# Pensions&Investments

THE INTERNATIONAL NEWSPAPER OF MONEY MANAGEMENT | JUNE 10, 2024 | PIONLINE.COM | $50 AN ISSUE / $350 A YEAR

CRAIN COMMUNICATIONS


**The Largest Money Managers**

## Managers claw back half of '22 losses

### Markets shake off recession fears, bank failures, pushing AUM to $55.23 trillion

**By Douglas Appell**

Money managers in 2023 recovered just over half of the $9 trillion in institutional assets they lost the year before, even as lingering economic and political uncertainties kept a lot of money sidelined, including a record $6 trillion parked in money market funds alone.

When that money comes off the sidelines, managers of active fixed-income and alternatives strategies will likely continue picking up market share at the expense of equity managers, analysts said.

*Pensions & Investments'* 2023 survey of the largest money managers showed institutional assets for 411 managers around the globe rising 9.7%, or $4.89 trillion, to $55.23 trillion as of Dec. 31 — roughly half the prior year's $9.32 trillion plunge.

Total worldwide assets for those managers rose 11.2%, or $8.7 trillion, from the year before to $86.18 trillion.

Despite a start to the year dominated by recession fears and some notable bank failures, managers — still smarting from the U.S. rate hiking cycle that pummeled stock and bond markets alike in 2022 — mostly saw a proverbial glass that was half full rather than half empty as 2023 drew to a close.

Optimism was in short supply as the year began, but then chipmaker Nvidia announced impressive results in May and

SEE MANAGERS ON PAGE 52

**Inside this issue**




Daniel Pelavin

**The Largest Money Managers Real Estate**

## Higher-for-longer interest rates showed no mercy for real estate

**By Arleen Jacobius**

Higher-for-longer interest rates swamped all property types, causing most real estate managers' assets under management to sink in 2023, the results of *Pensions & Investments'* latest money manager survey shows. The close to 18-months-long higher interest rate environment is making last year's rallying cry of "Survive 'til '25" in need of a rewrite to something more akin to "Don't deep-six before '26." Real estate equity AUM managed for U.S. tax-exempt institutions dipped 1.9% to $509.7 billion between 2023 and 2022 and is up only 10.8% over the past five years, *P&I* data shows.

**The data**

Data on real estate managers begins on **Page 38.**

"There is downward pressure on AUM because real estate property values have dropped," said Colin Hill, managing principal, real estate consultant at Meketa Investment Group. The reason: there's been a significant change in the risk-free rate, he said." Now that the

SEE REAL ESTATE ON PAGE 54

**ESG**

## ESG's branding woes pushing investors, managers to adapt

**By ARLEEN JACOBIUS**

ESG is in the midst of a makeover.

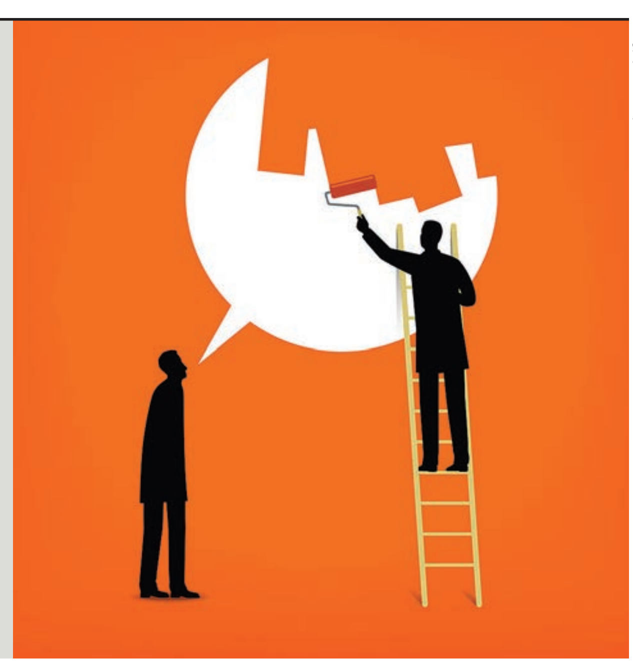
In some U.S. states, the three letters standing for environmental, social and governance have become toxic, even though institutional investors and pension fund executives continue to incorporate ESG into their investment process, believing that managing risk on matters such as climate change and associated floodwaters, for example, is essential to protecting their investments.

In Europe, ESG doesn't appear to be as politicized, but it has become a red state-blue state flashpoint in many parts of America.

Some states in the U.S., including Florida, Missouri, North Carolina, Oklahoma and Texas, have barred consideration of ESG factors

A new law in Oklahoma, for example, requires public pension

SEE BRANDING ON PAGE 49



dane_mark/Getty

**Pension Funds**

## Legal battle finally over, Illinois Firefighters turns focus to private markets

**By ROB KOZLOWSKI**

William Atwood, executive director and chief investment officer of the $8.4 billion Illinois Firefighters' Pension Investment Fund, Lombard, is building out a private markets portfolio, now that a long-simmering lawsuit is over.

The pension investment fund was created by a December 2019 law that consolidated municipal police and fire pension plans outside the city of Chicago into the Illinois Police Officers' Pension Investment Fund, Peoria, and IFPIF. A Kane County lawsuit, filed in February 2021 by the boards of 16 Illinois municipal police pension funds and two firefighters pension funds, alleged that the law violated Illinois Constitution clauses by terminating "plaintiffs' authority to exclusively

SEE FIREFIGHTERS ON PAGE 49

**SOUND BITE**

FRANKLIN TEMPLETON'S **JENNY JOHNSON:** 'If you ask me what I think the most disruptive trend is going to be, it's tokenization. **It's blockchain.**' **Page 3**

### PE deals heating up amid Japan's gains

Japan's corporate governance reforms, weak yen and stock market gains are bringing in private equity buyers and spurring deals. **Page 2**

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**OCIO survey past due**

*Pensions & Investments* is accepting late responses to the annual survey of investment outsourcing. Firms serving as outsourced CIOs to institutional asset owners are eligible to participate. Results will run July 15.

To request a survey or obtain further information, please contact Anthony Scuderi at **ascuderi@pionline.com** or 212-210-0140, or visit **www.pionline.com/section/surveys**.


*Pensions & Investments* (ISSN 1050-4974) is published monthly in January, February, March, July, August and December, and semimonthly in April, May, June, September, October and November by Crain Communications Inc., 130 E. Randolph St., Suite 3200, Chicago, IL 60601. Periodicals postage paid at Chicago, IL, and at additional mailing offices. **POSTMASTER:** Send address changes to Pensions & Investments, Circulation Dept., 1155 Gratiot Avenue, Detroit, MI 48207-2912. $350 per year in the U.S. Printed in U.S.A.

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**Published by Crain Communications Inc.**
**Chicago offices:** 130 E. Randolph St., Suite 3200, 60601
**London offices:** 11 Ironmonger Lane, EC2V 8EY
**New York offices:** 685 Third Ave., 10th Floor, 10017

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**Pension Funds**

# New Exelon CIO to leverage her OCIO roots

## Jessica Hart, a longtime Northern Trust exec, happy she'll now 'effectively have one client'

By **ROB KOZLOWSKI**

Exelon Corp., based in Chicago, is underway with a leadership transition as Northern Trust Asset Management veteran Jessica Hart takes over from longtime CIO Douglas Brown.

Brown, who is retiring July 1, has been the investment management head of the utility company's defined benefit plan, 401(k) plan and — until recently — a nuclear decommissioning trust since the end of 2008. Before then, he was chief investment officer of Chrysler.

When Brown arrived, Exelon was a relatively new entity, formed in October 2000 by the merger of PECO Energy Co. and Unicom Corp., and was in the midst of the global financial crisis.

"What attracted me to Exelon, and what I think is one of my best accomplishments is it was pretty much a startup," said Brown in an interview. "The company decided to start over with the investment activity with a whole new team, whole new governance structure and new investment strategy."

In 2010, the company replaced its pension fund's traditional, static asset allocation with a liability-driven approach split into a liability-driven investing portfolio and a growth-oriented portfolio, reflecting the trend at the time for corporate pension funds rocked by falling funding ratios following the global financial crisis. Also, the company created a new five-member investment committee that included two CIOs from other organizations and delegated most investment decisions to staff.


**TRANSITION:** Douglas Brown will hand over the reins to Jessica Hart on July 1.

"It was a little challenging at first, but we sorted through all that, and I think we built a great team," said Brown. "I'd say that was a significant undertaking that worked out pretty well."

Change has been a constant during Brown's tenure. In March 2012, Exelon purchased Constellation Energy; Brown and his staff were tasked with merging the company's 401(k) plans, re-enrolling all the employees from the

SEE **EXELON** ON PAGE 51

**Defined Contribution**

# New fiduciary rule protects employers, too

## DOL's Retirement Security Rule protects savers, plans from conflicted rollover advice

By **MARGARIDA CORREIA**

Protecting retirement savers from conflicted one-time rollover advice has been at the heart of the Department of Labor's fiercely debated Retirement Security Rule, but experts say another important aspect of the rule has been overlooked.

The DOL rule, they point out, also shields employers offering workplace retirement plans from getting conflicted one-time advice. In short, the rule shelters employers from conflicted advice as much as it does retirement savers.

Under the new rule that takes effect Sept. 23, advisers to sponsors of retirement plans will be held to a fiduciary standard even when giving one-time advice on plan investment menus, which not all advisers were held to before. That means all advisers must now give advice in the best interest of plan sponsors and participants and will have to think twice before recommending their own investment funds in plan lineups, especially if those funds are more expensive.

**PROTECTION:** Schlichter Bogard's Jerry Schlichter said plan sponsors 'have a right to believe that the advice they're getting is not advice that's going to make them liable or subject to liability.'

"The idea that a plan sponsor would pay for advice as to how to select investment options in a plan or a plan lineup or menu, and then not be able to rely on the adviser working for the sponsor's best interest flies in the face of the whole purpose for which they got advice," said Jerry Schlichter, founder and managing

SEE **FIDUCIARY** ON PAGE 50

**Alternatives**

# Aging founders, private equity spark dealmaking in Japan

By **NATALIE KOH**

Private equity buyers are pouncing on several trends in Japan including aging founders without a succession plan, pressure on corporations to sell off subsidiaries and streamline costs, and activist investors on the rise, sources said.

Under pressure to streamline costs and find new avenues of growth, Japanese listed corporates have been selling non-core divisions to focus on their core business. And private equity investors are ready to snap them up. With renewed focus on core businesses, shareholders in Japan are pressuring listed corporates to spin off and privatize their subsidiaries.

Japanese markets have seen a resurgence in investor interest for a market that's been decidedly unexciting for 30 years; the Nikkei 225 has risen 15.83% year-to-date as of May 29. Foreign investors also now hold $100 billion more in Japanese equities than 10 years ago as of Dec. 31, according to Julius Baer data.

Investors attribute this to a weak yen, the shift to an inflationary regime, and an increased focus on corporate governance and shareholders among listed companies.

For instance, the Japanese government launched a corporate governance code in 2015 and the Tokyo Stock Exchange implemented changes to improve corporates' profitability and return on equity.

For the first time since 2015, inflation has also held steady above 2% since April 2022, which has put pressure on companies to spend their cash hoards to increase wages and drive business growth.

"(Listed businesses) have slightly less than 350 trillion yen of cash on their corporate balance sheets," said Naomi Fink, Tokyo-based global strategist of the $228.6 billion Nikko Asset Management. "Corporates have been doing things like investing more, returning money to shareholders via dividends and buybacks, and they've been paying higher wages, but (a cash hoard) doesn't disappear overnight. Shareholders want to know what they're doing with it," she said.

### Dwindling subsidiaries

Hitachi, for instance, has been splitting off some of its business units in recent years. In 2021, it entered a deal with a consortium of funds led by Bain Capital to sell its metals unit for ¥382 billion. Bain Capital manages $185 billion in assets.

The number of publicly traded subsidiaries of listed parent

SEE **JAPAN** ON PAGE 54

The Largest Money Managers **AI**

# Money managers see big potential with AI, but tread cautiously

## Tech helping parse data and news coverage, sniff out investment opportunities

**By Caryl Anne Francia**

The boom in artificial intelligence has sparked interest among money managers for opportunity — not only to invest in technology companies that may stand to benefit, but to invest in tools and resources to enhance their own operations.

According to *Pensions & Investments'* latest annual survey of the largest money managers, several firms have integrated AI to streamline their workflow, some saying they've been using it long before OpenAI's ChatGPT debuted in November 2022.

"At that point, it was very clear that everyone in the investment management space realized that they were in a technological arms race, whether they like it or not," said Daniel Philps, the London-based head of Rothko Investment Strategies.

Rothko — which became an independent unit of Mondrian Investment Partners in 2013 — was founded with the vision of constructing public equity and international emerging markets funds with a stock selection process that uses machine learning to identify opportunities.

As of Dec. 31, Mondrian managed $49 billion in assets, including $28 million from Rothko.

**MOTIVATION:** For CBRE, AI is used 'from a point of sustainability,' said Chief Digital and Technology Officer Ampily Vijay.

Philps holds a doctorate in computer science from City, University of London, where he concentrated on AI and deep learning. From his view, "what happened 18 months ago was that ChatGPT and the birth of large language models shook the assumption that what (managers) do cannot be done by machines" as managers observed how AI can identify and explain things "in more eloquent and objective terms."

The framework Rothko set up more than 10 years ago has remained in place and "pretty much unaltered," he said. But the firm's system has learned how to identify changes in the market, including changes in behavior and changes in factors related to how companies manage their cash flow and deal with cost

SEE **ARTIFICIAL** ON PAGE 46

Prakash Singh/Bloomberg

**END OF THE LINE?** Jenny Johnson says the next CEO at Franklin Templeton 'is not necessarily going to be a Johnson.'

The Largest Money Managers **Technology**

# Franklin Templeton's Johnson sees tokenization disruption

## CEO thinks all mutual funds, ETFs will eventually be on blockchain

**By Lydia Tomkiw**

The president, CEO and third-generation family leader of Franklin Resources, operating as Franklin Templeton, sees plenty of changes coming to asset management in the next decade.

"If you ask me what I think the most disruptive trend is going to be, it's tokenization. It's blockchain," Jenny Johnson told *Pensions & Investments*.

Franklin Templeton created the first tokenized money market fund in 2021, building the shareholder record-keeping system in-house. Other firms have followed suit.

"It's just a more efficient technology to do record keeping. It is designed to be a general ledger," she said of blockchain. "If you think about the huge cost in financial services of reconciliation between systems within a company and then you got to reconcile the same data with

SEE **JOHNSON** ON PAGE 55

The Largest Money Managers **Retirement Plans**

# Manager concentration dominates corporate retirement plans

**By Rob Kozlowski**

U.S. corporate retirement plans are allocating more money to the very largest portfolio managers, and midsize and small managers face the challenge of finding opportunities in an increasingly concentrated market, consultants say.

A total of 281 managers provided data on assets managed for non-government retirement plans. And as of Dec. 31, the 25 largest managers of non-government retirement plan assets — each exceeding $80 billion — accounted for $10.25 trillion, a 14.4% jump from the prior year, according to *Pensions & Investments* survey data. Meanwhile, the remaining 256 managers accounted for $1.97 trillion, an increase of just 3.7% from the end of 2022.

**The data**

**Data on non-government retirement plans begins on Page 26.**

The data did not break down between defined benefit and defined contribution plan AUM.

David O'Meara, senior director and head of defined contribution investment strategy at Willis Towers Watson, said that the scale of the largest managers has given them significant advantages in multiple areas.

"There is a downward pressure on fees," O'Meara said. "That includes the long-term trend of an increasing use of individual passive investment options and target-date funds, which the largest managers have always dominated in the market, as well as active strategies that have more operational scale and can reduce fees appropriately."

O'Meara said that the growing share the largest managers have in the DC plan market can also be attributed to the demand for information from retirement plan sponsors.

"(That comes) through their RFPs and collecting more information, in particular ESG or sustainability

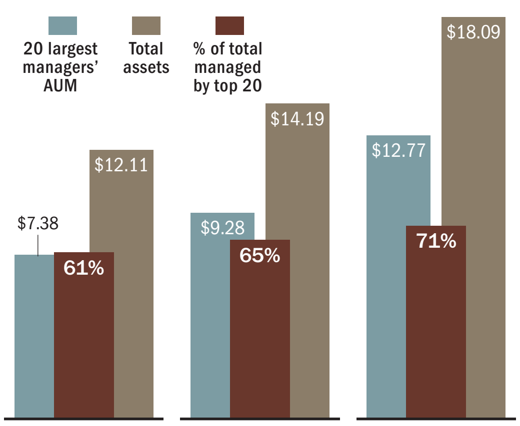
SEE **CONCENTRATION** ON PAGE 47

## Largest managers getting a bigger share

The 20 largest managers of U.S. institutional tax-exempt assets — which includes assets from defined contribution plans, defined benefit plans, endowments and foundations — had asset growth of 73% over the past 10 years, according to *Pensions & Investments'* annual money managers survey. Their share of total U.S. institutional tax-exempt assets grew 10 percentage points during that time.

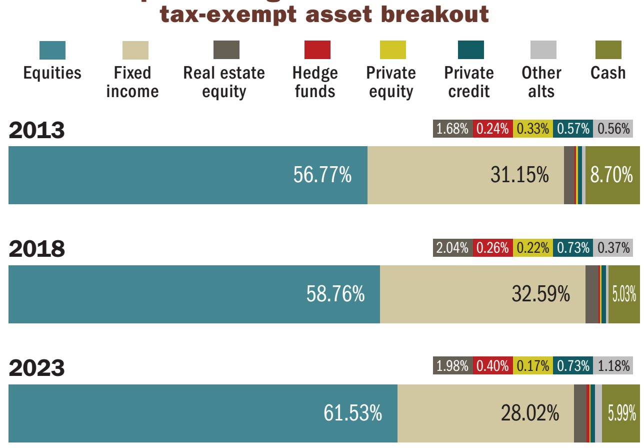
**More concentrated:** The 20 largest money managers based on U.S. institutional tax-exempt assets under internal management had $12.77 trillion, or 71% of the total AUM. A decade ago, the largest managers accounted for 61% of the AUM.

**Growth in U.S. institutional tax-exempt assets** (trillions)



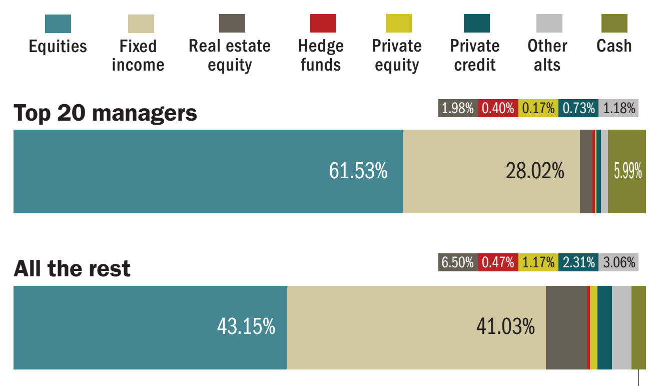

**Appetite for equities growing:** The largest asset managers continue to have most of their AUM invested in equities and fixed income. The two classes combined for 89.5% of all assets at year-end compared with about 88% at the end of 2013. Cash garnered 6% of assets at the end of 2023 vs. 8.7% in 2013.

**Top 20 managers U.S. institutional tax-exempt asset breakout**




**Top 20 vs. the rest:** Managers outside the top 20 had a lower portion invested in equity, about 43% vs. 61.5% for the larger managers. Fixed income was 13 percentage points higher at 41%. Alternatives were 13.5% of AUM compared with 4.5% for the largest managers.

**Top 20 managers vs. all others: U.S. institutional tax-exempt asset breakout**




Source: *Pensions & Investments.* All data is as of Dec. 31.

Compiled and designed by Larry Rothman and Gregg A. Runburg


Lydia Tomkiw

**BACK IN GOOD STEAD:** Investors are once again paying attention to AQR after a few rough years of performance, said co-founder and CIO Cliff Asness.

Alternatives

# Pod shops, private funds have 'sucked up a lot of the capital' — AQR's Asness

By LYDIA TOMKIW

Cliff Asness isn't afraid to speak his mind. The co-founder, managing principal and chief investment officer of AQR Capital Management has a quick wit and can be self-deprecating. But he knows his firm went through a tough performance run between 2018 and 2020. When Asness is asked about that period he quips, with a laugh, "I don't remember what you're talking about."

It has taken several years, but Asness is seeing pension funds and other asset owners again pay more attention to his firm following that rough patch.

AQR, which stands for Applied Quantitative Research, was founded in 1998, and the firm grew to manage over $224 billion in assets at the end of 2017, according to *Pensions & Investments* data, in a variety of products including hedge funds, long-only and liquid alternatives, before the value-oriented manager experienced a drawdown period.

"We've had close to probably three and a half years of fairly lights-out returns that almost everywhere have more than made up for the tough period," Asness said during an interview at AQR's office in Greenwich, Conn.

AQR has indeed seen a turnaround. Its hedge fund Absolute Return Strategy was up 18.4% in 2023 and had its best year ever in 2022, returning 43.5%. That fund was down 12.6% in 2018 and down 5.9% in 2019

SEE ASNESS ON PAGE 52



Pension Funds

# Deadline looms for Dutch funds amid retirement system reforms

By CHRISTOPHER MARCHANT

Netherlands-based pension funds only have about six months to tell the government how they plan to handle a radical shakeup of the country's retirement system.

In May 2023, the Dutch government approved the Future Pensions Act, a piece of legislation that aims to alleviate concerns over insufficient reserves within the current defined benefit system by shifting toward a defined contribution-style arrangement.

In the words of De Nederlandsche Bank, which acted as an independent consultant to the government in the drafting of the bill, "the current pension system no longer matches the changing labor market."

This means plans will move to a defined contribution model or enter into run-off — continuing to operate as DB and paying benefits, but without an expectation of further contributions or accrual — and moves must be completed no later than Jan. 1, 2028. Occupational pension plans must submit a transition plan to the government by no later than Jan. 1, 2025.

According to the 2024 Thinking Ahead Institute Global Pension Assets Study, 94% of retirement assets in the Netherlands are held in a DB plan.

## Several choices

The Future Pensions Act introduces three types of defined contribution plans for pension funds to adopt: solidarity, which is a collective defined contribution model, with a collective investment policy for all participants; flexible, in which individual investment policies can be pursued and is almost purely DC; and a contribution-payment plan that can only be executed by insurers.

The reforms are the most significant to happen in the Dutch retirement market since the 2007 introduction of regulatory capital requirements under the country's Financial Assessment Framework and Solvency II legislation,

SEE DUTCH ON PAGE 50

Money Management

# Flexible multiasset credit allocations gain traction

Their ability to toggle between fixed-income strategies a big draw

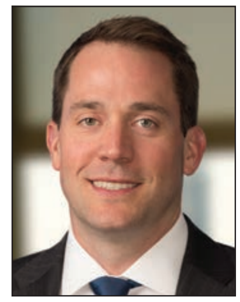
By DOUGLAS APPELL

The ranks of institutional investors eyeing multiasset credit strategies as a potent source of alpha are growing, amid a pickup in volatility across core-plus asset segments.

"The theme that we're seeing is an acceptance of blurred lines with respect to investment management agreements," giving portfolio managers more leeway and more levers to take advantage of short-term opportunities that present themselves, said Gregory Calnon, a partner and co-head of public investing with Goldman Sachs Asset Management.

A contributing factor: Market expectations for the number of U.S. rate cuts this year that wax or wane with each inflation point — with diverging impacts for fixed-rate instruments such as high-yield bonds and floating-rate vehicles such as bank loans.

Late last year, for example, when markets expected as many as five or six rate cuts in 2024, multiasset credit managers lifted exposures to high-yield bonds and downplayed loans, only to reverse course this year — when stubbornly high inflation data pared those expectations down to one or two cuts — and lean into bank loans instead, said Karin Anderson, Chicago-based director of credit manager research with investment consultant and OCIO firm Willis Towers Watson.



LEEWAY: Goldman Sachs' Gregory Calnon said multiasset managers can pivot to attractive opportunities.

## Clunky process

Such fleeting investment opportunities have left asset owners challenged by the slow, clunky process they typically follow in rebalancing separate high yield, bank loan and emerging market debt allocations overseen by different managers.

In early May, the $104.2 billion Massachusetts Pension Reserves Investment Management board became the latest institutional heavyweight to respond to those challenges, with its investment committee approving $2 billion in maiden allocations to multiasset credit strategies, to be funded mostly from existing allocations to high-yield bonds and bank loans.

COVID-related volatility and the more sustained disruptions that followed the start of an aggressive Fed rate hiking cycle in 2022 "really highlighted to institutions that their decision-making process is long and there's a lot of value to be had if you can move more quickly," noted Jeremiah S. Lane, a San Francisco-based partner with KKR & Co. and a portfolio manager of KKR's multiasset credit strategy, launched in 2008.

For example, Lane said, while bank loans and high-yield bonds have delivered similar rates of return over the long term, at points in 2022 their performance diverged by as much as 1,000 basis points.

## More diverse funding sources

Mark McKeown, managing principal and head of fixed-income manager research with investment consultant Meketa Investment Group, said changes in the way U.S. companies issue credit have also contributed to the underlying volatility attracting the attention of asset owners now.

Over the past five or six years, U.S. companies looking to issue credit have moved beyond a focus on high-yield bonds to a more balanced mix of options, including bank loans and private credit, with the bank loan market now on par with high yield at roughly $1.4 trillion while private credit has quickly caught up with and pushed ahead of both — spawning a rich array of relative-value opportunities for skilled managers to pursue, he said.

More companies, meanwhile, are consulting with large buy-side asset managers about what type of credit they should issue, in lieu of traditional sell-side banking partners, McKeown said. That, in turn, has influenced both the size of those core plus market segments as well as, ultimately, where Meketa's clients choose to be opportunistic, he said.

With more relative-value trading opportunities than there used to be, Meketa now complements some clients' core fixed-income allocations with multiasset credit strategies rather than separate high yield and bank loan "spokes."

With clients and fixed-income managers alike becoming less siloed in managing credit allocations, "a lot of high-yield searches for Meketa clients in recent years have turned into multiasset credit searches," McKeown said. He declined to identify those clients.

On May 7, Boston-based Massachusetts PRIM moved a step closer to becoming the next institutional heavyweight to climb on that bandwagon when its investment committee voted to recommend that the full board hire four New York-based multiasset credit managers.

The investment committee voted to recommend allocations of $600 million to HPS Investment Partners; $500 million to KKR's diversified multiasset credit strategy, or KMAC; $400 million to Shenkman Capital

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REPORTERS NOTEBOOK

LEADERSHIP HONORED

# PSCA honors Collinson, Pattillo with lifetime achievement awards

Catherine Collinson, founding CEO and president of Transamerica Institute and its operating division, Transamerica Center for Retirement Studies, and Beth Pattillo, director of retirement and financial programs for Leidos, are recipients of the annual lifetime achievement awards from the Plan Sponsor Council of America.

Collinson and Pattillo were honored during PSCA's annual conference in Salt Lake City May 15-17.

PSCA praised Collinson for her leadership that has been "instrumental in advancing our understanding of retirement trends, as evidenced by the Annual Transamerica Retirement Survey, now in its 24th year, providing invaluable insights for employers and employees alike," according to a May 20 news release.

**HONOREES:** Catherine Collinson (left) and Beth Pattillo

"Catherine, through her dedication to research and advocacy for public policy changes for more than 30 years, exemplifies what this award stands for," said Will Hansen, PSCA's executive director, in an email. "We are proud to recognize Catherine for her extensive contributions to the retirement industry that has undoubtedly shaped the landscape of retirement planning for the better."

Pattillo was honored in part for her work in managing a defined contribution plan with more than $11 billion in assets and covering more than 65,000 people. Her leadership "extends beyond her corporate responsibilities; she serves as chair of the Defined Contribution Institutional Investment Association's Plan Sponsor Institute," the news release said, noting that she serves on a DC client advisory board for T. Rowe Price and on Vanguard Group's client council.

"Beth has dedicated her career in HR to not only providing the best retirement plans to her employees that she can, but to advocating for best practices in plan design," Hansen said. Her advocacy has been expressed "through peer connections and sharing her expertise as a plan sponsor by volunteering in a leadership capacity at multiple benefits associations."

— ROBERT STEYER

DOLLARS AND SENSE

# NEPC's Samuels pens children's book aimed at financial literacy

Sarah Samuels said she wasn't set up for success in the investment industry — and she wants to change that for the next generation.

Growing up, Samuels' family lived paycheck to paycheck. She started her career as an administrative assistant at Wellington Management, where Samuels saw Jean Hynes investing. Hynes later became the CEO.


Samuels envisioned another path forward that was later aided by an MBA and CFA and CAIA designations. Today, Samuels is a partner at consultant and OCIO NEPC, which oversees $1.6 trillion in assets under advisement.

Samuels' children's book, "Braving Our Savings: Holland and London Learn to Invest," was published in mid-April and is aimed at teaching children from all backgrounds how to invest and be brave.

"I think every kid deserves the opportunity to be a steward of this capital, like we are, and to break generational cycles of making ends meet. But, it can be difficult if you don't have the right training to make it in this industry," she said.

Samuels thought it would be easy to describe investing to her two young daughters, but quickly realized it wasn't. Following a divorce, Samuels realized she needed to equip her daughters "with the skills to support themselves should they need to some day."

**LIFE LESSONS:** Sarah Samuels was inspired to write her book by a desire to teach her kids about investing.

The book follows Holland and London (her daughters' names) as they learn about investing after not having enough money for ear piercing. More sophisticated concepts in the book, including stocks, bonds and diversification, target older children and parents, Samuels said.

More than 2,000 books have been sold and donated and Samuels has committed to directing any proceeds into buying more books to give away. NEPC bought books for all of its employees, she added.

— LYDIA TOMKIW

A HOME RUN

# Arctos Partners scores with new sports investing index

The business of sports investing is getting its own index, with one of the firms behind private equity's incursion into the industry looking to bring a more scientific approach to the burgeoning asset class.

Dallas-based Arctos Partners, which manages about $7 billion in funds with stakes in teams including the Los Angeles Dodgers and the Golden State Warriors, on June 4 unveiled a new financial benchmark for North American sports franchises.

The Ross-Arctos Sports Franchise index is based on the sales of team stakes across Major League Baseball, the National Basketball Association, the National Football League and the National Hockey League. Compiled in partnership with the University of Michigan's Ross School of Business, it samples more than 400 transactions since 1960.

The index delivered an annualized return of 12% over the past two decades. That compares with 10% for the S&P 500 and nearly 15% for private equity. But more importantly, Arctos says it shows sports investing has been less sensitive to the swings of bonds and stocks.

"We're pitching this new end market for institutional investors," said Zach Baran, a director at Arctos, who said he hopes participants in the sector will use it to assess performance. "That's the power of finally having a rigorous underlying mark."

Baran said the top sports leagues are inherently more stable than traditional financial markets, thanks to contractually guaranteed media revenue and the collective bargaining agreements that set player salaries. The public's love for sports also appears to be sticky.

— BLOOMBERG

FINANCIAL DELICACY

# Will Matthew Sigel eat his HODL hat after SEC pivot on spot ether ETFs?


A few weeks before the May 23 deadline for the Securities and Exchange Commission to approve or deny a proposal to list and trade shares of the VanEck Ethereum Trust, Van Eck Associates' head of digital assets research seemed certain that day would bring a denial.

"Van Eck is first in line for a final decision on the proposed filing of our ethereum spot ETF," Van Eck's Matthew Sigel said during the May 7 episode of "ETF Prime," a podcast hosted by Nate Geraci, adding, however, that "if it's approved before the U.S. election in November, I will eat my hat."

Sigel told Geraci, president of The ETF Store, and his podcast listeners that "there's really no momentum to get these products set up in time to meet that May 23rd final deadline."

But a sudden SEC pivot took many — including Sigel — by surprise. On May 23, the SEC approved what are known as 19b-4 filings pertaining to not just Van Eck's proposed spot ether ETF, but others as well.

While uncertainty remains regarding when spot ether ETFs might make their trading debut, *Pensions & Investments* had questions for Sigel: Has he eaten his hat yet or is he waiting for the VanEck Ethereum Trust's S-1 to become effective? If he does end up eating his hat, will it be one of those hats — really more of a cap if we're being precise — that Van Eck has sporting the HODL ticker symbol of its spot bitcoin ETF? HODL, a term that has become central to the cryptocurrency world, is short for "hold on for dear life," according to Van Eck's website.

In response, Sigel signaled a willingness to eat — or perhaps sip — his chapeau if a spot ether ETF is trading in the U.S. before Election Day.

"If a spot (ether) ETF trades in the U.S. before the election, I'm committed to validating my promise with a proof-of-BBQ-steak-sauce blended HODL hat smoothie," he said in comments provided through a spokesperson. "Can't wait to video it."

And we can't wait to see that video, Matt. We'll also be keeping an eye on Van Eck's merch offerings for a potential HODL-branded blender.

— KATHIE O'DONNELL

P&I | CUSTOM CONTENT

# LDI AND PENSION RISK MANAGEMENT


Corporate pension plans find themselves in an opportune moment at full or near full funding levels – and several are even enjoying a surplus. Yet with continued geopolitical and macro uncertainties, DB plans are actively engaged in refining their investment strategy in order to protect – and even advance – their gains in funded status. Reducing funded volatility, improved cashflow matching, tightening hedges and diversifying the LDI program are all on the table while, on the return-seeking side, more active and customized approaches are under consideration.

This expert panel of asset managers and consultants shares insights and strategies for derisking and enhancing the end portfolio, viable strategies for surplus management, and the ways that they are delivering diversified asset management along with value-added data and analysis.

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OPINION


John Sommer/Getty

OTHER VIEWS TERESA GHILARDUCCI

# A bold fix to America's broken retirement system exists. It needs to be enacted.

In March, Blackrock CEO Larry Fink made headlines with a shareholder letter warning about our broken retirement system, noting that "nearly half of Americans aged 55 to 65 reported not having a single dollar saved in personal retirement accounts. Nothing in a pension. Zero in an IRA or 401(k)."

The American worker knows the retirement system is broken and they don't like it. In a recent national survey, 79% of those who responded said that America is facing a retirement crisis, and 87% said people in Washington don't know how hard it is for a person to save for retirement.

Pessimism is warranted. About 80 million working Americans are left out. That's because 172 million workers pay Social Security tax but only about 92 million have a retirement account at work. They have no feasible way to credibly supplement their Social Security.

According to the OECD, the U.S. ranks first in senior poverty rates, at 23%; Western Europe is in the low teens and the Dutch elder poverty rate is about 3%. Twenty-six million Americans have not maintained their living standards in retirement and 20% of American households aged 55-64 have less than $100,000 in total wealth, in retirement accounts, home equity, savings accounts, pennies in the couch, according to analysis of 2022 Federal Reserve Board data.

Being a middle-class worker is no protection from being a poor elder. About 40% of middle-income workers are at risk of downward mobility into poverty or near-poverty in retirement.

Working longer is not a solution: most people are "retired" involuntarily, i.e. they didn't choose to be, or they had to retire before they wanted to.

The American pension system ranks 22 out of 47 countries, getting a barely passable C+ on the prestigious Melbourne Mercer Global Pension Index. The U.S. system ranks below Kazakhstan, mainly because of lack of coverage of retirement benefits and many workers withdraw money from retirement before they retire.

**Teresa Ghilarducci** is the Bernard L. and Irene Schwartz Professor of Economics, Director, Schwartz Center for Economic Policy Analysis, Director of Graduate Studies in the Economics Department at the New School. Her new book is "Work, Retire, Repeat: The Uncertainty of Retirement in the New Economy" published by the University of Chicago Press.

For 40 years, Congress cut Social Security by raising the retirement age and companies abandoned pensions as unions weakened after the PATCO strike of 1981. Congress piled on tax breaks hoping to make the voluntary and top-heavy 401(k) popular. The tax breaks mushroomed, but coverage didn't budge much beyond half the workforce.

The tax exclusions for corporate and individual retirement plans cost over $400 billion a year; with the top 40% of earners getting 84% of the benefits and the top 20% receiving over 40 times more in retirement tax benefits than the bottom 20%.

After 40 years, the American pension system has failed — it leaves behind most American workers.

Fortunately, there is a bold proposal, the Retirement Savings for Americans Act, which would provide every qualified worker who doesn't have access to an employer-sponsored retirement account, with a retirement savings vehicle modeled after the successful federal Thrift Savings Plan (TSP).

One of the most effective features of the RSAA is that the federal government would provide a matching contribution of up to 5% for low and moderate-income workers. Research shows when low-income workers got a generous match in the federal Thrift Savings Plan (TSP), they saved even more for their retirement. A federal match incentivizes people to report all their earnings and stay in the formal economy.

Throughout U.S history, when low- and moderate-income workers unionize, they bargain to divert some of their pay to retirement accounts. No teacher's aide, home health care worker, mine worker, auto worker, janitor, or barista wants only Social Security.

The RSAA is the missing piece in America's retirement puzzle, as it will bring everyone without a plan into the wealth building system.

The wondrous fact about the RSAA is that it is aligned with political reality in a way few proposals are. A left-leaning economics professor (myself) and Kevin Hassett, Trump's top economic adviser, wrote the white paper backing the idea of the RSAA.

**The RSAA is the missing piece in America's retirement puzzle, as it will bring everyone without a plan into the wealth building system.**

Democrats and Republicans in Congress support the bill, and it has been endorsed by the AARP, Society for Human Resource Management (SHRM), DoorDash, Uber and the International Franchise Association, among many other leading organizations, businesses and industry groups.

Additionally, because it is modeled after the TSP, the blueprint for the program already exists. Passing the bipartisan Retirement Savings for Americans Act can help solve America's retirement crisis and the crisis in confidence regarding whether the government cares.

*This content represents the views of the author. It was submitted and edited under Pensions & Investments guidelines but is not a product of P&I's editorial team.*

OPINION

OTHER VIEWS **STEPHEN ADDICOTT**

# Pension funds can invest in timberland forests as a biodiversity play

Investing in timberland is one of the most direct ways that institutional investors can tackle the conundrum of marrying net-zero concerns with investment returns and a diversified strategy. With its ability to sequester carbon from the atmosphere, the asset class offers a net negative emissions profile, which can contribute meaningfully toward investors' climate targets and help offset more carbon-intensive investments. Returns-wise, performance is uncorrelated from the market, making it largely inflation-proof and an ideal diversification method for a portfolio that can deliver returns of around 8%-10%. Timberland is also increasingly being considered as an important biodiversity allocation. Institutional investors recognize that biodiversity is a crucial element if they are to meet their own sustainable investing goals.

**Stephen Addicott** is head of timberland at Stafford Capital Partners and a qualified forester. He is based in London.

The asset class is witnessing a renaissance in popularity as a result. But there is tension when it comes to choosing between the different types of forests — a commonly held belief being that only natural forests, with their abundance of different tree species, can offer valid biodiversity credentials, while managed plantation forests, which tend to comprise one type of tree species, limit the scope for biodiversity impact.

### Tackling the misconception

This is a conversation we have regularly with the pension funds we meet. Questions abound over whether plantation forests are the "wrong" kind of forests to invest in from a biodiversity perspective. The truth is that while we invest in both semi-natural and plantation forests for investment returns and carbon offsetting purposes, the biodiversity credentials of plantation forests are just as valid as those of natural forests.

### Easing pressure on natural forests

There are two key aspects to a plantation forest's biodiversity credentials: how it eases pressure on natural forests, thus allowing them to flourish, and its own biodiversity profile as an important contributor to the natural ecosystem. Most plantation forests have been established to meet the growing demand for wood raw materials. In this context, they have been highly successful. While planted forests make up just 7% of the world's total forest area, they supply almost half of the global demand for industrial wood. Annual demand for industrial roundwood has grown by 500 million cubic meters since 1995. Drivers such as rising standards of living, urbanization and the need for low carbon and renewable materials are causing demand to accelerate, with annual demand expected to increase by up to 900 million cubic meters by 2050 *(see Figure 1)*.

Without a plantation forest resource, the burden of meeting demand for wood raw material would fall onto natural forests.

Plantation forests have therefore been able to significantly reduce the pressure on natural forests, allowing more natural forests to be managed for conservation purposes. Consequently, they have a substantial role to play in contributing to biodiversity conservation *(see Figure 2)*.

### Measuring biodiversity within plantation forests

When it comes to their own biodiversity value, plantations are often held in comparison to natural forests. This approach makes sense only in a scenario where natural forests are converted into plantations. In the great majority of instances, this is not the case. In fact, of the 71.9 million hectares of natural forest that were converted into various agricultural commodity production between 2001 and 2015, less than 3% was converted into forest plantations *(see Figure 3)*.

### Active conservation

Most timberland plantations are developed on degraded agricultural land with limited biodiversity value. When establishing new plantations on degraded, cleared lands, managers are often presented with an excellent opportunity to apply an environmentally sound approach in their land-use planning. This will typically include the identification of high conservation value areas (or HCV), such as riparian zones, wetlands, fragments of remaining natural forest, or habitats containing threatened plant or animal species.

These areas are then linked by biodiversity corridors which allow birds, reptiles, amphibians, mammals and insects that would otherwise be isolated and vulnerable in one area of native vegetation, to move around with relative ease and safety. This is an important feature in minimizing habitat fragmentation, which is a major cause of biodiversity loss.

The HCV areas and biodiversity corridors, along with a smaller area that supports different forms of infrastructure (roads, firebreaks, dams or buildings), are excluded from planting. As a broad rule of thumb, around 30%-40% of a plantation's total area will remain unplanted.

It is true that, as most plantations are established with the main goal of efficient wood production, individual stands (a management unit that will typically range from 5-30 hectares in size) will contain trees of a single species, and similar age, size and condition, and therefore make up a relatively simple ecosystem in terms of their compositional and structural diversity.

However, at the landscape level, one will find stands of different ages and species, mixed in with HCV and other open areas. The range of habitats therefore becomes much more diverse when viewed at this level, and provides opportunities for more complex interactions.

### Preservation of endangered species

On top of that, plantation forests frequently provide a habitat for threatened or endangered species. One example includes the koala population in Australia. Decimated by hunting and habitat clearance in the late 1800s, koala numbers fell to less than 12,000 by 1930. In 2012, the koala population had recovered to approximately 330,000, with the majority of those living in eucalyptus plantations. Giant anteaters — which are found across Central and South America and are listed as a vulnerable species — are often found in plantations, which provide ample feeding opportunities and shade from high temperatures and shelter from potential predators. In addition to biodiversity conservation, plantation forests also provide several other ecosystem services, including carbon sequestration, clean water production and the prevention of soil erosion or desertification.

### Looking ahead

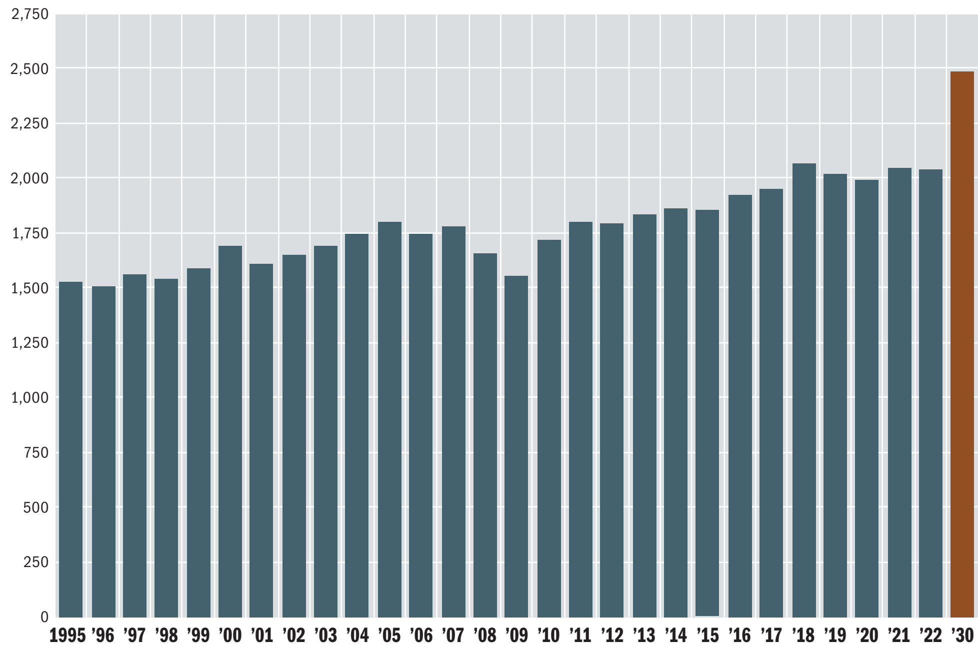
The demand for timber is set to rise further as the market increasingly recognizes the role of wood fiber as a sustainable, low-carbon material. The planted forests of the future will need to be managed carefully and purposefully to meet this demand.

Timberland investment managers continue to offer LPs a diversifying asset class that delivers on returns, the net-zero agenda, and the right biodiversity profile for a portfolio. Plantation forests promote biodiversity while alleviating pressure on natural forests around the world. With increased demand for wood supply, meeting that demand in a sustainable and eco-friendly way is the objective of the plantation forest.

This content represents the views of the author. It was submitted and edited under *Pensions & Investments* guidelines but is not a product of *P&I's* editorial team.

**Figure 1** Global industrial hardwood production

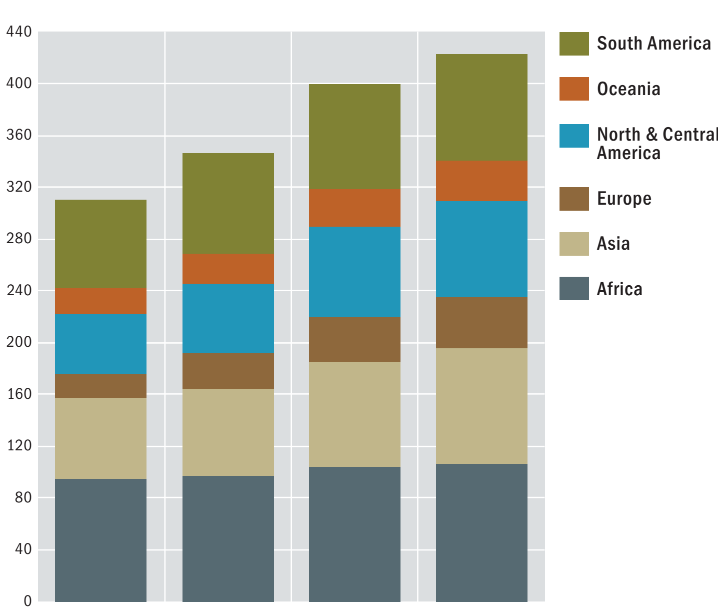
In millions of cubic meters.




Source: United Nations Food and Agricultural Organization "Global forest sector outlook 2050"

**Figure 2** Global forest area managed for conservation

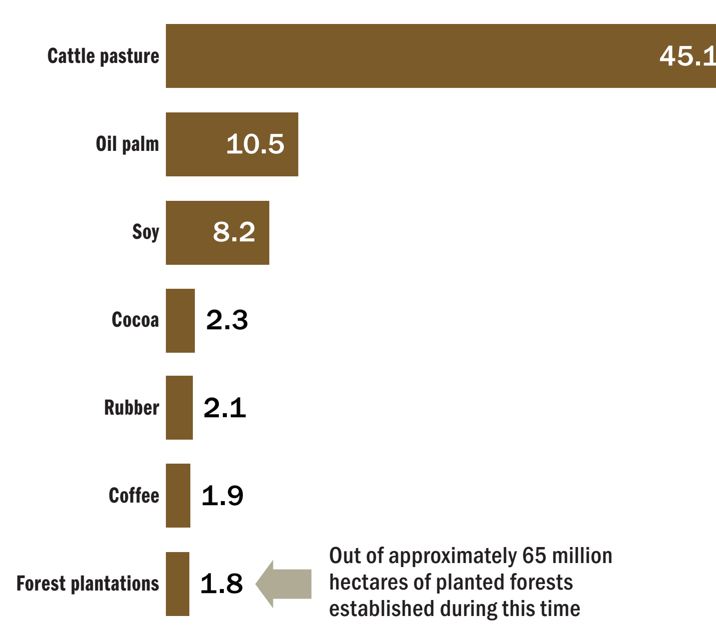
In millions of hectares.




Source: United Nations Food and Agricultural Organization "Global Forest Resources Assessment 2020"

**Figure 3** Area of natural forest converted to different end-uses, 2001-2015

In millions of hectares.




Source: World Resource Institute

# The Largest Money Managers

## Inside




Illustration by Daniel Pelavin

# How P&I compiled the managers data

This issue marks the 51st year *Pensions & Investments* has profiled the largest managers of U.S. institutional tax-exempt assets.

Some 411 investment management firms responded to an online questionnaire for this annual special report, representing $86.18 trillion in total assets under management and $55.23 trillion in worldwide institutional AUM.

All money management firms are encouraged to respond to the survey. To qualify for inclusion in the database, however, the firm must manage assets for U.S. institutional tax-exempt clients, such as qualified retirement plans, endowments or foundations, and answer the minimum required questions.

The report contains detailed information on the worldwide assets under management of the qualified respondents, including asset mix, insurance company, sovereign wealth fund or central bank client assets, and a regional breakout of clients.

Within the U.S. institutional tax-exempt universe, *P&I* further breaks down the data into asset classes and then into investment style.

The year's survey has a few additions. Managers were asked which ESG/sustainable investing standards their disclosure policies comply with, if any, and whether they have a different preferred term for what has widely been considered "ESG." Private credit was added to the asset allocation of worldwide AUM, and equity and fixed-income assets managed in India — for U.S. institutional tax-exempt investors — were also added. On the defined contribution side, which will be featured in the June 24 issue, a new question was added on assets managed in decumulation strategies. Lastly, managers were asked whether they were using artificial intelligence in their investing process and to describe their overall approach to AI.

### More online

**The entire report can be found at pionline.com/managers2024**

**For a full set of data, go to pionline.com/researchcenter**

All qualified firms are included for the charts and tables that are published, but only the largest 50 firms — ranked by worldwide institutional assets — are profiled in print.

Full profiles of all ranked money managers and complete listings by asset class and investment strategy can be found in the P&I Research Center. The online rankings are interactive and are searchable by asset class, investment strategy, region and clients.

*P&I* targeted more than 900 banks, trust companies, insurance companies and independent investment management firms in North America and abroad. The data contained in the stories, profiles, charts and tables in this issue and in the Research Center were developed by *P&I* staff from the firms' answers to the detailed, online questionnaire and through follow-up emails and phone calls.

All information, except where noted, is as of Dec. 31.

Special reports derived from this information will be published throughout the year. In addition to the DC managers report on June 24, in-depth reports on investment outsourcing and real estate managers will appear in the July 15 and Oct. 7 issues, respectively. Data from this special report also will be used in a ranking of the largest managers in the world, completed in conjunction with Willis Towers Watson's Thinking Ahead Institute, to be published Oct. 21.



## Money manager statistics at a glance

Assets are in millions as of Dec. 31.

| | 2023 data | One-year change | Five-year change |
|---|---|---|---|
| **Managers profiled** | 411 | -5.7% | -22.0% |
| Minority & women owned firms | 50 | 0.0% | -10.7% |
| **Total employees worldwide** | 680,300 | 5.4% | -1.7% |
| **Total worldwide assets** | $86,175,057 | 11.2% | 34.5% |
| Top 100 | $81,487,323 | 12.4% | 40.5% |
| **Central banks** | $505,850 | 13.7% | -1.5% |
| **Sovereign wealth funds** | $1,223,985 | 6.3% | 11.4% |
| **Nonaffiliated insurance companies** | $4,422,547 | 9.1% | 25.2% |
| **Investment outsourcing/fiduciary management mandates** | $2,051,266 | 8.9% | 36.2% |
| **LDI strategies** | $2,938,853 | 2.8% | -5.9% |
| **Assets managed under ESG principles** | $22,661,745 | 11.7% | 100.2% |
| **Hedge funds** | $488,011 | -2.2% | -39.5% |
| Direct | $379,157 | 2.8% | -31.5% |
| Fund of funds | $108,854 | -16.3% | -57.0% |
| **Mutual funds** | $29,973,063 | 9.9% | 23.0% |
| U.S. 1940 Investment Co. Act | $23,149,539 | 13.8% | 30.5% |
| Internally managed proprietary 1940 Act funds | $20,926,306 | 14.7% | 43.7% |
| **Sponsored ETFs/ETNs** | $9,322,921 | 21.7% | 127.7% |
| Actively managed | $411,115 | 54.0% | 457.2% |

| | 2023 data | One-year change | Five-year change |
|---|---|---|---|
| **Worldwide institutional assets** | $55,234,865 | 9.7% | 29.3% |
| Top 100 | $51,790,784 | 11.2% | 35.6% |
| **U.S. tax-exempt assets** | $25,029,078 | 11.5% | 31.1% |
| Top 100 | $23,757,764 | 12.8% | 36.3% |
| **U.S. institutional tax-exempt assets** | $20,184,282 | 9.7% | 27.6% |
| Top 100 | $18,987,701 | 11.0% | 33.1% |
| **U.S institutional tax-exempt assets managed internally** | $18,087,141 | 9.7% | 27.5% |
| Top 100 | $17,091,438 | 10.7% | 32.3% |
| **Active U.S. equity** | $2,613,632 | 11.3% | 12.8% |
| **Active U.S. fixed income** | $3,378,193 | 3.4% | 11.2% |
| **Active non-U.S. equity** | $968,593 | 0.4% | -8.9% |
| **Active global/non-U.S. fixed income** | $217,153 | -0.8% | -37.5% |
| **Active global equity** | $345,940 | -12.1% | -25.0% |
| **Indexed assets** | $6,099,573 | 18.1% | 55.4% |
| Passive U.S. equity | $3,831,836 | 18.8% | 76.4% |
| Passive U.S. fixed income | $1,127,116 | 18.5% | 45.7% |
| Enhanced index U.S. equity | $45,356 | 16.1% | -32.8% |
| Enhanced index U.S. fixed income | $91,099 | 12.3% | 17.5% |
| Passive non-U.S. equity | $398,729 | 14.0% | -15.3% |
| Enhanced index non-U.S. equity | $9,050 | 58.7% | -45.8% |

The Largest Money Managers **Cybersecurity**

# Managers racing to keep ahead of growing threats

AI making detection more difficult, making it a 'cat and mouse game'

**By Courtney Degen**

For the largest money managers, keeping up with existing and emerging cybersecurity threats means approaching those threats comprehensively. But technologies such as artificial intelligence continue to aid bad actors, sources said, and addressing the ever-changing landscape can be a challenge.

"It's a cat and mouse game," in which there's constantly new technology to catch up with, said T. William Roberts III, partner and co-CEO of GW&K Investment Management, which managed $50.7 billion in assets as of Dec. 31.

**COLLABORATION:** GW&K's T. Williams Roberts III says the firm's cybersecurity committee has members from various departments.

"It's a challenge that all firms have to address and it is constantly evolving," Roberts added. "And you have to stay on the forefront of these changes."

According to Roberts, there are three categories of new cybersecurity threats that asset managers face today: social engineering, imposters and zero-day events, and he's seen a "massive uptick" in all of these.

Social engineering is when a bad actor uses certain tactics, often through email, to get an employee to give up their credentials or click on something so the actor can gain access to the system, Roberts said.

GW&K uses outside software to prevent these types of emails, but some do get through, so "we do an immense amount of training from the day an employee starts all the way through to the last day as to what to be on the lookout for," he added.

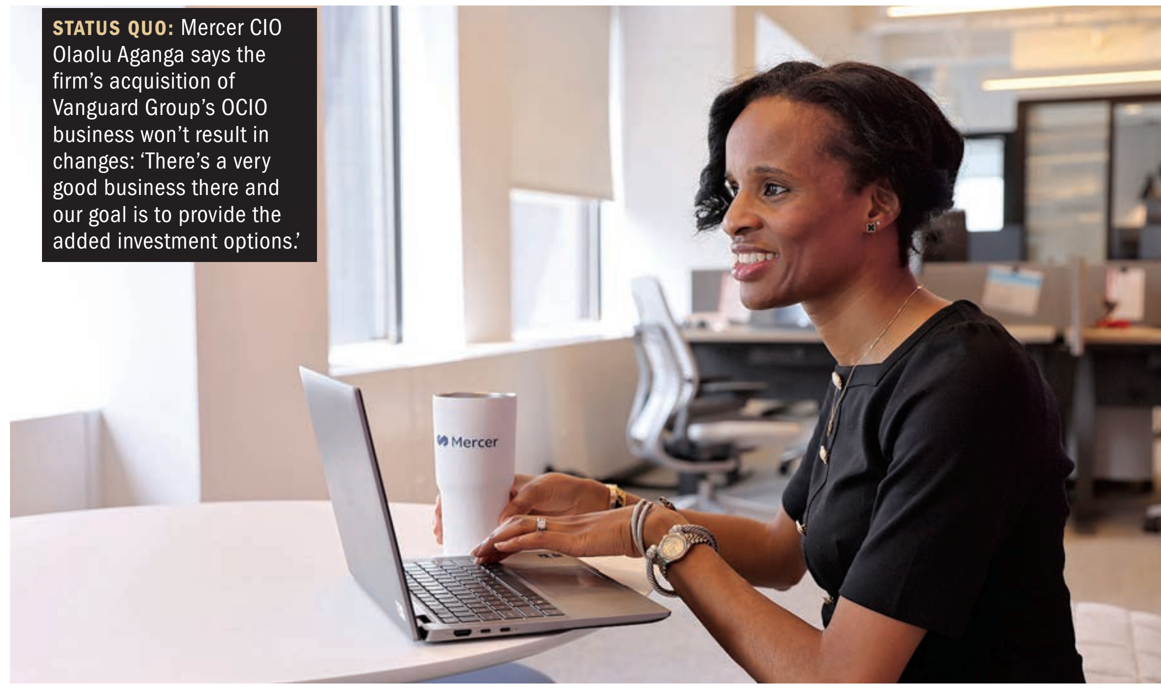
In general, addressing cybersecurity effectively requires working collaboratively, sources emphasized.

One way in which GW&K does that is through its cybersecurity committee, which Roberts is a member of along with employees from the information technology, legal and compliance, and client services departments.

The committee, which started more than 10 or 15 years ago, meets on a regular basis and covers "all aspects of trying to prevent bad actors and nation-states from doing things that would harm our business," Roberts said.

