

NCPERS Message

New NCPERS Research Available — And Your Input is Needed

By: [Matt Eckel](#), Director of Research, NCPERS

Two important pieces of NCPERS research are in the spotlight this spring: the [2026 Public Retirement Systems Study](#) is now available, and the [2026 Public Pension Compensation Survey](#), produced in partnership with CBIZ, has just gone into the field. Read on for highlights from the former, and a strong case for why your system should participate in the latter.

2026 Public Retirement Systems Study: Now Available

The [2026 study](#) reflects data from 149 public pension systems serving approximately 18.1 million members.

Among the headline findings:

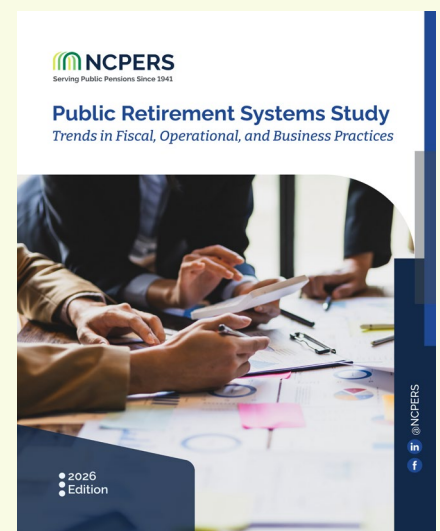
- **Funding discipline continues to drive outcomes.** Systems that received their full actuarially determined contribution reported funded ratios that were a median 13.2 percentage points higher than those that did not, a consistent and consequential finding for plan sponsors and policymakers.
- **Long-term investment performance remains strong.** Systems with fiscal year-end dates in the first half of 2025 reported average one-year net returns of 10.2% and ten-year returns of 7.5%.
- **AI adoption is picking up.** Just over 35% of respondents now report using artificial intelligence for at least one purpose, from fraud detection to participant communications, up significantly from prior years.

NCPERS members can [access the full report](#) and an [interactive dashboard](#) enabling peer benchmarking by plan size, employee type, geographic region, and more.

2026 Public Pension Compensation Survey: Participate Now

Public pension systems operate in a competitive and often challenging talent environment. Attracting and retaining skilled staff, from investment professionals to IT specialists to front-line benefits administrators, requires compensation strategies grounded in real data. That's precisely what the Public Pension Compensation Survey is designed to provide.

Recognizing the unique challenges that pension funds face with recruitment and retention, NCPERS developed the annual [Public Pension Compensation Survey](#) to help pension funds benchmark compensation and benefits packages against their peers and ensure key positions are filled with skilled and qualified staff.



Conducted annually by NCPERS and CBIZ, the survey captures compensation data on 99 positions commonly found at public pension funds, as well as details on benefits, fund oversight, salary increase planning, and bonuses.

The 2025 edition drew nearly 170 public pension funds that collectively manage \$6 trillion in assets on behalf of more than 25 million active and retired members. The 2026 survey, now in the field, aims to build on that participation, and the value of the data grows with every system that contributes.

Participation is Free, and It Pays Off Directly

Systems that complete the survey receive complimentary access to the full report upon its release. Participating NCPERS members also receive access to an interactive dashboard that lets you filter the data by region, number of fund staff, or assets under management to help optimize the mix of funds against which you'd like to benchmark your organization. For HR leaders, executive directors, and board members navigating compensation decisions, that kind of tailored benchmarking intelligence is hard to come by elsewhere.

The survey data collection opened April 7, when the CBIZ team joined us for a webinar to walk through how to participate (if you missed it, [view the recording here](#)). If your system has not yet received a participation invitation or has questions about the process, please reach out to [NCPERS Director of Research Matt Eckel](#) at research@ncpers.org.



2026 Public Pension Compensation Survey

Now Accepting Submissions

Deadline: Tuesday May 12, 2026

In This Issue

- Page 6** **Closing Loopholes in Investment Policy Statements** (Aon)
The article examines how multi-layer asset allocation ranges can help institutional investors close unintended risk gaps in their investment policy statements. Aon's review of public pension investment policy statements found an even split between single-layer and multi-layer asset allocation ranges, despite the fact that single-layer approaches can allow significant risk drift without violating policy.
- Page 8** **Board Governance and System Modernization: A Shared Oversight Framework for Public Pension Leadership** (Linea Solutions)
Public pension systems face growing operational, cybersecurity, and reputational risks as legacy platforms lag behind rising member expectations, regulatory scrutiny, and workforce constraints, making modernization unavoidable. When boards and executives stay aligned through consistent oversight questions and transparent governance, modernization efforts are better positioned to manage risk, sustain momentum, and strengthen public trust.
- Page 10** **Modernizing Retirement and Pension Administration: From Complexity to Agility** (Majesco)
Modern retirement and pension administration is under pressure from changing demographics, regulation, cybersecurity, and digital expectations, exposing the limits of legacy systems and business processes. Pension systems can elevate their operations by shifting to a modern, cloud-native, AI-enabled platform that unifies data, automates high-volume workflows, enhances member experiences, strengthens compliance, and provides agility to meet continuous change.
- Page 12** **Cost Efficiency and Investment Governance for Public Pension Plans** (Wilshire)
Public pension plans can improve net returns and fiduciary outcomes by adopting a rigorous Total Cost of Ownership (TCO) framework that uncovers hidden fees, optimizes costs across the full investment value chain, and strengthens governance through data-driven oversight and ongoing compliance.
- Page 14** **Safeguarding Pension Assets in Turbulent Markets Through Affordable Housing** (American South Capital Partners)
The article argues that investing in affordable housing can generate market rate returns, especially as downside protection in a turbulent market. Affordable housing is emerging as a resilient, alpha-generating real estate strategy due to powerful economic and demographic trends. A severe structural shortage of affordable units creates steady demand, reliable occupancy, and defensive income streams, making it especially attractive for pension funds seeking stability and diversification.
- Page 16** **Why Real-Time Mortality Is Essential** (Abacus Intel)
Real-time mortality verification helps financial institutions avoid costly errors by ensuring they stop payments promptly when individuals pass away, reducing fraud, compliance risks, and administrative burden. It shifts organizations from outdated, reactive data processes to proactive, continuous monitoring, improving accuracy, efficiency, and outcomes for both businesses and beneficiaries.
- Page 18** **Discount to Fair Value: How to Strengthen Pension Portfolio Resilience through Small-Ticket, Late-Stage Tech Secondaries** (Artea Global)
This article explains how pension funds can access best-in-class, high-growth, late-stage private technology companies at significant discounts to public market valuations through a small-ticket secondaries manager — and why a disciplined underwriting framework makes this strategy particularly well-suited to pension funds' long-term, capital-preservation mandates.

In This Issue

- Page 21** **[From Volatility to Stability: A Macro Hedging Approach for U.S. Pension Systems](#)** (Ortec Finance)
This report from Ortec Finance examines how macroeconomic developments, particularly declining interest rates, can translate into balance-sheet risks for U.S. pension funds. Using a stylized case study, they show that incorporating strategies like interest rate hedging can meaningfully reduce downside risk and enhance funding stability in an uncertain macroeconomic environment.
- Page 23** **[The Hidden Risk in Portfolios: Why Today's Market Concentration Deserves a Closer Look](#)** (Star Mountain Capital)
Exposure to software and large-cap technology across both public and private markets is creating outsized portfolio risk, and the lower middle-market may offer a compelling solution through greater diversification and enhanced return potential.
- Page 28** **[The Overlap Between Missing Participants and Unidentified Deaths](#)** (The Berwyn Group)
Fund members will gain insight into how accurate, continuously validated participant data is foundational to good plan governance. The article highlights how integrating death identification and participant location efforts strengthens oversight, reduces risk, and supports more defensible fiduciary decision-making.
- Page 30** **[How Your Public DB Plan Compares at Year-End 2025](#)** (Callan)
This article provides public Defined Benefit (DB) plan fiduciaries with the data to benchmark their plans compared to peer plans, over time and by size.
- Page 33** **[The White House Executive Order on Proxy Advisors](#)** (Segal Marco Advisors)
The recent Executive Order on proxy advisors does not change the rules today, although it clearly signals pressure on the proxy advisory ecosystem and on shareholder rights more broadly. The long term implications will depend on regulatory follow through, judicial outcomes, and how investors and companies adapt their engagement practices in response.
- Page 35** **[A Governance Imperative: Why Pension Funds Need a Dynamic AI Policy](#)** (Cohen Milstein)
The rapid advancement of AI creates new fiduciary, operational, and governance risks for pension systems. Outright bans are not realistic. Developing a dynamic, principle-based AI governance is essential to protecting beneficiaries' data, while safely streamlining efficiencies and enhancing returns.
- Page 37** **[The AI Inflection: Investing Beyond Sectors in a Thematic World](#)** (Calamos Investments)
Artificial intelligence is a structural force reshaping capital flows, business models and the framework investors use to understand opportunities. Traditional investment approaches, defined by sector classifications and static factor tilts, are increasingly inadequate, as thematic, actively managed strategies are better suited to not only capture the AI-driven opportunity set, but also essential to managing risks accompanying this transformation.
- Page 39** **[How Could AI Help Public DC Plans?](#)** (GuidedChoice)
When people hear "AI," they often think of large language models and virtual assistants. But for public Defined Contribution (DC) plans, AI may prove just as valuable in areas like prediction, pattern recognition, workflow automation, and decision support.

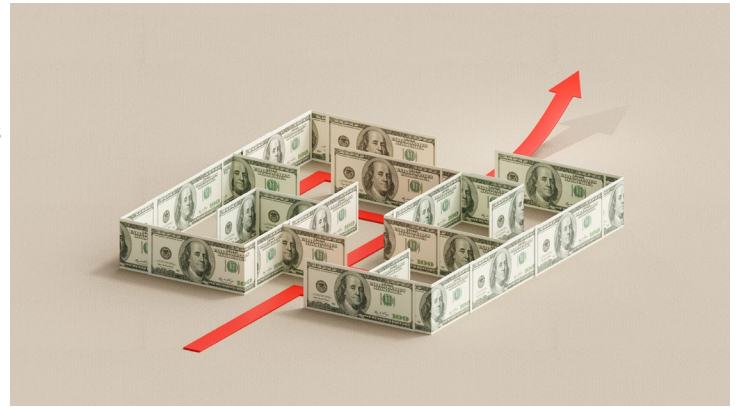
In This Issue

- Page 42** **[A Structured Approach to AI Implementation Ensures Success](#)** (Segal)
Public retirement systems are moving AI from experimentation to execution. This article highlights how thoughtful planning, training, and project discipline can develop an AI strategy that helps to produce real results without relying on a single tool or vendor.
- Page 44** **[Strategies for Retaining Late-Career Employees](#)** (CavMac)
Due to the current labor market, many government employers are looking to provide older employees with incentives to work longer rather than retire. This article outlines several possible strategies to achieve this goal.
- Page 46** **[Building Conviction in a World of Shifting Narratives](#)** (William Blair Investment Management)
Portfolio Manager Chandan Khanna explains why William Blair believes global markets present a landscape of opportunity for equity investors despite macroeconomic headwinds.
- Page 48** **[Beyond U.S. Exceptionalism](#)** (Nuveen)
In today's volatile markets, pension funds can strengthen portfolio resilience by diversifying alternative credit allocations across geographies and asset classes, reducing overreliance on any single market. Nuveen's research highlights how energy infrastructure credit — supported by powerful structural tailwinds including AI-driven power demand, domestic manufacturing and electrification — can offer pension investors stable, risk-adjusted income even in uncertain times.
- Page 50** **[Why Japan's Structural Story Has Years to Run](#)** (Columbia Threadneedle Investments)
Learn about Japan's structural transformation and explore thematic opportunities for investors. The article also highlights the potential of active management in a market riddled with inefficiencies.
- Page 53** **[The Strategic Case for Lower Middle Market Asset-Backed Finance](#)** (Mesirow)
Learn why lower middle market asset backed finance may be a compelling addition to pension fund portfolios, offering attractive yields, granular collateral, and embedded downside protection. Jay Braden of Mesirow Alternative Credit shows how this under-served niche can complement sponsor backed direct lending and strengthen long-term risk-return profiles.
- Page 55** **[Reframing Infrastructure Investing: A Fixed-Income-Like Approach for Public Pensions](#)** (Sustainability Partners)
Public pension funds face a persistent challenge: generating stable, long-duration returns while protecting portfolios from inflation and downside risk. As traditional fixed income struggles to meet these objectives in a volatile rate environment, many institutions are expanding allocations to Real Assets and Inflation Protection strategies. Usage-based essential infrastructure offers a compelling bridge between fixed income and real assets. Its combination of essential service demand and inflation-linked cash flows makes it uniquely suited to long-term liability matching.

Closing Loopholes in Investment Policy Statements

By: Eric Friedman and Katie Comstock, Aon

A on recently completed a study of the investment policy statements of the 50 largest public pension funds in the U.S., reviewing those that are publicly available to assess the prevalence of various characteristics.¹ One of the most interesting findings is that these plans are roughly evenly split between those that use single-layer asset allocation ranges and those that use multi-layer ranges — despite the fact that these two approaches can lead to meaningfully different risk outcomes. In practice, multi-layer ranges often provide stronger risk control and clearer governance, whereas single-layer ranges can allow total equity or total illiquid exposure to drift far from policy intent without technically violating policy. We have also found that many investment professionals have not considered the difference between single- and multi-layer asset allocation ranges, leading us to wonder how intentionally plans choose between single or multi-layer ranges.



Defining Single- and Multi-Layer Asset Allocation Ranges

The distinction is best illustrated through a simple example. The following exhibit shows two versions of the same target allocation: one with single-layer ranges around the target allocation (on the left) and the other with multi-layer ranges:

Figure 1: Single and Multi-Layer Asset Allocation Ranges

Asset Class	Target	Single-Layer Ranges	Multi-Layer Ranges
Total Equity			+/- 5%
Public Equity	40%	+/- 5%	+/- 5%
Private Equity	10%	+/- 5%	+/- 5%
Real Assets	10%	+/- 5%	+/- 5%
Hedge Funds	10%	+/- 5%	+/- 5%
Total Fixed Income			+/- 5%
Private Fixed Income	10%	+/- 5%	+/- 5%
Public Fixed Income	20%	+/- 5%	+/- 5%
TOTAL	100%		

In the multi-layer example, the inclusion of a separate “Total Equity” range prevents the portfolio from simultaneously reaching the maximum (or minimum) allocation for both public and private equity. This additional constraint helps ensure that total equity exposure remains consistent with policy intent, even as allocations shift within equity sub-segments. The multi-layer asset allocation range has a similar structure for fixed income. For many investors, multi-layer ranges offer better risk control and align the investment policy with how the portfolio is intended to be managed.

When are Multi-Layer Ranges Most Valuable?

Multi-layer ranges are most valuable when investment policies assign separate targets to closely related asset classes — for example, multiple categories of public equity alongside private equity. If each category has its own single-layer range, the portfolio could simultaneously sit at the top (or bottom) of every range, resulting in an overall exposure that differs materially from the intended target.

The following table has an example, showing just the equity asset classes. While this portfolio has a target allocation to all forms of equity totaling 50%, a single-layer range structure could allow equity to drift from as low as 25% to up to 75% without technically violating the policy. Most institutions do intend to provide this much flexibility.

Figure 2: Multi-Layer Ranges By Equity Asset Class

Asset Class (Equity Only)	Target	Range
U.S. Large Cap Equity	20%	+/- 5%
U.S. Small Cap Equity	5%	+/- 5%
Non-U.S. Developed Equity	10%	+/- 5%
Emerging Market Equity	5%	+/- 5%
Private Equity	10%	+/- 5%
TOTAL EQUITY	50%	

A similar issue arises when portfolios include multiple types of alternative investments. In these cases, multi-layer ranges can help manage total portfolio liquidity by preventing all illiquid allocations from simultaneously drifting to the upper end of their individual ranges. In other words, single-layer ranges can allow total equity or illiquid exposure to drift far from policy intent without technically violating policy.

Conclusion

A good investment policy statement should be aligned with how the institution intends to manage the portfolio. Multi-layer asset allocation ranges help align the written investment policy statement with how institutional portfolios are actually managed in practice — providing clearer guardrails around aggregate risk, liquidity, and governance intent — without adding unnecessary complexity. Yet under half of the 50 largest U.S. public pension plans have multi-layer asset allocation, and we believe that many others can consider this as an opportunity to enhance their governance and risk management.

Eric Friedman is a Partner with Aon's Investment Analytics & Strategy Development team in the U.S. In his role as the Head of Thought Leadership, he leads the firm's U.S. efforts in developing intellectual capital to improve its investment advice to institutional investors. Eric holds the designations of Fellow of the Society of Actuaries, Enrolled Actuary, and Chartered Financial Analyst.

Katie Comstock is a Partner and leads public sector solutions at Aon Investments USA. Katie consults to state and local public entities on governance, investment policy, asset-liability analysis, asset allocation, risk budgeting, and portfolio structure, helping public sector organizations achieve their investment objectives.

Disclosures: This article is a general communication being provided for informational purposes only. The opinions expressed represent the current, good-faith views of the author(s) at the time of publication. It is not designed to be investment advice or a recommendation of any specific investment product, strategy, or decision, and is not intended to suggest taking or refraining from any course of action. Any forward-looking statements, estimates, and certain information contained herein, are based upon research and other sources that are subject to change. The information provided relates to Aon Investments USA Inc. ("Aon Investments"). Aon Investments is wholly owned by ACI, an indirect subsidiary of its ultimate parent, Aon plc. Aon plc is a diversified professional services company, and such services are provided through various subsidiaries and/or affiliates. Investment advice and investment consulting services provided by Aon Investments.

Endnotes:

1. Source: Aon study of Investment Policy Statements of the 50 largest U.S. public pension funds. Data is only for public funds with Investment Policy Statements available online or through information requests to the fund. The study only used publicly available data. Data as of 8/2025.

Board Governance and System Modernization: A Shared Oversight Framework for Public Pension Leadership

By: Frank Karpinski, Linea Solutions

Public pension organizations operate in a systems environment that is evolving faster than many of the platforms that support their operations. Legacy systems that once served plans well now present increasing levels of operational, cybersecurity, and reputational risk.

At the same time, member expectations, regulatory scrutiny, and workforce realities continue to shift. As these pressures converge, system modernization is no longer a technology discussion: It has become **a shared governance and leadership issue**, one that benefits from alignment between boards of trustees and executive leadership.



Modernization initiatives affect nearly every part of a pension organization, including:

- Operations
- Data
- Staff capacity
- Communications
- Member services

The role of the **Executive Director** during modernization: leading and executing these efforts.

