



HIGH MEADOWS
INSTITUTE

Sustainability in Capital Markets

Financing the transition to a sustainable
low-carbon economy

Pension Funds Sector Profile



Introduction

This sector snapshot is part of the High Meadows Institute report, *Sustainability in Capital Markets*. It is designed to provide a high-level overview of how key sectors in the financial system are supporting the transition to a sustainable low-carbon economy (SLCE). The sector evaluation is based on a literature review of studies on each sector's role in the SLCE transition, as well as a more detailed analysis of how 10 of the largest institutions in the sector are supporting the transition. Further details on the purpose of the report, the sectors being assessed, and the methodology for the assessment can be found in the Methodology publication [here](#).

Sample size: GPIF (Japan), GPF (Norway), National Pension (South Korea), ABP (Netherlands), CalPERS (USA), Canada Pension (Canada), Central Provident Fund (Singapore), CalSTRS (USA), PFZW (Netherlands), NYC Retirement (USA)

Total AUM of sample size: \$6.3 trillion
(12% of sector AUM)

Pension funds globally oversee approximately \$55.7 trillion in assets,ⁱ with much of this capital (\$22.6 trillion) concentrated among the 300 largest pensions.ⁱⁱ In some countries, including Switzerland, the United Kingdom, and Australia, the cumulative size of pension assets can exceed 100% of national GDP.ⁱⁱⁱ Pension funds have exploded in size over the last few decades, in part because of investment performance but also because many employers, whether governments or corporations, recognize the value of creating an investment vehicle that can be used to preserve retirement savings for millions of people.

For this sector profile, we specifically looked at the 10 largest public pension funds with investment flexibility, which meant excluding a few national plans that are legally obligated to stick to “safe” assets such as government-backed bonds rather than diversified assets that may include climate-oriented investments.¹ These 10 pensions collectively control about \$6.3 trillion in assets, which are invested broadly across both public and private markets. On average, the 20 largest pension funds invested approximately 43% of their assets in equities, 35% in fixed income, and 22% in alternatives and cash, although these allocation mixes can vary dramatically by region.^{iv}

1. The two pensions excluded from the study include the U.S. Federal Retirement Thrift Plan (est. \$783 billion in assets) and China's National Society Security Plan (est. \$365 billion in assets).

The vast size and scope of pension funds means that most of them are invested in both climate-oriented assets as well as fossil fuel assets. For instance, a study of 14 of the largest U.S. public pension funds found \$81.6 billion in fossil fuel holdings, representing about 5.9% of all fund assets.^v Another study of 850 retirement schemes across Europe found that fewer than half (46%) are considering the investment risks posed by climate change and just 8% have pledged to reach “net zero” carbon emissions.^{vi} Meanwhile, a database tracking institutional commitments to divest from fossil fuels counts 209 pension funds among the more than 1,600 institutions worldwide with similar commitments.^{vii} These and other studies showcase both the opportunities and challenges that pension funds face in supporting an SLCE transition.



Pension Funds on the SLCE Spectrum



► This graphic illustrates where ten of the largest pension funds sit on the SLCE Spectrum, which is a framework designed to assess the strength and integrity of their commitment to a sustainable, low-carbon economy based on their alignment to industry best practices. SLCE 1.0 represents “Minimal Commitment,” while SLCE 2.0 represents “Active Integration” and SLCE 3.0 represents “Systemic Leadership.” To learn more about the SLCE Spectrum, including how pension funds were assessed against HMI’s criteria, please review the separate [Methodology](#) publication.

Opportunities to advance an SLCE

Pension funds hold a lot of cards when it comes to supporting the transition to an SLCE, especially because they sit at the top of the investment value chain and can often dictate terms with fund managers and other investees. As “universal owners,” pension funds have a fiduciary duty to address systemic risks like climate change through how they manage their investment portfolios because they are not able to diversify away from these risks.^{viii,ix} Pension funds also have more tools at their disposal due to their size and long-term investment horizons, a point that many proponents of sustainable finance have used to argue for the importance of pensions playing a leading role in the SLCE transition.^x

In recent years, many of the biggest pension funds in the world have begun taking climate change more seriously – not just in how they manage their investment portfolios, but also in how they engage in public advocacy and policy discussions. There are many examples of pensions making SLCE-related commitments that have had ripple effects across the market.

