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Asset Managers and Net Zero Investing: The Road Ahead

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Overview

Ahead of the upcoming UN Climate Change Conference of the Parties, also known as COP26, investors are under considerable pressure to commit to challenging decarbonization timelines and develop plans that turn commitments into reality. "Net Zero" has become shorthand for commitments made by state and non-state actors to reduce their overall emissions effectively to neutral or below. That would be in line with the goal of keeping global warming below the 1.5°C threshold, thereby avoiding the worst effects of climate change. The financial sector is critical to this goal.

Across the global financial system, institutions are organizing to create frameworks to help companies, both as issuers and borrowers, achieve Net Zero. A growing number of investment institutions have made public pledges to pursue "Net Zero by 2050."

There are plenty of challenges. How this is expressed as an investment strategy for asset managers, and how an asset manager's net zero investment strategy translates into real-world, measurable emission reductions, is not yet clear. Decarbonizing portfolios does not necessarily lead to decarbonization of the real economy. The data to support the pledges is of mixed quality. The actions of the private sector must be coordinated and be supported by government action. These are some of the issues faced by asset managers pledging to make their investments align with net zero emissions by 2050 or sooner.

This paper examines what committing to "net zero" means for asset managers, and what role they can play in decarbonizing the global economy. In addition, it assesses the challenges that asset managers who have made such promises face in fulfilling their commitments. We structure our analysis around the formal commitments that asset managers make as signatories to the Net Zero Asset Managers, or NZAM Initiative, and draw key insights from detailed responses to a questionnaire survey of asset managers that have made public net zero pledges.

In Section 1 we connect the scientific basis for the decarbonization imperative to the investment challenge. In Section 2 we trace financial sector and investment industry climate action over the past two decades to understand the institutional framework supporting the net zero investment movement. In Section 3 we examine the role of asset managers in pursuing economic decarbonization. In this section we draw on insights gathered through an open-ended survey of 12 asset managers. We also examine recent guidance, tools, and platforms aimed at supporting investors—and asset managers in particular—to have a real-economy impact. In Section 4, the final section, we consider how government action can support private-sector net zero action and what investors hope for from COP26.

This analysis is intended to inform future work on developing a framework within which to assess asset manager progress toward net zero, and to evaluate the contributions of individual asset managers to this high-stakes race against time for the financial sector. More specifically, we aim to shine some light on the asset manager net zero journey ahead—especially for managers who have yet to make commitments.

Key Takeaways

Global finance is being transformed by the scientific imperative of achieving the Paris Climate Agreement's goal of real-economy net zero greenhouse gas emissions by 2050.

In the lead-up to COP26, the U.N. Climate Change Conference scheduled to be held in Glasgow from Oct. 31 to Nov. 12, 2021, considerable financial sector organizing is focused on achieving systemic changes: creating collective awareness, raising ambitions, building institutions, and designing new investment metrics and approaches. The momentum behind the net zero investment movement can be traced over two decades, leading to stronger strategic cooperation across the finance sector.

Within this global financial system transformation, asset managers are embarking on an uncharted net zero journey.

To date, 128 asset managers responsible for USD 43 trillion in assets have pledged to achieve a carbon neutral investment strategy by 2050 or sooner under the banner of the NZAM. Within 12 months from the NZAM launch in December 2020, the 30 founding members must release their first climate action plans with targets for 2030 across specified portions of their portfolios.

Across the NZAM commitments and obligations there are considerable differences in how asset managers perceive achievability.

The pioneering efforts of investor networks such as the Institutional Investors Group on Climate Change and the leadership of the Climate Action 100+ initiative (called the CA100+) equip asset managers to exercise influence through active ownership. Strategies for collective influence are scaling up. However, asset managers feel less equipped to commit to portfolio targets because corporate disclosure and company-level emissions data remains weak or inconsistent, and because portfolio-level commitments are conditional on clients' ambitions.

The asset managers who responded to our survey are keenly aware of their power and responsibility as investment stewards to drive emissions reductions in the real economy through engagement across asset classes, and their ability to influence cost of capital. In addition, they have considerable influence over other stakeholders in the investment ecosystem. They recognize, however, that their success depends on coordination across the financial sector and refinement of both the tools for setting net zero-aligned targets and the metrics for assessing impact beyond their portfolios.

Asset managers are leveraging new guidance and tools as they develop net zero investment strategies.

Broad strategy guidance, such as the Paris Aligned Investment Initiative Net Zero Investment Framework 1.5°C Implementation Guide, and portfolio target-setting tools, such as the Science Based Targets for Financial Institutions, help asset managers to develop and implement credible climate action plans.

Portfolio emissions accounting methods, such as the Global GHG Accounting and Reporting Standard for the Financial Industry, help asset managers measure progress. The Recommendations of the Task Force on Climate-Related Financial Disclosures, or TCFD, help to communicate plans and progress.

Engagement and active ownership will be key strategies to establishing a link between portfolio targets and tackling emissions in the real economy.

Portfolio decarbonization does not necessarily lead to real-economy emissions reductions. Managers frequently noted that divesting fossil fuel assets will not ensure that they are decommissioned. Across public and private equity investments and fixed income, asset managers have identified key points of influence, recognizing the value of the collective voice of initiatives like the CA100+ and the importance of data in driving engagements.

There is no industry-standard for a net zero portfolio or for metrics that link net zero climate action plans to real-economy decarbonization.

While the momentum of the investment industry as evidenced by rapid sign-on to net zero initiatives under the UN-led Glasgow Finance Alliance for Net Zero and the 'Race to Zero' umbrella is an encouraging sign, the anticipated action plans will reveal the true degree of commitment and offer a basis for holding institutions accountable for their part in this global challenge. We anticipate wide variations in levels of commitment in asset managers' net zero climate action plans—from the portion of assets in scope for 2030 targets, to the metrics used to track engagement progress and systemic impact. This report underpins future work to evaluate and track climate action plans.

Industry-led initiatives do not substitute for government action.

Asset managers want governments to act on the climate crisis. This comes through clearly in responses to our survey where asset managers expressed strong support for a meaningful price on carbon, requiring mandatory TCFD reporting, removing fossil fuel subsidies, and leading the phase-out of thermal coal for electricity generation. These positions echo the 2021 Investor Statement to Governments on the Climate Crisis—coordinated by The Investor Agenda and signed by investors managing USD 52 trillion in assets. In support of the goals for COP26, asset managers want governments to make stronger national commitments, backed by transition plans, and they want developed country governments to fund their portion of the USD 100 billion-per-year climate transition fund pledged to support climate resilience in emerging markets and developing economies.

"Net Zero by 2050": The Science and the Global Challenge

The world is in a climate crisis. The latest roundup of scientific evidence draws an unequivocal link to human-caused atmospheric greenhouse gas emissions—primarily from the burning of fossil fuels. In the summer of 2021, the Northern Hemisphere saw flooding; drought; heatwaves; and a longer, more-intense wildfire season, signaling that the destruction of value caused by a steadily warming planet is already well under way. The present warming trajectory could wipe out 11% to 14% of global gross domestic product by mid-century.[1] Further climate action delays will escalate the magnitude of value destruction: Every incremental increase in global atmospheric temperatures imposes a far heavier toll on natural, human, and financial systems.

