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Financing a Low-Carbon Economy

**An Investor's Guide to Leveraging
Transition and Net-Zero
Financing Strategies**



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Introduction

Climate change and its impacts on the planet, economy and society are among the most significant challenges of the 21st century. As the urgency to address climate change and transition to a low-carbon economy mounts, there is increased focus on the critical role of the finance industry both to mobilize capital toward climate solutions and to influence the behavior of the companies for which they provide financing and investments. According to a report from McKinsey, around \$275 trillion of capital is needed globally to reach net zero by 2050, a crucial step in achieving the Paris Agreement's goal of limiting climate change to an average temperature rise of no more than 1.5°C by 2100.

In response to this challenge, institutional investors and banks have launched a series of programs and products to support the transition to a net-zero world, leading to a dramatic increase in retail and institutional investment in sustainability-linked financial products, with sustainable assets under management increasing from \$30.7 trillion in 2018 to \$35.3 trillion in 2020. There has also been a rise in net-zero commitments, with 128 countries, representing

91% of global GDP and 83% of global CO₂ emissions, announcing net-zero targets, along with thousands of companies, cities, regions, and other organizations. Some financial institutions have also made net-zero pledges and are now working to set roadmaps to achieve their commitments. Seeking to finance the global transition to a decarbonized economy, many have turned to two key investment strategies: net-zero investing and transition finance. Net-zero investing focuses on investing in climate solutions and excluding or minimizing an investor's exposure to emission-intensive industries. Transition financing, a more recent strategy, focuses on improving the climate performance of companies, including in hard-to-abate industries, which are often excluded from investors' net-zero portfolios.

In this briefing note, we explore the contextual factors that should be considered in developing financial strategies and initiatives to meet the climate change challenge and how both net-zero investing and transition finance work to address them. As we will see, both have a role to play, and institutional investors may choose to use one or both in achieving their climate goals.



Context for financing the net-zero transition

Ensuring a just transition

One of the key challenges for the finance industry's role in addressing climate change is to ensure that the transition to a net-zero economy is "just." While the speed and scale of actions required to mitigate climate-related risks and achieve the Paris Agreement goals are expected to create ample economic and environmental opportunities, there is a risk that many will be left behind in this shift. This is largely a result of stranded assets, displaced jobs, and the inability of certain markets, namely emerging markets, to tap into key investment opportunities and new technologies and approaches. A "just" transition, according to [European Bank for Reconstruction and Development \(EBRD\)'s Just Transition Initiative](#), is one that ensures that the economic and environmental benefits of a green economy are shared with those who would otherwise be likely to lose the most economically from the transition itself. (These are typically the same countries and communities who have been harmed the most by environmental degradation and exploitation, historically, and were hardest hit by the coronavirus pandemic.)

Key characteristics

Other key considerations for financing the net-zero transition successfully, adapted from [McKinsey's "Six characteristics define the net-zero transition"](#) and [The](#)

[Institutional Investors Group on Climate Change \(IIGCC\)'s Net Zero Investment Framework Implementation Guide](#), include:

- **Universal:** Climate change occurs in the context of an interconnected world where systems are highly interdependent; therefore, its solutions must also be universal in their approach – occurring across systems and geographies.
- **Significant:** The economic transformation will be substantial in terms of shifts in demand, capital allocation, costs, and jobs.
- **Impactful:** Investors should seek to maximize their ability to influence emissions reductions.
- **Rigorous:** Strategies must be based on robust evidence and be consistent with the best available science on global climate objectives.
- **Uneven:** The economic exposures of a transition to a low-carbon economy manifest differently across sectors, geographies, and communities; this will require varying strategies that adapt to specific contexts.
- **Reduces risk exposure:** Transition risks are those caused by not responding to climate change in a timely or effective manner. These risks may include increased physical climate risks and increased labor market disruption.

- **Opens new opportunities:** The transition to a low-carbon economy opens new opportunities across geographies, markets, sectors, companies and technologies.
- **Accountable:** Stakeholders should be able to assess whether companies or funds are on track to meet climate targets, which will require transparency of data and methodology.



Net-zero investing vs. transition finance

When discussing finance strategies for a low-carbon economy, it is important to understand the differences and synergies between them. While net-zero investing tends to exclude carbon-intensive industries from the investment universe, transition finance invests in these assets while seeking to improve their environmental performance. This is important, as these industries often are critical to providing the resources necessary to successfully transition to a low-carbon economy and support populations that are not yet integrated into the “green” economy. For example, the transition to electric vehicles (EVs) requires a massive expansion of battery metal mining. According to [Forbes](#), “A projected sixfold surge in demand for lithium-ion batteries over the next decade may require up to 384 additional graphite, lithium, nickel, and cobalt mines by 2035 to supply all those new EVs.” Divestment from the mining sector – an industry that is highly energy-intensive – would hinder its ability to contribute to such climate solutions. Where net-zero funds may eliminate mining from their portfolios to minimize their carbon risk exposure, transition finance can help provide the funds needed to clean up this carbon-intensive – yet crucial – industry.

Net-zero investing

The primary objective of net-zero investing is to ensure that investors can decarbonize investment portfolios and increase investment in climate solutions in a way that is consistent with a 1.5°C future. This approach, by design, tends to exclude carbon-intensive industries and reward companies already hitting key climate targets.



Three key financing strategies define net-zero investing, according to the [Glasgow Financial Alliance for Net Zero \(GFANZ\)](#) and [Morgan Stanley Capital International \(MSCI\)](#):

Climate solutions: Financing for entities and activities to develop and scale up climate solutions, such as the expansion of low-emission technologies or removal of greenhouse gases (e.g., green energy or nature-based carbon sequestration projects).

