in tandem with traditional equities and bonds, these investments are not immune to broader economic conditions and market volatility. Even with diversification strategies in place, pension fund performance fluctuates significantly with market events, such as the financial crisis of 2008, the COVID-19 pandemic, and the market dip in 2022.

Figure 9

Public Pension Investment Returns Have Been Trending Downward in the 21st Century

Median returns, 2000-24



Source: Pew analysis of data from Wilshire Trust Universe Comparison Service (TUCS)

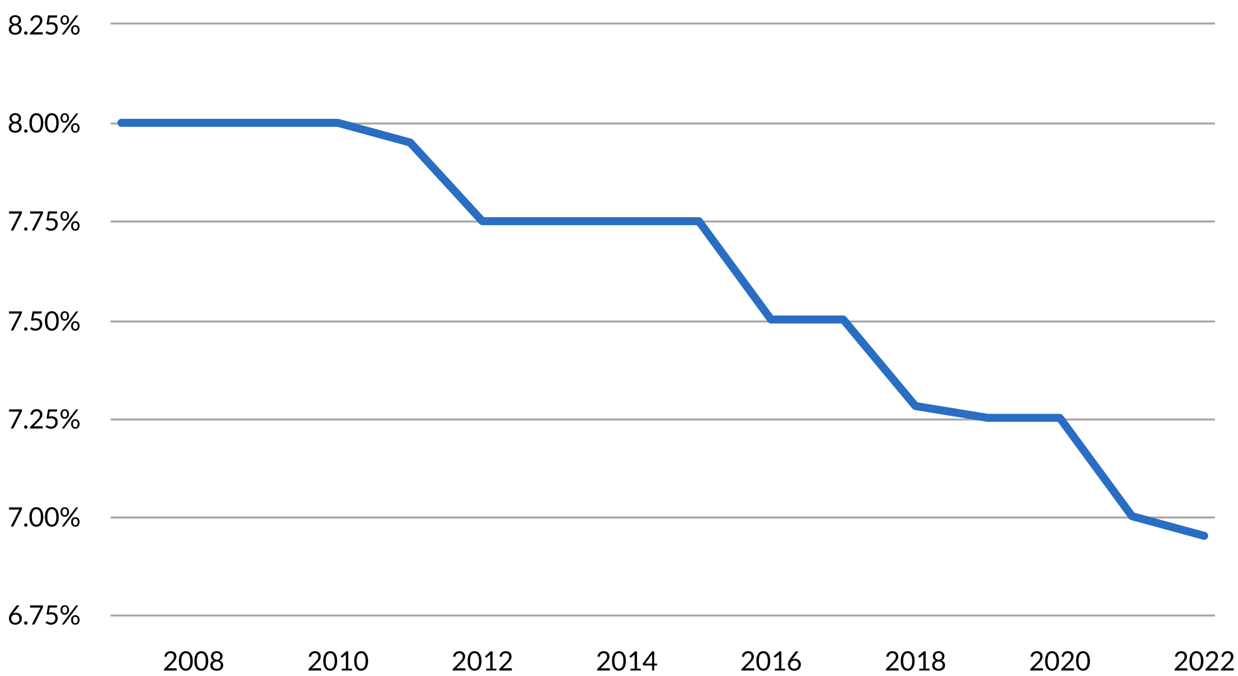
The 20-year mean compounded return fell steadily from a little over 12% to 7.3% from 2000 to 2024. Several factors have contributed to this long-term decline, particularly the prolonged low-interest-rate environment. Central banks have kept rates historically low to stimulate economic growth, leading to lower yields on fixed-income investments, a significant part of many pension portfolios. Market volatility also has influenced the decline. Events such as the global financial crisis, trade wars, and the COVID-19 pandemic have resulted in drastic periodic drops in returns.

However, this long-term trend has been slowing. The market's resilience, particularly the swift recovery from the pandemic downturn, has contributed to an apparent stabilizing of returns around the 7% mark since 2021.