According to John Quan, chief technology officer at Aristotle, "it really is a team effort when we think

SEE **CYBER** ON PAGE 47




**STATUS QUO:** Mercer CIO Olaolu Aganga says the firm's acquisition of Vanguard Group's OCIO business won't result in changes: 'There's a very good business there and our goal is to provide the added investment options.'

The Largest Money Managers **Investment Outsourcing**

# Mercer's Aganga: 'We have the spectrum' of OCIO strategies

**By Erin Arvedlund**

In the world of investment consultants, Mercer is the largest firm, with assets under advisement of $16.2 trillion globally as of June 2023. And it has big plans for growing its outsourced chief investment office business.

A unit of Marsh McLennan, the firm has built up its outsourced CIO business, acquiring Vanguard Group's OCIO business in a deal that closed this year. "This is a very complementary strategic pairing, and we want to make sure that no one in any way thinks we're coming in to change anything," said Olaolu Aganga, partner and U.S. chief investment officer. "There's a very good business there and our goal is to provide the added investment options."

**The data**

Data on investment outsourcing begins on **Page 28.**

Prior to the Vanguard OCIO deal closing, Mercer's OCIO business totaled $420 billion in global assets under management at the end of 2023. Currently, Mercer's OCIO assets totals $489 billion assets as of March 31, following the close of the deal, according to Marsh McLennan earnings.

Vanguard's OCIO assets totaled $54.7 billion as of Dec. 31, according to *Pensions & Investments* data. Mercer in 2023 also finalized the acquisition of Westpac's superannuation business in Australia.

The bulk of Vanguard clients shifting over to Mercer are mostly endowments, foundations and nonprofits, and will now have access to alternatives under the Mercer platform.

For example, Mercer offers funds of funds including real estate, private credit, infrastructure, private equity and secondaries, co-investments and venture capital. In April, Mercer closed with $4 billion in

SEE **AGANGA** ON PAGE 44

| | 2023 data | One-year change | Five-year change |
|---|---|---|---|
| Passive global/non-U.S. fixed income | $17,968 | 5.0% | -16.1% |
| Passive global equity | $578,419 | 17.0% | 78.0% |
| **Non-U.S. assets*** | $1,611,493 | 3.5% | -16.0% |
| Equity | $1,376,372 | 4.3% | -11.2% |
| Fixed income** | $235,121 | -0.4% | -36.3% |
| **Global equity*** | $924,359 | 4.1% | 17.6% |
| **REITs** | $127,938 | 0.6% | 46.7% |
| **Low-volatility equity** | $45,068 | -10.1% | -58.4% |
| **High-yield securities** | $191,626 | 13.8% | 5.2% |
| **Mortgages (whole loans)** | $43,458 | 9.3% | -40.3% |
| **Bank loans** | $42,235 | 40.0% | 23.9% |
| **Inflation-protected securities** | $132,044 | -0.2% | 4.7% |
| **Stable value** | $387,555 | -12.2% | -12.3% |
| **Convertibles** | $10,010 | -23.1% | -10.7% |
| **Alternative investments:** | | | |
| Real estate equity | $509,677 | -1.9% | 10.8% |
| Real estate debt | $115,968 | 32.7% | NA |
| Venture capital | $2,253 | -9.5% | -47.1% |
| Buyout funds | $27,836 | -2.2% | 0.6% |
| Infrastructure | $78,443 | 27.7% | 157.3% |

| | 2023 data | One-year change | Five-year change |
|---|---|---|---|
| Private equity | $34,488 | -24.7% | -3.2% |
| Timber | $7,670 | -5.9% | -48.1% |
| Energy | $4,000 | 0.6% | 43.2% |
| Fossil fuel | $399 | 128.0% | NA |
| Renewable | $3,601 | -5.3% | NA |
| Private credit | $200,192 | -3.1% | 113.7% |
| Direct lending | $42,014 | 11.8% | NA |
| Privately placed debt | $118,674 | -16.6% | 47.3% |
| Distressed debt | $18,447 | -1.6% | 87.1% |
| Mezzanine debt | $8,304 | 2.3% | 157.3% |
| Other private credit | $12,753 | NA | NA |
| Commodities | $24,032 | -2.0% | -4.4% |
| Hedge funds (net assets) | $64,551 | -1.8% | 6.7% |
| **Defined benefit plan assets managed internally** | $4,229,769 | 3.7% | 4.9% |
| **Defined contribution plan assets managed** | $9,813,721 | 15.6% | 46.7% |
| Defined contribution plan assets managed internally | $8,735,973 | 15.1% | 49.5% |
| **Endowment/foundation assets managed internally** | $706,189 | 0.7% | 19.1% |

*Includes indexed assets. **Includes global assets. Historical data may include retroactive updates.

# How to find the money manager data online

Full data profiles of all ranked money managers and complete listings by asset class and investment strategies can be found in *Pensions & Investments'* Research Center at **pionline.com/researchcenter.**

The online rankings are interactive and are searchable by asset class, investment strategy, region and clients, as well as by year.

Research Center access is available by subscription.

The Largest Money Managers **ETFs**

# Traditional active ETFs expected to grab more assets

## Organic growth and a pending SEC decision are cited as tailwinds

**By Kathie O'Donnell**

Fully discretionary active strategies accounted for just 39% of the $660 billion invested in U.S.-listed active ETFs as of May 21, according to Morningstar data, but Ben Johnson, Morningstar's head of client solutions, expects that percentage to increase in the years ahead.

**The data**

Data on ETFs begins on **Page 25.**

"I do expect the complexion of the active ETF universe in the coming years to look more like what people traditionally expect when they think of active, so more and more market share gains accrued by traditional discretionary active strategies," Johnson said.

As of May 21, 61% of active ETF assets were allocated to a combination of systematic, option income, defined outcome, single stock and other strategies that Morningstar doesn't consider to be discretionary active, he said.

**WILD CARD:** Morningstar's Ben Johnson says the SEC's decision on ETFs as share classes may drive even more asset growth.

Morningstar's data dovetails with *Pensions & Investments*' ranking of active ETF/exchange-traded note sponsors by worldwide assets as of Dec. 31, which listed Dimensional Fund Advisors in first place, followed by J.P. Morgan Asset Management in the No. 2 spot and American Century Investments, including its Avantis Investors unit, in third place.

Both Dimensional and Avantis, which accounts for the lion's share of American Century's ETF assets, are systematic active managers, according to Johnson. Dimensional defines systematic investing as a rules-based approach that "replaces the subjectivity of traditional active management with quantitative research and avoids the rigidities of indexing through an active but process-driven pursuit of premiums," according to its website.

JPMAM, meanwhile, is home to the $33.3 billion JPMorgan Equity Premium Income ETF and $23.4 billion JPMorgan Ultra-Short Income ETF, two popular strategies that Morningstar categorizes as option income, according to Johnson.

Dimensional had active ETF assets totaling $117.5 billion as of Dec. 31, according to *P&I*'s survey results, up nearly 63% from $72.2 billion at the end of 2022. JPMAM had $105.9 billion in active ETF assets of Dec. 31, up nearly 67% from a year earlier, while American Century had $36.5 billion of active ETF assets as of Dec. 31, up 98%, *P&I*'s survey showed.

Overall, active ETF AUM totaled $411.1 billion among respondents as of Dec. 31, according to survey data, up 54% from a year earlier and up a whopping 457% over the past five years.

Still, while systematic and other strategies that Morningstar doesn't consider to be fully discretionary active currently account for the majority of active ETF assets, Johnson cited two primary growth drivers that he believes will help traditional active ETF strategies gain market share in the coming years.

"One of them is going to be organic," the expert said. "So, I think you're going to continue to see net new money allocated to some of the discretionary active strategies that are out there today."

While discretionary active fixed-income strategies at 25.7% already account for a "fairly significant share" of U.S.-listed active ETF assets, Johnson believes that discretionary active equity strategies, which as of May 21 accounted for just 13.3%, will also continue to see growth.

Johnson pointed to the asset-gathering success of some relative newcomers such as the $1.6 billion T. Rowe Price Capital Appreciation Equity ETF, which debuted in June 2023, and the $738 million GMO U.S. Quality ETF, which launched in November, he said.

### ETF share class

The other key growth driver that may help traditional active strategies gain market share in the active ETF space is, at least for now, "a bit of a wild card," Johnson said.

If the Securities and Exchange Commission decides to greenlight the "ETF-as-share-class-construct" for active portfolios, "that could drive significant assets into just about any and every ETF share class that gets tacked onto an existing actively managed mutual fund."

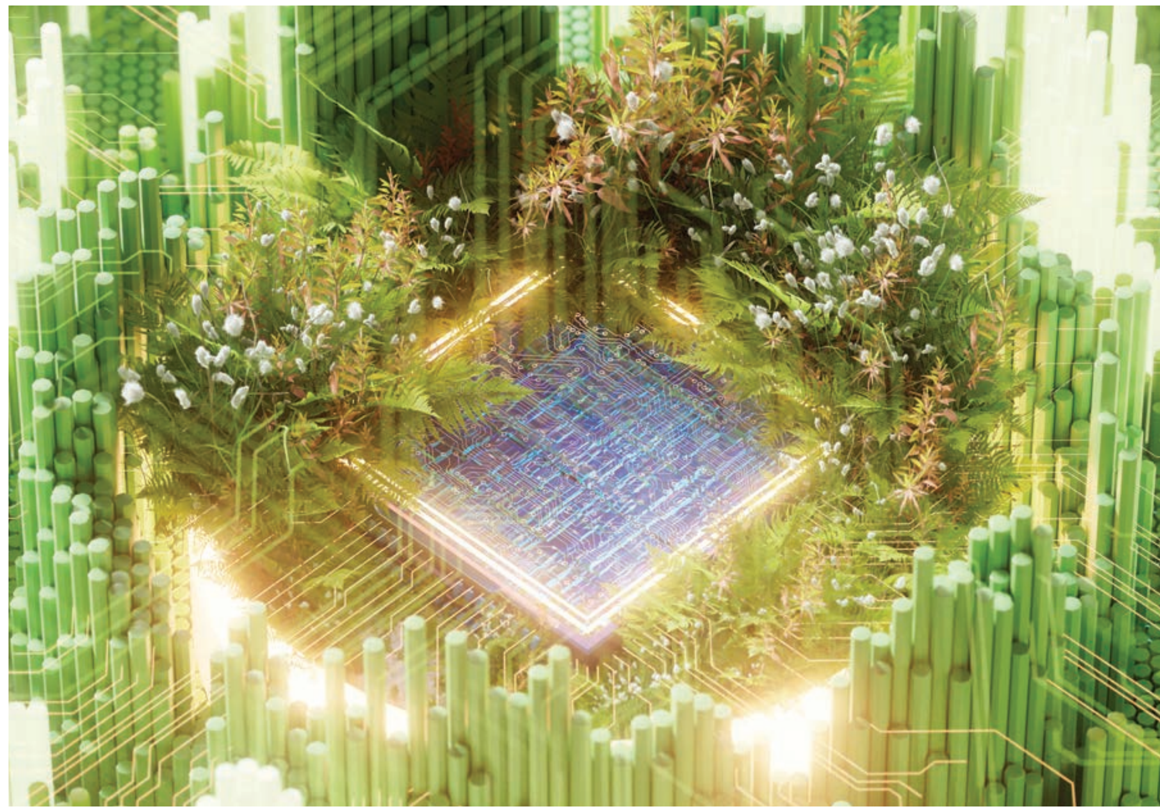
Johnson expects "that a significant portion of existing shareholders in those funds would jump at the chance to, via a tax-free transaction, convert their mutual fund shares into ETF shares."

Among the dozen or so firms seeking exemptive relief to offer ETF share classes of mutual funds is Grantham, Mayo, Van Otterloo, which filed its application May 23.

"GMO has always been focused on the best ways to serve our clients, which includes offering the strategies and investment products that best meet client needs," a GMO spokesman said about its application. He declined to comment further.

The GMO U.S. Quality ETF, known by the ticker symbol QLTY, was the first ETF launched by GMO,

SEE **ETFs** ON PAGE 44



The Largest Money Managers **ESG**

# Investors want better data; managers' protocols vary

## The continued evolution of the approach requires constant enhancement

**By Palash Ghosh**

Institutional investors in ESG are starting to drill down, demanding that their asset managers perform extremely granular research to help them get exactly what they want from sustainable investing.

As environmental, social, and governance-related investing continues to evolve, asset managers and their clients view ESG protocols as varying widely by firm.

But money managers said there are still plenty of ways firms can improve their activities related to ESG and sustainable investing.

**The data**

Data on ESG managers begins on **Page 29.**

For a quantitative manager like Los Angeles Capital Management, data is the heart of its investment process. "We work closely with our data providers to offer feedback on the development of their products," said Laina Draeger, senior portfolio manager and director of global equities and responsible investing. "Data coverage has improved significantly, and we expect this trajectory of progress and improvement to continue as disclosure regimes advance globally." That said, she cautioned, data quality, which extends to both data coverage and history, "remains an area of growth that's evolving quickly to keep pace with the market's demand."

More recently, LACM has seen an "uptick in offerings which incorporate geospatial data, which is relevant to evaluating physical risk and biodiversity impacts," Draeger said.

Marina Severinovsky, head of sustainability-Americas at Schroders, also said asset management firms need to continue to "frame sustainability investing in a way that is practical, pragmatic, supportive of transition, and respectful and empathetic to the perspectives and needs of the various stakeholders who are affected by both the global challenges themselves and efforts to solve them." This could also involve such efforts as rebuilding trust around greenwashing issues and ensuring more data transparency, consistency and comparability for consumers, investors and other key stakeholders, she indicated.

Schroders currently has more than $100 billion in strategies that are categorized as sustainable driven, sustainable thematic, and impact driven. Schroders reported $818.9 billion in AUM as of Dec. 31, according to *P&I*'s annual money manager survey.

Aside from improvements in quality of corporate disclosures on sustainability-related information, Luke Longinotti, ESG research analyst at Kayne Anderson Rudnick, believes that a better understanding of what investment managers mean by ESG/sustainable investing will be helpful in setting expectations and allowing clients to better assess what they are getting from their managers.

"There has been improvement in how investors are delineating between things such as integration and impact investing, but better understanding will help better match buyers with sellers and create a market where expectations are better aligned with outcomes," he added.

LACM, Draeger said, believes that ESG-related issues like climate change present material opportunities and risks to investors and are being priced into the market.

"Broadly speaking, this sentiment is not yet universally held, as there continues to be debate on the values orientation for ESG investing, which has some investors hesitating," she added. "Wider analysis and education on the materiality of climate, nature, social, and governance risks and opportunities are needed to bring more investors into ESG/sustainable investing."

As of March 31, more than 50% of LACM's AUM had a defined ESG objective — a figure that has steadily grown since the firm developed its proprietary ESG model in 2017.

### Differing attitudes

Attitudes toward ESG broadly differ by geography. On May 21, Robeco released its Global Climate Investing Survey 2024, which found significant regional differences with respect to views on climate investing. Interest in climate change issues continued to lag in North America, while the Asia-Pacific region has now surpassed Europe in terms of investors who believe climate change is a core element of their investment policies. Indeed, 79% of APAC managers felt this way, ahead of Europe (76%) and far ahead of North America (only 35%).

On a global basis, 62% of investors prioritized climate change in 2024, down from 71% in 2023. Robeco noted that the lack of enthusiasm for ESG in North America comes amidst "political wrangling over the perceived cost of integrating ESG factors into investments."

"Many investors are adopting a focused and diligent approach to the work of decarbonizing investment portfolios and moving towards the low-carbon economy of the future," said Lucian Peppelenbos, climate and biodiversity strategist at Robeco, in the report. "As they get to grips with the hard work involved in the climate transition, there is less naivety, and more careful deliberation and scrutiny over what is needed to embed sustainability into the many aspects of running investment

SEE **ESG** ON PAGE 44

Investment INSIGHTS

# DIRECT LENDING: POISED FOR UPSIDE

**Grant Haggard**
Senior Partner, Middle-Market Direct Lending, TPG Twin Brook Capital Partners

Direct lending to middle-market companies can be an attractive asset class for institutional investors. Historically, the lower part of the middle market has offered significant advantages versus the middle market's upper tier — companies with EBITDA of $25 million or less compared to those with $40 million to $75 million.

But as conditions in the lower-middle market have evolved in the past few years and deal-making activity has slowed, it has illuminated the need for institutional allocators to partner with an experienced direct-lending manager who can deliver strong, consistent performance across changing market conditions. Working with the right direct-lending manager, said Grant Haggard, senior partner, middle-market direct lending at TPG Twin Brook Capital Partners, can be key.

### WHY LOWER MIDDLE MARKET?

TPG Twin Brook has long favored lower-middle-market companies, which tend to be more conservatively structured credits than their upper-middle-market counterparts, Haggard said. For example, lower-middle-market borrowers typically are less leveraged, with debt closer to 4 times earnings before interest, taxes, depreciation and amortization, compared with 5 to 6-plus times EBITDA in the upper-middle market, according to firm data. In the event of default, moreover, their 85% historical recovery rate[1] is meaningfully better than the upper-middle market's 75%.

Lower-middle-market loans are also more lender friendly. Their coupon rates are materially higher. They have strict financial covenants that give lenders key protections, while at the upper-middle level, loans usually have few or no covenants. In addition, financial reporting by borrowers generally is monthly versus quarterly. Finally, there is much less competition for investments because there are fewer competitors in the lower-middle market compared with numerous new entrants in the upper-middle market.

### PENT-UP DEMAND

Haggard is bullish on the middle market's prospects, with what he believes is pent-up demand from lenders and investors. To fully appreciate his enthusiasm, it helps to understand what happened in the lean years of late 2022 and 2023.

The catalyst for the decline in the direct-lending market in late 2022 was the Federal Reserve's series of rapid interest rate hikes, which put a big chill into M&A and corporate finance — the dominant sources of demand for direct loans. "Rising interest rates slowed down M&A not only because they were higher, but also because of the uncertainty about how high they might go," Haggard said. "Private equity sellers had little feel for where valuations would settle as rates rose, and there was a ripple effect through the debt markets about how much leverage lenders could put on their companies. Investors became a lot more reluctant to make new capital commitments."

That environment, in turn, left lenders with the choice of whether to try to keep raising funds for new deals or pivot to focus on existing borrowers. "Lenders didn't know where their next round of funding would come from and how long the fundraising markets would remain seized up. You had to be very cautious about where you deployed your capital, so some chose to go to back to their key clients and portfolio companies. That's what we did," Haggard said. "This started in 2022 and continued through at least the first half of 2023, even all of 2023 as M&A really slowed down."

### HEALTHY M&A APPETITE

While 2023 turned out to be a slow year for many direct-lending managers, market sentiment began to improve in the year's second half and remains favorable through mid-2024. TPG Twin Brook sees more institutions feeling comfortable with interest rates at current levels and thus they are more confident about deploying capital, Haggard said.

> Investors should allocate to a manager that has the experience, has been through multiple market cycles, has invested with consistency and has the team and infrastructure to manage very active portfolios.

But buyers aren't the only source of demand for direct lending. Haggard also sees a healthy appetite for deals from private equity firms that haven't been able to sell their portfolio companies as easily as they could pre-COVID.

"Going back to COVID, and then the 18 months or so through the end of 2023, it was a tough time to sell your company," he said. "Private equity firms have now held these companies a lot longer than they expected to, and they're getting pressure to return capital from their limited partners. In other words, we believe there's huge pent-up demand to sell companies from private equity firms and private owners. We think this is going to drive M&A activity this year and in 2025 and 2026."

"The M&A markets are certainly up the first part of this year, but not yet to the level we were anticipating. We expect activity to keep growing as debt markets get healthier and there's more visibility on where interest rates are going," he said.

### ACROSS RATE SCENARIOS

Speaking of interest rates, recent inflation numbers suggest that the Fed might not start cutting rates this year as quickly or as much as investors anticipate. If so, Haggard said the direct-lending market wouldn't suffer.

He noted that with rates at current levels — and provided that they don't go much higher — it's still a good environment for doing middle-market M&A deals that require direct lending. Leverage levels can support full valuations.

"Many lenders are betting that this is as bad as it's going to get on the interest coverage side," Haggard said. "If we get a little deep on leverage today, hopefully we're doing so behind good, solid companies that should benefit if rates start to come down within 12 to 18 months. Lenders and investors making those bets feel that the market has peaked on the interest rate side and can sustain a year or two of tighter coverage."

### CHOOSE THE RIGHT MANAGER

For allocators evaluating direct-lending managers, Haggard recommends a number of key characteristics. Experience is at the top of the list. "Investors should allocate to a manager that has the experience, has been through multiple market cycles, has invested with consistency and has the team and infrastructure to manage very active portfolios."

Size is critical as well, with the manager's ability to take most, or all, of a loan being a major differentiator. "A lender that has the ability to grow with borrowers is a strong value proposition in the lower-middle market," he said.

Managers should have the number and type of personnel needed to do the job, in Haggard's view. "A lot of lenders can raise capital, but it's a whole other deal to actually manage a complex, active portfolio and have the resources to do it. It takes more than an investment team to handle it. We believe you need a variety of specialized personnel to manage everything and make sure you're on top of all the potential issues and working through situations properly," he said.

Finally, a good manager must be able to find deals — meaning that a robust origination capability and established, tight relationships with private equity sponsors are vital to success. As Haggard put it, "Access to capital won't take you far if you can't get deals. Having a strong network of sponsors that you've worked with for many years is mandatory if you want to be competitive in direct lending." ■

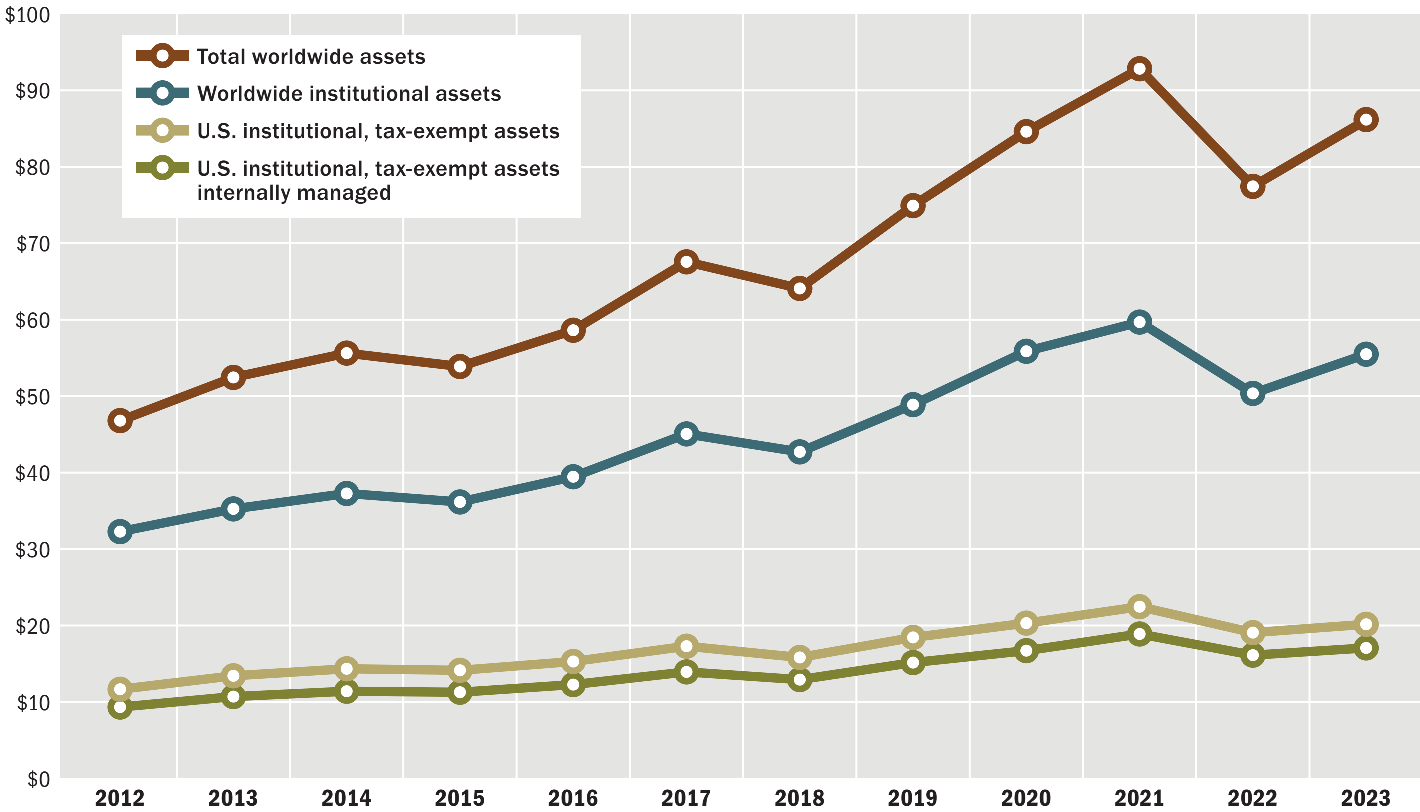


pionline.com/direct-lending-tpgtwinbrook24

[1]For the period 1987 through September 2021. Source: S&P Global Ratings, S&P Global Market Intelligence's Credit Pro & Ratings Research.

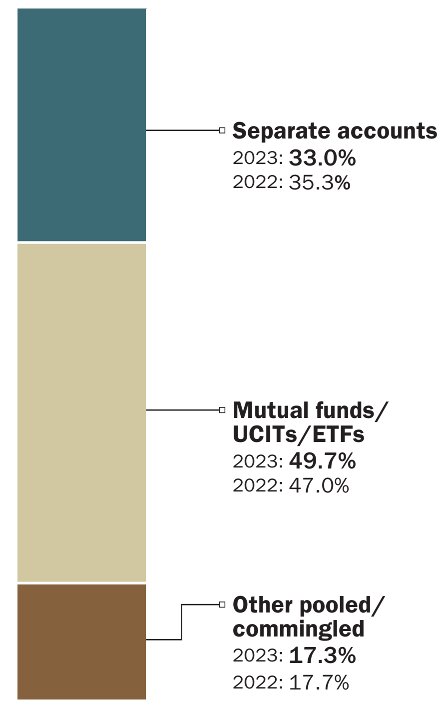
## Growth of manager assets

Assets are in trillions as of Dec. 31.



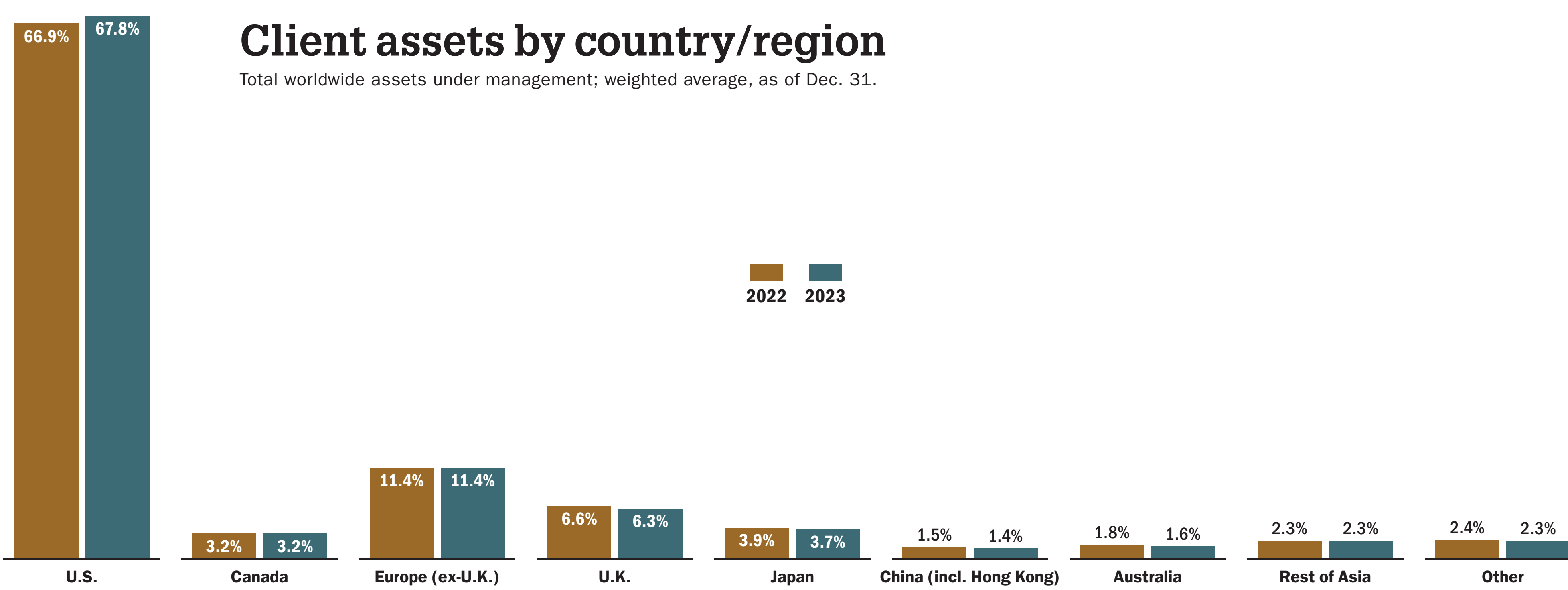

## Investment vehicle mix

Total worldwide assets under management; weighted average, as of Dec. 31.



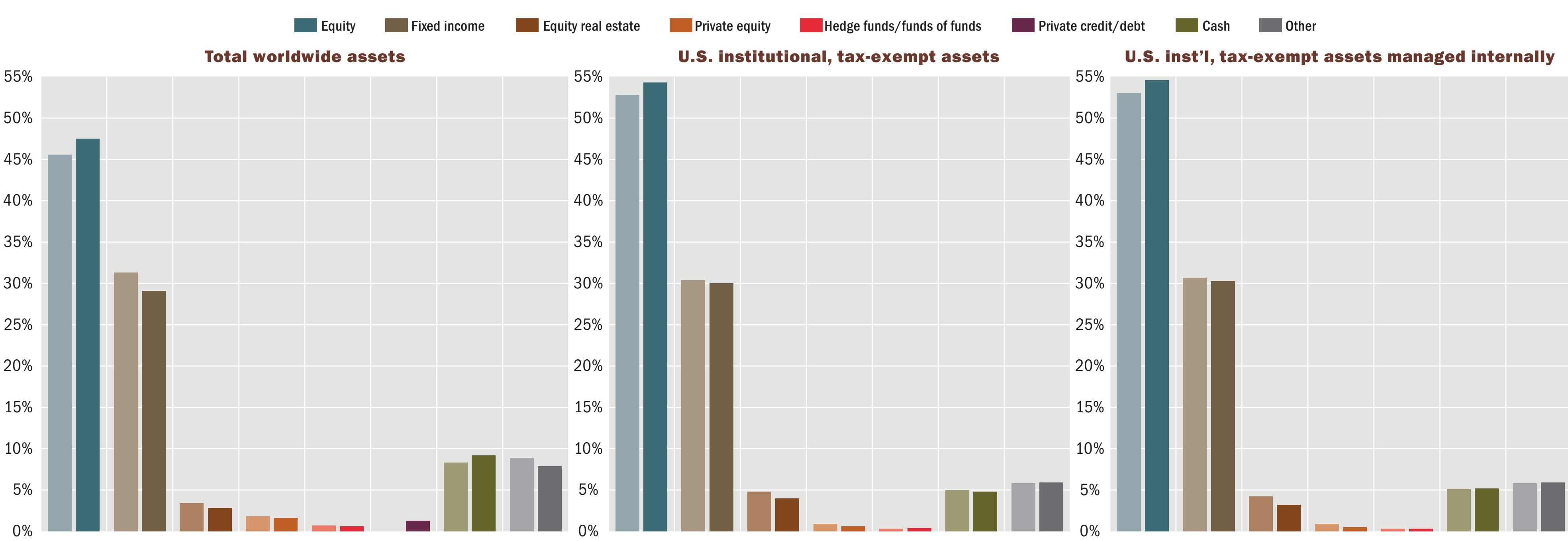

## Client assets by country/region

Total worldwide assets under management; weighted average, as of Dec. 31.




## Average asset mixes

Weighted averages as of Dec. 31. Data in parentheses are previous year.



# The Largest Money Managers

## The largest money managers

Ranked by total worldwide institutional assets under management, in millions, as of Dec. 31.

| Rank | Prev. rank | Manager | Assets |
|---|---|---|---|
| 1 | 1 | Vanguard Group | $6,063,130 |
| 2 | 2 | BlackRock | $5,570,859 |
| 3 | 3 | State Street Global | $2,812,916 |
| 4 | 4 | Fidelity Investments | $2,243,157 |
| 5 | 7 | J.P. Morgan Asset & Wealth | $1,711,469 |
| 6 | 6 | Goldman Sachs Group | $1,620,791 |
| 7 | 5 | BNY Mellon | $1,553,800 |
| 8 | 8 | Legal & General Investment | $1,389,206 |
| 9 | 10 | Amundi | $1,226,194 |
| 10 | 9 | Wellington Mgmt. | $1,218,957 |
| 11 | 12 | Geode Capital Mgmt. | $1,154,904 |
| 12 | 11 | Prudential Financial | $1,060,073 |
| 13 | 13 | PIMCO | $919,759 |
| 14 | 14 | Northern Trust Asset Mgmt. | $899,161 |
| 15 | 16 | Capital Group | $858,237 |
| 16 | 15 | Nuveen | $830,214 |
| 17 | 17 | T. Rowe Price Associates | $810,000 |
| 18 | 18 | AXA Investment | $751,453 |
| 19 | 20 | Federated Hermes | $706,482 |
| 20 | 19 | Franklin Templeton | $695,069 |
| 21 | 22 | Dimensional Fund Advisors | $677,141 |
| 22 | 21 | Invesco | $612,982 |
| 23 | 23 | MetLife Investment Mgmt. | $600,800 |
| 24 | 24 | Morgan Stanley Investment Mgmt. | $581,509 |
| 25 | 29 | DWS | $540,479 |
| 26 | 25 | New York Life Investments | $508,014 |
| 27 | 26 | Schroders | $505,838 |
| 28 | 27 | Principal Global Investors | $493,255 |
| 29 | 28 | KKR | $492,371 |
| 30 | 31 | Brookfield Asset Mgmt. | $469,311 |
| 31 | 33 | BNP Paribas Asset Mgmt. | $411,540 |
| 32 | 32 | Allspring Global Investments | $407,865 |
| 33 | 35 | Mercer | $393,473 |
| 34 | 34 | Asset Management One | $368,474 |
| 35 | 40 | Ares Mgmt. | $359,682 |
| 36 | 37 | Aegon Asset Mgmt. | $331,789 |
| 37 | 36 | Barings | $330,214 |
| 38 | 38 | AllianceBernstein | $326,021 |
| 39 | 39 | Neuberger Berman | $320,892 |
| 40 | 44 | MassMutual | $301,027 |
| 41 | 41 | Columbia Threadneedle | $295,699 |
| 42 | 42 | NISA Investment | $287,667 |
| 43 | 46 | SEI Investments | $262,699 |
| 44 | 48 | SLC Management | $251,913 |
| 45 | 47 | Manulife Investment | $250,832 |
| 46 | 45 | Aviva Investors | $250,083 |
| 47 | 49 | Russell Investments | $243,228 |
| 48 | 43 | Voya Investment Mgmt. | $239,505 |
| 49 | 50 | Loomis, Sayles | $238,907 |
| 50 | 51 | Baillie Gifford Overseas | $232,789 |
| 51 | 52 | Dodge & Cox | $222,102 |
| 52 | 55 | RBC Global Asset Mgmt. | $207,254 |
| 53 | 54 | MFS Investment | $203,118 |
| 54 | 56 | Mesirow | $196,005 |
| 55 | 53 | TCW Group | $195,651 |
| 56 | 57 | Guggenheim Investments | $176,354 |
| 57 | 62 | PFM Asset Mgmt. | $176,339 |
| 58 | 60 | Conning | $174,767 |
| 59 | 64 | TD Global Investment Solutions | $168,765 |
| 60 | 59 | WTW Investment Services | $162,929 |
| 61 | 67 | Nomura Asset Mgmt. | $158,645 |
| 62 | 69 | Payden & Rygel | $148,895 |
| 63 | 68 | Oaktree Capital | $148,893 |
| 64 | 65 | IFM Investors | $147,817 |
| 65 | 70 | Lazard Asset Mgmt. | $147,269 |
| 66 | 63 | CBRE Investment Mgmt. | $146,900 |
| 67 | 72 | Artisan Partners | $144,523 |
| 68 | 71 | Victory Capital | $137,109 |
| 69 | 73 | PRIMECAP | $134,477 |
| 70 | 74 | Man Group | $130,800 |
| 71 | 76 | Baird Advisors | $130,430 |
| 72 | 87 | Charles Schwab Investment | $128,664 |
| 73 | 75 | Robeco | $126,045 |
| 74 | 79 | Partners Group | $109,503 |
| 75 | 88 | RhumbLine Advisers | $107,611 |
| 76 | 82 | Acadian Asset Mgmt. | $103,744 |
| 77 | 85 | StepStone Group | $102,150 |
| 78 | | Mackenzie Investments | $101,076 |
| 79 | 78 | Ninety One | $100,656 |
| 80 | 91 | Record Currency Mgmt. | $99,230 |
| 81 | 81 | AQR Capital Mgmt. | $98,840 |
| 82 | 94 | Pictet Asset Mgmt. | $98,613 |
| 83 | 84 | LSV Asset Mgmt. | $96,001 |
| 84 | 92 | Income Research & Mgmt. | $92,785 |
| 85 | 80 | Starwood Capital | $91,271 |
| 86 | 86 | American Century | $90,187 |
| 87 | 89 | Pathway Capital | $88,521 |
| 88 | 83 | Prologis | $88,216 |
| 89 | 95 | First Sentier Investors | $87,123 |
| 90 | 98 | Alan Biller and Associates | $84,675 |
| 91 | 97 | New England Asset Mgmt. | $82,958 |
| 92 | 93 | AEW Capital | $79,760 |
| 93 | 102 | PineBridge Investments | $79,317 |
| 94 | 104 | CC&L Financial Group | $78,324 |
| 95 | 96 | Hines | $76,287 |
| 96 | 101 | GCM Grosvenor | $73,774 |
| 97 | 105 | Fort Washington | $73,662 |
| 98 | 99 | PPM America | $73,111 |
| 99 | 103 | PNC Financial | $71,761 |
| 100 | 108 | William Blair | $66,047 |
| 101 | 107 | Oak Hill Advisors | $63,432 |
| 102 | | Blackstone Alternative | $62,251 |
| 103 | 106 | Dai-ichi Life Holdings | $55,441 |
| 104 | 114 | PAG | $55,000 |
| 105 | 112 | Harrison Street | $54,924 |
| 106 | 116 | Adams Street Partners | $52,874 |
| 107 | 118 | GoldenTree Asset Mgmt. | $52,627 |
| 108 | 113 | Grantham, Mayo, Van Otterloo | $52,234 |
| 109 | 110 | Ashmore Group | $52,000 |
| 110 | 117 | Sterling Capital | $51,120 |
| 111 | 111 | Heitman | $50,320 |
| 112 | 115 | Harris Associates | $50,265 |
| 113 | 121 | Nikko Asset Mgmt. | $49,166 |
| 114 | 119 | Mondrian Investment | $49,058 |
| 115 | 128 | Harbor Capital Advisors | $47,935 |
| 116 | 125 | Fisher Investments | $47,887 |
| 117 | 122 | Harding Loevner | $40,490 |
| 118 | 127 | Marathon-London | $39,027 |
| 119 | 133 | Pzena Investment | $38,415 |
| 120 | 134 | Causeway Capital | $36,427 |
| 121 | 129 | Aristotle Capital Mgmt. | $36,139 |
| 122 | | Chandler Asset Mgmt. | $35,464 |
| 123 | 126 | Cohen & Steers | $34,937 |
| 124 | 140 | Los Angeles Capital | $34,581 |
| 125 | 130 | SECOR Asset Mgmt. | $34,366 |
| 126 | 177 | Callan | $34,233 |
| 127 | 137 | Hayfin Capital Mgmt. | $33,981 |
| 128 | 136 | MissionSquare Investments | $32,975 |
| 129 | 132 | PanAgora Asset Mgmt. | $32,730 |
| 130 | 131 | Stockbridge Capital Group | $31,943 |
| 131 | 143 | EARNEST Partners | $31,650 |
| 132 | | ASB Capital Mgmt. | $29,727 |
| 133 | 142 | Jarislowsky Fraser | $29,586 |
| 134 | 141 | Shenkman Group | $29,129 |
| 135 | 268 | Parnassus Investments | $28,074 |
| 136 | 152 | Nomura Corporate Research | $27,969 |
| 137 | 153 | Scout Investments | $27,107 |
| 138 | 148 | Hotchkis & Wiley | $27,008 |
| 139 | 145 | Strategic Investment Group | $26,878 |
| 140 | 144 | Knights of Columbus Asset | $26,837 |
| 141 | 151 | Beutel, Goodman | $26,260 |
| 142 | | Highland Associates | $24,790 |
| 143 | | First Pacific Advisors | $24,602 |

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Investment
**INSIGHTS**

# WAYS TO LEVERAGE A PENSION PLAN SURPLUS

A robust equity market coupled with the strong fixed-income returns that followed the sharp rise in interest rates have restored corporate pension plans to full-funded status, with many enjoying a surplus. This welcome development has sparked conversations by plan sponsors exploring paths for their excess pension assets, from bolstering retirement benefits to addressing corporate financial needs or supporting other business initiatives.

"The pension environment has changed significantly since pensions were last overfunded, and these changes present opportunities to plan sponsors with overfunded plans," said Jeff Passmore, lead strategist of liability-driven investing at MetLife Investment Management.

Take IBM, for example. With a funding ratio north of 115% and a surplus of $3.6 billion last year, the technology giant reopened its long-frozen defined benefit plan. It replaced its 5% match to its 401(k) plan with a 5% cash-balance pension benefit that it will fund through its pension surplus. The move, announced by IBM last November, turned heads in the retirement industry — and has opened the door to a wider evaluation by many plan sponsors and asset managers about the utility of surplus assets.

### ROAD TO FULL FUNDING

Corporate pension plans in the U.S. haven't been fully funded since 2007, just before the market downturn that was sparked by the global financial crisis. Since 2008, many plan sponsors moved to implement LDI strategies with derisking glidepaths, leading to increased allocations to bonds and decreased allocations to stocks.

"Many sponsors also launched programs to reduce the size of their pensions, such as closing plans to new entrants, freezing future benefit accruals, offering lump sums to separated participants and transferring liabilities to insurers through the purchase of annuities in a pension risk transfer," Passmore said.

Fast forward to 2019, when an extended period of strong equity market performance helped bring the average pension plan back to fully funded status — and since 2022, the Federal Reserve's rate-hiking cycle has further improved pension funding by increasing interest rates, driving down pension liabilities. By the end of the first quarter this year, the average funding ratio of corporate pension plans in the Russell 3000 reached 104.8%, up from 97.9% at the end of 2021, according to MetLife IM.

"With more in hedging assets and less equity risk, pension surplus is likely to persist. The pension landscape has changed dramatically, and there are now several potential uses of surplus plan assets as well as some benefits of keeping and growing the surplus," Passmore said. Sponsors can leverage surplus assets to, for instance, fund a PRT, cover administration costs or help in a corporate acquisition. Depending on a plan sponsor's goals and philosophy, those assets could also remain in the plan and reap benefits on their own, he noted. (See chart on funding projection for full and overfunded plans.)

### RESTART BENEFITS

"One efficient option for using surplus pension assets is to restart benefit accruals or reopen the plan," Passmore said, pointing to IBM's pension reopening move as an example. "This can be done in the context of reducing other elements of total compensation to achieve savings."

In pension "restart" situations, the new pension benefit can be structured differently than the legacy benefit, he said. For example, a plan with a frozen final average pay benefit could be reopened with a new cash-balance benefit. Because the Pension Protection Act added safe harbor cash-balance plan designs as a low-risk option for plan sponsors, cash balance has become the predominant new type of pension benefit.

### PAY HEALTH BENEFITS

"Many corporations have legacy unfunded retiree medical plans," Passmore said. "The ongoing benefit costs of these plans are typically paid from corporate cash. One potential way to efficiently use pension surplus is to pay retiree medical benefits."

Under Internal Revenue Service rules, defined benefit plans — but not multiemployer plans — can transfer retirement assets to medical benefit accounts via a qualified transfer. That rule was originally set to expire at the end of 2025, but in passing SECURE 2.0, Congress extended the sunset to the end of 2032.

### FUND A PRT

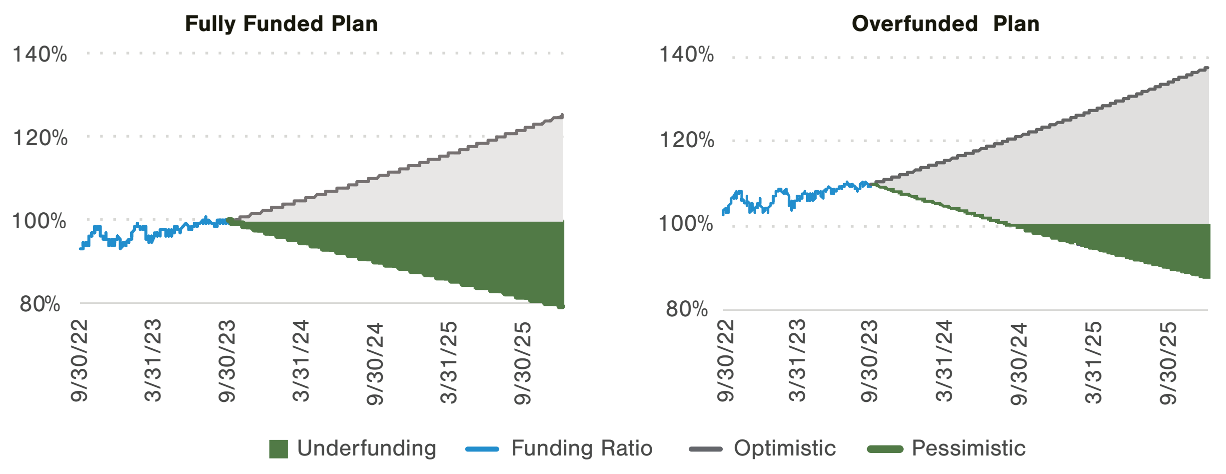
Surplus pension assets can be used to fund a pension risk transfer, which moves some or all of the pension liability to an insurer through an annuity purchase. PRT transactions have become an increasingly popular way to reduce or eliminate pension financial risk. The number of PRT transactions reached record levels last year, with 850 contracts sold, up 25% from 2022, according to LIMRA.

"The PRT market is comprised primarily of two types of strategies: plan terminations and lift-outs, or partial buyouts, most often of retirees," Passmore said. "Retiree lift-outs cover participants who have retired and who are already in payment status. Partial buyouts typically drive premiums, but transaction counts are mainly for plan terminations, especially small plans."

**Jeff Passmore**
Lead LDI Strategist
MetLife Investment Management

Passmore noted that plan sponsors need to tread carefully when considering a PRT because as transactions and premium volume have grown, so has the PRT provider market with a number of new entrants (see chart). Also, the industry is still waiting for the Department of Labor to release its final review on guidelines governing PRTs, which is expected sometime this year. "Despite the uncertainty associated with this unfinished review, market demand, high interest rates and improved funded status continue to drive PRT transactions," he said.

## Funding Projection Comparing Fully Funded and Overfunded Plans




*Source: MetLife Investment Management calculations. Illustrations of plan funded ratio history and a range of possible future outcomes using certain capital market assumptions. The left chart shows a fully funded plan (100% funded ratio) and the right chart shows an overfunded plan (110% funded ratio). The overfunded plan is more likely than the fully funded plan to be overfunded in the future.*

Investment
# INSIGHTS

### RECAPTURE SURPLUS ASSETS

When a plan sponsor terminates a plan with a surplus, the surplus assets can revert back to the company. However, such asset reversions are taxed, including through excise taxes, so they may not be the most efficient use of plan assets, Passmore said.

"If at least 25% of the surplus is used in a Qualified Replacement Plan, the remaining surplus assets are taxed at 20%," he noted. If a QRP is not used, then asset reversions face a 50% excise tax."

Specific IRS rules govern asset reversion through a QRP, including:

- It can be a new or existing plan, and can comprise multiple plans.
- It can be a defined benefit or defined contribution plan, but cannot fund matching contributions.
- It must include at least 25%, and up to 100%, of excess assets.
- It must allocate excess assets to participants evenly over seven years or faster.
- It must cover at least 95% of active employees in the terminating plan who remain employees after plan termination; other employees can also be included.
- It can include payment of expenses from plan assets for administration of the QRP.

Some sponsors can consider a plan spin-off or termination to capture surplus assets through an asset reversion. It is a two-step process: first, to split the pension into two plans, one each for active and inactive participants; and second, to terminate the plan for the inactive group. However, Passmore said, "the IRS has stopped issuing advance approvals of spinoffs/terminations, indicating a more negative view of these types of transactions."

### COVER ADMINISTRATIVE COSTS

"Pension assets can be, and typically are, used to pay plan expenses like [Pension Benefit Guaranty Corporation] premiums, actuarial fees and investment management fees," Passmore said. "With a plan surplus, plan sponsors may be motivated to consider paying a greater proportion of plan administrative expenses from plan assets. For example, it may be permissible to pay the expenses of staff who support the plan."

However, plan sponsors must follow specific guidelines when plan expenses are paid from plan assets: Plan documents must allow such payment, the expenses must be reasonable, and the costs incurred must be for the exclusive benefit of plan participants.

Another important detail is that, according to DOL guidelines, plan assets can be used to pay only for activities related to plan management, not the creation or design of the plan — activities referred to as settlor functions. (See table on settlor vs. administrative activities.)

### SUPPORT AN ACQUISITION

Beyond plan-related activities, surplus plan assets can be used in a corporate acquisition that includes an underfunded plan.

"When pensions are included in an acquisition, the purchase price typically includes a pension adjustment to reflect the funded position of the acquired plan," Passmore said. "A purchaser with an overfunded plan can monetize their surplus by acquiring a business with an underfunded plan."

For example, if a company with a pension plan surplus of $200 million acquires a company with a plan that is underfunded by $20 million, the acquisition purchase price can be adjusted down $20 million to reflect the underfunded pension. Once the acquisition closes, the acquirer will have a pension surplus of $180 million ($200 million minus $20 million). Post-acquisition, the plans may be merged or left as stand-alone plans.

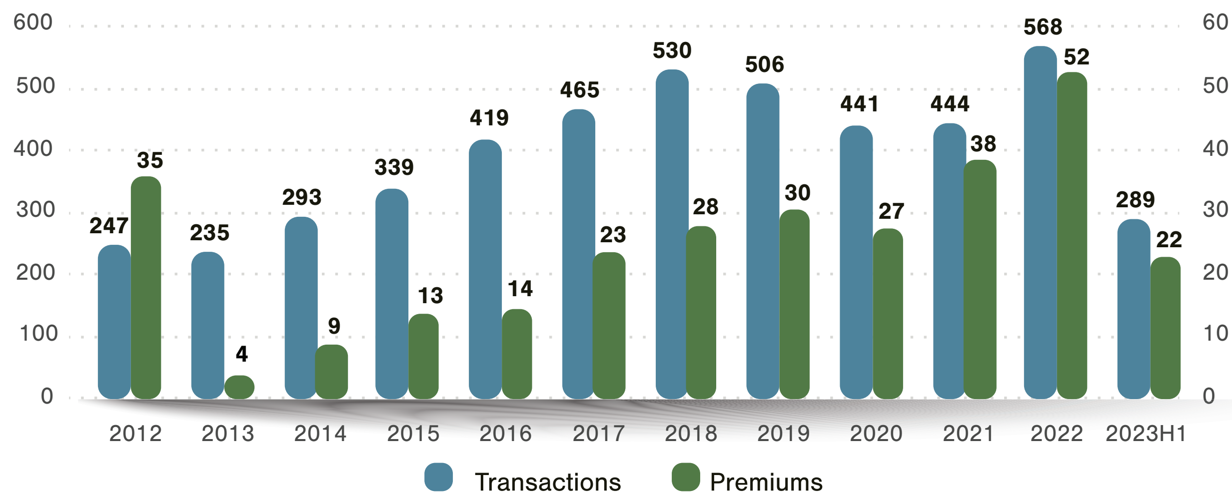
### KEEP THE SURPLUS

Some plan sponsors may simply prefer to maintain and grow a pension surplus rather than finding a near-term use for it. "There are benefits to having an overfunded position in a pension," Passmore said. "Simply knowing there are potential uses for surpluses may be enough motivation to support this approach."

First, overfunded plans do not have to make required contributions or pay PBGC variable-rate premiums. Second, the larger the plan's surplus, the less likely the plan will ever have to make required contributions or pay a variable-rate premium. Third, the accounting treatment for an overfunded plan results in income on the sponsor's P&L.

