

# Endowments Embrace Net-Zero Portfolios: Is It the Future of Investment Management?

Questions remain about how to measure risks and what a proper framework looks like, but more colleges and universities are taking the plunge.

Endowment juggernauts around the globe have recently enacted ambitious targets to confront climate risks within their investment portfolios, with many pursuing net-zero carbon goals. However, measuring climate-related risks remains difficult.

Investment teams from Stanford to Harvard (and more recently at Columbia) and even across the pond, at Oxford, have announced moves in anticipation of a societal shift to a fossil fuel-free economy. Market participants say this push to address the impacts of climate change, coupled with the complexities of assessing such exposures, will likely transform the industry's approach to measuring and managing risk.

Net-zero refers to achieving carbon neutrality by limiting the amount the amount of greenhouse gases (GHG) a company emits and offsetting whatever emissions remain by removing an the equivalent amount of emissions from the atmosphere. Focusing on net-zero goals, which in practical terms lower GHG emissions, is a key path in tackling climate change and reducing global warming, per the Paris Agreement.

"Net-zero commitments can help investors reduce risk at both the individual portfolio level and the systems level," said Georges Dyer, co-founder of the Intentional Endowments Network (IEN), a nonprofit that works with college and university endowments on sustainable investing. Investors will need to consider asset allocation, policy advocacy, and risk management processes as the economy moves through this transition, he added.

Given the nascent stages of creating net-zero portfolios,

data is limited and there are still varied perspectives on what exactly such portfolios should look like. But Dyer said the net-zero portfolio might be worth it.

"On the one hand, it is a prudent step all investors should be taking to protect their capital," Dyer said, "and on the other hand it is a real act of leadership to commit to a long-term goal without yet knowing exactly how you'll get there."

In January, Columbia Investment Management Company, which manages the university's \$11.26 billion endowment, announced it would focus on investing in technologies that contribute to the goal of net-zero emissions and GHG reductions.

The fund also formalized its commitment to eliminating investments in publicly traded oil and gas companies. In its announcement, Columbia stated that it would "expand its evaluation of its investment managers across sectors to assess whether they have plans to create portfolios with net zero emissions by 2050."

"As long-term investors, we have to think about climate as an investment risk because it will increasingly impact business decisions," Kim Lew, CEO of Columbia Investment Management Company, told CIO. "If a manager does not see it as a risk, they will not begin to plan for the transitions that will inevitably happen. We will ask managers how they are thinking about [such risks] and monitor over time."

Similarly, early last year, Oxford University's endowment board asked its investment team to engage with

external managers to request evidence of net-zero carbon business plans. The university's Oxford Martin Principles for Climate-Conscious Investment serve as a framework to shape investment decisionmaking and provide a model "for engagement between climate-conscious investors and companies across the global economy," according to the university's website.

Outside the commitment to net-zero emissions, the principles call for a profitable net-zero business model. "Business plans [should] ensure the profitability of their business, and limit supply chain risks, once emissions reach net-zero," noted the guide. "For companies that provide a carbon-intensive service or fuel for which there is no currently available substitute, a clear plan is required for contributing to the development and deployment of substitutes or remediation measures."

At the same meeting, the board formally announced it would divest from the fossil fuel industry and add a new member to the investment committee with expertise in both investment management and sustainable investing to help with the oversight and accountability of the endowment's climate goals.

The university's endowment is managed by Oxford University Endowment Management, which has roughly \$5.5 billion in assets under management (AUM).

### **Understanding Climate Risk**

While many endowments acknowledge the need to address climate change's implications on investment portfolios, understanding how to measure such risks remains tricky.

Government policies and actual commitments to combat climate change are still ill-defined, and social responses to addressing climate change are unclear, as are the development and adoption of green technologies. Such ambiguities challenge the assessment of both climate-related investments and climate as an investment risk within portfolios.