The role of the **Board** during modernization: provide oversight, set expectations, and understand risk within their fiduciary and statutory roles.

When modernization is framed solely as an IT project, organizations risk misalignment, either through under-engaged boards or leadership teams carrying execution burdens without clear governance guidance.

When it is framed as a **leadership responsibility shared between governance and management**, organizations are better positioned to manage risk and sustain momentum.

One effective way boards and executive directors remain aligned is by grounding discussions in a consistent set of oversight **questions**.

What oversight questions are not intended to do: evaluate performance or second-guess management decisions.

What oversight questions are intended to do: provide a shared governance framework that supports disciplined oversight and confident execution.

Examples include:

- What risks are we managing by modernizing and what risks do we accept by waiting?
- Do we have the information needed for effective oversight and informed execution?
- How will success be measured in terms meaningful to members and stakeholders?
- What reporting structures will allow management to lead confidently while keeping the board appropriately informed?
- How will we communicate transparently if challenges arise?

Used consistently, these questions reduce friction, prevent surprises, and reinforce trust between boards and executive leadership.

Effective modernization governance depends on **role clarity**.

Executive Directors lead vendor management, project execution, and organizational change.

Boards provide oversight of risk and readiness, clarity on priorities, and accountability aligned with fiduciary and statutory responsibilities.

Public pension systems operate in an environment where trust is essential. Modernization efforts may surface legacy data issues or process inefficiencies. Addressed transparently, these realities strengthen credibility with members, auditors, and policymakers.

A third-party advisor can help public pension boards and executive leaders by strengthening governance frameworks, clarifying oversight expectations, and aligning leadership early in modernization efforts. Ensure their approach emphasizes fiduciary clarity, role discipline, and transparent decision-making to help pension organizations manage risk while sustaining momentum and public trust.

Successful modernization is rarely the result of technology alone. It is the product of aligned leadership — where boards and executive directors operate as partners, asking the right oversight questions and maintaining a shared focus on mission and public trust.

Frank J. Karpinski brings over three decades of distinguished experience in retirement system management at the Employees' Retirement System of Rhode Island (ERSRI) to Linea Solutions as a Principal Consultant.

As the Executive Director of (ERSRI), Frank led the modernization of two core line of business and financial systems and guided the organization through a constantly evolving landscape, including multiple pension reform changes.

Frank is a recognized leader in the National Association of State Retirement Administrators (NASRA), where he was President in 2023. He also served on various committees of the National Council on Teacher Retirement (NCTR), advising on policy, governance, and legislative matters.

In 2021, Frank was honored with the Gary S. Sasse Distinguished Public Service Award by the Rhode Island Public Expenditure Council.

Modernizing Retirement and Pension Administration: From Complexity to Agility

By: Jessica Hurley, Majesco

Retirement and pension administration is at a tipping point. Demographic pressure, rising regulatory demands, escalating cybersecurity risk, staff retirements, and growing expectations for digital-first experiences are exposing the limits of legacy operating models and technology. The question is no longer *if* modernization is needed — but how fast organizations can execute.

A recent integrated research initiative — combining a survey of public-sector retirement organizations, an executive panel, and a real-world case study — reveals a clear mandate for change.

Organizations are increasingly aligned on key priorities: adopt advanced technologies, including AI; reduce operational cost and complexity; elevate member and staff experiences; maintain rigorous compliance, and adapt quickly as change continues. Yet execution remains constrained. Fragmented legacy systems, manual processes, and limited real-time visibility continue to slow progress. Many organizations are still navigating disconnected data environments, high-effort and high-cost enhancements, and operational models that struggle to scale with evolving plan complexity.

What leaders want is equally clear: modern, intuitive platforms that automate workflows, deliver seamless digital self-service, create operational efficiencies and effectiveness, and embed compliance directly into operations. Just as critical is a shift away from heavily customized legacy systems toward cloud-native, configurable architectures that provide more out-of-the-box capabilities to enable agility without disruption.

The message from industry leaders is consistent: modernization is not a one-time initiative. It is a strategic, ongoing transformation that provides a foundation to strengthen operational resilience, improve governance transparency, enable easy upgrades to take new innovations, and build long-term trust. It also establishes the foundation for the next wave of innovation, including AI-driven capabilities such as intelligent document processing, personalized member engagement, and orchestrated, human-guided automation.

A leading multiemployer benefit fund demonstrates what's possible when this transformation is executed with discipline. By moving to a modern, cloud-based platform, the organization unified fragmented data, introduced end-to-end digital self-service, and redefined and automated high-volume processes. The impact was immediate and measurable: auto-adjudication rates increased from near zero to more than 80%, processing times dropped from weeks to days, and operational accuracy improved significantly. Real-time visibility into workflows enabled better resource allocation, while embedded audit trails strengthened compliance and oversight. Security was built in from the start, with multifactor authentication, encryption, and continuous monitoring forming the foundation of the platform.



For NCPERS members, the path forward is clear. Start with your operating model and its highest-friction processes — eligibility, claims, and core member interactions. Replace fragmented legacy systems with unified, cloud-native platforms that centralize data and operational control. Prioritize digital experiences that meet rising expectations while reinforcing transparency and trust. And build with security and governance embedded from day one.

Modernization is no longer a technology initiative — it is a strategic and fiduciary imperative. Organizations that act now will not only improve operational efficiency, business outcomes, and reduce risk, they will also position themselves to deliver secure, responsive, and sustainable retirement and pension benefits in a rapidly evolving landscape.

To dive into this crucial strategic and operational topic, Majesco will be launching new research for the retirement and pension market focused on key strategic priorities for the business and technology foundation.

Jessica Hurley works in Strategic Marketing at Majesco with over 15 years of experience in marketing and communications within the insurance industry, bringing forward-thinking thought leadership to the retirement and pension market.

NCPERS Annual Conference & Exhibition

Your Premier Source for Public Pension Education

- ✓ 800+ Pension Professionals
- ✓ 40+ Expert-led Sessions
- ✓ 7+ Hours of Networking
- ✓ 14+ Hours of Continuing Education (CE)

Join Us At
**Caesars
Palace** | MAY
17–20
Las Vegas, NV



Cost Efficiency and Investment Governance for Public Pension Plans

By: Christopher Tessman and Ian Leverich, Wilshire

Public pension funds face increasing pressure to reduce costs and improve returns. A disciplined approach to uncovering hidden costs in portfolios can be critical to understanding the Total Cost of Ownership (TCO), improving governance, and fulfilling fiduciary responsibilities.

A comprehensive TCO framework goes beyond headline management fee analysis. TCO addresses cost drivers across the investment value chain, from management fees to trade execution, settlement, and custody costs. Plan sponsors can achieve this with a bottom-up analysis of all cost elements and operational processes that prioritize risk management, transparency, and contract compliance.



[Please click here to read the full paper on the Wilshire website.](#)

A robust governance model should cover the full spectrum of asset classes and investments, including public markets, private markets, foreign exchange, and services providers. Optimizing costs and efficiencies is not a simple task for any investment staff or traditional consultant. It involves:

1. Gathering data on all cost components and benchmarking
2. Forensic analysis of hidden fees and transaction costs
3. Renegotiating non-competitive terms and eliminating discrepancies
4. Implementing ongoing monitoring to ensure sustained compliance and continuous improvement

Traditional management fee metrics often overlook significant hidden costs. A TCO approach includes a thorough review of all direct and indirect cost elements, such as:

- All manager-related fee elements, including verification of performance fees and carried interest
- Explicit and implicit transaction and trading costs
- Foreign exchange and hedging costs
- Administrative and custody fees in segregated accounts and pooled vehicles
- Reporting costs and capabilities
- Clearing, collateral, and operational expenses including foreign tax reclamation
- Cash management and sweep fees

Compliance with fund legal documents (e.g., LPA, PPM) and bottom-up recalculation of fee structures is important to avoid overcharges. Common findings in optimization projects include non-market-compliant costs and processes, fee calculation discrepancies, inadequate cost allocations, and unfavorable contract terms. Examples that we have found include excessive transaction costs, uncompetitive management fees, omitted fee offsets, MFN clause violations, double-charging, and tax leakage due to inefficient structures.

Ultimately, adopting a rigorous TCO framework empowers public pension funds to uncover hidden inefficiencies, enhance governance, and drive meaningful, sustained improvements in net returns for beneficiaries.

Christopher Tessman is a Senior Vice President at Wilshire, specializing in client service for public pension plans and overseeing Wilshire Compass. Since joining Wilshire in 2000, Mr. Tessman has played a key role in advising a diverse array of asset owners, including public and corporate pension plans, foundations, endowments, insurance companies, family offices, and other wealth managers.

Ian Leverich, Managing Director, is responsible for XTP's business development and client service in North America, assisting allocators with oversight of the costs and fees incurred on their funds' behalf. He has worked with many of the largest public funds, corporate pensions, foundations, and endowments in the world – developing strategies to mitigate risk and lower investment implementation costs.

Disclosures: Wilshire Advisors LLC ("Wilshire") is an SEC-registered investment adviser serving diverse institutional and intermediary clients. Wilshire's products, services, and advice may differ among clients and may not be available to all investors. Information presented is for informational purposes only, does not constitute legal, tax, accounting, or investment advice, and is subject to change. Certain data has been obtained from third-party sources believed reliable, but accuracy is not guaranteed. Charts, forecasts, and projections are for illustrative purposes only and do not reflect actual or expected performance. Past performance is not indicative of future results. This material may include forward-looking statements which reflect Wilshire's current views, involve risks and uncertainties, and may change without notice. Reliance on such statements should be limited. For additional information, please review Wilshire's ADV Part 2 at www.wilshire.com/ADV.

Wilshire® is a registered service mark.

Copyright © 2026 Wilshire. All rights reserved.

NCPERS UNIVERSITY

Advanced Fiduciary Institute

Through real-world case studies and tailored insights in a small classroom setting, **pension professionals and experienced trustees** will learn advanced strategies to enhance board performance, ensure compliance, manage risk, and address workforce challenges.

[Register Now](#)

May 16-17, 2026 — Las Vegas, NV

Safeguarding Pension Assets in Turbulent Markets Through Affordable Housing

By: Deborah LaFranchi, American South Capital Partners

For decades, institutional investors assumed that affordable housing could not generate alpha. That perception is now being overturned as economic and demographic forces reveal affordable housing to be one of the most resilient real estate strategies available — particularly valuable for pension funds seeking stability in volatile markets. These forces are “turning a social challenge into a compelling financial opportunity.”



The foundation of this resilience lies in a structural shortage of affordable units. The United States faces an estimated deficit of seven million affordable homes, a gap that continues to widen. This shortage has pushed more than half of all renter households into being cost-burdened, spending over 30% of their income on housing. With so few alternatives and limited new construction, demand for affordable units remains exceptionally steady even when the broader economy contracts. Research shows that newly constructed units lease up rapidly, often with waitlists forming before construction is complete, a dynamic that provides unusually reliable occupancy and income streams.

	Most Affordable	Mid-Market	Least Affordable
Average Return/Quarter	1.64%	1.42%	1.06%
Volatility of Quarterly Returns	2.78%	2.87%	2.89%
Compound Average Annual Return, 1Q2008 to 1Q2024	6.54%	5.62%	4.15%

Source: PREA Research based on NCREIF data

This stability is especially important for pension funds, which must match long-term liabilities with dependable cash flows. Affordable housing's performance is further strengthened by its low correlation to macroeconomic cycles. Studies from NBER, Nuveen, NCREIF, and others show that affordable housing consistently exhibits lower vacancy rates and less sensitivity to economic downturns than market-rate multifamily housing. A 2024 PREA study found that over a 16-year period, the average annual return of the most affordable properties serving households at or below 80% of area median income outperformed higher income properties by 239 basis points, largely due to lower tenant turnover. In an environment where public markets can swing sharply, this kind of predictability becomes a powerful safeguard for pension portfolios.

The supply/demand imbalance is poised to intensify. Rising construction costs and higher interest rates have made new development far more expensive. Construction lending rates have climbed from around 4.5–5.5% in 2018 to as high as 7.5–9%¹, while materials such as steel and concrete are “up over 40%”². Developers have responded by shifting toward higher income projects where elevated rents can offset these costs. Between 2022 and 2025, more than two million multifamily units were built^{3,4} of which 13% were affordable. It is estimated that between 2026 to 2029, total production is projected to fall by a quarter, with only 38,000 affordable units expected in 2029⁵. This steep decline in supply reinforces the defensive nature of affordable housing: even as economic conditions fluctuate, the scarcity of units ensures persistent demand and stable revenue.

Historically, affordable housing relied heavily on the federal Low Income Housing Tax Credit program. But inflation and rising interest rates have eroded the effectiveness of these subsidies, which now cover a shrinking share of project costs. Developers often must assemble 6–11 sources of government subsidy, stretching timelines to 3–5 years for a single project. This complexity has pushed many developers to seek private capital, which offers speed, flexibility, and the ability to capitalize on local and state incentives. In Texas, for example, qualifying projects can receive a 100% property tax exemption, boosting net operating income by 20–25%. These incentives, combined with mixed income models that blend affordable, workforce, and market rate units, create strong economics that can support attractive returns.

For pension funds, the appeal lies in the combination of competitive returns and downside protection. Equity returns for well-structured affordable housing projects often fall in the mid-teens to low twenties, supported by high occupancy, reduced turnover, and favorable local incentives. Unlike many real estate sectors, demand for affordable housing tends to increase during economic uncertainty, as families “tighten budgets, seeking stability and lower rents.” This countercyclical behavior makes affordable housing a rare asset class that can strengthen a portfolio precisely when other investments falter.

The investment landscape has also matured significantly. Twenty years ago, few institutional grade managers operated in this space. Today, a growing cohort of specialized firms has more than a decade of track record, giving pension funds the data and confidence needed to underwrite the strategy. As Peter Braffman of GCM Grosvenor observes, affordable housing is now viewed “very differently — and far more positively” than before the Global Financial Crisis.

For pension funds navigating turbulent markets, affordable housing offers a compelling blend of resilience, diversification, and long-term value. Its structural demand, limited supply, and low correlation to economic cycles create a defensive real asset strategy capable of delivering stable income and protecting capital. At a time when many portfolios are overexposed to high income housing or public market volatility, affordable housing stands out as an investment opportunity hiding in plain sight — one that aligns financial prudence with meaningful social impact.

Deborah La Franchi is the founder and CEO of SDS Capital Group. SDS is a recognized national leader in impact investing with \$1.7 billion of active assets under management. Through a family of innovative funds, SDS engages the private sector in the meaningful investment in underserved communities with the mission of promoting economic development and creating affordable supportive housing for marginalized families throughout the United States. As head of the investment committee on each of the firm's six separate funds, Debbie leads the investment strategy, fundraising, and oversight of senior managers.

Debbie earned a BA in Political Science and History from UCLA, an MBA from UCLA, and an MPP from Georgetown University. She also holds a Series 65 license.

Endnotes:

1. Federal Reserve Bank of New York, “Secured Overnight Financing Rate Data,” *Markets & Policy Implementation: Reference Rates*, 2025
2. Federal Reserve Bank of St. Louis., *Producer Price Index by Commodity: Special Indexes: Construction Materials*
3. Federal Reserve Bank of St. Louis., *Producer Price Index by Commodity: Special Indexes: Construction Materials*
4. Yardi Matrix, “U.S. multifamily supply up and rents down,” *Yardi Matrix*, Oct. 30, 2024.
5. Yardi Matrix, “Multifamily Forecast Sees Higher Completions Through 2027,” *CRE Daily*, Aug. 8, 2025.

Why Real-Time Mortality Is Essential

By: Vincent Pellegrino, Abacus Intel

As organizations across financial services continue to modernize their operations, one topic is gaining increasing attention: real-time mortality verification.

We were honored to see our parent company, Abacus, recently recognized in [an article by Technology.org](#)¹ highlighting the growing role of real-time mortality verification in financial services. The article notes that *“Abacus illustrates how compliance technology can help financial institutions maintain transparent and auditable data workflows when managing longevity-related financial services.”* It also reinforces a challenge many institutions are already facing: *“every year, organizations lose millions to payments issued to individuals who have already passed away,”* underscoring just how widespread and costly delayed mortality data can be across the industry.



For institutions managing large books of business, even small gaps in data timing can quickly translate into significant financial and operational exposure.

The Operational and Compliance Impact of Delayed Data

For industries such as pensions, insurance, and life settlements, these delays can create challenges that extend far beyond financial loss. Administrative workloads increase as teams work to reconcile outdated records, compliance expectations continue to rise, and organizations face growing pressure to demonstrate that payments are being issued accurately and responsibly. In many cases, these issues are not the result of negligence, but rather the limitations of traditional data sources that are not designed to provide timely, continuous updates.

How Real-Time Mortality Verification Changes the Approach

The Technology.org article also emphasizes how technology is helping to address this challenge. Real-time mortality verification leverages continuously updated data sources to confirm an individual's status quickly, allowing institutions to respond faster and reduce the risks associated with delayed information. Instead of relying on periodic file updates or lagging datasets, organizations can shift to a more proactive model, one that identifies mortality events as they occur, rather than months later.

Improving Outcomes for Beneficiaries and Organizations

For pension administrators in particular, this capability is critical. Plans often manage decades of participant data, making it increasingly difficult to maintain accurate records over time. Automated monitoring systems that continuously screen for mortality events can help identify changes quickly, stop payments when necessary, and ensure assets are distributed according to plan guidelines. This not only improves operational efficiency but also strengthens audit readiness by demonstrating that consistent, reasonable efforts are being made to maintain accurate participant records.

At Abacus Intel, we are seeing this shift accelerate across the industry. Organizations are moving away from reactive processes and toward continuous monitoring models that prioritize accuracy, speed, and transparency. Our mortality verification solutions are designed to support this evolution by identifying mortality events across the United States with 99% accuracy and delivering results on a daily basis.

This level of precision and frequency allows organizations to act quickly, reducing the likelihood of improper payments while improving overall data integrity.

In addition to accuracy, organizations are also focused on scalability. By combining advanced algorithms, 97% data coverage, and detailed reporting, we enable clients to not only detect mortality events but also gain deeper insight into their populations and processes.

Beyond risk reduction, real-time mortality verification also supports better outcomes for beneficiaries and members. When records are accurate and up to date, benefits can be distributed more efficiently to the appropriate individuals, reducing delays and improving the overall experience. This is especially important in an environment where regulators and stakeholders alike are placing greater emphasis on accountability and transparency in benefit administration.

Being included in conversations about the future of mortality verification reinforces the importance of the work being done across the industry to improve efficiency, compliance, and financial accuracy in longevity-related services. As expectations continue to evolve, organizations that invest in proactive data strategies will be better positioned to navigate regulatory requirements and operational complexities.