Figure 10

Pension Plans Have Been Cutting Their Return Projections for at Least 15 Years

Median fund assumed rate of return, 2007-22



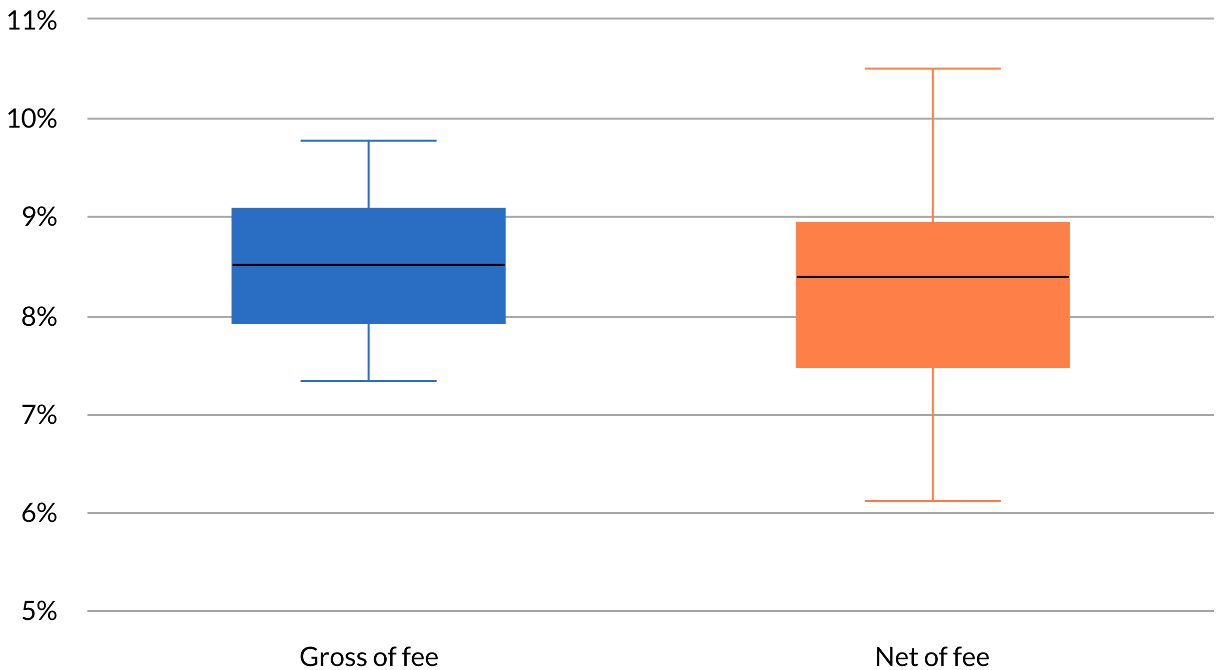
Sources: Annual comprehensive financial reports; news articles; and plan responses to data inquiries

The combined effects of decreasing historical performance and broader market conditions, including inflation and interest rates, have led pension funds to adopt increasingly conservative return expectations.[3] Specifically, pension plans reduced their assumed rates of return by a percentage point over 15 years from about 8% in 2007 to just below 7% in 2022.

Figure 11

Pension Plans Show Widely Varied Returns Despite Similar Investment Strategies

Retirement funds' 10-year performance distribution as of 2022



Note: "Net-of-fee" reporters subtract all fees paid to external managers before reporting returns; "gross-of-fee" reporters do not deduct those fees. As a result, performance numbers for the two groups are not comparable.