- Under the leadership of former CIO Hiro Mizuno, Japan’s GPIF requires all asset managers to integrate ESG factors into their investment analysis and decision-making and only pays its active managers according to a performance-based model.^{xi}
- Several of the biggest pension funds in New York (BERS, NYCERS, NYCRF, TRS) and California (CalPERS, CalSTRS, SFERS) have in recent years announced commitments to divest fossil fuel

assets from their portfolios; other notable pensions with divestment commitments include those in Australia (AustralianSuper, CSC, HESTA Super Fund, UniSuper, and others), Canada (CDPQ, UPPO), the Netherlands (ABP), Norway (GPF, Storebrand), Sweden (AP1, AP4, AP6), and the UK (Church of England, NEST, USS, and others).^{xii}

- In the U.S., CalPERS^{xiii} and CalSTRS^{xiv} were both vocal in their support of the SEC’s climate disclosure rule, which they said was integral to their ability to understand climate risk in their portfolios. In the Netherlands, both ABP and PFZW were major proponents of climate policy in the years leading up to the 2009 COP meeting in Copenhagen, and they have continued calling on policymakers to take action to prevent the worst effects of climate change.^{xv}
- Several large pension funds have made sizeable commitments to climate finance, including CalSTRS (1% target allocation to climate-themed private investments), NYSCRF (\$40 billion climate solutions investment target by 2035), CalPERS (\$100 billion climate solutions investment target by 2030), CDPQ (C\$54 billion target for “low carbon” or “green assets” by 2025), and PSP Investments (C\$70 billion target for “green assets” and C\$7.5 billion target for “transition assets” by 2026).^{xvi}

Each of these examples provides a different snapshot of what a more committed approach to the SLCE transition could look like, in which SLCE-related factors are embedded into everything from how portfolios are structured and investment decisions

are made, to how fund managers are incentivized and which benchmarks are used to assess performance. Smaller pensions with fewer resources can take lessons from these efforts, thereby turbo-charging their own support of the SLCE transition.

Our analysis of 10 of the largest pension funds suggests positive momentum in this direction. According to our research:

- All of the biggest pension funds say they invest in climate solutions, while 8/10 report on climate and have climate targets.
- 6/10 have committed to achieving net-zero emissions by 2050. While the remaining 4 funds have not made formal net-zero commitments, some are still taking steps to manage climate risks and explore low-carbon investment opportunities.
- 8/10 are signatories of the Principles for Responsible Investment (PRI), indicating a strong commitment to integrating ESG principles into their investment strategies. However, only 2/10 were members of the Net Zero Asset Owner Alliance (NZAOA), which sets a higher bar for participants including expectations around setting interim targets.



- Pension are adopting multiple sustainability standards, frameworks, and tools to strengthen their investment strategies. 6/10 use the Task Force on Climate-Related Financial Disclosures (TCFD) framework for climate risk disclosure, while 2/10 are direct members of the Science-Based Targets initiative (SBTi), integrating SBTi-aligned decarbonization pathways into their investment strategies. An additional 2 pensions utilize SBTi by either tracking the science-based targets of their portfolio companies or evaluating GHG reduction targets based on SBTi certification, while 3 other pensions use the SBTi framework to set science-based emissions reduction targets.
- 6/10 explicitly reference materiality in their ESG strategies or frameworks, integrating these concepts to align their investment approaches with sustainable and responsible investment goals. While the specific type of materiality—whether single or double—is not always specified, their focus reflects an awareness of both financial relevance and broader societal impact. These funds demonstrate stronger ESG integration by aligning with frameworks such as PRI and TCFD, enhancing their ability to manage systemic risks and support long-term value creation.
- 2/10 have limited third-party assurance for their ESG and climate-related reporting, with one additional fund having limited assurance provided by its internal audit services team.

Based on this snapshot, 5/10 pensions were categorized as aligned with an SLCE 3.0 framework, with the remaining 5 categorized as SLCE 2.0, primarily due to their lack of explicit, science-backed targets and the absence of strong accountability mechanisms. This shows that the largest pensions are taking their responsibility as fiduciaries seriously and are well-poised to play a leading role in the SLCE transition.