Vincent Pellegrino is an accomplished executive with more than 25 years of experience in the longevity risk and life settlement markets. In his role as Vice President at Abacus Intel, Vincent continues to drive business development initiatives, cultivate strategic partnerships, and apply his extensive knowledge to support the company's growth and client success.

Vincent has held senior leadership roles at AIG, Credit Suisse, and Prudential Financial, where he shaped market strategies, enhanced operations, and sales, and ensured regulatory compliance. His areas of expertise include managing longevity-linked asset portfolios, negotiating large life insurance acquisitions, and implementing safeguards to ensure fund solvency and reduce fraud risk.

A recognized leader in his field, Vincent, has consistently contributed to advancing industry best practices while aligning institutional objectives with market opportunities. His ability to balance innovation with rigorous financial discipline has positioned him as a trusted advisor and respected figure within the financial services community.

Endnotes:

1. [Technology.org. \(2026, March 12\). What is real-time mortality verification?](https://www.technology.org/2026/03/12/what-is-real-time-mortality-verification/)

Discount to Fair Value: How to Strengthen Pension Portfolio Resilience through Small-Ticket, Late-Stage Tech Secondaries

By: Artea Global

In early 2026, roughly half of publicly traded software companies tracked by institutional analysts reached three-year valuation lows as fears of AI agents displacing enterprise software triggered indiscriminate selling with names such as ServiceNow, HubSpot, and Adobe falling between 20% and 60% from recent highs. Yet a select group of late-stage private technology companies, those with genuine AI tailwinds, non-discretionary revenue, and defensible data moats, continued to outgrow their public peers and have remained largely insulated from selling pressure.



Exposure to many of these companies is attainable through the secondary markets at meaningful discounts to public comparables. By assembling stakes from small-ticket sellers such as early employees, end-of-life funds, and family offices, allocators can access high quality technology businesses at entry valuations typically unavailable in primary rounds or public markets. Applied with discipline to a carefully curated target list, this represents an asset class that pension investment committees should examine closely.

Structurally Growing Market with Motivated Sellers

The VC secondary market has expanded from approximately \$60 billion in annual deal volume in 2020 to over \$140 billion in 2023, a compound annual growth rate of roughly 30%, with direct secondaries in private technology expected to remain among the fastest-growing segments over the next decade.

The supply of motivated sellers is both large and durable. Approximately 50% of 2018 vintage funds reported 0.0x DPI, placing early-stage managers under increasing pressure to generate distributions. At the same time, an estimated 100,000 to 300,000 employees at private technology companies hold over \$1 million in paper equity, concentrated in a relatively small number of late-stage companies, many of which are opting to remain private longer. With the median IPO timeline extending to approximately 12 years (versus 5 in 2000), much of this paper wealth may remain illiquid for prolonged periods. Meanwhile family offices and non-traditional investors facing denominator constraints have also been active sellers. Across these cohorts, pricing is often driven by liquidity needs rather than intrinsic value, thereby sustaining a consistent supply of secondary opportunities.

The Governance Case: Why Secondaries Suit Pension Mandates

A well-constructed late-stage technology secondary program is distinguished from higher-risk technology allocations by three governance-positive attributes:

- **Valuation discipline anchored to public markets.** Managers can benchmark entry pricing against public comparables and underwrite to conservative scenarios, including downside cases informed by dislocations such as the 2022–23 sell-off. Small-ticket managers can access materially lower entry points levels than large block transactions by sourcing directly from motivated sellers and applying appropriate illiquidity discounts.

- **Superior liquidity visibility versus traditional VCs.** Late-stage assets benefit from identifiable near-term exit catalysts, including IPOs, M&A processes, and tender programs, enabling more credible DPI forecasting and alignment with actuarial cash flow planning. Unlike 10-year blind-pool VC structures, investors retain the flexibility to monetize positions through the secondary market as needed.
- **Concentration management.** Position sizing limits of 10–15% per name, combined with deliberate sector diversification, can reduce idiosyncratic risk to levels comparable to disciplined public equity portfolios.

Portfolio Construction and the Margin of Safety

Not all technology companies are equally resilient to AI disruption. Cybersecurity, data infrastructure, and vertical SaaS have in many cases demonstrated continued revenue acceleration during the sell-off while segments such as marketing technology, generic enterprise SaaS, and certain DevOps tooling, have experienced meaningful (e.g. >30%) valuation compression. Any secondary program should explicitly incorporate screening for AI resilience.

Pricing remains a crucial source of return. Small-ticket transactions, typically \$15 million or less, often clear at entry multiples 30 and 50% below public market comparables. This pricing advantage is largely unavailable to larger funds focused on LP stake or big block transactions. At the same time, primary investors in select AI companies have paid significant premiums to public benchmarks, reinforcing the relative attractiveness of disciplined small-ticket secondary entry points.

Figure 1: Strategy Comparison at a Glance

Criteria	Late-Stage Tech Secondaries	Primary Growth VC	Public SaaS Equities
Entry valuation vs. public comps	30-50% discount	Up to 100% premium	At market
Typical investment duration	1-3 years	7-12 years	Liquid / daily
Valuation anchor	Public comps (stress-tested)	Negotiated / mgmt case	Mark-to-market daily
Avg. NTM growth (portfolio)	40-55%+	Variable; early-stage risk	Median ~25% (top 10 SaaS)
DPI visibility	High (near-term catalysts)	Low (long J-curve)	N/A (mark-to-market)

A Call to Examine the Allocation

The lesson from 2022–23 and early 2026 is not that pension funds should avoid technology. It is *how* you access technology that determines whether volatility is a risk or an opportunity. CIOs and trustees should assess whether current investment policy statements accommodate small-ticket direct secondary strategies, distinct from both primary venture capital and large-format GP/LP secondary funds. Where such flexibility does not exist, establishing a dedicated allocation within the alternatives portfolio, sized appropriately, warrants consideration.

In a market where growth is rewarded and motivated sellers exchange liquidity for discounts, the best positioned pension funds are those that combine disciplined entry pricing with the conviction to hold through short-term noise. That is not a new principle, it reflects a core tenet of long-term pension investing.

Figure 2: Key Seller Profiles Creating Secondary Market Opportunity

Early-Stage Fund Managers	Private Company Employees	Family Offices & Non-Trad. VCs	End-of-Life Funds
<i>~50% of 2018 vintage funds carry 0.0x DPI</i>	<i>Between 100k and 300k US employees with \$1M+ paper equity at private tech cos.</i>	<i>Denominator effect forcing private tech allocation trims</i>	<i>Hitting fund life limits; need liquidity for LPs</i>
Intense LP distribution pressure driving discounted exits	Median IPO age 12 years vs. 5 in 2000. Wealth locked in illiquid equity	Selling at urgency-driven prices regardless of company fundamentals	GP-structured sales often at 30%+ discounts to ongoing tender processes

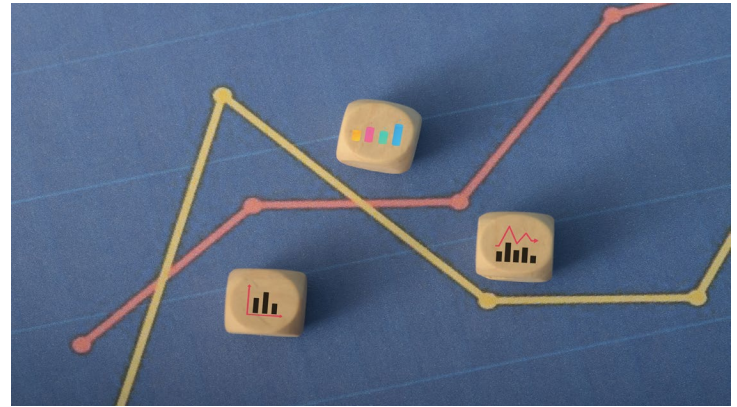
Artea Global is an institutional direct secondaries fund focused on acquiring stakes in best-in-class late-stage technology companies. Founded in 2022, the firm targets small, highly idiosyncratic transactions sourced from motivated sellers, including early employees, end-of-life venture funds, and family offices. This strategy enables Artea to provide its LPs with access to high-quality private technology businesses that are outperforming their public peers, at entry valuations typically unavailable through primary financings or large-format secondary funds.

Disclosures: Sources: Industry Ventures VC Secondary Market Research; Cambridge Associates Private Investment Benchmark Statistics; Artea Global Analysis. This article is for informational purposes only and does not constitute investment advice.

From Volatility to Stability: A Macro Hedging Approach for U.S. Pension Systems

By: Ortec Finance

Over the course of 2025, global markets swung between optimism and caution as institutional investors balanced easing inflation trends and large equity gains against policy uncertainty, structural valuation concerns, and mixed macroeconomic indicators. These factors contributed to some of the most volatile market episodes since the 2008 financial crisis, as confidence and risk aversion alternated throughout the year.



[Click here to read the complete report on the Ortec Finance website.](#)

Many pension funds, and particularly those in the United States, reported stable or improved funding ratios in 2025, mostly due to the strong equity market conditions.

Asset values rose significantly, while a relatively stable long-term interest rate environment limited increases in the present value of liabilities. These events appeared to be reassuring and suggested a return to healthier balance sheets after years of strain, but they also masked vulnerabilities.

Driven largely by interest rate cuts by the Federal Reserve coupled with broader macroeconomic and political uncertainty in the United States, the U.S. dollar fell by roughly 10% against other major currencies, marking 2025 the largest annual decline since 2017. As confidence weakened, investors looked for new safe havens. The shift to explore new markets led to the appreciation of minerals, such as gold and silver, as well as the growth of capital flows into foreign assets in Europe and Asia which further strengthened other currencies relative to the dollar.

However, the depreciation of the U.S. dollar is not entirely unexpected. Lower interest rates, existing trade tariffs, and currency weakness have contributed to higher import prices and renewed inflationary pressures for U.S. households, companies, and institutional investors. At the same time, a weaker dollar lowers the foreign-currency price of goods produced in the United States, which can improve export competitiveness over time, support domestic production, and strengthen external demand.

This report examines how macroeconomic developments, particularly declining interest rates, can translate into balance-sheet risks for U.S. pension funds. Using a stylized case study, we show that incorporating strategies like interest rate hedging can meaningfully reduce downside risk and enhance funding stability in an uncertain macroeconomic environment.

Public pension plans often discount liabilities using a fixed expected return on assets – an approach that originates from an accounting convention rather than strict market valuation. Under this framework, changes in long-term interest rates do not mechanically affect reported liabilities and funding ratios look stable even as market conditions evolve. Consequently, implementing interest rate hedging often seems counterintuitive for public funds. Because their liabilities are “fixed” in accounting terms, hedging market rates would introduce, rather than reduce, volatility to their funding status.

Does this mean that public pension funds are immune to interest rate risk? Not exactly.

In the short run, a drop in interest rates may actually make a public pension fund's funding ratio appear healthier because the value of its fixed income assets rises while its reported liabilities remain flat. Unfortunately, this strategy hides a deeper long-term issue. As rates fall, the forward-looking expected returns on safe assets decline. To maintain their high fixed return targets (often 7% or higher) in a low-rate world, public pension funds are forced to drift into riskier, less liquid asset classes to close the gap.

As the accounting value of liabilities of public pension funds remains unchanged, the economic value of the promised cash flows does move with interest rates, irrespective of how they are reported on the balance sheet. Fixed discount rates stabilize accounting outcomes, however they do not protect pension promises from changes in the value of money. For plans with liabilities that have significantly longer duration than their assets, falling rates increase the true economic value of the obligation far more than the assets.

To reduce funding ratio sensitivity to falling interest rates, it is possible to hedge using interest-rate swaps. In a swap operation, the fund receives a fixed interest rate and pays a floating rate. When market interest rates fall, the value of this position increases, which offsets the rise in the economic value of pension liabilities. Conversely, if the interest rates rise, the hedge loses value, but the liabilities become less expensive in economic terms.

Our case study sheds light on a key insight. Interest rate hedging is not intended to enhance returns in all scenarios – instead, it is to protect funding ratios in adverse scenarios. Regardless of how much return a given portfolio is seeking, the benefit of having both hedging strategies can help reduce unnecessary sources of volatility. While both strategies perform similarly, the inclusion of interest rate swaps leads to more stable funding ratios in scenarios where long-term interest rates decline. Over time, this added stability can lower the risk of funding shortfalls and reduce the likelihood of corrective contributions by plan sponsors or taxpayers.

About Ortec Finance: *We model and map relevant uncertainties to help you monitor your goals and decisions. Established by foremost experts in the fields of Econometrics and Technology in 1982, we have garnered an exceptional reputation for reliability. Serving over 600 clients across more than 20 countries, we play a pivotal role in enhancing our clients' investment decision making and managing their uncertainty. Headquartered in Rotterdam, The Netherlands, we also have offices in Amsterdam, London, Toronto, Zürich, Melbourne, Singapore and New York.*

 **NCPERS UNIVERSITY**

Trustee Essentials Training

(formerly known as TEDS)

Every **new trustee** should start with a solid foundation. NCPERS Trustee Essentials Training provides the core knowledge and practical insights every trustee needs to fulfill their fiduciary responsibilities with confidence.

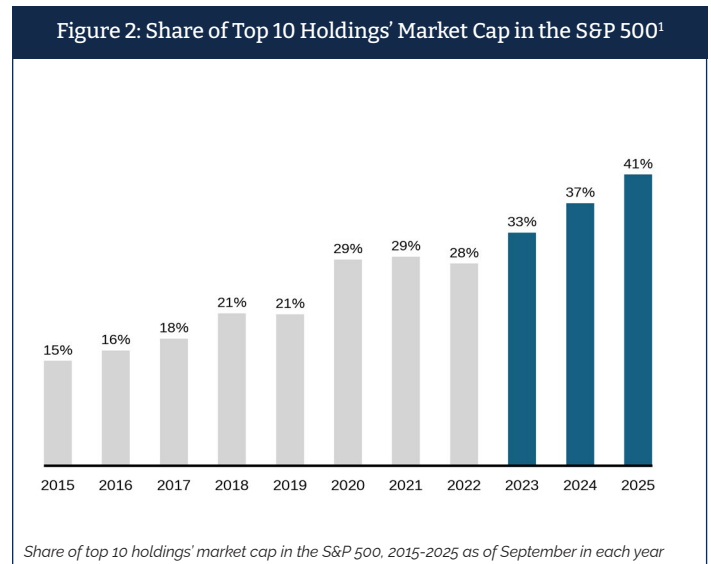
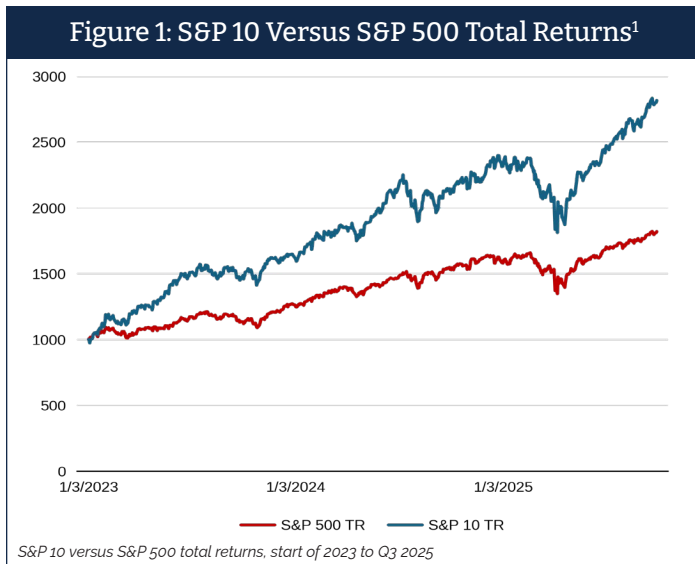
[Register Now](#)

May 16-17, 2026 — Las Vegas, NV

The Hidden Risk in Portfolios: Why Today's Market Concentration Deserves a Closer Look

By: Brett Hickey, Star Mountain Capital

A significant portion of today's market risk is increasingly concentrated in a narrow set of sectors, particularly within large-cap technology and software. For many investors that exposure is far larger and more interconnected than it appears. In public equities, the ten largest stocks in the S&P 500 now account for 41% of the index's market capitalization, approximately 175% higher than a decade ago.¹ At the height of the Dotcom bubble, the top ten stocks only accounted for 27% of the S&P 500 Index's weight.² Currently, valuations are similarly elevated, as the cyclically adjusted price to earnings ratio is 40.1, nearing the peak reached during the Dotcom boom in 1999.³

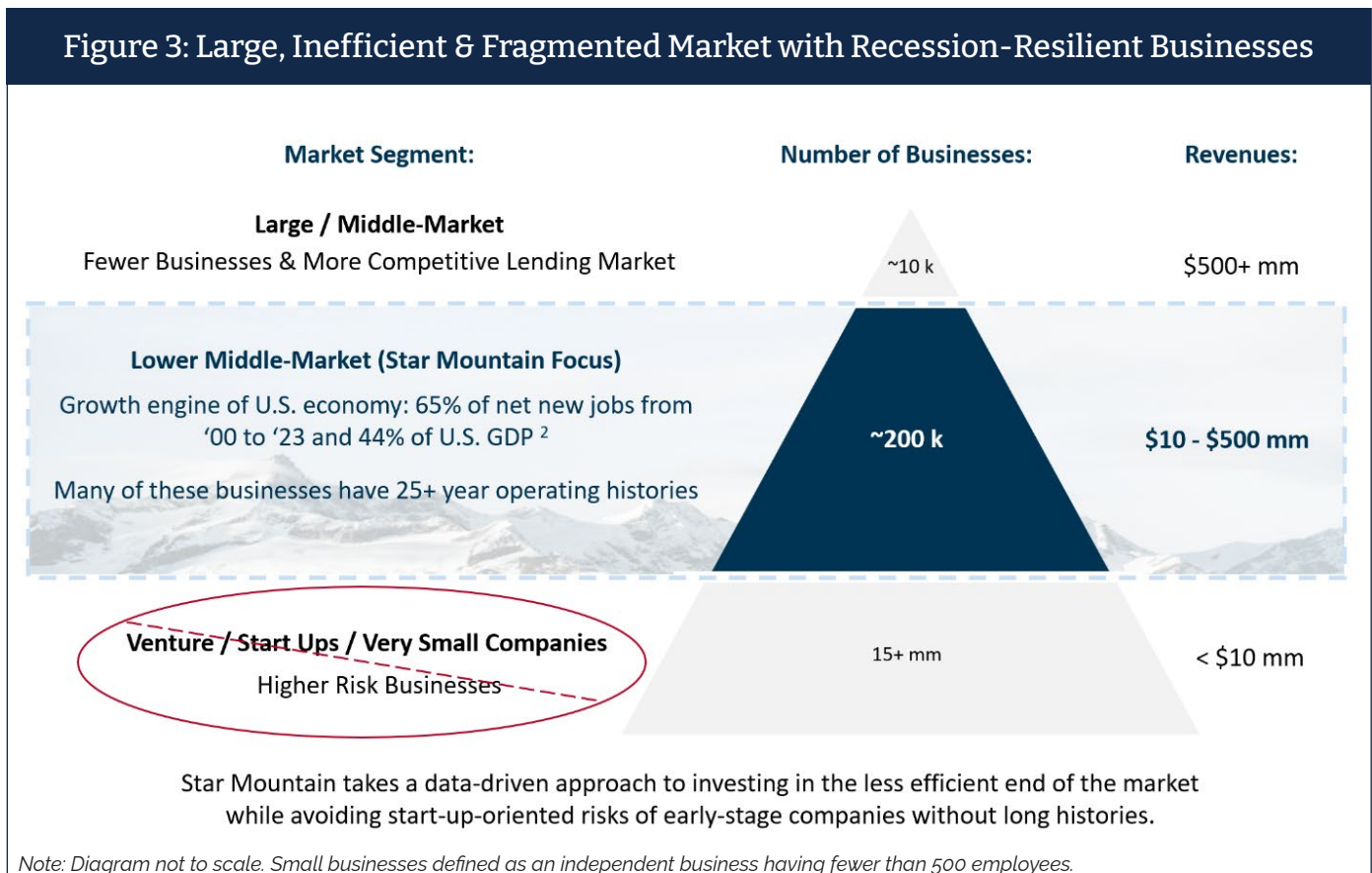


These risks extend beyond public markets. Software has accounted for roughly 40% of total private equity deal value over the past five years.⁴ In early February 2026, public software stocks lost over \$1.2 trillion in aggregate market value over a five day trading period, as many investors reassessed the durability of subscription-based business models in light of AI driven disruption.⁵ That repricing is migrating into private markets: secondary buyers are reportedly demanding discounts of up to 20% on technology heavy PE portfolios, and experts are estimating that 25% to 35% of the private credit market carries AI disruption exposure.^{6,7} This is particularly relevant for investors as the concentration risk is not confined to public equities.