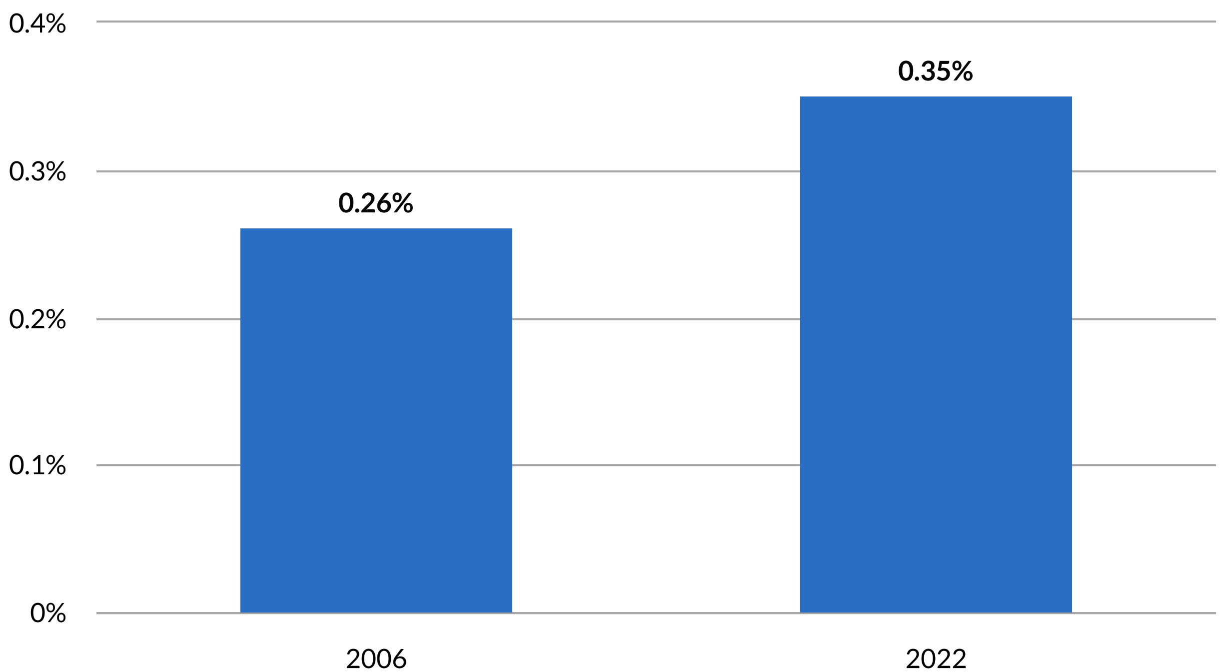
Sources: Annual comprehensive financial reports; quarterly investment reports; and plan responses to data inquiries

From 2002 to 2022, state pension plans' returns averaged about 8.3%. Beyond the average, however, the data reveals significant performance gaps between high-performing and low-performing plans. Among plans that report their returns gross of fees—that is, without accounting for fees charged for management and performance of investments—those in the bottom quarter performed at an average of 7.9%, compared with 9.1% for those in the top quarter. Even greater variability was found among the funds that use net-of-fee reporting, which includes all fees charged. The top quarter of these funds reported returns of 8.9%, while the bottom quarter's returns were 7.5%.

