CENTER FOR CLIMATE AND ENERGY SOLUTIONS

BUSINESS

Navigating the Finance Sector Net-Zero Transition

Levers for Decarbonizing in a Complex Landscape

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SUMMARY

Positioned at the center of global capital flows, financial institutions are uniquely equipped to shape the pace and scale of the net-zero transition. To stay on track for a 1.5-degree-C pathway, investment must increase nearly fivefold to $7.4 trillion annually by 2030, according to the Climate Policy Initiative. Similarly, the London School of Economics' Grantham Research Institute estimates that global investment in climate action must reach $6.3 to $6.7 trillion per year by the end of the decade. Without this rapid financial mobilization, the world risks missing critical decarbonization targets, driving intensified climate disruptions, economic instability, and systemic financial risks. Bridging the climate finance gap requires action across the entire financial system. Asset owners, asset managers, private markets, banks, and insurers each have a distinct yet interdependent role in mobilizing capital and steering the net-zero transition. Each actor must adapt their strategies to align with a shifting landscape where risks and capital flows are deeply interwoven across markets and institutions.

HIGHLIGHTS

Comprehensive Finance Sub-Sector Analysis
Provides a comprehensive overview of how financial actors including asset owners, banks, insurers, private markets, and asset managers are shaping net zero strategies across the investment value chain.

Financial and Nonfinancial Levers to Support Climate Integration
Highlights best practices and tools, both financial and non-financial, for embedding climate considerations across finance subsectors, including opportunities within shareholder engagement, investment screening, product innovation, and internal capacity building.

Stewardship and Engagement
Details how sector actors can use proxy voting, shareholder proposal filings, and targeted multi-layered engagement strategies to incentivize climate action in the real economy and accelerate the transition.

Ecosystem Influences and Feedback Loops
Examines how cross sector interdependencies, evolving global alliances, emerging thought leadership, and shifting regulatory frameworks can be utilized as reinforcing accountability mechanisms.

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Acronym Glossary

Acronym	Full Name	Short Definition
CA100+	Climate Action 100+	Investor-led initiative engaging high-emission companies to reduce climate risks and emissions.
CICERO	Center for International Climate Research	Research center providing climate research and second-party opinions on green bonds.
CREO	CREO	Not-for-profit organization that focuses solely on climate and sustainability market-rate investment across all asset classes in private markets.
CTFH	Climate Transition Finance Handbook	Guidelines for financing projects aligned with climate transition goals.
FIT	Forum for Insurance Transition to Net Zero	Collaborative platform for insurers to support the net-zero transition.
FIO	Federal Insurance Office	U.S. Treasury office monitoring insurance markets, particularly for climate-related risks.
GFANZ	Glasgow Financial Alliance for Net Zero	Alliance of financial institutions committed to net-zero emissions by 2050.
GIIN	Global Impact Investing Network	Network supporting the growth of impact investing globally.
GPs	General Partners	Managers of private equity or venture capital funds responsible for investment decisions.
ICAP	Investor Climate Action Plans	Frameworks guiding investors in aligning strategies with the Paris Agreement.
ICMA	International Capital Market Association	Association setting global standards for capital markets.
IDF	Insurance Development Forum	Coalition of insurance leaders supporting resilience to climate impacts.
IPSF	International Platform on Sustainable Finance	Platform to align international sustainable finance regulations.
IRENA	International Renewable Energy Agency	Agency promoting global renewable energy adoption and policies.
ISO	International Organization for Standardization	Standards-setting body for various sectors, including environmental management.
LPs	Limited Partners	Investors in private equity or venture capital funds.
NAIC	National Association of Insurance Commissioners	U.S. organization setting insurance standards and regulations.
NGFS	Network for Greening the Financial System	Network of central banks and supervisors promoting climate risk management.
NZAM	Net Zero Asset Managers Initiative	Initiative for asset managers committed to net-zero emissions by 2050.
NZBA	Net Zero Banking Alliance	Global initiative for banks to align lending and investment portfolios with net-zero targets.
NZAOA	Net Zero Asset Owner Alliance	Alliance of asset owners aiming for net-zero emissions by 2050.
NZIF	Net Zero Investment Framework	Guidance for investors to set targets and produce related net zero strategies and transition plans.
PAAO	Paris Aligned Asset Owners	Group of investors aligning portfolios with the Paris Agreement.
PAII	Paris Aligned Investment Initiative	Global forum to support investment alignment with Paris Agreement goals.
PCAF	Partnership for Carbon Accounting Financials	Framework for measuring and disclosing financed emissions in portfolios.
PSI	Principles for Sustainable Insurance	UNEP-supported initiative for integrating ESG into insurance industry operations.
SFDR	Sustainable Finance Disclosure Regulation	EU regulation for integrating sustainability risks in financial disclosures.
SLLs	Sustainability-Linked Loans	Loans with terms linked to environmental performance, incentivizing sustainability targets.
TCFD	Task Force on Climate-related Financial Disclosures	Guidelines for companies to disclose climate-related financial risks and opportunities.
TPI	Transition Pathway Initiative	Data provider on company progress in climate transition.
TPT	Transition Plan Taskforce	Taskforce providing guidelines for companies to disclose net-zero transition plans.
UoP	Use of Proceeds	Bonds designated for specific types of projects like green or sustainable bonds.
VCA	Venture Climate Alliance	Alliance of venture capital firms supporting climate-aligned startups.