With funded status healthier now than at any time in the last 17 years, corporate plan sponsors with a pension surplus have the flexibility to leverage those assets. The good news is that by simply leaving the surplus status quo, plan sponsors can maintain their strong position. ■

## PRT Transactions and Premiums by Year




*Source: Aon, U.S. Pension Risk Transfer, Market Insights, March 2023 and 2023 Mid-Year Update. 12/26/23.*

## Settlor vs. Administrative Pension Support Tasks

| Settlor Functions | Administrative Functions |
|---|---|
| Plan design work | Plan administration and benefit calculation expenses |
| Work associated with corporate transactions, like mergers, acquisitions, or plan spinoffs | Communicating plan benefits to participants and beneficiaries |
| Accounting calculations for pensions, e.g., ASC 715 | PPA required funding calculations |
| Plan amendments not required to keep the plan qualified and not required to implement the plan, e.g. an amendment to change plan benefits | Plan amendments required to maintain tax-qualified status, e.g., as required for a change in pension law |
| Expenses related to union negotiations | Expenses related to implementing plan changes from union negotiations |

*Sources: Department of Labor Guidance on Settlor v. Plan Expenses; American Society of Pension Professionals and Actuaries: What Expenses Can Be Paid from Plan Assets?; 12/26/23.*



pionline.com/pension-surplus-mim24

# The largest money managers

Ranked by total worldwide institutional assets under management, in millions, as of Dec. 31.

| Rank | Prev. rank | Manager | Assets |
|---|---|---|---|
| 144 | 160 | Kayne Anderson Rudnick | $24,425 |
| 145 | 161 | Polen Capital | $23,799 |
| 146 | 163 | Sustainable Growth Advisers | $23,675 |
| 147 | 147 | Rockpoint Group | $23,221 |
| 148 | 157 | Guardian Capital | $23,130 |
| 149 | 149 | AAM | $22,753 |
| 150 | 156 | PCCP | $22,496 |
| 151 | 150 | CIM Group | $22,134 |
| 152 | 154 | Calamos Advisors | $20,809 |
| 153 | 167 | Eagle Capital | $20,657 |
| 154 | 159 | Canyon Partners | $20,370 |
| 155 | 168 | Garcia Hamilton | $20,237 |
| 156 | 181 | Jacobs Levy Equity | $20,083 |
| 157 | 171 | Axiom Investors | $19,916 |
| 158 | 203 | CornerStone Partners | $19,914 |
| 159 | 180 | Cantillon Capital Mgmt. | $19,902 |
| 160 | 155 | ACORE Capital | $19,689 |
| 161 | 182 | Brandes Investment | $19,136 |
| 162 | 179 | Fuller & Thaler | $18,822 |
| 163 | 178 | Aristotle Pacific Capital | $18,292 |
| 164 | 172 | King Street Capital | $18,200 |
| 165 | 162 | TA Realty | $17,799 |
| 166 | 169 | Sprucegrove Investment | $17,219 |
| 167 | 175 | Champlain Investment | $17,111 |
| 168 | 196 | Westfield Capital | $16,938 |
| 169 | 170 | Longfellow Investment | $16,815 |
| 170 | 206 | Sage Advisory Services | $16,815 |
| 171 | 176 | Crestline Investors | $15,895 |
| 172 | 190 | Breckinridge Capital | $15,794 |
| 173 | | Merganser Capital | $15,628 |
| 174 | 197 | Driehaus Capital | $15,149 |
| 175 | 183 | Fayez Sarofim | $14,933 |
| 176 | 238 | Newfleet Asset Mgmt. | $14,768 |
| 177 | 191 | Beach Point Capital | $14,721 |
| 178 | 184 | Sit Investment | $14,583 |
| 179 | 188 | Beacon Capital | $14,161 |
| 180 | 195 | Eagle Asset Mgmt. | $13,954 |
| 181 | 199 | Segall Bryant & Hamill | $13,926 |
| 182 | 207 | Yousif Capital | $13,782 |
| 183 | 187 | Walton Street Capital | $13,330 |
| 184 | | ARGA Investment | $13,299 |
| 185 | 164 | MFG Asset Mgmt. | $13,038 |
| 186 | | Seix | $12,996 |
| 187 | | DRA Advisors | $12,900 |
| 188 | 189 | Rockwood Capital | $12,892 |
| 189 | 198 | CenterSquare Investment | $12,808 |
| 190 | 208 | Commerce Trust | $12,554 |
| 191 | 223 | Capital Fund Mgmt. | $12,508 |

| Rank | Prev. rank | Manager | Assets |
|---|---|---|---|
| 192 | 186 | Intercontinental Real Estate | $12,442 |
| 193 | 209 | Zacks Investment | $12,331 |
| 194 | 204 | Westbrook Partners | $12,189 |
| 195 | 202 | GW&K Investment | $11,924 |
| 196 | | iM Global Partner | $11,787 |
| 197 | 200 | Polaris Capital | $11,775 |
| 198 | 193 | American Realty Advisors | $11,758 |
| 199 | 212 | Cooke & Bieler | $11,322 |
| 200 | | Boston Trust Walden | $11,192 |
| 201 | 58 | Wilmington Trust | $10,801 |
| 202 | 219 | Ullico Investment | $10,792 |
| 203 | 216 | Pugh Capital | $10,786 |
| 204 | 227 | Christian Brothers | $10,703 |
| 205 | 211 | Brown Capital | $10,644 |
| 206 | 220 | London Co. | $10,520 |
| 207 | | GAM | $10,358 |
| 208 | 214 | Jensen Investment | $10,273 |
| 209 | 217 | Mill Creek Residential | $10,155 |
| 210 | 226 | Frontier Capital | $10,103 |
| 211 | 215 | Burgundy Asset Mgmt. | $10,096 |
| 212 | 228 | Manning & Napier | $9,993 |
| 213 | 224 | Waterfall Asset Mgmt. | $9,900 |
| 214 | 239 | National Investment | $9,797 |
| 215 | 218 | Global Endowment Mgmt. | $9,695 |
| 216 | 213 | L&B Realty | $9,408 |
| 217 | 241 | Prima Capital Advisors | $9,281 |
| 218 | 221 | GAMCO Investors | $9,268 |
| 219 | 232 | Ramirez Asset Mgmt. | $9,165 |
| 220 | 255 | Luther King Capital | $9,061 |
| 221 | 245 | Agincourt Capital | $8,989 |
| 222 | 230 | Washington Capital | $8,808 |
| 223 | 166 | Intech | $8,795 |
| 224 | 246 | Diamond Hill Capital | $8,767 |
| 225 | 233 | Altrinsic Global Advisors | $8,525 |
| 226 | 234 | National Real Estate | $8,488 |
| 227 | 231 | TimesSquare Capital | $8,268 |
| 228 | 236 | CS McKee | $8,262 |
| 229 | 229 | Ariel Investments | $8,240 |
| 230 | 235 | Advent Capital | $8,228 |
| 231 | 247 | AGF Investments | $8,113 |
| 232 | 271 | Madison Investments | $7,823 |
| 233 | 243 | Silver Creek Capital | $7,710 |
| 234 | 244 | River Road Asset Mgmt. | $7,580 |
| 235 | 251 | LCM Partners | $7,573 |
| 236 | 237 | WEDGE Capital | $7,420 |
| 237 | 252 | Madison Realty | $7,401 |
| 238 | 242 | Alger | $7,259 |
| 239 | 248 | Sentinel Real Estate | $7,030 |

| Rank | Prev. rank | Manager | Assets |
|---|---|---|---|
| 240 | 265 | Stephens Investment Mgmt. Group | $6,876 |
| 241 | 253 | Silvercrest Asset Mgmt. | $6,697 |
| 242 | 258 | AFL-CIO Housing Trust | $6,559 |
| 243 | 263 | Davis Advisors | $6,540 |
| 244 | 222 | Matthews Asia | $6,412 |
| 245 | 264 | Torchlight Investors | $6,376 |
| 246 | 210 | Stone Harbor Investment | $6,371 |
| 247 | 254 | White Oak Global Advisors | $6,357 |
| 248 | 267 | Congress Asset Mgmt. | $6,345 |
| 249 | 256 | Equus Capital | $6,240 |
| 250 | 249 | Ceredex Value Advisors | $6,238 |
| 251 | 273 | Camden Asset Mgmt. | $6,204 |
| 252 | 259 | Corbin Capital | $6,026 |
| 253 | 277 | Gramercy | $5,932 |
| 254 | 250 | CoreCommodity | $5,915 |
| 255 | 257 | Hardman Johnston Global | $5,912 |
| 256 | 260 | City of London | $5,909 |
| 257 | 261 | Spider Mgmt. | $5,860 |
| 258 | 240 | TT International | $5,762 |
| 259 | 288 | Baird Equity Asset Mgmt. | $5,755 |
| 260 | 276 | Lyrical Asset Mgmt. | $5,678 |
| 261 | 275 | Glenmede Investment | $5,642 |
| 262 | 272 | Richmond Capital | $5,501 |
| 263 | | Hildene Capital | $5,461 |
| 264 | 282 | Duff & Phelps | $5,400 |
| 265 | 274 | 400 Capital Mgmt. | $5,395 |
| 266 | 279 | Resource Mgmt. | $5,130 |
| 267 | 270 | Martingale Asset Mgmt. | $5,041 |
| 268 | 285 | LM Capital Group | $4,997 |
| 269 | 287 | Sierra Investment | $4,899 |
| 270 | 269 | Dana Investment | $4,823 |
| 271 | 284 | Johnson Asset Mgmt. | $4,820 |
| 272 | 280 | DePrince, Race & Zollo | $4,811 |
| 273 | 278 | D.F. Dent | $4,800 |
| 274 | 286 | Conestoga Capital | $4,728 |
| 275 | 289 | Forest Investment | $4,554 |
| 276 | 281 | Fiduciary Mgmt./Milwaukee | $4,500 |
| 277 | 290 | Carmel Partners | $4,469 |
| 278 | 296 | GlobeFlex Capital | $4,383 |
| 279 | 303 | Kennedy Capital | $4,341 |
| 280 | 294 | Todd Asset Mgmt. | $4,325 |
| 281 | 297 | Kornitzer Capital | $4,245 |
| 282 | 293 | Peregrine Capital | $4,171 |
| 283 | 323 | Bivium Capital | $4,129 |
| 284 | 299 | Emerald Advisers | $4,073 |
| 285 | 327 | Dalton Investments | $4,038 |
| 286 | 318 | Algert Global | $4,024 |
| 287 | 305 | Riverbridge Partners | $3,996 |

# The Largest Money Managers

| Rank | Prev. rank | Manager | Assets |
|---|---|---|---|
| 288 | 302 | Leading Edge Investment | $3,936 |
| 289 | 304 | Security Capital Research | $3,875 |
| 290 | 301 | Stacey Braun Associates | $3,825 |
| 291 | 295 | Hoisington Investment | $3,718 |
| 292 | 308 | Dolan McEniry | $3,628 |
| 293 | 326 | Zevenbergen Capital | $3,618 |
| 294 | | TGM Associates | $3,526 |
| 295 | | Barksdale Investment Mgmt. | $3,497 |
| 296 | 300 | Mar Vista Investment | $3,487 |
| 297 | | Longpoint Partners | $3,451 |
| 298 | 311 | Channing Capital | $3,450 |
| 299 | 313 | Twin Bridge Capital | $3,440 |
| 300 | | Metis Global Partners | $3,407 |
| 301 | 298 | Patron Capital | $3,398 |
| 302 | 309 | Angel Oak Capital | $3,343 |
| 303 | 328 | Hood River Capital | $3,287 |
| 304 | 316 | Systematic Financial | $3,247 |
| 305 | 315 | Aristotle Capital Boston | $3,032 |
| 306 | 307 | Granahan Investment | $3,032 |
| 307 | 312 | ClariVest Asset Mgmt. | $2,999 |
| 308 | 314 | Evanston Capital | $2,971 |
| 309 | 319 | Hillsdale Investment | $2,963 |
| 310 | 317 | Palisade Capital | $2,902 |
| 311 | 185 | Cliffwater | $2,885 |
| 312 | 321 | 3650 REIT | $2,727 |
| 313 | 329 | Trillium Asset Mgmt. | $2,707 |
| 314 | 381 | Belle Haven Investments | $2,664 |
| 315 | 332 | Verger Capital | $2,658 |
| 316 | 322 | GTIS Partners | $2,652 |
| 317 | 324 | Molpus Woodlands Group | $2,613 |
| 318 | | Meadow Partners | $2,325 |
| 319 | 335 | Oberweis Asset Mgmt. | $2,297 |
| 320 | 325 | Winthrop Capital | $2,296 |
| 321 | 331 | EAM Investors | $2,295 |
| 322 | 336 | Zazove Associates | $2,245 |
| 323 | 338 | Timberland Investment Resources | $2,204 |
| 324 | 346 | Silvant Capital | $2,172 |
| 325 | 339 | Sawgrass Asset Mgmt. | $2,120 |
| 326 | 333 | GIA Partners | $2,094 |
| 327 | 343 | Sound Shore Mgmt. | $2,077 |
| 328 | 334 | Weatherbie Capital | $2,017 |
| 329 | 337 | Wexford Capital | $2,000 |
| 330 | 341 | NewSouth Capital | $1,995 |
| 331 | 340 | SSI Investment | $1,829 |
| 332 | 345 | HS Management | $1,828 |
| 333 | 354 | Heartland Advisors | $1,809 |
| 334 | 363 | Smith Affiliated Capital | $1,796 |
| 335 | 349 | Genter Capital | $1,790 |

| Rank | Prev. rank | Manager | Assets |
|---|---|---|---|
| 336 | 342 | Foundry Partners | $1,748 |
| 337 | 344 | KBS | $1,650 |
| 338 | 360 | Ranger Investments | $1,650 |
| 339 | 353 | Covenant Capital Group | $1,560 |
| 340 | 355 | Adelante Capital | $1,544 |
| 341 | | Radcliffe Capital | $1,540 |
| 342 | 359 | Penn Capital | $1,516 |
| 343 | 352 | Edgar Lomax | $1,490 |
| 344 | 362 | Cornerstone Investment | $1,478 |
| 345 | 351 | Sarofim Realty | $1,431 |
| 346 | 358 | Quest Investment | $1,415 |
| 347 | | AJOVista | $1,369 |
| 348 | 366 | Orleans Capital | $1,362 |
| 349 | 377 | CS Capital | $1,305 |
| 350 | 400 | Denali Advisors | $1,243 |
| 351 | 403 | Medalist Partners | $1,216 |
| 352 | 370 | Tributary Capital | $1,213 |
| 353 | 364 | Logan Capital | $1,204 |
| 354 | 368 | Karpus Investment | $1,198 |
| 355 | 361 | Associated Capital Group | $1,098 |
| 356 | 371 | Mairs & Power | $1,088 |
| 357 | | Agilis | $1,061 |
| 358 | 373 | Granite Investment | $1,002 |
| 359 | 374 | Ativo Capital Mgmt. | $1,000 |
| 360 | 369 | StoneRidge PMG Advisors | $982 |
| 361 | 357 | Cramer Rosenthal McGlynn | $976 |
| 362 | | Summit Creek Advisors | $967 |
| 363 | 376 | Sasco Capital | $911 |
| 364 | 367 | Thornburg Investment | $902 |
| 365 | | Flaherty & Crumrine | $895 |
| 366 | 378 | TWIN Capital | $747 |
| 367 | 386 | Phocas Financial | $734 |
| 368 | 372 | Bridgeway Capital | $703 |
| 369 | 388 | Pier Capital | $702 |
| 370 | 390 | Van Hulzen Asset Mgmt. | $669 |
| 371 | 395 | Aristotle Credit Partners | $657 |
| 372 | 385 | Wright Investors' Service | $633 |
| 373 | 383 | Anchor Capital | $615 |
| 374 | 391 | SKBA Capital Mgmt. | $603 |
| 375 | 389 | GLOBALT | $565 |
| 376 | 393 | ST Capital | $504 |
| 377 | 397 | Farr, Miller & Washington | $492 |
| 378 | 398 | SouthernSun Asset Mgmt. | $486 |
| 379 | 394 | Redstone Advisors | $474 |
| 380 | 399 | Gifford Fong Associates | $472 |
| 381 | 396 | TerraCotta Group | $472 |
| 382 | 402 | AMI Asset Mgmt. | $451 |
| 383 | 382 | Montag & Caldwell | $390 |

| Rank | Prev. rank | Manager | Assets |
|---|---|---|---|
| 384 | | ACR Alpine Capital | $371 |
| 385 | 406 | Campbell Newman Asset | $367 |
| 386 | 408 | SMH Capital Advisors | $293 |
| 387 | 410 | Chicago Capital | $290 |
| 388 | 409 | Argent Capital | $289 |
| 389 | 414 | Bridge City | $242 |
| 390 | 411 | Osborne Partners | $224 |
| 391 | 407 | Gateway Investment | $216 |
| 392 | 415 | Strategy Asset Managers | $198 |
| 393 | 422 | Abner, Herrman & Brock | $197 |
| 394 | 418 | Winslow Asset Mgmt. | $187 |
| 395 | 416 | Kingdon Capital | $181 |
| 396 | 423 | NovaPoint Capital | $171 |
| 397 | | Matrix Asset Advisors | $150 |
| 398 | 412 | Oak Associates | $150 |
| 399 | 421 | Teton Advisors | $117 |
| 400 | 425 | Flippin, Bruce & Porter | $98 |
| 401 | 426 | Kestrel Investment | $88 |
| 402 | | Capital Mgmt. | $82 |
| 403 | 427 | Tom Johnson Investment | $78 |
| 404 | 428 | Argus Investors' Counsel | $70 |
| 405 | 430 | Robinson Value Mgmt. | $55 |
| 406 | 419 | Hahn Capital | $49 |
| 407 | 429 | Branson, Fowlkes/Russell | $46 |
| 408 | 432 | Nicholas Co. | $30 |
| 409 | | Bernzott Capital | $17 |
| 410 | 424 | Paradigm Capital | $12 |
| 411 | 433 | Cadinha | $10 |
| | | Total | $55,181,205 |

# The largest managers listed alphabetically

| Manager | Rank |
|---|---|
| 3650 REIT | 312 |
| 400 Capital Mgmt. | 265 |
| AAM | 149 |
| Abner, Herrman & Brock | 393 |
| Acadian Asset Mgmt. | 76 |
| ACORE Capital | 160 |
| ACR Alpine Capital | 384 |
| Adams Street Partners | 106 |
| Adelante Capital | 340 |
| Advent Capital | 230 |
| Aegon Asset Mgmt. | 36 |
| AEW Capital | 92 |
| AFL-CIO Housing Trust | 242 |
| AGF Investments | 231 |
| Agilis | 357 |
| Agincourt Capital | 221 |
| AJOVista | 347 |
| Alan Biller and Associates | 90 |
| Alger | 238 |
| Algert Global | 286 |
| AllianceBernstein | 38 |
| Allspring Global Investments | 32 |
| Altrinsic Global Advisors | 225 |
| American Century | 86 |
| American Realty Advisors | 198 |
| AMI Asset Mgmt. | 382 |
| Amundi | 9 |
| Anchor Capital | 373 |
| Angel Oak Capital | 302 |
| AQR Capital Mgmt. | 81 |
| Ares Mgmt. | 35 |
| ARGA Investment | 184 |
| Argent Capital | 388 |
| Argus Investors' Counsel | 404 |
| Ariel Investments | 229 |
| Aristotle Capital Boston | 306 |
| Aristotle Capital Mgmt. | 121 |
| Aristotle Credit Partners | 371 |
| Aristotle Pacific Capital | 163 |
| Artisan Partners | 67 |
| ASB Capital Mgmt. | 132 |
| Ashmore Group | 109 |
| Asset Management One | 34 |
| Associated Capital Group | 355 |
| Ativo Capital Mgmt. | 359 |
| Aviva Investors | 46 |
| AXA Investment | 18 |
| Axiom Investors | 157 |
| Baillie Gifford Overseas | 50 |
| Baird Advisors | 71 |
| Baird Equity Asset Mgmt. | 259 |
| Barings | 37 |
| Barksdale Investment Mgmt. | 295 |
| Beach Point Capital | 177 |
| Beacon Capital | 179 |
| Belle Haven Investments | 314 |
| Bernzott Capital | 409 |
| Beutel, Goodman | 141 |
| Bivium Capital | 283 |
| BlackRock | 2 |
| Blackstone Alternative | 102 |
| BNP Paribas Asset Mgmt. | 31 |
| BNY Mellon | 7 |
| Boston Trust Walden | 200 |
| Brandes Investment | 161 |
| Branson, Fowlkes/Russell | 407 |
| Breckinridge Capital | 172 |
| Bridge City | 389 |
| Bridgeway Capital | 368 |

| Manager | Rank |
|---|---|
| Brookfield Asset Mgmt. | 30 |
| Brown Capital | 205 |
| Burgundy Asset Mgmt. | 211 |
| Cadinha | 411 |
| Calamos Advisors | 152 |
| Callan | 126 |
| Camden Asset Mgmt. | 251 |
| Campbell Newman Asset | 385 |
| Cantillon Capital Mgmt. | 159 |
| Canyon Partners | 154 |
| Capital Fund Mgmt. | 191 |
| Capital Group | 15 |
| Capital Mgmt. | 402 |
| Carmel Partners | 277 |
| Causeway Capital | 120 |
| CBRE Investment Mgmt. | 66 |
| CC&L Financial Group | 94 |
| CenterSquare Investment | 189 |
| Ceredex Value Advisors | 250 |
| Champlain Investment | 167 |
| Chandler Asset Mgmt. | 122 |
| Channing Capital | 298 |
| Charles Schwab Investment | 72 |
| Chicago Capital | 387 |
| Christian Brothers | 204 |
| CIM Group | 151 |
| City of London | 256 |
| ClariVest Asset Mgmt. | 307 |
| Cliffwater | 311 |
| Cohen & Steers | 123 |
| Columbia Threadneedle | 41 |
| Commerce Trust | 190 |
| Conestoga Capital | 274 |
| Congress Asset Mgmt. | 248 |
| Conning | 58 |
| Cooke & Bieler | 199 |
| Corbin Capital | 252 |
| CoreCommodity | 254 |
| Cornerstone Investment | 344 |
| CornerStone Partners | 158 |
| Covenant Capital Group | 339 |
| Cramer Rosenthal McGlynn | 361 |
| Crestline Investors | 171 |
| CS Capital | 349 |
| CS McKee | 228 |
| D.F. Dent | 273 |
| Dai-ichi Life Holdings | 103 |
| Dalton Investments | 285 |
| Dana Investment | 270 |
| Davis Advisors | 243 |
| Denali Advisors | 350 |
| DePrince, Race & Zollo | 272 |
| Diamond Hill Capital | 224 |
| Dimensional Fund Advisors | 21 |
| Dodge & Cox | 51 |
| Dolan McEniry | 292 |
| DRA Advisors | 187 |
| Driehaus Capital | 174 |
| Duff & Phelps | 264 |
| DWS | 25 |
| Eagle Asset Mgmt. | 180 |
| Eagle Capital | 153 |
| EAM Investors | 321 |
| EARNEST Partners | 131 |
| Edgar Lomax | 343 |
| Emerald Advisers | 284 |
| Equus Capital | 249 |
| Evanston Capital | 308 |
| Farr, Miller & Washington | 377 |

| Manager | Rank |
|---|---|
| Fayez Sarofim | 175 |
| Federated Hermes | 19 |
| Fidelity Investments | 4 |
| Fiduciary Mgmt./Milwaukee | 276 |
| First Pacific Advisors | 143 |
| First Sentier Investors | 89 |
| Fisher Investments | 116 |
| Flaherty & Crumrine | 365 |
| Flippin, Bruce & Porter | 400 |
| Forest Investment | 275 |
| Fort Washington | 97 |
| Foundry Partners | 336 |
| Franklin Templeton | 20 |
| Frontier Capital | 210 |
| Fuller & Thaler | 162 |
| GAM | 207 |
| GAMCO Investors | 218 |
| Garcia Hamilton | 155 |
| Gateway Investment | 391 |
| GCM Grosvenor | 96 |
| Genter Capital | 335 |
| Geode Capital Mgmt. | 11 |
| GIA Partners | 326 |
| Gifford Fong Associates | 381 |
| Glenmede Investment | 261 |
| Global Endowment Mgmt. | 215 |
| GLOBALT | 375 |
| GlobeFlex Capital | 278 |
| GoldenTree Asset Mgmt. | 107 |
| Goldman Sachs Group | 6 |
| Gramercy | 253 |
| Granahan Investment | 305 |
| Granite Investment | 358 |
| Grantham, Mayo v. Otterloo | 108 |
| GTIS Partners | 316 |
| Guardian Capital | 148 |
| Guggenheim Investments | 56 |
| GW&K Investment | 195 |
| Hahn Capital | 406 |
| Harbor Capital Advisors | 115 |
| Harding Loevner | 117 |
| Hardman Johnston Global | 255 |
| Harris Associates | 112 |
| Harrison Street | 105 |
| Hayfin Capital Mgmt. | 127 |
| Heartland Advisors | 333 |
| Heitman | 111 |
| Highland Associates | 142 |
| Hildene Capital | 263 |
| Hillsdale Investment | 309 |
| Hines | 95 |
| Hoisington Investment | 291 |
| Hood River Capital | 303 |
| Hotchkis & Wiley | 138 |
| HS Management | 332 |
| IFM Investors | 64 |
| iM Global Partner | 196 |
| Income Research & Mgmt. | 84 |
| Intech | 223 |
| Intercontinental Real Estate | 192 |
| Invesco | 22 |
| J.P. Morgan Asset & Wealth | 5 |
| Jacobs Levy Equity | 156 |
| Jarislowsky Fraser | 133 |
| Jensen Investment | 208 |
| Johnson Asset Mgmt. | 271 |
| Karpus Investment | 354 |
| Kayne Anderson Rudnick | 144 |
| KBS | 337 |

| Manager | Rank |
|---|---|
| Kennedy Capital | 279 |
| Kestrel Investment | 401 |
| King Street Capital | 164 |
| Kingdon Capital | 395 |
| KKR | 29 |
| Knights of Columbus Asset | 140 |
| Kornitzer Capital | 281 |
| L&B Realty | 216 |
| Lazard Asset Mgmt. | 65 |
| LCM Partners | 235 |
| Leading Edge Investment | 288 |
| Legal & General Investment | 8 |
| LM Capital Group | 268 |
| Logan Capital | 353 |
| London Co. | 206 |
| Longfellow Investment | 169 |
| Longpoint Partners | 297 |
| Loomis, Sayles | 49 |
| Los Angeles Capital | 124 |
| LSV Asset Mgmt. | 83 |
| Luther King Capital | 220 |
| Lyrical Asset Mgmt. | 260 |
| Mackenzie Investments | 78 |
| Madison Investments | 232 |
| Madison Realty | 237 |
| Mairs & Power | 356 |
| Man Group | 70 |
| Manning & Napier | 212 |
| Manulife Investment | 45 |
| Mar Vista Investment | 296 |
| Marathon-London | 118 |
| Martingale Asset Mgmt. | 267 |
| MassMutual | 40 |
| Matrix Asset Advisors | 398 |
| Matthews Asia | 244 |
| Meadow Partners | 318 |
| Medalist Partners | 351 |
| Mercer | 33 |
| Merganser Capital | 173 |
| Mesirow | 54 |
| Metis Global Partners | 300 |
| MetLife Investment Mgmt. | 23 |
| MFG Asset Mgmt. | 185 |
| MFS Investment | 53 |
| Mill Creek Residential | 209 |
| MissionSquare Investments | 128 |
| Molpus Woodlands Group | 317 |
| Mondrian Investment | 114 |
| Montag & Caldwell | 383 |
| Morgan Stanley Inv. Mgmt. | 24 |
| National Investment | 214 |
| National Real Estate | 226 |
| Neuberger Berman | 39 |
| New England Asset Mgmt. | 91 |
| New York Life Investments | 26 |
| Newfleet Asset Mgmt. | 176 |
| NewSouth Capital | 330 |
| Nicholas Co. | 408 |
| Nikko Asset Mgmt. | 113 |
| Ninety One | 79 |
| NISA Investment | 42 |
| Nomura Asset Mgmt. | 61 |
| Nomura Corporate Research | 136 |
| Northern Trust Asset Mgmt. | 14 |
| NovaPoint Capital | 396 |
| Nuveen | 16 |
| Oak Associates | 397 |
| Oak Hill Advisors | 101 |
| Oaktree Capital | 63 |

| Manager | Rank |
|---|---|
| Oberweis Asset Mgmt. | 319 |
| Orleans Capital | 348 |
| Osborne Partners | 390 |
| PAG | 104 |
| Palisade Capital | 310 |
| PanAgora Asset Mgmt. | 129 |
| Paradigm Capital | 410 |
| Parnassus Investments | 135 |
| Partners Group | 74 |
| Pathway Capital | 87 |
| Patron Capital | 301 |
| Payden & Rygel | 62 |
| PCCP | 150 |
| Penn Capital | 342 |
| Peregrine Capital | 282 |
| PFM Asset Mgmt. | 57 |
| Phocas Financial | 367 |
| Pictet Asset Mgmt. | 82 |
| Pier Capital | 369 |
| PIMCO | 13 |
| PineBridge Investments | 93 |
| PNC Financial | 99 |
| Polaris Capital | 197 |
| Polen Capital | 145 |
| PPM America | 98 |
| Prima Capital Advisors | 217 |
| PRIMECAP | 69 |
| Principal Global Investors | 28 |
| Prologis | 88 |
| Prudential Financial | 12 |
| Pugh Capital | 203 |
| Pzena Investment | 119 |
| Quest Investment | 346 |
| Radcliffe Capital | 341 |
| Ramirez Asset Mgmt. | 219 |
| Ranger Investments | 338 |
| RBC Global Asset Mgmt. | 52 |
| Record Currency Mgmt. | 80 |
| Redstone Advisors | 379 |
| Resource Mgmt. | 266 |
| RhumbLine Advisers | 75 |
| Richmond Capital | 262 |
| River Road Asset Mgmt. | 234 |
| Riverbridge Partners | 287 |
| Robeco | 73 |
| Robinson Value Mgmt. | 405 |
| Rockpoint Group | 147 |
| Rockwood Capital | 188 |
| Russell Investments | 47 |
| Sage Advisory Services | 170 |
| Sarofim Realty | 345 |
| Sasco Capital | 363 |
| Sawgrass Asset Mgmt. | 325 |
| Schroders | 27 |
| Scout Investments | 137 |
| SECOR Asset Mgmt. | 125 |
| Security Capital Research | 289 |
| Segall Bryant & Hamill | 181 |
| SEI Investments | 43 |
| Seix | 186 |
| Sentinel Real Estate | 239 |
| Shenkman Group | 134 |
| Sierra Investment | 269 |
| Silvant Capital | 324 |
| Silver Creek Capital | 233 |
| Silvercrest Asset Mgmt. | 241 |
| Sit Investment | 178 |
| SKBA Capital Mgmt. | 374 |
| SLC Management | 44 |

| Manager | Rank |
|---|---|
| SMH Capital Advisors | 386 |
| Smith Affiliated Capital | 334 |
| Sound Shore Mgmt. | 327 |
| SouthernSun Asset Mgmt. | 378 |
| Spider Mgmt. | 257 |
| Sprucegrove Investment | 166 |
| SSI Investment | 331 |
| ST Capital | 376 |
| Stacey Braun Associates | 290 |
| Starwood Capital | 85 |
| State Street Global | 3 |
| Stephens Inv. Mgmt. Group | 240 |
| StepStone Group | 77 |
| Sterling Capital | 110 |
| Stockbridge Capital Group | 130 |
| Stone Harbor Investment | 246 |
| StoneRidge PMG Advisors | 360 |
| Strategic Investment Group | 139 |
| Strategy Asset Managers | 392 |
| Summit Creek Advisors | 362 |
| Sustainable Growth Advisers | 146 |
| Systematic Financial | 304 |
| T. Rowe Price Associates | 17 |
| TA Realty | 165 |
| TCW Group | 55 |
| TD Global Invest. Solutions | 59 |
| TerraCotta Group | 380 |
| Teton Advisors | 399 |
| TGM Associates | 294 |
| Thornburg Investment | 364 |
| Timberland Inv. Resources | 323 |
| TimesSquare Capital | 227 |
| Todd Asset Mgmt. | 280 |
| Tom Johnson Investment | 403 |
| Torchlight Investors | 245 |
| Tributary Capital | 352 |
| Trillium Asset Mgmt. | 313 |
| TT International | 258 |
| Twin Bridge Capital | 299 |
| TWIN Capital | 366 |
| Ullico Investment | 202 |
| Van Hulzen Asset Mgmt. | 370 |
| Vanguard Group | 1 |
| Verger Capital | 315 |
| Victory Capital | 68 |
| Voya Investment Mgmt. | 48 |
| Walton Street Capital | 183 |
| Washington Capital | 222 |
| Waterfall Asset Mgmt. | 213 |
| Weatherbie Capital | 328 |
| WEDGE Capital | 236 |
| Wellington Mgmt. | 10 |
| Westbrook Partners | 194 |
| Westfield Capital | 168 |
| Wexford Capital | 329 |
| White Oak Global Advisors | 247 |
| William Blair | 100 |
| Wilmington Trust | 201 |
| Winslow Asset Mgmt. | 394 |
| Winthrop Capital | 320 |
| Wright Investors' Service | 372 |
| WTW Investment Services | 60 |
| Yousif Capital | 182 |
| Zacks Investment | 193 |
| Zazove Associates | 322 |
| Zevenbergen Capital | 293 |

# The largest money managers by asset universe

Assets are in millions as of Dec. 31.

## Total worldwide assets

| Rank | Manager | Assets |
|---|---|---|
| 1 | BlackRock | $10,008,995 |
| 2 | Vanguard Group | $8,593,307 |
| 3 | Fidelity Investments | $4,581,980 |
| 4 | State Street Global | $4,127,817 |
| 5 | J.P. Morgan Asset & Wealth | $3,421,545 |
| 6 | Goldman Sachs Group | $2,812,000 |
| 7 | Capital Group | $2,532,813 |
| 8 | Amundi | $2,250,226 |
| 9 | BNY Mellon | $1,974,322 |
| 10 | Invesco | $1,585,344 |
| 11 | PIMCO | $1,483,912 |
| 12 | Legal & General Investment | $1,475,711 |
| 13 | Franklin Templeton | $1,455,506 |
| 14 | Prudential Financial | $1,449,673 |
| 15 | T. Rowe Price Associates | $1,444,500 |
| 16 | Morgan Stanley Inv. Mgmt. | $1,373,456 |
| 17 | Wellington Mgmt. | $1,219,910 |
| 18 | Nuveen | $1,187,693 |
| 19 | Northern Trust Asset Mgmt. | $1,180,585 |
| 20 | Geode Capital Mgmt. | $1,154,904 |
| 21 | Charles Schwab Investment | $1,068,923 |
| 22 | DWS | $990,366 |
| 23 | AXA Investment | $933,013 |
| 24 | Schroders | $818,875 |
| 25 | Brookfield Asset Mgmt. | $781,372 |
| 26 | Federated Hermes | $757,622 |
| 27 | AllianceBernstein | $707,447 |
| 28 | New York Life Investments | $686,900 |
| 29 | Dimensional Fund Advisors | $677,141 |
| 30 | Manulife Investment | $662,013 |
| 31 | Columbia Threadneedle | $637,000 |
| 32 | MetLife Investment Mgmt. | $600,800 |
| 33 | MFS Investment | $598,138 |
| 34 | BNP Paribas Asset Mgmt. | $595,978 |
| 35 | Nomura Asset Mgmt. | $570,490 |
| 36 | KKR | $552,801 |
| 37 | Principal Global Investors | $524,099 |
| 38 | Allspring Global Investments | $516,909 |
| 39 | MassMutual | $500,477 |
| 40 | Neuberger Berman | $463,418 |
| 41 | Dai-ichi Life Holdings | $461,161 |
| 42 | Asset Management One | $460,312 |
| 43 | RBC Global Asset Mgmt. | $432,364 |
| 44 | Mercer | $419,605 |
| 45 | Ares Mgmt. | $418,847 |
| 46 | Barings | $381,635 |
| 47 | Dodge & Cox | $362,993 |
| 48 | SEI Investments | $342,678 |
| 49 | Aegon Asset Mgmt. | $336,920 |
| 50 | Loomis, Sayles | $335,231 |

## U.S. institutional tax-exempt assets

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $2,412,821 |
| 2 | BlackRock | $2,209,879 |
| 3 | Fidelity Investments | $1,406,914 |
| 4 | State Street Global | $1,350,386 |
| 5 | T. Rowe Price Associates | $686,118 |
| 6 | Nuveen | $594,773 |
| 7 | Capital Group | $585,059 |
| 8 | J.P. Morgan Asset & Wealth | $524,931 |
| 9 | Northern Trust Asset Mgmt. | $518,820 |
| 10 | Prudential Financial | $453,821 |
| 11 | Dimensional Fund Advisors | $402,612 |
| 12 | BNY Mellon | $362,476 |
| 13 | Principal Global Investors | $348,809 |
| 14 | PIMCO | $334,322 |
| 15 | MassMutual | $301,027 |
| 16 | Goldman Sachs Group | $273,767 |
| 17 | NISA Investment | $261,546 |
| 18 | Wellington Mgmt. | $247,793 |
| 19 | Morgan Stanley Inv. Mgmt. | $232,437 |
| 20 | Franklin Templeton | $229,397 |
| 21 | Federated Hermes | $222,764 |
| 22 | Invesco | $218,860 |
| 23 | Dodge & Cox | $209,995 |
| 24 | SEI Investments | $197,211 |
| 25 | PFM Asset Mgmt. | $175,611 |
| 26 | Loomis, Sayles | $175,014 |
| 27 | AllianceBernstein | $160,083 |
| 28 | Allspring Global Investments | $155,266 |
| 29 | MFS Investment | $150,395 |
| 30 | Voya Investment Mgmt. | $142,293 |
| 31 | Mercer | $138,423 |
| 32 | Manulife Investment | $136,292 |
| 33 | TCW Group | $127,385 |
| 34 | Legal & General Investment | $127,257 |
| 35 | Victory Capital | $126,694 |
| 36 | Russell Investments | $121,025 |
| 37 | Neuberger Berman | $104,926 |
| 38 | RhumbLine Advisers | $98,850 |
| 39 | Payden & Rygel | $94,995 |
| 40 | Geode Capital Mgmt. | $93,234 |
| 41 | Alan Biller and Associates | $84,675 |
| 42 | Baird Advisors | $82,909 |
| 43 | Pathway Capital | $76,196 |
| 44 | Brookfield Asset Mgmt. | $74,416 |
| 45 | LSV Asset Mgmt. | $74,376 |
| 46 | KKR | $69,314 |
| 47 | Ares Mgmt. | $68,271 |
| 48 | Income Research & Mgmt. | $66,412 |
| 49 | WTW Investment Services | $65,824 |
| 50 | American Century | $65,707 |

## U.S. institutional tax-exempt assets managed internally

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $2,223,986 |
| 2 | BlackRock | $2,209,879 |
| 3 | State Street Global | $1,350,386 |
| 4 | Fidelity Investments | $855,672 |
| 5 | T. Rowe Price Associates | $686,118 |
| 6 | Nuveen | $594,773 |
| 7 | Capital Group | $585,059 |
| 8 | J.P. Morgan Asset & Wealth | $513,219 |
| 9 | Northern Trust Asset Mgmt. | $489,855 |
| 10 | Dimensional Fund Advisors | $402,612 |
| 11 | Prudential Financial | $388,193 |
| 12 | BNY Mellon | $362,476 |
| 13 | PIMCO | $334,322 |
| 14 | Principal Global Investors | $313,523 |
| 15 | MassMutual | $275,827 |
| 16 | NISA Investment | $261,546 |
| 17 | Wellington Mgmt. | $247,793 |
| 18 | Franklin Templeton | $229,397 |
| 19 | Morgan Stanley Inv. Mgmt. | $227,242 |
| 20 | Federated Hermes | $222,764 |
| 21 | Dodge & Cox | $209,995 |
| 22 | Goldman Sachs Group | $199,339 |
| 23 | Invesco | $188,013 |
| 24 | Loomis, Sayles | $175,014 |
| 25 | MFS Investment | $150,395 |
| 26 | PFM Asset Mgmt. | $148,160 |
| 27 | Allspring Global Investments | $141,117 |
| 28 | Manulife Investment | $136,292 |
| 29 | TCW Group | $127,385 |
| 30 | Legal & General Investment | $127,257 |
| 31 | Voya Investment Mgmt. | $126,833 |
| 32 | Victory Capital | $125,447 |
| 33 | RhumbLine Advisers | $98,850 |
| 34 | Payden & Rygel | $94,995 |
| 35 | Geode Capital Mgmt. | $93,234 |
| 36 | Russell Investments | $88,391 |
| 37 | Neuberger Berman | $86,526 |
| 38 | Baird Advisors | $82,909 |
| 39 | AllianceBernstein | $82,164 |
| 40 | Brookfield Asset Mgmt. | $74,416 |
| 41 | LSV Asset Mgmt. | $74,376 |
| 42 | KKR | $69,314 |
| 43 | Ares Mgmt. | $68,271 |
| 44 | Income Research & Mgmt. | $66,412 |
| 45 | American Century | $65,707 |
| 46 | New York Life Investments | $57,982 |
| 47 | MetLife Investment Mgmt. | $57,313 |
| 48 | Baillie Gifford Overseas | $54,299 |
| 49 | Artisan Partners | $51,887 |
| 50 | Acadian Asset Mgmt. | $45,185 |

## U.S.-client assets

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $8,164,935 |
| 2 | BlackRock | $6,372,017 |
| 3 | Fidelity Investments | $4,423,972 |
| 4 | State Street Global | $2,980,638 |
| 5 | J.P. Morgan Asset & Wealth | $2,470,696 |
| 6 | Capital Group | $2,462,235 |
| 7 | Goldman Sachs Group | $1,951,000 |
| 8 | T. Rowe Price Associates | $1,292,523 |
| 9 | Geode Capital Mgmt. | $1,121,131 |
| 10 | Nuveen | $1,102,828 |
| 11 | BNY Mellon | $1,099,345 |
| 12 | Invesco | $1,092,436 |
| 13 | Prudential Financial | $1,073,353 |
| 14 | Charles Schwab Investment | $1,068,923 |
| 15 | Morgan Stanley Inv. Mgmt. | $1,052,988 |
| 16 | Franklin Templeton | $1,019,376 |
| 17 | Northern Trust Asset Mgmt. | $991,679 |
| 18 | Wellington Mgmt. | $990,321 |
| 19 | PIMCO | $882,378 |
| 20 | Federated Hermes | $703,708 |
| 21 | MetLife Investment Mgmt. | $582,952 |
| 22 | Dimensional Fund Advisors | $571,206 |
| 23 | AllianceBernstein | $509,894 |
| 24 | MassMutual | $500,477 |
| 25 | New York Life Investments | $498,677 |

## Institutional U.S.-client assets

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $6,063,130 |
| 2 | BlackRock | $3,205,387 |
| 3 | Fidelity Investments | $2,243,157 |
| 4 | State Street Global | $1,743,428 |
| 5 | J.P. Morgan Asset & Wealth | $1,226,805 |
| 6 | Geode Capital Mgmt. | $1,121,131 |
| 7 | Wellington Mgmt. | $989,640 |
| 8 | Goldman Sachs Group | $951,322 |
| 9 | Capital Group | $850,074 |
| 10 | Nuveen | $745,762 |
| 11 | BNY Mellon | $740,580 |
| 12 | Northern Trust Asset Mgmt. | $710,506 |
| 13 | T. Rowe Price Associates | $703,613 |
| 14 | Prudential Financial | $693,308 |
| 15 | Federated Hermes | $672,438 |
| 16 | MetLife Investment Mgmt. | $582,952 |
| 17 | Dimensional Fund Advisors | $571,206 |
| 18 | PIMCO | $493,664 |
| 19 | Principal Global Investors | $432,204 |
| 20 | Invesco | $400,628 |
| 21 | Franklin Templeton | $399,704 |
| 22 | New York Life Investments | $397,725 |
| 23 | Allspring Global Investments | $378,264 |
| 24 | KKR | $339,532 |
| 25 | MassMutual | $301,027 |

# The Largest Money Managers

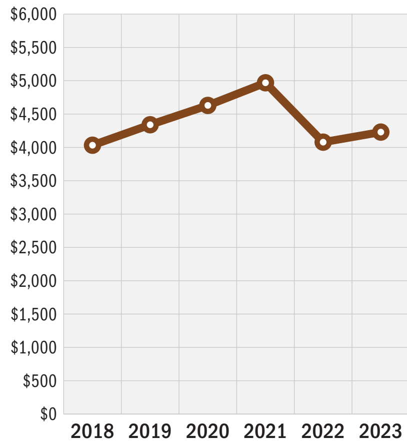
## Managers of defined benefit assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | BlackRock | $627,834 |
| 2 | State Street Global | $410,934 |
| 3 | BNY Mellon | $261,951 |
| 4 | NISA Investment | $242,360 |
| 5 | PIMCO | $196,298 |
| 6 | Prudential Financial | $193,146 |
| 7 | J.P. Morgan Asset & Wealth | $150,671 |
| 8 | Northern Trust Asset Mgmt. | $128,858 |
| 9 | Morgan Stanley Inv. Mgmt. | $101,276 |
| 10 | Wellington Mgmt. | $100,060 |

### Asset growth (billions)



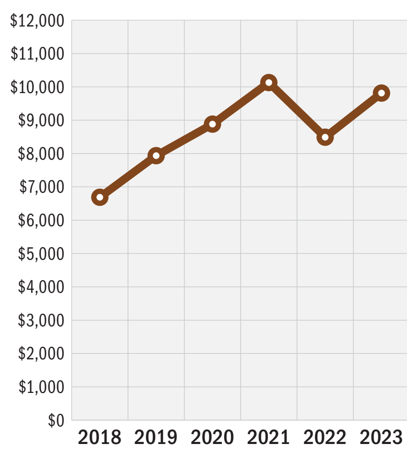

## Managers of defined contribution assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $2,196,075 |
| 2 | BlackRock | $1,442,168 |
| 3 | Fidelity Investments | $1,315,229 |
| 4 | State Street Global | $680,062 |
| 5 | T. Rowe Price Associates | $627,089 |
| 6 | Capital Group | $552,029 |
| 7 | Nuveen | $532,152 |
| 8 | J.P. Morgan Asset & Wealth | $310,906 |
| 9 | Northern Trust Asset Mgmt. | $217,817 |
| 10 | Prudential Financial | $207,363 |

### Asset growth (billions)



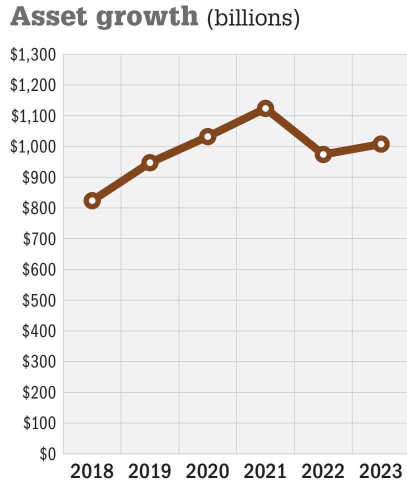

## Managers of endowment & foundation assets

Total worldwide assets, in millions, as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | State Street Global | $174,103 |
| 2 | Vanguard Group | $96,850 |
| 3 | BlackRock | $52,919 |
| 4 | J.P. Morgan Asset & Wealth | $49,359 |
| 5 | Morgan Stanley Inv. Mgmt. | $34,269 |
| 6 | Northern Trust Asset Mgmt. | $28,973 |
| 7 | PNC Financial | $26,994 |
| 8 | Mercer | $24,987 |
| 9 | PIMCO | $22,411 |
| 10 | CornerStone Partners | $19,914 |

### Asset growth (billions)



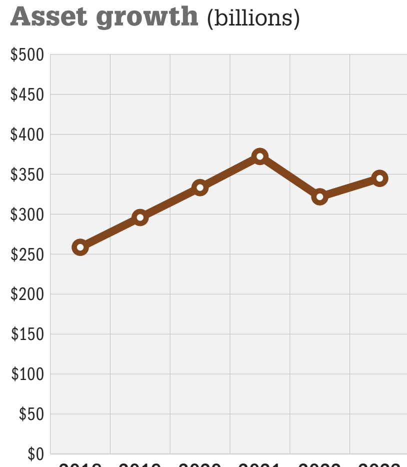

## Managers of endowment assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | State Street Global | $134,674 |
| 2 | Vanguard Group | $49,973 |
| 3 | Wellington Mgmt. | $38,200 |
| 4 | Northern Trust Asset Mgmt. | $16,791 |
| 5 | Morgan Stanley Inv. Mgmt. | $16,424 |
| 6 | Fayez Sarofim | $7,155 |
| 7 | Brookfield Asset Mgmt. | $5,706 |
| 8 | Grantham, Mayo v. Otterloo | $5,590 |
| 9 | BNY Mellon | $5,502 |
| 10 | J.P. Morgan Asset & Wealth | $4,666 |

### Asset growth (billions)




# Profiles of the 50 largest money managers

## 36 Aegon Asset Management

Aegonplein 50, The Hague 2591 TV Netherlands; phone: 877-234-6862; www.aegonam.com

| | (millions) |
|---|---|
| Total assets managed worldwide | $336,920 |
| Total worldwide institutional assets | $331,789 |
| Total U.S. client assets | $103,117 |
| Total U.S. institutional client assets | $103,117 |
| Total U.S. RIA assets | $15,244 |
| Total U.S. tax-exempt assets | $3,484 |
| Total U.S. institutional tax-exempt | $3,484 |
| Internally managed | $3,484 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Equity | 1% |
| Fixed income | 95% |
| Cash | 4% |

**INVESTMENT STRATEGIES**

| | |
|---|---|
| U.S. equity, active | $26 |
| U.S. bond, active | $3,290 |
| Privately placed debt | $13 |
| Cash | $156 |

**FIXED-INCOME STRATEGIES**

| | |
|---|---|
| Core | $85 |
| Core-plus | $97 |
| High-yield | $574 |
| High-yield mandates | $574 |
| LDI strategies | $1,315 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Hedge fund assets | $7 |
| Mutual fund assets | $130,843 |
| Investment outsourcing mandates | $45,335 |
| LDI strategies | $127,572 |
| Managed for retirement plans | $40,268 |

**ESG INVESTING**

| | |
|---|---|
| TOTAL | $148,889 |
| ESG mandates | $5,396 |

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

| | |
|---|---|
| Total | $431 |
| Internally managed | $431 |

**WORKFORCE**

| | |
|---|---|
| Total number of employees | 1,170 |
| Number of U.S.-based employees | 454 |
| Number of cybersecurity professionals | 19 |

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

| | |
|---|---|
| Total | 51% |
| Senior management | 47% |
| Investment | 26% |

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

| | |
|---|---|
| Total | 9% |
| Investment | 11% |

**ARTIFICIAL INTELLIGENCE**

| | |
|---|---|
| The firm invests in AI investment management technology (Y/N) | N |
| AI is used in the firm's investment management process (Y/N) | N |

**Parent company:** Aegon Ltd.
**Chief executive officer:** Bas NieuweWeme
**Chief investment officer:** Stephen Jones
**U.S. client contact:** Anthony Mazzella
**Other client contact:** Bradley Dawson

*The assets of the following subsidiaries or affiliates are included in the figures above:*

- **Aegon Asset Management NL**
- **Aegon Asset Management Spain**
- **Aegon Asset Management UK:** total assets: $42.1 billion; U.S. institutional, tax-exempt assets: $21 million; CIO: Stephen Jones; client contact: Bradley Dawson, phone: 312-777-2732, email: brdawson@aegonam.com
- **Aegon Asset Management US:** total assets: $86.7 billion; U.S. institutional, tax-exempt assets: $3.5 billion; CIO: Stephen Jones; client contact: Bradley Dawson, phone: 312-777-2732, email: brdawson@aegonam.com

### More data online

For a full set of manager data, plus profiles of all 411 managers, go to **pionline.com/managers2024**

## 38 AllianceBernstein LP

501 Commerce St., Nashville, TN 37203; phone: 212-969-1000; www.alliancebernstein.com

| | (millions) |
|---|---|
| Total assets managed worldwide | $707,447 |
| Total worldwide institutional assets | $326,021 |
| Total U.S. client assets | $509,894 |
| Total U.S. institutional client assets | $259,509 |
| Total U.S. tax-exempt assets | $247,160 |
| Total U.S. institutional tax-exempt | $160,083 |
| Assigned to external managers | $77,919 |
| Internally managed | $82,164 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Equity | 83% |
| Fixed income | 15% |
| Hedge funds | 1% |

**INVESTMENT STRATEGIES**

| | |
|---|---|
| U.S. equity, active | $30,558 |
| U.S. equity, passive | $20,126 |
| Non-U.S. equity, active | $6,506 |
| Non-U.S. equity, passive | $1,896 |
| Global equity, active | $9,128 |
| Global equity, passive | $237 |
| U.S. bond, active | $4,048 |
| U.S. bond, passive | $98 |
| Global/non-U.S. bond, active | $4,157 |
| Global/non-U.S. bond, passive | $3 |
| Real estate debt | $66 |
| Hedge funds | $1,082 |
| Renewable energy | $408 |
| Direct lending | $72 |
| Privately placed debt | $178 |
| Distressed debt | $3,381 |
| Cash | $219 |

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

| | |
|---|---|
| Large-cap | $17,264 |
| Smidcap | $2,108 |
| Small-cap | $3,733 |
| Broad-market | $88 |

**VALUE**

| | |
|---|---|
| Large-cap | $1,284 |
| Smidcap | $2,912 |
| Small-cap | $1,487 |

**CORE**

| | |
|---|---|
| Large-cap | $1,125 |
| Small-cap | $1 |
| Broad-market | $557 |

**PASSIVE U.S. EQUITY STRATEGIES**

**GROWTH**

| | |
|---|---|
| Large-cap | $101 |

**CORE**

| | |
|---|---|
| Large-cap | $18,078 |
| Midcap | $20 |
| Smidcap | $645 |
| Broad-market | $1,283 |
| Low-volatility strategies | $870 |
| REITs | $542 |

**NON-U.S. STRATEGIES**

| | |
|---|---|
| Emerging markets equity | $300 |
| Emerging markets equity mandates | $140 |
| China equity | $160 |
| Emerging markets debt | $658 |
| Emerging markets debt mandates | $658 |

**FIXED-INCOME STRATEGIES**

| | |
|---|---|
| Core | $736 |
| Core-plus | $4,554 |
| High-yield | $1,185 |
| High-yield mandates | $1,185 |
| Inflation-protected securities | $103 |
| Risk-parity strategies | $23 |

# The Largest Money Managers

**ESG INVESTING**
Total.................................................. $53,869
ESG mandates ........................................ $859
Equity, active........................................ $446
Bond, active............................................ $5

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund assets .................................. $9,266
Hedge fund-of-fund assets......................... $1,351
Mutual fund assets ............................. $235,216
U.S. 1940 Investment Co. Act ............ $139,808
Sponsored ETFs/ETNs.............................. $1,435
Actively managed.................................. $1,435
Institutional ........................................... $51
ESG investing ...................................... $503,982
ESG mandates ................................... $27,826

**OVERLAY STRATEGIES:**
**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**
Total.................................................. $22,167

**DEFINED CONTRIBUTION ASSETS**
**U.S. INSTITUTIONAL TAX-EXEMPT**
Total............................................... $110,200
Internally managed ............................. $32,360

**Primary custodian:** State Street
**Parent company:** Equitable Holdings Inc.
**Chief executive officer:** Seth Bernstein
**U.S. client contact:** Miguel Rozensztroch
**Other client contact:** Onur Erzan
**DC client contact:** Jennifer DeLong

## 32 Allspring Global Investments

1415 Vantage Park Drive, 3rd Floor, Charlotte, NC 28203; phone: 800-368-7550; www.allspringglobal.com

(millions)
Total assets managed worldwide........... $516,909
Total worldwide institutional assets........ $407,865
Total U.S. client assets......................... $486,630
Total U.S. institutional client assets ....... $378,264
Total U.S. RIA assets ............................. $27,516
Total U.S. tax-exempt assets ................ $158,221
Total U.S. institutional tax-exempt .......... $155,266
Assigned to external managers............. $14,149
Internally managed ............................ $141,117

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**
**ASSET MIX**
Equity..................................................... 20%
Fixed income............................................ 79%
Cash ......................................................... 1%

**INVESTMENT STRATEGIES**
U.S. equity, active .............................. $17,454
U.S. equity, passive................................. $481
U.S. equity, enhanced index .................. $1,529
Non-U.S. equity, active.......................... $8,503
Non-U.S. equity, enhanced index ................. $64
Global equity, active ................................ $890
U.S. bond, active ............................. $109,479
U.S. bond, passive.................................. $133
Global/non-U.S. bond, active................. $1,311
Hedge funds ............................................ $34
Cash .................................................. $1,239

**ACTIVE U.S. EQUITY STRATEGIES**
**GROWTH**
Large-cap ............................................ $939
Midcap................................................... $70
Smidcap................................................ $899
Small-cap .......................................... $1,282
Broad-market ...................................... $1,359

**VALUE**
Large-cap ............................................... $99
Midcap............................................. $6,902
Small-cap .......................................... $4,125

**CORE**
Large-cap .......................................... $1,031
Midcap................................................... $33
Smidcap.................................................. $55
Small-cap ............................................. $252
Broad-market ......................................... $893

**PASSIVE U.S. EQUITY STRATEGIES**
**CORE**
Large-cap ............................................ $413
Low-volatility strategies ......................... $1,454

**NON-U.S. STRATEGIES**
Emerging markets equity ....................... $4,526
Emerging markets equity mandates ..... $4,526
China equity ............................................ $85
Emerging markets debt............................... $94

**FIXED-INCOME STRATEGIES**
Core.................................................. $30,553
Core-plus ............................................... $916
Unconstrained........................................... $10
High-yield............................................... $127
High-yield mandates ................................ $72
Inflation-protected securities ...................... $35
Stable value ...................................... $67,150
LDI strategies...................................... $2,407

**ESG INVESTING**
Total.................................................... $8,162

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund assets ..................................... $177
Mutual fund assets ............................. $308,998
U.S. 1940 Investment Co. Act ........... $304,084
Investment outsourcing mandates............. $1,904
LDI strategies......................................... $2,407
Managed for retirement plans................ $2,407
Proprietary stable value ......................... $67,150
ESG investing ....................................... $27,048

**OVERLAY STRATEGIES:**
**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**
Total......................................................... $14

**DEFINED CONTRIBUTION ASSETS**
**U.S. INSTITUTIONAL TAX-EXEMPT**
Total.................................................. $99,121
Internally managed ............................ $84,974

**WORKFORCE**
Total number of employees.......................... 1,557
Number of U.S.-based employees................ 1,400

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total......................................................... 38%
Senior management .................................... 56%
Investment ................................................ 22%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**
Total......................................................... 33%
Senior management .................................... 11%
Investment ................................................ 37%

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N)............................................... Y
AI is used in the firm's investment management process (Y/N).................................................. Y

**Primary custodian:** State Street
**Parent company:** Allspring Global Investments Holdings LLC
**Chief executive officer:** Joseph A. Sullivan
**Chief investment officer:** Jon Baranko
**Client contact:** John Moninger

## 9 Amundi

91-93 boulevard Pasteur, Paris 75015 France; phone: 33-1-7633-3030; www.amundi.com

(millions)
Total assets managed worldwide..........$2,250,226
Total worldwide institutional assets ......$1,226,194
Total U.S. client assets.......................... $62,087
Total U.S. institutional client assets ......... $38,432
Total U.S. RIA assets ............................... $4,540
Total U.S. tax-exempt assets .................. $34,767
Total U.S. institutional tax-exempt ........... $18,430
Internally managed ............................ $18,430

**WORLDWIDE ASSETS UNDER MANAGEMENT**
ESG investing .................................... $970,398
ESG mandates ................................ $313,170

**WORKFORCE**
Total number of employees.......................... 5,500
Percent employee owned.............................. 1%

**Parent company:** Credit Agricole SA
**Chief executive officer:** Valerie Baudson
**Chief investment officer:** Vincent Mortier

*The assets of the following subsidiaries or affiliates are included in the figures above:*
- **Amundi Asset Management US Inc.**

## 35 Ares Management LLC

2000 Avenue of the Stars, 12th Floor, Los Angeles, CA 90067; phone: 310-201-4100; www.aresmgmt.com

(millions)
Total assets managed worldwide........... $418,847
Total worldwide institutional assets........ $359,682

Continued on Page 26

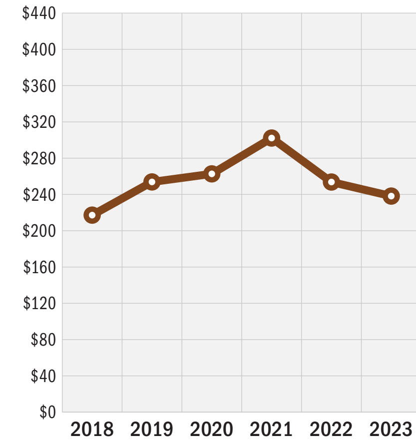
## Managers of foundation assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $39,614 |
| 2 | State Street Global | $39,428 |
| 3 | PNC Financial | $12,569 |
| 4 | Northern Trust Asset Mgmt. | $9,934 |
| 5 | RhumbLine Advisers | $7,550 |
| 6 | BNY Mellon | $5,787 |
| 7 | Dimensional Fund Advisors | $5,767 |
| 8 | Fidelity Investments | $5,277 |
| 9 | Morgan Stanley Inv. Mgmt. | $4,587 |
| 10 | Income Research & Mgmt. | $4,478 |

### Asset growth (billions)



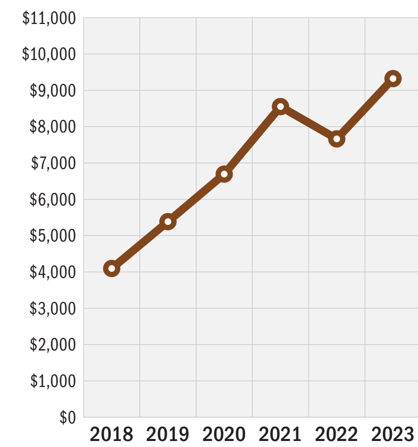

## Managers sponsoring ETFs/ETNs

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | BlackRock | $3,499,299 |
| 2 | Vanguard Group | $2,514,044 |
| 3 | State Street Global | $1,268,011 |
| 4 | Invesco | $545,472 |
| 5 | Charles Schwab Investment | $319,452 |
| 6 | Nomura Asset Mgmt. | $230,383 |
| 7 | DWS | $199,390 |
| 8 | J.P. Morgan Asset & Wealth | $150,132 |
| 9 | Dimensional Fund Advisors | $117,525 |
| 10 | Nikko Asset Mgmt. | $106,572 |

### Asset growth (billions)



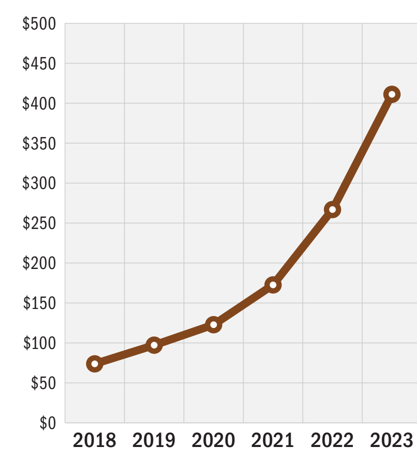

## Managers sponsoring active ETFs/ETNs

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Dimensional Fund Advisors | $117,525 |
| 2 | J.P. Morgan Asset & Wealth | $105,856 |
| 3 | American Century | $36,523 |
| 4 | PIMCO | $23,789 |
| 5 | BlackRock | $20,500 |
| 6 | Fidelity Investments | $18,805 |
| 7 | Capital Group | $18,760 |
| 8 | State Street Global | $10,735 |
| 9 | Invesco | $9,618 |
| 10 | TCW Group | $7,596 |