Aligned: Financing for entities already aligned with a 1.5°C trajectory, which involves a forward-looking assessment of companies' rates of decarbonization (e.g., funding for a company with a Science-Based Target Initiative (SBTi)-validated target that has achieved key milestones in achieving its long-term target).

Aligning: Financing for entities that have committed to rigorous climate targets and transition plans and have begun implementing measures to reduce emissions but are not yet on a 1.5°C trajectory (e.g., an energy-intensive company switching to renewable energy sources).

A [Morningstar report](#) published in April 2022 sought to quantify the number of climate funds in the market. It defined climate funds under the following categories:

- Low-Carbon and Climate Conscious funds, which focus on reducing climate-related risks via decarbonizing portfolios and investing in companies that align with the transition to a low-carbon economy (described above as “Aligned” and “Aligning”).
- Green Bond, Climate Solutions and Clean Energy/Tech funds, which focus on companies with products, services or projects that directly or indirectly cut emissions (described above as “Climate Solutions”).

According to the report, as of December 2021, there were 860 funds under Morningstar’s overarching definition of climate funds, with collective assets under management of \$408 billion worldwide. This was double the volume in the market in 2020.

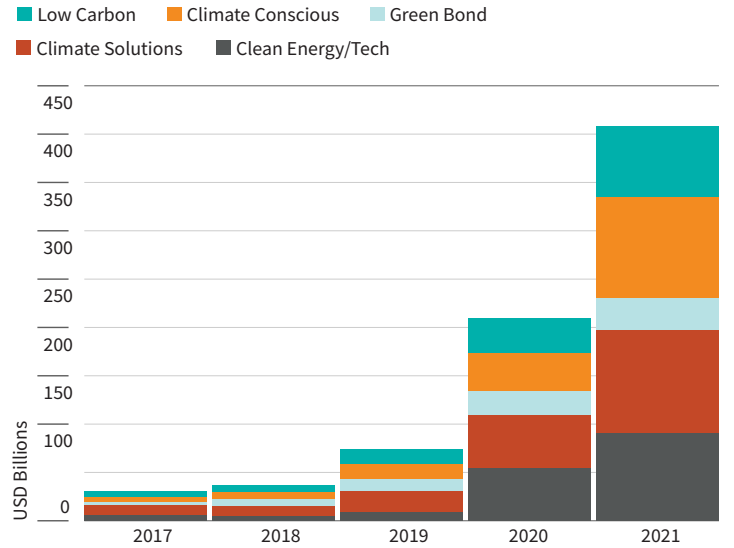


Figure 1. 2021 Global Climate Funds [source: Morningstar]

Net-Zero Investing Case Studies



Energy Impact Partners | EIP Deep Decarbonization Frontier Fund

Year: 2022

Asset Class: Venture Capital

Financial Instrument: Direct Investment

Sector: Sector Agnostic

Amount: USD 485 million

Energy Impact Partners is a global venture capital firm investing in the transition to a net-zero carbon economy. Its EIP Deep Decarbonization Frontier Fund was created to invest in companies that are working on early-stage technology designed to accelerate the transition to net-zero greenhouse gas emissions, particularly those with revolutionary climate technologies with outsized financial prospects, focusing on companies that are showing early promise with regards to technical success but have not yet reached scale.

The Frontier Fund is built around two areas of climate solutions: new investor interest helping to solve the challenge of decarbonization and an increased demand for net-zero and zero-emissions energy production and technology. The Frontier Fund has started deploying funds already, with a number of investments into startups focused on decarbonizing everything from power generation to fertilizer production. Some of these companies include Form Energy, which is making multi-day energy storage cheaper; Electric Hydrogen, which is pushing industrial-scale, renewable-powered hydrogen production; Nitricity, which is making a zero-emissions nitrogen fertilizer; and Sublime Systems, which is a zero-carbon cement.

“We are looking for audacious entrepreneurs taking big swings at big problems in climate tech,” said Shayle Kann, partner in the EIP Frontier Fund. “Over the last six years we have built an ecosystem and process to drive innovation in massive, mature and technically complex industries; nowhere is this skillset needed more than the drive toward deep decarbonization.”



Mirova | SunFunder

Year: 2012- present

Asset Class: Blended Finance

Financial Instrument: Blended Finance

Sector: Clean Energy

Amount: USD 200 million in clean energy investments closed

Mirova's SunFunder is the leading debt-financing provider for distributed solar power in Africa and other emerging regions, bringing access to green energy and long-term climate investments. It has closed over USD 200 million in loans to 57 solar companies working in off-grid solar, mini-grids, agri-solar and other commercial and industrial (C&I) solar projects. These investments have reduced carbon emissions by replacing fossil fuels, directly resulting in over 750,000 metric tons of annual CO₂e mitigation, and also help communities adapt to climate change by increasing resilience in local economies and food systems.

Prior to 2012, pioneering off-grid solar companies in Africa were struggling to get loans to grow their businesses and their impact. This was the financing bottleneck to scaling climate solutions that SunFunder made its mission to overcome. The sector was too new and too small for international lenders, and too esoteric for local banks.

SunFunder has raised the funds to deploy these investments through blended finance vehicles. These have given impact investors like Calvert Impact Capital, development finance institutions like DFC and Swedfund, private investors including Bank of America, catalytic investors like IKEA Foundation and high-net-worth individuals the opportunity to invest in diversified portfolios,

structured to their risk/return appetites.