"Climate risk is not a discrete category of risk that can be compartmentalized and measured in basis points," Jane Dietze, CIO of Brown University's \$4.7 billion portfolio told CIO. "It is not something that can be expressed neatly in an asset allocation. ... It needs to be contemplated in every investment decision. Climate risk could show up as regulatory changes, it could show up as supply chain disruption, it could show up as inflation or as something else. Climate risk is just risk."

Given the pervasiveness of climate exposures across

portfolios, coupled with investors' increased climate consciousness, she said the industry needs to provide more cohesive tools to address the impacts of climate shifts within investing.

"Risk is notoriously resistant to accurate measurement, and that is not for a lack of sophisticated effort by the financial industry," Dietze added. "The reality is that, collectively, we need to achieve substantial improvements in measurement and disclosure of a wide array of climate-related data. Companies, managers, institutions all need to demonstrate strides in the production and sharing of uniform data related to climate impact."and sharing of uniform data related to climate impact."

### **Unconventional Sources of Risk and Data**

"Investors are still at an early stage in sourcing consistent, high quality climate data at the individual security or asset level," said Shehriyar Antia, head of thematic research at PGIM, an investment manager with \$1.5 trillion in AUM. "By leveraging better, more detailed data, investors are becoming more granular in their analysis and can identify pockets of risk and opportunity where markets do not clearly discern them."

A recent report co-authored by Antia, "Weathering Climate Change: Opportunities and Risks in an Altered Investment Landscape," emphasized the need to look beyond obvious risks to uncover climate threats within investment portfolios.

"Climate change has the potential to unleash the same kind of disruptive impact through supply chains and industries not typically considered as having high climate risk, for example, semiconductors and pharmaceuticals," according to the research. For instance, pharmaceutical manufacturers are vulnerable to water stress, given that purified water is a key component in the manufacturing process.

Investors need to embrace unconventional data resources and methodologies to fully understand a portfolio's exposure to transition risks and physical risks. Alternative resources include satellite imagery, flooding maps, drought data, and air quality data, which could inform investors which supplier facilities might be exposed to physical climate risk, according to the report.

Going forward, Antia said he believes the industry will have a more robust and cohesive approach to risk management, particularly as climate analytics firms merge with mainstream data providers, and as investors move beyond generic environmental, social, and gover-

nance (ESG) scores. “While the underlying data remains vital, integrating this data with bottom-up analysis of individual securities provides a more definitive and meaningful assessment of investment risks and opportunities,” he said.

### Frameworks

The lack of a systematic approach in confronting climate risk in part prompted a coalition of more than 70 investors, representing more than \$16 trillion in assets, to release the Net Zero Investment Framework last year. Sponsored by the Institutional Investors Group on Climate Change (IIGCC), a collaborative effort focused on a low carbon future, the framework serves as a blueprint to provide a cohesive and forward-looking approach to guide investor action in achieving net-zero emissions by 2050.

The net-zero goal can be obtained by collectively aligning investment portfolios with a low carbon economy (i.e., decarbonizing investment portfolios) and increasing investments in climate solutions such as renewable energy, according to the framework.

The framework’s five key components to achieving a net-zero *strategy* are: governance, setting portfolio-level objectives, strategic asset *allocation*, asset class alignment, and advocacy and market engagement. The blueprint suggests both top-down (portfolio level) and bottom-up (asset level) targets. On an asset class level, the framework details an approach for equities, bonds, and real estate with the intention to add private equity (PE) and infrastructure in the future.

### Scenario Analysis

“There is a thirst for information on how managers are measuring climate exposure and how they are managing related risks,” said Scott Perry, partner at NEPC, a consulting firm with more than \$1.3 trillion in assets under advisement (AUA). One tool investors are increasingly using, from a total enterprise risk management perspective, is climate scenario analysis.

NEPC created a framework that identified various economic risk factors vulnerable to climate shifts within investment portfolios, which included real estate, inflation, geographic exposures, and higher energy costs. “By overlaying climate and policy scenarios, investors may better understand the potential threats and impacts on portfolios,” Perry said.