Private equity and private credit allocations, which have grown significantly in recent years, remain materially exposed to the same technology and software sectors now facing structural headwinds.⁸

Differentiated Opportunity within the U.S. Lower Middle-Market

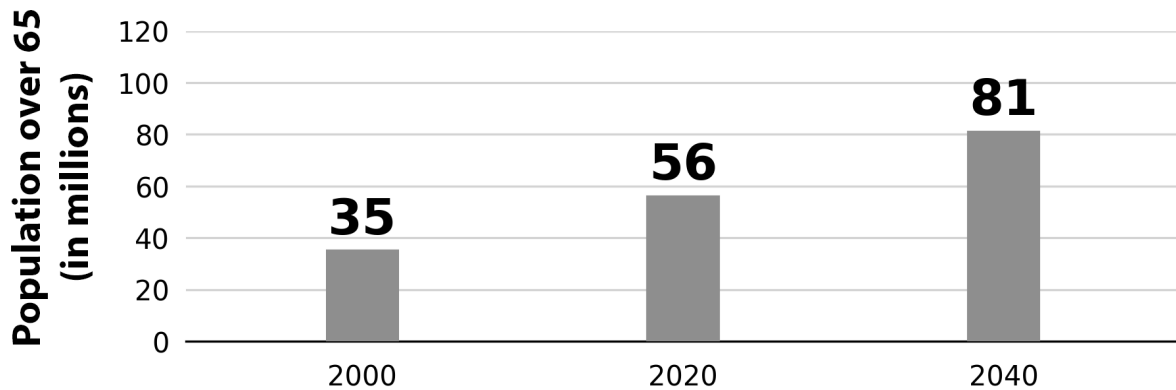
For sophisticated investors seeking resilient portfolios with strong risk-adjusted returns, the U.S. lower middle-market can offer a fundamentally different risk profile.⁹ Comprised of approximately 200,000 businesses with \$10 to \$500 million in annual revenue, the lower middle-market represents 44% of U.S. GDP and generated 65% of net new jobs from 2000 to 2023.¹⁰ Over 97% of these businesses are privately held, with many being founder-owned, service-oriented businesses that investors use every day without even knowing it in sectors such as healthcare services, professional services, and non-real estate construction and engineering.¹¹



Importantly, these businesses exhibit limited exposure to the primary source of current market concentration risk: AI / software. They are often domestically focused and relationship driven, with resilient business models that tend to exhibit lower sensitivity to the repricing dynamics impacting technology exposed portfolios.

Beyond diversification benefits, structural tailwinds driving demand for capital are accelerating. An estimated 3.1 million U.S. businesses, representing 51.3% of all employer firms, are owned by individuals aged 55 or older. As Baby Boomer owners approach retirement, lower middle-market firms are expected to transition ownership, creating a substantial need for experienced lending partners.

Figure 4: Strong Demand for Capital Amplified by Aging Demographics¹²



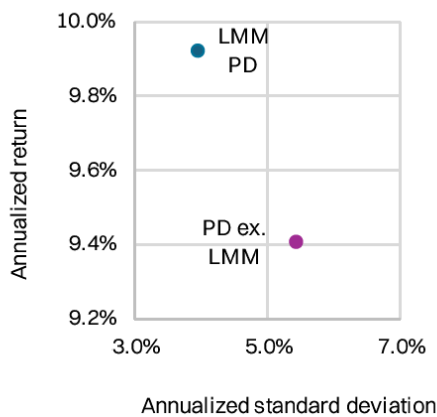
Note: U.S. Census Bureau population estimates and projections from 2000 to 2040.

Meanwhile, the supply of capital remains constrained. The number of U.S. commercial banks has declined approximately 50% over the past two decades, while larger private credit funds have increasingly shifted towards larger transactions. As a result, lower middle-market companies remain comparatively underserved.¹³

Portfolio Diversification Benefits within Lower Middle-Market Private Credit

Research by top global economist and Harvard Business School Professor Josh Lerner found that lower middle-market private credit delivered a 46% higher return per unit of risk compared to private debt excluding the lower middle-market segment from Q2 2015 to Q2 2025, with an annualized return of 9.9% and annualized standard deviation of 3.9%, compared to 9.4% return and 5.4% standard deviation for broader private debt.^{9, 14, 15, 16} Pairwise correlations with other asset classes generally fell between 0.2 and 0.7, strongly suggesting the segment's role as a genuine diversifier.

Figure 5: Better Returns, Lower Risk: How the LMM Outperforms⁹



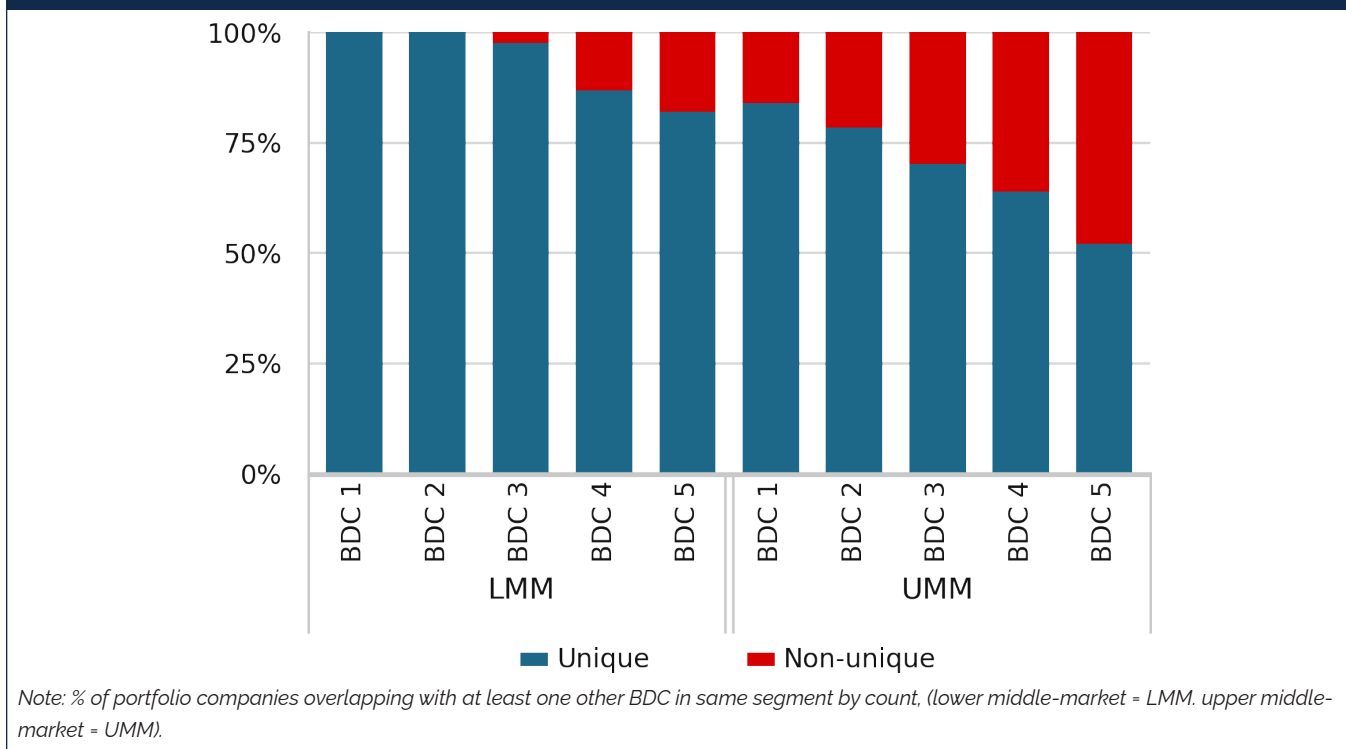
Strategy	Annualized return	Annualized std. dev. ⁹	Return per unit of risk ¹⁰
LMM PD	9.9%	3.9%	2.52
PD ex. LMM	9.4%	5.4%	1.73

LMM PD provides 46% higher return per unit of risk

Note: Risk/return by private capital asset class (lower middle-market = LMM), Q2 2015 - Q2 2025.

Lower middle-market lending can also offer structural protections increasingly rare in larger credit markets. Maintenance covenants are standard, and portfolio company overlap among lenders is significantly lower than in the upper middle-market, reducing the “false diversification” risk that can amplify losses during credit events.

Figure 6: % of Portfolio Companies Overlapping with at Least One Other BDC in Same Segment by Count⁹



Conclusion

In a market defined by software driven concentration and AI fueled uncertainty, investors should examine where their true exposures lie. The lower middle-market, with its breadth of service-oriented businesses, favorable supply demand dynamics, and historically attractive risk-adjusted characteristics, offers a compelling source of potential durable diversification in an increasingly narrow and volatile market environment.

Brett Hickey, Chief Executive Officer, has been structuring, analyzing and managing private equity, mezzanine and U.S. Government sponsored investment funds for over a decade. Prior to launching Star Mountain Capital, Mr. Hickey was the Co-Founder and President of a multi-manager platform including 4 U.S. state sponsored small business investment funds and helped structure over a dozen funds representing a billion dollars in assets.

Mr. Hickey formerly worked as an Investment Banker at Citigroup Global Markets in New York City where he worked on over \$8 billion in capital raising and restructuring transactions and served as Senior Analyst on the \$16.1 billion merger of the St. Paul Companies, Inc. and Travelers Property Casualty Corp.

Mr. Hickey earned a Bachelor of Commerce degree from McGill University and is an alumnus of Harvard Business School's Owner / President Manager CEO training and management program.

Disclosures: This presentation is provided for informational and educational purposes only and does not constitute an offer to sell, or a solicitation of an offer to purchase, any security or investment product managed or advised by Star Mountain Fund Management, LLC ("Star Mountain"). The information herein reflects the views and market observations of Star Mountain as of the date of publication and is subject to change without notice. This content is not intended as investment, legal, accounting, or tax advice, and prospective investors should consult their own professional advisors. The information herein may include data derived from third-party sources believed to be reliable, but Star Mountain makes no representations as to its accuracy or completeness. This content may be shared publicly but should not be reproduced or redistributed without written permission from Star Mountain.

Certain Risks of Investment

Investments in private funds, including LMM private credit funds, involve significant risks, including the risk of loss of capital. These investments are illiquid, speculative, and not subject to the same regulatory requirements as mutual funds or other registered investment products. There is no assurance that investment objectives will be achieved, and past performance is not indicative of future results. Statements regarding default rates, recovery rates, or structural protections in the LMM credit space are based on historical data and should not be interpreted as guarantees. Any investment should be made only after a careful review of the relevant offering documents and consultation with independent advisors.

Endnotes:

1. S&P Global and MacroMicro, as of October 2025.
2. "Comparing the dot-com bubble with today's market", Investing.com, August 2024.
3. "Shiller PE Ratio by Month," Multpl, October 2025.
4. "Private Equity's DoomsdAI Moment", Financial Times. 2/12/26.
5. Allianz Research, February 2026.
6. Bloomberg, "Private Equity Faces Rising Scrutiny as AI Threatens Software Valuations," February 25, 2026.
7. CNBC, "Private Credit Stocks Plummet on Concern About Exposure to Software Industry Disrupted by AI," February 3, 2026. UBS analysts estimate 25% to 35% of the private credit market is exposed to AI disruption risk.
8. Software Stress & AI Risk in Private Credit, Prime Buchholz, February 2026.
9. Bella Private Markets Insights, in collaboration with Star Mountain, "Hidden in Plain Sight: The Lower Middle-Market Advantage" written by Harvard Business School Professor Josh Lerner, January 2026.
10. NAICS, as of December 2024. U.S. Small Business Administration, Office of Advocacy, July 2024.
11. CapIQ, as of November 2025. Over 97% of companies with revenues between \$10M and \$500M are private.
12. U.S. Census Bureau, Population estimates and projections from 2000 to 2040.
13. Federal Deposit Insurance Corporation (FDIC) data on FDIC insured commercial banks in the United States.
14. Professor Lerner is a compensated Senior Advisor of Star Mountain Capital and was engaged by Star Mountain Capital to prepare the market analysis referenced in this post. Past performance and economic data are not indicative of future results.
15. Recognized by ScholarGPS and research.com.
16. Bella Private Markets Insights, was produced in collaboration with Star Mountain, "Hidden in Plain Sight: The Lower Middle-Market Advantage" written by Harvard Business School Professor Josh Lerner, January 2026. Based on Preqin and PitchBook fund-level data from Q2 2015 to Q2 2025, these returns are gross of fees. The analysis uses an average management fee rate of 1.40% in its fund size calculations.

 NCPERS

Pension Industry Careers

Job Listings, Hiring, and
Retirement Announcements

If your organization has news about its staff or is looking to hire, please send announcements to membership@ncpers.org for consideration.

[Learn More](#)



The Overlap Between Missing Participants and Unidentified Deaths

By: John Bikus, The Berwyn Group

For many plan sponsors, missing participant searches and death audits are treated as two separate administrative functions. One focuses on locating individuals, the other on identifying deceased participants, and preventing improper payments.

As expectations around fiduciary responsibility continue to evolve, a growing number of plan sponsors are recognizing that the line between “missing” and “deceased” participants is often blurred, and that treating these issues independently can introduce risk.



When “Missing” Doesn’t Mean Unreachable

The traditional definition of a missing participant centers on failed outreach, including returned mail, inactive accounts, outdated contact details, or uncashed checks. But that definition assumes the individual is still living.

In reality, that is not always the case.

Across more than 1,500 plan populations analyzed by Berwyn in 2025, 73.6% were missing at least one key data element, such as name, Social Security number, date of birth, or current address. These gaps do more than hinder outreach. They limit a plan’s ability to locate participants and understand their status.

As a result, what appears to be a participant location issue can become more complex. Plans may continue outreach for individuals who are no longer living, while their status remains unresolved.

This is why treating death audit and participant location as separate efforts creates risk. Without accurate data and validated death information, plans are not just searching for missing participants; they are operating without a clear understanding of who belongs in the population.

Why This Distinction Matters

At a surface level, the difference between a missing and deceased participant may seem operational. In practice, it has broader implications.

- **Continued payments to deceased participants** can lead to overpayments that are difficult, or impossible, to recover.
- **Ongoing outreach efforts** directed toward deceased individuals create inefficiencies and unnecessary costs.
- **Incomplete or inaccurate records** can complicate audits and regulatory reviews.
- **Documentation gaps** may make it difficult to demonstrate that appropriate steps were taken to maintain accurate census data.

As regulatory scrutiny increases, plan sponsors are expected not only to make a reasonable effort to locate participants, but also to maintain accurate and validated records. Without a clear understanding of whether a participant is living, even well-intentioned search efforts may fall short of that expectation.

Where Traditional Approaches Fall Short

Many plans rely on periodic death audits and ad hoc locate efforts. While each serves a purpose, they are often conducted independently, using different data, methods, and timelines.

This separation creates blind spots.

A locate process may find a new address without confirming whether the individual is still living. A death audit may identify decedents but remain disconnected from ongoing outreach or record updates.

Not all data is created equally. Some approaches rely on unverified or single-source data, increasing uncertainty and manual review. As a result, plan sponsors may receive results that suggest an outcome but lack the validation needed to act with confidence.

The Case for a More Integrated Approach

To address these gaps, many organizations are shifting toward continuous data validation, approach that integrates multiple data sources, applies validation methodologies, and maintains ongoing visibility into participant status. This type of strategy is designed to answer two critical questions at the same time:

- Can the participant be located?
- Can the participant's status be confidently verified?

Answering one without the other leaves room for error.

By combining **death identification, data enrichment, and participant location efforts into a unified process**, plan sponsors can reduce uncertainty, improve data accuracy, and create a more defensible administrative framework.

Looking Ahead

As the industry continues to place greater emphasis on data integrity and fiduciary accountability, the definition of effective missing participant management is expanding.

It is no longer limited to locating individuals when outreach fails. It increasingly requires a more comprehensive understanding of participant status, supported by accurate, validated, and continuously maintained data.

For plan sponsors, this raises an important question:

Is your current process designed to find participants, or to fully understand them?

In many cases, the difference between those two approaches is where risk and opportunity reside.