Scientists first sounded the alarm more than four decades ago. The Intergovernmental Panel on Climate Change was formed in 1988 with endorsement of the UN General Assembly to track the global state of scientific knowledge of climate change, including its social and economic impacts. Roundups of this science have been published in comprehensive periodic assessments since 1990.[2]

The Working Group I Contribution to the IPCC's Sixth Assessment Report was released in August 2021 and shows that some aspects of the crisis are unfolding more rapidly than previously modeled.[3] The evidence distilled from 14,000 scientific papers shows that "Climate change is widespread, rapid, and intensifying…some of the changes already set in motion—such as continued sea level rise—are irreversible over hundreds to thousands of years."[4] UN Secretary-General Antonio Guterres described the findings as a "code red for humanity."[5] The lead author of the report, Dr. Tamsin Edwards, has emphasized that without immediate action, the 1.5°C target will be beyond reach.[6]

The Science: 1.5°C

The importance of containing global average surface temperature rise at 1.5°C above pre-industrial levels (1850–1900) was made abundantly clear in the 2018 IPCC Special Report on Global Warming of 1.5°C (SR1.5).[7]

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1 Swiss Re Institute (2021). The economics of climate change: no action not an option. Zurich, 21 April 2021. https://www.swissre.com/dam/jcr:e73ee7c3-7f83-4c17-a2b8-8ef23a8d3312/swiss-re-institute-expertise-publication-economics-of-climate-change.pdf

2 https://www.ipcc.ch/about/history/

3 IPCC (2021). Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press. https://www.ipcc.ch/assessment-report/ar6/

4 IPCC (2021). Climate change widespread, rapid, and intensifying—IPCC. IPCC News Room, 9 August 2021. https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr

5 Guterres, A. (2021). Secretary-General's statement on the IPCC Working Group 1 Report on the Physical Science Basis of the Sixth Assessment. United Nations Secretary General, 9 August 2021. https://www.un.org/sg/en/content/secretary-generals-statement-the-ipcc-working-group-1-report-the-physical-science-basis-of-the-sixth-assessment

6 Vaughan, A. (2021). IPCC author Tamsin Edwards: 'Still possible to limit warming to 1.5°C'. New Scientist, 10 August 2021. https://www.newscientist.com/article/2286579-ipcc-author-tamsin-edwards-still-possible-to-limit-warming-to-1-5c

7 See: IPCC (2018). Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M.

Because there is a near-linear relationship between the amount of carbon in the atmosphere and increasing atmospheric temperatures, scientists have been able to calculate the carbon-burning limit consistent with the 1.5°C temperature rise limit. This budget forms the basis of a global decarbonization timetable: Net Zero by 2050.

To keep global warming below the 1.5°C threshold through to 2100, within 28 years humanity must be carbon neutral—capable of removing whatever greenhouse gases it puts into the atmosphere. Within eight years—by 2030—the world must have cut emissions by at least 45%-50% from 2010 levels.[8] This translates into annual global emissions reductions of 7.6%.[9]

Exceeding the 1.5°C degree threshold risks triggering irreversible changes to Earth's systems, known as *natural tipping points*. The IPCC report describes a tipping point as "a critical threshold beyond which a system reorganizes, often abruptly and/or irreversibly."[10] Crossing one tipping point—such as runaway melting of the Greenland ice sheet—creates environmental consequences that could set off a cascade of other negative outcomes that lead to further warming.[11]

Given how perilously some natural systems now hang in the balance, the scientific view is that swift, transformational action is imperative. Temperatures have already risen between 0.95°C and 1.2°C above preindustrial levels.[12] Further temperature increases are assured because of the long life of CO2 in the atmosphere. This places extremely high stakes on the next round of global climate negotiations at COP26.

Net Zero in Practice: The Race to Zero

Achieving net zero carbon emissions across the global economy by 2050 requires coordination at every level: from supranational to local, across public and private sectors.

Within the overarching framework for coordinating global action on climate change, called the United Nations Framework Convention on Climate Change (known as the UNFCCC), the Paris Climate Agreement was negotiated and adopted by 196 states at the 21st meeting of the Conference of Parties (called COP21), which entered into force in November 2016 as a legally binding international treaty on climate change.

Tignor, and T. Waterfield (eds.)]. World Meteorological Organization, Geneva, Switzerland, 32 pp. https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/

8 IPCC (2018).

9 UN Environment Program (2019). Cut global emissions by 7.6 percent every year for next decade to meet 1.5°C Paris target—UN report. Press Release. 26 November 2019. https://www.unep.org/news-and-stories/press-release/cut-global-emissions-76-percent-every-year-next-decade-meet-15degc

10IPCC (2021), SPM-28.

11 See: Climate Crisis Advisory Group (2021). Extreme Weather Events in the Arctic and Beyond. A Global State of Emergency. 29 July 2021. https://static1.squarespace.com/static/60ccae658553d102459d11ed/t/6102596bc768697d04731d55/1627543921216/CCAG+Extreme+Weather.pdf and Mc Sweeney, R. (2020). Tipping Points. Carbon Briefs. 2 October 2020. https://www.carbonbrief.org/explainer-nine-tipping-points-that-could-be-triggered-by-climate-change

12 IPCC (2021).

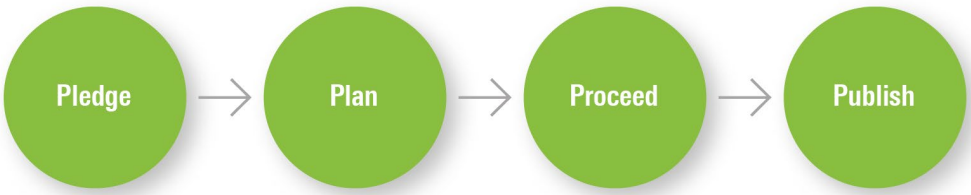
Next month, states will meet for the 26th time, in Glasgow at COP26, with four goals: strengthen formal country-level five-year plans for reducing GHGs; help climate-affected countries protect and restore ecosystems as a defense against climate change; mobilize finance from industrialized nations—fulfilling a pledge of USD 100 billion annually from 2020 onward—to support mitigation and adaptation in developing countries; and accelerate collaboration between governments, civil society, and businesses.

Net-zero commitments are individual pledges to support the global net zero by 2050 goal. There has been an acceleration in the number of net zero commitments as many countries, cities and businesses prioritized climate action as part of their pandemic recovery plan.[13] But they can vary considerably in terms of their timeframe, scope, and stated level of ambition.[14]

One of the biggest challenges implementing national emission reduction commitments is achieving alignment with subnational governments, civil society, business, and finance.

The UN Race to Zero campaign was launched by the UNFCCC in June 2020 to mobilize actors other than national governments to make net zero commitments—working with cities, regions, businesses, and financial and educational institutions. This has become the globally recognized platform through which non-state actors make formal and credible pledges to pursue a "Net Zero" strategy. Race to Zero signatories must, at the outset, commit to the "four Ps": *pledge* carbon neutrality by 2050, *prepare* a plan for targets covering a fair share of halving global emissions by 2030 within one year of signing up, *proceed* to act on the plan, and annually *publish* a report on targets and actions undertaken.[15]

Exhibit 1 UNFCCC Race to Zero Starting Line Criteria



Source: Race to Zero Campaign.

In the spirit of the Paris Climate Agreement itself, the Race to Zero does not mandate specific targets for actors. Rather, it obliges setting and disclosing targets, reporting on progress, and regularly reviewing individual and collective targets for alignment with the global net zero goal. This means that, within categories of actors, institutions that create collective accountability and that support collective action and transparency have a critical role in ensuring progress. Considerable institution-building within the finance sector aims to harness capital flows to achieve net zero.

13 UNFCCC (2020). Commitments to Net Zero Double in Less Than a Year. UN Climate Press Release, September 2020. https://unfccc.int/news/commitments-to-net zero-double-in-less-than-a-year

14 See: the UNFCCC's Non-state Actor Zone for Climate Action (NAZCA) for a database of net zero commitments by non-state actors https://climateaction.unfccc.int/views/total-actions.html

15 The Climate Group (2021). Join the Race to Zero https://www.theclimategroup.org/sites/default/files/2021-06/How%20to%20join%20the%20Race%20to%20Zero_0.pdf

Financial Sector Mobilization and the Net Zero Investment Movement

Appendix 2, on page 27, traces key milestones in the net zero investment movement.

From Investment Risk to Systemic Financial Risk

Investor awareness of the financial risks of climate change and consensus around the role of private-sector finance in tackling the climate crisis has evolved over the past two decades, from being predominantly framed in terms of portfolio or investment risk, to being broadly accepted as a systemic financial risk.

Much of the work in advancing awareness has been carried out by regional and global investor initiatives and supported by United Nations Environmental Program's Financial Initiative. The Institutional Investors Group on Climate Change, representing European asset owners; the Asia Investors Group on Climate Change; the Institutional Investors Group on Climate Change, representing Australasian investors; and Ceres' network of North American investors, along with the CDP and PRI investor associations, have been responsible for building a shared understanding and a common set of engagement tools and approaches for addressing climate-linked risk across the investment industry.

However, for most of the past two decades, the mainstream investment community's acknowledgement of systemic climate-related financial risk lagged climate science. This started to shift in the two-year period leading up to COP21 in 2015. Two key insights likely helped move the mainstream along:

In 2013 climate think tank, The Carbon Tracker Initiative, expanded on its 2011 concept of "unburnable carbon" and estimated the value of fossil fuel reserves that would have to remain in the ground to limit global warming—assets that were at risk of being stranded.[16] This offered a concrete way of thinking about climate-linked financial risk: Fossil fuel burning is an unpriced externality.