Introduction

The global finance sector plays a defining role in addressing the climate crisis wielding unprecedented influence over the net-zero transition. Underscoring the urgency for action, the Climate Policy Initiative and CREO recently projected that annual climate finance flows must surge from $1.4 trillion to $8.6 trillion by 2030 to meet net-zero targets.[1] This sixfold increase highlights the pivotal role finance must play in bridging the $7.2 trillion annual gap.[2] Failure to meet these targets will slow the transition resulting in increased climate impacts, economic disruptions and financial instability.

Net-zero transition plans for real economy companies provide a detailed forward-looking roadmap for transforming business operations to achieve net-zero emissions by a specified date, typically 2050 or sooner. Real economy companies refer to the part of a country's economy that produces goods and services, rather than the part that consists of financial services. These real economy focused plans outline specific actions, timelines, and capital investments required to decarbonize core business activities, such as upgrading manufacturing facilities, shifting to renewable energy sources, and redesigning products and services. Real economy transition plans include interim emissions reduction targets, detailed implementation strategies, and considerations for workforce transitions and stakeholder impacts. They serve as a crucial roadmap for meeting climate goals and commitments while maintaining business viability and competitiveness in a decarbonizing economy.

The finance sector's relationship with transition plans is multifaceted, as these institutions both develop their own transition plans and rely on the plans of real economy companies to achieve their climate objectives. Financial institutions' transition plans focus on decarbonizing the emissions associated with their lending, investment, and underwriting activities. With exposure that can span the entire economy, their ability to meet net-zero targets fundamentally depends on the successful execution of transition plans by real economy companies in their portfolios.

This creates a powerful dynamic where financial institutions use transition plans in three distinct ways:

1. Risk Management: as tools to assess and manage climate-related risks and opportunities
2. Asset Transition: in their portfolios, as frameworks to guide real economy asset transition
3. Capital Allocation: as criteria for capital allocation decisions that can incentivize more ambitious climate action.

This dependent relationship positions the finance sector as a catalyst for system-wide change. Their influence over capital flows and corporate behavior can be strategically deployed to drive the economy-wide transformation necessary to achieve the net-zero goals. Through mechanisms like preferential financing terms, stewardship and engagement, and innovative asset allocation strategies, financial institutions can create powerful feedback loops that reward companies with credible transition plans while increasing the cost of capital for those lagging in climate action, thereby accelerating the broader economic transition to net-zero.

The following analysis examines the crucial roles of various financial sector actors including banks, asset owners, asset managers, insurers and reinsurers, and private markets in driving and implementing transition plans globally. By leveraging a diverse array of strategies, the finance sector is not merely adapting to climate change but actively steering capital flows to accelerate the transition. The paper first outlines the role of each stakeholder in the finance sector and their interconnections to each other, then delves into the unique financial and non-financial levers available for transition, and concludes by examining the broader ecosystem influences shaping transition planning in the sector and how finance sector transition plans influence the broader economy. By providing this comprehensive overview, we aim to illuminate the finance sector's potential to catalyze the transformative change needed to meet ambitious climate goals while safeguarding financial stability and long-term value creation.

Finance Sector Landscape

The financial sector functions as an intricate ecosystem where each participant's success depends on their relationships and interactions with others through capital flows, risk management, intermediation services, and investment activities. Table 1 below provides a brief description of primary sector categories.

TABLE 1: FINANCE SECTOR STAKEHOLDERS

Category	Description
Asset Managers	Asset managers are responsible for overseeing portfolios of investments on behalf of clients. They are tasked with making investment decisions, allocating assets across various markets and sectors, and optimizing portfolio performance to increase risk adjusted returns.
Private Markets	Private markets encompass investment vehicles where ownership interests aren't publicly traded. These markets operate through partnerships between General Partners (GPs) who make investment decisions and Limited Partners (LPs) who provide capital while maintaining governance through negotiated rights rather than public market regulations. This ecosystem includes Private Equity, Venture Capital, Growth Equity, Private Credit, real estate, and infrastructure investments.
Asset Owners	Asset Owners oversee public and private pension funds, treasury funds, insurance companies' general accounts, family offices, endowments and foundations, and sovereign wealth funds. Their extensive capital pools, which span industries, give them substantial influence over capital markets, corporate behavior, and vast areas of the finance sector.
Insurance and Reinsurance	The insurance and reinsurance sectors are essential in financial stability, managing vast assets and specializing in risk management and underwriting. Insurers assess, price, and underwrite risk, investing client premiums to cover future claims while balancing profitability and capital reserves for long-term stability. Reinsurance provides an added layer of risk transfer, acting as "insurance for insurers."
Banks	Banks play an essential role in the global economy by providing credit, facilitating capital raising, and managing risk. They serve as intermediaries in the global financial system, providing the necessary capital to drive economic growth. Their core functions include lending and credit, capital raising, and risk management.