Pain Points

Despite their role as perhaps the most important financial actors in the transition to an SLCE, pension funds face several challenges impeding further progress. Many of these challenges are institutional in nature. For instance, pension fund CIOs must secure the approval of the pension trustees before making any significant changes to the investment policy or investment portfolio. These CIOs are also expected to match or exceed specific financial benchmarks like the S&P 500 or the MSCI World Index, which don't take systemic risks into account and are therefore poor proxies for measuring progress towards an SLCE.²

Many pension funds, as pools of capital representing the savings of ordinary citizens, are also susceptible to political pressures within the countries where they are based. This is particularly a concern in the U.S. due to the recent anti-ESG attacks, which have led to some pensions facing lawsuits for their divestment efforts^{xvii} or even being called to testify before Congress to defend their ESG investing practices.^{xviii} Even those pensions in supposedly pro-ESG states could be doing more to advance climate goals and address climate risks in how they vote their proxies and engage with external managers.^{xix}

However, it is also an important consideration in other countries and regions where governments may have ulterior motives besides prioritizing long-term performance. For instance, there are reports of some pension funds being pressured to invest more in domestic assets, even if such assets may not have as favorable a risk-return profile as other assets. Any form of political influence, whether well-intentioned or not, can have a dampening effect on a pension's ability to act as a fiduciary and use its influence to support an SLCE.

The other challenge facing the pension fund industry as a whole is a lack of collaboration on issues of shared interest. Pension funds can accomplish more working together than by working separately, especially since most pension funds share similar goals related to both preserving and growing a particular pool of capital. There are now several initiatives and trade groups aimed at pension funds; however, they tend to attract only the biggest and most SLCE-oriented pensions. More work will need to be done to engage the broader pension universe, especially on some of the more nuanced aspects of an SLCE 3.0 approach such as public advocacy and target-setting.

2. Organizations like the Predistribution Initiative and the Responsible Asset Allocator Initiative (RAAI) are currently working on a project aimed at creating financial benchmarks that take systemic risks/impacts into account.

Additional reading and resources about pensions

- **Pensions for Purpose:** <https://www.pensionsforpurpose.com/ImpactLens/>
 - **CalPERS:** <https://www.calpers.ca.gov/page/investments/sustainable-investments-program/esg-integration/siri-library>
 - **CalSTRS:** [Addressing Climate-Related Financial Risk Report](#)
 - **Net-Zero Asset Owner Alliance:** <https://www.unepfi.org/net-zero-alliance/resources/>
 - **Ellen Quigley:** [Universal Ownership in Practice: A Practical Investment Framework for Asset Owners](#)
 - **UN PRI:** [What is system-level investing?](#)
 - **Carbon Tracker Initiative:** [Loading the DICE Against Pensions](#)
 - **Economics of Energy Innovation and System Transition (EEIST):** [Net-zero transition planning for pension funds and other asset owners](#)
 - **Roosevelt Institute:** [State Pension Funds and Climate Risk: A Roadmap for Navigating the Energy Transition](#)
 - **World Bank:** [Pension Systems Plus Climate Risk: Measurement Plus Mitigation](#)
 - **Mercer and CFA Institute:** [Global Pension Index 2024](#)
 - **Financial Markets Law Committee (FMLC):** [Pension Fund Trustees and Fiduciary Duties: Decision-making in the context of Sustainability and the subject of Climate Change](#)
 - **University of Cambridge:** [Climate on the bench: corporate bond benchmarks as a tool for institutional investors](#)
- Top standards or initiatives for pensions serious about climate change:**
- **Climate Action 100+**
 - **Council of Institutional Investors (CII)**
 - **Institutional Investor Group for Climate Change (IIGCC)**
 - **Net-Zero Asset Owner Alliance (NZAOA)**
 - **Pensions for Purpose**

Endnotes

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High Meadows Institute is focused on the role of business leadership in society. Our mission is to contribute to sustainable economic and social progress in a global economy and society. High Meadows Institute was founded in 2013 by a small group of senior business and finance leaders with deep experience in the private and non-profit sectors. The Institute works in close partnership with other leading think tanks and academic and business organizations to advance its mission.

17 Communications is a mission-driven marketing and communications consultancy specializing in the ESG, impact investing and sustainable finance sectors. We are committed to catalyzing the flow of capital towards sustainability and impact-oriented investments and solutions through a combination of communications, advocacy, research and education.



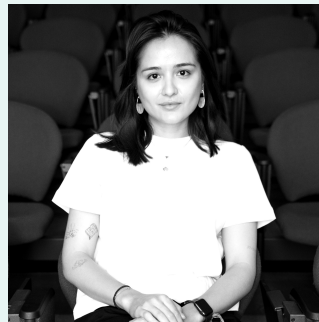
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Developed in partnership with:

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