In 2015 Mark Carney—then governor of the Bank of England and chairman of the G20's Financial Stability Board—stirred mainstream finance with his observation of the "tragedy of the horizon" in his now famous Lloyd's of London speech.[17] His message was simple: Climate change is a market failure borne of financial short-termism.

The Paris Climate Agreement negotiated at COP21 in December 2015 carved out a central role for finance in "…strengthen[ing] the global response to the threat of climate change…"[18] Article 2.1c commits to: "[m]aking finance flows consistent with a pathway toward low GHG emissions and climate-resilient development."

16 Carbon Tracker (2013). Unburnable Carbon 2013: Wasted capital and stranded assets. In Collaboration with the Grantham Institute for Climate Change and the Environment. https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2014/03/PB-unburnable-carbon-2013-wasted-capital-stranded-assets.pdf

17 Mark Carney (2015). Breaking the tragedy of the horizon—climate change and financial stability. Lloyd's of London, London, 29 September 2015 https://www.bis.org/review/r151009a.pdf

18 United Nations Paris Agreement (2015). https://unfccc.int/sites/default/files/english_paris_agreement.pdf

At the outset it was recognized that the urgency and scale of the problem required not only state-directed financial flows, but also a massive mobilization of private-sector finance.

To support the realignment of capital via finance flows, at COP21 the G20's Financial Stability Board set up an industry-led TCFD to develop recommendations for a globally consistent climate reporting framework for companies.[19] The task force initially recommended voluntary adoption of TCFD reporting. Now several jurisdictions, including the UK, the European Union, and Canada, have taken concrete steps toward mandating TCFD-aligned reporting. At the international level, G7 finance ministers have recently endorsed mandatory TCFD-aligned financial disclosures.

Understanding and responding to the systemic financial risks of climate change and the challenge of mobilizing private-sector finance is reshaping the global financial system's architecture. Central banks and financial market oversight authorities comprising the membership of the Network for the Greening of the Financial System represent 85% of global GDP.[20] The Coalition of Finance Ministers for Climate Change is composed of fiscal and economic policymakers from over 60 countries.[21] Together with the European Union's Sustainable Finance Expert Group and the G20 Sustainable Finance Working Group, these bodies provide international forums for advancing a global perspective on the role of governments and market supervisors in supporting private-sector climate action.[22]

The Net Zero Investment Movement Gains Momentum Ahead of COP26

The early climate-focused investor networks are evolving into industry-wide representative bodies with a clear focus on the challenge of decarbonizing the global economy by 2050 and achieving the necessary interim emissions reductions.

Investor-led initiatives are developing new investment strategy guidance; target-setting frameworks, portfolio and impact measurement metrics, and tools; and platforms for ensuring accountability and collectivizing the investor voice that all create a new institutional infrastructure for investor action. Collectively, these efforts create:

- Greater clarity about the role of investors in economic decarbonization;
- More concrete investor expectations of companies and of government policy; and
- New tools and guidelines to help investors navigate a path portfolio net zero with a real-world impact.

Two key investor groups collectivize the investment community's net zero ambitions.

19 Task Force on Climate-Related Financial Disclosures (2017). Final Report, June 2017. https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf

20 https://www.ngfs.net/en

21 https://www.financeministersforclimate.org/

22 See, for example: Introduction to Commitments and Measurement Methods for Private Financial Sector Portfolio Alignment with the Paris Agreement https://www.financeministersforclimate.org/news/coalition-publishes-summary-policymakers-private-financial-sector-paris-alignment and Network for the Greening of the Financial System (2020). Guide to climate scenario analysis for central banks and supervisors. Technical document June 2020. https://www.ngfs.net/sites/default/files/medias/documents/ngfs_guide_scenario_analysis_final.pdf

In May 2019 a group of large asset owners formed the Net Zero Asset Owners Alliance, convened by UNEP-FI and PRI. The alliance has since grown to 60 members from global markets representing USD 10 trillion in pension fund and insurance assets. Members commit to transitioning investment portfolios to net zero GHG emissions by 2050, tackling the challenges that are common to all investors as well as challenges specific to being asset owners with longer-term investment horizons.[23]

In December 2020, the NZAM Initiative was launched to provide asset managers with a platform for advancing a net zero investing agenda. The NZAM Initiative is supported by The Investor Agenda, which is an initiative of regional investor climate-focused networks, and has since grown to 128 members responsible for USD 43 trillion in assets. Among other things, members commit to working with asset owner clients to develop investing strategies that translate portfolio targets into real-world impact.[24]

Moving the real economy toward net zero requires coordination of the ambitions, commitments, and actions of institutions across the entire financial system. The Glasgow Financial Alliance for Net Zero was set up in April 2021 by Mark Carney (the UK Prime Minister's COP26 Finance Adviser and the UN Special Envoy for Climate Action and Finance) to provide a point of entry for financial institutions into the Race to Zero. It grows out of the COP26 Private Finance Agenda launched by the Bank of England in February 2020.

Member institutions are affiliated with one of the four large financial sector networks: NZAO; NZAM; the Paris Aligned Investment Initiative,[25] which is an initiative of the IIGCC to develop an investing framework for net zero; and the more recently formed Net Zero Banking Alliance.[26] NZBA is composed of 84 banks from 36 countries, representing 41% of global banking assets (USD 64 trillion).

In September 2021 two more financial sector groups were added to the GFANZ umbrella alliance: the Net Zero Financial Service Providers Alliance[27] and the Net Zero Insurance Alliance.[28]

Simply stated, the GFANZ vision is to "…ensure that every professional financial decision takes climate change into account…every company, bank, insurer and investor will have to adjust their business models, develop credible plans for the [net zero] transition and implement them."[29]

23 https://www.unepfi.org/net zero-alliance/

24 https://www.netzeroassetmanagers.org/

25 https://www.parisalignedinvestment.org/

26 https://www.unepfi.org/net zero-banking/

27 https://www.netzeroserviceproviders.com/

28 https://www.unepfi.org/net zero-insurance/

29 Carney, M. (2020). Building a Private Finance System for Net Zero. Priorities for private finance for COP26. November 2020. https://ukcop26.org/wp-content/uploads/2020/11/COP26-Private-Finance-Hub-Strategy_Nov-2020v4.1.pdf

Asset Manager Net Zero Commitments

Having mapped out the emerging institutional infrastructure supporting investor net zero action, we turn specifically to the role of asset managers. Asset managers are powerful investment stewards and intermediaries in the financial system with a critical role to play in decarbonizing the real economy. As of 2021 they collectively manage over USD 100 trillion globally, with the largest 10 managing almost one third of this total.[30]

We posed seven open-ended questions to several large asset managers who have made net zero commitments. Twelve responded, offering reflections on the early stages of their net zero journey (see Appendix 1 for a list of the survey questions). In this section we synthesize insights from responses to the first five questions.

Firstly, we examine the commitments that asset managers make by signing up to the NZAM Initiative. We then identify the tools and resources asset managers can use to develop and execute net zero investment plans—climate action plans—across their portfolio of managed assets. Finally, we consider the role of stewardship and engagement for linking portfolio decarbonization to real-world emissions reductions.

Racing to the Start Line

Signatories to the NZAM Initiative commit "…to support the goal of net zero GHG emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5°Celsius…[and] to support investing aligned with net zero emissions by 2050 or sooner."

Implicit in this statement is a commitment to embed the goal of net zero by 2050 into asset managers' own capital-allocation decisions so that a growing portion of assets is managed in line with scientifically determined net zero targets. The commitment also entails actively engaging companies via dialogue and other forms of stewardship, engaging clients, and undertaking policy and industry advocacy—all of which support portfolio decarbonization efforts as well as economy-wide emissions reduction.[31]

While some asset managers had already expressed support for a net zero investment goal prior to joining, signing up to the NZAM Initiative formalizes this commitment and frames it in terms that connect to broader net zero financial sector mobilization. It also raises the visibility of commitments by providing common reporting requirements and review process.