### Asset growth (billions)



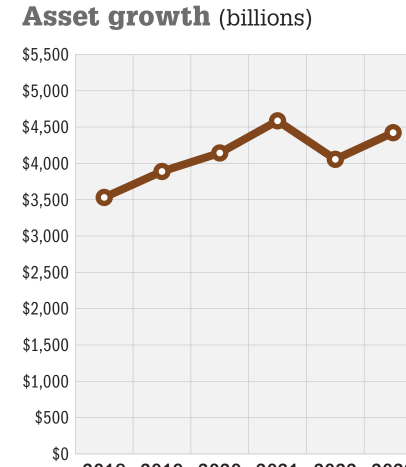

## Managers of non-affiliated insurance co. assets

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | BlackRock | $649,887 |
| 2 | J.P. Morgan Asset & Wealth | $289,000 |
| 3 | PIMCO | $253,381 |
| 4 | State Street Global | $215,755 |
| 5 | Prudential Financial | $191,250 |
| 6 | DWS | $180,639 |
| 7 | T. Rowe Price Associates | $180,578 |
| 8 | Schroders | $154,393 |
| 9 | Wellington Mgmt. | $152,276 |
| 10 | Franklin Templeton | $147,147 |

### Asset growth (billions)



# The Largest Money Managers

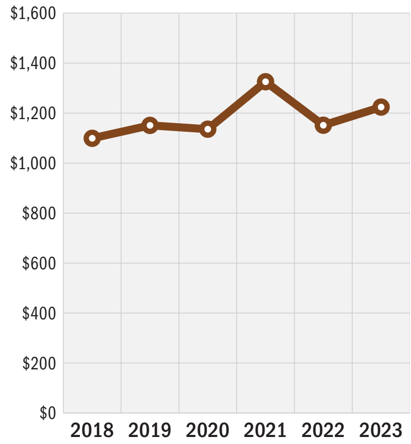
## Managers of sovereign wealth fund assets

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | BNY Mellon | $105,133 |
| 2 | Brookfield Asset Mgmt. | $100,350 |
| 3 | BlackRock | $90,294 |
| 4 | Amundi | $76,636 |
| 5 | State Street Global | $76,571 |
| 6 | J.P. Morgan Asset & Wealth | $62,136 |
| 7 | Legal & General Investment | $53,603 |
| 8 | Franklin Templeton | $41,223 |
| 9 | Ares Mgmt. | $39,758 |
| 10 | Pathway Capital | $29,069 |

### Asset growth (billions)



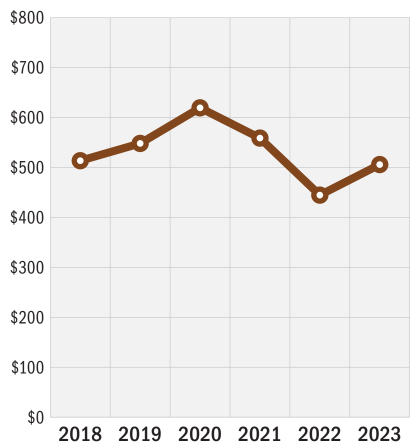

## Managers of central bank assets

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | BlackRock | $67,527 |
| 2 | State Street Global | $63,236 |
| 3 | PIMCO | $53,696 |
| 4 | Amundi | $44,683 |
| 5 | BNP Paribas Asset Mgmt. | $27,476 |
| 6 | Franklin Templeton | $27,168 |
| 7 | J.P. Morgan Asset & Wealth | $24,143 |
| 8 | Prudential Financial | $22,115 |
| 9 | Columbia Threadneedle | $18,828 |
| 10 | Northern Trust Asset Mgmt. | $17,692 |

### Asset growth (billions)



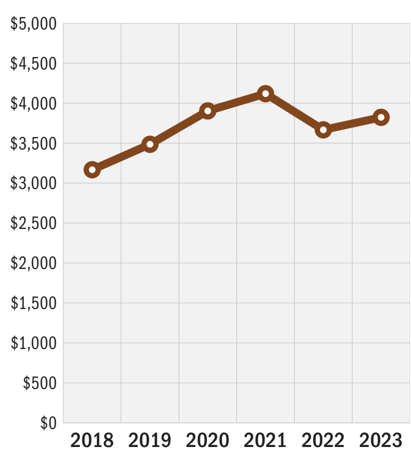

## Managers of government retirement plan assets

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | State Street Global | $550,208 |
| 2 | BNY Mellon | $147,622 |
| 3 | Brookfield Asset Mgmt. | $145,662 |
| 4 | KKR | $119,519 |
| 5 | Ares Mgmt. | $94,610 |
| 6 | AllianceBernstein | $86,238 |
| 7 | Nomura Asset Mgmt. | $84,497 |
| 8 | Invesco | $84,252 |
| 9 | Prudential Financial | $83,766 |
| 10 | PIMCO | $82,896 |

### Asset growth (billions)



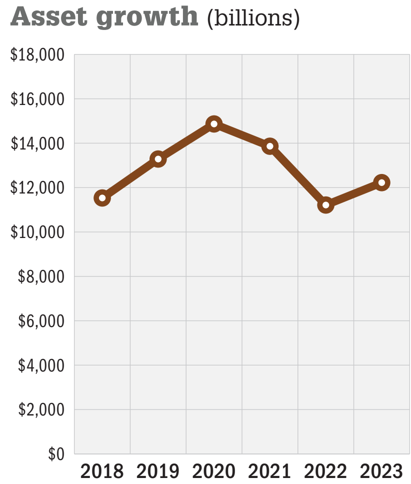

## Managers of non-government retirement plan assets

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $2,984,375 |
| 2 | T. Rowe Price Associates | $1,174,511 |
| 3 | State Street Global | $975,237 |
| 4 | BNY Mellon | $750,025 |
| 5 | Nuveen | $536,240 |
| 6 | J.P. Morgan Asset & Wealth | $464,793 |
| 7 | PIMCO | $374,949 |
| 8 | Prudential Financial | $357,458 |
| 9 | Northern Trust Asset Mgmt. | $326,988 |
| 10 | Mercer | $310,769 |

### Asset growth (billions)




**Continued from Page 25**

Total U.S. client assets ........................ **$169,924**
Total U.S. institutional client assets ....... **$169,924**
Total U.S. tax-exempt assets .................. **$68,271**
Total U.S. institutional tax-exempt ........... **$68,271**
Internally managed ............................ **$68,271**

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Fixed income ............................................ **2%**
Equity real estate ...................................... **6%**
Private equity .......................................... **14%**
Hedge funds ............................................. **3%**
Other ..................................................... **75%**
*Other type: Alternative credit, Asia credit, EU/U.S. direct lending, real estate debt, infrastructure, secondaries*

**INVESTMENT STRATEGIES**
U.S. bond, active ................................. **$1,624**
Equity real estate, U.S. .......................... **$2,881**
Equity real estate, non-U.S. ................... **$1,537**
Real estate debt .................................... **$673**
Hedge funds ....................................... **$1,792**
Buyout funds ....................................... **$7,134**
Infrastructure ........................................ **$634**
Direct lending .................................... **$29,056**
Distressed debt .................................... **$2,572**
Other private credit .............................. **$7,904**
High-yield .............................................. **$460**
Bank loans ............................................. **$670**
ESG investing ...................................... **$68,271**

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund assets .................................. **$6,329**
Mutual fund assets ................................. **$3,111**
U.S. 1940 Investment Co. Act ............... **$2,014**
ESG investing .................................... **$418,847**
ESG mandates ................................. **$32,700**

**WORKFORCE**
Total number of employees ......................... **2,857**
Number of U.S.-based employees .................. **1,789**
Number of cybersecurity professionals ............. **23**
Percent employee owned ............................. **42%**

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total ........................................................ **43%**
Senior management ................................... **23%**
Investment ................................................ **24%**

**PERCENT U.S.-BASED MINORITY EMPLOYEES**
Total ........................................................ **36%**
Senior management ................................... **24%**
Investment ................................................ **27%**

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N) ............................................ **Y**
AI is used in the firm's investment management process (Y/N) ............................................ **N**

**Primary custodian:** State Street
**Parent company:** Ares Management Corp.
**Chief executive officer:** Michael Arougheti
**U.S. client contact:** Scott McConnell

## 34 Asset Management One Co. Ltd.

Tekko Building, 8-2, Marunouchi 1-chome, Chiyoda-ku, Tokyo 100-0005 Japan; phone: 81-3-6774-6075; www.am-one.co.jp

(millions)
Total assets managed worldwide ........... **$460,312**
Total worldwide institutional assets ........ **$368,474**
Total U.S. client assets ............................... **$578**
Total U.S. institutional client assets ............. **$578**
Total U.S. tax-exempt assets ....................... **$578**
Total U.S. institutional tax-exempt ................ **$578**
Internally managed ................................. **$578**

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Equity ...................................................... **8%**
Fixed income ............................................. **6%**
Other ..................................................... **86%**
*Other type: Multiasset*

**INVESTMENT STRATEGIES**
U.S. equity, active ....................................... **$9**
Non-U.S. equity, active ............................... **$38**
U.S. bond, active ....................................... **$32**

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Mutual fund assets ............................... **$82,156**
Sponsored ETFs/ETNs ............................. **$9,682**
ESG investing ....................................... **$19,216**
ESG mandates .................................. **$19,216**

**WORKFORCE**
Total number of employees ......................... **1,074**
Number of U.S.-based employees ...................... **52**
Number of cybersecurity professionals ............. **23**

**Parent companies:** Mizuho Financial Group Inc., Dai-ichi Life Holdings Inc.
**Chief executive officer:** Noriyuki Sugihara
**Chief investment officer:** Takashi Maruyama
**U.S. client contact:** Satoshi Oshita

## 46 Aviva Investors

80 Fenchurch St., London EC3M 4AE England; phone: 44-20-7809-6000; www.avivainvestors.com

(millions)
Total assets managed worldwide ........... **$266,371**
Total worldwide institutional assets ........ **$250,083**
Total U.S. client assets ................................. **$76**
Total U.S. institutional client assets ............... **$76**
Total U.S. tax-exempt assets ......................... **$76**
Total U.S. institutional tax-exempt .................. **$76**
Internally managed ................................... **$76**

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Fixed income ......................................... **100%**

**INVESTMENT STRATEGIES**
U.S. bond, active ....................................... **$76**
High-yield ................................................. **$30**
High-yield mandates ................................ **$30**
ESG investing ............................................ **$76**

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Mutual fund assets ............................... **$97,908**
U.S. 1940 Investment Co. Act ..................... **$59**
LDI strategies ....................................... **$23,265**
Managed for retirement plans ................ **$5,953**
ESG investing ..................................... **$266,371**
ESG mandates ................................. **$64,871**

**WORKFORCE**
Total number of employees ......................... **1,016**
Number of U.S.-based employees ...................... **26**
Number of cybersecurity professionals ............. **37**
Percent employee owned ............................... **2%**

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total ........................................................ **12%**
Senior management ................................... **12%**
Investment ................................................ **12%**

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N) ............................................ **Y**
AI is used in the firm's investment management process (Y/N) ............................................ **N**

**Parent company:** Aviva PLC
**Chief executive officer:** Mark Versey
**Chief investment officer:** Daniel McHugh
**U.S. client contact:** Paul Rasbach

## 18 AXA Investment Managers

400 Atlantic St., Suite 1000, Stamford, CT 06901; phone: 203-983-4200; www.axa-im.com

(millions)
Total assets managed worldwide ........... **$933,013**
Total worldwide institutional assets ........ **$751,453**
Total U.S. client assets .......................... **$38,379**
Total U.S. institutional client assets ......... **$36,766**
Total U.S. tax-exempt assets ........................ **$772**
Total U.S. institutional tax-exempt ................ **$772**
Internally managed ................................. **$772**

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund-of-fund assets ............................. **$72**
Mutual fund assets ............................... **$295,697**
LDI strategies ....................................... **$11,899**
Managed for retirement plans ................ **$8,603**
ESG investing ..................................... **$744,179**
ESG mandates ................................. **$550,725**

**WORKFORCE**
Total number of employees ......................... **2,641**
Number of U.S.-based employees .................... **165**
Number of cybersecurity professionals ............... **4**

**Primary custodian:** State Street
**Parent company:** AXA Group
**Chief executive officer:** Marco Morelli

**U.S. client contact:** Leigh Troy

## 50 Baillie Gifford Overseas Ltd.

Calton Square, 1 Greenside Row, Edinburgh EH1 3AN Scotland; phone: 44-131-275-2000; www.bailliegifford.com

| | (millions) |
|---|---|
| Total assets managed worldwide | $287,782 |
| Total worldwide institutional assets | $232,789 |
| Total U.S. client assets | $116,445 |
| Total U.S. institutional client assets | $112,832 |
| Total U.S. tax-exempt assets | $54,299 |
| Total U.S. institutional tax-exempt | $54,299 |
| Internally managed | $54,299 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Equity | 100% |

**INVESTMENT STRATEGIES**

| | |
|---|---|
| U.S. equity, active | $713 |
| Non-U.S. equity, active | $46,681 |
| Global equity, active | $6,905 |

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

| | |
|---|---|
| Broad-market | $713 |

**NON-U.S. STRATEGIES**

| | |
|---|---|
| Emerging markets equity | $10,774 |
| Emerging markets equity mandates | $10,774 |

**ESG INVESTING**

| | |
|---|---|
| Total | $54,299 |
| ESG mandates | $477 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Mutual fund assets | $13,226 |
| U.S. 1940 Investment Co. Act | $13,226 |
| ESG investing | $287,782 |
| ESG mandates | $24,286 |

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

| | |
|---|---|
| Total | $3,920 |
| Internally managed | $3,920 |

**WORKFORCE**

| | |
|---|---|
| Total number of employees | 1,823 |
| Percent employee owned | 100% |

**Primary custodian:** BNY Mellon
**Parent company:** Baillie Gifford & Co.
**Chief executive officer:** Andrew Telfer
**U.S. client contacts:** Mike Saliba, Ryan Fitzpatrick
**DC client contact:** Mike Saliba

## 37 Barings

300 S. Tryon St., Suite 2500, Charlotte, NC 28202; phone: 877-766-0014; www.barings.com

| | (millions) |
|---|---|
| Total assets managed worldwide | $381,635 |
| Total worldwide institutional assets | $330,214 |
| Total U.S. client assets | $265,071 |
| Total U.S. institutional client assets | $229,312 |
| Total U.S. RIA assets | $408 |
| Total U.S. tax-exempt assets | $30,322 |
| Total U.S. institutional tax-exempt | $30,322 |
| Internally managed | $30,322 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Equity | 10% |
| Fixed income | 53% |
| Equity real estate | 17% |
| Private equity | 6% |
| Other | 14% |

*Other type: Real estate debt, direct lending, mezzanine debt, distressed debt, infrastructure debt, private placements*

**INVESTMENT STRATEGIES**

| | |
|---|---|
| Global equity, active | $2,984 |
| U.S. bond, active | $12,945 |
| Global/non-U.S. bond, active | $3,079 |
| Equity real estate, U.S. | $2,878 |
| Equity real estate, non-U.S. | $257 |
| Real estate debt | $251 |
| Timber | $29 |
| Infrastructure | $761 |
| Private equity, U.S. | $993 |
| Renewable energy | $51 |
| Direct lending | $2,506 |
| Privately placed debt | $22 |
| Distressed debt | $570 |
| Mezzanine debt | $784 |
| Other private credit | $11 |

**NON-U.S. STRATEGIES**

| | |
|---|---|
| Emerging markets debt | $154 |

**FIXED-INCOME STRATEGIES**

| | |
|---|---|
| Core | $5,230 |
| Core-plus | $1,264 |
| High-yield | $2,197 |
| Inflation-protected securities | $250 |
| Stable value | $9,006 |
| Bank loans | $1,784 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Mutual fund assets | $21,890 |
| Investment outsourcing mandates | $6,056 |
| Proprietary stable value | $9,006 |

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

| | |
|---|---|
| Total | $9,563 |
| Internally managed | $9,563 |

**WORKFORCE**

| | |
|---|---|
| Total number of employees | 1,871 |
| Number of U.S.-based employees | 863 |
| Number of cybersecurity professionals | 16 |

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

| | |
|---|---|
| Total | 38% |
| Senior management | 25% |
| Investment | 26% |

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

| | |
|---|---|
| Total | 23% |
| Senior management | 25% |
| Investment | 21% |

**Primary custodian:** State Street
**Parent company:** Massachusetts Mutual Life Insurance Co.
**Chief executive officer:** Mike Freno
**Client contact:** Britta Hion

## 2 BlackRock Inc.

50 Hudson Yards, New York, NY 10001; phone: 212-810-5800; www.blackrock.com

| | (millions) |
|---|---|
| Total assets managed worldwide | $10,008,995 |
| Total worldwide institutional assets | $5,570,859 |
| Total U.S. client assets | $6,372,017 |
| Total U.S. institutional client assets | $3,205,387 |
| Total U.S. tax-exempt assets | $2,209,879 |
| Total U.S. institutional tax-exempt | $2,209,879 |
| Internally managed | $2,209,879 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Equity | 60% |
| Fixed income | 15% |
| Cash | 2% |
| Other | 23% |

*Other type: Advisory, multiasset, alternatives*

**INVESTMENT STRATEGIES**

| | |
|---|---|
| U.S. equity, active | $22,779 |
| U.S. equity, passive | $901,219 |
| Non-U.S. equity, active | $2,276 |
| Non-U.S. equity, passive | $13,983 |
| Global equity, active | $16,857 |
| Global equity, passive | $274,340 |
| U.S. bond, active | $98,763 |
| U.S. bond, passive | $186,088 |
| U.S. bond, enhanced index | $6,743 |
| Global/non-U.S. bond, active | $7,903 |
| Global/non-U.S. bond, passive | $5,475 |
| Equity real estate, U.S. | $8,611 |
| Hedge funds | $5,017 |
| Commodities | $1,254 |
| Cash | $46,064 |

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

| | |
|---|---|
| Large-cap | $2,739 |
| Midcap | $1,674 |
| Smidcap | $6 |
| Small-cap | $33 |

**VALUE**

| | |
|---|---|
| Large-cap | $3,773 |
| Broad-market | $476 |

**CORE**

| | |
|---|---|
| Large-cap | $6,603 |
| Smidcap | $484 |

Continued on Page 28

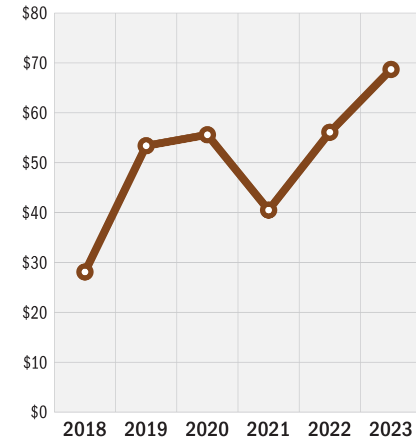
## Managers of 529 plan assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Nuveen | $43,091 |
| 2 | Invesco | $5,852 |
| 3 | Fidelity Investments | $5,800 |
| 4 | Dimensional Fund Advisors | $5,239 |
| 5 | American Century | $3,000 |
| 6 | Voya Investment Mgmt. | $2,859 |
| 7 | Principal Global Investors | $1,444 |
| 8 | State Street Global | $730 |
| 9 | AllianceBernstein | $169 |
| 10 | AEW Capital | $118 |

### Asset growth (billions)



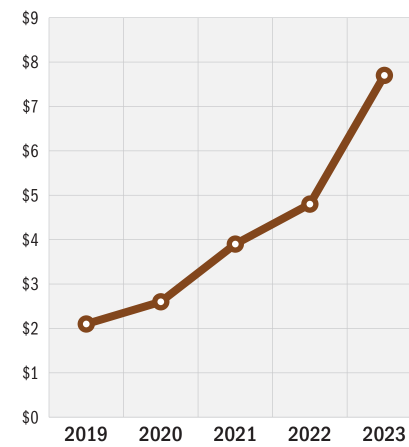

## Managers of HSA assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Fidelity Investments | $6,202 |
| 2 | Nuveen | $1,395 |
| 3 | Voya Investment Mgmt. | $71 |
| 4 | New York Life Investments | $31 |
| 5 | Winthrop Capital | $3 |

### Asset growth (billions)



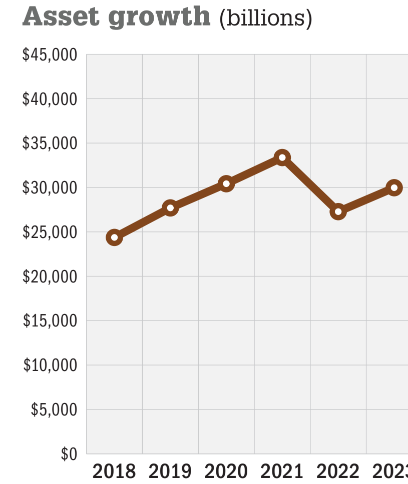

## Managers of mutual fund assets

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $5,774,084 |
| 2 | Fidelity Investments | $4,056,170 |
| 3 | Capital Group | $2,376,621 |
| 4 | J.P. Morgan Asset & Wealth | $1,609,734 |
| 5 | T. Rowe Price Associates | $1,049,804 |
| 6 | BlackRock | $964,856 |
| 7 | Franklin Templeton | $956,519 |
| 8 | PIMCO | $886,910 |
| 9 | Wellington Mgmt. | $673,657 |
| 10 | Charles Schwab Investment | $644,574 |

### Asset growth (billions)



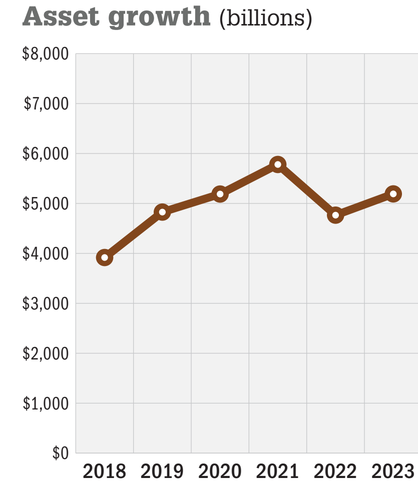

## Managers assigning assets to others

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Fidelity Investments | $1,168,690 |
| 2 | Vanguard Group | $695,928 |
| 3 | Goldman Sachs Group | $443,807 |
| 4 | Mercer | $419,605 |
| 5 | SEI Investments | $342,678 |
| 6 | Manulife Investment | $201,229 |
| 7 | WTW Investment Services | $162,929 |
| 8 | Prudential Financial | $151,531 |
| 9 | AllianceBernstein | $98,075 |
| 10 | Russell Investments | $94,294 |

### Asset growth (billions)



# The Largest Money Managers

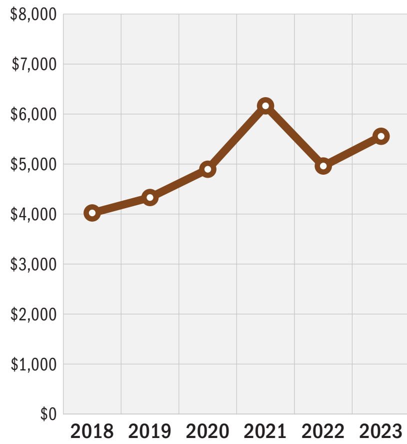
## Managers of subadvised assets

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Geode Capital Mgmt. | $1,058,399 |
| 2 | Wellington Mgmt. | $673,657 |
| 3 | BlackRock | $461,106 |
| 4 | Principal Global Investors | $296,753 |
| 5 | PIMCO | $243,635 |
| 6 | BNY Mellon | $191,451 |
| 7 | T. Rowe Price Associates | $177,899 |
| 8 | J.P. Morgan Asset & Wealth | $160,874 |
| 9 | Loomis, Sayles | $122,049 |
| 10 | Prudential Financial | $119,822 |

### Asset growth (billions)



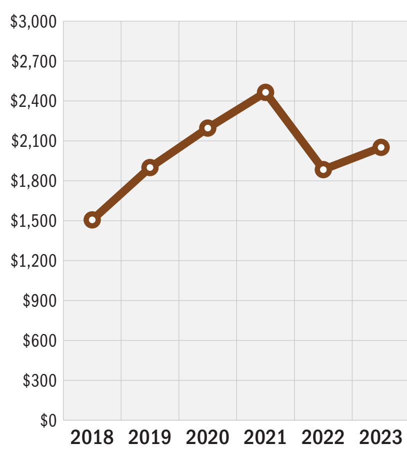

## Managers of outsourcing/fiduciary mgmt. mandates

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Mercer | $419,605 |
| 2 | BlackRock | $216,538 |
| 3 | SEI Investments | $193,500 |
| 4 | WTW Investment Services | $162,929 |
| 5 | State Street Global | $157,631 |
| 6 | Russell Investments | $155,783 |
| 7 | Alan Biller and Associates | $84,675 |
| 8 | Northern Trust Asset Mgmt. | $78,908 |
| 9 | J.P. Morgan Asset & Wealth | $63,094 |
| 10 | Vanguard Group | $54,702 |

### Asset growth (billions)



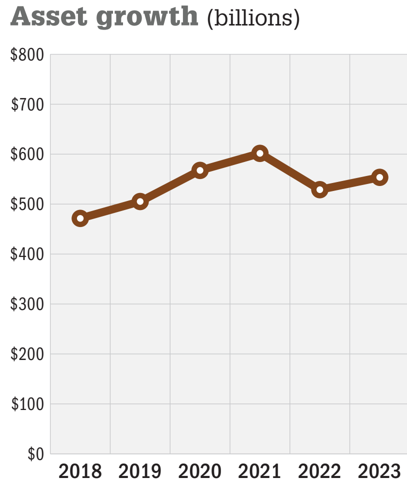

## Managers of overlay assets

U.S. institutional, tax-exempt assets covered as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | NISA Investment | $192,178 |
| 2 | Parametric | $94,402 |
| 3 | Russell Investments | $63,468 |
| 4 | Legal & General Investment | $52,043 |
| 5 | J.P. Morgan Asset & Wealth | $51,009 |
| 6 | Voya Investment Mgmt. | $36,196 |
| 7 | AllianceBernstein | $22,167 |
| 8 | Record Currency Mgmt. | $18,008 |
| 9 | Payden & Rygel | $5,422 |
| 10 | Nuveen | $3,929 |

### Asset growth (billions)



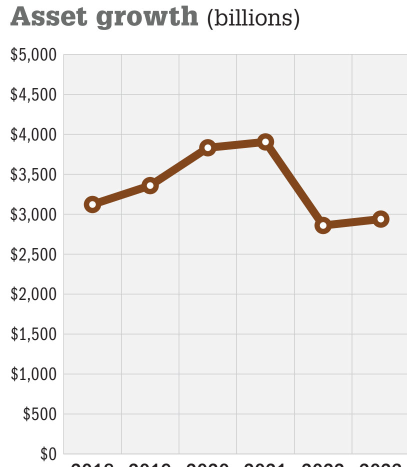

## Managers of LDI strategies

Total worldwide assets as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Insight Investment | $534,749 |
| 2 | Legal & General Investment | $475,248 |
| 3 | BlackRock | $336,463 |
| 4 | NISA Investment | $237,791 |
| 5 | PIMCO | $180,169 |
| 6 | Mercer | $171,824 |
| 7 | Aegon Asset Mgmt. | $127,572 |
| 8 | J.P. Morgan Asset & Wealth | $96,789 |
| 9 | Schroders | $72,800 |
| 10 | Wellington Mgmt. | $63,403 |

### Asset growth (billions)




**Continued from Page 27**

Small-cap ........ $5,172
Broad-market ........ $1,820

**PASSIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap ........ $14,370
Midcap ........ $343
Smidcap ........ $272
Small-cap ........ $444
Broad-market ........ $770

**VALUE**

Large-cap ........ $6,718
Smidcap ........ $670
Small-cap ........ $1,750

**CORE**

Large-cap ........ $644,453
Midcap ........ $12,377
Smidcap ........ $105,082
Small-cap ........ $17,661
Broad-market ........ $91,493

REITs ........ $4,247

**NON-U.S. STRATEGIES**

Emerging markets equity ........ $23,127
Emerging markets debt ........ $1,821

**FIXED-INCOME STRATEGIES**

Core ........ $114,049
Core-plus ........ $13,066
High-yield ........ $2,793
Inflation-protected securities ........ $28,711
LDI strategies ........ $105,863
ESG investing ........ $17,608
ESG mandates ........ $17,608

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Hedge fund assets ........ $46,317
Hedge fund-of-fund assets ........ $27,916
Mutual fund assets ........ $964,856
U.S. 1940 Investment Co. Act ........ $398,811
Sponsored ETFs/ETNs ........ $3,499,299
Actively managed ........ $20,500
Investment outsourcing mandates ........ $216,538
LDI strategies ........ $336,463
ESG investing ........ $801,805
ESG mandates ........ $801,805

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total ........ $1,442,168
Internally managed ........ $1,442,168

**WORKFORCE**

Total number of employees ........ 19,801

**Primary custodian:** J.P. Morgan
**Chief executive officer:** Laurence D. Fink
**Chief investment officers:** Rick Rieder, Raffaele Savi, Becci McKinley Rowe, Philip Vasan, Samara Cohen, Edwin Conway
**U.S. client contact:** Armando Senra
**DC client contact:** Anne Ackerley

### 31 BNP Paribas Asset Management

787 Seventh Ave., 5th Floor Annex, New York, NY 10019; phone: 212-681-3181; www.bnpparibas-am.com

(millions)

Total assets managed worldwide ........ $595,978
Total worldwide institutional assets ........ $411,540
Total U.S. client assets ........ $4,712
Total U.S. institutional client assets ........ $4,650
Total U.S. tax-exempt assets ........ $2,804
Total U.S. institutional tax-exempt ........ $2,804
Internally managed ........ $2,804

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Fixed income ........ 65%
Other ........ 35%
*Other type: Balanced, currency*

**INVESTMENT STRATEGIES**

U.S. bond, active ........ $783
Global/non-U.S. bond, active ........ $1,040
Inflation-protected securities ........ $1,141

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Hedge fund assets ........ $202
Hedge fund-of-fund assets ........ $351
Mutual fund assets ........ $293,248
Sponsored ETFs/ETNs ........ $45,370
LDI strategies ........ $20,131
Managed for retirement plans ........ $17,052
ESG investing ........ $403,778
ESG mandates ........ $81,826

**WORKFORCE**

Total number of employees ........ 2,373
Number of U.S.-based employees ........ 98

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

Total ........ 41%
Senior management ........ 56%
Investment ........ 27%

**Primary custodian:** BNP Paribas
**Parent company:** BNP Paribas
**Chief executive officer:** Sandro Pierri
**Chief investment officer:** Robert Gambi
**U.S. client contact:** Kenneth Corwin
**Other client contact:** Johanna Lasker

### 7 BNY Mellon Investment Management

240 Greenwich St., New York, NY 10286; phone: 212-495-1784; www.bnymellon.com

(millions)

Total assets managed worldwide ........ $1,974,322
Total worldwide institutional assets ........ $1,553,800
Total U.S. client assets ........ $1,099,345
Total U.S. institutional client assets ........ $740,580
Total U.S. tax-exempt assets ........ $362,476
Total U.S. institutional tax-exempt ........ $362,476
Internally managed ........ $362,476

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity ........ 55%
Fixed income ........ 17%
Cash ........ 16%
Other ........ 12%
*Other type: Multiasset, alternatives, LDI, overlay*

**INVESTMENT STRATEGIES**

U.S. equity, active ........ $5,887
U.S. equity, passive ........ $136,711
Non-U.S. equity, active ........ $18,243
Non-U.S. equity, passive ........ $8,895
Global equity, active ........ $10,494
Global equity, passive ........ $15,650
U.S. bond, active ........ $28,375
U.S. bond, passive ........ $29,366
Global/non-U.S. bond, active ........ $1,978
Global/non-U.S. bond, passive ........ $1,766
Cash ........ $57,263

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap ........ $6
Smidcap ........ $159
Small-cap ........ $39

**VALUE**

Large-cap ........ $697
Midcap ........ $100
Smidcap ........ $12
Small-cap ........ $331

**CORE**

Large-cap ........ $191

**PASSIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap ........ $2,083
Small-cap ........ $118

**VALUE**

Large-cap ........ $668
Small-cap ........ $401

**CORE**

Large-cap ........ $30,328
Midcap ........ $4,419
Small-cap ........ $5,341
Broad-market ........ $23,326

**FIXED-INCOME STRATEGIES**

Core ........ $720
Core-plus ........ $2,606
Unconstrained ........ $15
High-yield ........ $303
Inflation-protected securities ........ $1,873
Stable value ........ $20,474
LDI strategies ........ $24,3971

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Mutual fund assets ........ $411,536
U.S. 1940 Investment Co. Act ........ $310,929
Sponsored ETFs/ETNs ........ $5,225

# The Largest Money Managers

Actively managed ........ $101
LDI strategies ........ $534,7491
Managed for retirement plans ........ $518,6981
Proprietary stable value ........ $20,474

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total ........ $89,236
Internally managed ........ $89,236

**Primary custodian:** BNY Mellon
**Parent company:** Bank of New York Mellon
**Chief executive officer:** Hanneke Smits
**U.S. client contact:** Kyle Pham

## 30 Brookfield Asset Management

250 Vesey St., 15th Floor, New York, NY 10281-1023; phone: 212-417-7000; www.brookfield.com

(millions)

Total assets managed worldwide ........ $781,372
Total worldwide institutional assets ........ $469,311
Total U.S. client assets ........ $116,364
Total U.S. institutional client assets ........ $102,673
Total U.S. tax-exempt assets ........ $74,416
Total U.S. institutional tax-exempt ........ $74,416
Internally managed ........ $74,416

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity real estate ........ 39%
Private equity ........ 16%
Other ........ 45%
*Other type: Infrastructure, multiasset*

**INVESTMENT STRATEGIES**

Equity real estate, U.S. ........ $5,876
Equity real estate, non-U.S. ........ $23,493
Buyout funds ........ $14,293
Infrastructure ........ $29,557
Mezzanine debt ........ $1,197
ESG investing ........ $74,416

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Mutual fund assets ........ $1,603
U.S. 1940 Investment Co. Act ........ $1,603
ESG investing ........ $781,372

**WORKFORCE**

Total number of employees ........ 240,000

## 15 Capital Group

333 S. Hope St., Los Angeles, CA 90071; phone: 213-486-9200; www.capitalgroup.com

(millions)

Total assets managed worldwide ........ $2,532,813
Total worldwide institutional assets ........ $858,237
Total U.S. client assets ........ $2,462,235
Total U.S. institutional client assets ........ $850,074
Total U.S. tax-exempt assets ........ $1,460,436
Total U.S. institutional tax-exempt ........ $585,059
Internally managed ........ $585,059

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity ........ 76%
Fixed income ........ 19%
Cash ........ 5%

**INVESTMENT STRATEGIES**

U.S. equity, active ........ $314,110
Non-U.S. equity, active ........ $89,415
Global equity, active ........ $38,321
U.S. bond, active ........ $99,245
Global/non-U.S. bond, active ........ $12,529
Cash ........ $31,439
LDI strategies ........ $10,008
ESG investing ........ $585,059

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Mutual fund assets ........ $2,376,621
U.S. 1940 Investment Co. Act ........ $2,376,621
Sponsored ETFs/ETNs ........ $18,760
Actively managed ........ $18,760
Institutional ........ $56
LDI strategies ........ $10,386
Managed for retirement plans ........ $10,386
ESG investing ........ $2,532,813

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total ........ $552,029
Internally managed ........ $552,029

**WORKFORCE**

Total number of employees ........ 5,050
Percent employee owned ........ 100%

**Chief executive officer:** Michael C. Gitlin
**Chief investment officer:** Martin Romo
**U.S. client contacts:** Walt Best, Chantal Manseau

## 41 Columbia Threadneedle Investments

290 Congress St., Boston, MA 02210; phone: 617-385-9840; www.columbiathreadneedle.com

(millions)

Total assets managed worldwide ........ $637,000
Total worldwide institutional assets ........ $295,699
Total U.S. client assets ........ $395,935
Total U.S. institutional client assets ........ $119,902
Total U.S. tax-exempt assets ........ $26,773
Total U.S. institutional tax-exempt ........ $18,096
Assigned to external managers ........ $5,341
Internally managed ........ $12,755

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Hedge fund assets ........ $998
Mutual fund assets ........ $329,680
U.S. 1940 Investment Co. Act ........ $260,130
Sponsored ETFs/ETNs ........ $2,150
Investment outsourcing mandates ........ $49,400
LDI strategies ........ $36,511
Proprietary stable value ........ $3,469
ESG investing ........ $45,364

**WORKFORCE**

Total number of employees ........ 2,710
Number of U.S.-based employees ........ 1,110
Number of cybersecurity professionals ........ 152

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

Total ........ 28%
Senior management ........ 8%
Investment ........ 20%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

Total ........ 20%
Senior management ........ 9%
Investment ........ 24%

**ARTIFICIAL INTELLIGENCE**

The firm invests in AI investment management technology (Y/N) ........ Y
AI is used in the firm's investment management process (Y/N) ........ N

**Parent company:** Ameriprise Financial Inc.
**Chief executive officer:** Ted Truscott
**Chief investment officer:** William Davies
**U.S. client contact:** Francine Asselta

## 21 Dimensional Fund Advisors LP

6300 Bee Cave Road, Building One, Austin, TX 78746; phone: 512-306-7400; www.dfafunds.com

(millions)

Total assets managed worldwide ........ $677,141
Total worldwide institutional assets ........ $677,141
Total U.S. client assets ........ $571,206
Total U.S. institutional client assets ........ $571,206
Total U.S. tax-exempt assets ........ $402,612
Total U.S. institutional tax-exempt ........ $402,612
Internally managed ........ $402,612

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity ........ 82%
Fixed income ........ 16%
Other ........ 2%
*Other type: Commodities, multiasset, target date*

**INVESTMENT STRATEGIES**

U.S. equity, active ........ $164,875
U.S. equity, passive ........ $10,371
U.S. equity, enhanced index ........ $221
Non-U.S. equity, active ........ $130,782
Global equity, active ........ $24,997
U.S. bond, active ........ $46,265
Global/non-U.S. bond, active ........ $18,308
Commodities ........ $6,793

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap ........ $3,093
Small-cap ........ $1,021

**Continued on Page 30**

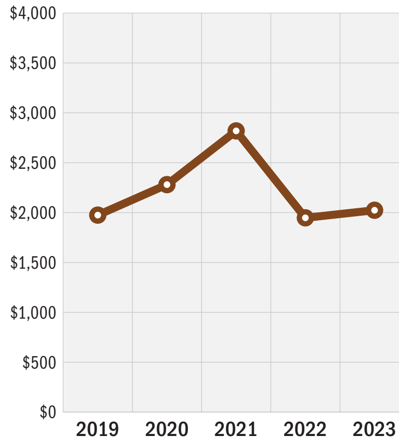
## Managers of LDI strategies for retirement plans

Total worldwide assets as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Insight Investment | $518,698 |
| 2 | Legal & General Investment | $475,248 |
| 3 | NISA Investment | $231,686 |
| 4 | Mercer | $171,824 |
| 5 | PIMCO | $152,877 |
| 6 | Schroders | $72,800 |
| 7 | Aegon Asset Mgmt. | $40,268 |
| 8 | Dodge & Cox | $32,872 |
| 9 | Franklin Templeton | $31,251 |
| 10 | J.P. Morgan Asset & Wealth | $30,435 |

**Asset growth** (billions)



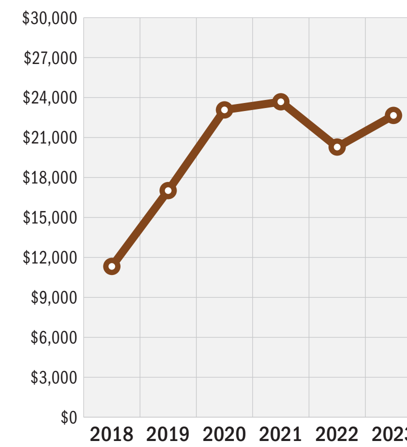

## Managers of assets under ESG principles

Total worldwide assets as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | J.P. Morgan Asset & Wealth | $2,820,404 |
| 2 | Capital Group | $2,532,813 |
| 3 | Nuveen | $1,187,693 |
| 4 | Amundi | $970,398 |
| 5 | BlackRock | $801,805 |
| 6 | Brookfield Asset Mgmt. | $781,372 |
| 7 | Schroders | $778,000 |
| 8 | AXA Investment | $744,179 |
| 9 | State Street Global | $650,200 |
| 10 | New York Life Investments | $602,601 |

**Asset growth** (billions)



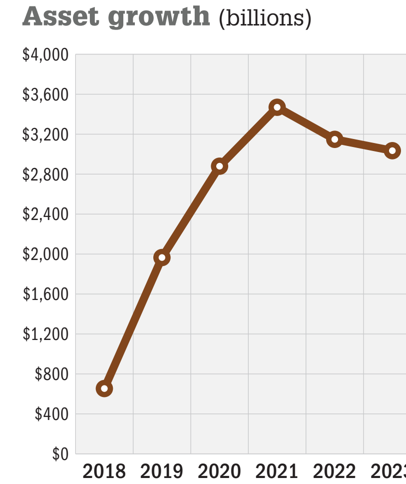

## Managers of ESG mandates

Total worldwide assets as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | BlackRock | $801,805 |
| 2 | AXA Investment | $550,725 |
| 3 | Amundi | $313,170 |
| 4 | State Street Global | $266,900 |
| 5 | Northern Trust Asset Mgmt. | $115,201 |
| 6 | Schroders | $96,880 |
| 7 | BNP Paribas Asset Mgmt. | $81,826 |
| 8 | Nuveen | $67,770 |
| 9 | Aviva Investors | $64,871 |
| 10 | Morgan Stanley Inv. Mgmt. | $53,662 |

**Asset growth** (billions)



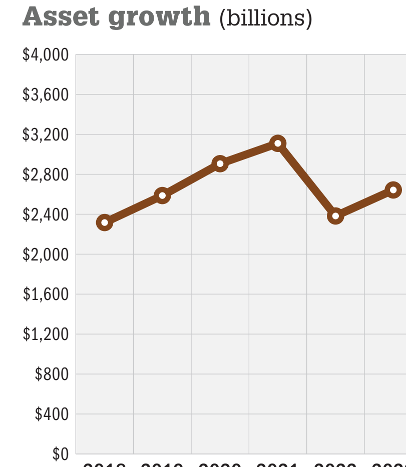

## Managers of active U.S. equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | T. Rowe Price Associates | $575,260 |
| 2 | Fidelity Investments | $421,573 |
| 3 | Capital Group | $314,110 |
| 4 | Dimensional Fund Advisors | $164,875 |
| 5 | Nuveen | $82,545 |
| 6 | Dodge & Cox | $79,891 |
| 7 | MFS Investment | $78,914 |
| 8 | J.P. Morgan Asset & Wealth | $74,415 |
| 9 | Principal Global Investors | $59,490 |
| 10 | Wellington Mgmt. | $45,812 |

**Asset growth** (billions)



# The Largest Money Managers

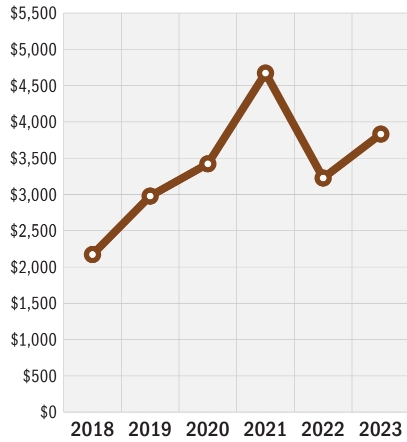
## Managers of passive U.S. equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $1,547,681 |
| 2 | BlackRock | $901,219 |
| 3 | State Street Global | $537,800 |
| 4 | Northern Trust Asset Mgmt. | $270,044 |
| 5 | BNY Mellon | $136,711 |
| 6 | RhumbLine Advisers | $87,162 |
| 7 | Morgan Stanley Inv. Mgmt. | $73,145 |
| 8 | Geode Capital Mgmt. | $69,776 |
| 9 | Principal Global Investors | $58,993 |
| 10 | Invesco | $32,568 |

### Asset growth (billions)



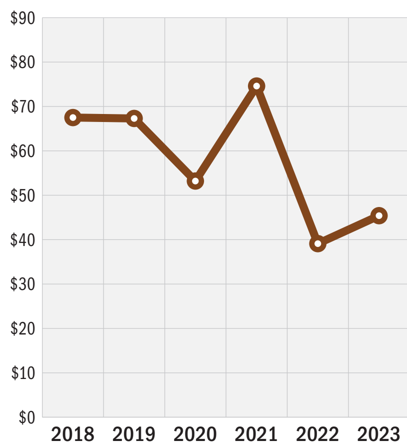

## Managers of enhanced index U.S. equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | T. Rowe Price Associates | $26,398 |
| 2 | PIMCO | $5,119 |
| 3 | Legal & General Investment | $3,569 |
| 4 | J.P. Morgan Asset & Wealth | $3,371 |
| 5 | MFS Investment | $1,739 |
| 6 | Allspring Global Investments | $1,529 |
| 7 | Voya Investment Mgmt. | $1,220 |
| 8 | Franklin Templeton | $1,139 |
| 9 | TWIN Capital | $573 |
| 10 | Federated Hermes | $285 |

### Asset growth (billions)



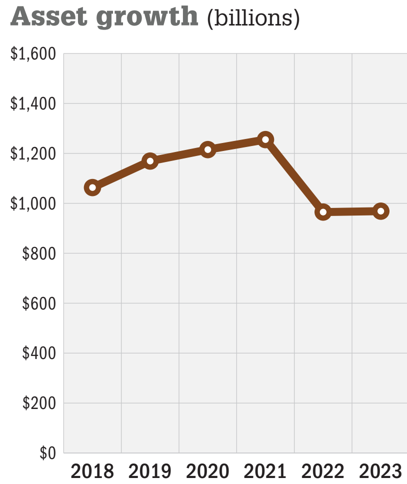

## Managers of active non-U.S. equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Dimensional Fund Advisors | $130,782 |
| 2 | Fidelity Investments | $105,846 |
| 3 | Capital Group | $89,415 |
| 4 | MFS Investment | $56,054 |
| 5 | Baillie Gifford Overseas | $46,681 |
| 6 | Acadian Asset Mgmt. | $36,877 |
| 7 | Mondrian Investment | $28,978 |
| 8 | Nuveen | $27,566 |
| 9 | Lazard Asset Mgmt. | $25,680 |
| 10 | Marathon-London | $25,610 |

### Asset growth (billions)



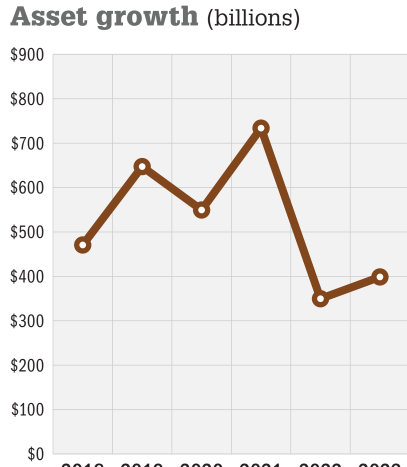

## Managers of passive non-U.S. equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | State Street Global | $131,833 |
| 2 | Vanguard Group | $122,526 |
| 3 | Northern Trust Asset Mgmt. | $74,458 |
| 4 | Geode Capital Mgmt. | $22,539 |
| 5 | BlackRock | $13,983 |
| 6 | BNY Mellon | $8,895 |
| 7 | Legal & General Investment | $5,910 |
| 8 | RhumbLine Advisers | $4,638 |
| 9 | Voya Investment Mgmt. | $2,602 |
| 10 | Nuveen | $2,141 |

### Asset growth (billions)




**Continued from Page 29**

**VALUE**
Large-cap ... $26,460
Smidcap ... $13,998
Small-cap ... $15,405

**CORE**
Large-cap ... $6,561
Small-cap ... $22,400
Broad-market ... $75,936

**PASSIVE U.S. EQUITY STRATEGIES**

**CORE**
Large-cap ... $10,366
REITs ... $16,437

**NON-U.S. STRATEGIES**
Emerging markets equity ... $51,107
Emerging markets equity mandates ... $51,107

**FIXED-INCOME STRATEGIES**
Core ... $11,067
Core-plus ... $2,851
Inflation-protected securities ... $5,695

**ESG INVESTING**
Total ... $16,777
ESG mandates ... $16,777
Equity, active ... $15,438
Bond, active ... $1,339

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Mutual fund assets ... $494,687
U.S. 1940 Investment Co. Act ... $412,074
Sponsored ETFs/ETNs ... $117,525
Actively managed ... $117,525
LDI strategies ... $440
ESG investing ... $90,148
ESG mandates ... $29,071

**WORKFORCE**
Total number of employees ... 1,619

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N) ... N
AI is used in the firm's investment management process (Y/N) ... N

**Primary custodian:** State Street
**Chief executive officers:** David Butler, Gerard O'Reilly
**Chief investment officers:** Gerard O'Reilly, Savina Rizova

### 25 DWS Group GmbH & Co. KGaA

875 Third Ave., 26th Floor, New York, NY 10022; phone: 212-454-6260; www.dws.com

(millions)
Total assets managed worldwide ... $990,366
Total worldwide institutional assets ... $540,479
Total U.S. client assets ... $226,672
Total U.S. institutional client assets ... $170,350
Total U.S. tax-exempt assets ... $29,041
Total U.S. institutional tax-exempt ... $29,041
Internally managed ... $29,041

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Equity ... 26%
Fixed income ... 2%
Equity real estate ... 66%
Cash ... 3%
Other ... 3%
*Other type: Other*

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Mutual fund assets ... $257,610
U.S. 1940 Investment Co. Act ... $94,988
Sponsored ETFs/ETNs ... $199,390
LDI strategies ... $27,187
Managed for retirement plans ... $27,187
ESG investing ... $147,544

**WORKFORCE**
Total number of employees ... 4,517
Number of U.S.-based employees ... 852

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total ... 41%
Senior management ... 5%
Investment ... 6%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**
Total ... 36%
Senior management ... 6%
Investment ... 8%

**Primary custodian:** State Street
**Parent company:** Deutsche Bank AG
**Chief executive officer:** Stefan Hoops
**Chief investment officer:** Stefan Hoops
**U.S. client contacts:** Dirk Goergen, JJ Wilczewski, Laura Gaylord, Amanda Rebello, John Cassedy
**Other client contacts:** Chuck Fiedler (Americas), Michelle Reuter (Americas)

### 19 Federated Hermes Inc.

1001 Liberty Ave., 23rd Floor, Pittsburgh, PA 15222-3779; phone: 800-245-0242; www.federatedhermes.com

(millions)
Total assets managed worldwide ... $757,622
Total worldwide institutional assets ... $706,482
Total U.S. client assets ... $703,708
Total U.S. institutional client assets ... $672,438
Total U.S. RIA assets ... $11,203
Total U.S. tax-exempt assets ... $229,305
Total U.S. institutional tax-exempt ... $222,764
Internally managed ... $222,764

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Equity ... 8%
Fixed income ... 26%
Cash ... 65%
*Other type: Balanced*

**INVESTMENT STRATEGIES**
U.S. equity, active ... $15,354
U.S. equity, enhanced index ... $285
Non-U.S. equity, active ... $2,746
Global equity, active ... $317
U.S. bond, active ... $58,699
Global/non-U.S. bond, active ... $211
Other private credit ... $92
Cash ... $145,060

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**
Large-cap ... $1,334
Midcap ... $3,749
Smidcap ... $51
Small-cap ... $2,570

**VALUE**
Large-cap ... $6,111
Small-cap ... $141
Broad-market ... $7

**CORE**
Small-cap ... $709
Broad-market ... $371

**NON-U.S. STRATEGIES**
Emerging markets equity ... $29
Emerging markets debt ... $10

**FIXED-INCOME STRATEGIES**
Core ... $19,321
Core-plus ... $8,792
Unconstrained ... $151
High-yield ... $6,449
High-yield mandates ... $1,374
Inflation-protected securities ... $64
Stable value ... $2,842
Mortgages (whole loans) ... $186
LDI strategies ... $2,678

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Mutual fund assets ... $494,179
U.S. 1940 Investment Co. Act ... $462,820
Sponsored ETFs/ETNs ... $131
Actively managed ... $131
Institutional ... $131
LDI strategies ... $2,678
Proprietary stable value ... $2,842

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**
Total ... $54,603
Internally managed ... $54,603

**WORKFORCE**
Total number of employees ... 2,025
Number of U.S.-based employees ... 1,433
Percent employee owned ... 18%

**Primary custodian:** State Street
**Chief executive officer:** John B. Fisher
**Chief investment officers:** Robert J. Ostrowski, Stephen F. Auth, Deborah A. Cunningham
**Client contacts:** Paul A. Uhlman, James Wojciak, Bryan Burke

# The Largest Money Managers

## 4 Fidelity Investments

245 Summer St., Boston, MA 02210; phone: 800-343-3548; www.fidelity.com

(millions)

| | |
|---|---|
| Total assets managed worldwide | $4,581,980 |
| Total worldwide institutional assets | $2,243,157 |
| Total U.S. client assets | $4,423,972 |
| Total U.S. institutional client assets | $2,243,157 |
| Total U.S. tax-exempt assets | $2,832,106 |
| Total U.S. institutional tax-exempt | $1,406,914 |
| Assigned to external managers | $551,242 |
| Internally managed | $855,672 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Equity | 62% |
| Fixed income | 27% |
| Cash | 11% |

**INVESTMENT STRATEGIES**

| | |
|---|---|
| U.S. equity, active | $421,573 |
| U.S. equity, passive | $38 |
| Non-U.S. equity, active | $105,846 |
| Global equity, active | $7,085 |
| U.S. bond, active | $111,040 |
| U.S. bond, passive | $108,373 |
| Global/non-U.S. bond, active | $3,731 |
| Global/non-U.S. bond, passive | $2,871 |
| Cash | $95,115 |

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

| | |
|---|---|
| Large-cap | $274,846 |
| Midcap | $692 |
| Small-cap | $3,089 |

**VALUE**

| | |
|---|---|
| Large-cap | $23,057 |
| Midcap | $18,354 |
| Small-cap | $3,089 |

**CORE**

| | |
|---|---|
| Large-cap | $19,306 |
| Midcap | $4,095 |
| Small-cap | $12,044 |

**NON-U.S. STRATEGIES**

| | |
|---|---|
| Emerging markets equity | $33,047 |
| Emerging markets equity mandates | $33,047 |
| High-yield | $12,137 |
| Inflation-protected securities | $16,011 |
| Stable value | $31,195 |
| LDI strategies | $38,400 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Mutual fund assets | $4,056,170 |
| U.S. 1940 Investment Co. Act | $3,946,261 |
| Sponsored ETFs/ETNs | $52,654 |
| Actively managed | $18,805 |
| Investment outsourcing mandates | $9,192 |
| LDI strategies | $38,400 |
| Proprietary stable value | $33,908 |

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

| | |
|---|---|
| Total | $1,315,229 |
| Internally managed | $763,987 |

**WORKFORCE**

| | |
|---|---|
| Total number of employees | 74,000 |

**Parent company:** FMR LLC
**Chief executive officer:** Bart Grenier
**Chief investment officer:** Joe DeSantis
**U.S. client contact:** Casey Condron
**DC client contact:** Ted Madden

## 20 Franklin Templeton

1 Franklin Parkway, Building 970, 1st Floor, San Mateo, CA 94403; phone: 650-312-2000; www.franklintempleton.com

(millions)

| | |
|---|---|
| Total assets managed worldwide | $1,455,506 |
| Total worldwide institutional assets | $695,069 |
| Total U.S. client assets | $1,019,376 |
| Total U.S. institutional client assets | $399,704 |
| Total U.S. tax-exempt assets | $290,616 |
| Total U.S. institutional tax-exempt | $229,397 |
| Internally managed | $229,397 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Equity | 26% |
| Fixed income | 57% |
| Equity real estate | 12% |
| Hedge funds | 1% |
| Other | 3% |

*Other type: Balanced*

**INVESTMENT STRATEGIES**

| | |
|---|---|
| U.S. equity, active | $45,752 |
| U.S. equity, enhanced index | $1,139 |
| Non-U.S. equity, active | $12,641 |
| Global equity, active | $4,289 |
| U.S. bond, active | $111,574 |
| Global/non-U.S. bond, active | $17,975 |
| Equity real estate, U.S. | $28,185 |
| Equity real estate, non-U.S. | $161 |
| Real estate debt | $10 |
| Hedge funds | $4,918 |
| Infrastructure | $388 |
| Cash | $1,028 |

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

| | |
|---|---|
| Large-cap | $12,185 |
| Midcap | $114 |
| Small-cap | $4,286 |
| Broad-market | $770 |

**VALUE**

| | |
|---|---|
| Large-cap | $15,057 |
| Midcap | $446 |
| Small-cap | $603 |
| Broad-market | $183 |

**CORE**

| | |
|---|---|
| Large-cap | $3,814 |
| Midcap | $1,207 |
| Small-cap | $737 |
| Broad-market | $109 |
| Low-volatility strategies | $5,586 |

**NON-U.S. STRATEGIES**

| | |
|---|---|
| Emerging markets equity | $1,141 |
| Emerging markets equity mandates | $1,141 |
| Emerging markets debt | $1,212 |
| Emerging markets debt mandates | $126 |

**FIXED-INCOME STRATEGIES**

| | |
|---|---|
| Core | $9,612 |
| Core-plus | $45,465 |
| Unconstrained | $8,226 |
| High-yield | $5,725 |
| High-yield mandates | $5,050 |
| Inflation-protected securities | $168 |
| Stable value | $5,216 |
| Mortgages (whole loans) | $110 |
| Bank loans | $154 |
| LDI strategies | $35,599 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Hedge fund assets | $14,349 |
| Hedge fund-of-fund assets | $806 |
| Mutual fund assets | $956,519 |
| U.S. 1940 Investment Co. Act | $604,134 |
| Sponsored ETFs/ETNs | $18,654 |
| Actively managed | $6,844 |
| Investment outsourcing mandates | $15,324 |
| LDI strategies | $52,125 |
| Managed for retirement plans | $31,251 |
| Proprietary stable value | $5,216 |