Interconnections

Asset managers serve as the professional investment stewards of the system, managing capital on behalf of asset owners, insurance companies, and banks. They depend on banks for trading execution, custody services, and research, while also utilizing insurance products to protect their operations. Asset managers often collaborate with private market firms on deal opportunities and co-investments. Their investment decisions influence capital flows throughout the financial system, affecting valuations and market access for all participants.

Private market firms, structured around General Partners and Limited Partners, connect with other sectors in multiple ways. They raise capital from asset owners, collaborate with asset managers on investments, rely on banks for acquisition financing, and secure insurance coverage for their operations and portfolio companies. They generate co-investment opportunities for other institutional investors while also consuming various financial services from banks and asset managers.

Asset owners provide a primary source of investment capital to large parts of the financial system. They provide capital to asset managers for public market investments, commit funds to private equity and venture firms, maintain substantial deposits with banks, and invest in insurance products. Their investment decisions and mandates influence the behavior and strategies of all other financial sectors. They also consume services from across the system, relying on asset managers for investment expertise, banks for custody and

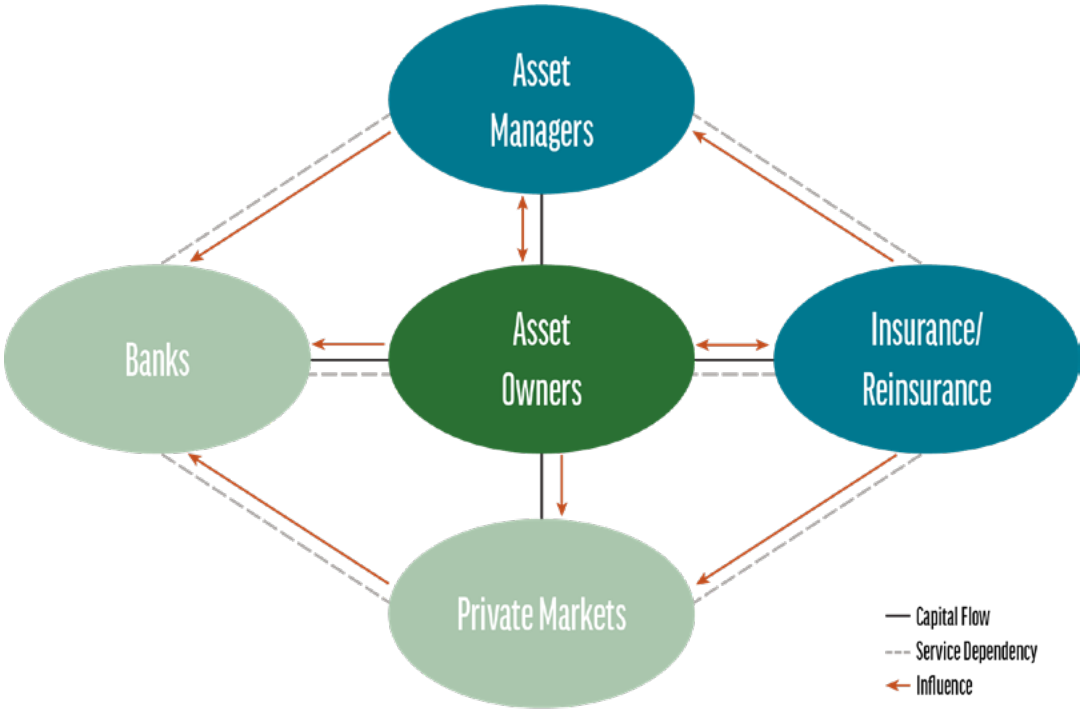
treasury services, and insurers for risk protection.

Insurance and reinsurance companies maintain dual relationships with other sectors. As risk managers, they provide essential protection to all other financial institutions, covering their operations and activities. As institutional investors, they deploy significant capital through asset managers, invest directly in private markets, and maintain substantial banking relationships. Reinsurers add another layer to this web by providing risk transfer services to insurers while also operating as substantial institutional investors themselves.

Banks function as the central nervous system of the financial sector, providing essential services to all other participants. They supply custody services to asset managers and asset owners, provide financing to private market firms, and offer treasury services to insurance companies. Banks also act as trading counterparties for asset managers and create investment products in which other institutions invest. Additionally, banks serve as key counterparties for tax credit financing, particularly for clean energy and low-carbon transition projects, enabling the monetization of investment and production tax credits. Their role in payment processing and credit provision makes them fundamental to the daily operations of all other financial institutions.