SunFunder's loans have directly resulted in over 8 million people gaining improved energy access. They are predominantly in rural areas of Sub-Saharan Africa, as well as India and other developing countries. The solar energy systems installed by the companies SunFunder works with have provided children with light to do their homework at night and their households can adopt modern appliances and are no longer reliant on toxic and dangerous kerosene, improving health, safety, and air quality. Farmers using solar irrigation pumps increase their production and resilience to climate risks, while for businesses the benefits of cutting costs and emissions and improving the reliability of their energy supply through C&I solar bring wider benefits for local economies and jobs.



Transition Finance

The Organisation for Economic Co-operation and Development (OECD) **defines** transition financing as focusing on “*the dynamic process of becoming sustainable, rather than providing a point-in-time assessment of what is already sustainable, to provide solutions for decarbonization of the whole economy, and to decarbonize the most polluting and hard-to-abate industries today.*” So far, debt-related instruments are viewed as playing the most prominent role in transition finance. Responses to the [OECD Industry Survey on Transition Finance](#) show that there is currently no consensus on the role that individual

financial instruments do or will play in transition finance-related transactions. Currently, transition finance is primarily provided through fixed-income instruments. Transition bonds issuance globally nearly tripled in each of the past two years, from \$585 million to \$1.67 billion in 2020 and \$4.56 billion in 2021. However, it is still dwarfed by the total global issuances of other sustainable debt instruments; for example, green bonds grew 60% from \$297 billion in 2020 to \$517.4 billion in 2021. Use of Proceeds bonds (green and sustainable bonds) can also be leveraged for transition finance due to the forward-looking,

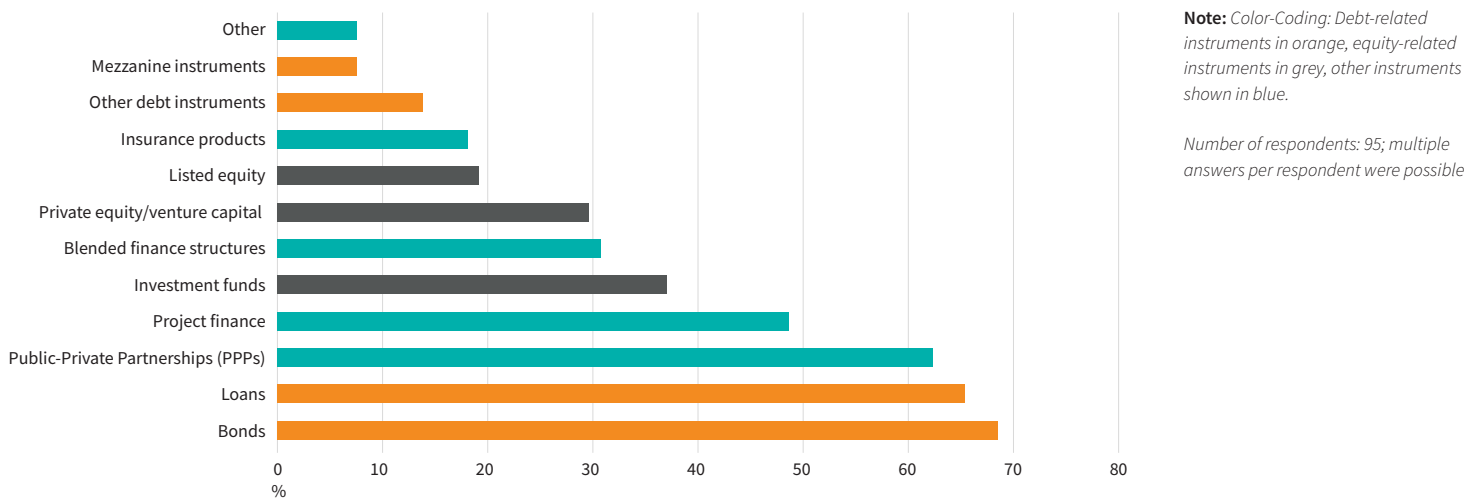


Figure 2. Survey Question: Which financial instruments or mechanisms will be most deployed for Transition Finance-related transitions, in your view? [source: [OECD Industry Survey on Transition Finance](#)]

performance-based nature of these debt instruments. They require sustainability performance targets and associated key performance indicators at the entity level, ensuring accountability for decarbonization. In H1 2022, the cumulative green, social, sustainability, sustainability-linked, and transition-labeled debt reached \$417.8 billion.

So far, the focus in transition finance has been around transition bonds but this is expanding, as shown by the OECD Survey. Transition finance encapsulates financial instruments such as Use of Proceeds bonds, transition bonds, corporate transition plans, and transition funds.

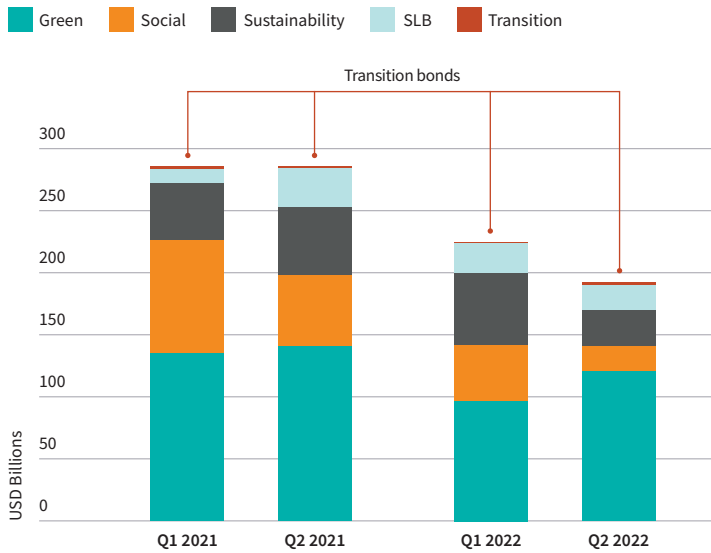


Figure 3. Total Issuance of Sustainable Debt Instruments in H1 2021 and H1 2022
[source: Adapted from Climate Bonds Initiative]