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

| | |
|---|---|
| Total | $1,139 |

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

| | |
|---|---|
| Total | $29,441 |
| Internally managed | $29,441 |

**Parent company:** Franklin Resources Inc.
**Chief executive officer:** Jenny Johnson
**U.S. client contact:** Michael Foley

## 11 Geode Capital Management

100 Summer St., 12th Floor, Boston, MA 02110; phone: 800-777-6757; www.geodecapital.com

(millions)

| | |
|---|---|
| Total assets managed worldwide | $1,154,904 |
| Total worldwide institutional assets | $1,154,904 |
| Total U.S. client assets | $1,121,131 |
| Total U.S. institutional client assets | $1,121,131 |
| Total U.S. tax-exempt assets | $93,234 |
| Total U.S. institutional tax-exempt | $93,234 |
| Internally managed | $93,234 |

Continued on Page 32

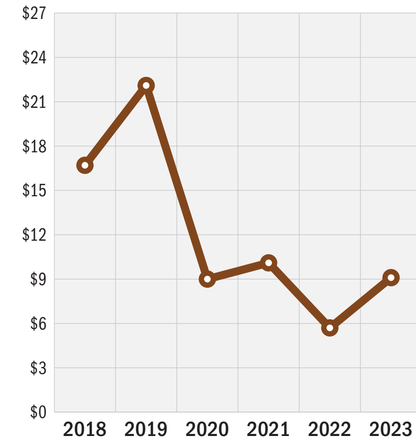
## Managers of enhanced index non-U.S. equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Legal & General Investment | $4,323 |
| 2 | PIMCO | $2,078 |
| 3 | Robeco | $1,361 |
| 4 | MFS Investment | $1,214 |
| 5 | Allspring Global Investments | $64 |
| 6 | T. Rowe Price Associates | $10 |

**Asset growth** (billions)



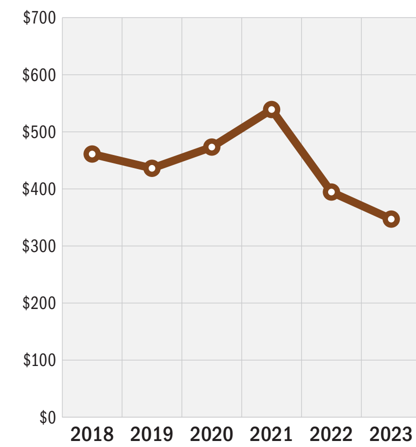

## Managers of active global equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Capital Group | $38,321 |
| 2 | Wellington Mgmt. | $26,145 |
| 3 | Dimensional Fund Advisors | $24,997 |
| 4 | Nuveen | $21,950 |
| 5 | BlackRock | $16,857 |
| 6 | American Century | $13,984 |
| 7 | Artisan Partners | $13,401 |
| 8 | Grantham, Mayo v. Otterloo | $12,848 |
| 9 | Morgan Stanley Inv. Mgmt. | $10,702 |
| 10 | BNY Mellon | $10,494 |

**Asset growth** (billions)



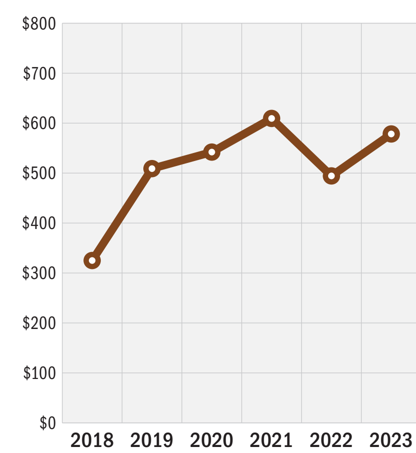

## Managers of passive global equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | State Street Global | $279,682 |
| 2 | BlackRock | $274,340 |
| 3 | BNY Mellon | $15,650 |
| 4 | Legal & General Investment | $2,373 |
| 5 | Vanguard Group | $2,002 |
| 6 | Morgan Stanley Inv. Mgmt. | $1,418 |
| 7 | RhumbLine Advisers | $1,415 |
| 8 | Metis Global Partners | $587 |
| 9 | Invesco | $417 |
| 10 | Geode Capital Mgmt. | $245 |

**Asset growth** (billions)



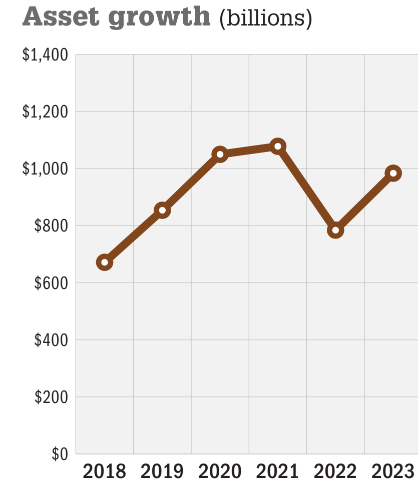

## Managers of active U.S. large-cap growth equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | T. Rowe Price Associates | $484,027 |
| 2 | Fidelity Investments | $274,846 |
| 3 | Nuveen | $29,884 |
| 4 | Prudential Financial | $29,237 |
| 5 | Loomis, Sayles | $19,516 |
| 6 | AllianceBernstein | $17,264 |
| 7 | Sustainable Growth Advisers | $12,442 |
| 8 | Franklin Templeton | $12,185 |
| 9 | Wellington Mgmt. | $11,183 |
| 10 | Polen Capital | $10,238 |

**Asset growth** (billions)



# The Largest Money Managers

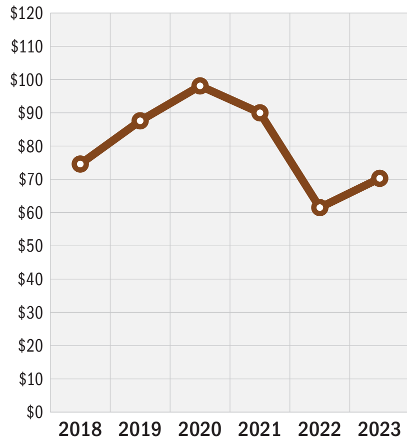
## Managers of active U.S. midcap growth equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | T. Rowe Price Associates | $22,074 |
| 2 | Artisan Partners | $8,669 |
| 3 | MFS Investment | $7,687 |
| 4 | J.P. Morgan Asset & Wealth | $6,511 |
| 5 | Federated Hermes | $3,749 |
| 6 | TimesSquare Capital | $3,297 |
| 7 | Baird Equity Asset Mgmt. | $3,085 |
| 8 | Westfield Capital | $2,384 |
| 9 | BlackRock | $1,674 |
| 10 | Invesco | $1,633 |

### Asset growth (billions)



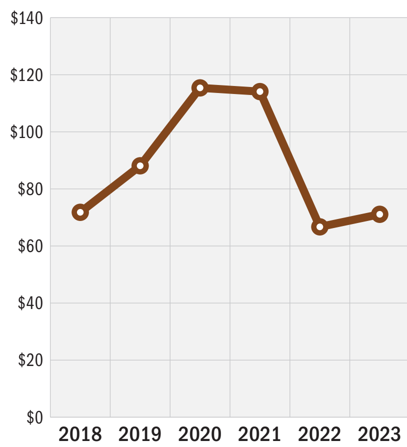

## Managers of active U.S. small-cap growth equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | T. Rowe Price Associates | $12,122 |
| 2 | Franklin Templeton | $4,286 |
| 3 | Emerald Advisers | $3,906 |
| 4 | AllianceBernstein | $3,733 |
| 5 | Invesco | $3,546 |
| 6 | Fidelity Investments | $3,089 |
| 7 | Hood River Capital | $3,014 |
| 8 | Brown Capital | $2,627 |
| 9 | Federated Hermes | $2,570 |
| 10 | Vanguard Group | $2,268 |

### Asset growth (billions)



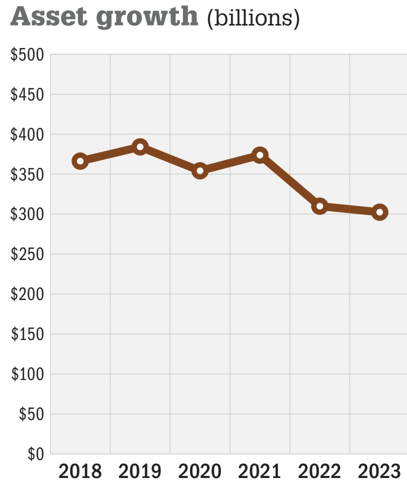

## Managers of active U.S. large-cap value equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Dodge & Cox | $79,891 |
| 2 | MFS Investment | $31,365 |
| 3 | Dimensional Fund Advisors | $26,460 |
| 4 | Fidelity Investments | $23,057 |
| 5 | T. Rowe Price Associates | $22,291 |
| 6 | Franklin Templeton | $15,057 |
| 7 | Invesco | $9,155 |
| 8 | Principal Global Investors | $8,174 |
| 9 | Vanguard Group | $7,322 |
| 10 | Federated Hermes | $6,111 |

### Asset growth (billions)



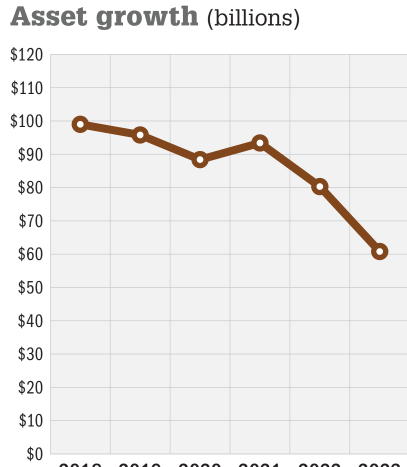

## Managers of active U.S. midcap value equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Fidelity Investments | $18,354 |
| 2 | MFS Investment | $9,312 |
| 3 | Allspring Global Investments | $6,902 |
| 4 | J.P. Morgan Asset & Wealth | $6,716 |
| 5 | T. Rowe Price Associates | $5,776 |
| 6 | American Century | $5,389 |
| 7 | Ceredex Value Advisors | $2,513 |
| 8 | Cooke & Bieler | $948 |
| 9 | Sasco Capital | $869 |
| 10 | Invesco | $699 |

### Asset growth (billions)




**Continued from Page 31**

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity .......... 99%
Other .......... 1%
*Other type: Commodities, equity option overlay*

**INVESTMENT STRATEGIES**

U.S. equity, passive .......... $69,776
Non-U.S. equity, passive .......... $22,539
Global equity, passive .......... $245
Commodities .......... $477

**PASSIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap .......... $5,191

**VALUE**

Large-cap .......... $7,694
Smidcap .......... $265

**CORE**

Large-cap .......... $25,754
Midcap .......... $707
Smidcap .......... $2,174
Small-cap .......... $353
Broad-market .......... $27,639
REITs .......... $13

**NON-U.S. STRATEGIES**

Emerging markets equity .......... $228
Emerging markets equity mandates .......... $228

**WORLDWIDE ASSETS UNDER MANAGEMENT**

ESG investing .......... $3,384
ESG mandates .......... $3,384

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

Total .......... $197

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total .......... $92,109
Internally managed .......... $92,109

**WORKFORCE**

Total number of employees .......... 167
Number of U.S.-based employees .......... 100
Number of cybersecurity professionals .......... 1
Percent employee owned .......... 8%

**Parent company:** Geode Capital Holdings LLC
**Chief executive officer:** David Lane
**Chief investment officer:** Tim Estella
**U.S. client contacts:** Bill Miller, Bill Gibbs

## 6 Goldman Sachs Group Inc.

200 West St., New York, NY 10282; phone: 212-902-1000; www.gs.com

(millions)

Total assets managed worldwide .......... $2,812,000
Total worldwide institutional assets .......... $1,620,791
Total U.S. client assets .......... $1,951,000
Total U.S. institutional client assets .......... $951,322
Total U.S. tax-exempt assets .......... $285,523
Total U.S. institutional tax-exempt .......... $273,767
Assigned to external managers .......... $74,428
Internally managed .......... $199,339

## 22 Invesco

Midtown Union, 1331 Spring St. N.W., Atlanta, GA 30309; phone: 404-479-1095; www.invesco.com

(millions)

Total assets managed worldwide .......... $1,585,344
Total worldwide institutional assets .......... $612,982
Total U.S. client assets .......... $1,092,436
Total U.S. institutional client assets .......... $400,628
Total U.S. RIA assets .......... $380,000
Total U.S. tax-exempt assets .......... $338,778
Total U.S. institutional tax-exempt .......... $218,860
Assigned to external managers .......... $30,847
Internally managed .......... $188,013

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity .......... 48%
Fixed income .......... 32%
Equity real estate .......... 14%
Private equity .......... 1%
Cash .......... 4%
Other .......... 1%
*Other type: Commodities*

**INVESTMENT STRATEGIES**

U.S. equity, active .......... $33,844
U.S. equity, passive .......... $32,568
U.S. equity, enhanced index .......... $16
Non-U.S. equity, active .......... $13,746
Non-U.S. equity, passive .......... $636
Global equity, active .......... $8,879
Global equity, passive .......... $417
U.S. bond, active .......... $55,807
Global/non-U.S. bond, active .......... $3,921
Equity real estate, U.S. .......... $21,942
Equity real estate, non-U.S. .......... $2,033
Venture capital .......... $26
Infrastructure .......... $11
Private equity, U.S. .......... $1,232
Private equity, non-U.S. .......... $31
Renewable energy .......... $243
Commodities .......... $1,650
Distressed debt .......... $876
Mezzanine debt .......... $1,663
Other private credit .......... $22
Convertible securities .......... $69
Cash .......... $8,382

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap .......... $5,618
Midcap .......... $1,633
Small-cap .......... $3,546
Broad-market .......... $1,688

**VALUE**

Large-cap .......... $9,155
Midcap .......... $699
Small-cap .......... $887
Broad-market .......... $1,688

**CORE**

Large-cap .......... $3,112
Midcap .......... $846
Small-cap .......... $444
Broad-market .......... $4,528

**PASSIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap .......... $2,414
Midcap .......... $80
Smidcap .......... $226
Small-cap .......... $5

**VALUE**

Large-cap .......... $1,084
Midcap .......... $329
Smidcap .......... $215
Small-cap .......... $119

**CORE**

Large-cap .......... $8,402
Midcap .......... $1,446
Small-cap .......... $328
Broad-market .......... $17,921
Low-volatility strategies .......... $256
REITs .......... $1,296

**NON-U.S. STRATEGIES**

Emerging markets equity .......... $8,320
Emerging markets equity mandates .......... $8,320
Emerging markets debt .......... $13
Emerging markets debt mandates .......... $13

**FIXED-INCOME STRATEGIES**

Core .......... $2,555
Core-plus .......... $953
Unconstrained .......... $42
High-yield .......... $799
High-yield mandates .......... $799
Inflation-protected securities .......... $41
Stable value .......... $40,545
Bank loans .......... $3,859
Risk-parity strategies .......... $7,661

**ESG INVESTING**

Total .......... $1,129

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Mutual fund assets .......... $586,041
U.S. 1940 Investment Co. Act .......... $431,049
Sponsored ETFs/ETNs .......... $545,472
Actively managed .......... $9,618
Institutional .......... $114,549
Proprietary stable value .......... $70,604
Digital assets/cryptocurrency .......... $159
ESG investing .......... $93,199
ESG mandates .......... $15,808

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total .......... $126,569

# The Largest Money Managers

Internally managed ............................ $96,510

**WORKFORCE**

Total number of employees ......................... 8,489
Number of U.S.-based employees ................ 3,203
Number of cybersecurity professionals ........... 121
Percent employee owned ............................... 7%

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

Total ......................................................... 40%
Senior management ................................... 39%
Investment ................................................ 20%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

Total ......................................................... 37%
Senior management ................................... 18%
Investment ................................................ 28%

**ARTIFICIAL INTELLIGENCE**

The firm invests in AI investment management technology (Y/N) .............................................. Y
AI is used in the firm's investment management process (Y/N) ................................................ N

**Parent company:** Invesco Ltd.
**Chief executive officer:** Andrew Schlossberg
**U.S. client contact:** Stephen Wagenbach
**DC client contact:** Greg Jenkins

## 29 Kohlberg Kravis Roberts & Co. LP

30 Hudson Yards, New York, NY 10001; phone: 212-750-8300; www.kkr.com

(millions)

Total assets managed worldwide ........... $552,801
Total worldwide institutional assets ........ $492,371
Total U.S. client assets ........................ $378,439
Total U.S. institutional client assets ....... $339,532
Total U.S. tax-exempt assets .................. $75,541
Total U.S. institutional tax-exempt ........... $69,314
Internally managed ............................ $69,314

**WORKFORCE**

Total number of employees ......................... 2,621
Number of U.S.-based employees ................ 1,566

**Primary custodian:** J.P. Morgan
**Chief executive officers:** Joe Bae, Scott Nuttall
**U.S. client contact:** Amy Lesch

## 8 Legal & General Investment Management (Holdings) Ltd.

1 Coleman St., London EC2R 5AA England; phone: 44-20-3124-3000; www.lgim.com

(millions)

Total assets managed worldwide .......... $1,475,711
Total worldwide institutional assets ...... $1,389,206
Total U.S. client assets ........................ $135,549
Total U.S. institutional client assets ....... $135,549
Total U.S. RIA assets ............................... $7,706
Total U.S. tax-exempt assets ................ $127,257
Total U.S. institutional tax-exempt .......... $127,257
Internally managed .......................... $127,257

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity ..................................................... 30%
Fixed income ........................................... 70%
*Other type: Commodities, multiasset*

**INVESTMENT STRATEGIES**

U.S. equity, passive ............................ $21,992
U.S. equity, enhanced index .................. $3,569
Non-U.S. equity, passive ........................ $5,910
Non-U.S. equity, enhanced index ............. $4,323
Global equity, passive ........................... $2,373
U.S. bond, active ................................ $86,399
U.S. bond, passive ............................... $2,297
Global/non-U.S. bond, active ...................... $87

**PASSIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap ............................................ $366
Midcap .................................................. $64
Small-cap .............................................. $31

**VALUE**

Large-cap ............................................ $288

**CORE**

Large-cap ......................................... $13,320
Midcap ............................................. $1,066
Small-cap .......................................... $2,013
Broad-market ..................................... $4,843

**NON-U.S. STRATEGIES**

Emerging markets equity ....................... $1,082
Emerging markets equity mandates ..... $1,082

**FIXED-INCOME STRATEGIES**

Core ................................................. $86,734
Core-plus ............................................ $1,914
High-yield ................................................ $87
High-yield mandates .............................. $87
Inflation-protected securities .................... $228
LDI strategies ................................... $50,218
ESG investing ...................................... $9,670

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Mutual fund assets ............................. $583,969
U.S. 1940 Investment Co. Act .................. $115
Sponsored ETFs/ETNs ........................... $14,510
Investment outsourcing mandates ............. $2,397
LDI strategies ..................................... $475,248
Managed for retirement plans ............ $475,248
ESG investing .................................... $481,321

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

Total ................................................. $52,043

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total .................................................. $9,938
Internally managed ............................... $9,938

**WORKFORCE**

Total number of employees ......................... 2,514
Number of U.S.-based employees ................... 270

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

Total ......................................................... 33%
Senior management ................................... 22%
Investment ................................................ 17%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

Total ......................................................... 32%
Senior management ................................... 13%
Investment ................................................ 28%

**ARTIFICIAL INTELLIGENCE**

The firm invests in AI investment management technology (Y/N) ............................................. N
AI is used in the firm's investment management process (Y/N) ................................................ N

**Parent company:** Legal & General Group
**Chief executive officer:** Michelle Scrimgeour
**Chief investment officer:** Sonja Laud
**U.S. client contact:** Donald Andrews
**DC client contact:** Rob Capone

*The assets of the following subsidiaries or affiliates are included in the figures above:*

- **Legal & General Investment Management America Inc.:** total assets: $214.8 billion; U.S. institutional, tax-exempt assets: $127.3 billion; CIO: Jason Shoup; client contact: Donald Andrews, phone: 312-585-0380, email: donald.andrews@lgima.com

## 49 Loomis, Sayles & Co. LP

1 Financial Center, Boston, MA 02111; phone: 617-482-2450; www.loomissayles.com

(millions)

Total assets managed worldwide ........... $335,231
Total worldwide institutional assets ........ $238,907
Total U.S. client assets ........................ $265,981
Total U.S. institutional client assets ....... $179,017
Total U.S. tax-exempt assets ................ $260,814
Total U.S. institutional tax-exempt .......... $175,014
Internally managed .......................... $175,014

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity ..................................................... 16%
Fixed income ........................................... 84%

**INVESTMENT STRATEGIES**

U.S. equity, active .............................. $26,541
Global equity, active ............................. $1,015
U.S. bond, active ............................... $142,613
Global/non-U.S. bond, active ................. $4,844

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap ......................................... $19,516
Smidcap ............................................ $2,040
Small-cap .......................................... $1,607
Broad-market ..................................... $1,902

Continued on Page 34

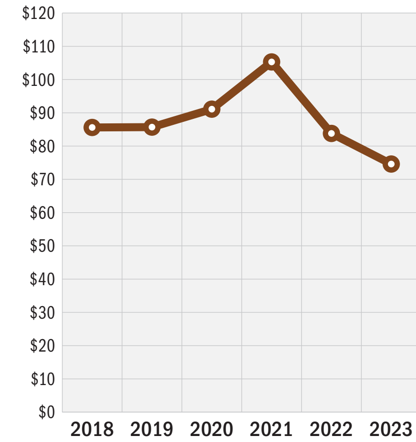
## Managers of active U.S. small-cap value equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Dimensional Fund Advisors | $15,405 |
| 2 | Fisher Investments | $4,865 |
| 3 | Allspring Global Investments | $4,125 |
| 4 | T. Rowe Price Associates | $3,134 |
| 5 | Fidelity Investments | $3,089 |
| 6 | Systematic Financial | $2,978 |
| 7 | American Century | $2,958 |
| 8 | Channing Capital | $2,561 |
| 9 | Kennedy Capital | $2,347 |
| 10 | DePrince, Race & Zollo | $1,988 |

**Asset growth** (billions)



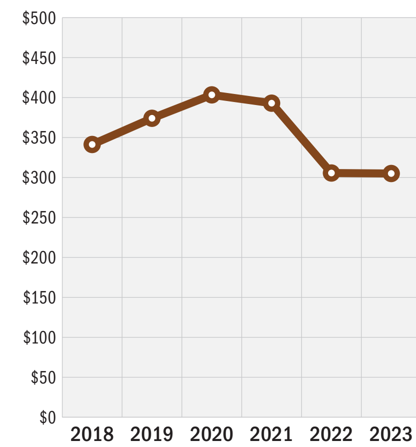

## Managers of emerging markets equity

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Dimensional Fund Advisors | $51,107 |
| 2 | Fidelity Investments | $33,047 |
| 3 | BlackRock | $23,127 |
| 4 | State Street Global | $18,944 |
| 5 | J.P. Morgan Asset & Wealth | $15,551 |
| 6 | Northern Trust Asset Mgmt. | $12,445 |
| 7 | Vanguard Group | $11,304 |
| 8 | Baillie Gifford Overseas | $10,774 |
| 9 | Acadian Asset Mgmt. | $9,575 |
| 10 | William Blair | $8,999 |

**Asset growth** (billions)



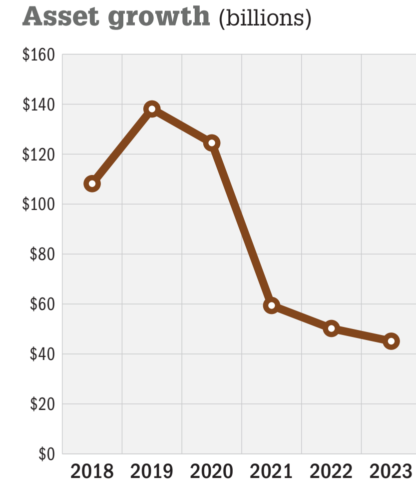

## Managers of low-volatility equity strategies

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Morgan Stanley Inv. Mgmt. | $11,792 |
| 2 | Franklin Templeton | $5,586 |
| 3 | J.P. Morgan Asset & Wealth | $3,644 |
| 4 | Martingale Asset Mgmt. | $3,596 |
| 5 | Acadian Asset Mgmt. | $3,180 |
| 6 | State Street Global | $2,658 |
| 7 | River Road Asset Mgmt. | $2,118 |
| 8 | Neuberger Berman | $1,973 |
| 9 | Allspring Global Investments | $1,454 |
| 10 | MFG Asset Mgmt. | $1,399 |

**Asset growth** (billions)



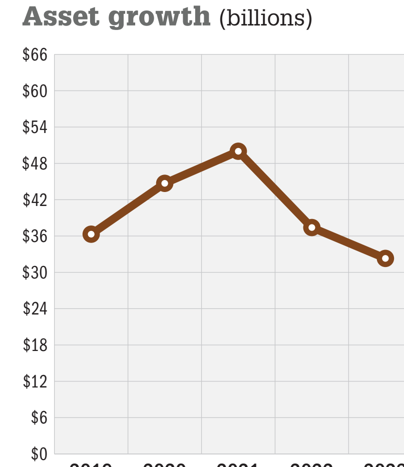

## Managers of risk-parity strategies

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | AQR Capital Mgmt. | $8,273 |
| 2 | PanAgora Asset Mgmt. | $7,884 |
| 3 | Invesco | $7,661 |
| 4 | StepStone Group | $7,482 |
| 5 | J.P. Morgan Asset & Wealth | $783 |
| 6 | Neuberger Berman | $140 |
| 7 | AllianceBernstein | $23 |
| 8 | Morgan Stanley Inv. Mgmt. | $7 |

**Asset growth** (billions)



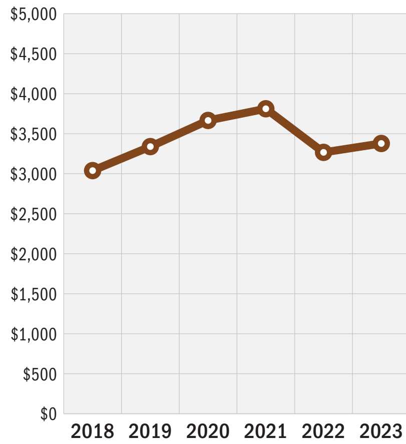
## Managers of **active U.S. bonds**

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | PIMCO | $270,505 |
| 2 | NISA Investment | $254,819 |
| 3 | Nuveen | $228,385 |
| 4 | Prudential Financial | $222,993 |
| 5 | Loomis, Sayles | $142,613 |
| 6 | TCW Group | $115,004 |
| 7 | Franklin Templeton | $111,574 |
| 8 | Fidelity Investments | $111,040 |
| 9 | Allspring Global Investments | $109,479 |
| 10 | J.P. Morgan Asset & Wealth | $108,200 |

**Asset growth** (billions)



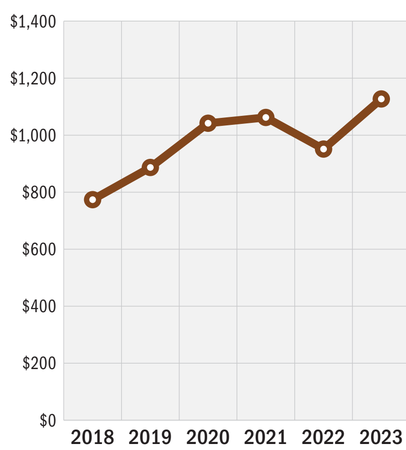

## Managers of **passive U.S. bonds**

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $413,124 |
| 2 | State Street Global | $244,602 |
| 3 | BlackRock | $186,088 |
| 4 | Fidelity Investments | $108,373 |
| 5 | Northern Trust Asset Mgmt. | $62,903 |
| 6 | BNY Mellon | $29,366 |
| 7 | Morgan Stanley Inv. Mgmt. | $28,947 |
| 8 | Principal Global Investors | $16,238 |
| 9 | Payden & Rygel | $11,360 |
| 10 | RhumbLine Advisers | $5,635 |

**Asset growth** (billions)



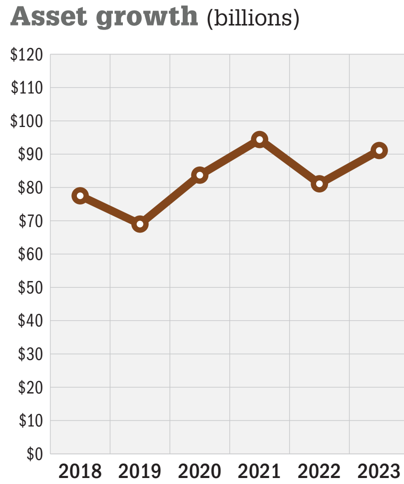

## Managers of **enhanced index U.S. bonds**

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Baird Advisors | $82,909 |
| 2 | BlackRock | $6,743 |
| 3 | Neuberger Berman | $1,409 |
| 4 | T. Rowe Price Associates | $38 |

**Asset growth** (billions)



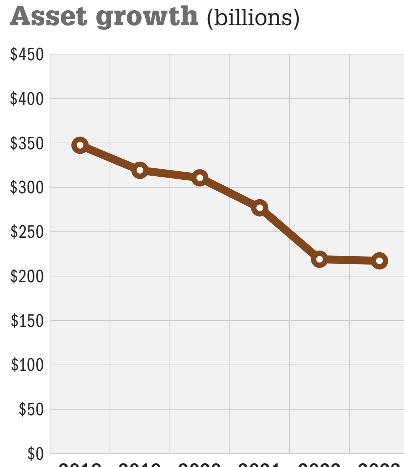

## Managers of **active global/non-U.S. bonds**

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Wellington Mgmt. | $24,043 |
| 2 | PIMCO | $20,633 |
| 3 | Dimensional Fund Advisors | $18,308 |
| 4 | Franklin Templeton | $17,975 |
| 5 | Prudential Financial | $14,680 |
| 6 | Nuveen | $14,238 |
| 7 | J.P. Morgan Asset & Wealth | $13,359 |
| 8 | Capital Group | $12,529 |
| 9 | Principal Global Investors | $8,030 |
| 10 | BlackRock | $7,903 |

**Asset growth** (billions)




**Continued from Page 33**

VALUE
Small-cap ........ $926

CORE
Smidcap ........ $550

NON-U.S. STRATEGIES
Emerging markets equity ........ $322
Emerging markets debt ........ $749
Emerging markets debt mandates ........ $749

FIXED-INCOME STRATEGIES
Core ........ $24,375
Core-plus ........ $49,750
High-yield ........ $6,684
High-yield mandates ........ $6,684
Inflation-protected securities ........ $1
Stable value ........ $17,768
Bank loans ........ $787
LDI strategies ........ $11,191
ESG investing ........ $30,588

WORLDWIDE ASSETS UNDER MANAGEMENT
Hedge fund assets ........ $612
Mutual fund assets ........ $127,496
U.S. 1940 Investment Co. Act ........ $91,222
Sponsored ETFs/ETNs ........ $20
Actively managed ........ $20
Institutional ........ $20
LDI strategies ........ $11,382
Managed for retirement plans ........ $11,334
Proprietary stable value ........ $17,768
ESG investing ........ $78,129

DEFINED CONTRIBUTION ASSETS
U.S. INSTITUTIONAL TAX-EXEMPT
Total ........ $32,879
Internally managed ........ $32,879

WORKFORCE
Total number of employees ........ 889
Number of U.S.-based employees ........ 816
Number of cybersecurity professionals ........ 97

PERCENT U.S.-BASED FEMALE EMPLOYEES
Total ........ 41%
Senior management ........ 27%
Investment ........ 25%

PERCENT U.S.-BASED MINORITY EMPLOYEES
Total ........ 21%
Investment ........ 25%

ARTIFICIAL INTELLIGENCE
The firm invests in AI investment management technology (Y/N) ........ Y
AI is used in the firm's investment management process (Y/N) ........ N

**Primary custodian:** State Street
**Parent company:** Natixis Investment Managers
**Chief executive officer:** Kevin Charleston
**Chief investment officer:** David L. Waldman
**U.S. client contact:** Maurice Leger
**DC client contacts:** Brian Hobin, Anne Schneidman Coleman

### 45 Manulife Investment Management

200 Bloor St. E., Toronto, ON M4W 1E5 Canada; phone: 617-375-1500; www.manulifeim.com

(millions)
Total assets managed worldwide ........ $662,013
Total worldwide institutional assets ........ $250,832
Total U.S. client assets ........ $327,526
Total U.S. institutional client assets ........ $182,683
Total U.S. tax-exempt assets ........ $143,550
Total U.S. institutional tax-exempt ........ $136,292
Internally managed ........ $136,292

WORLDWIDE ASSETS UNDER MANAGEMENT
Mutual fund assets ........ $268,115
ESG investing ........ $490,798

**Primary custodian:** State Street
**Parent company:** Manulife Financial Corp.
**Chief executive officer:** Paul Lorentz

### 40 MassMutual

1295 State St., Springfield, MA 01111; phone: 413-744-1000; www.massmutual.com

(millions)
Total assets managed worldwide ........ $500,477
Total worldwide institutional assets ........ $301,027
Total U.S. client assets ........ $500,477
Total U.S. institutional client assets ........ $301,027
Total U.S. tax-exempt assets ........ $333,853
Total U.S. institutional tax-exempt ........ $301,027
Assigned to external managers ........ $25,200
Internally managed ........ $275,827

DEFINED CONTRIBUTION ASSETS
U.S. INSTITUTIONAL TAX-EXEMPT
Total ........ $78,600
Internally managed ........ $53,400

**Chief executive officer:** Roger Crandall

### 33 Mercer

1166 Avenue of the Americas, New York, NY 10036; phone: 212-345-7000; www.mercer.com

(millions)
Total assets managed worldwide ........ $419,605
Total worldwide institutional assets ........ $393,473
Total U.S. client assets ........ $138,423
Total U.S. institutional client assets ........ $138,423
Total U.S. tax-exempt assets ........ $138,423
Total U.S. institutional tax-exempt ........ $138,423
Assigned to external managers ........ $138,423

WORLDWIDE ASSETS UNDER MANAGEMENT
Hedge fund-of-fund assets ........ $7,199
Investment outsourcing mandates ........ $419,605
LDI strategies ........ $171,824
Managed for retirement plans ........ $171,824

DEFINED CONTRIBUTION ASSETS
U.S. INSTITUTIONAL TAX-EXEMPT
Total ........ $61,738

WORKFORCE
Total number of employees ........ 25,000
Number of U.S.-based employees ........ 5,850

PERCENT U.S.-BASED FEMALE EMPLOYEES
Total ........ 59%
Senior management ........ 37%
Investment ........ 35%

PERCENT U.S.-BASED MINORITY EMPLOYEES
Total ........ 23%
Senior management ........ 11%
Investment ........ 21%

**Primary custodian:** State Street
**Parent company:** Marsh McLennan
**Chief executive officer:** Michael Dempsey
**Chief investment officer:** Hooman Kaveh
**U.S. client contact:** Marc Cordover
**Other client contact:** Jennifer Kruse
**DC client contact:** Holly Verdeyen

### 23 MetLife Investment Management

1 MetLife Way, Whippany, NJ 07981; phone: 973-355-4000; www.metlife.com/investments

(millions)
Total assets managed worldwide ........ $600,800
Total worldwide institutional assets ........ $600,800
Total U.S. client assets ........ $582,952
Total U.S. institutional client assets ........ $582,952
Total U.S. tax-exempt assets ........ $57,313
Total U.S. institutional tax-exempt ........ $57,313
Internally managed ........ $57,313

INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS
ASSET MIX
Equity ........ 6%
Fixed income ........ 90%
Equity real estate ........ 4%

INVESTMENT STRATEGIES
U.S. equity, passive ........ $2,394
U.S. bond, active ........ $49,105
U.S. bond, passive ........ $810
Global/non-U.S. bond, active ........ $1,470
Equity real estate, U.S. ........ $2,480
Privately placed debt ........ $1,055

NON-U.S. STRATEGIES
Emerging markets debt ........ $1,470
Emerging markets debt mandates ........ $1,470

FIXED-INCOME STRATEGIES
Core ........ $2,380
Core-plus ........ $1,154
High-yield ........ $18
High-yield mandates ........ $18
Stable value ........ $197
LDI strategies ........ $5,792

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Mutual fund assets ....... $243
U.S. 1940 Investment Co. Act ....... $243
LDI strategies....... $5,792
Managed for retirement plans....... $2,423
Proprietary stable value ....... $6,327
ESG investing ....... $8,930

**DEFINED CONTRIBUTION ASSETS**
**U.S. INSTITUTIONAL TAX-EXEMPT**
Total....... $2,456
Internally managed ....... $2,456

**WORKFORCE**
Total number of employees....... 1,720
Number of U.S.-based employees....... 1,236
Number of cybersecurity professionals ....... 165

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total ....... 35%
Senior management ....... 24%
Investment....... 30%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**
Total ....... 37%
Senior management ....... 25%
Investment....... 31%

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N)....... N
AI is used in the firm's investment management process (Y/N)....... N

**Parent company:** MetLife Inc.
**Chief investment officer:** John D. McCallion
**U.S. client contact:** Brendan Kilfeather
**Other client contacts:** Thomas Metzler (Global), Nigel Murdoch (Europe, Middle East & Africa), Maya Kiyokawa (Japan), Angus Campbell (Global)
**DC client contact:** Brendan Kilfeather

## 5 J.P. Morgan Asset & Wealth Management

383 Madison Ave., New York, NY 10179; phone: 212-648-0523; www.jpmorgan.com/institutional

(millions)
Total assets managed worldwide....... $3,421,545
Total worldwide institutional assets....... $1,711,469
Total U.S. client assets....... $2,470,696
Total U.S. institutional client assets ....... $1,226,805
Total U.S. RIA assets ....... $125,787
Total U.S. tax-exempt assets ....... $533,645
Total U.S. institutional tax-exempt ....... $524,931
Assigned to external managers....... $11,712
Internally managed ....... $513,219

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**
**ASSET MIX**
Equity....... 35%
Fixed income....... 38%
Equity real estate....... 15%
Hedge funds ....... 1%
Cash ....... 10%
Other ....... 1%
*Other type: Currency, private credit, macro*

**INVESTMENT STRATEGIES**
U.S. equity, active ....... $74,415
U.S. equity, passive....... $273
U.S. equity, enhanced index ....... $3,371
Non-U.S. equity, active....... $25,604
Global equity, active ....... $6,537
U.S. bond, active ....... $108,200
Global/non-U.S. bond, active....... $13,359
Equity real estate, U.S....... $38,634
Equity real estate, non-U.S....... $992
Hedge funds ....... $2,285
Infrastructure ....... $8,778
Private equity, U.S....... $304
Cash ....... $30,369

**ACTIVE U.S. EQUITY STRATEGIES**
**GROWTH**
Large-cap ....... $9,599
Midcap....... $6,511
Small-cap ....... $281

**VALUE**
Large-cap ....... $2,073
Midcap....... $6,716
Smidcap....... $199
Small-cap ....... $1,376
Broad-market....... $3,220

**CORE**
Large-cap ....... $22,584
Broad-market....... $673

**PASSIVE U.S. EQUITY STRATEGIES**
**CORE**
Large-cap ....... $273
Low-volatility strategies ....... $3,644
REITs ....... $2,199

**NON-U.S. STRATEGIES**
Emerging markets equity ....... $15,551
Emerging markets equity mandates....... $15,551
Emerging markets debt....... $415
Emerging markets debt mandates....... $415

**FIXED-INCOME STRATEGIES**
Core....... $46,991
Core-plus ....... $2,522
Unconstrained....... $153
High-yield....... $10,849
High-yield mandates ....... $10,849
Inflation-protected securities....... $225
Stable value....... $7,434
Risk-parity strategies ....... $783
LDI strategies....... $29,731

**ESG INVESTING**
Total....... $491,152
ESG mandates ....... $192
Equity, active....... $192

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund assets ....... $3,709
Hedge fund-of-fund assets....... $17,215
Mutual fund assets ....... $1,609,734
U.S. 1940 Investment Co. Act ....... $1,085,652
Sponsored ETFs/ETNs....... $150,132
Actively managed....... $105,856
Investment outsourcing mandates....... $63,094
LDI strategies....... $96,789
Managed for retirement plans....... $30,435
Proprietary stable value ....... $11,264
ESG investing ....... $2,820,404
ESG mandates ....... $16,290

**OVERLAY STRATEGIES:**
**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**
Total....... $51,009

**DEFINED CONTRIBUTION ASSETS**
**U.S. INSTITUTIONAL TAX-EXEMPT**
Total....... $310,906
Internally managed ....... $306,997

**WORKFORCE**
Total number of employees....... 8,396
Number of U.S.-based employees....... 3,379
Number of cybersecurity professionals ....... 1,454
Percent employee owned....... 3%

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total....... 41%
Senior management ....... 23%
Investment....... 28%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**
Total....... 38%
Senior management ....... 19%
Investment....... 25%

**Parent company:** J.P. Morgan Chase & Co.
**Chief executive officer:** George Gatch
**U.S. client contact:** Andrea Lisher
**Other client contact:** Keith Cahill
**DC client contact:** Jennifer Archer

## 24 Morgan Stanley Investment Management

1585 Broadway, New York, NY 10036; phone: 212-761-4000; www.morganstanley.com/im

(millions)
Total assets managed worldwide....... $1,373,456
Total worldwide institutional assets....... $581,509
Total U.S. client assets....... $1,052,988
Total U.S. institutional client assets ....... $269,661
Total U.S. RIA assets ....... $262
Total U.S. tax-exempt assets ....... $337,949
Total U.S. institutional tax-exempt ....... $232,437
Assigned to external managers....... $5,195
Internally managed ....... $227,242

Continued on Page 36

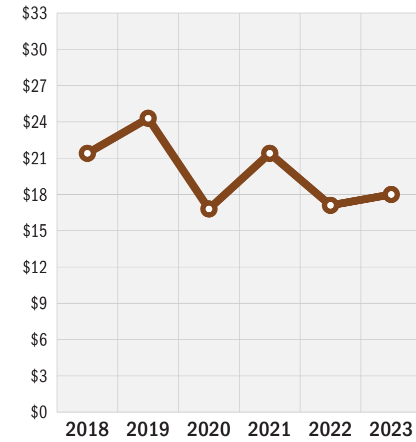
## Managers of passive global/non-U.S. bonds

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | BlackRock | $5,475 |
| 2 | Vanguard Group | $4,306 |
| 3 | State Street Global | $3,456 |
| 4 | Fidelity Investments | $2,871 |
| 5 | BNY Mellon | $1,766 |
| 6 | Northern Trust Asset Mgmt. | $91 |
| 7 | AllianceBernstein | $3 |

**Asset growth** (billions)



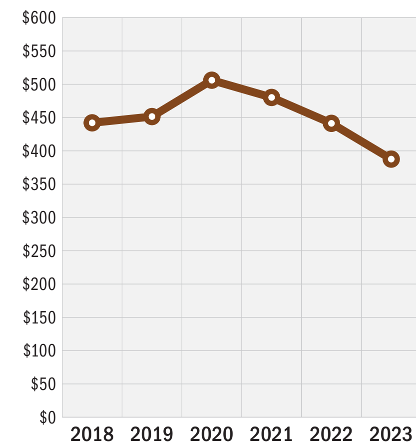

## Managers of stable value assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Allspring Global Investments | $67,150 |
| 2 | Invesco | $40,545 |
| 3 | T. Rowe Price Associates | $33,963 |
| 4 | Fidelity Investments | $31,195 |
| 5 | Prudential Financial | $25,651 |
| 6 | Vanguard Group | $23,505 |
| 7 | PIMCO | $23,037 |
| 8 | Principal Global Investors | $20,952 |
| 9 | BNY Mellon | $20,474 |
| 10 | Loomis, Sayles | $17,768 |

**Asset growth** (billions)



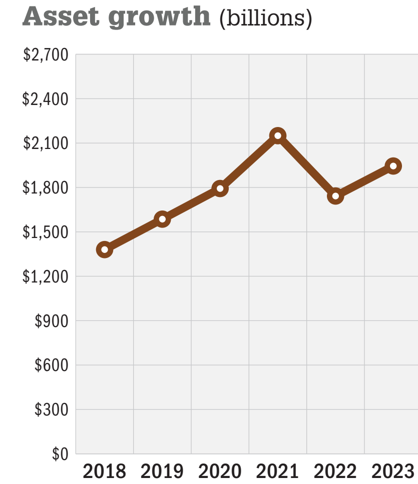

## Managers of core bond strategies

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Vanguard Group | $459,019 |
| 2 | NISA Investment | $260,156 |
| 3 | State Street Global | $185,715 |
| 4 | Prudential Financial | $159,805 |
| 5 | Nuveen | $135,600 |
| 6 | BlackRock | $114,049 |
| 7 | Legal & General Investment | $86,734 |
| 8 | Baird Advisors | $55,554 |
| 9 | Dodge & Cox | $51,223 |
| 10 | J.P. Morgan Asset & Wealth | $46,991 |

**Asset growth** (billions)



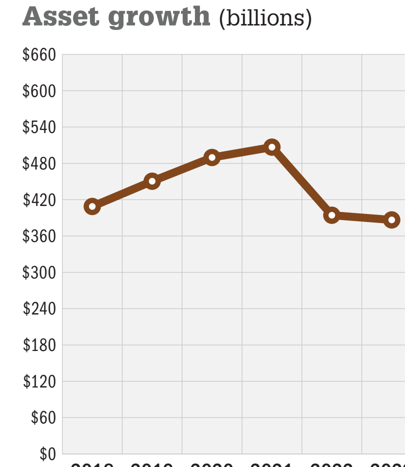

## Managers of core-plus bond strategies

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | TCW Group | $70,807 |
| 2 | PIMCO | $57,457 |
| 3 | Loomis, Sayles | $49,750 |
| 4 | Franklin Templeton | $45,465 |
| 5 | Prudential Financial | $31,210 |
| 6 | Baird Advisors | $27,355 |
| 7 | BlackRock | $13,066 |
| 8 | Voya Investment Mgmt. | $9,420 |
| 9 | Wellington Mgmt. | $8,938 |
| 10 | Federated Hermes | $8,792 |

**Asset growth** (billions)



# The Largest Money Managers

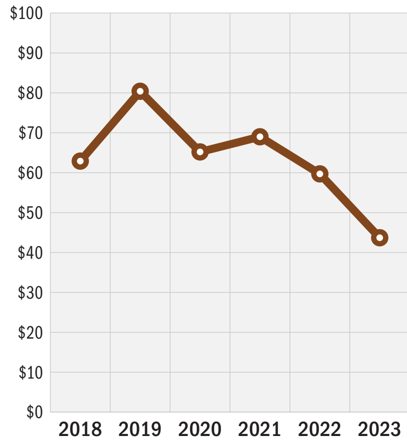
## Managers of unconstrained bond strategies

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Franklin Templeton | $8,226 |
| 2 | Neuberger Berman | $6,980 |
| 3 | SLC Management | $5,353 |
| 4 | TCW Group | $4,883 |
| 5 | Madison Investments | $3,885 |
| 6 | PIMCO | $3,227 |
| 7 | Payden & Rygel | $1,956 |
| 8 | Prudential Financial | $1,639 |
| 9 | Principal Global Investors | $1,323 |
| 10 | American Century | $1,282 |

### Asset growth (billions)



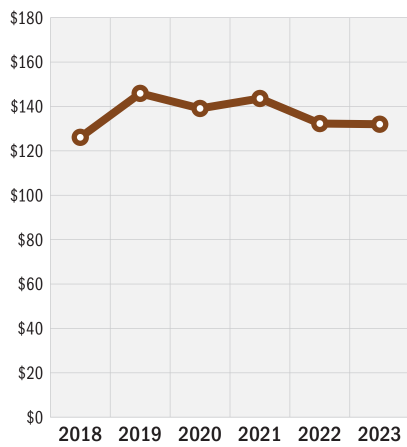

## Managers of inflation-protected securities

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | BlackRock | $28,711 |
| 2 | State Street Global | $22,751 |
| 3 | Fidelity Investments | $16,011 |
| 4 | Vanguard Group | $12,529 |
| 5 | Northern Trust Asset Mgmt. | $10,570 |
| 6 | PIMCO | $9,349 |
| 7 | Nuveen | $6,986 |
| 8 | Dimensional Fund Advisors | $5,695 |
| 9 | NISA Investment | $4,717 |
| 10 | American Century | $2,354 |

### Asset growth (billions)



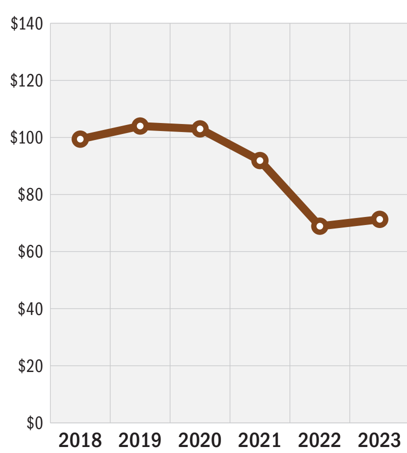

## Managers of emerging markets debt

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Nuveen | $10,057 |
| 2 | Wellington Mgmt. | $8,642 |
| 3 | PIMCO | $8,582 |
| 4 | Prudential Financial | $7,245 |
| 5 | Payden & Rygel | $6,028 |
| 6 | TCW Group | $5,336 |
| 7 | Principal Global Investors | $3,005 |
| 8 | Ashmore Group | $2,400 |
| 9 | BlackRock | $1,821 |
| 10 | MFS Investment | $1,815 |

### Asset growth (billions)



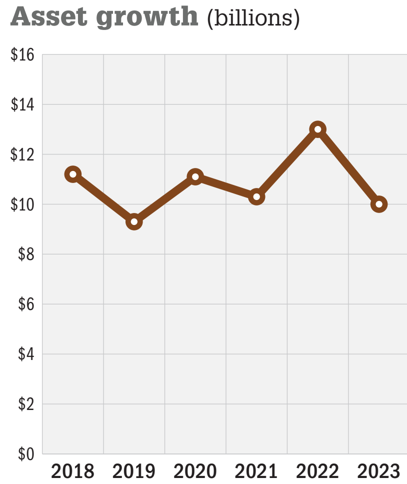

## Managers of convertible securities

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Voya Investment Mgmt. | $4,206 |
| 2 | Advent Capital | $4,034 |
| 3 | Oaktree Capital | $658 |
| 4 | Income Research & Mgmt. | $365 |
| 5 | Palisade Capital | $263 |
| 6 | New York Life Investments | $177 |
| 7 | AAM | $132 |
| 8 | Zazove Associates | $96 |
| 9 | Invesco | $69 |
| 10 | GAMCO Investors | $10 |

### Asset growth (billions)




**Continued from Page 35**

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity ..... 52%
Fixed income ..... 28%
Equity real estate ..... 11%
Private equity ..... 2%
Cash ..... 5%
Other ..... 3%
*Other type: Private credit/debt*

**INVESTMENT STRATEGIES**

U.S. equity, active ..... $22,857
U.S. equity, passive ..... $73,145
Non-U.S. equity, active ..... $8,730
Non-U.S. equity, passive ..... $709
Global equity, active ..... $10,702
Global equity, passive ..... $1,418
U.S. bond, active ..... $31,991
U.S. bond, passive ..... $28,947
Global/non-U.S. bond, active ..... $2,362
Equity real estate, U.S. ..... $25,339
Equity real estate, non-U.S. ..... $268
Real estate debt ..... $2,800
Hedge funds ..... $14
Infrastructure ..... $1,653
Private equity, U.S. ..... $3,118
Private equity, non-U.S. ..... $707
Commodities ..... $1,389
Privately placed debt ..... $772
Cash ..... $10,321
Low-volatility strategies ..... $11,792

**NON-U.S. STRATEGIES**

Emerging markets equity ..... $2,406
Emerging markets equity mandates ..... $2,234
India equity ..... $265
China equity ..... $323
Emerging markets debt ..... $1,133
Emerging markets debt mandates ..... $1,133
High-yield ..... $4,463
High-yield mandates ..... $4,463
Stable value ..... $840
Mortgages (whole loans) ..... $718
Bank loans ..... $8,115
Risk-parity strategies ..... $7
LDI strategies ..... $10,343

**ESG INVESTING**

Total ..... $32,683
ESG mandates ..... $674

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Hedge fund assets ..... $4,289
Hedge fund-of-fund assets ..... $9,012
Mutual fund assets ..... $610,268
U.S. 1940 Investment Co. Act ..... $429,676
Sponsored ETFs/ETNs ..... $578
Actively managed ..... $578
Investment outsourcing mandates ..... $28,334
LDI strategies ..... $10,576
Managed for retirement plans ..... $10,576
ESG investing ..... $238,024
ESG mandates ..... $53,662

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

Total ..... $94,4021

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total ..... $9,543
Internally managed ..... $9,543

**WORKFORCE**

Total number of employees ..... 4,587
Number of U.S.-based employees ..... 3,144

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

Total ..... 36%
Senior management ..... 28%
Investment ..... 25%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

Total ..... 29%
Senior management ..... 23%
Investment ..... 28%

**Parent company:** Morgan Stanley
**U.S. client contact:** Michi McDonough
**DC client contact:** Carlos Del Valle-Ortiz

*The assets of the following subsidiaries or affiliates are included in the figures above:*

- **Atlanta Capital:** total assets: $30.5 billion; U.S. institutional, tax-exempt assets: $7.3 billion; client contact: Kelly Williams, phone: 404-682-2528
- **Calvert Research and Management:** total assets: $37.5 billion; U.S. institutional, tax-exempt assets: $245 million; client contact: Michi McDonough, phone: 617-672-6178, email: michi.mcdonough@morganstanley.com
- **Parametric Portfolio Associates:** total assets: $474.6 billion; U.S. institutional, tax-exempt assets: $202.8 billion; client contact: Chris Uhas, phone: 952-767-7733, email: chris.uhas@parametricportfolio.com

## 39 Neuberger Berman

1290 Avenue of the Americas, New York, NY 10104; phone: 212-476-9000; www.nb.com

(millions)

Total assets managed worldwide ..... $463,418
Total worldwide institutional assets ..... $320,892
Total U.S. client assets ..... $268,466
Total U.S. institutional client assets ..... $151,789
Total U.S. tax-exempt assets ..... $125,607
Total U.S. institutional tax-exempt ..... $104,926
Assigned to external managers ..... $18,400
Internally managed ..... $86,526

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity ..... 28%
Fixed income ..... 46%
Equity real estate ..... 6%
Private equity ..... 17%
Hedge funds ..... 1%
Other ..... 2%
*Other type: Alternatives, quantitative, multiasset*

**INVESTMENT STRATEGIES**

U.S. equity, active ..... $20,332
Non-U.S. equity, active ..... $2,984
Global equity, active ..... $457
U.S. bond, active ..... $34,544
U.S. bond, passive ..... $1,900
U.S. bond, enhanced index ..... $1,409
Global/non-U.S. bond, active ..... $1,964
Equity real estate, U.S. ..... $4,881
Hedge funds ..... $259
Private equity, U.S. ..... $1,891
Direct lending ..... $2,298
Privately placed debt ..... $692
Distressed debt ..... $118
Other private credit ..... $703

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap ..... $399
Midcap ..... $727
Small-cap ..... $408
Broad-market ..... $26

**VALUE**

Large-cap ..... $2,318
Midcap ..... $4
Smidcap ..... $22
Small-cap ..... $1,130
Broad-market ..... $80

**CORE**

Large-cap ..... $1,870
Small-cap ..... $7,332
Broad-market ..... $3,807

Low-volatility strategies ..... $1,973
REITs ..... $325

**NON-U.S. STRATEGIES**

Emerging markets equity ..... $615
Emerging markets equity mandates ..... $615
Emerging markets debt ..... $1,198
Emerging markets debt mandates ..... $1,198

**FIXED-INCOME STRATEGIES**

Core ..... $4,863
Core-plus ..... $1,640
Unconstrained ..... $6,980
High-yield ..... $4,881
High-yield mandates ..... $4,881
Inflation-protected securities ..... $621
Bank loans ..... $887
Risk-parity strategies ..... $140
LDI strategies ..... $2,756

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Hedge fund assets ..... $8,681
Hedge fund-of-fund assets ..... $8,014

# The Largest Money Managers

Mutual fund assets $80,612
U.S. 1940 Investment Co. Act $52,948
Sponsored ETFs/ETNs $292
Actively managed $292
Institutional $47
Investment outsourcing mandates $2,051
LDI strategies $3,040
Managed for retirement plans $1,069
Digital assets/cryptocurrency $44

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total $15,576
Internally managed $15,560

**WORKFORCE**

Total number of employees 2,826
Number of U.S.-based employees 2,015
Number of cybersecurity professionals 10
Percent employee owned 100%

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

Total 38%
Senior management 30%
Investment 24%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

Total 32%
Senior management 24%
Investment 24%

**ARTIFICIAL INTELLIGENCE**

The firm invests in AI investment management technology (Y/N) Y
AI is used in the firm's investment management process (Y/N) Y

**Primary custodian:** State Street
**Chief executive officer:** George Walker
**Chief investment officers:** Joseph Amato, Brad Tank, Anthony Tutrone, Erik Knutzen
**U.S. client contact:** Matt Malloy
**Other client contact:** Lesley Nurse
**DC client contact:** Scott Kilgallen

## 26 New York Life Investments

51 Madison Ave., New York, NY 10010; phone: 212-576-7000; www.nylim.com

(millions)

Total assets managed worldwide $686,900
Total worldwide institutional assets $508,014
Total U.S. client assets $498,677
Total U.S. institutional client assets $397,725
Total U.S. RIA assets $62,861
Total U.S. tax-exempt assets $63,841
Total U.S. institutional tax-exempt $58,328
Assigned to external managers $346
Internally managed $57,982

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Fixed income 78%
Equity real estate 15%
Private equity 6%
Other 1%
*Other type: Other*

**INVESTMENT STRATEGIES**

U.S. bond, active $41,221
Global/non-U.S. bond, active $17
Equity real estate, U.S. $1,753
Equity real estate, non-U.S. $6,431
Real estate debt $632
Buyout funds $2,057
Fossil fuel energy $188
Privately placed debt $1,030
Mezzanine debt $188
Other private credit $2,800
Convertible securities $177
Cash $96

**NON-U.S. STRATEGIES**

Emerging markets debt $17
Emerging markets debt mandates $17

**FIXED-INCOME STRATEGIES**

Core $2,743
Core-plus $6,943
Unconstrained $408
High-yield $13,525
Stable value $7,236

**ESG INVESTING**

Total $47,586

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Hedge fund assets $3,595
Hedge fund-of-fund assets $251
Mutual fund assets $183,464
U.S. 1940 Investment Co. Act $95,455
Sponsored ETFs/ETNs $3,490
Actively managed $663
Institutional $628
Investment outsourcing mandates $751
LDI strategies $15,992
Managed for retirement plans $1,157
Proprietary stable value $16,338
ESG investing $602,601
ESG mandates $43,067

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total $11,117
Internally managed $11,117

**WORKFORCE**

Total number of employees 1,966

**ARTIFICIAL INTELLIGENCE**

The firm invests in AI investment management technology (Y/N) N
AI is used in the firm's investment management process (Y/N) N

**Parent company:** New York Life Insurance Co.
**Chief executive officer:** Naim Abou-Jaoude

*The assets of the following subsidiaries or affiliates are included in the figures above:*

- **Apogem Capital LLC:** total assets: $41.3 billion; U.S. institutional, tax-exempt assets: $3.7 billion; client contact: David Fann, phone: 212-601-3600
- **MacKay Shields LLC:** total assets: $139.2 billion; U.S. institutional, tax-exempt assets: $35.2 billion; client contact: John Akkerman, phone: 212-230-3805

## 42 NISA Investment Advisors LLC

101 S. Hanley Road, Suite 1700, St. Louis, MO 63105; phone: 314-721-1900; www.nisa.com

(millions)

Total assets managed worldwide $287,722
Total worldwide institutional assets $287,667
Total U.S. client assets $285,059
Total U.S. institutional client assets $285,004
Total U.S. tax-exempt assets $261,546
Total U.S. institutional tax-exempt $261,546
Internally managed $261,546

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity 1%
Fixed income 99%

**INVESTMENT STRATEGIES**

U.S. equity, active $73
U.S. equity, passive $924
Non-U.S. equity, passive $393
U.S. bond, active $254,819
U.S. bond, passive $5,337

**ACTIVE U.S. EQUITY STRATEGIES**

**CORE**

Large-cap $55
Smidcap $18

**PASSIVE U.S. EQUITY STRATEGIES**

**CORE**

Large-cap $391
Small-cap $2
Broad-market $451

REITs $451

**NON-U.S. STRATEGIES**

Emerging markets equity $52

**FIXED-INCOME STRATEGIES**

Core $260,156
Inflation-protected securities $4,717
Stable value $2,561
LDI strategies $234,242

**ESG INVESTING**

Total $9,843

**WORLDWIDE ASSETS UNDER MANAGEMENT**

LDI strategies $237,791
Managed for retirement plans $231,686
Proprietary stable value $2,561
ESG investing $10,446

Continued on Page 38

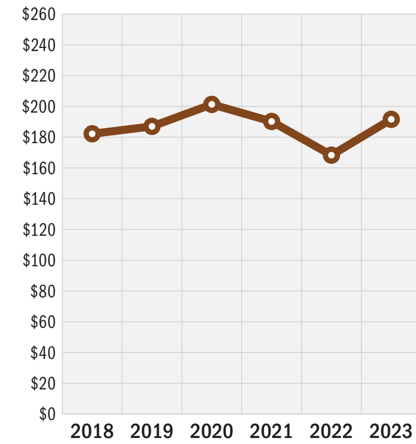
## Managers of high-yield securities

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Nomura Corporate Research | $14,042 |
| 2 | Nomura Asset Mgmt. | $13,766 |
| 3 | New York Life Investments | $13,525 |
| 4 | Fidelity Investments | $12,137 |
| 5 | Nuveen | $11,862 |
| 6 | J.P. Morgan Asset & Wealth | $10,849 |
| 7 | Shenkman Group | $10,233 |
| 8 | Principal Global Investors | $7,497 |
| 9 | PIMCO | $7,446 |
| 10 | Loomis, Sayles | $6,684 |

**Asset growth** (billions)



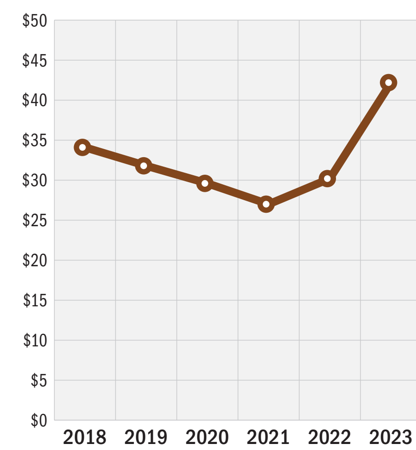

## Managers of bank loans

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Morgan Stanley Inv. Mgmt. | $8,115 |
| 2 | PineBridge Investments | $7,239 |
| 3 | Seix | $5,025 |
| 4 | Invesco | $3,859 |
| 5 | Nuveen | $3,782 |
| 6 | Aristotle Pacific Capital | $2,741 |
| 7 | Conning | $2,373 |
| 8 | Voya Investment Mgmt. | $1,901 |
| 9 | Barings | $1,784 |
| 10 | T. Rowe Price Associates | $1,225 |

**Asset growth** (billions)



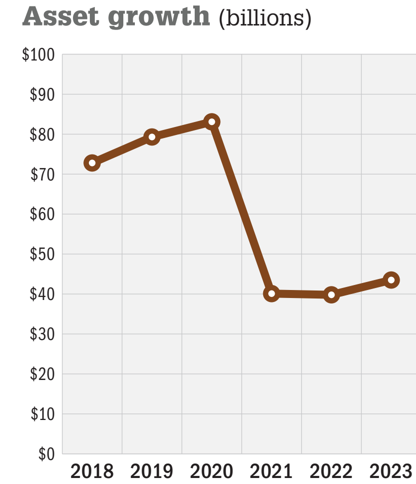

## Managers of mortgages (whole loans)

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Prudential Financial | $19,208 |
| 2 | Principal Global Investors | $9,329 |
| 3 | Heitman | $4,311 |
| 4 | Ullico Investment | $3,610 |
| 5 | Prima Capital Advisors | $2,624 |
| 6 | Washington Capital | $1,962 |
| 7 | 3650 REIT | $1,058 |
| 8 | Morgan Stanley Inv. Mgmt. | $718 |
| 9 | Pugh Capital | $216 |
| 10 | Federated Hermes | $186 |

**Asset growth** (billions)



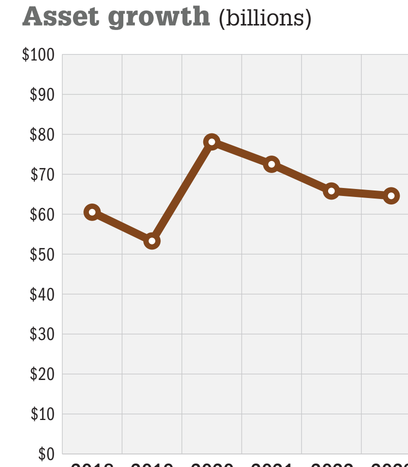

## Managers of hedge fund assets

U.S. inst'l, tax-exempt assets managed internally, reported on a net basis, as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Wellington Mgmt. | $19,363 |
| 2 | PIMCO | $8,086 |
| 3 | BlackRock | $5,017 |
| 4 | Franklin Templeton | $4,918 |
| 5 | Principal Global Investors | $4,318 |
| 6 | King Street Capital | $4,100 |
| 7 | Grantham, Mayo v. Otterloo | $3,245 |
| 8 | J.P. Morgan Asset & Wealth | $2,285 |
| 9 | Prudential Financial | $2,039 |
| 10 | Ares Mgmt. | $1,792 |

**Asset growth** (billions)



# The Largest Money Managers

## Managers of private equity*

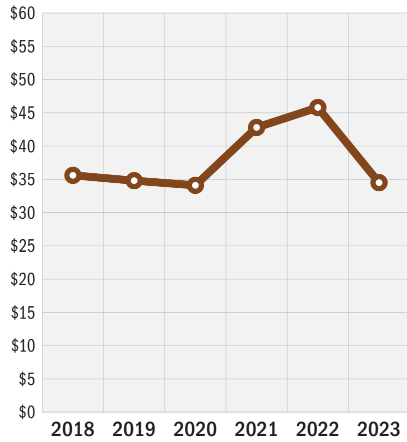
U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Nuveen | $13,339 |
| 2 | Oaktree Capital | $5,225 |
| 3 | Morgan Stanley Inv. Mgmt. | $3,825 |
| 4 | Voya Investment Mgmt. | $2,619 |
| 5 | Neuberger Berman | $1,891 |
| 6 | StepStone Group | $1,761 |
| 7 | Prudential Financial | $1,407 |
| 8 | Invesco | $1,263 |
| 9 | Barings | $993 |
| 10 | Twin Bridge Capital | $706 |

*Excludes private equity assets broken out elsewhere.