These sectors create a deeply interconnected system where capital, services, and risk flow in multiple directions (see Figure 1). Asset owners provide capital that flows through asset managers, banks, and private market firms. Banks facilitate transactions and provide services that enable other sectors to operate efficiently. Insurance companies protect everyone while investing alongside them. Asset managers deploy capital while working with all other sectors. Private market firms raise institutional capital while creating investment opportunities for others. This complex network of relationships and dependencies forms the foundation of the modern financial system, with each sector playing multiple roles as both service providers and consumers within the ecosystem.

FIGURE 1: FINANCE SECTOR INFLUENCE MAP



Finance Sector: Transition Planning and Action Levers

Asset Managers

Asset managers are responsible for overseeing portfolios of investments on behalf of clients and can offer active management, passive management, or both. They are tasked with making investment decisions, allocating assets across various markets and sectors, and optimizing portfolio performance to meet specific financial goals. Asset managers interact with a broad range of stakeholders, including asset owners, corporations, regulators, and policymakers. Their primary objective is to generate risk-adjusted returns for clients based on a particular investment thesis.

Importance of Net-Zero Transition Plans for Asset Managers

Asset managers are guided by a fiduciary duty to their clients.[3] This duty includes the duty of care to exercise reasonable skill when managing assets to in order to minimize risk. As the climate crisis intensifies, fiduciary duty has evolved to encompass the management of climate-related risks. Climate change is now seen as a systemic risk that can affect entire sectors and industries, with implications for long-term investment returns.[4]

Climate risks fall into two broad categories: physical risks and transition risks. Physical risks refer to the financial impact of climate-related events, such as hurricanes, droughts, or wildfires, which can disrupt business operations, damage assets, and affect market performance.[5] Transition risks arise from the global shift toward decarbonization, driven by new policies, regulations, technological advancements, and changing consumer behavior. This shift can render carbon-intensive assets stranded, reducing their value and impacting portfolio performance. Additionally, litigation risk is an emerging transition risk as companies and financial institutions face potential legal actions for failing to adequately address climate risks, producing misleading disclosures about climate-related impacts, or contributing to environmental degradation. This growing legal pressure can result in financial liabilities, reputational damage, and increased costs for companies, potentially impacting returns.

In addition to the fiduciary duty to manage climate-related risks, clients like high-net-worth individuals and asset owners are increasingly demanding the incorporation of climate and transition-related criteria within investment product design.[6] Typically, individual clients are looking to align their investment activities with their values in pursuit of risk-adjusted returns while asset owners look to meet their own targets and voluntary commitments.

Financed Emissions

One critical component of asset managers net-zero transition plans is the measurement and disclosure of financed emissions, which represent the greenhouse gas emissions associated with a financial institution's investments. However, the methodology for calculating financed emissions remains unsettled, with different approaches to attribution and accounting that can lead to significant variations in reported numbers. The Partnership for Carbon Accounting Financials (PCAF) notes that methodological choices around attribution factors and emission scopes can materially impact results.[7] By calculating financed emissions, asset managers can better evaluate the carbon intensity of their portfolios and identify areas for improvement. Tracking financed

emissions helps managers align their portfolios with net-zero goals, ensuring that investments are consistent with broader climate objectives.

Net-zero transition plans are essential tools for asset managers as they navigate the transition and look to reduce financed emissions. These plans help asset managers assess climate risks within their portfolios, reallocate capital towards more sustainable sectors, and identify investment opportunities in green technologies and industries that are leading efforts to decarbonize.[8]

Despite the importance of these plans, a 2023 report by InfluenceMap revealed that many large asset managers, particularly in the United States, are falling short of their climate commitments.[9] The report highlights that some firms continue to invest in high-carbon industries, demonstrating a gap between their public pledges and investment practices. To address these shortcomings, initiatives like the Net Zero Asset Managers Initiative (NZAM) have emerged as catalysts to accelerate climate action. NZAM, launched in 2020, brings together asset managers committed to aligning their portfolios with the goal of achieving net-zero emissions by 2050. Members of NZAM set interim targets, report annually on their progress, and engage with holdings to ensure that portfolios reflect decarbonization objectives.[10] The initiative aims to hold asset managers accountable for their climate commitments and foster greater transparency in the financial industry.

Avoided Emissions

Avoided emissions have emerged as a crucial portfolio greening metric, recognized by key finance sector frameworks including the Net Zero Investment Framework (NZIF) and the Partnership for Carbon Accounting Financials (PCAF); however, methodologies for calculating avoided emissions are still evolving, and there is currently no standardized accounting approach, leading to variation in how avoided emissions are assessed and reported across institutions.[11] These emissions represent the greenhouse gas emissions prevented through two distinct investment strategies: (1) investing in pure play climate solutions that directly avoid emissions and (2) supporting companies transitioning from high-carbon to low-carbon business models. According to a Ceres' report, Investing in the Future: Unlocking Value Through Avoided Emissions, avoided emissions are calculated by comparing emissions in a traditional baseline scenario with those in a scenario driven by sustainable investments.[12]

Asset managers can pursue avoided emissions through two complementary approaches: solutions investments and transition investments. The first focuses on investing in solution providers: companies developing and scaling technologies that enable emissions reductions across the economy, such as renewable energy, electric vehicles, and energy efficient technologies. The second approach involves identifying and supporting companies with credible transition plans to transform carbon-intensive operations that yield improved financial performance as well. These plans serve as critical tools for mapping the journey from carbon-intensive to low-carbon operations creating a framework for investor oversight.