In practical terms, NZAM's first level of commitment is to the Race to Zero "four Ps." Asset managers are expected, within 12 months of signing up to the NZAM Initiative (the pledge) to come up with a climate action plan entailing:

30 Svaluto Moreolo, C. (2021). Global asset managers record 4.9% net AUM increase in 2020. Investment & Pensions Europe (IPE), 2 June 2021. https://www.ipe.com/global-asset-managers-record-49-net-aum-increase-in-2020/10053184.article

31 https://www.netzeroassetmanagers.org/#our_commitment

- Interim targets that translate into their fair share of the 50% global emissions reductions required by 2030 (in line with the IPCC's global emissions reduction trajectory to reach net zero by 2050); and
- An action plan for achieving these targets.

The broad NZAM commitment statement is operationalized via three core commitments and specific actions that asset managers undertake to fulfill the core commitments, both with respect to the proportion of assets in scope for the interim goal, and with respect to all assets under management.

The three core commitments asset managers make are:

A. Work in partnership with asset owner clients on decarbonization goals, consistent with an ambition to reach net zero emissions by 2050 or sooner across all assets under management.
B. Set an interim target for the proportion of assets to be managed in line with the attainment of net zero emissions by 2050 or sooner.
C. Review our interim target at least every five years, with a view to ratcheting up the proportion of AUM covered until 100% of assets are included.

Given where asset managers are in their net zero journey, the biggest challenges expressed by asset managers relate to commitment B, and to action No. 3 specifically, which is to "Prioritize the achievement of real-economy emissions reductions within the sectors and companies in which we invest." Several important points were made across the responses.

Measuring real-world impact is complicated by data quality issues and lack of data, especially on scope 3 emissions.

- Widely available climate metrics are backward looking; historical emissions are not a good indication of a company's transition readiness.
- Available carbon reduction pathways for companies are insufficiently robust, given the inexact science applied to sectoral emission reduction projections.
- There is limited guidance on how to evaluate trade-offs in emission reduction approaches with other societal and environmental impacts.

Commitments taken by asset managers are both essential to the achievement of decarbonization across all economic activity as well as highly dependent on the commitments made by other stakeholders. Concerns that asset managers raised include:

- The difficulty of setting interim targets if their clients were not aligned with the necessary investment shift;
- The difficulty of influencing certain types of assets, particularly sovereigns offering fixed income securities, which are often difficult to engage with; and
- Uncertainty around government policy and enforcement decisions, which are fundamental to the achievement of decarbonization goals.

The areas where asset managers felt best equipped to embark on the net zero investment journey are those that apply to all assets under management, in particular:

- Action point 7: Most asset managers noted that they had already been conducting engagement and stewardship for some time and felt confident about using it as a strategy for effecting change. Investment industry coordination around engagement via initiatives like the CA100+ coalition, of which all respondents are members, supports asset managers in this obligation.
- Action point 10: All the asset managers we surveyed are already publishing TCFD reports and therefore felt confident about incorporating their climate action plans into their climate reporting. TCFD reports containing action plans are to be submitted to The Investor Agenda within 12 months of joining. The Investor Agenda will then review plans to ensure alignment with the UN Race to Zero criteria.
- Commitment A and action point 8: Investor networks like IIGCC, initiatives like PAII and CA100+, and industry coordination through GFANZ are helping to establish common ground with asset owner clients and a shared purpose with other investment system actors. This offered asset managers a degree of confidence to "work in partnership with asset owner clients on decarbonization goals," and to "engage with actors key to the investment system" as required by action point 8.

Some of the concerns expressed by asset managers are linked to the rapidly evolving landscape of data, metrics, methodologies, and reporting options, which question 3 of the survey sought to illuminate. Asset managers are embarking on an uncharted journey and are uncertain of some of the newest navigation tools. However, there is broad recognition among those asset managers making public net zero commitments of the urgency of acting right away, as reflected in BMO GAM's statement on its net zero commitment.

> *"The risks of 'net zero-washing' are real. Methodologies on net zero investing are still emerging, and disclosure by corporates is patchy, despite the progress made since the publication of the Task Force on Climate-related Financial Disclosures. However, the urgency of the issue is too great to wait until we have all the building blocks fully in place."*[32]

The responses we received from asset managers to question 3 demonstrate that they are actively researching and evaluating resources and tools developed by industry groups and recognize that methodologies and metrics need to have industry-wide approval and be subject to ongoing public scrutiny. Feedback, new data, and broader uptake will continue to enhance the value of these resources to asset managers.

Coming Prepared: Resources and Tools

New guidance and tools to support investors are evolving quickly. We examined responses to question 3 to understand which resources asset managers find helpful or plan to use in developing their net zero investment strategy.

32 Bakhshi, V. (2021). The road to net zero. BMO ESG Viewpoint. April 2021. https://globalfundsearch.com/wp-content/uploads/2020/01/ESG-Viewpoint-BMO-GAM-net-zero-commitment-April-2021.pdf

Appendix 3 identifies many of the tools and guides that asset managers referenced in their responses. Most have been published or released as recently as 2020 and 2021, reflecting the speed with which the industry is responding to the net zero challenge. They have been developed by industry-led initiatives, some of which involve investment industry-climate science community collaborations. They offer common reference points for linking the science of decarbonization to investment decision making. Collectively they build a repository of shared datasets, open platforms, and open-source methodologies that investors can draw on at each stage of the net zero journey.

Charting a Course

While the process of developing a net zero investment strategy is best depicted as iterative rather than linear, it's helpful to group supporting resources into broad categories that chart a general course.

Exhibit 2 Charting the Investor Net Zero Journey

Source: Morningstar (see Appendix 3).

Survey responses identify key resources that asset managers have found useful in the early stages of their Net Zero journey: the PAII Net Zero Investment Framework 1.5˚C Implementation Guide (called the PAII Framework),[33] the NZAO Inaugural 2025 Target Setting Protocol (called the Protocol),[34] and The Investor Agenda's Investor Climate Action Plan Expectations Ladder (called the Expectations Ladder).[35]

> "*We would expect to use one or a combination of these to set targets to support broader implementation of relevant elements of the commitment such as stewardship and engagement.*"

The PAII Framework was most frequently referenced as a useful resource. It is a general framework laying out six key components of a net zero investment strategy. Within this framework investors, both asset managers and institutional asset owners, can situate more specific actions. For example, climate financial risk assessment is an action in the "Governance and Strategy" category, while selective divestment is categorized under "Asset Class Alignment." Some actions apply at the portfolio level, some at the asset class level, and some have systemic influence—such as policy advocacy and engaging with other market actors.

33 IIGCC (2021). Net Zero Investment Framework 1.5˚C Implementation Guide. Paris Aligned Investment Initiative March 2021 https://www.parisalignedinvestment.org/media/2021/03/PAII-Net-Zero-Investment-Framework_Implementation-Guide.pdf

34 Net Zero Asset Owners Alliance (2020). Inaugural 2025 Target Setting Protocol, U.N.-Convened Net-Zero Asset Owner Alliance Monitoring Reporting and Verification Track. January 2021. https://www.unepfi.org/publications/aoapublication/inaugural-2025-target-setting-protocol/

35 The Investor Agenda (2021). Investor Climate Action Plans (ICAPs) Expectations Ladder. https://theinvestoragenda.org/wp-content/uploads/2021/05/expectations-ladder.pdf

Exhibit 3 Main Components and Actions of the PAII Net Zero Investment Framework

Portfolio/Fund Level	Asset Class Level	External
Governance and Strategy	Asset Class Alignment (including engagement)	Policy Advocacy
Targets and Objectives		Market Engagement
Strategic Asset Allocation		

Source: Paris Aligned Investment Initiative (PAII) Net Zero Investment Framework 1.5°C Implementation Guide.

The Expectations Ladder offers a step-by-step approach to getting to the net zero starting line in the form of a "self-assessment checklist." Suggested activities in seven broad categories—strategy, risk management, asset allocation, additional target-setting, collaborative engagement, bilateral engagement, and escalation—can be undertaken to move up the expectations ladder toward a net zero-aligned investment strategy. Given that NZAM members commit to submit their climate action plans to The Investor Agenda for compliance review in line with the Race to Zero minimum criteria, asset managers should familiarize themselves with the expectations set out in this framework.

Demystifying Net Zero Targets

Target-setting is core to aligning portfolios and investment decisions with the global net zero decarbonization agenda. NZAM signatories are expected to work in partnership with asset owner clients on decarbonization goals. It is therefore important to understand NZAO Alliance commitments.[36] Several of the asset managers responding to our survey found the NZAO Protocol to be a useful reference.