Transition Finance Case Studies

Brookfield

Brookfield Asset Management | Brookfield Global Transition Funds

Year: 2022

Asset Class: Private Equity

Financial Instrument: Transition Fund

Sector: Energy & Industrials

Amount: USD 15 Billion

Brookfield Asset Management's Brookfield Global Transition Fund is the largest ever private fund wholly dedicated to supporting the global economy in achieving net zero. More than 100 investors worldwide, ranging from public and private pension plans, sovereign wealth funds, insurance companies, endowments and foundations, financial institutions and family offices, contributed to the fund.

The fund will invest in the transformation of carbon-intensive industries as well as clean energy projects. To date, \$2.5 billion has already been deployed toward three projects: solar power and battery developer Sunovis, which boasts a

development pipeline capacity of about 25GW; Entropy, a carbon capture and storage developer; and Cambridge Power, a battery storage provider.

Mark Carney, Brookfield's vice chair and head of transition investing, said in a statement: "Now is the time for comprehensive, determined action. [The Brookfield Global Transition Fund] provides significant scale of capital with catalytic long-term investment the world needs to help put our planet of a sustainable net-zero pathway."



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Lombard Odier | TargetNetZero Global & Europe Equity Fund

Year: 2021-Present

Asset Class: Private Equity

Financial Instrument: Transition Fund

Sector: Sector Agnostic

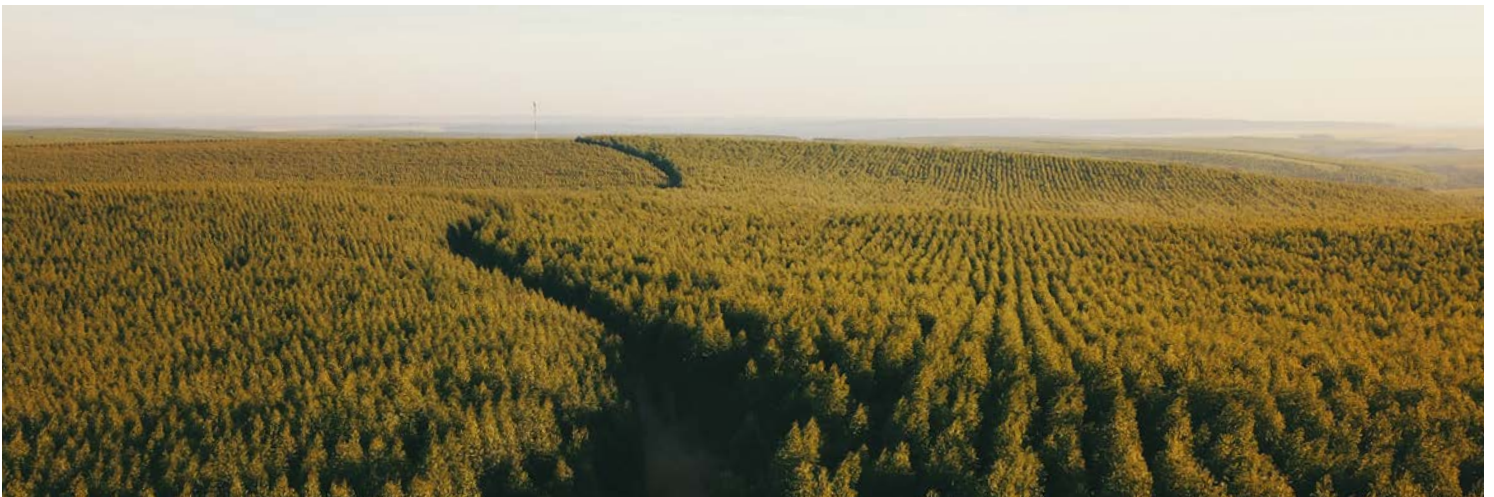
TargetNetZero equity funds are designed to decarbonize portfolios and to help accelerate the transition to a more sustainable economy, with a range of strategies to take into account the emission trajectories of companies across all emission scopes. The funds have a wide variety of climate objectives covering the risk of transition and the opportunities and the physical risks associated with climate change and focus on the reduction in emissions across the economy.

Portfolios include companies already targeting net-zero CO2 emissions by 2050, as well as those without such targets but who may be brought into line through regulatory action, investor engagement and market changes.

The funds aim to deliver on three parameters:

- Reducing the transition risk for investors and generating risk-adjusted returns as our global economy is in transition.
- Offering an investment opportunity in line with the climate goal to limit greenhouse gases and consumer demand.
- New targets and regulations are increasingly focused on circularity, nature, equality and net zero. Technological innovation and economies of scale are driving down the costs of circular, lean, inclusive, clean economic model.

“We recognize that to get to net zero, we cannot merely shy away from the more difficult, hard-to-abate industries,” said Dr. Christopher Kaminker, Head of Sustainable Investment Research, Strategy and Stewardship at Lombard Odier. “Rather, we must seek to identify those players that are emerging as the champions of the transition ahead in each of their respective sectors. Doing so requires diversified strategies that are able to distinguish the leaders from the laggards, and re-deploy capital accordingly.”