Integrating avoided emissions into investment strategies enhances both climate impact and financial performance. Asset managers who prioritize avoided emissions can identify investment opportunities that actively contribute to emissions reductions, such as financing companies producing renewable energy enabling technologies. For companies transitioning from brown-to green-operations, detailed transition plans help asset managers assess the credibility of decarbonization strategies, monitor progress against interim targets, and

evaluate the alignment of capital expenditure with stated climate goals. This structured approach to transition oversight helps ensure companies maintain momentum in their decarbonization efforts. By quantifying and reporting on avoided emissions across both solution providers and transitioning companies, asset managers can demonstrate their contribution to real-world emissions reductions while managing transition risks in their portfolios.

Financial Levers to Integrate Net-Zero Transition Plans*

Asset managers employ two principal types of financial instruments to advance their net-zero transition objectives: public equities and fixed-income strategies. Public equities strategies involve investing in stocks of publicly traded companies typically listed on exchanges, using various screening and integration approaches. Fixed-income strategies center on bonds, which are debt instruments where investors lend money to an issuer in exchange for regular interest payments and return of principal at maturity. Together, these complementary approaches allow asset managers to both reward climate leaders through equity investments while also catalyzing transition through targeted debt financing. This section examines how asset managers deploy these strategies to align their portfolios with net-zero goals while driving the real economy net-zero transition.

Public Equities Strategies

Asset managers can leverage a clear climate investment thesis and framework to effectively evaluate companies and sectors for climate-aligned investments. This thesis should articulate how climate change and the net-zero transition will affect different sectors of the economy and identify opportunities to accelerate decarbonization by strategically allocating capital to companies willing and able to transition ahead of their industry peers or market-driven timelines. Such positioning can support real-economy emissions reductions while enhancing financial performance by reducing downside risk from transition laggards and unlocking upside potential from transition leaders gaining market share, regulatory advantage, or innovation-driven growth. The framework should also establish clear criteria for assessing the credibility and feasibility of corporate transition strategies, taking into account both company-specific factors and broader sectoral pathways.

Critical to this evaluation is understanding which sectors have credible pathways to transition (e.g., utilities, transportation, and industrials) versus those that lack viable transition paths (e.g., oil & gas). This distinction helps asset managers differentiate between companies that can successfully decarbonize and those facing fundamental business model challenges in a net-zero economy. Using their climate thesis and framework as guidance, asset managers can employ a variety of tools to evaluate companies for inclusion in net-zero-and transition themed funds and offerings. Below are four primary strategies traditionally used in sustainable finance, which incorporate transition planning, sectoral pathways, and demonstrated performance within portfolio-level screening criteria.[13]

1. Positive Screening

This strategy involves investment in companies and sectors leading the low-carbon transition through demonstrated decarbonization achievements and implementation of ambitious transition strategies. These transition leaders distinguish themselves through clear strategic commitments backed by robust action, successful emissions reductions that outpace industry averages, and capital investment decisions that accelerate their transition beyond standard industry timelines.

*__Note__: While these strategies are particularly relevant to asset managers, they are not exclusive to them. Many of these strategies and instruments can be utilized by other actors in the finance sector, especially asset owners, who share similar goals in aligning their portfolios with climate objectives.

Asset managers assess leadership through multiple lenses including:

- measurable emissions reductions achieved
- capital expenditure alignment with climate commitments
- demonstration of successful deployment of low-carbon technologies
- identification of explicit targets for future transformation.

Focus is placed on companies advancing sectoral transitions by implementing innovative decarbonization approaches that can be replicated by industry peers, particularly in hard-to-abate sectors where establishing viable transition pathways is crucial. Companies must demonstrate both the vision to set ambitious transition goals and the operational capability to achieve them, showing they can maintain competitive advantages while decarbonizing faster than their industry peers. This approach identifies the companies best positioned to thrive in a low-carbon economy while encouraging accelerated transition across their sectors through demonstrated success and competitive pressure.

Positive Screening Example

Trillium Asset Management's ESG Global Equity Fund (PORTX) exemplifies positive screening through its systematic selection of climate transition leaders based on measurable achievements.* The fund specifically seeks companies with verified emissions reductions and strong climate governance, demonstrated by holdings like Schneider Electric with 51 percent operational emissions reduction since 2017 and Vestas Wind Systems showing significant verified emissions avoidance through wind technology. The fund evaluates companies using multiple quantifiable metrics including operational emissions reductions, renewable energy adoption rates, and capital expenditure allocated to low-carbon technologies. With a portfolio carbon intensity 65 percent lower than its benchmark, PORTX's approach focuses on identifying and investing in companies actively advancing the low-carbon transition through documented performance rather than just excluding poor performers. The fund's positive screening methodology has resulted in a portfolio of companies that not only demonstrate strong climate commitments but also show verified progress in implementing those commitments across their operations and value chains.