The Protocol specifies a four-part target-setting structure linking to real-world GHG emissions reductions. It recommends that members of the NZAO set targets on all four parts, but on three as a minimum for compliance with the NZAO commitment. The four categories are engagement, sector, sub-portfolio, and "financing transition" targets, each with a range of suggested key performance indicators. For instance, at the sub-portfolio level, where not all asset classes are presently in scope, members should plan for, among other performance indicators, a 16% to 29% CO2e emissions reduction by 2025 across publicly traded debt, equity, and real estate assets relative to a 2019 baseline. Later, when all asset classes are in scope, this target would apply at the portfolio level. Financing transition targets link investment decisions to positive climate solutions. NZAO members commit to engage at least 20 high-emitting companies, or engage with companies accounting for 65% of portfolio emissions. Because of the importance placed on engagement, the NZAO Alliance requires all members to set targets in this category.

A key point of difference between the NZAO and NZAM commitments is that NZAM members are required to set interim targets for 2030 consistent with global net zero emissions by 2050, while NZAO signatories must set interim targets every five years in line with the Paris Agreement Article 4.9, with the first targets applying to 2025. The first NZAO biennial progress report shows asset owners ahead of

36 See The Net-Zero Asset Owners Alliance Commitment Document for Participating Asset Owners (2021): https://www.unepfi.org/wordpress/wp-content/uploads/2021/02/04-UN-AOA-Commitment-doc-D11-0021.pdf

required commitments, with 29 member investors having committed to portfolio emissions reductions of 25%-30% by 2025 across in-scope asset classes.[37] This sets a brisk pace for portfolio decarbonization, which asset managers will be under pressure to align with.

Pathways and Scenarios in Target-Setting

An important set of tools for helping investors set net zero-aligned portfolio targets are net zero pathways. These are plausible trajectories of development—incorporating technological, socioeconomic, policy and other factors—that unfold over a specified time period to get the world to net zero by 2050. They can help investors understand and plan for investment risks, identify investment opportunities, and evaluate the likely real-world impacts of alternative investment strategies. Big-picture net zero pathways, like the One Earth Climate Model[38], or OECM, and the International Energy Agency's Net Zero by 2050 Roadmap for the Global Energy Sector (Net Zero by 2050 Roadmap)[39], can be embedded into pathways adapted for specific geographies, sectors, and companies.

Sectoral pathways help decision-makers understand the challenges and opportunities that apply to decarbonization within specific sectors, but which connect to the big-picture global decarbonization timeframe. They contain milestones and timelines to keep within carbon budget constraints assigned to heavy-emitting sectors of the economy within the big-picture constraint of achieving economy-wide net zero by 2050.

The NZAO Alliance's Sectoral Pathways to Net Zero Emissions is based on the OECM and covers five high-emitting sectors: energy, utilities, transport, steel, and cement.[40] For example, global market share modelling of combustion engine versus electric vehicles in five-year increments up to 2050 depicts one aspect of the transition necessary to achieve net zero emissions within the transportation sector. The NZAO intends for these to support asset owners' engagements with investee companies, evaluate individual investee company pathways, and help asset owners set their own sector-specific targets.

The Net Zero by 2050 Roadmap underpins the Transition Pathway Initiative's new carbon benchmark for firms, which will help investors assess whether a company's carbon performance is aligned with a 1.5°C scenario.[41] Less than two weeks before the start of COP26, the TPI launched an investor-backed project to expand coverage of alignment data from 400 to 10,000 companies and make the data publicly available to all market participants.[42]

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37 UN Environment Programme (2021). Major investors to reduce portfolio emissions 25-30% by 2025, inaugural Net-Zero Asset Owner Alliance Progress Report finds. Press Release, 20 October 2021. https://www.unep.org/news-and-stories/press-release/major-investors-reduce-portfolio-emissions-25-30-2025-inaugural-net

38 https://oneearth.uts.edu.au/

39 https://www.iea.org/reports/net zero-by-2050

40 Teske, S; Niklas, S.; Atherton, A.; Keylly, S. and Herring, J. (2020). Sectoral Pathways to Net Zero. Institute for Sustainable Futures, University of Technology Sydney. https://www.unpri.org/download?ac=12245

41 Dietz, S. (2021). TPI introduces 1.5°C benchmark for Carbon Performance. Transition Pathway Initiative, 8 September 2021. https://www.transitionpathwayinitiative.org/publications/53?type=NewsArticle

42 TPI (2021). Landmark New TPI Global Climate Transition Centre to be Created. 19 October 2021. https://www.transitionpathwayinitiative.org/publications/89.pdf

Economic decarbonization pathways help asset managers develop their own sectoral, industry, and asset class decarbonization pathways to inform portfolio-level decarbonization planning. For example, DWS has developed a decarbonization pathway for its European-managed real estate investments which draws on the 1.5°C carbon reduction trajectory for the commercial real estate sector.[43]

The Net Zero by 2050 Roadmap is a necessarily narrow pathway, given the magnitude of the challenge, entailing steep fossil fuel phase-out deadlines—such as decommissioning all unabated coal and oil power plants by 2040—as well as "massive deployment of all available clean energy technologies... between [2021] and 2030," requiring investments in building retrofits, solar and wind energy, and other technologies to reach USD 4 trillion by 2030. This highly informed vision of the future offers investors strategic investment insights.

However, pathways are not predictive—reality might unfold completely differently given different technology, policy, and other factors. The outcome, or end-point, of a pathway or set of pathways is a scenario, which describes a likely future state of reality. Scenarios offer hypothetical "readiness" testing environments—for example, stress-testing whether banks or other financial institutions can withstand specific types of shocks.[44] In partnership with an academic consortium, the NGFS developed a set of six scenarios to help financial market authorities explore the possible impacts on the economy and financial system of three broad climate policy paths that navigate routes between physical and transition risks. The NGFS Scenario Portal can be used by investors to identify the broad macro-financial impacts of transition and physical risks associated with each scenario.[45]

Portfolio Carbon Accounting and Target-Setting

When it comes to portfolio target-setting, it is important to distinguish between portfolio carbon accounting and portfolio net zero alignment. Portfolio carbon accounting consists of a standard set of metrics for describing a portfolio's financed emissions at a particular point in time.

Measuring and disclosing portfolio GHG emissions is fundamental to setting net zero investment targets and tracking progress over time—one asset manager responding to our survey noted that calculating portfolio carbon metrics was an initial step it took to establish a baseline. Industry standard financed emissions measurements also ensure comparability of reported emissions across financial institutions.

The scope of emissions covered in carbon accounting and target-setting is key to assessing the contribution of portfolios to economic decarbonization. The most recent TCFD implementation guidance for financial institutions requires that portfolio emissions reporting and target setting cover scope 1 and scope 2 emissions and, where material, scope 3 emissions.[46] To ensure comparability across institutions and products, the TCFD guidance recommends that asset managers apply the Global GHG Accounting

43 https://www.betterbuildingspartnership.co.uk/sites/default/files/DWS%20Net%20Zero%20Carbon%20Pathway%20FV1.pdf

44 https://www.weadapt.org/system/files_force/pathways_and_scenarios-final_0.pdf

45 https://www.ngfs.net/ngfs-scenarios-portal/

46 TCFD (2021). Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures. October 2021 https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf

and Reporting Standard for the Financial Industry developed by the Partnership for Carbon Accounting Financials, or PCAF.

The PCAF is a collaboration across global banking and investment institutions to develop a standardized methodology for measuring and reporting on emissions linked to investing and lending portfolios. Emissions can be expressed either in absolute terms, across an institution, portfolio, or asset class for a specified period—as tons of CO2 equivalent—as well as in terms of intensity—quantity of CO2 equivalent emissions per economic unit. Intensity metrics give an indication of how financially 'exposed' a portfolio is to heavy emitters. The PCAF Standard is built on the GHG Protocol for measuring scope 1, 2, and 3 emissions across multiple asset classes. [47]

Carbon accounting is backward-looking, based on corporate reports and emissions estimation models. It does not capture what is possible and necessary to align with the global net zero goal.