**Asset growth** (billions)



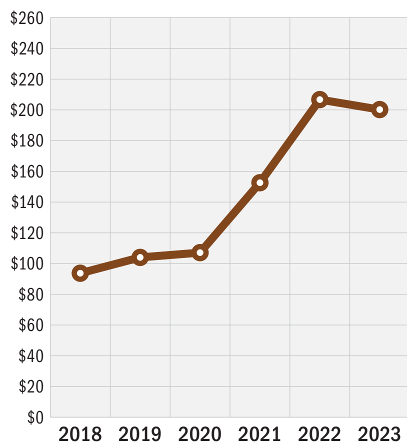

## Managers of private credit

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Nuveen | $45,139 |
| 2 | Ares Mgmt. | $39,532 |
| 3 | Prudential Financial | $29,856 |
| 4 | Voya Investment Mgmt. | $18,103 |
| 5 | Oaktree Capital | $10,922 |
| 6 | Principal Global Investors | $8,799 |
| 7 | SLC Management | $5,801 |
| 8 | TCW Group | $4,261 |
| 9 | New York Life Investments | $4,018 |
| 10 | Barings | $3,893 |

**Asset growth** (billions)



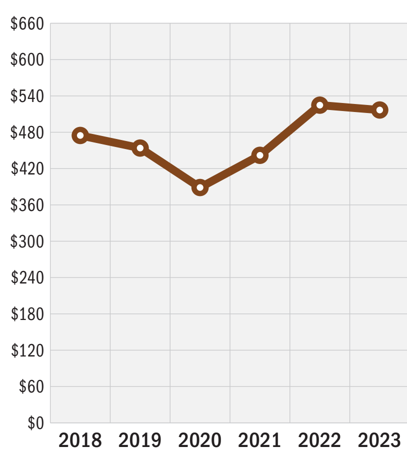

## Managers of real estate equity

U.S. institutional, tax-exempt assets managed internally, net of leverage, as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Nuveen | $71,281 |
| 2 | J.P. Morgan Asset & Wealth | $39,626 |
| 3 | Prudential Financial | $37,228 |
| 4 | Principal Global Investors | $31,030 |
| 5 | Brookfield Asset Mgmt. | $29,369 |
| 6 | Franklin Templeton | $28,346 |
| 7 | Morgan Stanley Inv. Mgmt. | $25,607 |
| 8 | Invesco | $23,975 |
| 9 | Heitman | $21,700 |
| 10 | State Street Global | $18,087 |

**Asset growth** (billions)



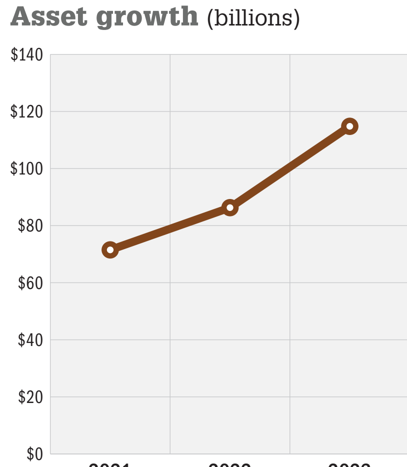

## Managers of real estate debt

U.S. institutional, tax-exempt assets managed internally, net of leverage, as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Nuveen | $66,940 |
| 2 | Prudential Financial | $24,665 |
| 3 | Principal Global Investors | $10,741 |
| 4 | Voya Investment Mgmt. | $2,901 |
| 5 | Morgan Stanley Inv. Mgmt. | $2,800 |
| 6 | Prima Capital Advisors | $2,624 |
| 7 | Washington Capital | $1,962 |
| 8 | 3650 REIT | $1,058 |
| 9 | Ares Mgmt. | $673 |
| 10 | New York Life Investments | $632 |

**Asset growth** (billions)




**Continued from Page 37**

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

Total.... $192,178

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total.... $2,953
Internally managed.... $2,953

**WORKFORCE**

Total number of employees.... 390
Number of U.S.-based employees.... 390
Number of cybersecurity professionals.... 6
Percent employee owned.... 100%

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

Total.... 28%
Senior management.... 16%
Investment.... 22%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

Total.... 14%
Senior management.... 11%
Investment.... 15%

**ARTIFICIAL INTELLIGENCE**

The firm invests in AI investment management technology (Y/N).... N
AI is used in the firm's investment management process (Y/N).... N

**Parent company:** NISA LLC
**Chief executive officer:** David G. Eichhorn
**U.S. client contact:** Cheryl L. Hanson
**DC client contact:** Daniel H. Riley

### 14 Northern Trust Asset Management

50 S. LaSalle St., Chicago, IL 60603; phone: 312-630-6000; www.northerntrust.com/asset-management/united-states

(millions)

Total assets managed worldwide.... $1,180,585
Total worldwide institutional assets.... $899,161
Total U.S. client assets.... $991,679
Total U.S. institutional client assets.... $710,506
Total U.S. tax-exempt assets.... $553,166
Total U.S. institutional tax-exempt.... $518,820
Assigned to external managers.... $28,965
Internally managed.... $489,855

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity.... 71%
Fixed income.... 14%
Cash.... 15%

**INVESTMENT STRATEGIES**

U.S. equity, active.... $3,548
U.S. equity, passive.... $270,044
Non-U.S. equity, passive.... $74,458
U.S. bond, active.... $4,794
U.S. bond, passive.... $62,903
Global/non-U.S. bond, passive.... $91
Hedge funds.... $486
Private equity, U.S..... $476
Cash.... $73,055

**ACTIVE U.S. EQUITY STRATEGIES**

**VALUE**

Large-cap.... $751
Small-cap.... $63

**CORE**

Large-cap.... $1,914
Small-cap.... $820

**PASSIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap.... $30,200
Midcap.... $275
Small-cap.... $6,706

**VALUE**

Large-cap.... $24,558
Midcap.... $392
Small-cap.... $6,768

**CORE**

Large-cap.... $152,526
Midcap.... $4,790
Smidcap.... $1,174
Small-cap.... $2,083
Broad-market.... $40,572

Low-volatility strategies.... $1,333
REITs.... $10,348

**NON-U.S. STRATEGIES**

Emerging markets equity.... $12,445
Emerging markets equity mandates.... $12,445

**FIXED-INCOME STRATEGIES**

Core.... $2,349
High-yield.... $301
Inflation-protected securities.... $10,570
LDI strategies.... $9,511

**ESG INVESTING**

Total.... $13,335
ESG mandates.... $6,483
Equity, passive.... $3,698
Bonds, passive.... $2,785

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Hedge fund-of-fund assets.... $1,388
Mutual fund assets.... $292,694
U.S. 1940 Investment Co. Act.... $209,444
Sponsored ETFs/ETNs.... $21,522
Actively managed.... $1,246
Institutional.... $2,723
Investment outsourcing mandates.... $78,908
LDI strategies.... $10,016
Managed for retirement plans.... $8,532
ESG investing.... $162,490
ESG mandates.... $115,201

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

Total.... $220

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total.... $217,817
Internally managed.... $217,817

**WORKFORCE**

Total number of employees.... 941
Number of U.S.-based employees.... 612
Percent employee owned.... 2%

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

Total.... 28%
Senior management.... 39%
Investment.... 30%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

Total.... 31%
Senior management.... 27%
Investment.... 29%

**Primary custodian:** Northern Trust
**Parent company:** Northern Trust Co.
**Chief executive officer:** Daniel Gamba
**Chief investment officer:** Angelo Manioudakis
**U.S. client contacts:** John Abunassar, Jason Tyler

### 16 Nuveen

730 Third Ave., New York, NY 10017; phone: 800-842-2733; www.nuveen.com

(millions)

Total assets managed worldwide.... $1,187,693
Total worldwide institutional assets.... $830,214
Total U.S. client assets.... $1,102,828
Total U.S. institutional client assets.... $745,762
Total U.S. tax-exempt assets.... $594,773
Total U.S. institutional tax-exempt.... $594,773
Internally managed.... $594,773

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity.... 26%
Fixed income.... 41%
Equity real estate.... 12%
Private equity.... 3%
Other.... 19%
*Other type: Alternatives, asset allocation, balanced, structured*

**INVESTMENT STRATEGIES**

U.S. equity, active.... $82,545
U.S. equity, passive.... $17,866
Non-U.S. equity, active.... $27,566
Non-U.S. equity, passive.... $2,141
Global equity, active.... $21,950
U.S. bond, active.... $228,385
Global/non-U.S. bond, active.... $14,238
Equity real estate, U.S..... $63,707
Equity real estate, non-U.S..... $7,060
Real estate debt.... $66,940
Timber.... $514
Infrastructure.... $2,726
Private equity, U.S..... $13,339

Privately placed debt ........ $45,139

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap ........ $29,884
Small-cap ........ $36

**VALUE**

Large-cap ........ $6,011
Small-cap ........ $535

**CORE**

Large-cap ........ $41,383
Midcap ........ $258
Smidcap ........ $999
Small-cap ........ $3,440

**PASSIVE U.S. EQUITY STRATEGIES**

**GROWTH**

Large-cap ........ $1,456

**CORE**

Large-cap ........ $16,398
Small-cap ........ $1

REITs ........ $1,282

**NON-U.S. STRATEGIES**

Emerging markets equity ........ $7,462
Emerging markets debt ........ $10,057
Emerging markets debt mandates ........ $10,057

**FIXED-INCOME STRATEGIES**

Core ........ $135,600
High-yield ........ $11,862
High-yield mandates ........ $4,876
Inflation-protected securities ........ $6,986
Stable value ........ $12,182
Bank loans ........ $3,782
LDI strategies ........ $3,340

**ESG INVESTING**

Total ........ $594,773
ESG mandates ........ $67,770
Equity, active ........ $1,257
Equity, passive ........ $13,909
Bond, active ........ $11,067

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Hedge fund assets ........ $182
Mutual fund assets ........ $353,142
U.S. 1940 Investment Co. Act ........ $353,142
Sponsored ETFs/ETNs ........ $8,454
LDI strategies ........ $3,340
Managed for retirement plans ........ $3,340
Proprietary stable value ........ $2,743
ESG investing ........ $1,187,693
ESG mandates ........ $67,770

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

Total ........ $3,929

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total ........ $532,152
Internally managed ........ $532,152

**WORKFORCE**

Total number of employees ........ 20,012
Number of cybersecurity professionals ........ 175

**Primary custodian:** BNY Mellon
**Parent company:** TIAA
**Chief executive officer:** Jose Minaya
**Chief investment officer:** Saira Malik
**U.S. client contact:** Elizabeth Sansone

## 13 Pacific Investment Management Co. LLC

650 Newport Center Drive, Newport Beach, CA 92660; phone: 949-720-6000; www.pimco.com

(millions)

Total assets managed worldwide ........ $1,483,912
Total worldwide institutional assets ........ $919,759
Total U.S. client assets ........ $882,378
Total U.S. institutional client assets ........ $493,664
Total U.S. tax-exempt assets ........ $342,450
Total U.S. institutional tax-exempt ........ $334,322
Internally managed ........ $334,322

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

Equity ........ 5%
Fixed income ........ 82%
Private equity ........ 2%
Hedge funds ........ 1%
Cash ........ 4%
Other ........ 6%

*Other type: Commodities, real estate, asset allocation, ARS*

**INVESTMENT STRATEGIES**

U.S. equity, active ........ $7,789
U.S. equity, enhanced index ........ $5,119
Non-U.S. equity, active ........ $3,913
Non-U.S. equity, enhanced index ........ $2,078
Global equity, active ........ $920
U.S. bond, active ........ $270,505
Global/non-U.S. bond, active ........ $20,633
Hedge funds ........ $8,086
Commodities ........ $3,560
Cash ........ $11,719

**ACTIVE U.S. EQUITY STRATEGIES**

**VALUE**

Large-cap ........ $6,013
Small-cap ........ $68

**NON-U.S. STRATEGIES**

Emerging markets equity ........ $964
Emerging markets equity mandates ........ $964
Emerging markets debt ........ $8,582
Emerging markets debt mandates ........ $8,582

**FIXED-INCOME STRATEGIES**

Core ........ $9,034
Core-plus ........ $57,457
Unconstrained ........ $3,227
High-yield ........ $7,446
High-yield mandates ........ $7,446
Inflation-protected securities ........ $9,349
Stable value ........ $23,037
Bank loans ........ $432
LDI strategies ........ $137,049

**ESG INVESTING**

Total ........ $9,018
ESG mandates ........ $1,145
Bond, active ........ $1,145

**WORLDWIDE ASSETS UNDER MANAGEMENT**

Hedge fund assets ........ $26,934
Mutual fund assets ........ $886,910
U.S. 1940 Investment Co. Act ........ $496,345
Sponsored ETFs/ETNs ........ $30,379
Actively managed ........ $23,789
LDI strategies ........ $180,169
Managed for retirement plans ........ $152,877
Proprietary stable value ........ $15,307
ESG investing ........ $278,900
ESG mandates ........ $45,383

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

Total ........ $3,086

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

Total ........ $115,613
Internally managed ........ $115,613

**WORKFORCE**

Total number of employees ........ 3,366
Number of U.S.-based employees ........ 2,259

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

Total ........ 38%
Senior management ........ 30%
Investment ........ 21%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

Total ........ 49%
Senior management ........ 42%
Investment ........ 51%

**ARTIFICIAL INTELLIGENCE**

The firm invests in AI investment management technology (Y/N) ........ Y
AI is used in the firm's investment management process (Y/N) ........ Y

**Parent company:** Allianz Asset Management
**Chief executive officer:** Emmanuel Roman
**Chief investment officer:** Daniel Ivascyn
**DC client contact:** James Bentley

## 17 T. Rowe Price Associates Inc.

100 E. Pratt St., Baltimore, MD 21202-1009; phone: 410-345-2000; www.troweprice.com

(millions)

Total assets managed worldwide ........ $1,444,500
Total worldwide institutional assets ........ $810,000

Continued on Page 40

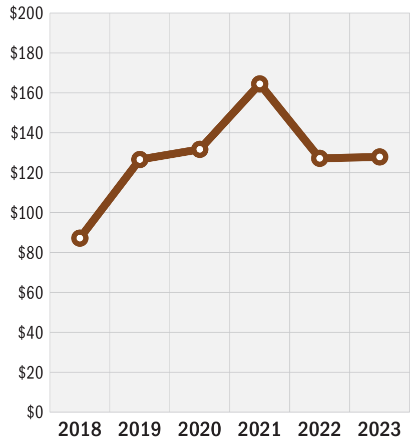
## Managers of REITs

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Prudential Financial | $30,247 |
| 2 | Dimensional Fund Advisors | $16,437 |
| 3 | Principal Global Investors | $13,660 |
| 4 | State Street Global | $12,700 |
| 5 | Northern Trust Asset Mgmt. | $10,348 |
| 6 | Vanguard Group | $10,254 |
| 7 | Cohen & Steers | $6,435 |
| 8 | CenterSquare Investment | $5,935 |
| 9 | BlackRock | $4,247 |
| 10 | AEW Capital | $3,261 |

**Asset growth** (billions)



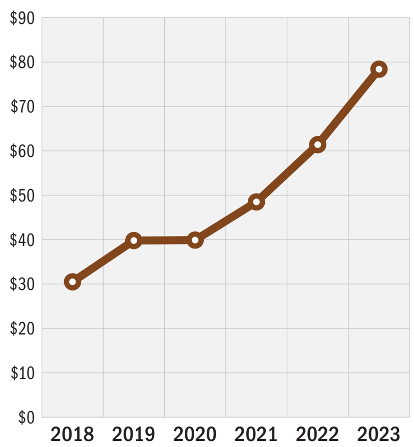

## Managers of infrastructure assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Brookfield Asset Mgmt. | $29,557 |
| 2 | IFM Investors | $22,799 |
| 3 | J.P. Morgan Asset & Wealth | $8,778 |
| 4 | Ullico Investment | $4,470 |
| 5 | Nuveen | $2,726 |
| 6 | CBRE Investment Mgmt. | $2,600 |
| 7 | Harrison Street | $2,199 |
| 8 | Morgan Stanley Inv. Mgmt. | $1,653 |
| 9 | StepStone Group | $913 |
| 10 | Oaktree Capital | $895 |

**Asset growth** (billions)



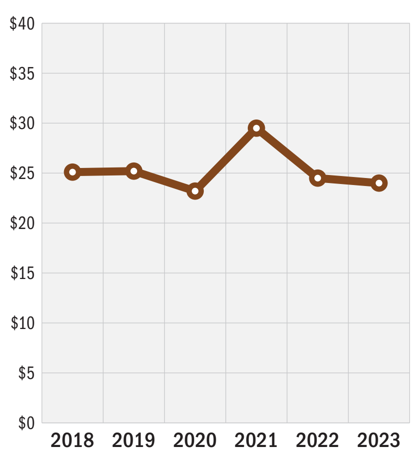

## Managers of commodities

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Dimensional Fund Advisors | $6,793 |
| 2 | State Street Global | $6,125 |
| 3 | PIMCO | $3,560 |
| 4 | CoreCommodity | $2,081 |
| 5 | Invesco | $1,650 |
| 6 | Morgan Stanley Inv. Mgmt. | $1,389 |
| 7 | BlackRock | $1,254 |
| 8 | Geode Capital Mgmt. | $477 |
| 9 | Prudential Financial | $286 |
| 10 | MFS Investment | $232 |

**Asset growth** (billions)



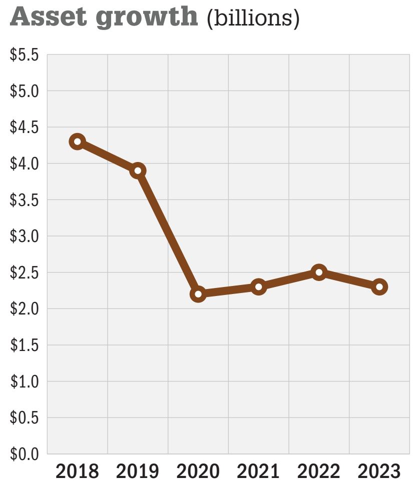

## Managers of venture capital

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

**The largest managers** (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Adams Street Partners | $1,233 |
| 2 | StepStone Group | $586 |
| 3 | Wexford Capital | $400 |
| 4 | Invesco | $26 |
| 5 | PineBridge Investments | $8 |

**Asset growth** (billions)



# The Largest Money Managers

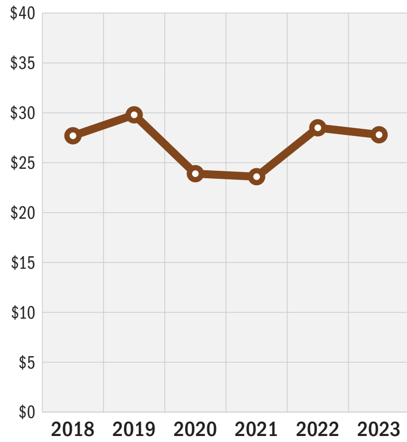
## Managers of buyout funds

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Brookfield Asset Mgmt. | $14,293 |
| 2 | Ares Mgmt. | $7,134 |
| 3 | New York Life Investments | $2,057 |
| 4 | StepStone Group | $1,752 |
| 5 | Twin Bridge Capital | $1,647 |
| 6 | Adams Street Partners | $949 |
| 7 | PineBridge Investments | $4 |

### Asset growth (billions)



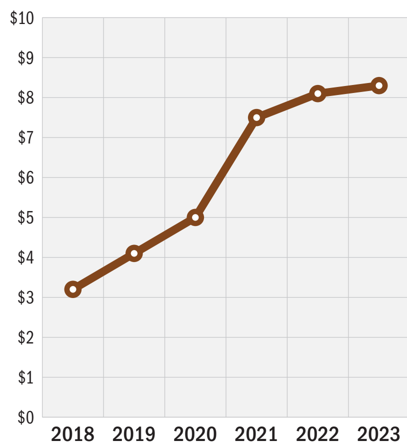

## Managers of mezzanine debt

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | SLC Management | $2,960 |
| 2 | Invesco | $1,663 |
| 3 | Brookfield Asset Mgmt. | $1,197 |
| 4 | AEW Capital | $831 |
| 5 | Barings | $784 |
| 6 | Oaktree Capital | $544 |
| 7 | New York Life Investments | $188 |
| 8 | Rockwood Capital | $48 |
| 9 | StepStone Group | $35 |
| 10 | National Real Estate | $30 |

### Asset growth (billions)



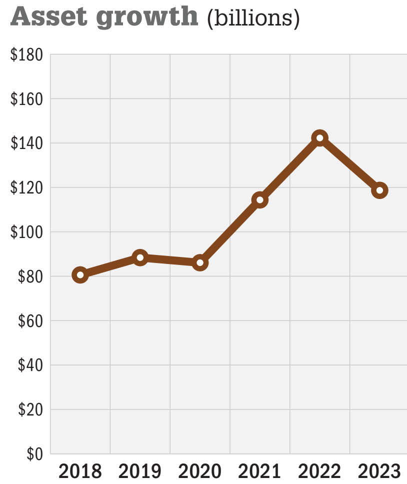

## Managers of privately placed debt

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Nuveen | $45,139 |
| 2 | Prudential Financial | $28,991 |
| 3 | Voya Investment Mgmt. | $18,103 |
| 4 | Principal Global Investors | $7,641 |
| 5 | TCW Group | $3,729 |
| 6 | PCCP | $3,087 |
| 7 | Adams Street Partners | $2,735 |
| 8 | Schroders | $2,706 |
| 9 | MetLife Investment Mgmt. | $1,055 |
| 10 | New York Life Investments | $1,030 |

### Asset growth (billions)



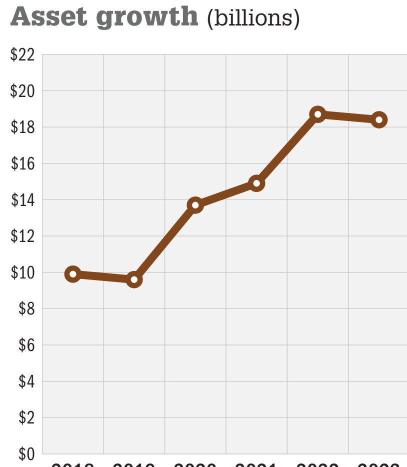

## Managers of distressed debt

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Oaktree Capital | $10,378 |
| 2 | AllianceBernstein | $3,381 |
| 3 | Ares Mgmt. | $2,572 |
| 4 | Invesco | $876 |
| 5 | Barings | $570 |
| 6 | TCW Group | $527 |
| 7 | Neuberger Berman | $118 |
| 8 | Prudential Financial | $17 |
| 9 | StepStone Group | $8 |

### Asset growth (billions)




**Continued from Page 39**

Total U.S. client assets ....................... $1,292,523
Total U.S. institutional client assets ....... $703,613
Total U.S. tax-exempt assets ................ $811,987
Total U.S. institutional tax-exempt .......... $686,118
Internally managed .......................... $686,118

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Equity ................................................ 91%
Fixed income ........................................ 9%

**INVESTMENT STRATEGIES**
U.S. equity, active ........................... $575,260
U.S. equity, passive ............................ $2,371
U.S. equity, enhanced index ................ $26,398
Non-U.S. equity, active ........................ $11,948
Non-U.S. equity, passive .......................... $120
Non-U.S. equity, enhanced index ................. $10
Global equity, active ............................ $8,776
U.S. bond, active .............................. $53,372
U.S. bond, passive ................................. $827
U.S. bond, enhanced index .......................... $38
Global/non-U.S. bond, active ................. $5,252
Cash ................................................ $1,746

**ACTIVE U.S. EQUITY STRATEGIES**
**GROWTH**
Large-cap ..................................... $484,027
Midcap ........................................... $22,074
Small-cap ........................................ $12,122
**VALUE**
Large-cap ........................................ $22,291
Midcap ............................................. $5,776
Small-cap .......................................... $3,134
**CORE**
Large-cap ........................................ $13,673
Midcap ............................................. $3,014
Small-cap .......................................... $8,150

**PASSIVE U.S. EQUITY STRATEGIES**
**CORE**
Large-cap .......................................... $2,264
Midcap ................................................ $107
REITs ................................................. $154

**NON-U.S. STRATEGIES**
Emerging markets equity ...................... $3,004
Emerging markets equity mandates ..... $3,004
Emerging markets debt ............................ $560
Emerging markets debt mandates ......... $560

**FIXED-INCOME STRATEGIES**
Core .................................................. $3,244
Core-plus ............................................. $223
Unconstrained ......................................... $87
High-yield .......................................... $3,583
Inflation-protected securities .................... $111
Stable value ...................................... $33,963
Mortgages (whole loans) ............................ $19
Bank loans .......................................... $1,225
LDI strategies .................................... $11,192

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund assets ................................ $3,178
Mutual fund assets ........................... $1,049,804
U.S. 1940 Investment Co. Act ........... $987,747
Sponsored ETFs/ETNs ............................ $2,519
Actively managed ................................ $2,519
Institutional ......................................... $668
LDI strategies .................................... $11,192
Proprietary stable value ...................... $38,281
ESG investing ..................................... $22,053
ESG mandates ..................................... $22,053

**DEFINED CONTRIBUTION ASSETS**
**U.S. INSTITUTIONAL TAX-EXEMPT**
Total ............................................... $627,089
Internally managed .......................... $627,089

**WORKFORCE**
Total number of employees ......................... 7,906
Number of U.S.-based employees ................ 6,563
Percent employee owned ............................... 7%

**Parent company:** T. Rowe Price Group Inc.
**Chief executive officer:** Robert W. Sharps

### 28 Principal Global Investors

801 Grand Ave., Des Moines, IA 50392-0490; phone: 800-533-1390; www.principalglobal.com

(millions)
Total assets managed worldwide ........... $524,099
Total worldwide institutional assets ........ $493,255
Total U.S. client assets ........................ $459,820
Total U.S. institutional client assets ....... $432,204
Total U.S. RIA assets ........................... $158,410
Total U.S. tax-exempt assets ................ $349,008
Total U.S. institutional tax-exempt .......... $348,809
Assigned to external managers ............ $35,285
Internally managed ......................... $313,523

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Equity ................................................ 48%
Fixed income ........................................ 36%
Equity real estate ................................... 13%
Hedge funds ........................................... 1%
Cash ..................................................... 1%
Other .................................................... 1%
*Other type: Other*

**INVESTMENT STRATEGIES**
U.S. equity, active ............................. $59,490
U.S. equity, passive ............................ $58,993
Non-U.S. equity, active ........................ $25,323
Non-U.S. equity, passive ....................... $1,477
Global equity, active ............................ $6,610
Global equity, passive ................................. $9
U.S. bond, active ............................... $80,011
U.S. bond, passive .............................. $16,238
Global/non-U.S. bond, active ................. $8,030
Equity real estate, U.S. ....................... $31,030
Real estate debt ................................ $10,741
Hedge funds ....................................... $4,318
Infrastructure ........................................... $9
Commodities .......................................... $69
Direct lending ..................................... $1,158
Privately placed debt ........................... $7,641
Cash ................................................ $2,376

**ACTIVE U.S. EQUITY STRATEGIES**
**GROWTH**
Large-cap .......................................... $9,387
Midcap ................................................ $635
Smidcap ................................................ $46
Small-cap ............................................... $71
**VALUE**
Large-cap .......................................... $8,174
Midcap .................................................... $1
Smidcap ............................................. $1,219
Small-cap ............................................... $46
**CORE**
Large-cap .......................................... $5,149
Midcap ............................................ $23,319
Small-cap .......................................... $2,700

**PASSIVE U.S. EQUITY STRATEGIES**
**GROWTH**
Large-cap .......................................... $1,232
Midcap ................................................ $155
Small-cap ............................................. $147
**VALUE**
Large-cap ............................................. $365
Midcap ................................................ $336
Small-cap ............................................. $176
**CORE**
Large-cap ........................................ $41,580
Midcap ............................................. $9,175
Small-cap .......................................... $5,828
Low-volatility strategies ............................. $9
REITs .............................................. $13,660

**NON-U.S. STRATEGIES**
Emerging markets equity ...................... $6,449
Emerging markets equity mandates ..... $6,449
Emerging markets debt ......................... $3,005
Emerging markets debt mandates ....... $2,954

**FIXED-INCOME STRATEGIES**
Core ................................................ $10,857
Core-plus .......................................... $3,214
Unconstrained ..................................... $1,323
High-yield .......................................... $7,497
High-yield mandates ......................... $5,793
Inflation-protected securities ....................... $1
Stable value ...................................... $20,952
Mortgages (whole loans) ....................... $9,329
Bank loans ............................................ $314
LDI strategies ...................................... $6,369

**ESG INVESTING**
Total ................................................... $845
ESG mandates ....................................... $845
Equity, active ...................................... $845

# The Largest Money Managers

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund assets ........ $8,112
Mutual fund assets ........ $158,907
U.S. 1940 Investment Co. Act ........ $150,878
Sponsored ETFs/ETNs ........ $3,718
Actively managed ........ $3,718
Institutional ........ $3,718
LDI strategies ........ $6,869
Managed for retirement plans ........ $6,460
Proprietary stable value ........ $20,952
ESG investing ........ $10,343
ESG mandates ........ $10,343

**DEFINED CONTRIBUTION ASSETS**
**U.S. INSTITUTIONAL TAX-EXEMPT**
Total ........ $132,914
Internally managed ........ $132,914

**WORKFORCE**
Total number of employees ........ 1,954
Number of U.S.-based employees ........ 1,543

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total ........ 41%
Senior management ........ 36%
Investment ........ 27%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**
Total ........ 13%
Senior management ........ 7%
Investment ........ 15%

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N) ........ Y
AI is used in the firm's investment management process (Y/N) ........ Y

**Primary custodian:** BNY Mellon
**Parent company:** Principal Financial Group
**Chief executive officer:** Kamal Bhatia

*The assets of the following subsidiaries or affiliates are included in the figures above:*

- **Post Advisory Group:** total assets: $16.6 billion; U.S. institutional, tax-exempt assets: $3.9 billion; CIO: Jeffrey Stroll; client contact: Eileen Mancera, phone: 310-996-9600
- **Principal Claritas**
- **Principal Edge:** total assets: $16.7 billion; U.S. institutional, tax-exempt assets: $11.8 billion; client contact: Jaime Kiehn, phone: 206-913-5842
- **Principal Origin:** total assets: $4.6 billion; U.S. institutional, tax-exempt assets: $2.9 billion; client contact: Nishil Patel, phone: 44-20-7812-8500
- **Principal Real Estate:** total assets: $98.8 billion; U.S. institutional, tax-exempt assets: $62.4 billion; client contact: Michelle Fang, phone: 203-858-9649, email: fang.michelle@principal.com
- **Spectrum Asset Management:** total assets: $14.9 billion; U.S. institutional, tax-exempt assets: $5.3 billion; CIO: L. Phillip Jacoby; client contact: Mark Lieb, phone: 203-321-1120

## 12 Prudential Financial

751 Broad St., Newark, NJ 07102; phone: 973-802-6000; www.pgim.com

(millions)

Total assets managed worldwide ........ $1,449,673
Total worldwide institutional assets ........ $1,060,073
Total U.S. client assets ........ $1,073,353
Total U.S. institutional client assets ........ $693,308
Total U.S. RIA assets ........ $110,779
Total U.S. tax-exempt assets ........ $654,253
Total U.S. institutional tax-exempt ........ $453,821
Assigned to external managers ........ $65,628
Internally managed ........ $388,193

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**
**ASSET MIX**
Equity ........ 13%
Fixed income ........ 75%
Equity real estate ........ 10%
Hedge funds ........ 1%
Cash ........ 1%

**INVESTMENT STRATEGIES**
U.S. equity, active ........ $37,675
U.S. equity, passive ........ $6,562
Non-U.S. equity, active ........ $1,780
Non-U.S. equity, passive ........ $1,359
Global equity, active ........ $3,055
U.S. bond, active ........ $222,993
Global/non-U.S. bond, active ........ $14,680
Equity real estate, U.S. ........ $36,255
Equity real estate, non-U.S. ........ $973
Real estate debt ........ $24,665
Hedge funds ........ $2,039
Private equity, U.S. ........ $507
Private equity, non-U.S. ........ $900
Commodities ........ $286
Direct lending ........ $830
Privately placed debt ........ $28,991
Distressed debt ........ $17
Mezzanine debt ........ $18
Cash ........ $4,608

**ACTIVE U.S. EQUITY STRATEGIES**
**GROWTH**
Large-cap ........ $29,237

**VALUE**
Large-cap ........ $378

**CORE**
Large-cap ........ $2,940
Midcap ........ $493
Small-cap ........ $2,810
Broad-market ........ $1,816

**PASSIVE U.S. EQUITY STRATEGIES**
**CORE**
Large-cap ........ $4,639
Midcap ........ $71
Small-cap ........ $147
Broad-market ........ $1,706

REITs ........ $30,247

**NON-U.S. STRATEGIES**
Emerging markets equity ........ $1,305
Emerging markets equity mandates ........ $1,305
Emerging markets debt ........ $7,245
Emerging markets debt mandates ........ $7,245

**FIXED-INCOME STRATEGIES**
Core ........ $159,805
Core-plus ........ $31,210
Unconstrained ........ $1,639
High-yield ........ $6,368
High-yield mandates ........ $6,368
Inflation-protected securities ........ $678
Stable value ........ $25,651
Mortgages (whole loans) ........ $19,208
Bank loans ........ $148
LDI strategies ........ $21,755

**ESG INVESTING**
Total ........ $78,468
ESG mandates ........ $29
Equity, active ........ $29

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund assets ........ $10,729
Hedge fund-of-fund assets ........ $76
Mutual fund assets ........ $399,373
U.S. 1940 Investment Co. Act ........ $390,194
Sponsored ETFs/ETNs ........ $6,696
Actively managed ........ $6,696
Investment outsourcing mandates ........ $35,721
LDI strategies ........ $23,343
Managed for retirement plans ........ $21,351
Proprietary stable value ........ $25,651
ESG investing ........ $480,965
ESG mandates ........ $1,459

**DEFINED CONTRIBUTION ASSETS**
**U.S. INSTITUTIONAL TAX-EXEMPT**
Total ........ $207,363
Internally managed ........ $164,812

**WORKFORCE**
Total number of employees ........ 40,658
Number of U.S.-based employees ........ 16,124

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total ........ 50%
Senior management ........ 35%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**
Total ........ 36%
Senior management ........ 26%

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N) ........ Y
AI is used in the firm's investment management process (Y/N) ........ N

**Chief executive officer:** Charles F. Lowrey
**U.S. client contact:** Cameron Lochhead
**DC client contact:** Michael Miller

*The assets of the following subsidiaries or affiliates*

Continued on Page 42

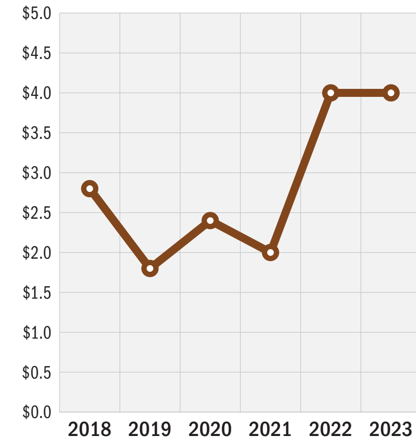
## Managers of energy assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

| Rank | Manager | Assets |
|---|---|---|
| 1 | Voya Investment Mgmt. | $2,847 |
| 2 | AllianceBernstein | $408 |
| 3 | StepStone Group | $263 |
| 4 | Invesco | $243 |
| 5 | New York Life Investments | $188 |
| 6 | Barings | $51 |

### Asset growth (billions)



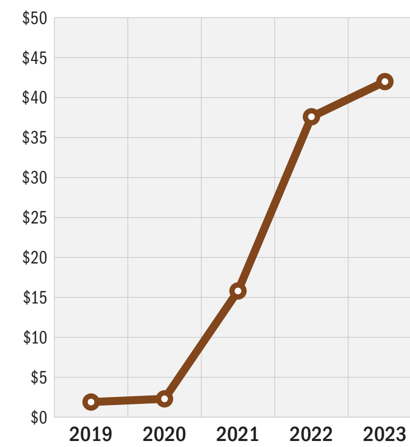

## Managers of direct lending assets

U.S. institutional, tax-exempt assets managed internally as of Dec. 31.

### The largest managers (millions)

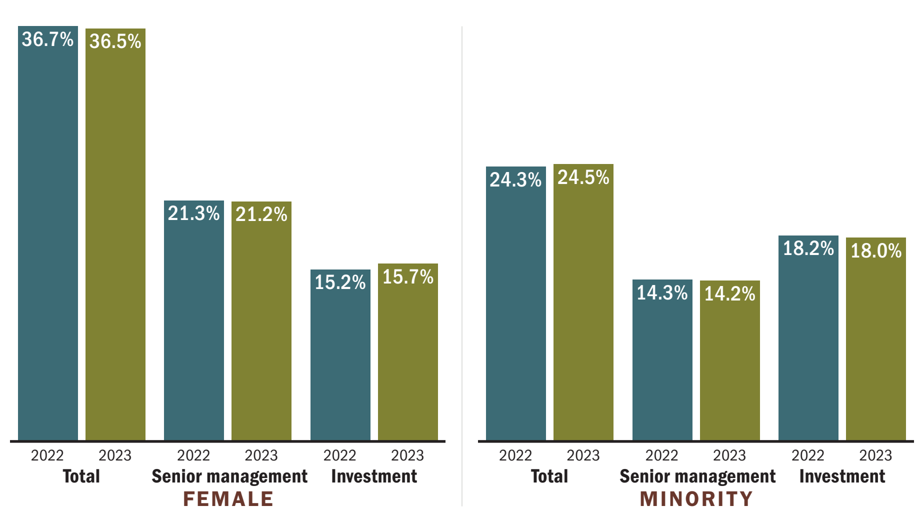
| Rank | Manager | Assets |
|---|---|---|
| 1 | Ares Mgmt. | $29,056 |
| 2 | SLC Management | $2,841 |
| 3 | Barings | $2,506 |
| 4 | Neuberger Berman | $2,298 |
| 5 | Madison Realty | $1,901 |
| 6 | StepStone Group | $1,254 |
| 7 | Principal Global Investors | $1,158 |
| 8 | Prudential Financial | $830 |
| 9 | TerraCotta Group | $98 |
| 10 | AllianceBernstein | $72 |

### Asset growth (billions)




## Diversity of managers' U.S.-based employees

Average percentage of female and minority employees, as of Dec. 31.




## Minority- & women-owned managers

As of Dec. 31.

- Adelante Capital
- Advent Capital
- Alger
- ARGA Investment
- Argus Investors' Counsel
- Ariel Investments
- Ativo Capital Mgmt.
- Barksdale Investment Mgmt.
- Bivium Capital
- Brown Capital
- Cadinha
- Campbell Newman Asset
- Causeway Capital
- Channing Capital
- Denali Advisors
- Dodge & Cox
- EARNEST Partners
- Edgar Lomax
- Garcia Hamilton
- GIA Partners
- Gifford Fong Associates
- GLOBALT
- GlobeFlex Capital
- Hardman Johnston Global
- Leading Edge Investment
- LM Capital Group
- Longfellow Investment
- Longpoint Partners
- Mar Vista Investment
- Metis Global Partners
- Nicholas Co.
- Oak Associates
- Palisade Capital
- Paradigm Capital
- Payden & Rygel
- Phocas Financial
- Pugh Capital
- Ramirez Asset Mgmt.
- RhumbLine Advisers
- Robinson Value Mgmt.
- SECOR Asset Mgmt.
- Sit Investment
- Smith Affiliated Capital
- Sprucegrove Investment
- Stacey Braun Associates
- StoneRidge PMG Advisors
- TerraCotta Group
- Weatherbie Capital
- Wright Investors' Service
- Zevenbergen Capital

# The Largest Money Managers

**Continued from Page 41**

*are included in the figures above:*

- **Jennison Associates:** total assets: $194.1 billion; U.S. institutional, tax-exempt assets: $82.9 billion; client contact: Lori McEvoy, phone: 212-833-0794
- **PGIM Fixed Income:** total assets: $794.4 billion; U.S. institutional, tax-exempt assets: $196.8 billion; CIO: Craig Dewling/Gregory Peters; client contact: Brad Blalock, phone: 973-367-5431
- **PGIM Portfolio Advisory**
- **PGIM Private Capital:** total assets: $101.5 billion; U.S. institutional, tax-exempt assets: $30.8 billion; CIO: Matt Douglass; client contact: Michael Campion, phone: 973-367-2454, email: michael.campion@pgim.com
- **PGIM Quantitative Solutions:** total assets: $94.8 billion; U.S. institutional, tax-exempt assets: $13.9 billion; CIO: George N. Patterson; client contact: Jonathan Ryan, phone: 973-802-6099
- **PGIM Real Estate:** total assets: $161.1 billion; U.S. institutional, tax-exempt assets: $62.4 billion; CIO: Raimondo Amabile; client contact: Mark Chamieh, phone: 973-734-1300, email: realestate.investorservices@pgim.com

## 47 Russell Investments

1301 Second Ave., 18th Floor, Seattle, WA 98101; phone: 206-505-7877; www.russellinvestments.com

| | (millions) |
|---|---|
| Total assets managed worldwide | $297,581 |
| Total worldwide institutional assets | $243,228 |
| Total U.S. client assets | $159,106 |
| Total U.S. institutional client assets | $121,345 |
| Total U.S. tax-exempt assets | $121,345 |
| Total U.S. institutional tax-exempt | $121,025 |
| Assigned to external managers | $32,634 |
| Internally managed | $88,391 |
| LDI strategies | $14,400 |
| ESG investing | $5,896 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Hedge fund-of-fund assets | $2,445 |
| Mutual fund assets | $53,384 |
| U.S. 1940 Investment Co. Act | $35,527 |
| Sponsored ETFs/ETNs | $673 |
| Institutional | $117 |
| Investment outsourcing mandates | $155,783 |
| LDI strategies | $19,763 |
| Managed for retirement plans | $19,763 |
| ESG investing | $37,226 |

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

| | |
|---|---|
| Total | $63,468 |

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

| | |
|---|---|
| Total | $9,527 |
| Internally managed | $9,527 |

**WORKFORCE**

| | |
|---|---|
| Total number of employees | 1,387 |
| Number of U.S.-based employees | 681 |
| Number of cybersecurity professionals | 6 |

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

| | |
|---|---|
| Total | 35% |
| Senior management | 27% |
| Investment | 23% |

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

| | |
|---|---|
| Total | 27% |
| Senior management | 15% |
| Investment | 27% |

**ARTIFICIAL INTELLIGENCE**

| | |
|---|---|
| The firm invests in AI investment management technology (Y/N) | Y |
| AI is used in the firm's investment management process (Y/N) | N |

**Primary custodian:** State Street
**Parent company:** TA Associates Management LP
**Chief executive officer:** Zach Buchwald
**Chief investment officer:** Kate El-Hillow
**U.S. client contact:** Lindy Freeman
**DC client contact:** Kerry Bandow

## 27 Schroders

7 Bryant Park, 19th Floor, New York, NY 10018; phone: 212-641-3800; www.schroders.com

| | (millions) |
|---|---|
| Total assets managed worldwide | $818,875 |
| Total worldwide institutional assets | $505,838 |
| Total U.S. client assets | $97,791 |
| Total U.S. institutional client assets | $71,565 |
| Total U.S. RIA assets | $50,260 |
| Total U.S. tax-exempt assets | $25,538 |
| Total U.S. institutional tax-exempt | $25,505 |
| Internally managed | $25,505 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Equity | 52% |
| Fixed income | 36% |
| Other | 12% |

*Other type: Alternatives, multiasset*

**INVESTMENT STRATEGIES**

| | |
|---|---|
| U.S. equity, active | $389 |
| Non-U.S. equity, active | $10,768 |
| Global equity, active | $2,058 |
| U.S. bond, active | $9,168 |
| Privately placed debt | $2,706 |

**ACTIVE U.S. EQUITY STRATEGIES**

**CORE**

| | |
|---|---|
| Large-cap | $173 |
| Smidcap | $159 |
| Small-cap | $57 |

**NON-U.S. STRATEGIES**

| | |
|---|---|
| Emerging markets equity | $4,763 |
| Emerging markets equity mandates | $4,763 |

**FIXED-INCOME STRATEGIES**

| | |
|---|---|
| Core | $3,027 |
| Core-plus | $865 |
| LDI strategies | $5,147 |

**ESG INVESTING**

| | |
|---|---|
| Total | $25,505 |
| ESG mandates | $386 |
| Equity, active | $386 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Hedge fund assets | $2,733 |
| Mutual fund assets | $172,605 |
| U.S. 1940 Investment Co. Act | $50,260 |
| Sponsored ETFs/ETNs | $208 |
| Actively managed | $208 |
| LDI strategies | $72,800 |
| Managed for retirement plans | $72,800 |
| ESG investing | $778,000 |
| ESG mandates | $96,880 |

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

| | |
|---|---|
| Total | $1,116 |
| Internally managed | $1,116 |

**WORKFORCE**

| | |
|---|---|
| Total number of employees | 6,194 |
| Number of U.S.-based employees | 349 |
| Number of cybersecurity professionals | 50 |
| Percent employee owned | 4% |

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

| | |
|---|---|
| Total | 40% |
| Senior management | 1% |
| Investment | 10% |

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

| | |
|---|---|
| Total | 33% |
| Investment | 8% |

**ARTIFICIAL INTELLIGENCE**

| | |
|---|---|
| The firm invests in AI investment management technology (Y/N) | Y |
| AI is used in the firm's investment management process (Y/N) | Y |

**Primary custodian:** J.P. Morgan
**Parent company:** Schroders PLC
**Chief executive officer:** Peter Harrison
**Chief investment officers:** Johanna Kyrklund, Rory Bateman
**U.S. client contact:** Catherine Dooley
**Other client contact:** Zachary Ketcho (North America)
**DC client contact:** Deb Boyden

## 43 SEI Investments

1 Freedom Valley Drive, Oaks, PA 19456; phone: 866-SEI-2441; www.seic.com/institutional-investors

| | (millions) |
|---|---|
| Total assets managed worldwide | $342,678 |
| Total worldwide institutional assets | $262,699 |
| Total U.S. client assets | $308,863 |
| Total U.S. institutional client assets | $232,417 |
| Total U.S. tax-exempt assets | $266,013 |
| Total U.S. institutional tax-exempt | $197,211 |
| Assigned to external managers | $197,211 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Investment outsourcing mandates | $193,500 |

**U.S. client contact:** Frank Wilkinson

## 44 SLC Management

96 Worcester St., Wellesley Hills, MA 02481; phone: 781-446-1177; www.slcmanagement.com

| | (millions) |
|---|---|
| Total assets managed worldwide | $282,041 |
| Total worldwide institutional assets | $251,913 |
| Total U.S. client assets | $108,189 |
| Total U.S. institutional client assets | $99,676 |
| Total U.S. RIA assets | $4,780 |
| Total U.S. tax-exempt assets | $25,523 |
| Total U.S. institutional tax-exempt | $24,794 |
| Internally managed | $24,794 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Fixed income | 99% |
| Equity real estate | 1% |

**INVESTMENT STRATEGIES**

| | |
|---|---|
| U.S. equity, passive | $13 |
| U.S. bond, active | $18,741 |
| Equity real estate, U.S. | $194 |
| Direct lending | $2,841 |
| Mezzanine debt | $2,960 |
| Cash | $45 |

**PASSIVE U.S. EQUITY STRATEGIES**

**CORE**

| | |
|---|---|
| Broad-market | $13 |

**FIXED-INCOME STRATEGIES**

| | |
|---|---|
| Core | $5,190 |
| Core-plus | $131 |
| Unconstrained | $5,353 |
| High-yield | $4,605 |
| High-yield mandates | $4,605 |
| Inflation-protected securities | $140 |
| Bank loans | $246 |
| LDI strategies | $7,720 |

**ESG INVESTING**

| | |
|---|---|
| Total | $24,794 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Mutual fund assets | $2,400 |
| U.S. 1940 Investment Co. Act | $2,400 |
| Sponsored ETFs/ETNs | $690 |
| Actively managed | $380 |
| Investment outsourcing mandates | $4,169 |
| LDI strategies | $31,927 |
| Managed for retirement plans | $9,600 |
| Proprietary stable value | $43 |
| ESG investing | $282,041 |

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**

| | |
|---|---|
| Total | $292 |

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**

| | |
|---|---|
| Total | $205 |
| Internally managed | $205 |

**WORKFORCE**

| | |
|---|---|
| Total number of employees | 2,696 |
| Number of U.S.-based employees | 959 |
| Number of cybersecurity professionals | 14 |

**PERCENT U.S.-BASED FEMALE EMPLOYEES**

| | |
|---|---|
| Total | 41% |
| Senior management | 23% |
| Investment | 29% |

**PERCENT U.S.-BASED MINORITY EMPLOYEES**

| | |
|---|---|
| Total | 31% |
| Senior management | 16% |
| Investment | 23% |

**ARTIFICIAL INTELLIGENCE**

| | |
|---|---|
| The firm invests in AI investment management technology (Y/N) | Y |
| AI is used in the firm's investment management process (Y/N) | Y |

**Primary custodian:** State Street
**Parent company:** Sun Life Financial
**Chief executive officer:** Steve Peacher
**Chief investment officer:** Randy Brown
**U.S. client contact:** Tim Boomer

## 3 State Street Global Advisors

1 Iron St., Boston, MA 02210; phone: 617-786-3000; www.ssga.com

| | (millions) |
|---|---|
| Total assets managed worldwide | $4,127,817 |
| Total worldwide institutional assets | $2,812,916 |
| Total U.S. client assets | $2,980,638 |
| Total U.S. institutional client assets | $1,743,428 |
| Total U.S. RIA assets | $5,692 |
| Total U.S. tax-exempt assets | $1,350,386 |
| Total U.S. institutional tax-exempt | $1,350,386 |
| Internally managed | $1,350,386 |

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**

| | |
|---|---|
| Equity | 68% |
| Fixed income | 18% |
| Cash | 9% |
| Other | 5% |