* Trillium Asset Management. 2025. "Trillium ESG Global Equity Fund." 2025. *https://www.trilliuminvest.com/mutual-funds/trillium-esg-global-equity-fund*.

2. Negative / Exclusionary Screening

Asset managers can exclude high-carbon companies or sectors from their portfolios based on several factors: lack of credible transition pathways for their core business model like thermal coal; oil and gas exploration and production companies, midstream oil and gas infrastructure or companies with revenue streams heavily dependent on coal, absence of science-aligned transition plans, or consistent failure to meet stated climate targets.

This screening may also exclude companies that continue to expand fossil fuel production, have business models fundamentally misaligned with net-zero goals, or those whose transition plans rely heavily on unproven technologies. For sectors like oil and gas, including both upstream and midstream operations, where the core business model is incompatible with a net-zero future, exclusion may be more appropriate than engagement, as these industries face fundamental rather than technical transition challenges.

Negative/Exclusionary Screening Example

The Domini Impact Equity Fund (DSEFX) implements strict exclusions based on revenue thresholds: it has a 0 percent tolerance for coal mining, arctic drilling, or tar sands and exclusion of companies deriving more than 5 percent revenue from conventional oil & gas production.* Their 2024 Investment Standards detail how these screens have kept the fund fossil-fuel-free while delivering 10-year annualized returns of 8.94 percent as of December 31, 2023. The fund also excludes companies with poor transition planning, demonstrated by continued fossil fuel infrastructure expansion or inadequate emissions reduction targets. Beyond fossil fuels, DSEFX applies similar revenue-based exclusions to other high-emissions sectors, including companies deriving significant revenue from cement production without clear decarbonization plans and transportation companies heavily invested in internal combustion engine technology. The fund's comprehensive exclusionary approach extends to the evaluation of supply chain emissions, excluding companies with significant scope 3 emissions from fossil fuel-related activities.

* Domini Funds. 2025. "Domini Impact Equity Fund - Investor Shares." 2025. *https://domini.com/domini-funds/domini-impact-equity-fund/.*

3. Transition Criteria Integration

This approach systematically and explicitly includes factors related to transition planning within investment analysis. This involves assessing companies based on specific climate transition factors, including emissions reduction targets, progress on decarbonization, capital allocation to low-carbon technologies, and the technical feasibility of their transition strategy given their sector's decarbonization pathway. Companies must demonstrate robust interim targets that show a clear progression toward their long-term goals, enabling regular progress assessment. Their transition plans should also include mechanisms for regular review and enhancement to incorporate emerging technologies, evolving regulations, and changing market conditions, showing the ability to adapt and accelerate transition efforts as needed.

Companies are evaluated on both their stated commitments and their demonstrated ability to execute their transition plans, including their track record of meeting interim targets and adjusting strategies in response to external changes. Those with credible plans, proven track records, and demonstrated commitment to continuously enhancing their transition strategies are favored in portfolio construction. This approach ensures investments are resilient to transition risks and are well-positioned to maintain long-term value, as companies successfully executing robust transition plans are better equipped to navigate regulatory changes, shifting market demands, and evolving technologies, ultimately delivering more stable risk-adjusted returns.

Transition Integration Criteria Example

The Impax Global Opportunities Fund utilizes the Climate Progress Indicator (CPI) which evaluates companies on four key metrics: emissions reduction targets (weighted 30 percent), implementation progress (30 percent), capital allocation to low-carbon technologies (25 percent), and climate governance (15 percent). Their 2024 Climate Report shows portfolio companies average CPI score of 3.2/4.0, with 85 percent of holdings having science-aligned targets.* The fund achieved 70 percent lower carbon footprint than its benchmark through systematic integration of these transition criteria. The CPI framework requires companies to demonstrate ongoing progress through quarterly monitoring of implementation milestones and annual reviews of capital allocation plans. Companies must also show evidence of board-level oversight of climate strategies and executive compensation tied to climate targets. Additionally, the fund employs active ownership strategies, engaging with portfolio companies to strengthen their transition plans and accelerate implementation timelines when opportunities for improvement are identified.

* Impax Asset Management. 2025. "Impax Global Opportunities Fund - Impax Asset Management." 2025. *https://impaxam.com/products/sustainability-lens-equities/global-opportunities-strategy/impax-global-opportunities-fund/*

4. Transition-Themed Investing

This strategy involves investing in sectors and companies critical to enabling the global climate transition. While Transition Criteria Integration focuses on evaluating specific metrics like emissions targets or capital allocation plans, Transition Themed Investing takes a more comprehensive view of how companies and entire sectors are transforming their business models. The focus extends beyond pure-play climate solution providers in renewable energy, energy efficiency, or sustainable infrastructure to include companies actively transitioning from carbon-intensive operations to low-carbon business models at an accelerated pace.