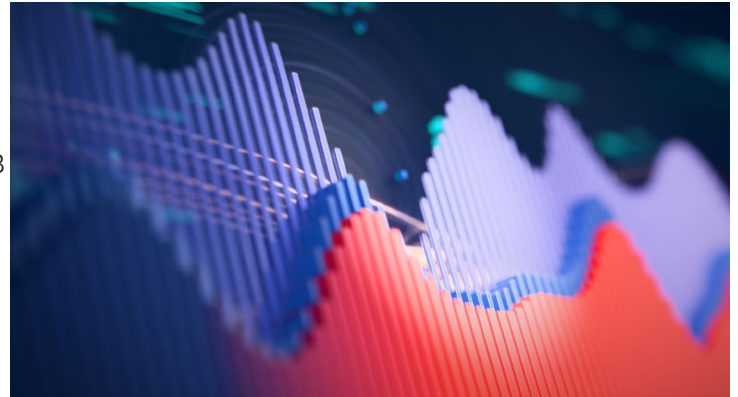
John Bikus, President of The Berwyn Group, leads the company's efforts to bring accuracy, validation, and innovation to death audit and participant location services for pension funds. He previously co-founded and grew two pioneering data companies — *ObitData.com* and *Legacy.com* — which helped transform how organizations and consumers access and verify obituary information.

How Your Public DB Plan Compares At Year-End 2025

By: Brad Penter, Callan

December 31 is a common fiscal year end for roughly a quarter of public defined benefit (DB) plans, making the end of the calendar year performance data an important measurement period. In the fiscal year ended Dec. 31, 2025, the median public DB plan gained 13.8%, nearly double the median assumed rate of return of 7.0%.

This marks the third consecutive calendar year in which the median public plan's return was well in excess of the median assumed rate of return (2023: 12.8%, 2024: 10.0%). This bodes well for an improvement in funded status across public pension plans. Many use an actuarial smoothing period of five years. Over the last five years, the median public DB plan has an annualized gain of 7.2%.

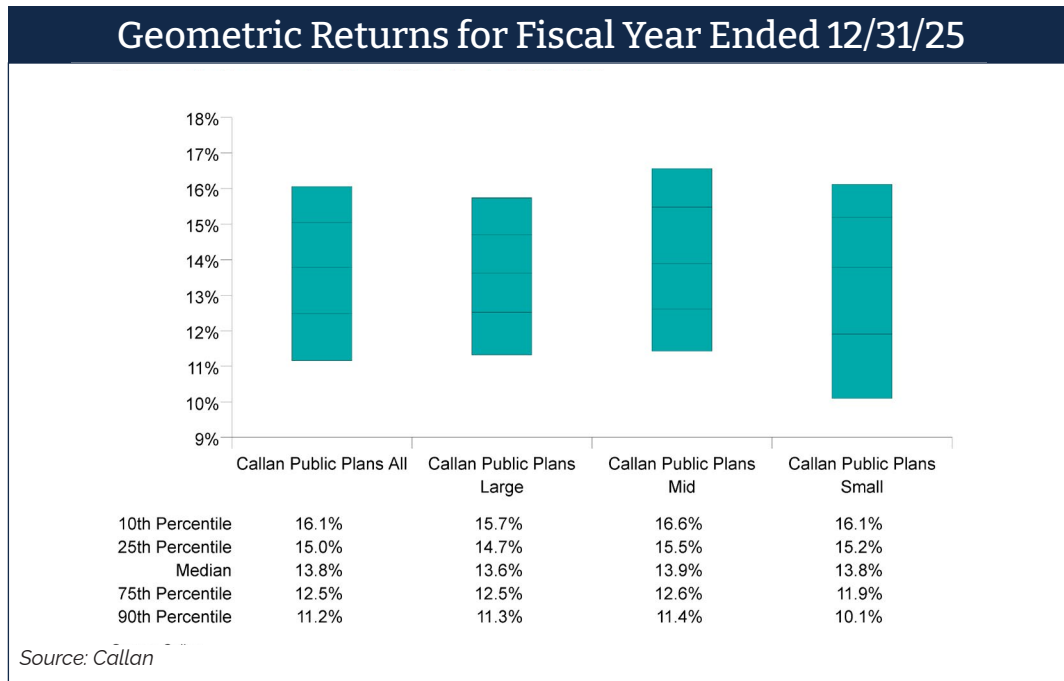


Drivers of Public DB Plan Returns

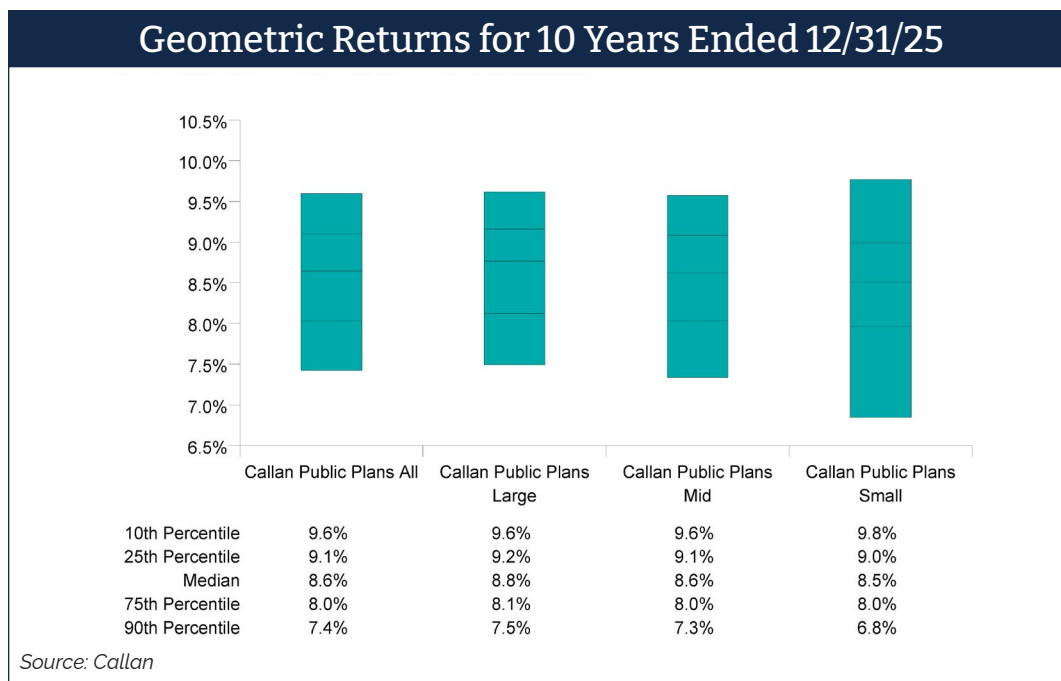
All major asset classes ended the calendar year with gains, led by global ex-U.S. equities (MSCI ACWI ex-USA: 32.3%), U.S. equities (Russell 3000 Index: 17.2%), and core fixed income (Bloomberg Aggregate Index: 7.3%). In alternatives, hedge funds had the strongest year (HFRI Fund Weighted: 12.4%), followed by private equity (Cambridge Private Equity: 9.5%), private credit (Cambridge Senior Debt: 7.8%), and real estate (NCREIF ODCE: 2.9%). Gold investors, while a relatively uncommon allocation in public pensions, were rewarded spectacularly with an annual return of 64.3%.

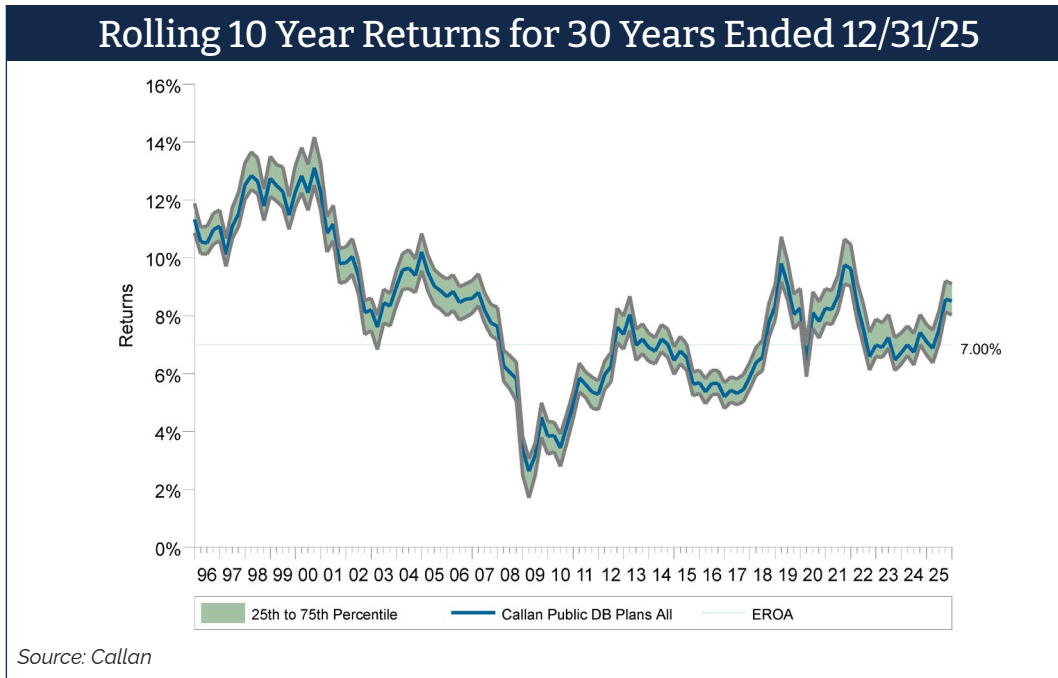
Dispersions in results by plan size were relatively muted for calendar year 2025. Mid-sized plans marginally outperformed their smaller and larger peers. Small and mid-sized plans' more liquid portfolios benefited as public equities generated the strongest results, while private equity portfolios continued to lag.

Over a 10-year timeframe, the median large plan has outperformed its smaller peers. Allocations to alternative investments have been beneficial, most particularly when comparing plain vanilla fixed income (Bloomberg Aggregate: 2.0%) versus more complex diversifiers (Cambridge Senior Debt: 8.0%, NCREIF ODCE: 4.2%) where bigger plans have higher allocations. On average, large public plans allocate ~25% of their portfolio to alternative investments versus 15% for mid-sized plans and ~10% for small plans.



As always, Callan recommends public plans should focus on their ability to achieve their long-term expected return on assets (EROA) target rather than fixating on short-term volatility. The long-term approach has worked out over time as the median public plan's 10-year return has consistently exceeded the median return hurdle (7.0%).





Brad Penter, CFA, CAIA, is a vice president in Callan's Atlanta consulting office. His responsibilities include supporting clients and consultants in the areas of performance evaluation, strategic planning and implementation, investment manager review, and the coordination of special client proposals and requests. Brad is a member of Callan's Public Defined Benefit Focus Group.



Pension Fund Roundtables: Because No Pension Leader Should Go It Alone

- CEO/Executive Director
- CIO/Investment Officer
- Communications
- Government Affairs
- Human Resources (HR)
- Investments Back- & Middle-Office (IBMO)
- Legal
- Member Services



The White House Executive Order on Proxy Advisors

By: Maureen O'Brien, Segal Marco Advisors

On December 11, 2025, the White House issued an Executive Order aimed at reducing the influence of proxy advisory firms. While the order does not mandate immediate regulatory change, it sends a signal about where the administration would like to go.

The Executive Order directs three federal agencies — the SEC, FTC, and Department of Labor — to investigate proxy advisory firms, but it does not compel those agencies to take specific action. There are no immediate enforcement changes.



The order highlights several concerns the administration wants to examine more closely, including:

- The market dominance of proxy advisors ISS and Glass Lewis
- The foreign ownership structures of these firms
- The role of ESG data and analysis in proxy voting recommendations

This Executive Order does not arrive in isolation. The past year has already seen a broader erosion of shareholder rights through recent SEC actions and state-level laws — notably in Texas — that have reduced or removed traditional tools of shareholder participation.

What Does This Mean Going Forward?

The long-term fate of core shareholder tools — including access to the proxy, exempt solicitations, and shareholder proposals used to test broader investor sentiment — may ultimately be decided in the courts. In the near term, however, we have already noticed:

- Fewer shareholder proposals
- Fewer exempt solicitations
- More investor-company engagement behind closed doors

What remains uncertain is how shareholder voice — and corporate responsiveness — will evolve if transparency continues to decline and formal shareholder mechanisms are further constrained.

What Initially Gave Rise to Proxy Voting?

Shareholder voting rights have long been integral to the U.S. capital markets and are widely viewed as a core mechanism supporting market transparency and investor confidence.

Congress established federal proxy voting protections as part of the Securities Exchange Act of 1934 to address a specific structural problem: the growing separation of ownership and control in publicly traded companies.

A congressional committee report issued during the Act's passage explained:

"The widespread ownership of corporate securities, with its concomitant separation of corporate ownership and management, gave rise to conditions under which security holders frequently were denied an effective voice in or information about the business in which they had invested their capital, and the management was able to perpetuate itself in office and carry on corporate affairs with an eye more to its own advantage than to that of the corporation."¹

The report made Congress's intent clear:

"Fair corporate suffrage is an important right that should attach to every equity security bought on a public exchange. Managements of properties owned by the investing public should not be permitted to perpetuate themselves by the misuse of corporate proxies."²

That underlying market structure has not changed. Ownership of U.S. public companies remains widely dispersed. BlackRock, State Street Global Advisors, and Vanguard are often the largest shareholders of publicly traded firms, yet they typically hold only 3–8% stakes individually. At the same time, U.S. nonfinancial companies receive approximately 67% of their funding from equity financing.³ Broad ownership — largely through retirement accounts and pooled investment vehicles — is the fuel that grows U.S. companies and, by extension, the U.S. economy.

Because shareholder value is directly affected, mergers, reincorporation, and other material transactions require shareholder approval. The same is often true for executive compensation structures and long-term strategic planning, including decisions related to future energy mix and capital allocation. Proxy votes provide companies with a routine, low risk mechanism to understand investor preferences and gauge market support while investors benefit from better understanding company intent.

Reducing shareholder proposals and erecting additional hurdles to proxy voting risks disrupting a governance process that has been foundational to U.S. capital markets for nearly a century.

What's Next?

Proxy voting was established precisely to protect investors in a market defined by dispersed ownership and professional management. Limiting access to proxy tools risks reviving the very conditions Congress sought to address in 1934: reduced transparency, diminished accountability, and weakened investor confidence. As courts, regulators, and market participants respond, the central question is whether U.S. capital markets will continue to rely on open, visible shareholder engagement — or shift further toward closeddoor stewardship with fewer signals and less accountability.

Maureen O'Brien, Senior Vice President of Corporate Governance, Engagement and Proxy Voting at Segal Marco Advisors, leads corporate engagements on behalf of Segal Marco's clients and oversees the proxy voting service. Segal Marco is one of the largest U.S. based investment consultancies, with combined advisory assets exceeding \$500 billion. Her work in shareholder advocacy began in 2003 as a Research Analyst for the Investor Responsibility Research Center. Prior to Segal Marco, Ms. O'Brien was Head of Engagement at Conflict Risk Network, where she held dialogues with companies operating in Sudan and other conflict zones. Ms. O'Brien is the Chair of Segal Marco's Sustainability Committee, which evaluates asset managers on sustainability, provides internal education and coordinates topical thought leadership. She is a frequent speaker on these topics at industry events.

Ms. O'Brien received her M.A. from American University in Washington, D.C. and her B.A. from the University of Missouri-Columbia. She holds a Sustainable Investing Certification from the CFA Institute.

Endnotes:

1. Friedman, Daniel M., "SEC Regulation of Corporate Proxies," *Harvard Law Review*, March 1950, available at: [SEC Regulation of Corporate Proxies](#).
2. *Ibid*
3. 2024 Capital Markets Fact Book, SIFMA, July 2024, available at: <https://www.sifma.org/wp-content/uploads/2023/07/2024-SIFMA-Capital-Markets-Factbook.pdf>

A Governance Imperative: Why Pension Funds Need a Dynamic AI Policy

By: Julie Reiser and Suzanne Dugan, Cohen Milstein

Artificial Intelligence (AI) capability is advancing rapidly. As it improves, pension funds and their vendors are embedding AI into core investment and operational functions to enhance returns and improve efficiencies. AI tools now draft investment memoranda, summarize manager reports, model portfolio risk, analyze actuarial data, support benefits calculations, and automate member communications. Fund staff also use generative AI to accelerate research, interpret statutes, and draft internal documents.



Given these efficiencies, the question is no longer whether pension systems will use AI. It is how quickly they will establish AI governance and how often those policies should be reassessed. For pension fund leadership, AI is not simply a technology initiative. It is a fiduciary imperative.

If AI produces an incorrect benefits calculation, who catches it? If a model misinterprets statutory language governing eligibility or cost-of-living adjustments, who verifies the result? If staff upload confidential member data into a public AI tool, what are the privacy implications? If an investment decision is influenced by an AI-generated summary that omits key risk factors, how is that detected?

These risks are not theoretical. McKinsey reports that 88% of organizations now use AI in at least one business function, yet only about one-quarter have mature AI governance frameworks. That gap between adoption and oversight is particularly concerning for pension systems, which manage substantial assets and highly sensitive member data under strict fiduciary obligations.

AI Exposure Extends Beyond Investments

AI conversations often focus too narrowly on portfolio analytics. Pension system risk is far broader, extending across benefits administration, statutory compliance, data privacy and cybersecurity, investment oversight, board reporting and public disclosures. AI is already influencing each of these functions, and errors can go undetected and scale quickly.

Large language models can generate confident but inaccurate outputs that may oversimplify statutory language or summarize complex documents while missing material details. If not properly configured, they may also retain or expose sensitive data. In a pension system, such failures have tangible consequences: incorrect payments to beneficiaries, misstated disclosures, regulatory scrutiny, litigation exposure and reputational harm.

Fiduciary oversight requires understanding the tools that influence decisions, define boundaries of use, train personnel, and ensure vendor standards. Governance is not about slowing innovation; it is about preventing avoidable risk and demonstrating institutional oversight.

A “No AI” Policy Is Not a Solution

Refusing to adopt AI or discouraging its use is not effective oversight. Employees are already experimenting with AI tools. Research by Microsoft and LinkedIn found that 75% of knowledge workers use AI at work, and 78% of those users do so without employer approval, significantly increasing the risk that sensitive information will be shared with unvetted platforms.

Gartner projects that by 2030, 40% of enterprises will experience security or compliance incidents tied to unauthorized or “shadow AI” use. Prohibitions tend to drive usage underground rather than eliminate it. The absence of a policy does not prevent AI use; it prevents visibility into AI use. For pension funds, that visibility is essential.

AI Governance Is a Risk Management Function

An effective AI policy should answer three questions: Where is AI being used? What risks does that use create? Who is accountable for oversight?

Leading funds are beginning to evaluate AI use enterprise-wide and developing internal AI policies and governance frameworks. Essentially, AI deployment must be accompanied by institutional guardrails.

Pension system governance discussions should align with fiduciary duties: Is AI use consistent with statutory requirements? Are outputs verified before influencing decisions? Are member data protections clearly defined? Is the board receiving updates on AI initiatives and associated risks?