Exhibit 4 Portfolio Carbon Accounting and Net Zero Alignment Support Science-Based Target-Setting

Source: Morningstar

The Science Based Targets Initiative for Finance framework (called SBTi Finance) supports quantitative target-setting and target validation on investment and lending portfolio emissions that "…are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement."[48] A science-based method for portfolio emission reduction target setting ensures this alignment by mapping out a specific decarbonization trajectory based on a portfolio's sectoral and asset class characteristics. How a portfolio aligns with the trajectory helps investors identify an emissions reduction path with portfolio emissions targets as milestones.

SBTi's Financial Institutions tool can be used to independently verify targets set under one of the existing net zero commitment frameworks by assessing "temperature alignment" (see below), and investors should aim to obtain this assurance in developing climate action plans.

Portfolio Alignment Measures

Portfolio net zero alignment refers to an assessment of the position of a portfolio relative to a benchmark net zero trajectory.

Broadly speaking, net zero portfolio alignment can be supported by reducing exposure to industries and companies associated with high levels of emissions and allocating more capital to areas of the economy

47 Partnership for Carbon Accounting Financials (2020). The Global GHG Accounting and Reporting Standard for the Financial Industry. First Edition 18 November 2020. https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf

48 Science Based Targets (2021). Financial Sector Science Based Targets Guide. Pilot Version 1.1. April 2021. https://sciencebasedtargets.org/resources/files/Financial-Sector-Science-Based-Targets-Guidance-Pilot-Version.pdf

that support a transition toward renewable energy. To assess the contribution of an investment to net zero targets, investors can develop different kinds of scenario analyses that incorporate information from companies' climate-related disclosures.

Assessing the extent to which an investment portfolio is aligned with a neutral or negative carbon emissions pathway depends in part on the types of tools, models, and metrics used to measure the emissions linked to an asset. Technical guidance to Measuring Portfolio Alignment offered by the TCFD identifies three types of tools that investors can use to assess portfolio alignment.[49]

Binary target measurements determine the alignment of a portfolio with specific targets based on the percentage of its holdings that have declared net zero pledges. While this approach is a first step in supporting a net zero investment thesis, more sophisticated methods can look beyond stated commitments and estimate the degree to which company activities are in alignment.

Benchmark divergence models assess alignment at an individual company level so as to allow for a forward-looking comparison of company performance relative to a reference climate pathway or scenario—for example, a 1.5°C scenario that requires an economy-wide emissions reduction of 7.6% per year. One may measure whether a portfolio aligns with this objective by assessing whether the yearly emissions reductions of holdings within a portfolio meet this 7.6% reduction target. More complex benchmark divergence models disaggregate reduction targets and activities by sectors and regions, which are expected to decarbonize at different rates.

Implied temperature rise models are tools that expand upon divergence models by assigning a portfolio and its constituent assets a temperature score that can help gauge alignment or misalignment with net zero targets. An advantage of ITR models is that they allow asset managers to estimate the relative contribution of assets to the overall impact of a portfolio in terms of a commonly understood temperature unit within the context of future climate scenarios. For example, while a company or portfolio with a score of 1°C would be regarded as aligned with a 1.5°C target, one with a score of 2.5°C would be regarded as exceeding its fair share of the global carbon budget.

Benchmark divergence and ITR approaches to modeling portfolio net zero alignment rely on company-level transition readiness assessments. European asset manager and founding NZAM signatory Lombard Odier has built an in-house proprietary temperature alignment tool that assesses the degree of clients' portfolio alignment to 1.5°C decarbonization pathways based on assessments of the transition readiness of portfolio companies.[50]

The TPI transition readiness free tool allows asset owners and asset managers to understand company transition readiness based on two assessments: management quality and carbon performance.[51] These

49 TCFD Portfolio Alignment Team (2021). Measuring Portfolio Alignment: Technical Supplement. June 2021. https://assets.bbhub.io/company/sites/60/2021/05/2021-TCFD-Portfolio_Alignment_Technical_Supplement.pdf

50 https://am.lombardodier.com/home/sustainability/our-sustainable-investment-frame/lo-portfolio-temperature-alignme.html

51 https://www.transitionpathwayinitiative.org/sectors

metrics are forward-looking in that they estimate how well a company is positioned, relative to its sector, to decarbonize its business model.

Whatever portfolio metric an investor uses to track progress toward targets, the real-world impact depends on the quality of the underlying data. Not surprisingly, asset managers referenced data quality as a key concern in target-setting. Lack of consistent and verified reporting of emissions and other climate-linked information by entities undermines investors' ability to set targets and reliably track progress at the portfolio level. Company-level transition readiness assessment is also key to engaging effectively with companies to align business models with the net zero transition.

Beyond Portfolio Decarbonization to Real Economy Emissions Reduction

The NZAM commitment goes beyond portfolio decarbonization and requires that, for the proportion of assets to be managed in line with net zero by 2050 under 2030 interim targets, asset managers are to "prioritize the achievement of real-economy emissions reductions within the sectors and companies in which [they] invest." Several asset managers pointed out in their responses to our survey that decarbonizing portfolios does not necessarily lead to real-economy emissions reductions.

Divestment versus Engagement

Major institutional asset owners around the world have committed to reducing their exposure to, or exiting positions in, investments that generate revenue from specific types of fossil fuels. Over the past decade, high-profile cases have involved pension funds and university endowments in North America, Europe, and the Asia-Pacific region. A recent prominent example is three of New York City's five public employee pension funds, which announced that they were divesting USD 4 billion from securities related to fossil fuel companies.[52]

Taking a cue from asset owners, asset managers have also made some high-profile commitments to divest from carbon-intensive investments. In 2020, BlackRock, the world's largest asset manager, pledged that its actively managed portfolios will exclude from their holdings companies that generate more than one fourth of their revenue from thermal coal production.[53] Fossil Free—a 350.org project that tracks commitments to divest from fossil fuels—reports that, to date, institutional investors, asset managers, and individuals representing USD 14.61 trillion in assets have made full or partial commitments to divest from coal and Canada's carbon intensive oil sands operations.[54]

Besides the direct impact on portfolio emission reduction, motivations for exiting carbon-intensive positions may include a focus on addressing escalating social, reputational, or regulatory risks associated with fossil fuels, responding to mounting stakeholder concerns, or an interest in pressuring the fossil fuel industry to transition toward more sustainable energy production practices.[55] Divestment

52 https://www.bnnbloomberg.ca/three-nyc-pension-funds-to-divest-4-billion-from-fossil-fuels-1.1553737

53 Fink, L. (2020). Sustainability as BlackRock's New Standard for Investing. Annual letter to clients, January 2020. https://www.blackrock.com/corporate/investor-relations/2020-blackrock-client-letter

54 https://gofossilfree.org/divestment/commitments/

55 https://www.smithschool.ox.ac.uk/publications/reports/SAP-divestment-report-final.pdf

commitments draw public attention to the ethics of fossil fuels, while also applying pressure on companies to adhere to evolving social norms and potentially raising their cost of capital.[56] In this way, divestment can raise awareness, free up capital to pursue green investment opportunities, and reduce or eliminate portfolio exposure to where investors take a negative view of the long-term financial prospects of fossil fuels.

However, divesting fossil fuel assets does not ensure that they are decommissioned. Divestment also reduces an influential investor's leverage to engage to change a company's business model. Holding and engaging with large carbon emitters gives investors a voice in how a company transitions its business model which, when strategically targeted, can have systemic consequences.

Connecting Engagements to Net Zero

When asked about where they could have most impact between now and 2030, almost all asset managers in our survey highlighted the influence they could bring to bear through engagement and stewardship activities. Many emphasized the need to focus on the heaviest emitters and sectors, and some described ways to escalate beyond direct engagement to include activities such as, "…private and public letters to the board and/or management; voting against relevant board members; collaborating with other investors and stakeholders; publishing public letters stating our views; supporting shareholder proposals and filing or co-filing shareholder proposals."

Some responses emphasized the importance of working closely with investee companies to develop strategies around capital expenditure and governance and to develop a deep understanding of how net zero will affect them—whether positively or negatively.

All asset managers responding to our survey are CA100+ members and several recognized this platform as a key component of their net zero investment approach.

The CA100+ investor initiative represents over USD 60 trillion in assets—more than half of managed assets globally. It affords a platform for investors to develop a shared vision of the transition path that heavy emitters should take to align their business models with net zero. Collective engagements strategically target the heaviest emitters in order to maximize impact and drive systemic changes to business practices. As a condition of membership, investors must be involved in at least one engagement, in which they represent asset owner and asset manager members.