Figure 12

Management Fees Increased by 35% Over 16 Years

Reported external fees as a percentage of assets, 2006-22



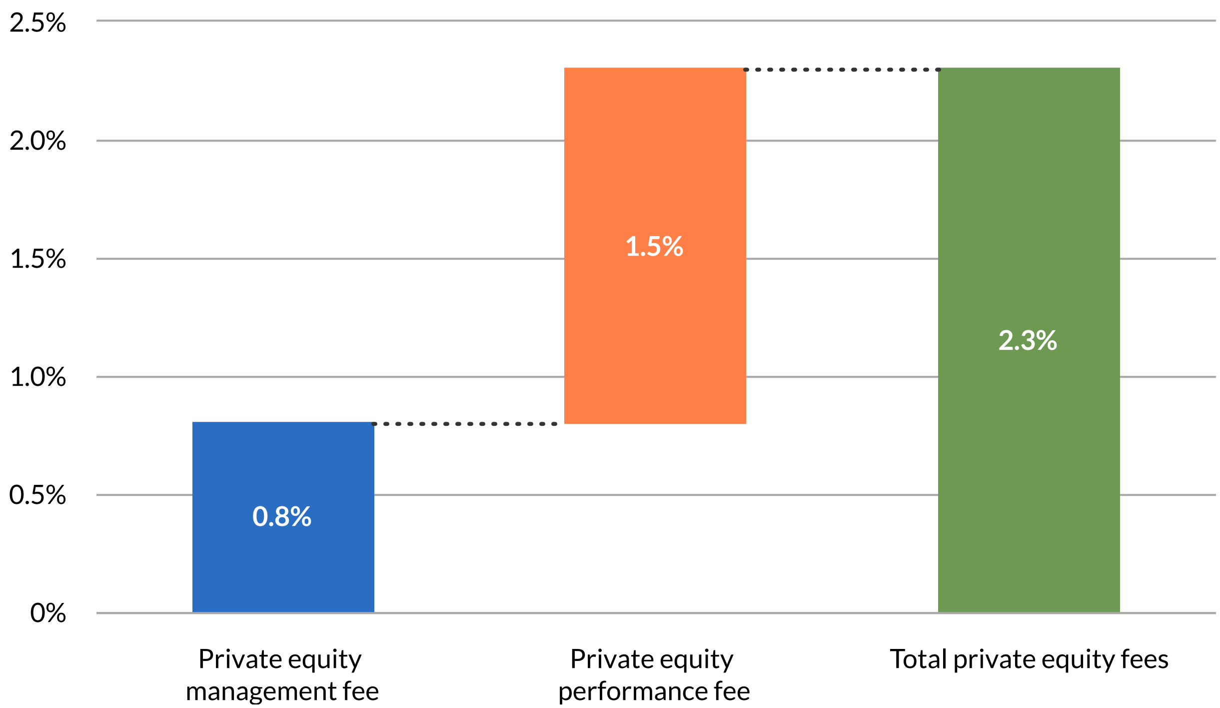
Sources: Annual comprehensive financial reports; quarterly investment reports; and plan responses to data inquiries

In 2022, public pension plans collectively reported more than $16.5 billion in fees and investment expenses, a 50-state average of 0.35% of investments. This represents a 35% increase in costs since 2006, reflecting, in part, the increasing allocations to expensive alternative investments over this period.

Figure 13

Private Equity Fees Significantly Affect Total Costs

Average fees by type as a share of private equity investments among 5 states, 2022



Sources: Annual comprehensive financial reports, 2022; quarterly investment reports; and plan responses to data inquiries for the California Public Employees' Retirement System (CalPERS), New York State and Local Retirement System (NY SLRS), North Carolina Retirement System (NCRS), Ohio Public Employees' Retirement System (OH PERS), and South Carolina Retirement System (SCRS)