This requires acknowledging that AI is already embedded in work product and bringing it within formal oversight structures. In many cases, this also means engaging experienced governance and fiduciary advisors who understand both pension system operations and the legal obligations.

Practical First Steps

AI governance should be principle-based and dynamic. Initial steps include conducting an enterprise-wide inventory of AI use, clarifying privacy and confidentiality rules, establishing review protocols for AI-generated outputs and assigning executive-level accountability. Importantly, AI risk should be integrated into existing risk management and compliance structures rather than treated as a standalone initiative.

The technology sector’s mantra “move quickly and break things” is incompatible with the mission of pension systems. The retirement security of public employees depends on stability, accuracy, and trust.

Adopting a dynamic AI policy is not about resisting innovation. It is about protecting beneficiaries, preserving institutional credibility and ensuring that technological progress advances — rather than undermines — fiduciary duty.

Julie Reiser, co-chair of Cohen Milstein’s Securities Litigation & Investor Protection practice, focuses on protecting the investment interests of public pension fund and Taft-Hartley pension funds.

Suzanne Dugan leads Cohen Milstein’s Ethics & Fiduciary Counseling practice, where she counsels pension funds on fiduciary responsibility, ethical duties, strategic governance, and compliance issues.

The AI Inflection: Investing Beyond Sectors in a Thematic World

By: Nick Niziolek and Dennis Cogan, Calamos Investments

Artificial intelligence is a structural force reshaping capital flows and business models. We believe it should also reshape the frameworks investors use to understand opportunity. Traditional approaches anchored in backward-looking sector classifications and static factor tilts are increasingly inadequate. We strongly believe a thematic, actively managed approach is better suited to not only capture the AI-driven opportunity set but also essential for managing the risks accompanying this transformation.



Why GICS Sectors Fail in an AI-Driven World

The Global Industry Classification Standard (GICS) organizes the investable universe into 11 sectors based primarily on a company's principal business activity. This framework was designed for a world where industry boundaries were relatively stable, and companies could be neatly categorized. AI is breaking those boundaries.

An investor screening by GICS sector would be unlikely to connect the investment opportunities of a global, multisector AI value chain with sweeping needs for infrastructure, power, and technology hardware and software. Participants include industrial, utilities, and technology companies, across developed and developing markets.

The transition from electrical/copper-based data transmission to optical (light-based) networking is a sub-theme in the AI infrastructure buildout that vividly illustrates the limits of a GICS framework. The optical networking value chain crisscrosses countries and sectors with key players from Japan (fiber manufacturing; industrials sector) to Taiwan (semiconductors; information technology sector) and the United States (photonics, information technology). A sector-constrained or regionally siloed approach misses these interconnections; a thematic, globally oriented process captures them naturally.

These limitations are especially pronounced in emerging markets, where AI supply chain contributions manifest very differently across countries: Taiwan through semiconductor manufacturing, South Korea through memory and displays, and China through a rapidly maturing domestic AI ecosystem. Sector-based allocation would lump them under "Information Technology," missing the critical distinctions driving returns.

How AI Is Reshaping Factor Performance

The AI revolution is also altering the behavior of traditional equity factors that many investors rely upon for portfolio construction. The investment industry has long categorized companies into boxes — "Growth" versus "Value," high "Quality" versus low — as if these labels represent fixed, immutable characteristics. These classifications are backward-looking, and the boundaries between them are far more fluid than most investors appreciate.

For example, "Growth" versus "Value," is not a binary choice for us. We prefer to think of growth and value in concert, investing in businesses with compelling growth fundamentals that support the ability to compound intrinsic value over time.

Similarly, as it relates to “Quality,” wide swaths of the economy where business models were previously believed to be highly defensible — including knowledge-intensive businesses, software platforms, IT services, professional services — are facing the forces of creative destruction from AI. As a result, all three components of a discounted cash flow framework — expected growth rate, discount rate, and time horizon — are being marked more conservatively for many of these businesses. Meanwhile, as the once-assumed durability of “quality” cash flow streams comes under scrutiny, investors are increasingly recognizing the value of nearer-term cash flows less vulnerable to AI disruption, often in more cyclical or tangible-asset-intensive areas that constitute the “Value” factor.

The Bifurcation and Our Approach

The AI investment cycle is producing a clear bifurcation that does not respect sector boundaries. The most immediate beneficiaries are companies providing infrastructure — semiconductors, data center equipment, power generation, and cooling solutions. Beyond infrastructure, emerging opportunities in humanoid robotics, industrial automation, and autonomous systems represent the next frontier. Conversely, companies in software, knowledge services, and IT consulting face extended valuation pressure. A third cohort — cyclical businesses benefiting from the global recovery while perceived as less vulnerable to AI disruption — may be the most interesting for active investors.

Our research coverage is organized around key secular and cyclical themes rather than traditional GICS sector assignments. Our investment process screens over 11,000 companies globally, leveraging proprietary quantitative tools alongside deep fundamental research to identify inflections in real time. Today, approximately 20% of the names in our portfolios were not on our radar two years ago, and we anticipate this figure will only increase as AI disrupts moats across many industries.

The AI revolution is not a sector story; it is a global, multidecade transformation that touches every industry, geography, and investment factor. Investors anchored to backward-looking classification systems or complacent positioning in yesterday’s winners risk being left behind.

[This article excerpts a white paper, available at www.calamos.com/globalcapabilities](http://www.calamos.com/globalcapabilities)

Nick Niziolek, CFA, Co-CIO, Head of Global Strategies, Senior Co-Portfolio Manager and **Dennis Cogan, CFA**, SVP, Senior Co-Portfolio Manager, have each been members of the Calamos Investment organization for more than 20 years, and contribute nearly 50 years of combined industry experience. They are responsible for portfolio management for the firm’s global, international, and emerging market equity strategies. Additionally, as a Co-CIO, Nick is responsible for oversight of investment team resources, investment processes, performance, and risk management.

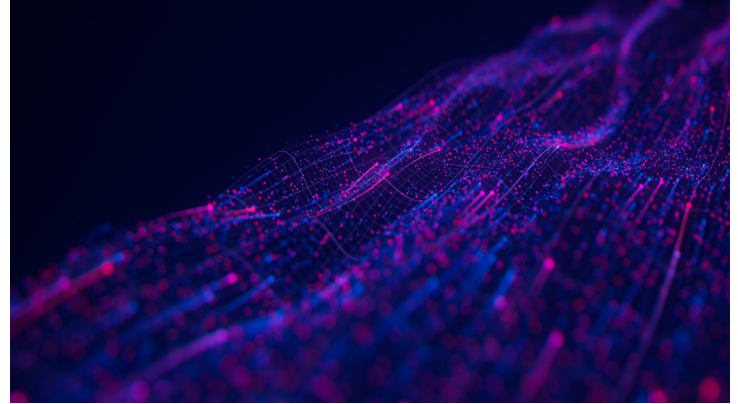
Disclosures: Opinions, estimates, forecasts, and statements of financial market trends that are based on current market conditions constitute our judgment and are subject to change without notice. The views and strategies described may not be appropriate for all investors. References to specific securities, asset classes and financial markets are for illustrative purposes only and are not intended to be, and should not be interpreted as, recommendations.
Calamos Advisors LLC.

How Could AI Help Public DC Plans?

By: Thomas Anichini, GuidedChoice

Plan staff deal with recurring friction:

- Participants submit incomplete forms
- New employees miss enrollment steps
- Near-retirees seek help only when key decisions are close
- Communications staff keeps rewriting standard explanations
- Service teams answer the same loan and withdrawal questions repeatedly
- Operations staff sort routine items from urgent ones before they can solve either



These are the places where AI help first.

Use LLMs Where Staff Lose Time

Some of the clearest uses for AI are language-heavy tasks that already consume staff time.

Plan staff answer routine questions, rewrite technical language, sort incoming messages, and hunt for the right policy or procedure. Large language models fit that work. They can summarize documents, classify inquiries, draft plain-language responses, and help staff retrieve plan rules quickly.

That matters because much of plan administration depends on explanation. A participant asks about a loan. Another submits a withdrawal form with a missing field. A third wants to know how a beneficiary change works. Before staff can solve these problems, they often must explain the rules, restate them in clearer language, and direct the case to the right queue.

LLMs help with that routine work. They reduce repetitive drafting, speed up routine triage, and help staff respond more consistently.

Much of this work is language-heavy: explaining, rewriting, sorting, and retrieving.

Table 1: Language-Heavy Tasks Where LLMs Help Plan Staff Most

- **Explain plan provisions in plain language**
- **Draft routine responses**
- **Classify inquiries**
- **Summarize documents**
- **Help staff retrieve rules and procedures**

Use AI Predictive Models Where Timing Matters

Other problems in DC administration are less about explanation than about timing.

Some failure points are familiar:

- A participant borrows repeatedly
- A worker leaves service and takes a cash distribution
- A worker maintains an unsuitable allocation for years
- A near-retiree reaches distribution without a drawdown plan

These are familiar failure points in DC administration.

Predictive and analytic models fit this work better than chat tools do. They can look for patterns in structured data and help the plan identify which participants are more likely to cash out after separation, disengage, miss key steps, or approach retirement unprepared.

Predictive models help the plan spot these risks sooner.

A plan that can identify likely cash-outs could send earlier messages about preservation and rollover options. A plan that can spot disengaged participants might target education before the gap widens. A plan that can detect anomalies can catch errors before they spread.

The next kind of work: find patterns earlier so the plan pre-empts unwanted outcomes.

Table 2: Plan Problems that Predictive Models Help Flag Earlier
<ul style="list-style-type: none"> • Leakage risk • Disengagement • Anomalies or errors • Repeated borrowing • Weak retirement-readiness signals

Where AI Would Help Plan Staff Most

The value is clear when you consider where plan staff lose time.

- Communications staff rewrite standard explanations in multiple formats
- Service teams triage surges of participant questions after market events, annual notices, or rule changes
- Operations staff identify incomplete forms, extract key information, and route cases before backlog builds
- Education teams tailor messages for new hires, mid-career workers, and near-retirees
- Plan leadership see where participants get stuck and where routine processes fail

AI can help plan staff do their jobs with less delay, less repetition, and better timing.

Keep Judgment With Staff

For all AI can help with supporting routines and raising alerts, staff should still make the decisions that affect participant options and outcomes.

A model may help explain a projection, a system may help draft communication, and a tool may flag a high-risk case. However, staff should still validate the numbers, choose the intervention, and decide what happens next.

That boundary matters even more in public plans than in private ones, due to the legal duties, privacy obligations, procurement rules, and scrutiny public plans face. Any tool that affects participant communications, case handling, or targeted outreach must remain reviewable and accountable.

Thus, AI should assist staff, not decide for them.

Evaluate Tools by Plan Problems

Public DC plans should judge AI tools by the work their staff face.

Does the tool reduce delay? Does it help staff answer routine questions more clearly? Does it flag incomplete forms before backlog builds? Does it help identify likely cash-outs early enough to matter? Can staff monitor it, explain it, and override it when needed? These are the right questions.

Use AI where it cuts delay, reduces repetitive work, and helps plan staff stave off regrettable results. That is the case for AI in public plans: better execution of the work that already shapes participant outcomes.

Thomas Anichini, CFA, CFP, is Chief Investment Strategist with GuidedChoice / 3Nickels, with over 30 years of actuarial and investment experience.

Tom is a member of GuidedChoice's Investment Committee. He refines GuidedChoice's capital market assumptions and proprietary return model, and also contributes to GuidedChoice's retirement advice engine and 3Nickels financial advice engine. Tom communicates about the firm's philosophy and advice, and represents the investment team when facing clients and consultants.

Prior to joining the firm, Tom gained experience in various actuarial, investment consulting, and portfolio management positions, including for EnnisKnupp & Associates, Mercer, Westpeak Global Advisors, and Freeman Investment Management.

A Structured Approach to AI Implementation Ensures Success

By: Wayne Leipold, Segal

Artificial intelligence (AI) has quickly become part of everyday work for many retirement system professionals — summarizing documents, drafting communications or accelerating analysis. But moving from individual experimentation to organization-wide value requires more than access to AI tools. It requires structure.

One public retirement organization recently walked this path, beginning with curiosity about AI's potential to improve productivity and decision-making — particularly within its technology and project delivery teams — and ending with a coordinated portfolio of strategic initiatives. This experience illustrates how retirement systems can responsibly adopt AI while maintaining the accountability and transparency their members expect.

What followed was not a single "AI project," but a sequence of coordinated efforts — each building on the last — to ensure AI adoption was useful, well-governed and sustainable.

Start With Strategy for Clarity

The work began with the development of an organizational AI strategy. Rather than focusing on specific technologies, the strategy established three guiding principles:

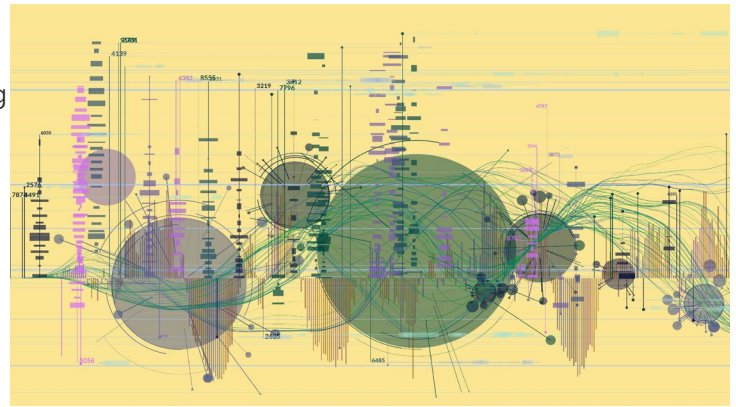
- AI should augment human judgment.
- AI use must align with organizational values.
- Data privacy, security and transparency are foundational, especially in a public-sector retirement environment.

A key outcome of this phase was the development of a proposed "Responsible Use of AI" policy. The policy translated broad concepts into practical expectations around acceptable use, human oversight, training requirements and accountability. By putting guardrails in place early, the organization created space for innovation while reducing uncertainty for staff and leadership alike.

From a management perspective, this step mattered because it was intended to reduce risk. Staff knew what was allowed; leaders knew how AI would be governed; future projects could move forward without revisiting foundational questions each time.

Build Confidence Through Education

With strategy and policy established, the organization's attention turned to people. AI training sessions focused on building shared understanding were delivered to staff and leaders. The sessions addressed what generative AI does well, where it falls short and how it can be used responsibly in day-to-day work.



This training helped staff and leaders gain confidence that AI could be used safely and effectively. And the workforce began to identify meaningful opportunities to integrate AI into existing workflows — rather than experimenting in isolation.

Training became the bridge between high-level strategy and practical execution.

Move From Ideas to Action With an AI Tactical Blueprint

Only after strategy, policy, and training were in place did the organization move into implementation. That transition was formalized through an AI tactical blueprint, which is a practical roadmap for turning ideas into action.

The blueprint identified a small set of pilot initiatives, each clearly defined with objectives, success measures, dependencies, and governance. Rather than attempting broad transformation, the organization focused on targeted opportunities where AI could deliver near-term value with manageable risk.

Initial pilots deployed AI agents to support existing work processes. One pilot enabled executive reporting related to the software development lifecycle. A second was created to provide information to team members who were going through an organizational change. The third is an operational knowledge management tool using AI agents for survivor benefit processing teams.

Each initiative followed familiar project-management disciplines: defined scope, phased rollout, stakeholder engagement, and clear ownership.

By introducing it through these specific pilots, AI started to become part of how work gets done.

Lessons That Travel

This organization's experience provides a broader lesson for public retirement systems: Successful AI adoption is less about finding the "right" tool and more about sequencing the work correctly.

Start with strategy and guardrails. Invest in training to build confidence and trust. Then move into execution using disciplined project management and clearly defined pilots. This approach allows organizations to learn, adapt and scale — without losing sight of accountability or the necessity of appropriate third-party risk management and vendor due diligence activities.

AI may be new, but the fundamentals of managing change are not.

Three Practical Takeaways for Retirement Systems

1. **Treat AI as a program, not a product. Policies, education and training, and governance matter as much as the technology.**
2. **Start small and stay focused. Carefully selected pilots build momentum without overwhelming staff.**
3. **Keep humans in the loop. AI works best when it supports professional judgment.**

Wayne Leipold, PMP, is a Senior Consultant in Segal's Administration and Technology Consulting practice. He has more than 25 years of consulting experience implementing complex software solutions, process improvements and operations management for clients, including public pension systems.

Strategies for Retaining Late-Career Employees

By: Aaron Chochon and Brent Banister, CavMac

Public employers across the United States are facing workforce shortages, with many sectors struggling to attract and retain talent. This situation is exacerbated by an aging workforce and increased competition for skilled workers. To help tackle this challenge, there are several strategies available for defined benefit plans to encourage late-career employees to remain in the workforce.



A significant portion of public sector employees have reached, or are close to reaching, retirement eligibility.

As these individuals leave the workforce, the loss of institutional knowledge and experience can create gaps that younger, less experienced employees may struggle to fill. Additionally, public employers are often constrained by budgetary limitations, making it difficult to offer competitive salaries and benefits that can attract new talent. Further, in response to the Great Recession, many public retirement plan sponsors created new, less costly benefit tiers for future hires to help improve their long-term funding trajectory. Although prudent at the time, some of these new tiers represented a significant reduction in benefits, complicating the recruitment of new talent.

As public employers seek innovative solutions to address workforce shortages, public retirement systems are exploring several strategies to incent late-career employees to extend their service.

The following are some approaches available for consideration:

Deferred Retirement Option Plan (DROP)

DROP programs allow eligible employees to “lock in” their accrued retirement benefits while continuing to work for a specified period – generally between three and five years. During this time, the participant’s monthly benefit is credited to an account (termed a “DROP account”) and typically accumulates with interest. Upon actual retirement from employment, members can receive their accumulated DROP accounts in a lump sum payment and start receiving their “locked-in” monthly retirement benefits.

This program encourages employees to extend their careers by offering a substantial lump sum benefit without reducing their accrued retirement benefit. DROPs can be designed a myriad of ways, with some designs specifically targeting employee retention. DROPs are utilized often when the retirement plan puts a cap on benefit service.

In-Service Distributions

In-service distributions allow eligible employees to access their retirement pension while also receiving a paycheck and retaining medical insurance coverage, provided they meet minimum age requirements set by the IRS. This option provides an incentive for older employees to work longer by offering a significant increase in total compensation. In addition, the increase in compensation and, therefore, the incentive is larger for career members who have accrued larger retirement benefits. The result allows public employers to retain valuable knowledge and skills.