Considerations when implementing net-zero investing and transition finance strategies

The stranded asset challenge

Net-zero investing is often focused on divestment of carbon-intensive industries, which increases the risk of creating “stranded” assets from closed power stations or transport infrastructure that are no longer in use and that investors no longer want. Essentially, as [Rempel and Gupta](#) explain, assets are stranded when they “*suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities. These include physical (e.g., fossil fuel equipment, infrastructure), financial (e.g., equity and debt); natural (e.g., fossil fuel resources); human (e.g., expertise, jobs); and social (e.g., networks and communities) assets.*” These costs will have to be borne by someone, whether it be governments, financial institutions, corporates, or communities. What is evident is that stranded assets will mean that certain groups will lag in the transition to a low-carbon economy. For example, emerging markets with abundant fossil fuel resources are most likely to suffer from asset depreciation and the adoption of renewables over the coming decades, especially because existing high-emitting assets in these economies are still relatively new and thus, there may be less incentive to undertake low-carbon capital spending. [For example](#), Africa would have to leave 26%, 34%, and 90% respectively of its gas, oil, and coal reserves untapped, resulting in substantial economic losses

in its transition to a net-zero economy. Additionally, stranded assets lock in externalities that will make it difficult to achieve the UN Sustainable Development Goals (SDGs), such as SDG 8 (decent work and economic growth), due to the loss of employment. The figure below shows the exposure of several countries to the transition by measuring the proportion of employment, economic production, and physical capital stock in exposed sectors today. The [findings](#) support the claim that a “just” and inclusive transition would be undermined by excluding heavy-emitting sectors from low-carbon strategies.

While net-zero investment initiatives such as Net Zero Asset Managers (NZAM) insist that divestment is not a requirement, they recognize that the alignment approach they propose may reallocate capital away from high-carbon investments. This dichotomy is reinforced by NZAM's expectation that signatories phase out fossil fuels while also urging signatories to be [mindful](#) of countries and regions that are particularly dependent on fossil fuels and need support for a just transition. GFANZ, on the other hand, combines net-zero investing and transition finance strategies, promoting a [managed phaseout](#) approach that encourages its participants to recognize that the greatest emissions reduction may be achieved by directing financing and related services to carbon-intensive firms and assets rather than divesting from them.

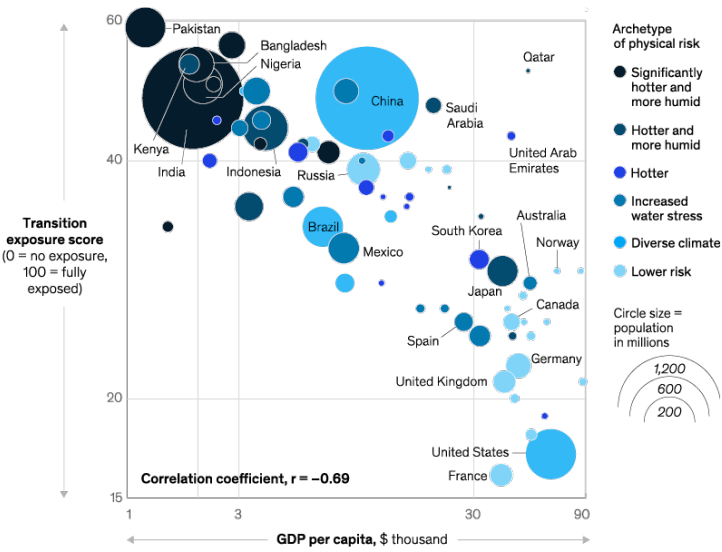


Figure 4. Graph of physical risk through transition exposure against GDP per capita by country [source: McKinsey]

Social impact (just transition)

Until recently, the consideration of the social dimension in net-zero investing and transition finance frameworks has been limited. While several net-zero investment initiatives acknowledge the just transition as a consideration, they offer little guidance for how investors should incorporate it into their investment and engagement strategies. However, newer guidance issued for transition finance has focused more on this issue. The International Capital Market Association (ICMA), for example, notes in their [Climate Transition Finance Handbook](#) that issuers should describe how they have considered and included just transition principles in their climate transition strategy as well as specify any relevant social expenditures, and the [OECD Guidance on Transition Finance](#) outlines the need for stakeholder engagement. However, in most cases, there is little indication of what actions qualify as sufficient inclusion of just transition principles.



Financing gap

Emerging markets' lack of access to global capital markets may be particularly acute as they look to invest in low-emissions technologies, which may be harder to finance and [come with different risk-return expectations](#). To alleviate these concerns, the United Nations Framework Convention on Climate Change (UNFCCC) has promoted the concept of directing climate finance from developed markets to emerging markets. It has been estimated that emerging markets need nearly [\\$94.8 trillion](#) to transition to net zero. In 2009, at COP15, developed countries committed to a target of providing [\\$100 billion in annual climate finance by 2020](#). It has yet to be met. (While COP27 in 2022 wrapped up with a [historic agreement](#) to provide “loss and damage” funding for vulnerable countries impacted by climate change, it did not address the funding gap for reducing emissions.)

The technology challenge

There is currently a lack of affordable climate mitigation technologies to enable rapid progress on reducing negative climate impacts, particularly for

extractive industries, which face formidable challenges to decarbonizing. Significant investment is now required to enable the redesign and reconstruction of existing facilities, equipment, and production processes. It has been estimated for example that decarbonizing cement, steel, ammonia, and ethylene alone will cost around \$21 trillion through 2050. This challenge is further complicated by the reality that companies that make sizable investments into low-carbon production may not see the payoff for some years, which is especially true for low-margin commodities competing in a global market.