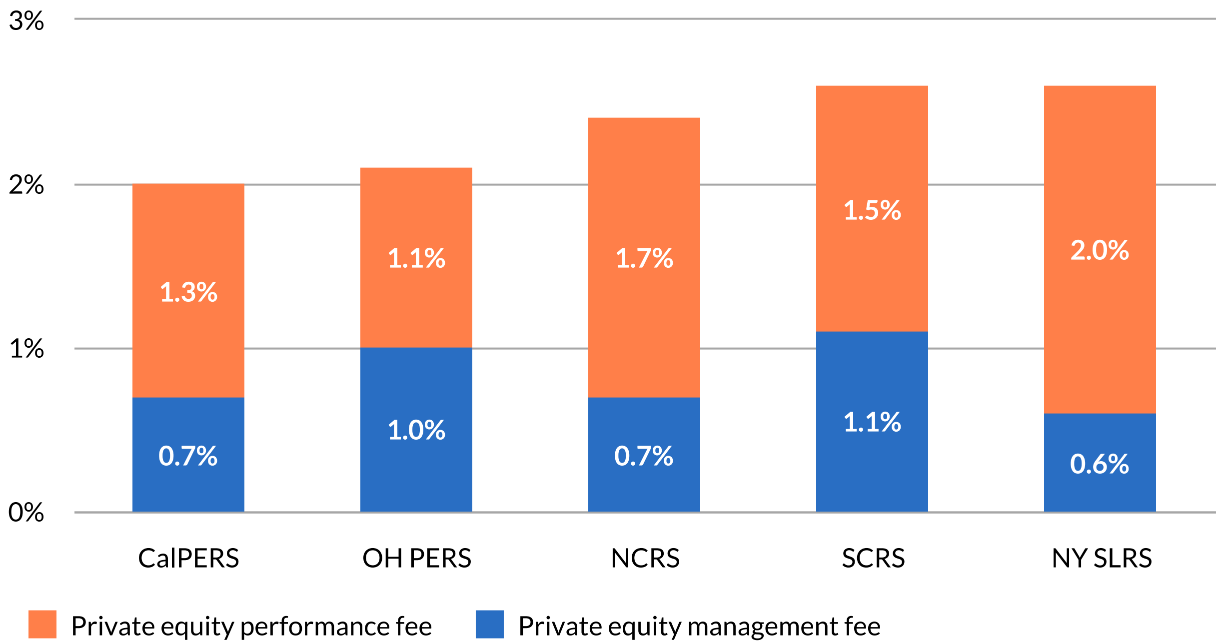
Public pension plans almost always disclose external management fees, but those disclosures often exclude certain costs, particularly "carried interest"—performance-based private equity fees, earned when those investments meet or exceed certain benchmarks. And among plans that do disclose these fees, the level of detail varies widely. Nevertheless, these fees are often substantial and can significantly increase the total cost of managing private equity investments.

The combined private equity fees for five major pension plans that disclose them exceeded 2.3% of those plans' total private equity investments, or more than $2.7 billion in 2022. Of that total, performance fees alone amounted to $1.7 billion, or 1.5% of the total investments, a far greater share than the mere 0.35% in total fund management fees that plans reported for that same year.

Figure 14

Performance Fees Drive Up Costs for Pension Plans

Average private equity fees by type among 5 states reporting comprehensive fees, 2022



Sources: Annual comprehensive financial reports, 2022; quarterly investment reports; and plan responses to data inquiries

Performance fees consistently and substantially exceed external management fees as a share of private equity fees for all five pension plans examined. For example, the New York State and Local Retirement System (NY SLRS) reported that performance fees were more than three times the management fees.

Accurate reporting of performance as well as management fees is critical for assessing the true cost of managing public pension plan investments, especially as many funds increasingly turn to alternative assets, such as private equity and real estate.

Endnotes

1 Traditional investments are more accessible and liquid than alternative assets and are traded in public markets. In contrast, alternative investments, which encompass a range of assets, including private equity, real estate, hedge funds, infrastructure, and commodities, may not be commonly understood or accessible to most individual investors.

2 Shruti Singh, "Private Credit Attracts Billions From U.S. Pension Plans," *Bloomberg News,* 2023, https://www.bloomberg.com/news/articles/2023-12-18/calpers-other-us-public-pensions-pump-billions-into-private-credit.

3 Actuarial Standard of Practice (ASOP) 27 provides guidance on selecting economic assumptions for use in measuring pension obligations and emphasizes that actuarial assumptions should be reasonable, as outlined in subsection 3.6, and should follow specific criteria, including: current and projected interest rates, current and expected inflation rates, historical and forecasted returns for various asset classes, and a fund's historical performance. See Selection of Economic Assumptions for Measuring Pension Obligations, ASOP No. 27, Actuarial Standards Board, 2011, https://www.actuarialstandardsboard.org/asops/selection-economic-assumptions-measuring-pension-obligations-2/.

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