Return-to-Work Program

Through Return-to-Work programs, retirees who underwent a bona fide retirement are welcomed back into positions covered by the retirement system, without pausing their retirement benefits. This can be particularly useful for addressing immediate staffing shortages. However, such programs can be restrictive in their design with respect to the number of hours the employee may work, the length of the bona fide retirement, and the typical requirement that there can be no pre-arrangement between the member and the employer to regain employment.

Partial Lump Sum Option

Another approach is to allow eligible members to receive a portion of their retirement benefits as a lump sum payout at retirement, contingent upon earning additional service beyond regular retirement eligibility. Their lifetime benefit would then be reduced to reflect the lump sum. The potential for a large payout is intended to incentivize employees to continue working until reaching the stricter (later) eligibility requirements.

Increasing Normal Retirement Age

While not an immediate solution, increasing the normal retirement age (usually only for new hires) can help to retain employees over the long-term, promoting a longer tenure for new members. This change, however, would likely not address short-term challenges and could potentially face backlash from current employees. It should thus be balanced with more immediate incentives designed to retain existing personnel.

Conclusion

In the face of broad demographic shifts, workforce shortages in the public sector is a difficult issue to address and requires strategic action. By implementing innovative retirement options, public retirement systems can incentivize late-career employees to remain in their roles longer and help alleviate the issue.

Public employers should remain proactive and responsive to both the challenges and opportunities presented by an evolving workforce. By prioritizing employee retention and investing in workforce strategies, public employers can help ensure that they continue to provide essential services effectively while addressing the needs of their personnel. The focus must be on creating policies that not only meet operational demands but also recognize and value the contributions of experienced employees throughout their careers.

Aaron Chochon, ASA, EA, MAAA, FCA, Consulting Actuary, has developed a broad range of experience in public pensions, including pension valuations, assumption analysis, legislative analysis, projection modeling and consulting services.

Aaron has provided actuarial services to many retirement systems, such as Kansas PERS, Nebraska PERS, Iowa PERS, Missouri State Employees Retirement System (MOSERS), Oklahoma PPRS, South Dakota Retirement System, and numerous municipal clients.

Brent Banister, PhD, FSA, EA, MAAA, FCA, Chief Actuary, has public sector consulting experience since 1994 providing services to large public clients. He has worked extensively with cost-sharing multiple employer statewide and other large systems, including Indiana Public Retirement System, Iowa Public Employees Retirement System, Kansas Public Employees Retirement System, Los Angeles County Employees Retirement Association, Minnesota Teachers Retirement Association, Nebraska Public Employees Retirement System, and Oklahoma Public Employees Retirement System, in preparing the annual valuation, developing projection models, and conducting cost and experience studies. Over his career, Brent has performed a significant amount of review work for other consultants covering retirement and postemployment benefits on systems from municipalities through statewide systems all across the country.

Building Conviction in a World of Shifting Narratives

By: Chandan Khanna, William Blair Investment Management

Global markets present a landscape of opportunity for equity investors despite macroeconomic headwinds. Chandan Khanna, a portfolio manager on William Blair's Global Leaders and International Leaders strategies, explains how he seeks to take advantage of such opportunities.



Investment Philosophy

Khanna says his investment philosophy is a blend of quality and growth. "Growth on its own isn't enough, because that's where you can run into real downside risk," he says. "And quality without growth can lead you to overpay for stability that isn't actually compounding. So, the philosophy is really about finding that balance — businesses that have the quality characteristics you want and the growth to justify the valuation."

Investment Approach

"At its core, equity is a unique asset class. The downside is limited to your invested capital, but the upside is theoretically unlimited. To capture that asymmetry, many investors focus so much on avoiding mistakes that they miss the big winners. But over time, the big winners can drive long-term returns as that growth offsets the inevitable losses elsewhere in your portfolio," says Khanna.

Because of that, Khanna seeks to identify those outsized winners, while believing quality discipline helps avoid permanent capital impairment. "To do that, I've historically leveraged a "5/10/15" approach, which means I look for companies that have the potential to deliver 5% organic sales growth, 10% earnings per share (EPS) growth and net margin, and 15% return on equity (ROE), margin of safety, and earnings before interest and taxes (EBIT) margin. It's a way for me to put guardrails around words such as quality and growth, which can mean different things to different people."

Where Growth is Today

"Growth shifts over time. Identifying that shift and where it is moving to is part of the job — and part of the skill," says Khanna.

For example, early in his career, consumer staples used to be a key area of global growth. But around 2012 and 2013, growth increasingly converged in technology. "We were early to move our portfolio allocation there. Within technology, growth leadership moved in fits and starts — from software to semiconductors. Today, the divergence between semis and software, even within tech, is as wide as it has ever been."

Future Growth Opportunities

"A growing growth theme is the personalization of everything," says Khanna. "As the cost of tailoring products and services to the individual continues to fall, the opportunity set expands."

He continues, "In healthcare especially, we're moving toward more personalized approaches to treatment and prevention. People respond differently to the same inputs, and advances in data, diagnostics, and technology should allow for much more targeted care. That has meaningful implications for both outcomes and economics."

Approaching Periods of Volatility

In volatile market periods, it's important to deconstruct what the market is saying versus what's actually happening. "A lot of the time the move is driven by the narrative rather than by fundamentals. With good, high-quality companies, earnings don't usually change that quickly. They may miss a quarter, but they're often still compounding at attractive rates. What shifts faster is sentiment and the market's view of the long-term story."

Khanna continues, "We've seen that repeatedly. In 2022–2023, Meta was viewed as a legacy media business — almost a "Yahoo 2.0" narrative — and then it became an AI leader. Alphabet was seen as an AI laggard not long ago and then quickly rerated. The market's perception can change much faster than underlying fundamentals. In those moments, the key is separating narrative from reality."

Valuation in Portfolio Construction

Khanna believes valuation is very central to the "5/10/15" framework. "We look for roughly a 15% margin of safety to intrinsic value when we invest. That said, it's the last thing we assess. The starting point is always the business model. Then we do the work on the financial model and valuation to determine if now is the time to buy that attractive business."

"There are plenty of businesses we admire but won't own because the valuation isn't right. In those cases, we're willing to be patient, sometimes for years, and wait for the market to offer an opportunity. When it does, we look to move," Khanna concludes.

This article is excerpted and edited for length. [Click here to read the full article.](#)

Chandan Khanna is a portfolio manager for the Global Leaders and International Leaders strategies at William Blair Investment Management. Before joining the firm in 2025, he was a senior partner and global equity strategy portfolio manager at Eighteen48 Partners, a boutique investment firm based in London. Previously, Chandan worked on the buy side at Capital Group. He has also held roles at Morgan Stanley and KPMG. Chandan is a Chartered Accountant. He received a B.Com from the University of Mumbai and an M.B.A. from INSEAD.

Beyond U.S. Exceptionalism

By: Don Dimitrievich, Nuveen

Concerns are growing over economic activity, political tension, and policy uncertainty in the U.S., creating a challenging investment environment. Headlines throughout 2025 and so far in 2026 underlined this uneasiness; foreign investors were reportedly leaving U.S. markets in droves amid currency volatility and tariff-driven fears, possibly spelling the end of U.S. exceptionalism as we know it. Adding to these doubts is the specter of an increasingly deglobalized world.

In this climate, separating rhetoric from reality is crucial. In our opinion, the world may be changing, but global private credit — whether corporate or asset-backed — remains an attractive opportunity set for those seeking diversified sources of stable income in an unstable time. Institutional investors can build resilience with alternative credit by diversifying exposure across a range of asset classes and across the U.S. and Europe.

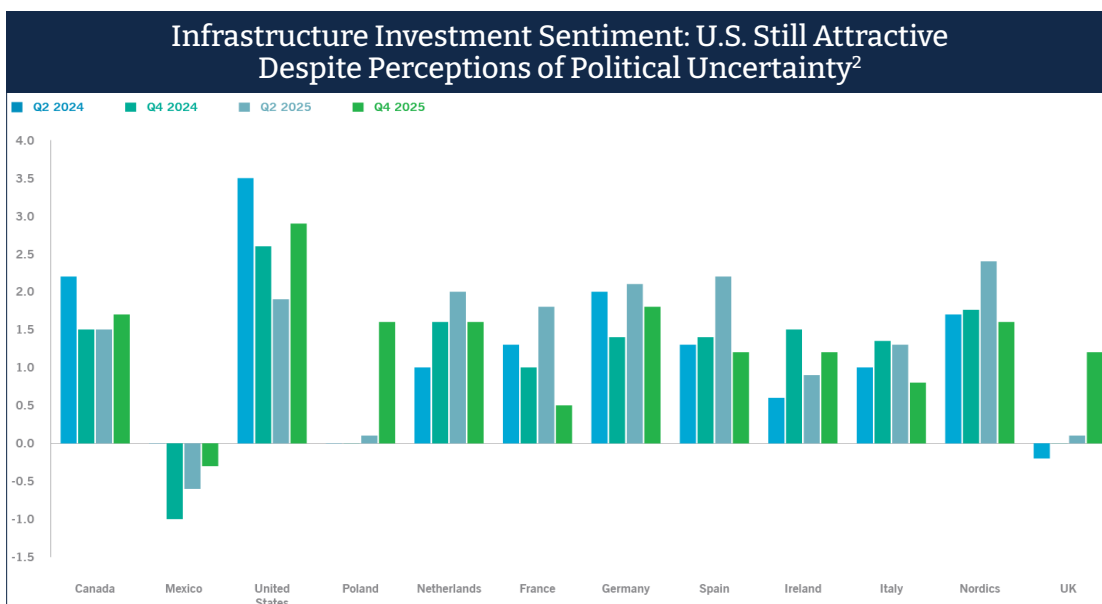
U.S. Remains a Rich Source of Opportunity Despite New Risks

Despite the uncertainty, the U.S. economy has demonstrated its ability to withstand shocks and beat pessimistic forecasts. Corporate earnings remain robust, and default rates for U.S. credit, especially among higher-rated borrowers, remain overwhelmingly stable.¹

Despite the U.S. dollar weakening through 2025 and into 2026, it continues to anchor international portfolios, providing depth and liquidity that few global markets can match.

In this environment, we believe U.S.-based credit continues to play an important source of portfolio diversification. Investors are drawn by its strong fundamentals, attractive risk-adjusted yields, and proven resilience.

While issues such as the First Brands' and Tricolor bankruptcies have cast a shadow over private credit, industry experts and allocators stress that these incidents remain isolated, driven by inadequate diligence and lax underwriting, rather than broader economic malaise. Disciplined managers continue to demonstrate the importance of robust due diligence in an environment rich with opportunity but not without risk.



Europe Offers Unique Risk Diversification Exposure

While the U.S. remains attractive, the universe for alternative credit is broader than one market. We're seeing Europe offering pockets of long-term value, especially in non-cyclical sectors and upper middle market lending. The stronger euro, likely in response to the weaker U.S. dollar, exemplifies the benefits of geographic diversification in times of global uncertainty.

According to a recent survey of asset managers globally, 37% of respondents identified European direct lending as having the most growth potential over the next five years.³

Opportunities in Europe reflect the continent's geopolitics. A continued focus on energy infrastructure for both renewable energy and energy security, for example, demonstrates how structural changes are driving compelling investments. These same factors are acting as catalysts for investment grade private credit.

Energy Infrastructure Credit

From our perspective, infrastructure debt as an asset class continues to present attractive investment opportunities for investors. It is supported by rapid power demand growth from AI datacenters, onshoring of manufacturing, and electrification.

In the U.S., private infrastructure debt investments across energy, power, and digitalization steadily climbed from approximately \$120 billion in 2021 to nearly \$350 billion in 2025. This is not only expected to increase, but there is over \$600 billion of debt maturing before the end of 2030.⁴

Our research explains why we see energy efficiency, community solar, domestic manufacturing, and U.S. liquified natural gas offering attractive risk-adjusted opportunities in this environment. These energy and power investment themes address critical supply-demand imbalances that will likely persist for the next decade and are all supported by government policy.

Don Dimitrievich, is a Senior Managing Director and Portfolio Manager for Energy Infrastructure Credit at Nuveen, where he leads investment strategy, oversees portfolio management and chairs the Investment Committee for the EPIC funds and EIC platform.

Don brings over 25 years of investment experience to his role. Prior to joining Nuveen in 2022, he was Head of Energy & Power and a Partner at HPS Investment Partners, where he founded and led the energy and power investment vertical. Previously, he served as a Managing Director at Citi Credit Opportunities, overseeing power, renewables and energy investments. Don began his career as an attorney at Skadden, Arps, Slate, Meagher & Flom LLP, focusing on energy and power M&A.

Don holds a JD with Great Distinction from McGill University and a chemical engineering degree with Great Honors from Queen's University.

Disclosures: This material is not intended to be a recommendation or investment advice, does not constitute a solicitation to buy, sell or hold a security or investment strategy and is not provided in a fiduciary capacity. The information provided does not take into account the specific objectives or circumstances of any particular investor, or suggest any specific course of action. Investment decisions should be made based on an investor's objectives and circumstances and in consultation with their financial advisors. Financial professionals should independently evaluate the risks associated with products or services and exercise independent judgment with respect to their clients.

Past performance is no guarantee of future results. All investments carry a certain degree of risk, including the possible loss of principal, and there is no assurance that an investment will provide positive performance over any period of time. Certain products and services may not be available to all entities or persons. There is no guarantee that investment objectives will be achieved.

Nuveen, LLC provides investment solutions through its investment specialists.

5329303

Endnotes:

1. S&P Global "Default, Transition, and Recovery: Regional Divergences Should Keep The Global Default Rate Steady Through September" dated 26 Nov 2025
2. Alvarez & Marsal (Q4 2025): Infrastructure Pulse – North America and Europe. Chart based on respondents answering "What is your outlook for the attractiveness of, and opportunities for, your fund(s) infrastructure investment in the following countries in the next quarter? (-5: extremely unfavourable, 0: neutral, 5: extremely favourable)"
3. Mercer "Private Markets in Motion: Private debt Taking the pulse of global asset managers" as of July 2025
4. Infralogic (Accessed 24 Feb 2026)

Why Japan's Structural Story Has Years to Run

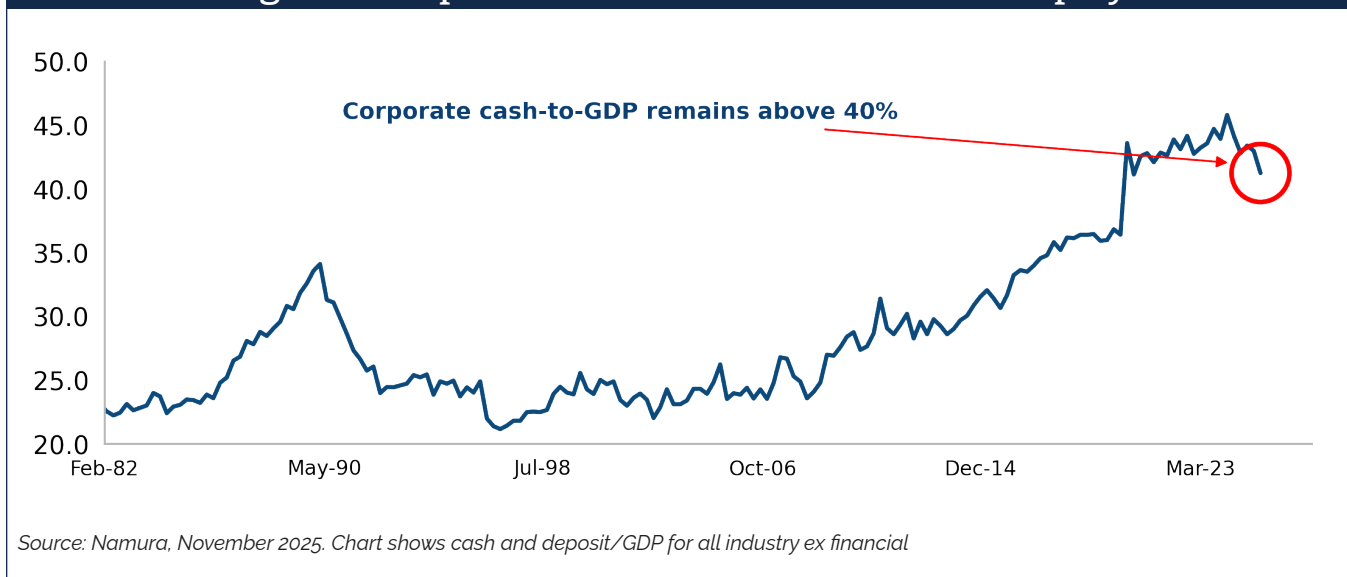
By: Daisuke Nomoto and Simon Morton-Grant, Columbia Threadneedle Investments

Across boardrooms in Tokyo, the conversation has shifted from cash retention and stability to an urgent focus on shareholder returns and capital efficiency.

The numbers tell the story of gathering momentum. Japanese companies returned 60% of net income to shareholders in 2025, yet they are still sitting on cash equivalent to 40% of GDP — more than double the U.S. ratio (Figure 1). Share buybacks have multiplied nine times since 2012, cross-shareholdings continue to unwind, and dividends have doubled in 10 years.



Figure 1: Corporates Still Have Lots of Cash to Deploy



Multiple Catalysts Align for Sustained Growth

Three powerful catalysts are converging to create a 'why now' moment.

1. **Shift from savings to investment culture.** People are beginning to invest against a backdrop of persistent inflation and improved NISA accounts (Japan's tax-free investment scheme).
2. **Nominal GDP growth is projecting upward,** and the TOPIX historically tracks this trajectory.
3. **Japan's political winds have shifted decisively.** Takaichi pursues 'Sanaenomics' – a strategy that fuses economic growth with national security. With fiscal and monetary support, the government is partnering with private industry to dominate tomorrow's critical technologies: artificial intelligence (AI), semiconductors, quantum computing, shipbuilding, cybersecurity, and digital content.

Relative to U.S. markets, Japanese equities trade at a significant discount – this positions Japan as a natural beneficiary of any rotation away from U.S. exceptionalism.