For example, rising temperatures could lead to droughts and water scarcity. There could then be a disruption to food supply chains, including the inflationary effect on

agriculture, leading to population displacements and health care system stresses. Poorer economies with weaker health care systems tend to be more at risk, whereas wealthier countries would be better positioned to adapt to climate change, according to NEPC’s analysis.

“Extreme weather events could have significant ramifications on certain regions, such as emerging markets, and as a result on various investing opportunities,” Perry added.

A separate scenario analysis conducted on the Church Commissioners of England’s \$11.87 billion portfolio, both in 2015 and 2020, looked at how changes in three different temperature scenarios affected the portfolio’s resilience considering transition and physical risks and opportunities.

“[One] key takeaway was that it is crucial to have a better line-by-line understanding of climate risks within the portfolio,” Tom Joy, CIO of the Church Commissioners, told CIO. While a top-down strategic asset allocation review could be a good starting point, it is useful to have a more detailed assessment to manage risks, especially given the physical risk in real assets.

“On the whole, our portfolio scores well for climate change resilience, with differences within asset classes,” Joy said. The plan’s infrastructure, agriculture, and timberland portfolios, which represented 15% of assets, were well placed to take advantage of a transition to a lower-carbon world. Further, a large portion of the portfolio’s listed equity exposure was also well-positioned as it is managed with strong ESG and sustainability processes, Joy said.

The church is expanding the scope of its climate data so it can perform backward, current, and forward-looking scenario analyses on its exposure to listed equities on an ongoing basis.

“We plan to formally review this at least once a year, and we need to have the ability to identify and engage with existing and potential managers on particular climate-related risks ... in light of our net-zero 2050 target and the 2025 carbon reduction target,” Joy said. Considering data is less readily available within private markets, he said the church has engaged its managers and a specialized consultant to get better information on its holdings, to devise a forward-looking strategy.

Given that many of its assets are managed by third parties, the church increased its engagement with managers to ensure that they would prioritize carbon reduction and

assessment, Joy added. The church also encouraged its managers to explore collaborative efforts such as IIGCC and the Net Zero Asset Managers Initiative.

"Climate solution investments have a key role in providing both investment returns and contributing to

our climate targets," Joy said. The risks within the space are marked by limited data and inefficiencies, providing opportunities. "We search to partner with managers offering 'win-win' solutions that meet our investment criteria," he added. ●

## Higher Education Endowments That Have Announced Climate Change Targets\*

Institution	The Plan**
Brown University	Declared that 90% of investments in companies that extract fossil fuels have been sold, with the remainder set to be liquidated when possible
Columbia University	Committed to net-zero greenhouse gas emissions by 2050
Cornell University	Instituted a moratorium on new private investments focused on fossil fuels
Georgetown University	Ceased making new investments in any company or fund whose primary business is the exploration or extraction of fossil fuels, including all forms of coal, oil, and natural gas
Harvard Management Company	Committed to accelerating its transition to net-zero greenhouse gas emissions by 2050
McGill University	Adopted a responsible investing framework to guide investment decisionmaking, in line with recognized standards such as the UN-supported Principles of Responsible Investment
Oxford University	<ul style="list-style-type: none"> <li>• Divested from the fossil fuel industry</li> <li>• Asked endowment managers to engage with fund managers to request evidence of net-zero carbon business plans across its portfolio</li> </ul>
Stanford Management Company	Committed to accelerating transition to net-zero greenhouse gas emissions by 2050
University of California, Regents	Declared that its investment portfolios were fossil fuel free, and its clean energy investments topped \$1 billion
University of Cambridge	<ul style="list-style-type: none"> <li>• Said it would divest from all meaningful exposure to fossil fuels by 2030</li> <li>• Aims to achieve net-zero greenhouse gas emissions across its entire investment portfolio by 2038</li> </ul>
University of Toronto	Adopted a responsible investing framework to guide investment decisionmaking, in line with recognized standards such as the UN-supported Principles of Responsible Investment

\*Sampling of universities/colleges that made announcements over the past year

\*\*This may only include one or some takeaways from the school's announcement