*Other type: Commodities, MLPs, real assets, currency, multiasset*

**INVESTMENT STRATEGIES**

| | |
|---|---|
| U.S. equity, active | $1,210 |
| U.S. equity, passive | $537,800 |
| Non-U.S. equity, active | $1,705 |
| Non-U.S. equity, passive | $131,833 |
| Global equity, active | $772 |
| Global equity, passive | $279,682 |
| U.S. bond, active | $3,067 |
| U.S. bond, passive | $244,602 |
| Global/non-U.S. bond, passive | $3,456 |
| Equity real estate, U.S. | $2,846 |
| Equity real estate, non-U.S. | $15,241 |
| Private equity, U.S. ($1) | |
| Commodities | $6,125 |
| Cash | $121,083 |

**ACTIVE U.S. EQUITY STRATEGIES**

**GROWTH**

| | |
|---|---|
| Large-cap | $273 |

**CORE**

| | |
|---|---|
| Large-cap | $755 |
| Small-cap | $160 |
| Broad-market | $22 |

**PASSIVE U.S. EQUITY STRATEGIES**

**GROWTH**

| | |
|---|---|
| Large-cap | $8,698 |
| Smidcap | $86 |
| Small-cap | $274 |

**VALUE**

| | |
|---|---|
| Large-cap | $6,309 |
| Small-cap | $792 |

**CORE**

| | |
|---|---|
| Large-cap | $319,893 |
| Midcap | $13,531 |
| Smidcap | $1,221 |
| Small-cap | $59,560 |
| Broad-market | $96,377 |
| Low-volatility strategies | $2,658 |
| REITs | $12,700 |

**NON-U.S. STRATEGIES**

| | |
|---|---|
| Emerging markets equity | $18,944 |
| Emerging markets equity mandates | $18,837 |
| Emerging markets debt | $933 |
| Emerging markets debt mandates | $933 |

**FIXED-INCOME STRATEGIES**

| | |
|---|---|
| Core | $185,715 |
| Core-plus | $2,816 |
| High-yield | $2,641 |
| High-yield mandates | $2,641 |
| Inflation-protected securities | $22,751 |
| LDI strategies | $730 |

**ESG INVESTING**

| | |
|---|---|
| Total | $650,000 |
| ESG mandates | $266,900 |

**WORLDWIDE ASSETS UNDER MANAGEMENT**

| | |
|---|---|
| Hedge fund-of-fund assets | $74 |

Mutual fund assets $434,491
U.S. 1940 Investment Co. Act $323,453
Sponsored ETFs/ETNs $1,268,011
Actively managed $10,735
Investment outsourcing mandates $157,631
LDI strategies $17,378
Managed for retirement plans $15,860
ESG investing $650,200
ESG mandates $266,900

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**
Total $2,196

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**
Total $680,062
Internally managed $680,062

**WORKFORCE**
Total number of employees 2,488
Number of U.S.-based employees 1,022
Percent employee owned 1%

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total 38%
Senior management 20%
Investment 26%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**
Total 12%
Senior management 8%
Investment 12%

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N) N
AI is used in the firm's investment management process (Y/N) N

**Primary custodian:** State Street
**Parent company:** State Street Corp.
**Chief executive officer:** Yie-Hsin Hung
**Chief investment officer:** Lori Heinel
**U.S. client contact:** Barry Smith
**DC client contacts:** David Ireland, Brendan Curran, Greg Porteous

## 1 Vanguard Group Inc.

P.O. Box 2600, Valley Forge, PA 19482; phone: 800-310-8876; www.vanguard.com

(millions)

Total assets managed worldwide $8,593,307
Total worldwide institutional assets $6,063,130
Total U.S. client assets $8,164,935
Total U.S. institutional client assets $6,063,130
Total U.S. tax-exempt assets $3,293,342
Total U.S. institutional tax-exempt $2,412,821
Assigned to external managers $188,835
Internally managed $2,223,986

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Equity 77%
Fixed income 21%
Cash 3%

**INVESTMENT STRATEGIES**
U.S. equity, active $12,643
U.S. equity, passive $1,547,681
Non-U.S. equity, passive $122,526
Global equity, active $104
Global equity, passive $2,002
U.S. bond, active $55,471
U.S. bond, passive $413,124
Global/non-U.S. bond, active $90
Global/non-U.S. bond, passive $4,306
Commodities $35
Cash $66,004

**ACTIVE U.S. EQUITY STRATEGIES**

GROWTH
Small-cap $2,268

VALUE
Large-cap $7,322

CORE
Large-cap $1,302
Midcap $1,452
Small-cap $299

**PASSIVE U.S. EQUITY STRATEGIES**

GROWTH
Large-cap $40,552
Midcap $3,341
Small-cap $6,382
Broad-market $3,103

VALUE
Large-cap $16,854
Midcap $4,268
Small-cap $7,310
Broad-market $1,620

CORE
Large-cap $456,610
Midcap $74,932
Small-cap $46,751
Broad-market $885,959

REITs $10,254

**NON-U.S. STRATEGIES**
Emerging markets equity $11,304

**FIXED-INCOME STRATEGIES**
Core $459,019
High-yield $1,443
Inflation-protected securities $12,529
Stable value $23,505

**ESG INVESTING**
Total $603
ESG mandates $603

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Mutual fund assets $5,774,084
U.S. 1940 Investment Co. Act $5,345,712
Sponsored ETFs/ETNs $2,514,044
Actively managed $6,492
Investment outsourcing mandates $54,702
Proprietary stable value $45,003
ESG investing $12,501
ESG mandates $12,501

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**
Total $2,196,075
Internally managed $2,032,664

**Chief executive officer:** Mortimer J. (Tim) Buckley
**Chief investment officer:** Gregory Davis

## 48 Voya Investment Management

230 Park Ave., New York, NY 10169; phone: 212-309-8200; www.voyainvestments.com

(millions)

Total assets managed worldwide $321,701
Total worldwide institutional assets $239,505
Total U.S. client assets $263,402
Total U.S. institutional client assets $212,815
Total U.S. tax-exempt assets $158,230
Total U.S. institutional tax-exempt $142,293
Assigned to external managers $15,460
Internally managed $126,833

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Equity 38%
Fixed income 57%
Private equity 3%
Hedge funds 1%
Cash 1%

**INVESTMENT STRATEGIES**
U.S. equity, active $12,183
U.S. equity, passive $14,772
U.S. equity, enhanced index $1,220
Non-U.S. equity, active $1,142
Non-U.S. equity, passive $2,602
Global equity, active $501
U.S. bond, active $56,833
U.S. bond, passive $3,023
Global/non-U.S. bond, active $1,149
Real estate debt $2,901
Hedge funds $1,395
Private equity, U.S. $1,329
Private equity, non-U.S. $1,290
Renewable energy $2,847
Privately placed debt $18,103
Convertible securities $4,206
Cash $1,337

**ACTIVE U.S. EQUITY STRATEGIES**

GROWTH
Large-cap $4,235
Midcap $1,271
Small-cap $667

VALUE
Large-cap $1,019

CORE
Large-cap $2,683
Small-cap $394

**PASSIVE U.S. EQUITY STRATEGIES**

GROWTH
Large-cap $1,588
Midcap $987

VALUE
Large-cap $1,349
Midcap $77

CORE
Large-cap $12,899
Midcap $1,451
Small-cap $851

Low-volatility strategies $808

**NON-U.S. STRATEGIES**
Emerging markets equity $514
Emerging markets equity mandates $514
Emerging markets debt $549
Emerging markets debt mandates $549

**FIXED-INCOME STRATEGIES**
Core $10,748
Core-plus $9,420
Unconstrained $572
High-yield $1,153
High-yield mandates $952
Inflation-protected securities $78
Stable value $13,508
Bank loans $1,901
LDI strategies $6,972

**ESG INVESTING**
Total $79,880
ESG mandates $2
Equity, active $2

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund assets $2,730
Mutual fund assets $167,664
U.S. 1940 Investment Co. Act $75,905
LDI strategies $13,397
Managed for retirement plans $6,972
Proprietary stable value $12,500
ESG investing $233,260
ESG mandates $840

**OVERLAY STRATEGIES:**

**U.S. INSTITUTIONAL TAX-EXEMPT ASSETS (NOTIONAL VALUE)**
Total $36,196

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**
Total $85,930
Internally managed $72,326

**WORKFORCE**
Total number of employees 1,090
Number of U.S.-based employees 935
Number of cybersecurity professionals 104

**PERCENT U.S.-BASED FEMALE EMPLOYEES**
Total 37%
Senior management 27%
Investment 17%

**PERCENT U.S.-BASED MINORITY EMPLOYEES**
Total 31%
Senior management 23%
Investment 25%

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N) Y
AI is used in the firm's investment management process (Y/N) Y

**Parent company:** Voya Financial
**Chief executive officer:** Matt Toms
**Chief investment officers:** Eric Stein, Paul Zemsky, Vincent Costa
**U.S. client contact:** Conor Sullivan
**DC client contact:** Conor Sullivan

## 10 Wellington Management Group LLP

280 Congress St., Boston, MA 02210; phone: 617-951-5000; www.wellington.com

(millions)

Total assets managed worldwide $1,219,910
Total worldwide institutional assets $1,218,957
Total U.S. client assets $990,321
Total U.S. institutional client assets $989,640
Total U.S. tax-exempt assets $247,943
Total U.S. institutional tax-exempt $247,793
Internally managed $247,793

**INTERNALLY MANAGED U.S. INSTITUTIONAL TAX-EXEMPT ASSETS**

**ASSET MIX**
Equity 39%
Fixed income 53%
Hedge funds 8%

**INVESTMENT STRATEGIES**
U.S. equity, active $45,812
Non-U.S. equity, active $25,103
Global equity, active $26,145
U.S. bond, active $107,327
Global/non-U.S. bond, active $24,043
Hedge funds $19,363

**ACTIVE U.S. EQUITY STRATEGIES**

GROWTH
Large-cap $11,183
Midcap $933
Small-cap $1,012
Broad-market $1,739

VALUE
Large-cap $2,621
Midcap $243
Smidcap $502
Small-cap $1,531
Broad-market $1,116

CORE
Large-cap $3,584
Midcap $6,710
Small-cap $9,228
Broad-market $2,206

REITs $48

**NON-U.S. STRATEGIES**
Emerging markets equity $6,698
Emerging markets debt $8,642

**FIXED-INCOME STRATEGIES**
Core $21,574
Core-plus $8,938
High-yield $2,750
Inflation-protected securities $1,215
LDI strategies $49,673

**WORLDWIDE ASSETS UNDER MANAGEMENT**
Hedge fund assets $19,363
Mutual fund assets $673,657
U.S. 1940 Investment Co. Act $673,657
LDI strategies $63,403

**DEFINED CONTRIBUTION ASSETS**

**U.S. INSTITUTIONAL TAX-EXEMPT**
Total $28,740
Internally managed $28,740

**WORKFORCE**
Total number of employees 3,104
Number of U.S.-based employees 2,183
Percent employee owned 100%

**ARTIFICIAL INTELLIGENCE**
The firm invests in AI investment management technology (Y/N) Y
AI is used in the firm's investment management process (Y/N) N

**Chief executive officer:** Jean Hynes
**U.S. client contact:** Scott Geary
**Other client contact:** Scott Geary
**DC client contact:** Amy Morse

# ESG

CONTINUED FROM PAGE 14

portfolios."

As of March 31, Robeco had $199.5 billion in assets under management, of which $194.4 billion was committed to ESG integration.

Looking at an array of asset management firms, *Pensions & Investments* found a sustained commitment to ESG and fighting climate change, but a divergence of strategies on how to accomplish these goals.

Investors have become more demanding with respect to ESG matters. Draeger said her firm has seen a "growing ambition" among its ESG-focused clients both in terms of increased frequency of ESG-focused inquiries, and the level of detail.

"In many cases, investors are no longer looking for a simplistic ESG strategy, but are inquiring about more thematic areas of focus, including decarbonization, biodiversity and impact," she said. "Among ESG-focused clients, we've observed more granular reporting requests on net zero and/or Paris alignment, not only for portfolio-level statistics to measure alignment, but also for stock-level information to build a more comprehensive understanding of why a portfolio's carbon footprint has decreased."

For example, Draeger cited, clients may wish to gauge the extent to which improvements or declines in the carbon footprint should be attributed to the company level, or to exposure changes in the portfolio, or to changes in the carbon profile due to the metrics used.

LACM, which had $34.6 billion in AUM as of Dec. 31, has also observed a greater focus on investment in climate solutions, with "some ESG-focused clients looking to expand beyond a low carbon or decarbonization approach and embrace active investment via solutions as part of a Paris-aligned strategy," Draeger said. "This has been accompanied by a growing interest in complementing more backward-looking carbon data with forward-looking metrics on climate-related risks and opportunities."

LACM, she added, firmly believes that a successful climate strategy combines both a decarbonization glidepath and targeted investment in climate solutions to best capture potential long-term growth opportunities related to climate, while also protecting against downside risks.

### Geographic differences

A spokesperson for Principal Asset Management said that as client values and objectives differ around the world, ESG themes and emphases vary by geography.

"Our U.S. clients are most interested in governance issues, diversity and inclusion, and active engagement," said the spokesperson. "Our European clients tend to inquire about climate mitigation and transition strategies. Our Australia and New Zealand clients value human rights and anti-slavery outcomes the most."

As of Dec. 31, Principal had more than 100 actively managed strategies globally that have integrated principles of sustainable investing across asset classes. "For example, we offer global listed infrastructure and global sustainable food strategies for clients who wish to invest in line with those specific themes," the spokesperson added. Principal reported $524.1 billion in AUM as of Dec. 31, according to *P&I* data.

At Kayne Anderson Rudnick Investment Management, most clients want to know how the firm is identifying and assessing the risks and opportunities that come up — i.e., how are they integrating sustainability into the investment decision-making and holding period, said Longinotti.

Kayne Anderson Rudnick had $59.6 billion in AUM as of Dec. 31.

Longinotti explained that his firm uses the Sustainability Accounting Standards Board to help identify material financial risks at the industry level. "We decided to rely on SASB because we felt aligned with how the organization emphasizes the financial impact of sustainability issues — something which is central to our ESG process," he added.

Michael Benabib

**ECO-FOCUS:** Schroder's Marina Severinovsky says the firm is hearing interest in climate adaptation and resilience investing.

While Kayne relies on SASB as a starting point for its sustainability research, "we still conduct full diligence where we look at the company-specific position relative to the given issue and assess anything that could be relevant to an investment thesis," he noted.

"Many of our clients share this perspective and appreciate the mosaic that has to be created in making an investment decision, where ESG is only a piece of the whole," he stated. "Additionally, we are seeing more requests for details on engagement efforts: how do we engage, what is a threshold for engaging with management, and how do we measure progress for engagements over time? As we are in the beginning of formalizing our engagement efforts, we typically say we are only focusing on proactive engagements at this time, for example, responding to controversial proxy votes, questioning them about an acquisition target or decision, or bringing up specific allegations of impropriety we have uncovered in our research."

### More granular strategies

Aside from climate change, the other top areas of focus at Schroders, from both a research and engagement standpoint, are nature/biodiversity, human rights, human capital, DEI and governance, Severinovsky said. For example, Schroders has made a commitment to eliminate commodity-driven deforestation across all of its investments by 2025, she noted. She also indicated that Schroders holds a majority stake in Swiss-based BlueOrchard Finance, an impact investment manager with $875 million in AUM.

"We define impact investment as investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return," Severinovsky explained. "We work with many purpose-led clients that seek to align their investments with their values, helping them to target specific impact outcomes allocating investments across asset classes and geographies."

Another big area of focus for Schroder clients is climate solutions, said Severinovsky, including strategies that focus on corporate decarbonization and those that focus on products and services to aid transition are of interest. "This includes investment in energy transition across the energy spectrum from traditional to renewables, including production and infrastructure," she added.

"This year in particular, we are also hearing more interest in climate adaptation and resilience investing, alongside climate mitigation." In addition, Severinovsky said, there is also increasing interest in nature-focused strategies. "Other thematic areas are also becoming more popular, including strategies aimed at financial inclusion with a diversity or gender lens, and strategies focused on human capital or labor factors, in the context of challenging demographics leading to skilled labor shortages which will challenge companies who are not focused on human capital investments that reduce turnover and increase productivity," she added.

Climate is a core consideration for many of Los Angeles Capital Management's ESG-focused investors. As of March 31, about 51.2% of the firm's clients employed a dedicated ESG approach, with the notable majority of those having some sort of low carbon, or more extensive climate consideration, Draeger said.

"We (also) observe a growing number of ESG-focused investors seeking to deploy a thematic approach," Draeger noted. "Clients continue to seek climate solutions to decarbonize their portfolios and are increasingly inquiring about impact strategies which generate positive, measurable social or environmental impacts alongside a financial return."

Kayne Anderson Rudnick opted to develop a proprietary ESG research and rating methodology rather than rely on third-party ratings, primarily because of its focus on small- and midcap companies.

"There has historically been a coverage gap in this area, forcing third-party research analysts to make estimates based on imperfect data," he said. "These estimates can have a natural large-cap bias based on availability of information at large-cap companies who have dedicated sustainability teams that can do a much better job assessing, disclosing, and managing their sustainability information."

The ratings, Longinotti believes, are somewhat correlated with the availability of data disclosed and therefore have limited investment value. "We don't want companies, particularly smaller businesses without the dedicated resourcing, to be unfairly penalized because of their inability to meet a ratings agencies checklist of sustainability criteria," he added.

### Client choice at BlackRock

Perhaps no asset management firm has been more embroiled in controversy over ESG issuers than the $10.5 trillion behemoth BlackRock.

In response to a *P&I* survey question on how a manager differentiates its ESG strategy, a company spokesman noted that client choice is a key component in relation to sustainable investing.

"We offer choices in investment products and portfolio construction which include dedicated sustainable products and solutions, with a combined $802 billion in sustainable assets under management," they said in the *P&I* survey. "Sustainability can be a driver of investment risks and opportunities. We incorporate them in our firmwide processes when they're material."

Moreover, BlackRock's ESG/sustainable mandates soared by 36.7% over 2023 to nearly $802 billion. ■

# ETFs

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a firm co-founded by legendary investor Jeremy Grantham.

"Well, I think we have the advantage that we're pretty well known," said Tom Hancock, head of GMO focused equity and a portfolio manager of QLTY, when asked what drove the fund's asset gathering success. "And there are a lot of people who know who we are, and yet didn't previously have the accessibility for small … amounts of money."

While GMO offers mutual funds, "they're really institutional vehicles" with very high minimums, he said.

"A lot of the assets in the strategy actually come from people we have direct relationships with, so family offices, RIAs, that kind of increasingly institutional-style investor, but they're taxable money," Hancock said. "So, the ETF as a vehicle has a lot of appeal to them."

In some cases, they are actually already investors in the mutual fund, he said, referencing the $9.9 billion GMO Quality Fund. As Hancock noted in an earlier interview, both the ETF and the mutual fund are run by same team and that the key difference between offerings is that ETF invests solely in U.S. stocks.

"It's not so much that they're switching," Hancock said, adding that of itself would be a taxable event. "But if they're an adviser who's getting new flows in, they'll redirect those flows into the ETF as a more suitable vehicle for them."

The ETF has also drawn interest from endowments, which surprised Hancock because he thought of ETFs as most suitable for taxable investors.

"But we've found that even endowments that are big enough to meet our minimum and who don't really have a tax issue, they just like the convenience of ETFs," he said.

Hancock declined to name those endowments.

# Aganga

CONTINUED FROM PAGE 13

commitments to Mercer Private Investment Partners VII. For PIP VII, endowments, foundations, insurers and other clients represent approximately 50% of capital raised.

This type of offering is what Aganga said the firm can now open to Vanguard clients, who did not have the access to these suites of strategies before, she stressed. "Some clients want a sliver, we have the spectrum," she said.

### Vanguard Integration

It's the same with hedge funds.

"We have hedge fund strategies and other programs that have been around for many years. The team managing that has been around a long time. Constructed well, hedge funds offer diversification that's hard to see in bonds. We have specialized teams that put those together, with lower correlation to equities and bonds. And more recently, in the past few years, with equities and bonds going down together in 2023, they're more correlated."

"Part of why we're so successful is we have the infrastructure to do more than others could. We've done it for so long. We can spot style drift," she said.

**'This was an opportunity for clients with Vanguard to have the opportunity to have more if they want. We want them to feel like they have access to different types of investment strategies, which currently they don't.'**

MERCER'S **OLAOLU AGANGA**

About 120 Vanguard employees joined Mercer, and are based in Mercer's offices in King of Prussia, Pa., and Phoenix.

Aganga outlined the ongoing integration of Vanguard OCIO clients into Mercer.

"We strongly believe there's a place for both active and passive management in portfolios. Clients are on a continuum. This was an opportunity for clients with Vanguard to have the opportunity to have more if they want. We want them to feel like they have access to different types of investment strategies, which currently they don't. From a portfolio construction perspective, the universe those clients had was limited by the platform. Now, it's an opportunity to come to the largest OCIO platform."

Nonprofits tend to have a 5% real spending rate, "so that means their investment appetite into alternatives tends to be higher. They need to generate those returns to pay out from portfolios. We have a lot of new clients onboarding looking at alternatives, wanting to learn," she said.

Private credit really came out of the global financial crisis, Aganga said, and interest has grown. The other component that helps investor appetite "has to do with the strength of the debt covenants. Private credit is negotiated bilaterally. The types of protections put into these structures, it's very strong and very well thought out and could be stronger than public markets.

"As a result, we see less defaults in that space. If you combine higher yields and higher returns with fewer

**CONVENIENCE MATTERS:** GMO's Tom Hancock was surprised by the interest in ETFs by endowments.

### 'More choice' for investors

Like GMO, Dimensional is also among the growing list of firms seeking exemptive relief to offer ETF share classes of mutual funds. In fact, Dimensional filed its application in July, just months after Vanguard Group's patent expired in May 2023.

Gerard O'Reilly, Dimensional's co-CEO and co-chief investment officer, also urged the SEC to grant Dimensional's application for exemptive relief, in a May 21 comment letter to the SEC written in support of a proposed rule change filed by Cboe BZX Exchange.

"First, the ability to offer funds with both ETF classes and mutual fund classes would give investors more choice," O'Reilly said in the letter.

While investors are increasingly choosing ETFs, they may also prefer to continue to hold mutual funds for a variety of reasons, he said.

"For example, an investor may wish to hold an ETF in their brokerage account and a mutual fund pursuing the same strategy in their 401(k) account, as 401(k) plans do not typically offer ETFs as investment options," O'Reilly said.

In addition, it is Dimensional's understanding that some mutual fund investors — many of whom might have started investing decades ago — may now rather hold some or all of their investments in ETFs, the letter said. If those investors sell their mutual fund shares to purchase shares of an ETF pursuing the same strategy, "they will incur transaction fees and potentially negative tax consequences in the form of realized capital gains," O'Reilly's letter said.

"ETF classes would solve these issues for these investors by allowing them to exchange from a mutual fund class to an ETF class of the same fund without incurring transaction fees or realizing gains," the letter said.

Finally, while O'Reilly's letter didn't mention Vanguard by name, it said that if investors want the ability to invest in a strategy that offers both mutual fund and ETF classes, their choice is currently limited to one fund group.

"The commission has permitted one fund group to offer ETF classes, and this structure has been very popular with investors, with over $2.5 trillion in assets currently invested in this fund group's ETF classes in the U.S.," O'Reilly's letter said.

Granting exemptive relief that would allow Dimensional to offer ETF classes of mutual funds "would give investors additional investment approaches and strategies to choose from, and greater competition in the market would benefit investors by incentivizing funds to operate efficiently and keep fees and expenses low," the letter said.

For mutual fund companies today, pursuing the ability to offer ETF share classes, is an "intelligent next step," Morningstar's Johnson said. Across the industry, many major fund complexes have been "hemorrhaging assets," he said, adding that active equity funds in particular "have been the epicenter of the bleeding."

"So, this can help, in some cases, at least maybe slow — if not altogether maybe halt — instances of money just simply going out the door and really just puts that money in a new wrapper that in many cases is fundamentally just more compatible with the way that investors are building portfolios today," he said. ■

defaults, it's an area we're seeing more and more clients look to as they think through private market portfolios," she said.

Returns can range up to the high teens, depending on the spectrum of credit and "your comfort level," Aganga added.

### No conflicts

Aganga also highlighted what she said is a lack of a conflict of interest surrounding its OCIO advice to clients.

Mercer's open architecture platform means "we don't have the conflicts. Within Mercer we don't have direct products or funds. We have experts doing research and diligence. Our job is to provide the best recommendations. We're agnostic to firm. We see them all, we know them all. Our goal is to find and recommend appropriate managers. If a client is looking for teens returns, has more comfort with illiquidity, then we recommend one over another.

"Clients have specific comfort levels. We work with clients to understand how it translates to an investment outcome, and we match it up. A client might say I want 15% returns with very little risk. It comes back to our consulting DNA."

### Pension fund worries

Aganga said pension fund clients today mainly worry about four areas: "the journey planning, the return-seeking aspect, liability hedging and governance. That's constantly top of mind. Where we are today with rates, we have a good number of pensions sitting on a surplus. It's a good problem to have."

Among governance issues, "its everything from stakeholders, roles and responsibilities. So, for example, making sure from asset-liability perspective, the model is clear. Have you thought through who would make decisions as [the plan] gets to the end of life, to terminate, hibernate, etc. Within the organization, do they have a big enough staff to communicate that — the clarity of roles and decision-making."

Mercer's OCIO business continues to aim for growth. "It's very public we have aspirations to be top 10 investment firm. That will happen by us competing and winning business, and also inorganic opportunities we've made clear we're open to. Those come in various forms, like Vanguard's OCIO business, which they were shopping. It's very complementary to what we're doing already as a firm." ■

The Largest Money Managers **ETFs**

# Avantis CIO embraces his Dimensional DNA, low fees as firm rises in active ETFs

**By Kathie O'Donnell**

Three firms dominate actively managed U.S.-listed equity ETFs, and two of them have someone in common: Eduardo Repetto.

Repetto is chief investment officer at Avantis Investors, an American Century Investments unit that didn't exist prior to 2019 but that now ranks as the third-largest player in active equity ETF assets behind Dimensional Fund Advisors and J.P. Morgan Asset Management, according to Morningstar.

Before being hired to launch Avantis in 2019, he was co-CEO and co-CIO at Dimensional, which currently manages more than $700 billion in assets across ETFs, mutual funds and separately managed accounts. Repetto, who rose through Dimensional's ranks after starting in research there in 2000, resigned from Dimensional in 2017.

After leaving, Repetto "did nothing for a couple of years," he said. Nothing, that is, apart from dad duty. "I took my kid to school — my little boy, I never took him to school, so I took him to school," said Repetto, a Ph.D. in aeronautics from the California Institute of Technology.

Then Repetto, who at that point considered himself retired, got a call from someone he's known for a while — Victor Zhang, chief investment officer and senior vice president at American Century Investments.

"One day Victor called me and (said), 'hey, what about if we do something together,'" Repetto said. "My response (was) 'Look, I live in Los Angeles, I'm not moving, so if you are willing to have me in Los Angeles and if you are willing to have low expense ratios — because for me it's fundamental, the low expense ratio — we're in business.'"

**STEADY HAND:** Eduardo Repetto helped guide Avantis Investors from its 2019 launch into the third-largest player in active equity ETF assets.

American Century already had a presence in Los Angeles, and it was "very committed" to having "very low and competitive fees," he said.

After receiving the call from Zhang in late 2018 or early 2019, "I spoke with a couple of friends that are fundamental to this business," Repetto said, adding that "when you start a business like this, you have to have a portfolio management team that you completely trust."

### Dimensional DNA

A lot of people Repetto trusts have something in common — Dimensional on their resumes.

In June 2019, American Century hired Repetto and Patrick Keating to launch Avantis Investors. Keating, who was named chief operating officer, had previously worked at Dimensional and had served as COO there. Keating also left Dimensional in 2017.

In addition to Repetto and Keating, bios of at least 18 others at Avantis — including those of Chief Investment Strategist Phil McInnis and three senior portfolio managers — show they were previously employed at Dimensional.

Dimensional, which according to its website has more than 1,600 employees across 15 offices globally as of March 31, declined to comment. Dimensional launched its first ETFs in November 2020.

So far, Dimensional has converted seven tax-managed mutual funds with assets at the time of their conversion totaling $44.6 billion into ETFs.

As of April 30, Avantis' assets under management totaled $42.7 billion across ETFs, mutual funds and separate accounts. ETFs represented the bulk of those assets at $39.9 billion.

American Century also offers American Century-branded ETFs, which as of April 30 had $3.1 billion in total assets. As of April 30, American Century had $236.4 billion in total assets under management.

The most expensive offering among Avantis' 28 ETFs and eight mutual funds is the Avantis Emerging Markets Small Cap Equity ETF, which has an expense ratio of 0.42%. Several Avantis ETFs— both equity and fixed income — as well as some of its mutual funds have expense ratios of 0.15%, its website shows.

"Our job is to systematize active management, and for that systematizing active management you need data and science to apply to the data to give you better security selection and better security weighting," Repetto said.

On a daily basis, Avantis' systems — quantitative computer models using market and financial data — try to identify attractively priced securities such as shares of companies with good balance sheets and cash flows that are trading at low prices, he said. While Avantis portfolio managers make the final decisions regarding security selection, systematization reduces the time they need to spend analyzing securities or data, Repetto said.

"If we systematize active management, we can analyze more securities — at lower cost because we need less people — on a more frequent basis," Repetto said. "The more you can systematize, the more efficient that you become, and you can add value without increasing your costs."

That greater efficiency achieved via systemization allows Avantis to provide lower expense ratios to its clients, he said.

"Everyone wins," Repetto said.

### No. 3 in active equity ETFs

Dimensional ranks as the biggest player by far when it comes to U.S.-listed active equity ETF assets, with about $124 billion as of March 31, according to Morningstar data. J.P. Morgan Asset Management ranked a distant second with about $60 billion of such assets, followed by American Century in third place with about $40 billion, of which about $39 billion was Avantis.

Avantis "followed in many ways the Dimensional blueprint for success," said Bryan Armour, director of passive strategies research for North America at Morningstar Research Services, a Morningstar subsidiary.

"There are strong parallels between the two," Armour said. "And we do think highly of Avantis and Dimensional."Both Avantis and Dimensional have a "very academic approach" that tilts into factor exposures such as value and profitability that have historically beaten the market in the long run, he said. In addition, both Avantis and Dimensional have well-diversified portfolios, which allows them to "go into different areas of the market that other active ETF managers might struggle with capacity in," Armour said.

For example, in small-cap value ETFs, "Avantis and Dimensional hold the vast majority of the assets," he said. "And that's because their diversified portfolios allow them to have significantly more capacity than a concentrated discretionary active ETF would have," Armour said, adding that unlike mutual funds, ETFs can't close to new investors when assets get too high for managers to effectively deploy their strategies.

The $11.1 billion Avantis U.S. Small Cap Value ETF, known by the ticker symbol AVUV, returned nearly 23% last year, outpacing the nearly 17% return of its average U.S. small-cap value category peer, according to Morningstar. AVUV was up 2.56% this year through May 6, compared with a 2.05% gain for the category.

AVUV has a 0.25% expense ratio. That compares with a 0.66% average expense ratio for active U.S. ETFs overall and a 0.65% average expense ratio for active U.S. equity ETFs, according to Morningstar.

"As research indicates, a fund's fees are the best predictor of future success," Armour said. ■

# Artificial

CONTINUED FROM PAGE 3

structures.

The firm seeks to continue innovating in the investment management space with the help of AI. For instance, Philps said Rothko has been researching topics within sustainable investing, and it's using large language models to extract structured data from "vast amounts of text information to drive a deeper understanding about controversies in the ESG space."

For other firms such as CBRE Investment Management, AI is used "from a point of sustainability," said Ampily Vijay, chief digital and technology officer.

Her team identifies how the firm can bring the technology into different areas of the business to grow revenue and increase efficiency, and she said this also serves as a way to "continue to motivate our employees and our stakeholder base."

"We have to be solving for a problem when we use this technology," she added. "Otherwise, there is a lot of cool stuff that you can do, but in particular, you might not be adding value to your stakeholders. That's where I think real strategy drives the usage of AI."

The New York-headquartered real assets manager had AUM of $147.5 billion as of Dec. 31.

Among those who said they use AI, managers said the technology is helping them sift through data and news coverage as well as identify investment opportunities. Among generative AI applications, they mentioned using Microsoft Copilot and Microsoft Azure OpenAI Service the most.

The technology "will drive productivity and insights and will ideally help modernize many of the processes that are inside an asset manager," said Kate Burke, president at Allspring Global Investments.

But she noted that the money management industry "is a relationship business," which requires "knowing your client and having those in-person discussions that pull apart the needs of you as an individual or you as a pension."

"I don't know that AI will ever fully pick up on that," she added.

The Charlotte, N.C.-headquartered multiasset firm managed $517 billion in assets as of Dec. 31.

While firms have been increasingly assessing AI's capabilities, they have also been approaching the technology cautiously. Investment professionals said they see a continued presence of AI in the asset management industry, but it's up to humans to decide how the technology will play a role at their firms.

"We are equally, if not more convinced, that ultimately, the value and the risk will come down to judgment made by human beings at the back end of any work processes, including those that are on the AI front," said Ted Maloney. Currently chief investment officer of MFS Investment Management, he will become the Boston-based manager's CEO on Jan. 1.

"We have always been about making sure that we take all the tools at our disposal, analyze which ones can add value to our clients, which ones can't and be really thoughtful about how we can put those together to deliver results for clients," he added.

MFS managed $598.1 billion as of Dec. 31.

### Evolving definition

Since *P&I* reported on firms that use AI in the waning days of the dot-com bubble, the technology has significantly evolved. Likewise, so has the definition of AI.

Alec Crawford, founder of Artificial Intelligence Risk, a software platform that handles governance and cybersecurity for AI systems for companies including asset managers, said that when computers began playing chess, people would say "it's AI, it's incredible." But the definition changed when ChatGPT showed it's capable of things such as talking, as well as writing and editing.

Having studied computer science and written a thesis on AI as a student at Harvard University, Crawford has observed the progression of AI in the money management industry. When he served as a vice president at the Goldman Sachs Group in the 1990s, the company was starting to use "simple algorithms" that would count as AI, he said.

"My belief is that within the next decade, AI is going to become foundational to the investment management business," he added. "If you're not doing it 10 years from now, you're probably not in business."

One new form of AI that managers said they use today is robotic process automation, which carries out a process by abiding by a sequence of rules. These rules are determined by a human who writes the code for the process.

MFS has been using robotic processing automation for its "functional workflows," Maloney said. Additionally, in its survey response, Russell Investments said it has experimented with automation for request-for-proposal writing. The Seattle-headquartered investment manager had $297.6 billion in assets as of Dec. 31.

Another form of AI, machine learning uses "self-learning models based on historical data and can — to an extent — predict outcomes," CBRE IM's Vijay said.

Although the algorithm is also developed by humans, by consuming old content such as text and data, machine-learning AI learns to produce subsequently with less human intervention, even mimicking a human brain.

Following the release of ChatGPT, generative AI has been the main focus in conversations about the broader technology. CBRE IM's Vijay added that this kind of AI "takes it a step further, and it can generate content based on pretrained models."

MFS has worked with programs at the Massachusetts Institute of Technology, Cambridge, starting in 2016 for touch points, including talent and research, said Maloney. MIT launched the Generative AI and the Work of the Future working group, in which students, faculty, companies and nonprofit organizations discuss how the technology is being used the impact it has on working people.

### Problem-solving

"We don't use technology for technology's sake," Vijay said. Instead, CBRE IM looks at AI from a business perspective, asking "how can it solve our business problems?"

The manager uses AI for summarizing content from unstructured data, of which it has more than 39 billion data points. Vijay added that time spent on abstractions — particularly for summarizing unstructured data from leases, contacts and invoices — have been reduced by 25%.

Similarly, Loomis, Sayles and Co. noted in the survey that "AI-generated text can be found in client meeting books for nearly 1,500 of (its) accounts," streamlining time spent by staff on writing.

The Boston-based active equity and quantitative manager — which had an AUM of $335.2 billion as of Dec. 31 — is also one the firms that said they're using AI to monitor large volumes of investment data.

Loomis Sayles uses the technology as a clustering algorithm that identifies trade opportunities. It also has algorithms to clean data, fit a model and help interpret results.

Nomura Asset Management said it uses an AI model for stock selection. Made using deep-learning, the manager and adviser's model can capture the straightforward relationship between the investment factors for each stock and its future returns, in addition to the nonlinear relationship between this data.

The Tokyo-headquartered firm — which managed $570.5 billion in assets as of Dec. 31 — is also one of the survey respondents that said it's using AI to read financial news and capture data on market sentiment.

Using a machine-learning method, another model created by Nomura analyzes Japanese survey data and evaluates the sentiment in a sentence of an article. Similarly, Allspring uses natural-language processing tools to digest financial news to allow portfolio managers to save time and "incorporate their own views" for analysis, the firm said in the survey.

In addition to leading Rothko, Philps is also the co-leader of AI research at the University of Warwick's Gillmore Centre for Financial Technology, and the team he works with provides academic research for Rothko.

"In terms of how AI has evolved within Rothko, I've always believed, and so we've all believed that it's all about design, architecture and thought that drives an investment process," Philps said. "If you have a badly designed and badly thought-out process, it's never going to work very well."

One of his doctoral students and a collaborator is also looking at how generative AI can be "used to imagine the counterfactual," or predict what would have happened in alternate scenarios, such as if the Federal Reserve had hiked interest rates twice instead of four times in 2023.

This kind of innovation "can help you understand what would have happened if this specific regime shifting event hadn't happened, and that's critically important to have a better understanding of risk," Philps said.

### Early days

As managers told *P&I*, generative AI is still in its early days. Some firms have formed governance or steering committees to assess the ethical issues of employing the technology.

MFS' Maloney said the firm "built a small Gen AI strategic working group," in which he is the executive chair. Adhering to "very rigorous governance structures," the group's members are "thinking holistically firmwide about some of the big decisions" that come with the technology before implementation.

"We start with a conservative view on most new technologies and major change agents — in the financial markets and in all markets — so for us critically, security and ethical and moral considerations are top of mind," he noted.

The firm is "making sure that we're always asking those questions before we proceed further" and "proceed to the work of deciding where we can — and should be — investing resources and analytical capabilities on behalf of delivering excellent results for our clients that drive all of our decisions."

Firms said they have guidelines and policies for using AI, and some added that their employees participate in training sessions to understand the associated risks.

CBRE IM is one of the managers that has established training for AI, but "we also do have many curated trainings for our business, strategy and security teams as well," Vijay added.

Executives on those teams will look at how they can employ one tool to get a key performance indicator from "A to B," or a "particular efficiency from X to Y. That's a different way of looking at it, then you need to provide a different set of trainings for them to say, 'OK, if you have this problem, this is how AI could help you,'" Vijay said.

# Some managers 'fake it to make it' when it comes to AI – Rothko chief

Artificial intelligence is the buzzword across all industries, and money management firms are assessing the ethics of implementing AI in their strategies.

But among ethical concerns the industry faces, the main one is managers who say they're using AI but aren't really, said Daniel Philps, the London-based head of Rothko Investment Strategies. That's a strong belief of his, at a time when clients want to gain access to "the latest and greatest way of investing."

He holds a doctorate in computer science from City, University of London, where he concentrated his studies on AI and deep learning. His firm was created in 2013 as an independent unit of Mondrian Investment Partners, which was one of the respondents in *Pensions & Investments'* latest annual survey of money managers that said they use the technology.

"The vast majority of investment managers out there, they talk a good game. They talk about using AI," Philps said. "What we know — from our connections in the industry, we speak to all of these allocators and the major consulting firms — is that very few managers are actually leveraging AI at all … To our knowledge, there are very few groups outside the hedge fund space and outside of Rothko who are using AI at the core of their business."

**OVERSTATING:** Rothko's Daniel Philps said some managers are not actually using AI as much as they say.

"If a manager is overstating their use of AI, which we believe many are, that's clearly highly unethical behavior, so the main concern is, I'm going to call it 'fake it to make it,'" he added. "We see it in various parts of the industry."

Philps spent the last 25 years as a quantitative and systematic investor and also serves as co-leader of AI research at the Gillmore Centre for Financial Technology at the University of Warwick.

Described by Philps as a "fabulous force multiplier," his team at the University of Warwick also works with Rothko to produce research on the academic side. This enables the firm to stay ahead in terms of cutting-edge academic and commercial AI research.

It was "an explosion of high quality data of all types" and "a revolution in computing power" that has drove Rothko to where it is today.

Philps' journey with AI and money management industry began 20 years ago, when he was a portfolio manager on the global fixed income and currency side at Mondrian.

"We were using basic forms of machine learning to understand how different companies related to each other," he said. "We were using clustering techniques."

When Mondrian created Rothko, Philps' method of stock selection using machine learning "married up beautifully" with the vision of David Tilles — then-group chief investment officer and current non-executive chair of Mondrian — as to how a public equity fund and international emerging market equity fund should be run: in which AI is driving a more powerful systematic approach.

"What we've been able to do is digest huge amounts of information and draw what we consider fundamental insights about those companies, but it's using a form of artificial intelligence that can find the interactions between all of these terms and direct us toward the best investments," he added. "It sounds complicated, but it's actually fairly straightforward."

When other managers think of AI, Philps said there's a misinterpretation that it's "just a form of cheap machine learning that they can pass factors into, and it will give you a return," but that's not what AI means when his team uses it. Instead, "AI is a system that evolves and changes over time, and that system informs us as a portfolio management team," he said.

"The beautiful thing about AI is that, if applied correctly, it should be able to learn in a causal way. It's really important," he added.

By causal way, the firm's system learns changes in the market, including changes in behavior and changes in things that are important, such as what reflects a company's ability to continue to grow cash flow and generate alpha.

"If you can get your system to identify causal patterns, things that a company does and the way it does it, that naturally results in good outcomes, or conversely bad outcomes," Philps said. "It means that you no longer need a team of 40 Ph.D.s data mining to try to find wonderful signals of quality … That's a huge efficiency saving."

As of Dec. 31, Mondrian had $49 billion in assets, including $28 million from Rothko.

— CARYL ANNE FRANCIA

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Additionally, some managers have blocked internal use of certain AI products like ChatGPT. AI Risk's Crawford said the concern is that managers want to avoid disclosing customers' personal data on public versions of the product.

"If you typed something in (ChatGPT) that's confidential, first of all, it's sitting on OpenAI servers, so you now breached whatever confidentiality agreement you have with your client because it's not segregated," he added. "The other issue is OpenAI can now use that (information) to train their model on its next version … It can be in there because it's training on my data."

The concern gives way for managers to create and use in-house AI products, or obtain an enterprise-grade version of ChatGPT.

For instance, Lazard Asset Management has a brand-specific generative AI called "Lazard Asset Management ChatGPT." The product provides users with information in the form of data or text, the firm said in the survey.

In its current version, Lazard ChatGPT uses publicly available data, but it does not give the application access to the firm's proprietary information. While responses from the tool may play a role in the investment considerations of an analyst or manager, Lazard noted that it "will not rely exclusively on ChatGPT to recommend or make an investment for a portfolio," still keeping the human aspect of the investment process in focus.

The New York-based manager had $207 billion in assets as of Dec. 31. ■

# Cyber

CONTINUED FROM PAGE 13

about how to best approach cybersecurity," which means working on cyber issues across departments and utilizing third-party experts and system providers. Aristotle's six affiliates had $90 billion in combined AUM as of March 31.

"We believe that having a comprehensive program is really our best defense," Quan said, emphasizing things like governance, engineering and understanding the threat landscape. He added that the company believes "cyber is everyone's responsibility."

Santhosh Keshavan, executive vice president and chief information officer at Voya Financial, had a similar view.

"Everybody has a role to play in this," Keshavan said. "It will take a village to stop because all you need is one weak entry point and your security can be compromised."

Keshavan added that the "most important thing" that Voya does to address cybersecurity threats is employee education and training, which includes conducting simulated attacks. Voya Investment Management had $321.7 billion in AUM as of Dec. 31.

### New threats

Besides social engineering, GW&K's Roberts highlighted imposters and zero-day events as the next big threats in cyber.

Imposters are "someone (who) buys a domain name that is very similar to your domain name," like including an extra vowel, and then uses that domain to try and gain money or credentials, according to Roberts.

While GW&K utilizes software to alert them whenever a similar domain name is registered, "the problem is these domain names are usually registered in foreign countries and they're very, very difficult to shut down," Roberts said.

Zero-day events occur when a software company realizes a vulnerability in their system, posts a patch to fix that vulnerability, and "before (they) have time to put that patch on … somebody in the dark web will reverse engineer that patch, figure out what the vulnerability is, and then go ahead and sell that on the dark web," Roberts said. The event gets its name from the speed in which a patch is exploited, before companies even get the chance to use it.

To try and prevent those events, GW&K is "in tune with every vendor and as soon as the patch comes out, we are installing it (that) moment," he said.

Keshavan also acknowledged zero-day events as a major threat and said Voya works to quickly institute patches as well.

Technological vulnerabilities are not new, Keshavan contended, "but the intensity of it has increased and the threat actors are getting very sophisticated, so it's becoming harder to sort of identify what's malicious vs. not."

### AI and cybersecurity

Aristotle's Quan said he believes the "primary driver" of new cybersecurity threats is generative AI.

"We can be certain that nation-states, organized crime, opportunistic types of adversaries … they're (all) utilizing generative AI for more tailored, more specific types of phishing attacks," Quan said.

Phishing is a type of social engineering in which an attacker pretends to be a trusted source to trick victims into clicking on links, sharing personal information, sending money or a different action that benefits the attacker.

Generative AI allows for the use of voice and video when phishing, in addition to more traditional texting and emailing tactics, according to Quan.

Voya's Keshavan acknowledged that bad actors can utilize AI in malicious ways, which means ramping up protection is important. But on the other hand, "AI has given a lot of benefits to customers and employees when it's done right," Keshavan said, and Voya's investment management business has been using it for the past 10 years or so.

At Aristotle, "we are taking a measured approach to how we adopt generative AI," Quan said, which includes establishing a strong AI policy.

Specifically, Aristotle is focusing on the data sources that AI utilizes, and ensuring the company has a closed-off environment, as AI has a "publicly available nature" through things like ChatGPT, according to Quan.

The company is also training its employees on how to properly use AI, as well as using AI for its cybersecurity defense, Quan said.

Todd Conklin, chief AI officer and deputy assistant secretary for cybersecurity and critical infrastructure protection at the Treasury Department, has emphasized the importance of AI for cybersecurity defense.

"You really can't have a modern cybersecurity defense posture without leveraging AI," Conklin said at the Investment Company Institute's 2024 Leadership Summit on May 22.

But using AI for cybersecurity defense still requires the help of humans, Quan contended.

"AI can streamline a lot of stuff (and) can make things much more efficient, but we feel that it's not a replacement for a human," Quan said, explaining that they still need cyber engineers to "apply the right context" to each situation.

### Managing the risks

On March 27, the Treasury Department released a report warning that financial institutions are increasingly vulnerable to cybersecurity attacks fueled by AI.

The department created the report in response to President Joe Biden's executive order, issued in October, which called on the Treasury secretary to lay out best practices for financial institutions to manage AI-related cybersecurity risks.

According to the report, "financial institutions should expand and strengthen their risk management and cybersecurity practices to account for AI systems' advanced and novel capabilities, consider greater integration of AI solutions into their cybersecurity practices, and enhance collaboration, particularly threat information sharing."

Aristotle's Quan noted that "cybersecurity starts at the top," as it's up to board executives to decide how to allocate resources.

"We're fortunate here at Aristotle to have a board that is focused on technology and is focused on protecting the firm and our clients," he said.

A 2023 survey from Deloitte found that cybersecurity budgets as a share of total revenue in the investment management sector make up less than 1%, only slightly increasing to 0.49% in 2023 from 0.4% in 2021.

In the retirement world, some plan sponsors are now turning to external cybersecurity firms to supplement their own cyber programs, which Quan said seems to be a trend for money managers, as well.

"I think firms of all sizes are recognizing that they can't do this alone (and) that they have to leverage this network of third parties that are out there," Quan said. ■

# Concentration

CONTINUED FROM PAGE 3

metrics," said O'Meara. "The larger firms can have greater resources to respond to that and provide that type of information."

Dave Keil, partner at Aon Investments USA, said continued derisking by corporate DB plans has resulted in fewer managers overseeing those assets.

"If you had 70% in equities, you're likely to use a lot of managers," said Keil. "If you now have 70% in investment-grade fixed income, you can get great diversification with just three or four managers."

Those three or four managers are more likely to be the larger managers, he added.

### Differentiation

O'Meara said the intermediate- and smaller-sized managers need to differentiate themselves from the larger managers. He said he tends to see more of an alignment of interests in smaller managers.

"(That includes) things like greater ownership of the firm within the investment team, or the greater longevity of the portfolio managers," said O'Meara.

One of the trends leading to consolidation among managers is merger and acquisition activity among larger managers, who are buying up smaller firms in order to package their offerings in a suite of solutions.

"(Middle-market) managers do need to find how they're going to participate in that trend," said O'Meara. "So are they going to partner with other asset managers or are they going to partner with an OCIO solution?"

The growth of the OCIO market may provide smaller managers an outlet for opportunities, he said. Investment consulting firm Mercer is one such OCIO provider.

As of Dec. 31, Mercer reported $310.8 billion in assets managed for non-government retirement plans, up 16.3% from the previous year. That AUM will only grow this year after the firm closed its acquisition of Vanguard Group's OCIO business in March.

Jay Love, U.S. chief investment strategist at Mercer, said in an interview, "You're going to find probably more opportunity for alpha with midsize managers."

"Once they get too big, obviously it's tough to keep generating alpha," Love said. "There are exceptions, of course, some of which I'm sure have been reported, but they're definitely few and far between."

Arnold Adler

**ROOM TO GROW:** Willis Towers Watson's David O'Meara said the burgeoning OCIO market may open up opportunities for smaller managers.

### Alpha more consistent

The ability for the middle-market managers to generate alpha more consistently than the largest managers is their greatest selling point, said Love. He said Mercer's healthcare clients and wealth management clients and their foundation and endowment clients are showing particularly strong interest in finding those types of active managers.

The disparity in AUM growth in 2023 is far smaller among managers of foundation and endowment clients, according to *P&I*'s survey. As of Dec. 31, the 25 managers with the highest reported assets managed for foundations and endowments reported $700.2 billion in AUM, up 9.1% from the previous year, while the remaining 287 managers reported $307.6 billion, up 8.7% from the previous year.

Investors' level of interest in the kind of active risk provided by middle-market managers has picked up a little bit, said Love.

"We're seeing more interest in what we call values-aligned investing," said Love, "finding somebody who will invest with a philosophy outside of pure returns that aligns with the institution's core values."

"The growing interest in the U.S. in sustainability and thinking about things in that way doesn't necessarily lend itself to driving toward midsize managers, but midsize managers perhaps have more capability to adapt to what clients are looking for," Love said. ■

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# Branding

CONTINUED FROM PAGE 1

funds to sever ties with firms said to discriminate against the oil and gas industry. Enforcement of that law recently was blocked with a temporary injunction by a judge, part of a lawsuit by a pension beneficiary. During the pause the $11.6 billion Oklahoma Public Employees Retirement System renewed a $7.3 billion contract with BlackRock, a money manager blacklisted by the state's Republican Treasurer Todd Ross for allegedly boycotting the fossil fuel industry.

Florida Gov. Ron DeSantis is leading a group of 19 Republican state governors, which was formed to "protect individuals from the ESG movement that threatens the vitality of the American economy and Americans' economic freedom."

Nationally, there is a bill to ban defined contribution plans from considering ESG factors introduced by Rep. Greg Murphy, R-N.C. in March.

### Say no more

Some pension funds and other asset owners have stopped using the term ESG altogether.

CalPERS is no longer using the initials ESG, replacing it with sustainable investment, said Dan Bienvenue, the $485.8 billion pension fund's interim chief investment officer at the Milken Institute Global Conference in Los Angeles in May.

Officials at the California Public Employees' Retirement System, Sacramento, took that step because the term has become so toxic, Bienvenue said.

"I think, unfortunately, ESG has become polarized," Bienvenue said.

But another California pension fund still uses the term ESG.

"ESG is just one of many ways to refer to long-term business risk," said Mindy Tirapelle, a spokeswoman at the $336.2 billion California State Teachers' Retirement System, West Sacramento.

"We do still use ESG when appropriate and expect our team and external managers to adhere to our Investment Policy for Mitigating ESG Risks," she said.

As a global investor with a long-term horizon, CalSTRS officials are "focused on sustainable business practices that lead to global economic growth and prosperity" as well as investment risks, Tirapelle said.

The $54 billion New Mexico State Investment Council, Santa Fe, could soon review its diversity, equity and inclusion policy.

Catherine Allen, chair of the council's governance committee has said she plans to ask her committee and the investment council staff to develop a draft diversity, equity and inclusion policy as part of its work. Any proposal or policy would then go to the full council for additional consideration and possible implementation, a council spokesman said.

"In broad terms, the NM State Investment Council views ESG characteristics as important factors as we assess new investment opportunities, as well as being a key consideration when evaluating our current managers and their performance," the spokesman said.

### Rebrand needed

Money managers are still leaning toward keeping the ESG brand. According to *Pensions & Investments'* latest data, most managers said they still use ESG or environmental, social and governance terminology.

The next most popular term was sustainability, while some managers used both ESG and sustainability.

Some industry insiders say that ESG is in need of a new label.

"ESG certainly needs to be rebranded; What the name insinuates is that it relates to businesses who care more about E, S, and G than they do profits," said Will McDonough, founder and chairman of Corestone Capital, a merchant bank that has worked with private equity firms. "At the end of the day investors want profits and gains, and have a separate pocket for charitable endeavors."

McDonough said that ESG also needs a common definition — or it needs to be abandoned.

"The problem is, ESG has no central office or governing body, or marketing budget centralizing a branding effort and/or standards to adhere to, so therefore, it will never gather enough critical mass to be rebranded," he said.

McDonough added, "ESG should just be called charitable donations, and leave the investment opportunities to those that seek profits and returns, and if you want to back social initiatives, donate to a charity that is in that 'business.'"

**'In my view, the work being done is more important than the label or acronym we choose to describe it.'**

ILPA'S **MATT SCHEY**

There are efforts underway to create common language for ESG factors. Last year, the International Sustainability Standards Board released global sustainability and climate disclosure standards for companies. The standards are designed to communicate sustainability and climate-related risks and opportunities to investors.

Greg MacKinnon, director of research at Pension Real Estate Association, a real estate trade association, agrees that ESG has a branding problem.

"What people call the ESG backlash is real," MacKinnon said. "It's unfortunate that real estate has been caught up in it along with other asset classes."

PREA gives out ESG awards and officials at the industry group, which is made up of asset owners, portfolio managers and others, considered changing the name, "but what do you change it to?" he said.

"What if sustainability becomes the next bad word? Sustainability, responsible investing. It all kind of means the same thing," MacKinnon said. "It's really a branding issue."

PREA executives decided to stick with ESG for now and see how things develop over time, he said.

### Mitigating risks

In real estate, the anti-ESG arguments don't hold water, he said. The evidence is clear: good environmental performance is good for investment performance, a 2022 PREA study showed.

Resistance to the ESG moniker varies from investor to investor, manager to manager, he said.

Rather than calling it ESG, PREA members talk about making sure they have resilient investments and that they mitigate risks and preserve property value over time, MacKinnon said.

"A number of people haven't changed what they do, they changed how they talk about it," he said.

The branding problem puts money managers in an odd spot, MacKinnon said. They may go visit an investor who grills the manager on ESG while yet another investor doesn't want to see the acronym ESG in the manager's presentation, he said.

But even in jurisdictions that are thought of being anti-ESG in nature, some investors will be interested in appropriately designed strategies that will, for example, take measure of the environmental characteristics of properties. These investors consider taking these characteristics into consideration as good investing practices rather than ESG, MacKinnon said.

"They don't call it ESG necessarily but emphasize those characteristics as the ones that will lead to better investment performance," he said.

Among Institutional Limited Partners Association members, some are calling ESG by another name, while others are not, said Matt Schey, managing director for external affairs and sustainable investing at ILPA.

"The organizations (both LP and GP) who have pivoted away from using 'ESG' typically trend toward something a bit more specific and defined, in some cases, breaking the acronym apart," Schey said.

Some are avoiding the term in an attempt to depoliticize the conversation around it, which has become a distraction from the actual work being done, he said.

And location matters. Of the LPs headquartered in Europe, 70% agreed or strongly agreed that ESG commitments influence valuation premiums, according to a 2022 ILPA survey. However, only 38% of LPs headquartered in the U.S. held the same opinions, the survey revealed.

What's more, nearly three-quarters of North American respondents cited the potential for negative publicity as a reason to scrap an investment, while half of European LPs shared this concern.

At the same time, 78% of European LPs considered a firm's lack of desire to improve on poor ESG performance a deal-breaker, compared to only 44% of North American LPs, the ILPA survey showed.

"In my view, the work being done is more important than the label or acronym we choose to describe it," Schey said.

Fundamentally, this is a way for investors to consider material risks through the lens of environmental, social and governance considerations, he said.

"You can call it whatever you want — the true value is how effectively you can connect the processes you have, or say you have, in place to create value for your clients and beneficiaries," Schey said. ■

Michael A. Marcotte

**GETTING TO KNOW YOU:** IFPIF's William Atwood says relationship-building is the first step to deploying capital from the fund's private markets allocation.

# Firefighters

CONTINUED FROM PAGE 1

manage and control their investment expenditures and income," according to the original court filing.

Following a long legal battle, the Illinois Supreme Court in January ruled that the consolidation of investment management responsibilities did not violate the constitution's clause prohibiting the diminishment or impairment of benefits. The lawsuit had delayed the transition of pension fund assets beyond the original deadline of June 30, 2022 mandated by the law.

Following that transition, the firefighters' pension investment fund was able to begin its move from an interim investment policy consisting of a temporary, highly-liquid portfolio consisting of 97% passive equities and fixed income.

Atwood, who was one of IFPIF's very first hires at the beginning of 2020 following the formation of its board, said the interim allocation has done exactly what it was intended to do. "It's long equities, and it's short fixed income," said Atwood. "So we underperformed in a down market but more recently — dramatically — outperformed only because we're heavily weighted to stocks and stocks have run well."