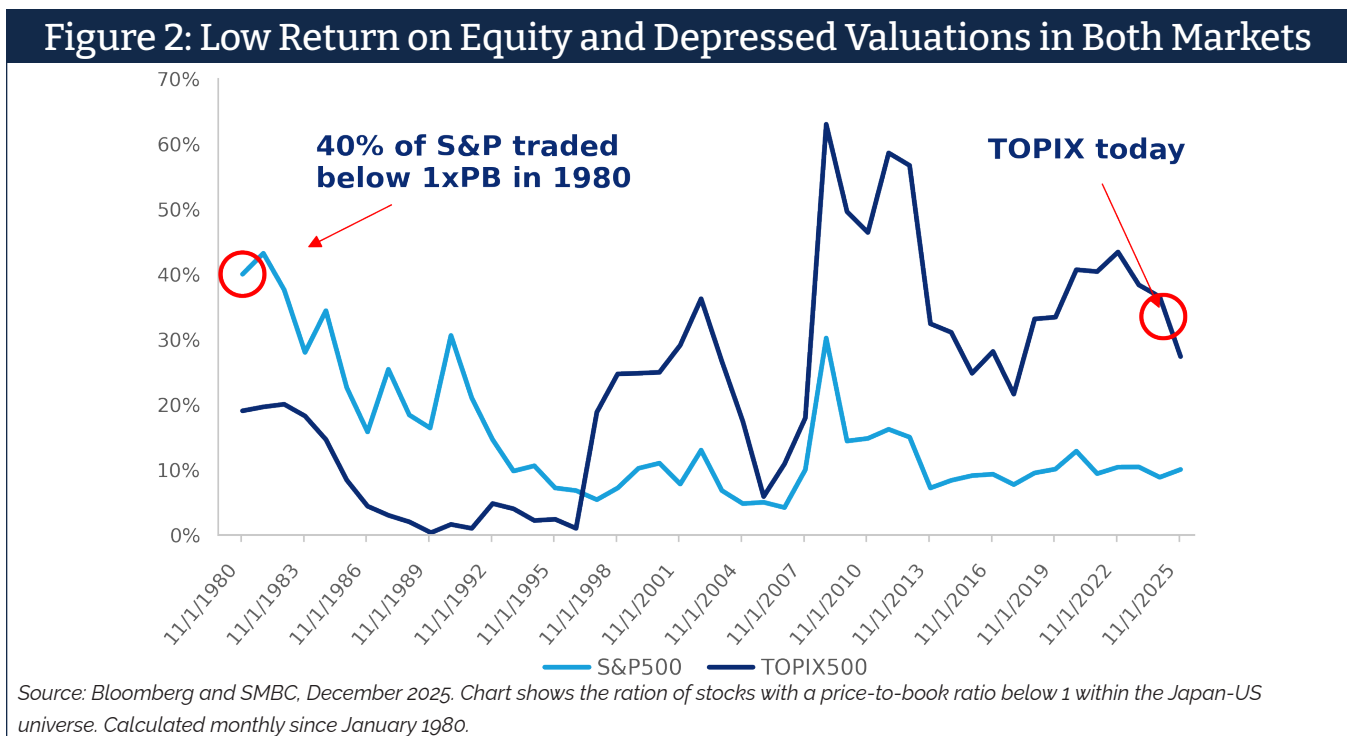
Japan’s Investment Landscape Transforms

Japan’s investment story is evolving beyond its traditional automation and digital transformation themes.

- **AI adoption** – addresses productivity challenges without the job displacement fears plaguing other nations.
- **Infrastructure spending** – infrastructure built 40-50 years ago during the high-growth and bubble eras requires comprehensive renovation. Construction companies stand to benefit.
- **Fan culture** – ‘Oshikatsu’ – supporting favorite idols, anime characters, VTubers, and athletes – now rivals the global anime industry in market size.
- **Refloating shipbuilding** – defense and maritime equipment sectors benefit from rising geopolitical tensions.
- **Osaka’s reemergence** – momentum builds behind Osaka’s ‘sub-capital’ vision signaling economic rival ahead.

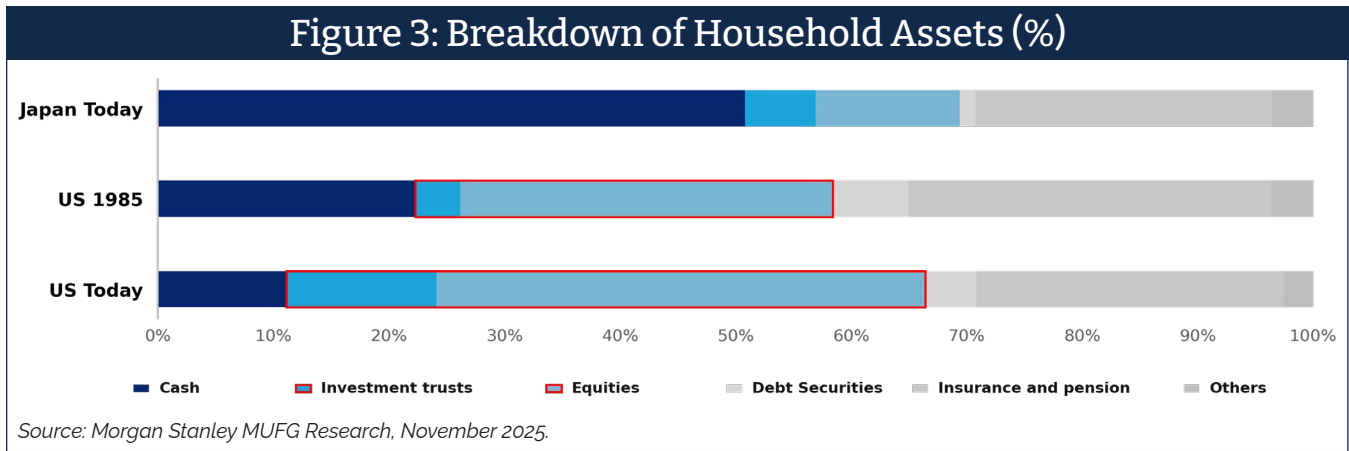
The Wealth Creation Playbook: Japan Today Mirrors 1980s U.S.

The parallels to America’s transformation in the early 1980s are striking and instructive. Back then, 40% of U.S. stocks traded below book value – almost identical to Japan today (Figure 2). American companies were directionless after the stagflation of the 1970s, just as Japanese firms remained shell-shocked decades after their bubble burst.



The catalyst in both cases was the same: a corporate awakening focused on shareholder returns.

The retail investor revolution also provides another compelling parallel. Equity and investment trusts comprised just 36% of U.S. household allocation in 1985, growing to 55% today. Japan currently sits at 19% – way below 1985 U.S. level – and the trajectory is clear (Figure 3). With 50% of assets still in cash, the potential for reallocation into equities dwarfs what America experienced four decades ago. Japan’s NISA accounts are following a similar transformative path that 401(k)s and IRAs carved in the U.S.



The Active Advantage: Navigating Inefficiency

Japan's transformation demands an active investment approach. The evidence is clear: The median active Japan equity manager outperforms the MSCI Japan Index over every time period in the past decade. Active managers are well positioned to create genuine alpha opportunities from a market riddled with inefficiencies.

Our quality core investment approach strategically targets exceptional, inexpensive businesses with strong fundamentals and management teams dedicated to unlocking shareholder value.

The Bottom Line: Japan's Defining Investment Moment

Japan's renaissance isn't a cyclical upturn; it is a structural transformation that could span decades. The convergence of corporate governance reform, demographic-driven capital reallocation and political realignment creates a compelling multi-year investment thesis.

The structural drivers remain intact, the runway for reform extends years ahead, and the opportunity for active managers to generate alpha has rarely been more compelling. We believe Japan's renaissance is just beginning — and those who recognize its structural nature today will be best positioned to benefit from the transformation ahead.

Daisuke Nomoto, CMA (SAAJ) - head of Japanese equities at Columbia Threadneedle Investments. Prior to his current role, he was a director and senior portfolio manager on the Overseas Equity team.

Simon Morton-Grant - client portfolio manager within the Japan and Asia Equity teams. Responsible for providing detailed information on the company's capabilities and investment views to existing and prospective clients as well as to consultants and other intermediaries.

The Strategic Case for Lower Middle Market Asset-Backed Finance

By: Jay Braden, Mesirow

Institutional investors have meaningfully increased allocations to private credit, often through sponsor backed direct lending. Many are now seeking complementary strategies that offer differentiated sources of return, diversification, and stronger structural protection.

Lower middle market asset-backed finance (ABF) — in particular, lending against granular pools of consumer and small-business assets originated by specialty finance platforms — is, in our view, one of the most compelling opportunities within this broader ecosystem.

This paper outlines why lower middle market ABF is well positioned to deliver attractive, income-oriented returns with meaningful downside protection for long-term institutional capital.



Defining the Lower Middle Market in ABF

In this context, the “lower middle market” refers primarily to specialty finance platforms focused on consumer and small-business assets such as consumer loans, point-of-sale financing, healthcare receivables, small-business working capital, factoring, and revenue-based finance. These businesses are often too small or operationally complex for banks and large private credit managers to serve efficiently.

Facilities in this segment are generally sized between \$15 million and \$75 million, a range in which competition from large banks and megafunds is limited and structuring flexibility is greatest. Collateral pools consist of short-duration, self-amortizing assets that often have millions of underlying contracts. These collateral pools are diversified across originators, geographies, business models and product types. Advance rates are intentionally conservative, typically resulting in portfolio loan-to-value ratios in the low 80% range.

Structural Inefficiency and Return Potential

Post-GFC regulatory changes and capital constraints have led banks to retrench from nonstandard, capital intensive lending, particularly to smaller specialty finance platforms and consumer facing lenders. As a result, a significant portion of the U.S. specialty finance market across consumer, commercial, and contractual cashflow segments remains underpenetrated by both banks and traditional private credit.

This allows for a “complexity premium” to be earned in the lower middle market. Transactions are operationally intensive and often too small to interest scaled platforms, yet large enough to matter for focused strategies. Underwriting requires specialized systems, data analysis, and domain expertise to analyze collateral performance through economic cycles and to assess the operational capabilities of originators. Structural features such as collateral eligibility criteria, conservative advance rates, and dynamic borrowing bases with triggers and covenants are central to risk management.

Investors willing to back managers with the infrastructure and experience to operate in this niche can, in our view, access persistently higher yields than are typically available in more commoditized corporate direct lending, without a proportionate increase in fundamental credit risk.

Diversification and Portfolio Role

Lower middle market ABF offers noncorporate, highly granular, diversified exposure. Unlike sponsor-backed direct lending, where risk is concentrated in individual corporate borrowers, each ABF facility is supported by large pools of consumer and small-business receivables with small average balances, materially reducing single-name risk.

Performance is driven by collateral cash flows rather than EBITDA, leverage, and exit valuations. Historically, this has resulted in low correlation to public markets and to traditional corporate credit. For institutions whose private credit allocations are anchored in middle market direct lending, adding a dedicated lower middle market ABF allocation can:

- Diversify away from sponsor and corporate risk
- Introduce structurally protected, asset backed exposures that are bankruptcy remote
- Enhance cash distributions
- Provide short duration, self-amortizing collateral that steadily returns principal

A well-constructed lower middle market ABF fund will typically hold 20–30 positions diversified by borrower, asset type, origination channel, and geography, with tight limits on exposure to any single platform or pool. Within each position, further diversification comes from the granularity and amortizing nature of the underlying contracts.

Downside Protection and Risk Management

Downside protection is central to the ABF thesis. Key structural elements typically include:

- Bankruptcy-remote special purpose vehicles (SPVs) that hold collateral and isolate cash flows from platform operating risk
- Conservative advance rates and meaningful excess spread, creating substantial cushions before lender principal is at risk

Robust documentation reinforces these protections through concentration limits by asset type, credit band, geography, and other risk dimensions; performance triggers that allow for lower advance rates or trap cash when breached; and lender control over collection accounts and cash waterfalls.

Specialty finance platforms generate rich performance data, enabling loan or pool-level reporting at high frequency and near real-time monitoring of delinquencies, prepayments, recoveries, and vintage curves. Structures, advance rates, or eligibility criteria can be adjusted if performance deteriorates. A culture of risk management integrated across sourcing, underwriting, and portfolio management, reinforced by continuous data feedback, should be a defining characteristic of managers in this space.

Jay Braden is the CEO and Co-Chief Investment Officer in Mesirow Alternative Credit. In this capacity, he is responsible for leading the business and participates in all aspects of the investment process. Jay is a voting member of the business' Investment Committee.

Before joining Mesirow, Jay was the founder, Chief Executive Officer, and Chief Investment Officer of Bastion Management. Prior to founding Bastion in 2013, Jay was President of Castillo, LLC, a US investment firm, and before that, he served as Managing Director and Co-Head of High Yield at Wachovia Securities where he led a team of 60+ professionals. Earlier in his career, Jay also held senior roles at Smith Barney and Bear Stearns.

Jay holds a B.A. from Roanoke College and an MBA from The Wharton School.

Reframing Infrastructure Investing: A Fixed-Income-Like Approach for Public Pensions

By: Jason McGaugh, Sustainability Partners

Public pension funds face a persistent challenge: generating stable, long-duration returns while protecting portfolios from inflation and downside risk. As traditional fixed income struggles to meet these objectives in a volatile rate environment, many institutions are expanding allocations to Real Assets and Inflation Protection strategies.



Within this shift, essential infrastructure presents a compelling yet often underutilized opportunity. When viewed through a cash-flow lens, these assets share many characteristics with fixed income, while offering additional benefits tied to essential service demand, inflation resilience, and asset-level control.

Usage-based essential infrastructure investing resembles fixed income in function: stable, contract-supported cash flows tied to essential services, but with additional asset-level controls and an illiquidity premium, which can improve long-term resilience for pension portfolios. Structured correctly, usage-based payment structures can mimic fixed income cash flows - stable and predictable. Most essential infrastructure asset types can be structured to incorporate this concept.

WATER 	WASTEWATER 	BRIDGES & LEVEES 	ROOFS & EXTERIORS 	LED LIGHTING & FIXTURES
HVAC 	BROADBAND & COMMUNICATIONS 	EV FLEET & CHARGING 	ELEVATORS & ESCALATORS 	CHILLERS & BOILERS
TRANSPORTATION & PUBLIC TRANSIT 	ELECTRICAL DISTRIBUTION & MICRO GRID 	PORTS & INLAND WATERWAYS 	PARKS & RECREATION 	SPORTS FIELD TURF & TURF LIGHTING

We start with a clear framework for assessing critical infrastructure opportunities through a fixed income lens - focusing on asset resilience, cash flow stability, and long-term risk mitigation for public pension portfolios.

Similarities between Usage-based Essential Infrastructure and Traditional Fixed Income:

Coupon Payments vs. Contracted/Tariff-Based Cash Flows – Both are designed to deliver predictable, steady cash flows; infrastructure cash flows are structured as recurring payments tied to asset operation plus customer usage while fixed income is generally a scheduled coupon plus principal payment. Both rely on structures that reduce downside risk and improve payment certainty; infrastructure has more “hands-on” control points than traditional fixed-income instruments.

Duration Matching: Liability-Driven Investing vs. Long Asset Life – Both can be used in liability-driven investment-style roles — stable cash flow to meet long-term obligations. Fixed-income maturities are explicit (10/20/30 yrs), whereas with essential infrastructure investments, assets and contract duration naturally match pension horizons (20-50 year asset life); and if structured correctly, can be characteristic of a perpetual cycle of capital deployment and long-term cash flow.

Inflation Protection: TIPS/CPI Linkage vs. Rate Escalation – Both can provide real-return durability. Fixed-income vehicles utilize TIPS, CPI swaps, and floating rates. Municipal infrastructure cash flows often include inflation-protective features, such as annual escalators.

Default Dynamics: Corporate Downgrade Risk vs. Essential-Service Stickiness – Essential infrastructure is closer to utility-like cash flow stability, which can behave “bond-like.” Corporate bonds are susceptible to demand loss, competition, and margin compression, whereas essential infrastructure demand is “sticky” because people must consume essential services such as water and electricity.

Price Volatility vs. Fundamental Value Stability – Infrastructure portfolios can exhibit lower mark-to-market volatility. Usage-based cash flows are not subject to market swings or interest rate movements, whereas fixed income vehicles can fluctuate with rates/spreads even if the issuer remains healthy.

Credit Enhancements vs. Structural Protections – Both investment types offer substantive investor protections. Fixed income carries traditional items such as covenants, seniority, reserve accounts and lien/collateral packages. Infrastructure contracts generally include step-in rights, termination payments, and may also include maintenance requirements, enhancing risk protection by ensuring assets remain in a state of good repair, thereby sustaining cash flow generation.

Core Underwriting Discipline

A specific example is modernizing water and wastewater systems through pump station upgrades, treatment plant resiliency, advanced metering infrastructure, and leak detection to address drought, flooding, and aging network risks.

Water and wastewater investments generate predictable, usage-based revenue streams from municipal ratepayers. Unlike many sectors, demand for water is highly inelastic; consumption may fluctuate modestly, but payment priority remains high across economic cycles.

The cash flow comparison to fixed income is instructive:

Cash Flow Comparison		
Feature	Traditional Fixed Income	Water Infrastructure
Income Source	Coupon payments	User fees/tariffs
Counterparty	Corporate/sovereign issuer	Municipal utility
Demand Sensitivity	Cyclical	Non-discretionary
Duration	Defined maturity	30-50+ years
Inflation Protections	TIPS/floaters	Rate increases, cost pass-throughs

While simplified, the distinction is important: water assets tend to maintain or increase cash flows as costs rise, whereas nominal bonds can lose real value. These characteristics collectively reduce operational and financial risk – supporting stronger, more stable revenue streams. Additionally, these mechanisms provide a natural hedge against inflation that is often more direct and durable than traditional fixed income instruments. Collectively, these features can provide a level of control and downside protection that exceeds many traditional public bond investments.

Consequently, water infrastructure can serve as a complementary component to fixed income within real asset or inflation-protection allocations, supporting income generation, inflation durability, and long-term risk mitigation for public pension portfolios.

Conclusion

As public pensions continue to evolve their portfolio allocations, usage-based essential infrastructure offers a compelling bridge between fixed income and real assets. Its combination of essential service demand and inflation – linked cash flows makes it uniquely suited to long-term liability matching.

For fiduciaries focused on protecting beneficiaries over decades, that alignment is not just attractive – it is essential.

Jason McGaugh serves as Sustainability Partners' (SP) Chief Capital Officer, responsible for formulating investment processes, project investment theses, transaction structuring, returns analyses, and project risk management for the Company's \$15 billion infrastructure project pipeline.

He leads SP's utilization underwriting and due diligence activities, including credit risk evaluation and project cash flow analysis.

Prior to joining SP, Jason spent 8 years at the largest renewable energy manufacturing company in the Western hemisphere, responsible for M&A evaluation and strategic financial leadership to multiple business lines.

Prior experience includes 17+ years in investment banking and advisory roles with deal experience exceeding \$2 billion of enterprise value across multiple industries, representing domestic and international companies on buy-side, sell-side and capital raise transactions. Mr. McGaugh earned both his Bachelor of Science in Finance and MBA from the W.P. Carey School of Business at Arizona State University and has held numerous Securities licenses throughout his career.