Lack of reliable data

Financial institutions do not yet have enough reliable and comparable data to establish what a “credible transition” looks like. In October 2022, the annual review by Carbon Tracker found that carbon-intensive companies were not adequately disclosing the effects of climate-related risks and net-zero emissions plans in their financial statements – an omission which denied investors crucial climate-related information. The review found that 98% of surveyed companies do not provide evidence that their 2021 financial statements had considered the effects of climate-related matters. Additionally, the OECD Industry

Survey on Transition Finance indicates that financial market participants view a lack of detailed information from corporates on their climate transition planning as the main obstacle preventing them from identifying companies they could finance in line with their net-zero targets. For example, in the oil and gas industry, oil majors have yet to publish credible transition plans with emission targets. The Carbon Tracker’s Absolute Impact 2022 report analyzed the credibility of 15 major oil and gas companies’ plans for emissions reductions and found an industrywide failure to align with science-based pathways for limiting global warming to 1.5°C. Although Scope 3 emissions from the use of sold products make up more than 80% of an oil and gas company’s life-cycle emissions, oil and gas companies primarily focus on Scope 1 and 2 emissions. Where there are Scope 3 targets, they tend to be intensity based, which allows companies to achieve their stated targets without changing their business model or total emissions.

Lack of financial instruments

While the emphasis in transition finance is currently on debt instruments, the debt market alone is not enough to mobilize the necessary capital for the global transition to a low-carbon economy. Financial market actors will need

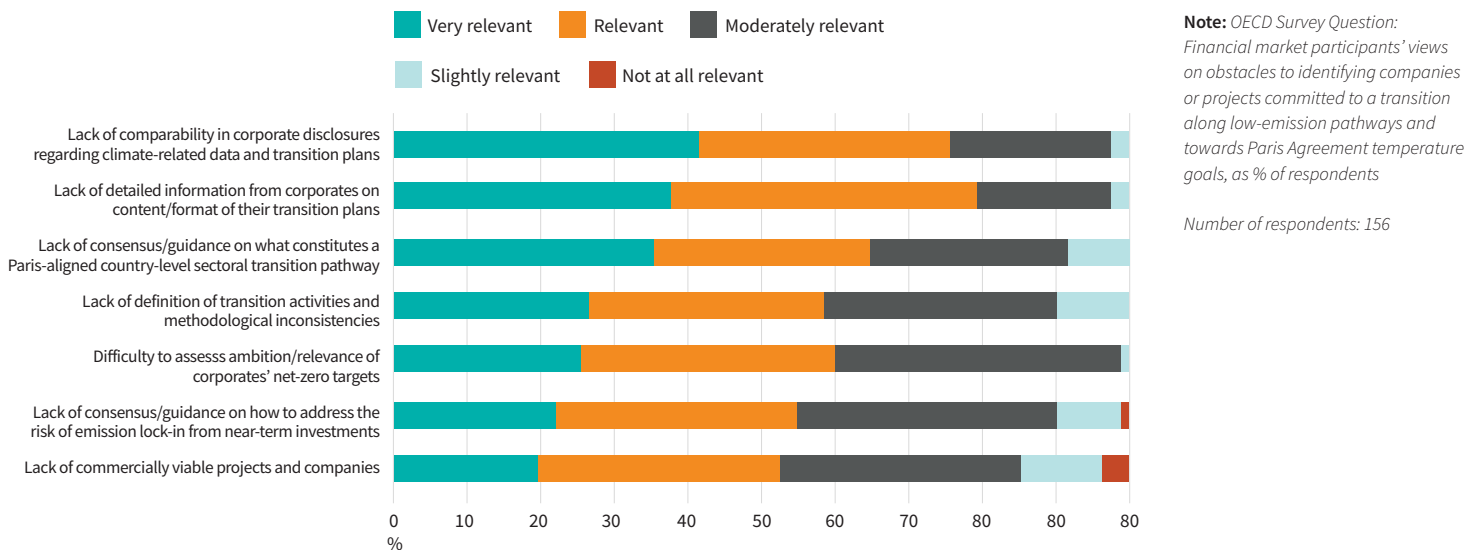


Figure 5. Information gaps and a lack of comparability of relevant data are key obstacles to identifying companies that are committed to a credible net-zero transition [source: OECD Industry Survey on Transition Finance]

to diversify their approach and develop and leverage new equity instruments and hybrid instruments such as convertible bonds.

Short-termism

Financial markets, despite some progress, are still dominated by a short-term logic that directly contradicts the need for a long-term approach to sustainability challenges in general, and climate change in particular. As Kim and Asuncion write, *“Short-termism’ is translated into acceptable investment horizons for all major investment classes: 10 years for public stocks, 5–7 years for private equity, and 3–5 years for corporate bonds, for example. These time horizons represent normative views of the period over which an investment is supposed to generate some acceptable rate of return. This has also seemingly worsened: average holding of equities fell from 8 years to 8 months over the span of 20 years.”* Transition finance requires more patient capital, to absorb the risks associated with



a low-carbon economy, such as stranded assets and reskilling workers in emission-intensive industries. This means adopting timelines closer to 20 years.

Appendix

Net-zero investing guidance

The following table summarized examples of recommended actions, metrics and methodologies by leading net-zero investing coalitions and initiatives. The overarching objective of these is to support investors in decarbonizing their portfolios and increasing investments in climate solutions, in a way that is consistent with a 1.5°C trajectory.