### Long-term allocation

With the interim allocation in place and all assets finally transferred, IFPIF is building out its long-term target allocation, which will include some actively managed public equities and fixed income, as well as a total target of 31% to private markets, consisting of targets of 10% each to private equity and real estate, 7% to private credit and 4% to infrastructure.

Atwood said the key to building out the private markets portfolio was establishing relationships with both discretionary and non-discretionary investment consultants for those asset classes.

"One of the critical issues about private markets is, unlike large-cap equities, we can't just go out to deploy the capital," said Atwood. "It's going to be a lengthy process, but before we can even start that process, we need to have these relationships in place. It's no secret we have a very small staff who made a strategic decision to rely on outside providers." Including Atwood, IFPIF has three investment professionals in its staff.

IFPIF originally issued an RFP in February 2023 for a non-discretionary private markets consultant and three OCIOs to oversee portions of the overall portfolio. In May of that year, the board hired Meketa Investment Group as its non-discretionary private markets consultant, which will work with staff to provide recommendations to the board for half the private equity and real estate portfolios and the entire infrastructure portfolio.

Regarding the choice to have staff discretion over infrastructure, Atwood said, "There's not a large number of providers, it's pretty transparent, pretty easy to get your arms around, so we figured we could do that."

His staff and Meketa then worked together to find OCIOs for the other halves of private equity and real estate as well as the entire private credit portfolio. Atwood said it was "fairly intuitive" how he and his staff determined which private markets investments he felt could remain non-discretionary based on his and his staff's expertise.

"We think we can make decisions on mega-cap private equity and core real estate, as well as the entire infrastructure space internally without paying the cost of the discretionary relationships," Atwood said. Within private equity, smaller deals would go under the auspices of an OCIO, and in real estate, non-core and value-added deals would also be turned over to an OCIO.

"We decided to allocate the entire private credit allocation to one provider, mainly because we felt like an informed discretionary adviser could add value through tilting the portfolio one way or another between more conventional private credit like direct lending and tilting toward more aggressive types of products depending on their view of the markets," Atwood said.

In February, the board hired Adams Street Partners as OCIO to provide discretionary services for the other half of the private equity portfolio and in May, the board hired Townsend Group to provide discretionary services for half the real estate portfolio and RockCreek Group to provide those services for the entire private credit portfolio.

On May 24, IFPIF issued RFPs for open-end infrastructure and real estate managers, and Meketa Investment Group will assist in recommending commitments to the board later this year.

While the work is far from over, Atwood said he remains enthusiastic about being able to build a new pension fund from the ground up.

"To be at this stage in my life and have the opportunity to start up a brand-new pension fund, it's just very fortunate intellectually and professionally," said Atwood. "It's just a great thing, really, and I'm very proud of the work we're doing and I'm very confident we're on the side of the angels. This is really good public policy." ■

# Fiduciary

CONTINUED FROM PAGE 2

partner of Schlichter Bogard, a law firm with a track record of filing lawsuits against employers whose retirement plans it claims have excessive fees and imprudent investments.

Schlichter, a strong defender of the DOL rule, argues that plan sponsors "have a right to believe that the advice they're getting is not advice that's going to make them liable or subject to liability for not carrying out their duty."

The new rule closes a loophole that essentially allowed advisers to avoid their fiduciary duty when giving one-time advice on matters like plan sponsor investment menus and participant "rollovers," a reference to the transfer of workplace retirement plan balances into outside individual retirement accounts or other investments.

Under the old rule, advisers giving one-time advice did not meet one of the requirements of the much talked-about "five-part test" that advice be on a regular basis, thereby skirting the fiduciary question. The new rule changed the definition, so that one-time advice must now also be in the best interest of plan sponsors and participants.

"Before this new rule, advice or recommendations to the plan sponsor on the investment lineup could include things that were more expensive than they should have been," said Kathleen McBride, an ERISA 402(a) specialist at Fiduciary Wise, a firm that shoulders the bulk of plan sponsors' fiduciary responsibility.

McBride explained that while advisers are "supposed to keep an eye on whether participants can get a better share class" in investments in a plan menu, some "probably didn't pay as much attention to that even if they should have" under the old rule.

Despite its protections, the rule has drawn intense industry opposition, with critics decrying the rule as overly broad and unnecessary given numerous other regulations covering the marketplace, including the Securities and Exchange Commission's Regulation Best Interest.

Trade groups in fact have already challenged the rule in court, including most recently a lawsuit filed by nine insurance trade associations in U.S. District Court for the Northern District of Texas. The lawsuit, filed May 24, challenges the rule as limiting consumers' choice of financial professionals.

**LEAD-IN:** Fiduciary Wise's Kathleen McBride said some advisers may not be paying close enough attention to plan menus.

### Small employer impact

Opposition aside, the new rule is expected to have a particularly strong impact on small employers, which typically rely on one-time advice around their plan menus, according to industry observers.

Smaller employers often opt for one-time advice rather than establishing an ongoing relationship with an independent fiduciary, said Joe DeBello, vice president at CAPTRUST, a retirement plan adviser.

"Smaller employers may have limited resources and be more apt to take the path of least resistance," he said, explaining that larger plan sponsors are sophisticated buyers of consulting and fiduciary services and have the resources to form internal oversight committees.

Protecting small plan sponsors is especially important as the industry looks to expand the number of new plans, particularly those offered by small businesses.

The American Retirement Association, for example, supports the new rule in part because it closes a gap that it says would have left millions of small employers and their workers at risk of receiving advice not in their best interest.

"The rule will ensure that advice given to plan sponsors with respect to plan investments under all circumstances is required to comply with the fiduciary standards of ERISA," said Brian Graff, ARA's CEO, in a news release endorsing the rule.

Certain advisers have long been providing plan sponsors with fiduciary advice, but not all, an inconsistency that the new rule corrects.

Firms known as registered investment adviser firms and their advisers have long abided by a fiduciary standard as required under the Investment Advisers Act of 1940. However, RIA firms that are part of — or dually registered as — a broker dealer or an insurance company don't always have to stick to a best-interest standard, McBride said.

"If you are dealing with an independent registered investment advisory firm, they're fiduciaries. If

# Dutch

CONTINUED FROM PAGE 4

according to Fekko Ebbens, head of institutional business for the Benelux region at Neuberger Berman, a U.S.-headquartered investment firm with $474 billion in assets under management.

"(The Future Pensions Act) is a reaction to worker mobility increasing quite quite dramatically. There are a lot of self-employed people in the Netherlands at the moment, and the idea underpinning the DB model that people join a company and work there all their life is just outdated," he said in an interview.

**'The idea underpinning the DB model that people join a company and work there all their life is just outdated.'**

NEUBERGER BERMAN'S **FEKKO EBBENS**

Bas van Ooijen, head of investment management at Pensioenfonds Horeca & Catering, Zoetermeer, Netherlands, with €15.6 billion ($16.6 billion) in assets, noted that his pension fund would rather move to the solidarity option, as would "most industrywide pension funds," he says.

Most of Dutch investment firm Van Lanschot Kempen's clients are planning to operate within the solidarity option, said Johan van Egmond, executive director for institutional relations. The firm has €128 billion in AUM.

The solidarity plan operates as a collective defined contribution model, van Egmond said. It is the replacement option most similar to previous DB plans, although sits with participants rather than employers — and it's proving popular, he said. Sponsoring employers prefer the greater perceived continuity afforded by the solidarity model, he added.

### Active to passive

There is also a shift underway in the Netherlands in terms of investment choices, moving to passive management from active, sources said. This was most evident recently at APG, a Dutch pension investment company and direct subsidiary of Stichting Pensioenfonds ABP, Heerlen, Netherlands, the largest pension fund in the country with approximately €549 billion in assets.

APG's most recent annual results showed a cut to asset management jobs at the firm in light of a move to passive, though it was also confirmed there would be an attempt to reassign these positions where possible.

"It is true that our clients are increasingly looking for index investment solutions with lower costs compared to actively managed portfolios. As a result, APG Asset Management needs to adjust the organization's cost level to the new preferences of pension fund customers. In 2023 we expected that jobs will be lost following our clients' choice for more index investment solutions," a spokesperson said.

With the DC market in countries such as the U.K. known for being capped against the high fees that can be found in active management, it raises the question of whether the shift to a countrywide DC model in the Netherlands is accelerating this move to passive.

According to Ebbens, this is not necessarily the case, as Dutch regulators began to encourage pension funds to switch to passive from active well over 10 years ago. In 2019, Dutch pension funds had 70% of their outsourced equity investments in indexed strategies.

However, the shift does raise an-you're dealing with a dually registered RIA firm that's also a broker dealer, you don't know. You can be getting fiduciary advice or you might be getting advice as part of a sales pitch." she said. "It's very hard to tell."

McBride sees a dire need for the new rule. Without it, "you could have a well-run plan that has a fiduciary that is acting prudently in one firm, and then across the street you could have another plan that is being advised by non-fiduciaries, that is not well run, that is not cost efficient, that doesn't have good fund choices in it that are good for the participants," she said, explaining that the fund choices instead are "good for the people who are recommending them."

**'Bigger issue' than realized**

Experts perceive conflicted plan-sponsor advice as a widespread industry problem.

"It's a bigger issue than people have realized and that plan sponsors have realized," Schlichter said. "I think plan sponsors in some ways are similar to plan participants (in) that they just assume that the advisor is operating in the plan sponsor's best interest."

McBride shares similar views, saying the issue impact small and large plans alike.

"Any size plan can get conflicted advice and you can see that when you look at all those huge plan lawsuits," she said.

Schlichter also agrees that conflicted advice is a problem for both large and small plans. "It wouldn't be accurate to say that large plans or jumbo plans aren't in some cases recipients of conflicted advice," he said.

If anything, he added, the temptation to give conflicted advice is greater in larger plans because the potential fees for advisers are bigger.

"With large plans, if there is a conflict of interest — if there are kickbacks or commissions for recommending certain options — the fees are bigger, especially if they're asset-based," he said. ■

# Exelon

CONTINUED FROM PAGE 2

combined organization rather than simply mapping them over, and overhauling the investment options lineup. The 401(k) plan had $5.2 billion in assets as of Dec. 31, 2022.

Almost exactly a decade later, in February 2022, Exelon completed the separation of Constellation Energy. Brown said the new Constellation isn't entirely the same firm as the old Constellation, representing Exelon's generation and competitive energy business.

That separation required splitting investment management functions, moving the nuclear decommissioning trust to the new Constellation Energy and splitting the investment staff into two entities, said Brown. That effort impacted Exelon's succession planning, which was able to begin only after the completion of that project.

As of Dec. 31, Constellation Energy had $6.7 billion in pension plan assets, and as of Dec. 31, 2022, 401(k) plan assets totaled $4.6 billion, according to SEC filings.

**Succession planning**

"We did a very competitive national search to find our No. 2 position and ultimately, our successor," said Brown. "That's how we found Jessica, and I will tell you it was a very competitive process and we had some outstanding finalists, but we clearly made the right selection with Jessica because now the succession has come true, and she's going to be the CIO, which is awesome."

Hart joined Exelon in July 2022 as vice president, investment strategy, after more than 20 years at Northern Trust Asset Management in a variety of roles, most recently as senior vice president and OCIO retirement practice lead, multimanager solutions.

Hart said that Exelon, whose offices are a mere two blocks away from her old job at Northern Trust, provided her a unique opportunity to leverage her experiencing overseeing NTAM's OCIO business focusing on retirement plans.

"Doug and I had never met, despite him being a Northern Trust client for (about) 20 years," said Hart. "So we knew a lot of the same people, but we had never met. But I knew him by reputation."

Hart said the biggest difference from Northern Trust is essentially moving from 45 different clients and sets of objectives and risk tolerances to, "I now effectively have one client."

"It really allows you the opportunity in my line to go much deeper into how you're thinking about investment strategy, our selecting fund managers, and then how we are meeting the corporate objectives at the same time," said Hart. "In terms of where we are headed from here, I was not hired to rebuild anything or fix anything. We have a very well-articulated and robust investment strategy."

Hart's top priority over the next 12 months is change management.

"Really, it's just continuing a lot of what Doug built around innovation," said Hart. "Let's look at all of our investment options that we created, with how we drive solutions. Let's challenge each other, and at the same time, make sure we are keeping in mind excellence for our corporate risk tolerances and objectives."

Hart said one of her key challenges beginning July 1 will be continuing to improve the funded status of Exelon's corporate pension plans. As of Dec. 31, the DB plans had $9.402 billion in assets, compared with $10.988 billion in projected benefit obligations, for a funding ratio of 85.6%. Hart pointed out that the investment staff has the additional responsibility of maintaining a closed plan that still has a healthy amount of benefit accruals.

"While you read a lot of articles about pension funds are better funded than they ever have, and we have absolutely made tremendous gains in funded status over the last several years, we still have room to go," said Hart.

"We do still have very much a return-seeking orientation within the portfolio, within the construct of an LDI risk-managed portfolio, because the last thing we want to do is be at the mercy of the discount rate over time," said Hart. "We think about that in terms of that challenge. A lot of what we're focusing on is how do we make that pool of returns really work for us in the most risk-managed and efficient way possible?"

**'Asset class buckets exist for convenience, both for the asset owners and frankly, the managers, as a way for them to think about how they run their business, how they distribute, how they change, all those things.'**

EXELON'S **JESSICA HART**

As of Dec. 31, the DB plan target allocation was 44% fixed income and 28% each alternatives and equities.

**Opportunity cost**

In the risk-seeking portfolio, which still makes up the majority of pension plan assets given the continuing benefit accruals, she said private credit plays a role in the portfolio, but she focuses primarily on opportunity cost.

"We have private credit, and every manager that knocks on our door is talking about some kind of private credit investment," she said. The key she said is to understand that "asset class buckets exist for convenience, both for the asset owners and frankly, the managers, as a way for them to think about how they run their business, how they distribute, how they change, all those things."

Private credit does have a role, said Hart. But she asks whether any given private credit investment can stand up to other opportunities even away from private credit "because we really have got to optimize that return-generating allocation."

"I always get very nervous when everybody is pitching something," said Hart. "It's the worst possible time to go about doing it right, so I think we need to be very skeptical of everything that walks through the door. Everybody wants to talk about private credit, and that's usually the worst time to do something right."

When asked about future challenges at Exelon, Brown said "I don't have any challenges after July 1st." He is thrilled with the arrival of Hart as his successor.

Brown said he's approaching retirement as something for which "you have to have the right portfolio of things to do, a diversified portfolio of things to do in retirement."

Those include "front loading" a great deal of travel, likely sitting on a few boards and staying somewhat busy in the investment world on a part-time basis. There is only one thing he knows for sure: "No Chicago winters." ■

other concern: "More pension funds do realize that if they want to lead on the sustainability side, it is really hard to do that in a passive context," Ebbens added.

**Improved funding**

There's another trend in play right now across the globe — pension risk transfer — afforded by improvements in funding ratios. Rather than being in deficit, improvements in asset levels plus rising interest rates — and therefore lower liabilities — mean many DB funds are now in surplus. That includes Netherlands-based pension funds, Ebbens said.

There was a compound annual growth rate of 12.6% in pension assets in the Netherlands in 2023, compared to a just 2.5% average over the last 10 years, according to data from the Thinking Ahead Institute.

The U.K. market, for example, has been a big mover in pension risk transfers to insurers, said Rohit Mathur, head of international reinsurance for the retirement strategies business at Prudential Financial, which has $1.4 trillion in overall AUM.

"The risk transfer market is expected to expand gradually," Mathur added.

And for the Netherlands, the risk in yields since the Future Pensions Act passed means the notion of pension risk transfer is "suddenly, very relevant again," Ebbens agreed. ■

# Multiasset

CONTINUED FROM PAGE 6

Management; $300 million to Anchorage Capital Advisors and $200 million to KKR's relatively concentrated global credit opportunities fund, or GCOF.

If approved at PRIM's May 30 board meeting, the fund's current portfolio allocations of 1.5% to high-yield bonds and 2% to bank loans will give way to a 2% allocation to multiasset credit and reduced weightings of 1% each for high yield and bank loans.

At the May 7 meeting, Chuck LaPosta, PRIM's head of fixed income, said shifting exposures invested in "more siloed and somewhat limited scope mandates" to ones that give managers the latitude to move between longer duration, shorter duration, higher quality, lower quality, senior secured, unsecured, subordinated and so on should give managers scope to add value via credit cycle timing on PRIM's behalf.

Materials made available for PRIM's investment committee meeting showed all five approved strategies beating a 50% high-yield bond/50% leveraged loan benchmark over the past five years, with annualized outperformance of 2.21 percentage points for Anchorage's strategy; 1.69 percentage points for HPS; 84 basis points for KKR's multiasset credit strategy; 2 percentage points for KKR's global credit opportunities fund; and 99 basis points for Shenkman's strategy.

A spokesman for PRIM declined to make LaPosta available for further comment.

GSAM's Calnon said his firm — anticipating a continued move away from hub-and-spoke models in favor of core allocations complemented by multiasset credit strategies — hired PGIM veteran Lindsay Rosner in September as the firm's first head of multisector investing.

**NIMBLE:** KKR's Jeremiah S. Lane said recent volatility revealed the benefits of being able to make moves quickly.

Rosner noted that growing institutional interest in squeezing alpha out of credit allocations comes at a moment when asset owners — better funded as strong equity markets boosted assets and rising discount rates lowered liabilities — are moving to trim equity-related risk from their portfolios in favor of fixed income.

While asset owners with close to 100% funding now are looking to take some of their equity chips off the table, many aren't eager to shift all of those allocations into core fixed income, Rosner said. Even as they move into lower-risk assets, they're asking "is there something we can do within fixed income that is more opportunistic to get us slightly higher returns," she asked.

KKR's Lane said multiasset credit strategies are one possible answer.

"There's a lot of incremental return to be had if you can pivot into something that is very short duration like bank loans when you're uncertain about what the Fed is doing or pivot back into something that has duration when you think the market has overshot their conviction on how the Fed is going to change policy," he said.

**Streamlined relationship**

An additional appeal of hiring multiasset credit managers is the relatively streamlined nature of the relationship. Instead of having to vet and oversee separate managers for high-yield bonds, bank loans, emerging markets debt and structured credit, asset owners such as pension funds could cover those bases by hiring a single skilled multiasset credit manager.

WTW's Anderson said it can be challenging to find multiasset credit managers with both superior security selection and superior sector rotation capabilities across a full range of credit segments — high yield, bank loans, structured credit (such as collateralized loan obligations) and emerging market debt.

Instead, "we have tended to focus on specialists using high yield and loans as an anchor," she said.

Calnon and Lindsay contend GSAM is capable of overseeing a full range of credit options. "The goal that you're trying to get at is to have more and more levers with degrees of freedom to be able to generate alpha," said Calnon. But, the executives said, if clients prefer a narrower array of market segments, GSAM can accommodate them.

Lane said KKR focuses on high-yield bonds, bank loans and, more recently, structured credit, drawing on the firm's broad expertise in working with U.S. companies in a range of capacities.

U.S. and European corporate credit are areas KKR as a firm can offer a differentiated skill set, Lane noted. "We've been investing on our platform for almost 20 years," bolstered by "all our partners" on the private equity side, the private credit side, the capital markets side that are looking to invest in or finance similar businesses, he said.

While the number of multiasset credit strategies on offer continues to grow, those that can show strong track records of five years or more with excellent security selection as well as an ability to deliver alpha by toggling between asset classes will be best positioned to garner strong flows, Meketa's McKeown said.

But broadly speaking, McKeown said, multiasset credit managers could be in a relatively strong position to demonstrate skill in coming years.

Managers actively overseeing high-yield bonds, bank loans and structured credit could be effective in "grinding out more alpha than the benchmarks," he said. ■

# Managers

CONTINUED FROM PAGE 1

suddenly everyone was talking about artificial intelligence and who the beneficiaries would be, said Paula Robinson, Willis Towers Watson's head of global equity manager research.

That spike in market enthusiasm helped levitate beta returns for the year.

Benchmark indexes for U.S. and global ex-U.S. stocks ended 2023 up roughly 26% and 18% respectively, while U.S. and global ex-U.S. bond indexes gained roughly 5.6% apiece. The only major asset class not invited to the party was real estate, with the NCREIF Fund index for private real estate plunging 12.7% for the year.

Last year's AI-powered rally, meanwhile, gave already-dominant U.S. megacap growth stocks added momentum, with the so-called Magnificent Seven — Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia and Tesla — accounting at times for close to 30% of the S&P 500 index.

The narrowness of the market was last year's "biggest theme," said Andrew Schlossberg, president and CEO of Atlanta-based Invesco. That, together with a slower than hoped for evolution of the monetary policy environment, left activity by asset owners, financial institutions and wealth advisers "significantly down" for the year, he said.

There were signs of the money manager universe becoming more top heavy as well, even if incrementally so when compared to the world of listed U.S. companies.

The top 100 among the more than 400 money managers surveyed by *P&I* posted a relatively strong 11.2% gain in institutional assets under management to $51.79 trillion, suggesting managers with size and scale were able to enjoy advantages in rising as well as falling markets. In 2022, with markets tumbling, the top 100's institutional AUM dropped 14.8% while the broader universe of managers lost 15.6%.

That relative outperformance helped lift the 100 largest managers' share of the worldwide institutional pie to 93.8% in 2023 from 91.6% two years before and 87.3% a decade ago.

### Largest managers

The market's dramatic about-face from 2022, meanwhile, did surprisingly little to scramble the latest manager rankings, with none of the top 20 firms for *P&I*'s 2022 survey falling below that cutoff in 2023.

Vanguard bolstered its hold on the top rung of the ladder it wrested from BlackRock in 2022 with a 20.7% gain to $6.06 trillion, more than doubling its lead over the New York-based giant to roughly $500 billion.

BlackRock reported a 15.2% gain to $5.57 trillion.

State Street Global Advisors' 16.5% increase to $2.81 trillion left it in third place while Fidelity remained fourth with a 29.5% surge to $2.24 trillion.

In an email, Chris Pariseault, Fidelity's Boston-based head of institutional portfolio managers, attributed his firm's roughly 30% increase in institutional AUM last year in part to "notable growth" in demand for Fidelity's fixed-income offerings, together with solid investment performance and favorable market conditions. A Fidelity spokesman declined to provide further details.

J.P. Morgan Asset Management rounded out the top five with a 21.2% gain to $1.71 trillion, swapping places with BNY Mellon Investment Management, which slipped to seventh place with a 7.4% increase to $1.55 trillion. Goldman Sachs Group's 12.5% gain to $1.62 trillion left it in sixth place, unchanged from the year before.

Elsewhere, Legal & General Investment Management held on to eighth place despite a relatively modest 0.89% gain to $1.39 trillion, while Amundi and Wellington Management traded places for the final top-10 rankings, with Amundi climbing to ninth place on the back of a 9.5% gain to $1.23 trillion and Wellington slipping to 10th place with a 6.2% increase to $1.22 trillion.

### Alternatives managers

Alternatives-focused managers — the lone gainers in 2022 — mostly stayed in positive territory last year, with the exception of firms focused on real estate.

KKR, the highest-ranked private markets manager, slipped one spot to 29th place with a 7.5% gain in institutional AUM to $492.4 billion. In 2022, the firm advanced four places on the strength of a 4.3% increase.

Against the backdrop of last year's strong stock market rebound, Brookfield Asset Management's 19.9% jump in institutional AUM to $469.3 billion lifted the private markets' giant a mere one spot to 30th place. A similar 20% gain in 2022, as global equity markets were plunging, catapulted the Canadian firm to 31st place from 45th.

Private markets players Ares Management and Oaktree Capital likewise continued to climb up the leader board, with respective AUM gains of 21.5% and 11.9% propelling both firms five places higher: Ares to 35th place and Oaktree to 63rd.

But amid persistent post-pandemic weakness for key property segments such as offices, a number of real estate-focused managers — including CBRE Investment Management, Starwood Capital Group, Prologis, AEW Capital Management and Hines — reported AUM declines for 2023.

*P&I*'s survey results showed mixed results for U.S. institutional tax-exempt assets in specific alternatives segments. For example, infrastructure AUM jumped 27.7% to $78.4 billion while direct lending rose 11.8% to $42 billion. But private equity AUM dropped 24.7% to $34.5 billion and privately placed debt declined 16.6% to $118.7 billion.

PAY ME: Morgan Stanley's Jacques Chappuis said private-market investors are waiting for capital from previous allocations.

A number of money managers cited alternatives as an area of strength for their businesses in 2023.

"We had pretty good traction across our alternatives" segments, accounting for roughly 15% of AUM, including considerable interest in private credit and infrastructure, said Jacques Chappuis, co-head of Morgan Stanley Investment Management, which held on to 24th place in the latest tally with a 9.5% gain in worldwide institutional assets to $581.5 billion.

The "denominator effect" — where plunging stock prices leave institutional portfolios overweight private market assets that aren't marked to market daily — began the year as an inhibiting factor but mostly went away as markets rebounded, especially for institutions fully or heavily allocated to U.S. equities, Chappuis said.

The issue in private markets fundraising today is that a lot of general partners haven't returned capital from prior allocations, leaving some institutional clients basically saying "give me back some money before you start asking me for money for the next one," said Chappuis.

### Active vs. passive

Meanwhile, the Magnificent Seven's powerful rebound in 2023 made it difficult once again for active managers — especially those focused on U.S. growth equities — to beat their benchmarks by underweighting those high-flyers in favor of other stocks.

With the market rallying, active managers who put up good numbers in absolute terms remained vulnerable to disappointing clients focused on benchmark-relative returns, noted WTW's Robinson.

For market segments such as U.S. large-cap equities and U.S. large-cap growth, that challenging active-management environment continued to favor allocations to passive strategies, noted Michael Roberge, the CEO of Boston-based MFS Investment Management.

MFS, a manager of active U.S. and overseas equity and bond strategies, advanced one position in the latest rankings to 53rd place, with a 9% gain in worldwide institutional assets to $203.1 billion.

In line with trends over the past decade or more, *P&I*'s latest survey showed AUM growth for actively managed stocks and bonds trailing their passive counterparts.

For 2023, active U.S. equity AUM rose 11.3% to $2.61 trillion while passive U.S. institutional tax-exempt AUM jumped 18.8% to $3.83 trillion. Active U.S. fixed income, meanwhile, rose 3.4% to $3.38 trillion while passive surged 18.5% to $1.13 trillion.

Managers said they remain hopeful that investors over the coming year will increasingly look to exploit active opportunities in market segments left in the shadows as U.S. large-cap stocks surged.

That conviction rests partly on a belief in the adage that no tree grows to the sky.

"It's about duration," a natural tendency after riding a trend long enough to say "how long does something last," said Mannik Dhillon, president, investment franchises and solutions and head of product and strategy with San Antonio-based Victory Capital Management. And that, in turn, lends itself to an increasing focus on what could be either undervalued or appropriately valued vs. a potentially overvalued U.S. large-cap growth sector, Dhillon said.

Victory rose three spots in the latest rankings to 68th place on the back of an 8.4% gain in institutional assets to $137.1 billion.

If there's consensus that the U.S. large-cap dominance party can't go on forever, there's less agreement about how quickly asset classes seen as offering considerable value now — including small-cap stocks, non-U.S. developed market stocks, emerging markets stocks and Chinese equities in particular — could see a material pickup in flows.

The U.S. Federal Reserve Board's current moment in limbo between tightening and easing remains a fly in the ointment on that front. And increasingly, November's looming presidential election, with its long list of potential policy shifts, could

# Asness

CONTINUED FROM PAGE 4

before it returned to positive territory in 2020, according to figures seen by *P&I*.

AQR's Style Premia strategy was down over 15% in 2018, over 9% in 2019 and down over 27% in 2020. The fund also saw a turnaround starting in 2021 when it returned over 23%, then was up over 29% in 2022 and over 12% in 2023, according to figures seen by *P&I*.

Risk premia funds were in negative territory from January 2018 through December 2020, down 4.4% on average, according to hedge fund research firm PivotalPath's risk premia index. They rebounded in following years, up an annualized 10.2% from January 2021 through April of this year, according to PivotalPath data.

Asness was investing during other tough moments, pointing to 1999 and 2000 as an "anti-value" environment and the bottom of the global financial crisis. "It's one of the only three times I think we've pounded the table saying this is crazy and cannot stand," he said.

He also points to the end of the first COVID year, saying the world "went more nuts than it ever had before" as far as the spread between a more holistic sense of value in the context of quality, profitability, and the spread between cheap and expensive.

"So I simultaneously looked back at the lows, which are, of course the high for the attractiveness in this version of value, and I have two very contradictory thoughts," he said. "I think to myself, how did anyone not triple up here? How did anyone sell us at that point? And then I look at the returns over the prior two and a half years to that and I go, how did anyone stick with us? And obviously, these are as wildly inconsistent a thought, but they're both true."

AQR ended last year posting double-digit returns in several strategies after strong 2022 performance. And at the end of April, AQR had approximately $106 billion in assets under management.

"They're starting to allocate to us again, which I love," Asness said, but notes that it has taken longer than he thought it would. "I make no bones about wanting to be a successful business and a successful asset manager attracts assets."

But Asness said he has never set a goal for assets under management. "We try to create good products, we try to argue for them in the world of the public sphere and then see where they go," he said.

### Pod shops

Other hot areas of alternatives, including private credit, are having an impact on investor allocations.

"I think the pod shops and the privates world — I don't think it's about AQR, I don't take it personally — I think they've sucked up a lot of the capital in the world," Asness said.

Asness says some people wrongly think he doesn't like private equity or private credit. He views them as equity and credit and says, "I don't think there's magic to them."

What he is jealous of applies equally to both private equity and private credit. "There's still a fair subset that kind of either believes or acts like they believe the reported risk numbers, the volatilities, the betas, that come out of very occasionally marked and then not fully marked to market positions. And I don't understand why you put the word private in something and suddenly it's not volatile," Asness said.

**'We try to create good products, we try to argue for them in the world of the public sphere and then see where they go.'**

AQR'S **CLIFF ASNESS**

Asness even wrote a parody piece in 2019 called The AQR S.M.O.O.T.H. Fund describing a wrapper for funds that would sail smoothly through tough periods like 2018. Asness sarcastically jokes that AQR has never had a 10-year period that would upset investors.

He argues there are two ways to mark a portfolio — what it could actually be sold for today and what an investor thinks it is worth. "Why one gets to use one … is a quirk of a legal and accounting history that has led many people to sleep better at night than I sleep," he said. "So that's where the jealousy comes in. When we lose, we actually have to tell people."

### Multistrategy

And while the last decade has brought continued growth of private equity and the booming growth in private credit, it has also seen the rise of multistrategy hedge funds. Multistrategy hedge funds now account for $704 billion in assets under management, making it the second-largest strategy after long/short equity hedge funds, according to a count by Nasdaq's eVestment. That has nearly doubled from $375 billion 10 years earlier.

"We're probably a quarter of the way closer to a pod shop than we used to be in terms of having motivated small teams that own small add-on parts. But it's not a pod. It's not. It's all part of AQR," Asness said.

AQR launched its newest multistrategy hedge fund, Apex, in 2020. The strategy returned 16% at the end of last year when it was managing $550 million. It is now managing over $1 billion and is up double digits so far this year, according to figures seen by *P&I*.

Asness admits if certain aspects of the pod shop approach were described to him years ago — layers of fees and cutting portfolio managers if they are performing below a certain level — he would have gotten it wrong.

"I would have said no, charging a ton doesn't work and you get rid of a lot of good strategies that go through cloud the investment outlook.

Most market participants say they'll await concrete election results and policy decisions before adjusting their investment portfolios. "There's election rhetoric and then there's actual policy and so the jury's out" for now, said MFS' Roberge. Still, Roberge said he's a little surprised that the market hasn't seemed to attach any risk premium to the outcome yet.

Getting more clarity on Fed policy and the election — "regardless of outcome, just getting (it) behind us" — could pave the way for greater diversification of institutional allocations, said Invesco's Schlossberg.

For now, a considerable amount of institutional and retail investor money remains in allocation purgatory.

Last year's equity market rebound lent broad support to the industry but flows remained challenged, with retail investors in particular choosing to park their money in cash instruments offering newly attractive yields of more than 5%, said Roberge.

Money market totals of around $6 trillion are roughly double pre-COVID levels, he noted.

That flight to safety helped money market giant Federated Hermes, which reported a 14.3% jump in worldwide institutional assets to $706.5 billion for 2023.

Invesco's Schlossberg said the institutional side of the industry likewise saw a slowdown in activity in 2023 — with delays in the funding of mandates already awarded and a drawing out of the sales cycle for people making decisions.

Early signs of investors being willing to consider a broader range of markets beyond U.S. stocks and bonds can already be seen in areas such as fixed income and markets outside of the U.S. such as China, which garnered inflows in April and May that "were stronger than all of 2022 and 2023 combined," Schlossberg said.

**TIRED OF WAITING:** PIMCO's Candice Stack said institutional investors have begun to deploy their cash.

Invesco has a 50% interest and management control of $90 billion Shenzhen-based joint venture Invesco Great Wall Fund Management Co.

### Reallocating cash

If and when money on the sidelines funnels back to higher-risk assets, analysts said, fixed income and alternatives are likely to claim a bigger share at the expense of equities.

"There's a big focus on cash coming off the sidelines," but it won't necessarily head back into the same strategies, geographies or vehicles it left — a big question market for many asset managers, said Ben Phillips, a New York-based partner in Oliver Wyman's insurance and asset management practice.

With the sharp rise in interest rates over the past two years leaving a growing majority of corporate pension plans fully funded, "there'll be a lot more of a credit lens applied to structuring portfolios going forward" — favoring private credit and fixed income, Phillips predicted.

Todd Glickson, head of investment management, North America with financial sector advisory firm Coalition Greenwich, likewise predicted tougher times ahead for managers of publicly traded equities.

So many corporate pension plans that were underfunded three to five years ago are fully funded now and looking for a "smoother ride" — a backdrop that should rule out any return to "the halcyon days" when equity ruled the roost and fixed income and private markets were secondary, Glickson said.

Fixed-income money managers seem most optimistic, reporting signs of growing demand for their actively managed strategies.

The zero-interest-rate policy that prevailed through March 2022 left many asset owners moving to passive as a low-cost solution despite drawbacks, such as automatically giving clients market weight exposures "to the most indebted, least healthy issuers," noted David Leduc, Boston-based CEO, North America of Insight Investment, BNY Mellon Investment Management's $826 billion fixed-income affiliate.

Over the last half of 2023, "we started to have … renewed interest in our active solutions," including the firm's flagship U.S. core-plus strategy and its global fixed-income strategies, Leduc said.

But record levels of cash now show that many clients — individuals as well as some institutions — remain on the sidelines, content to pick up an attractive yield without any duration or market volatility risk, he said.

"We're counseling clients that now's the time to start deploying that cash back to fixed-income strategies because our expectation is that central banks, particular the Fed, will start lowering rates toward the end of this year and that yield is going to go away quickly," said Leduc.

### Not waiting on Fed cut

"From an institutional standpoint, you are starting to see allocators step out of cash," opting not to wait for the first Fed rate cut anticipated for later this year, said Candice Stack, managing director and head of client management, Americas, with bond giant Pacific Investment Management Co.

"You're seeing that in terms of their strategic asset allocations as well (with) more of a focus on how do we capitalize on opportunities in the intermediate part of the (yield) curve, more flexible mandates and strategies that also have the full global opportunity set" — newly interesting now that synchronized central bank policy has given way to global differentiation, Stack said.

A pickup in demand for PIMCO's active bond strategies that started in the final quarter of 2023 has accelerated in the new year. An earnings release by PIMCO parent company Allianz showed PIMCO garnering net inflows of €32 billion (34.6 billion) for the quarter ended March 31, exceeding the €24 billion pulled in for all of 2023.

In the latest survey, PIMCO ranked 13th in worldwide institutional, unchanged from the year before, on the back of a 6.3% gain to $919.8 billion.

With a solid U.S. economy, U.S. equities should remain the biggest magnet for global allocations this year, said MSIM's Chappuis. But with many investors overallocated there, "people are starting to look at other places to take on risk," he added, likewise pointing by way of example to the strong rally in recent months by Chinese stocks — considered "untouchable" six months ago.

Managers said they expect overseas markets, led by the Asia-Pacific region, to account for a greater share of their growth going forward.

Over the past 12 to 18 months, Invesco's U.S. operations were the fastest-growing portion of the Atlanta-based firm's global business but in coming years "Asia is going to be the fastest growing part of the company," said Schlossberg.

He said Invesco raised $10 billion from clients in Japan during 2023, with a big chunk of that total going to the firm's global equity strategy. "We've been there 30 years," a period when the Japanese market — a leading performer over the past two years — often seemed to be struggling. "I'm very glad … we stuck with it," Schlossberg said.

Likewise, Chappuis said his team expects Asia to be a growing portion of MSIM's business. A pickup in demand for the firm's emerging markets offerings, meanwhile, remains nascent. ■

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bad periods. And yet they've done phenomenally. Not all of them of course … So obviously, there's something to it on the manager selection side," he said, adding that he doesn't know how Ken Griffin of Citadel and Izzy Englander of Millennium Management have gotten so good at manager selection, "but I'm impressed."

But after years of fast growth for multi-manager funds, tougher times could be ahead.

"I will say, going forward, it's obviously going to be harder for them. That's not a knock. It's harder for anyone. When they've been in the popular thing for five to 10 years, it's always harder going forward," he said.

### Social media

Asness spends time sharing his views on social media site X, formerly known as Twitter, to over 129,000 followers under the handle @CliffordAsness. He says he gets "tremendous enjoyment" out of the good encounters and finds the financial discussions on #fintwit to be "excellent."

"I enjoy learning, but I love explaining things. And one thing, yeah, I will yell at people when they pissed me off. I don't think I can hide that. But if someone asked me a reasonable question, I think I'm at the outer edges of any kind of peers and willing to sit there and explain and explain and explain as long as I think someone's of goodwill and trying to actually understand," he said.

But, he's also been known to call people out and admits that historically if someone is mean to him on social media, he would be "12 times meaner to them back. I think I've gotten a little better at that over time," he said.

Asness also wades into politics — describing himself as a University of Chicago free marketer who is "fairly pro-Israel."

"Every once in a while, something usually irks me to some degree. And I will, will take advantage of whatever pulpit I have," he said.

With the U.S. presidential election looming in six months, Asness says AQR tries very hard to make most investing unrelated to political events. "I have no idea as a portfolio which (candidate) I'm rooting for, which is how it's supposed to be for a quant," he said. ■

# Real estate

CONTINUED FROM PAGE 1

10-year Treasury is much higher than it was two to three years ago, investors require higher yields to earn an appropriate premium," resulting in properties selling at lower valuations, Hill said.

Returns were not pretty last year. The NCREIF Property index lost 7.9% and the NCREIF Fund Index-Open End Diversified Core Equity index was down -12.7% net of fees in 2023.

### Open-end funds

For big open-end funds, there are not only lower property values but many have also paid out some redemptions, Hill said.

"The combination of the two actions have resulted in a drop in fund NAV (net asset value) and firm AUM," he said. "I don't know any real estate manager that has been immune over the last 12-18 months."

Many core, open-end fund managers are offering incentives in the form of fee reductions if investors add new capital or if investors remove themselves from redemption/exit pools to help limit redemptions and encourage new investment, Hill said.

With the higher interest rate environment persisting, real estate owners are in no hurry to sell their properties, Hill said. "If you own a property and don't have to sell it today and don't need liquidity, you are likely crossing your fingers and hoping the Fed takes action sooner than later," Hill said.

### Closed-end funds

In closed-end funds, where the holding period was intended to be three or four years, many general partners are working with lenders to extend the maturities on their loans, with mixed success, he said. "If the bank has pressure on its balance sheet, it will often want to preserve its liquidity for the best customers," Hill said.

The best customers can often refinance their portfolio with lenders that may not always enforce the letter of the contract, he said. The bank might require only a modest paydown and a slight bump-up in interest rate with a fee while "everyone hopes and waits for things to get better," he said.

Some property owners are selling equity stakes in their properties to pay down a maturing loan, Hill said. That way, the property gets a capital infusion, the loan gets paid down and the property owner has more time until a new loan matures, he said.

"It's a tough thing for business development teams trying to raise a new fund," Hill said. "Any properties that you bought before the interest rate increases that you still own probably have a lesser value."

Even for money managers that own high-quality property in sectors with better fundamentals like industrial and multifamily, "the risk-free rate applies to everybody," he said.

HOLDING ON: Meketa's Colin Hill said owners are in no hurry to sell their real estate given the interest rate environment.

### Nuveen's assets up

Despite AUM drops for most real estate firms, the manager with the most AUM for U.S. tax-exempt institutions, Nuveen, saw its assets grown by 19.5% to $71.3 billion in 2023."

It was a challenging year as the market continued to grapple with the hiking cycle and the uncertainty that created," said Carly Tripp, global chief investment officer and head of investments for Nuveen Real Estate.

With public equities and bonds down for a good part of 2022, investors were generally overallocated to real estate in 2022, Tripp said. Transactions were down because managers didn't want to buy or sell because "nobody knew how to price" properties, she said.

Even so, armed with dry powder and balance sheet money, Nuveen was a net acquirer in 2023, Tripp said. Nuveen's real estate business not only completed mergers and acquisitions but also some strategic transactions that executives had been working on last year, she said.

Nuveen's funds have relatively low leverage and staggered debt maturities, so the firm was not forced to sell properties last year, Tripp said.

"Of course the legacy book experienced what the market experienced with some depreciation," she said.

Among the deals were Nuveen's acquisition of an affordable housing portfolio in May 2023 from Omni Holding Co., that increased its affordable housing AUM to $6.4 billion. Terms of the transaction were not disclosed.

In February 2023, Nuveen made a further investment in self-storage real estate business MyPlace, a business it helped launch with Kurt O'Brien founder and former CEO of Simply Self Storage, Tripp said. Nuveen and MyPlace started acquiring self-storage assets in 2022 and had about $300 million of assets under management across both value-added and core-plus strategies. The partnership aims to increase its AUM to about $1 billion over two years.

Nuveen also increased its self-storage portfolio in Europe with a deal to take Scandinavian public self-storage company Self Storage Group private for 3.79 billion Norwegian kroner ($360 million). The Self Storage deal was Nuveen's third strategic acquisition in Europe, Tripp said.

### Transactions down

Across the industry, fundraising fell in 2023 in the U.S. by an estimate of around 50% from 2022 levels, said Peter Rogers, director, investments-Americas and head of real assets research at Willis Towers Watson.

It varies by sector but generally transaction volume has been subdued, Rogers said. Using core, open-end funds as a proxy, real estate pricing declined, depending on the sector, on average by 20% to 25% last year, he said.

Transactions are expected to resume in earnest when long-term interest rates start settling down, Rogers said. "That will hopefully take uncertainty out of the market and allow more transactions to occur," he said.

While it's hard to generalize, many of the early transactions are where there is property level or capital market distress, meaning the manager or property owner has a loan coming due on a property, Rogers said.

"In certain sectors, there's going to be difficulty, particularly office," he said.

But Rogers said he doesn't expect a tsunami of debt maturity overtaking the real estate market. "Every year everyone likes to say there's going to be a wave of debt maturities," Rogers said. "There's always pockets of distress."

But Willis Towers Watson executives don't think there's going to be widespread distress in the real estate market, he said.

Sectors with more resilience, sustainable long-term demand drivers and the ability to increase rents faster than other sectors generally fared better such as data centers, single-family rentals and manufactured housing, Rogers said.

"But they weren't immune to valuation declines from higher interest rates," he added.

Sectors mattered in 2023. The best performing of the five main property types tracked by NCREIF Property index was hotels at 10.3%, followed by retail at -0.9%, industrial at -4.1%, apartments at -7.3% and office, -17.6%.

### Real estate debt

Not even the relatively newer sector of real estate debt was completely invulnerable from the impact of higher-for-longer interest rates in 2023.

According to the results of *P&I*'s money manager survey, real estate debt AUM managed for U.S. institutional tax-exempt investors grew by 32.7% to $116 billion in 2023 from the year before. However, some managers say that fewer transactions have had an impact.

For instance, Nuveen is also a real estate lender with $50 billion of commercial real estate mortgage loans on its books, Tripp said. "Last summer, the pipeline for commercial mortgages was 30% of normal," she said. Since then, mortgages have come back to "a healthier range," Tripp said.

Another manager in *P&I*'s money manager survey to see its real estate equity AUM managed for U.S. institutional tax-exempt investors decrease last year was PGIM, the money management business of Prudential Financial. PGIM's U.S. institutional tax-exempt AUM decreased 12.7% in the year ended Dec. 31 to $36.3 billion.

AUM dropped across its entire real estate business, said Cathy Marcus, co-CEO and global chief operating officer of PGIM Real Estate.

"Like pretty much everyone else our AUM went down in 2022 and 2023 largely because of value declines," which were entirely interest rate driven, Marcus said.

Real estate fundamentals such as occupancy rates were up, she said. Income and risk are two components of capitalization rates, meaning a property's rate of return, Marcus said. "Income is not the problem here," she said. "It is the raising of the interest rates, which results in a domino effect of cap rates."

"Borrowing costs went up very precipitously in 2023" in many regions around the world, Marcus said.

"We're looking at negative leverage in the first couple of years, which is not a great buy signal for a lot of people," she said. Negative leverage is where the cash-on-cash return of property without leverage is greater than that of levered real estate. "Borrowing costs are not very accretive at this point and that impacts buyers," Marcus said.

### 'Be prepared'

"The best thing you can do in this

# Japan

CONTINUED FROM PAGE 2

companies has been declining for more than a decade, said Yoshiyuki Asaoka, Tokyo-based corporate partner at global law firm Linklaters, which is headquartered in London.

"We had more than 400 (subsidiaries on the stock exchange) in 2006, which have almost halved since then. Incremental pressure on the parent firms has driven the companies to either divest their public subsidiaries or take the subsidiary private to make it 100% owned by the parent group," he said.

By 2022, there were around 200 listed subsidiaries in Japan, according to data from the Ministry of Economy, Trade and Industry in Japan.

The Tokyo Stock Exchange has added more pressure to these businesses as investors voice concerns over the parent groups' conflicts of interest. In December, the stock exchange told listed companies with public subsidiaries to improve disclosures on how they might be prioritizing profit for the parent group over the subsidiary.

"If a parent company decides to divest its business subsidiary, then probably the most viable (buyer) would be private equity houses. Private equity firms have supported those divestment transactions actively in the last decade, including Hitachi's series of divestment or business subsidiaries since around 2016," Asaoka said.

Another example is SoftBank Group and its cascade of subsidiaries, he added. "It's the ultimate parent company," he said.

For instance, the group could own a mobile company that owns another listed holdings company, which has other listed companies. "It's almost like a grandparent to parent to grandparent kind of structure. I don't think this kind of exception will go away entirely… but the number would continue to decrease,' Asaoka said.

### Private equity and activism

Private equity firms can provide a solution for businesses that have been engaged by activist investors, said Takanobu Hara, Japan Partner at EQT Private Capital Asia, which had €242 billion ($261.2 billion) in AUM as of March 31.

"We potentially come in as a white knight to privatize the business so this engagement from activists goes away," he said in an interview.

"This activism situation is creating multiple layers in (the private equity space in Japan). How (businesses) benefit from that is really to do with our track record… in terms of value creation," he said.

Activist investing in Japan has been on an uptick. In the first half of 2021, Japan was second to the U.S. in the number of activist investor campaigns and represented 26% of non-U.S. campaigns globally, up from 6% in 2015, according to Lazard Asset Management.

Some listed companies are not only privatizing their subsidiaries but also taking themselves private for strategic reasons, providing opportunities to private equity firms like EQT, Hara said.

The firm in November said it would partner with the founding family of Japanese education services provider Benesse Holdings to take the firm private.

"They saw more benefit in taking themselves off the market to do more fundamental structural changes with the business and possibly relisting in some other form," Hara said.

HOARDING: Nikko's Naomi Fink said shareholders want to know what corporate funds are doing with their piles of cash.

Before privatizing, Benesse Holdings' share price had been in decline, falling to a low of $11.41 in October from a high of $43.69 in June 2014.

### Succession gap

Private equity firms also serve as buyers for businesses with leaders close to retirement age but with no successors.

"We're seeing more of these kind of founders getting older, and without any kind of successor within their family, and potentially selling to sponsors," Hara said. The current generation is much less prejudiced towards private equity, having seen their peers buy or sell from private equity firms globally, he said. "I think what's partly driving that is really this perception around private equity too. That's a big factor."

Japan's aging population contributes to the lack of successors in small and medium enterprises, said Liang Yin, Hong Kong-based head of private equity for Asia Pacific at WTW Investments, which had $162.9 trillion in assets under management and $4.2 trillion in assets under advisement as of Dec. 31.

"People outside Japan don't realize that an aging population creates a huge problem with succession which in turn brings huge opportunity to private equity. There are close to 4 million SMEs in Japan and their leaders have an average age of more than 50, and two-thirds don't have a successor. The urgency to this successor challenge brings about a huge market for private equity to step in environment is to be prepared" and PGIM Real Estate was very prepared, she said.

PGIM Real Estate executives can't take credit for predicting the rapid pace of the interest rate increase, "which was surprising for most people," she said. However, they did think that the trajectory of interest rates after a very long cycle of nearly zero interest rates was up, not down, Marcus said. So, PGIM Real Estate came into this period with lower leverage having refinanced its properties in 2021 and up through the first quarter of 2022, she said.

"It was a really, really great time to lock in longer-term debt," Marcus said. "Everyone tried to get the longest term possible during that time."

PGIM also has been underweight office for at least 10 years, she said. Office values were down 35% and 40% in 2023 from before the pandemic, Marcus said.

"If you look across the board. Therefore, the less of that you have the better … Our core strategy is very much underweight at this point," Marcus said.

"It's not that we had great vision that the office market would wildly fall apart, but if you look at office in the NCREIF Property index, office performance is not great" due to the expensive improvements owners need to make to attract tenants, she said.

When tenant improvement costs started ratcheting up in the years before the pandemic, office lost about 25% of net operating income to those expenditures, Marcus said.

"It's hard to make money and core funds are about distributing income," which managers can't do if it's losing close to a third of a property's income in office, she explained. And Marcus said that she is not particularly worried about 2024."I'm feeling very positive about where we are in the cycle and it really does feel like we're going to hit the bottom midyear this year," Marcus said.

PGIM executives are starting to see early positive signs. Open-end funds, unlike closed-end funds, mark their portfolios to market every quarter and some multifamily properties have sold, or are in the process of being sold, at prices that are higher than appraised values, she said. ■

# Johnson

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your counterparty who also has a bunch of reconciliation, all that goes away when a transaction is done on chain, because there's only one source of truth and it's immediate."

Johnson thinks blockchain will play a significant role in financial services and open up interesting investment opportunities, such as song royalties from smart contracts.

"I think mutual funds and ETFs will all be on blockchain" down the line, she said.

And Johnson is quick to point out that the cryptocurrency bitcoin should not be "confused with the rest of the blockchain ecosystem. I always say it's the greatest distraction from one of the greatest disruptions that are coming to asset management."

Franklin Templeton launched a bitcoin ETF at the start of the year and Johnson says she did buy some of it, but her father, Charles B. Johnson who served as the company's CEO, did not. "He is not yet a bitcoin fan," she said.

Franklin Templeton had $1.6 trillion in assets under management as of March 2024.

**AI platform**

Franklin Templeton announced a partnership with Microsoft at the end of April to build an advanced financial AI platform. One benefit could be improving sales and marketing productivity and personalizing client experiences. Johnson said she feels fortunate to have a team involved in AI since 2018, before ChatGPT "made it a cool thing for everybody."

Franklin Templeton built a goals optimization engine, which allows for dynamic asset allocation based on individual goals, she said.

Johnson herself spent time with the firm's head of AI to understand machine learning, regression analysis and large language models. She expects interesting innovations in AI to happen once complex models are brought together, and compares today to the early days of Apple's iPhone.

"What tends to happen with technology is the first thing that people do is they improve what they're doing today. Hence, we've got a model … doing our help desk, we've got a model reconciling information between systems, we've got a model reconciling for exchange transactions. All that's doing is creating efficiencies in the existing things," she said. "Once you tend to learn with those, that's when you'll get the great breakthroughs."

**Alternatives acquisition**

Since Johnson's watch as CEO of the San Mateo, Calif.-based company started in February 2020, Franklin Templeton has acquired 10 companies. In 2022, the firm acquired alternatives specialists Lexington Partners, a private equity secondaries and co-investment specialist, and Alcentra, a European credit manager. And this year, Franklin completed its acquisition of Putnam Investments.

"We had to diversify to alts," Johnson said, pointing out that startup and family-owned companies are staying private for longer.

"I tend to think generationally, and say, 'well, I'm not going to worry about this quarter,' but I think that's harder and harder to do," she said. "So firms are recognizing in those early growth years, when they need to capture market share, that they're better off not being public. So they can reinvest their profits into growing the business."

Johnson points to the parallel of her grandfather getting into the mutual fund business because in those years, the average investor couldn't get the returns of the equity market. "That's a bit of the dilemma that's happening now in alts," she said, adding that big wealth channel distributors recognize that they need to offer alternatives to their clients, but the challenge is how capture the segment given suitability requirements. "I think the next big step is going to be to figure out a responsible way to bring these to the wealth channel," she added.

Johnson sees harder times ahead in private equity, noting that investors will see "who's actually skilled, because now costs cash costs something." But she sees opportunities in the private equity secondaries space. "We think it's a fantastic place to be," she said, noting that the deals Lexington Partners are seeing are the "best they've seen."

"There's a real supply and demand kind of mismatch there that's enabling really aggressive discounts from marks," she said.

With the proliferation of private credit, Johnson said banks just aren't lending like they used to. She doesn't think there's systemic risk. "The investor in a private credit fund knows they're tying up their money. It's a very conscious decision," she said.

Commercial real estate and real estate debt are areas where Franklin has grown through acquisitions, including Clarion Partners and Benefit Street Partners. Johnson said the two units meet regularly to discuss the space.

Commercial real estate is a space where there are areas of opportunity, Johnson said, pointing to segments including logistics and data centers. "It requires you to really be in the sector to know where the opportunity exists," she said.

**'I tend to think generationally, and say, "well, I'm not going to worry about this quarter," but I think that's harder and harder to do.'**

FRANKLIN TEMPLETON'S **JENNY JOHNSON**

Johnson said the last remaining acquisition gap is infrastructure, but it's an expensive proposition.

"If the right infrastructure manager came around, we think that would be pretty interesting," she said. "If I were to choose, I think I'd prefer infrastructure debt over equity type portfolio, but either one, we think that that's just going to continue to be a huge growth opportunity. And, you know, I don't think we could create it ourselves. I think we'd need to acquire."

Johnson sees a massive infrastructure need globally, and in the case of the U.S., there are a lot of aging assets that will need to be "creatively financed."

"I just think there's a massive need for infrastructure to be financed. And we would love to be in that space," she said.

**Inflation and geopolitics**

Franklin Templeton doesn't have a house view on inflation since they have several fixed-income CIOs. "We don't have a house view because we have five different fixed income CIOs. And they're all slightly different on it."But Johnson says she thinks it will be hard to get inflation under control down to 2%.

"I think it's probably … one cut this year, if at all, if I were to pick my second choice, I'd say no cuts," she said.

Growing U.S. debt hasn't received enough coverage, she said.

"We are going to be the reserve currency, there's nowhere else to go," she said. "Nobody has confidence in any other currency (besides the U.S. dollar) to be the reserve currency. It's just at what price do you choose to put your money in Treasuries vs. another asset class? And I think that's what keeps the longer end of the curve a little more elevated."

Franklin Templeton has clients in 160 countries and that means navigating geopolitics. Johnson gives the example of a U.S.-China relations and points to a U.S. pension fund that may not be comfortable investing in China, but others will be.

"I probably wouldn't invest in technology in China," Johnson said adding that it could be an area with additional risks due to political issues. "But don't write off China from an investment standpoint around a country that has got a lot of really smart, well-educated people who want to have growth in their domestic economy."

In times of volatility, "you often as investor can find opportunities to invest," she said.

Johnson, 59, is a mother of five, and said the next CEO of Franklin Templeton "is not necessarily going to be a Johnson."

Franklin Templeton goes through a detailed succession review of all key positions, including CEO, for the board, Johnson said. And her role includes looking at potential candidates who can step in and do the job.

"It's really about what's best. We're a public company," she said. "We've got to go through the process." ■

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and create a solution," he said.

**Japan a bright spot**

Japan's private equity market has been a bright spot in Asia-Pacific, the only market to see a rise in deal activity in the region, according to Bain & Co.'s 2024 Asia-Pacific Private Equity survey, published in March.

The five-year average deal value in Japan rose 183% compared to the previous five-year period, ranking as the top country in Asia-Pacific, which recorded a $147 billion fall in deal value during the same period, according to the report.

Megadeals over $1 billion in value drove the surge, helping to bring its share of Asia-Pacific deal value to 30%, from 7% in the previous five-year period, even though its share of deal count in the region was only 10%.

"Up until recently Japan PE was almost exclusively in the midmarket space, but in the last two years we have started to see large deals of $1 billion and above in value, which is a healthy boost to the total deal activity," Liang said.

The activity is also driven by global funds taking advantage of Japan's declining currency, and "the very low interest rate" which makes financing more appealing, he said.

"Pricing is also another reason Japan is standing out given that Japan still has one of the lowest interest rates in the world, which makes leveraged buyouts attractive. It has a stable regulatory environment as well," he added.

"Japan has been a buyout market and one of the reasons we like it is it's one of the more sophisticated buyout markets in Asia-Pacific," he said.

**Rising competition**

Subsidiaries sold off by listed companies have also contributed to these $1 billion deals, said Linklaters' Asaoka.

"These subsidiaries are generally smaller than the parent companies, but still it could be hundreds of millions USD market cap to $2 to 3 billion market cap. So they're not small, these subsidiaries," he said.

Asaoka agreed that the midmarket space used to be the most active in the Japanese private equity market, but added that private equity houses that seek opportunity in the large-cap market are becoming increasingly commonplace.

There have been a lot of newcomers in Japan — global private equity firms that did not previously have boots on the ground and are now hiring local investment experts.

"They are actively seeking deals in Japan. The PE space in Japan is continuing to be competitive regardless of the deal size. That seems to be one of the drivers of the recent price adjustment in the Tokyo market," Asaoka said.

The $671 billion Apollo Global Management opened a Japan office in 2018 and Ares Management, which has $428 billion in AUM, said in December that it was planning to open an office in Japan in 2024. ■