These transitioning companies, particularly in high-impact sectors with clear decarbonization pathways like steel, cement, or transportation, can create ripple effects across their value chains and dependent sectors. For example, a steel manufacturer transitioning to green hydrogen production can accelerate decarbonization among its automotive and construction sector customers, while simultaneously creating market signals for renewable energy providers to scale up production. Asset managers focus on companies demonstrating both the technical capability and strategic commitment to transition faster than market-driven timelines, as these companies can influence and accelerate broader sectoral transitions.

By identifying and supporting these transition leaders, asset managers can help create virtuous cycles of decarbonization across interconnected industries while delivering financial returns. This multi-sector transition approach not only reduces systemic climate risk across investment portfolios but also creates new markets and business opportunities as companies transform their operations, ultimately generating value through both risk reduction and growth in emerging low-carbon markets. The strategy prioritizes companies with proven technologies and scalable business models that can catalyze system-wide transformation and accelerate the overall pace of industrial decarbonization while capturing the economic benefits of leading the transition.

Transition-Themed Investing Example

The Boston Common Asset Management's US Sustainable Climate Solutions Strategy targets companies driving sectoral transitions. Their Climate Strategy Overview details investments in emerging clean technologies with 75 percent of portfolio companies developing solutions in renewable energy, energy storage, grid modernization, and sustainable transportation.* Key holdings include companies like Eaton Corporation with smart grid technology and Aptiv PLC with electric vehicle systems, which have reduced their operational emissions by 50 percent and 40 percent, respectively since 2015. The strategy prioritizes companies that can demonstrate scalable solutions with potential for widespread adoption across their sectors, particularly focusing on technologies that enable emissions reductions in hard-to-abate industries. The fund also maintains strict requirements for portfolio companies to reinvest a significant portion of their revenues into research and development of next-generation clean technologies, ensuring continuous innovation in climate solutions. Additionally, the strategy engages with portfolio companies to accelerate their technology deployment timelines and expand market adoption through strategic partnerships and industry collaborations. This strategy exemplifies transition themed investing by specifically targeting companies that are developing and deploying technologies essential for economy-wide decarbonization, focusing not just on individual company performance but on their potential to enable broader sectoral transitions through scalable climate solutions.

* *Boston Common Asset Management. 2025. "ESG Impact Investing: Sustainable Investment Solutions | BCAM." Boston Common Asset Management. 2025. https://bostoncommonasset.com/impact/*

Fixed Income Strategies

Asset managers can leverage fixed income instruments to support the low-carbon transition and align with net-zero transition plans. The sustainable bond market provides asset managers with powerful instruments to facilitate transition-aligned financing flows. The sustainable bond market is comprised of two main categories: "use of proceed" bonds (UoP) and performance-linked bonds.

Sustainable Bond Market

The sustainable bond market provides asset managers with powerful instruments to facilitate transition-aligned financing flows. UoP bonds, such as Green Bonds and Sustainability Bonds, earmark funds for projects that contribute meaningfully to an issuer's transition. These might include initiatives supporting greenhouse gas reduction strategies or renewable energy goals, as well as projects with social implications to ensure a just and equitable transition. Performance-linked bonds, including Sustainability-linked Bonds and Environmental Impact Bonds, tie coupon payments to one or more Key Performance Indicators (KPIs) that can be linked to elements in a transition plan.[14] Transition Bonds can be structured as either UoP or performance-linked instruments that specifically target activities supporting high-emitting sectors' net-zero transition.

TABLE 2: SUSTAINABLE BOND CATAGORIES

Classification	Label	Scope of Activities	Alignment
Ties to UoP	Green bond	Linked to environmental projects	Green Bond Principles
	Sustainability bond	Linked to a combination of social and environmental projects	Sustainability Bond Guidelines
	Transition bond	Linked to projects/initiatives or KPIs to specifically help firms, typically in high polluting or emitting sectors, engage in climate and just transition related activities	None applicable
Ties to KPIs	Sustainability-linked bonds	Linked to social or environmental KPIs	Sustainability-linked Bonds Principles
	Environmental impact bonds	Linked to climate and environmental KPIs	Green Bond Principles

Cells in yellow represent sustainable bonds that are tied to UoP; blue indicates bonds tied to KPIs; green indicates a blend of UoP and KPI.

*Table includes definitions from BNP Paribas.

TABLE 3: CENTER FOR INTERNATIONAL CLIMATE RESEARCH "SHADES OF GREEN" METHODOLOGY

Dark Green	Solutions and projects that currently realize the long-term vision of a climate-resilient and low-carbon future. Typically, this equates to zero-emission solutions and government support hat integratese enviromental effects into all governance structures. Examples include renewable energy projects, such as wind or solar.
Medium Green	Solutions and projects that are making progress toward the long-term vision, but that are not fully realized. Examples include sustainable buildings with good (but not excellent) energy efficiency ratings.
Light Green	Solutions and projects that aren't a part of the long-term vision, but are still environmentally friendly. Projects should be careful not to lock into fossil-fuel systems permanently. Examples include short-term improvements in fossil fuel efficiency that result in reductions of greenhouse gas emissions.
Brown	Solutions and projects that do not enable long-term vision of a climate-resilient and low-carbon future. Examples include new infrastructure projects for coal.