Linking engagements to net zero targets requires identifying and tracking key indicators of company level progress. The Climate Action 100+ Net-Zero Company Benchmark translates three broad goals for engagement—stronger climate governance, reduced greenhouse gas emissions, and enhanced TCFD-aligned reporting—into 10 indicators, each with 1-3 sub-indicators and associated metrics. One of the inputs is the TPI company-level carbon performance benchmark data.

56 A 2021 study found that increasing oil and gas divestment pledges in a country are associated with lower capital flows to domestic oil and gas companies https://academic.oup.com/joeg/article/21/1/141/6042790

Legal and General's Climate Impact Pledge[57] and Aviva Investors' Climate Engagement Escalation program[58] are examples of where asset managers have developed their own in-house benchmarking approaches to tracking engagement progress with a clear escalation strategy linked to benchmark indicators.

Successful engagements translate into portfolios that are better aligned with the net zero transition and into real-economy decarbonization through the adoption and spread of net zero-aligned business practices. Careful benchmark tracking helps asset managers demonstrate the alignment of engagement and stewardship efforts with their net zero commitment.

Engaging Across Asset Classes

Most coordinated engagement efforts focus on public equities. To understand how asset managers intend to extend their influence via engagement and stewardship beyond public equities, we asked about whether engagement and stewardship levers were also applicable to fixed-income and private equity asset classes.

Respondents noted that their carbon and other ESG engagement and stewardship activities have an important role to play in their corporate fixed-income and private equity portfolios. Some asset managers also engage with non-corporate entities, such as municipalities, and sovereigns and supranational entities. For most, fixed-income and public equity engagements were rolled into the same conversations at the entity level.

Besides advocacy, engaging with debt issuers and private equity investments allows managers to collect valuable insights and to offer their perspective and guidance in contexts where they have stronger influence than a typical public equity investment.

Several respondents noted that they tend to have more leverage when engaging with corporate debt issuers compared with public equity issuers, because of the frequency of reissuance of bonds, which affords them opportunities to guide issuers on key areas of interest. Green and other climate-focused bonds can also help fixed-income investors better evaluate the transition readiness of a company as an equity investment. In some cases, issuers may proactively seek feedback from fixed-income investors.

Engaging with sovereign and municipal issuers is generally more complex and, some asset managers noted, out of scope for net zero target-setting because of challenges in aligning government activities with asset managers' corporate ESG models and methodologies. Still, asset managers can engage with policy makers, including regulatory agencies and other departments. For example, one of the managers in our study noted that if creditors do not have voting rights, asset managers can help issuers understand:

57 https://www.lgim.com/uk/en/responsible-investing/climate-impact-pledge/

58 https://www.avivainvestors.com/en-gb/about/company-news/2021/02/aviva-Investors-climate-transition-engagement-programme/

> *"…how the market's perception of key ESG risks could impact their credit quality, future access to capital, valuation/funding costs and broader stakeholders..... For securitized investments, we may engage beyond the originators to the servicers and other third parties. For supranational issuers, we engage on their broad policy objectives, on the structuring of ESG securities such as KPI-linked bonds."*

Similarly, respondents said that their engagement and stewardship activities are especially meaningful in the private equity space, where they have a direct and extended relationship with companies, frequent interactions, and often a larger ownership stake. Ownership stakes may also include board seats. As with public equity, however, challenges remain, including the nascent stage of methodologies for assessing net zero alignment.

One asset manager investing in private equity through a fund-of-funds strategy had begun addressing net zero goals with third-party providers to "…understand and evaluate their processes, as well as ensure that they are aware that this is an important factor in our own decision process."

Advanced approaches to net zero engagement integrate multiple strategies across various asset classes and different ESG initiatives. One asset manager described this process as "speaking with one voice," such that all teams and personnel—from the CEO and CFO to members of the stewardship, equity, and credit team—work collectively to support each other's efforts and determine areas of climate risk exposure and opportunity. Combining insights and knowledge can enhance an organization's ability to make informed investment decisions and develop impactful stewardship activities.

Advocacy Across the Investment Ecosystem

Besides their role as investment stewards, asset managers are influential intermediaries in the financial system through relationships with financial service providers—credit rating agencies, auditors, stock exchanges, proxy advisers, investment consultants, and data providers—as well as with clients and investor associations. One asset manager noted:

> *"…we believe that one of the most important roles that asset managers can play in the next eight years and beyond, is to remain at the center of the investment value chain … encouraging proactive management of climate risks and absolute emissions reduction."*

Asset owners have been a driving force in the net zero investment movement and some large asset owners are strengthening their asset manager evaluation against their climate investing commitments. However, asset managers noted that not all asset owners may be on board with the investment shifts required to reach net zero investment targets and recognized the need to educate and work with asset owner clients to help achieve alignment on decarbonization targets. Going forward, asset managers may start to incorporate net zero alignment when considering new clients and new business.

Responses also strongly emphasized the need to step up policy advocacy through more coordinated and targeted campaigns directed through investment associations and by supporting the implementation of

climate policies. Indeed, one asset manager felt that this was the way in which asset managers could have the most impact between now and 2030: " …[the] most important action [over the next eight years] is to engage with governments to achieve harmonized regulations for the economy as well as the financial industry." Several responses emphasized the need for more harmonized corporate disclosure to improve data quality and company-level climate metrics as a priority area of policy and industry advocacy. As a form of industry advocacy, the role of the asset manager as thought leader was emphasized in several different ways: "Asset managers have a key role to play in identifying, quantifying, and educating investors on the nature, scale and distribution of climate risks in portfolios."

Finally, there was broad consensus about the need to rapidly steer capital, especially via private equity investments: toward green solutions—low-carbon technologies, including energy efficiency solutions and renewables—and toward companies that are actively advancing the net zero transition. Several responses emphasized the need to support new product development and investment strategy innovations, such as customized index solutions, low carbon funds, and catalytic private debt finance.

Investors Need Governments to Act

Under coordinated net zero commitment frameworks, investors are pledging to manage investments in line with net zero targets, which includes not only portfolio-level decisions, but also working with industry stakeholders and clients, and engaging with investee companies to mobilize systemic decarbonization.

However, this is not where the responsibility ends for private-sector investors. The ability of investors to achieve net zero targets depends very much on the actions of government. Asset managers, in particular, have an important role to play in public policy advocacy. They direct a large portion of the global store of economic value and occupy a powerful role as intermediaries in the investment ecosystem. One of the commitments of the NZAM Initiative is that signatories "[e]nsure any relevant direct and indirect policy advocacy we undertake is supportive of achieving global net zero emissions by 2050 or sooner."

In their responses to our request for views on how policies and regulation can support the achievement of net zero investing commitments, there was a clear consensus.

> *"Unambiguous government commitments to net zero, with appropriate timelines and interim targets… backed up by well-defined roadmaps outlining the specific policy choices and instruments that governments will pursue."*

> *"…clear transition roadmaps from government and sub-government entities and meaningful commitment towards alignment and direct financing of the energy transition, involving clear capital expenditure plans."*

> *"If countries can implement and follow the Paris Agreement, that will lead to significant investment opportunities in clean technologies, green infrastructure and other necessary assets, products and services."*

Specific policy approaches were flagged by multiple responses.

- Provide certainty and clear market signals, especially regarding offsets markets and carbon pricing;
- Mandate standardized, integrated, decision-useful climate risk disclosure and assurance standards;
- Tackle emissions across the economy through fossil fuel phase-out, emission control regulation and ending fossil fuel subsidies;
- Take steps to incentivize private-sector climate positive investments;
- Promote natural climate solutions, linking net zero investing with protection of natural capital;
- Support sector transitions through green infrastructure development; and
- Require businesses and investors to produce climate transition plans.

Many of these points echo the 2021 Global Investor Statement to Governments on the Climate Crisis which, to date, has been signed by 587 investors representing over USD 46 trillion, or 40% of managed assets globally, sending a strong message from investors to global leaders ahead of COP26.[59]

Asset managers, reflecting on their hopes for COP26, emphasized each of the goals set out for the gathering of UNFCCC parties.

Several responses expressed hope for a fairer distribution of responsibilities and obligations among nations and, in particular, that wealthy nations meet funding obligations to support poorer countries' adaptation and mitigation efforts.