	Glasgow Financial Alliance for Net Zero (GFANZ)	Institutional Investors Group on Climate Change (IIGCC)	Morgan Stanley Capital International (MSCI)
Financial Institution Coverage	Asset Owners, Asset Managers, Banks, Insurers	Asset Owners & Asset Managers	Asset Owners
Theory of Change	Finance entities and activities that: <ul style="list-style-type: none"> • develop and scale climate solutions • already align to a 1.5°C pathway • commit to transitioning in line with 1.5°C-aligned pathways • accelerate the managed phaseout of high-emitting physical assets 	<ul style="list-style-type: none"> • Decarbonize investment portfolios in a way that is consistent with achieving global net-zero greenhouse gas (GHG) emissions by 2050 • Increase investment in the range of climate solutions needed to meet that goal 	<ul style="list-style-type: none"> • Decarbonize investment portfolios • Increase investments in impact and green solutions
Deadline	2050	2050	2050
Task Force on Climate-Related Financial Disclosure (TCFD) Aligned	Yes - Recommendations build on TCFD	Yes - Climate financial risk assessment in line with TCFD and reporting	Yes – TCFD-aligned reporting
Temperature Commitment	1.5°C degrees	1.5°C degrees	1.5°C degrees
Approach to own operations Scope 1 and 2	N/A - recommendations cover financial institutions' Scope 3 financed emissions	N/A - recommendations cover financial institutions' Scope 3 financed emissions	N/A - recommendations cover financial institutions' Scope 3 financed emissions
Approach to Financed Emissions	Commitments should cover at least the Scope 1 and Scope 2 emissions associated portfolio companies. Scope 3 should be included if/when material or portfolio company is a significant contributor to climate change	Portfolio-level targets should include Scope 1 and 2 emissions. Scope 3 should be included if material. Set goals for increasing % AUM invested in aligned assets.	Set targets for Scope 1 and 2 emissions that align with reaching net-zero emissions by 2050. Targets should be set for Scope 3 emissions wherever possible.
Interim Targets	Yes - interim targets that maximum effort toward a significant share of the 50% global reduction in GHG emissions needed by 2030.	Yes - medium-term targets to inform strategic asset allocation and monitor the impact of strategy. However, "medium-term" is not defined.	Develop short- and mid-term targets: <ul style="list-style-type: none"> • Short-term targets include targets between now and 2025 • Medium-term targets generally address the decade from 2026 to 2035 • Long-term targets generally cover the period from 2036 to 2050

	Glasgow Financial Alliance for Net Zero (GFANZ)	Institutional Investors Group on Climate Change (IIGCC)	Morgan Stanley Capital International (MSCI)
Approach to Engagement with portfolio companies	Actively engage with portfolio companies to encourage strategies, plans and progress towards net-zero alignment. Have an escalation framework in place when engagement is ineffective.*	Set an engagement target to ensure that at least 70% of financed emissions in material sectors are either net zero, aligned with a net-zero trajectory, or subject to direct or collective commitment and management actions. This threshold should be raised to at least 90% by 2030.	Set targets for engagement.
Industry and Policy Advocacy	Yes – discuss challenges, support an orderly transition to net zero and standardize approach.	Yes – list of engagement topics included, e.g., improved energy use data disclosure and data-sharing initiatives or carbon pricing in line with achieving net zero.	Yes – financial institutions should set targets for policy advocacy.
Scenario Analysis	Yes	Yes	Yes
Approach to the Just Transition	Financial activity across all four key financing strategies may also intersect with areas of just transition, biodiversity, and nature.	Institutions should consider articulating overarching principles, such as just transition.	No
Approach to High-Emitting Industries	Managed Phaseout: this strategy should include levers such as engaging with institutional investors and portfolio companies to identify opportunities to accelerate the phaseout and developing products and services to support an orderly phaseout. Standalone guidance available for managed phaseout.	Selective divestment: Based on climate-related financial risk; engagement escalation; non-permissible activity thresholds.	Divestment from companies with stranded assets.
Approach to Offsets	N/A - Approach to offsets not included	Only where there are no technologically and/or financially viable alternatives to eliminate emissions	Carbon offsets should generally be used for residual emissions, but does not specify whether this is part of recommended actions
Avoided Emissions	Managed phaseout: avoided emissions from retired assets are included as an example of metrics	Decarbonization and avoided emissions should generally be treated separately	N/A
Additional Notes	*Members of the sector-specific alliances comprising GFANZ have each committed to supporting net-zero GHG emissions by 2050. Each sector alliance establishes the commitment criteria for membership.	N/A	N/A

Transition finance guidance

Since transition finance is still nascent, there is a lack of specific, formalized guidance beyond high-level guidance on transition bonds and the OECD's Guidance on Transition Plans. Therefore, the table below includes transition guidance currently available. We expect that similar guidance will be developed for other transition financial instruments in the coming years.