> *"Economically developed nations and international corporations have benefited from an investment ecosystem that—up until now—has contributed to the climate crisis. The debate in Glasgow will be about how to pivot this dynamic and could represent a major shift in how capital is allocated and investment decisions are made."*

> *"While [funding for loss and damage] is a core part of the Paris Agreement, there is, alarmingly, no mechanism as yet within the UNFCCC to fund responses when vulnerable countries experience loss and damage. This is viewed as a critical factor by LDCs to unlock the negotiations but is resisted by many wealthy nations. An acceptable deal has to be struck."*

Asset managers hope for stronger emphasis on nature-based solutions. Biodiversity loss and global warming are interlinked crises that cannot be solved independently of one another.

59 The Investor Agenda (2021). Global Investor Statement to Governments on the Climate Crisis. September 2021. https://theinvestoragenda.org/wp-content/uploads/2021/09/2021-Global-Investor-Statement-to-Governments-on-the-Climate-Crisis.pdf

> *"An increasingly important aspect of the climate debate centres on… how nature can become a climate solution for absorbing carbon and for protecting against climate impacts. COP26 needs to set out and deliver a plan to integrate [nature-based solutions] into the Paris implementation strategy."*
>
> *"A significant scale-up in nature-based solutions may be one of our most powerful levers to mitigate climate change and other nature losses and will hopefully gain increased traction after COP26."*

More generally, asset managers want to see global progress towards net zero and hope that COP26 will energize the global net zero investment movement.

> *"Most importantly, we hope COP26 will add further momentum to recognition of the fact, by investors, that the climate transition is now inevitable and carries significant implications that, as asset owners and managers, we have a fiduciary duty to address."*

Decarbonizing the global economy is a challenge that demands a reshaping of the financial system that has, to date, fueled rather than mitigated the climate crisis. This extends responsibility for action to all corners in the financial system. Investors who make a public commitment to pursue a net zero investment strategy under one of the GFANZ investor sign-on initiatives are taking a leap of faith that other stakeholders, including governments, will also rise to the challenge. All who sign on to the net zero investment movement should therefore welcome constructive scrutiny.

Appendix 1: Survey Questions

Refer to the Net Zero Asset Managers Commitments.

1. Which of the net zero commitments is likely to be most difficult to fulfil? Why?
2. Which of the net zero commitments do you feel is the most attainable? Why?
3. What frameworks, portfolio measurement tools and/or net zero guidance have you found helpful, or plan to use, in developing a net zero investment strategy?
4. "Engagement and stewardship are key levers" but is that true for private equity and fixed income? What engagement and stewardship levers can asset managers use for those asset classes?
5. The next eight years will prove crucial in determining whether the world can contain the climate crisis. What do you see as the most impactful thing that asset managers can do over the next eight years to have a real-economy impact?
6. What types of government policies and regulation would be the most helpful in supporting asset managers in their portfolio decarbonization commitments?
7. What do you hope for from COP26?

Appendix 2: The Net Zero Investment Movement Gains Momentum

2015

- **December: Paris Climate Agreement adopted by 196 Parties at COP21**
  Article 2.1(c) "Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development"
- **December: Task Force on Climate-Related Financial Disclosures launched by G20 Financial Stability Board**
  "Without reliable climate-related financial information, financial markets cannot price climate-related risks and opportunities correctly and may potentially face a rocky transition to a low-carbon economy, with sudden value shifts and destabilizing costs..."

2016

- **November: The Paris Agreement becomes a legally binding international treaty on climate change**

2017

- **June: TCFD Recommendations published**
- **December: Climate Action 100+ Initiative launched**

2018

- **October: IPCC Special Report on Global Warming of 1.5°C published**
  "...we are already seeing the consequences of 1°C of global warming through more extreme weather, rising sea levels and diminishing Arctic sea ice" -Panmao Zhai, Co-Chair of IPCC Working Group I.

2019

- **May: UN-Convened Net Zero Asset Owner Alliance launched**

2020

- **February: COP26 Private Finance Agenda launched by the Bank of England**
- **June: UNFCCC Race To Zero Campaign Launched**
- **December: Net Zero Asset Managers Initiative launched**
  Signatories commit to reach net zero emissions by 2050 or sooner and set 2030 interim targets.

2021

- **March: Net Zero Investment Framework 1.5°C Implementation Guide Published**
- **April: Glasgow Financial Alliance for Net Zero launched**
  Building a private finance system for net zero to "...ensure that every professional financial decision takes climate change into account"
- **May: Net Zero by 2050: A Roadmap for the Global Energy Sector published by the International Energy Agency**
  "Pathway to critical and formidable goal of net-zero emissions by 2050 is narrow but brings huge benefits"
- **July: NZAM grows to 128 members with $43 trillion in assets**
- **August: IPCC Climate Change 2021: The Physical Science Basis published**
  "Climate change widespread, rapid, and intensifying"—IPCC code red for humanity—António Guterres, UN Secretary-General
- **September: Net Zero Financial Service Providers Alliance launched**
- **October: NZAO members' targets exceed minimum commitments under GFANZ**
  "Major investors to reduce portfolio emissions 25%-30% by 2025, inaugural Net-Zero Asset Owner Alliance Progress Report finds"-UNEP-FI Press Release
- **October: Climate Action 100+ Initiative reaches over US$60tn in managed assets**
- **November: COP26 Glasgow**
  Uniting the world to tackle climate change

Source: Morningstar.

Appendix 3: Tools and Guidance to Support Net Zero Action Planning

	Commit	Prepare	Set Targets			Take External Action		Measure and Disclose	
Initiatives	*Commitments*	*Guidance Frameworks*	*Scenarios and Net Zero Transition Pathways*	*Portfolio Net Zero Alignment Assessment*	*Target Setting*	*Engagement*	*Policy Advocacy*	*Portfolio Emissions Measurement*	*Reporting*
CA100+						Net Zero Company Benchmark (March 2021); Global Sector Strategies (Aug. 2021)			
CDP				CDP-WWF open source Temperature Rating Methdology (Oct. 2020) powering CDP Temperature Ratings					
Ceres							Blueprint for Responsible Policy Engagement on Climate Change (July 2020)		
IEA			Net Zero by 2050: A Roadmap for the Global Energy Sector (May 2021)						
NGFS			NGFS Scenarios Portal (June 2021)						
NZAM	The Net Zero Asset Managers Commitment (Dec. 2020)								
NZAO	NZAO Commitment Statement (Dec. 2019)		Sectoral Pathways to net Zero Emissions (Dec. 2020)		Inaugural 2025 Target Setting Protocol (Jan. 2021)				
PAII		Net Zero Investment Framework 1.5°C Implementation Guide Version 1.0 (March 2021)							

Source: Morningstar.

Appendix 3: Tools and Guidance to Support Net Zero Action Planning (Cont.)

	Commit	**Prepare**	**Set Targets**			**Take External Action**		**Measure and Disclose**	
Initiatives	*Commitments*	*Guidance Frameworks*	*Scenarios and Net Zero Transition Pathways*	*Portfolio Net Zero Alignment Assessment*	*Target Setting*	*Engagement*	*Policy Advocacy*	*Portfolio Emissions Measurement*	*Reporting*
PCAF								Global GHG Accounting and Reporting Standard for the Financial Industry (Nov. 2020), incorporating GHG Protocol Scope 1, 2 and 3 Guidance	
PRI						Collaborative engagement on climate change transition for oil and gas (Mar. 2018 – Nov. 2020)			
Race to Zero / GFANZ	Race to Zero Minimum Criteria (June 2020), GFANZ joins (April 2021)								
SBTi				SBTi Temperature Alignment Tool (Oct. 2020) using CDP Temperature Ratings data	Financial Sector Science-Based Targets Guidance Pilot Version 1.1 (April 2021)				
TCFD				Measuring Portfolio Alignment: Technical Supplement (July 2021)					TCFD Supplemental Guidance for the Financial Sector (June 2017)
The Investor Agenda		Investor Climate Action Plans (ICAPs) Expectations Ladder and Guidance (May 2021)					The 2021 Global Investor Statement to Governments on the Climate Crisis (Nov. 2021)		
TPI			TPI Tool (January 2017) now incorporating a 1.5°C benchmark for Carbon Performance (Sept. 2021)						
UNFCCC			Marrakech Partnership thematic Climate Action Pathways (Nov. 2020)						

Source: Morningstar.

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