	International Capital Market Association (ICMA)	Climate Bonds Initiative (CBI)	Organisation for Economic Co-operation and Development (OECD)
Definition of Transition	No - CTFH does not provide definitions or taxonomies of what constitutes 'transition projects' but acknowledges several initiatives that can be used to define transition activities: <ol style="list-style-type: none"> 1. The EU Taxonomy 2. National Standard of Canada for Green and Transition Finance 3. Financing Credible Transitions - A Climate Bonds Initiative Project 	Yes - Defines transition via 5 principles and 5 transition categories. The principles are: <ol style="list-style-type: none"> 1. Aligned with 1.5 °C trajectory 2. No offsets 3. Science-based 4. Technological viability trumps economic competitiveness 5. Actions, not pledges 	Yes - Transition finance has been generally understood as being intended to decarbonize entities or economic activities that: (i) are emissions-intensive (ii) may not currently have low- or zero-emission substitutes that are economically available or credible in all relevant contexts, but (iii) are important for future socio-economic development.
Instruments	Transition Bonds	Transition Bonds	Transition Plans
Overview of Framework	A transition label applied to a debt financing instrument should communicate how an issuer's corporate strategy seeks to transform the business model in a way that effectively addresses climate-related risks and contributes to alignment with the objectives of the Paris Agreement.	Yes - framework provided at entity and activity level. Transition label can be used for eligible investments that: <ul style="list-style-type: none"> • Make a considerable contribution to halving global emissions levels by 2030 and reaching net zero by 2050, but will not have a role to play in the long term, OR • will have a role to play in the long term, but the pathway to achieving net-zero emissions targets needs to be clarified. 	The list of ten elements of credible corporate transition plans: <ol style="list-style-type: none"> 1. Setting temperature goals, net-zero, and interim targets 2. Using sectoral pathways, technology roadmaps, and taxonomies 3. Measuring performance and progress through metrics and KPIs 4. Clarify the use of carbon credits and offsets - A credible transition plan will not see them as an alternative to reducing a company's emissions today or as a reason to delay mitigation action but rather as part of the portfolio of solutions to accelerate the path to net zero 5. Setting out a strategy, actions, and implementation steps, including on preventing carbon-intensive lock-in 6. Addressing adverse impacts through the Do-No-Significant-Harm (DNSH) Principle and Responsible Business Conduct due diligence 7. Supporting a just transition 8. Ensuring sound governance and accountability 9. Transparency and Verification
TCFD Alignment	Yes	Yes - a credible strategy aligns with the TCFD's recommendations on adopting a strategic response to future climate risks.	Yes - while not explicit, the guidance pulls on many recommendations laid out by TCFD such as assessing the likelihood of achieving the plan's targets using multiple climate-related scenarios and articulating the transition risks and opportunities that companies expect to face in the short-, medium- and long-term

	International Capital Market Association (ICMA)	Climate Bonds Initiative (CBI)	Organisation for Economic Co-operation and Development (OECD)
Science-based Targets and Pathways	Yes - climate strategy should be referenced to science-based targets (e.g., SBTi) and transition pathways	Yes - All goals and pathways must be led by scientific experts and be harmonized across countries	Yes - Setting net-zero and interim targets must be based on science. In other words, to be credible, transition plans must be consistent with the IPCC Special Report on Global Warming of 1.5°C.
Disclosure	Yes – Issuers are recommended to disclose: <ol style="list-style-type: none"> 1. climate transition strategy and governance system that is aligned with the TCFD 2. how the financing instruments support the implementation of the transition strategy, including details of any divestments, governance, and process changes. 3. CapEx and OpEx plans and other relevant financial metrics to the extent they relate to a transition strategy may be made via a company's annual report, website, or sustainability report 	Yes – CBI does not recommend a disclosure framework in this whitepaper or discuss what information should be disclosed. However, it is noted that climate-related disclosures are being made in line with the TCFD and EU Taxonomy.	Yes – The guidance does not recommend a specific approach to reporting and disclosure. However, it does indicate that sustainability reporting standards are an integral part of companies' transition plans. The credibility of transition plans depends on public disclosure of the company's commitments, objectives, underlying assumptions and progress towards goals and achievements

Net-zero and transition finance alignment with ESG

ESG Strategies/Objectives	Net-Zero Investing	Transition Finance
Setting Net-Zero Targets	<u>Financial institutions</u> quantify the impact of their investments on climate change based on their warming potential.	Financial institutions should collaborate with clients and portfolio companies to support and encourage the development of robust transition plans and associated reduction targets.
Constructing sustainable portfolios	<p>Pre-investment due diligence: ESG due diligence is increasingly incorporating climate-related criteria/lenses: e.g., assessment of how material climate is to an investment</p> <p><u>Build new investment products</u> that fuse climate considerations with financial objectives, e.g., SFDR Article 9 funds</p> <p><u>Run scenario analysis</u> to understand the implications of climate change on investments</p>	Construct a portfolio that minimizes stranded assets and ties funding for heavy emitters to forward-looking KPIs to help companies address operational emissions or alter their business models to achieve net-zero goals
Active Ownership	<p><u>Active ownership through shareholder engagement</u> can be defined as the mechanism used by shareholders to express their dissatisfaction with a firm's ESG/climate performance or to encourage companies to meet climate-related objectives.</p> <p>E.g., The Portfolio Coverage Approach (PCA) is an engagement-based approach for reducing portfolio emissions. It requires financial institutions to engage with their portfolio companies to set their own science-based targets, which will then be validated by the SBTi.</p>	<p>Active Ownership: Engagement has an impact on changing corporate behavior, which is essential for high-emitting industries with an elevated risk of becoming stranded</p> <p>E.g., <u>Exxon</u> established net-zero pledges after pressure from an activist investor led to board changes.</p>
Reporting & Disclosure	Annual reporting of climate-related information and progress in sustainability reports and TCFD reports.	Science-based assessments and targets are needed to ensure that transition plans and the related supporting material are legitimate in getting financial markets to the goal of lowering emissions and reducing physical climate-related risks.

About the Authors



Chris Pinney
President, High Meadows
Institute
cpinney@
highmeadowsinstitute.org



Emily Knudsen
Senior Consultant,
KKS Advisors



Tobi Karim
Associate, KKS Advisors

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High Meadows Institute

800 Boylston Street
16th floor
Boston, MA 02199

Phone: (617) 453-8308

Fax: (857) 362-7840

Email: info@highmeadowsinstitute.org

Web: www.highmeadowsinstitute.org



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