Green Bonds and Sustainability Bonds

Green bonds are UoP bonds that can be used to support transition-related projects like renewable energy, energy efficiency, green buildings, climate change adaptation, and clean transportation. Green bonds can be traced back to 2007 when the European Investment Bank and the World Bank issued the first such instruments under the label of Climate Investment Bond.[15] Green bonds follow the Green Bond Principles established by the International Capital Market Association (ICMA)[16] To address the subjective nature of green bond labeling, the Center for International Climate Research (CICERO) developed the "CICERO Shades of Green" methodology in 2015, providing second-party opinions on a bond's alignment with climate and environmental goals (see Table 3).[17]

Green bonds are UoP bonds that can be used to support transition related projects like renewable energy, energy efficiency, green buildings, climate change adaptation, and clean transportation. A notable example is Union Pacific's $600 million-dollar green bond issuance to support emissions reductions as part of its Climate Action Plan through infrastructure and software updates. The impact of these investments led to an annual emissions reduction of 393,000 metric tons of carbon dioxide-equivalent and a reduction of 6.8 million gallons of diesel fuel.[18] Similarly, Sustainability bonds are UoP bonds designed to finance projects with a social or an environmental focus. They follow the Sustainability Bond Guidelines from ICMA, which are aligned with the Green Bond Principles.

Sustainability-Linked Bonds

Sustainability-Linked Bonds differ from UoP bonds in that their coupons are tied to achieving specific sustainability or climate-related KPIs. If an issuer fails to meet these KPIs, it results in higher coupon payments. These bonds adhere to ICMA's Sustainability-Linked Bond Principles and are particularly well-suited for corporate climate goals due to their forward-looking nature. The structure of these bonds creates a direct financial incentive for issuers to meet their sustainability targets, aligning financial performance with environmental and social goals.

Transition Bonds

Transition Bonds, which emerged in 2017, represent a newer category in the sustainable bond market. These instruments can be structured as both UoP and KPI-linked bonds, focusing on helping companies transition from "brown to green" by supporting decarbonization goals. While they are not yet governed by a universal labeling regime like green bonds, the Climate Transition Finance Handbook issued by ICMA provides foundational guidance to ensure the credibility of transition financing.[19] A prime example is Bank of China Luxembourg's €300 million steel sector-specific transition bond issued in October 2023. This bond targeted decarbonization projects in Hebei Province, China's top steel-producing region, concentrating on reducing emissions from steel processing and promoting the recycling and utilization of scrap iron and steel.[20]

Box 1: Investing in Renewables Technology with Bonds

Fixed-income strategies are becoming a cornerstone of asset managers' approaches to financing renewable technologies and supporting the global energy transition. Through green bonds, sustainability bonds, and transition bonds, asset managers can direct significant capital flows toward renewable energy projects like solar installations, wind farms, and battery storage facilities. These bond instruments are particularly effective for large-scale renewable infrastructure projects, offering asset managers both portfolio diversification and measurable impact on emissions reduction goals.

The surge in renewable energy investment is driven by attractive financial returns, long-term stability, and alignment with global climate targets. The International Renewable Energy Agency (IRENA) reports that annual investments in renewable energy must more than quadruple by 2030 to meet international climate goals*. Asset managers can leverage various bond strategies to support this growth, including green bonds for direct project financing, sustainability bonds that combine renewable energy with broader environmental benefits, and transition bonds that help utilities and energy companies shift from fossil fuels to renewable energy generation.

For example, the European Investment Bank's green bond program demonstrates how fixed-income instruments can catalyze renewable energy development through large-scale project financing.† The Climate Transition Finance Handbook (CTFH) provides essential guidance for these investments, emphasizing that credible transition financing must support activities aligned with pathways to net-zero and demonstrate clear climate transition benefits through scientifically-aligned targets and implementation transparency.‡

By leveraging these bond instruments and frameworks like the CTFH, asset managers can support large-scale renewable infrastructure projects critical to achieving net-zero targets while providing stable, long-term financing that matches project development timelines. Through strategic bond investments, asset managers can fulfill both their fiduciary duties and their role in accelerating the transition to a low-carbon economy, while meeting growing investor demand for climate-aligned fixed-income products.

* International Renewable Energy Agency, "World Energy Transitions Outlook: 1.5°C Pathway," March 2021, *https://www.irena.org/publications/2021/March/World-Energy-Transitions-Outlook*.

† Sertore, Serean. 2022. "From Niche to Mainstream: 15 Years on, Green, Social and Sustainability Bonds Are Still the Future of Sustainable Finance." *https://www.eib.org/en/stories/15-years-green-bond*.

‡ International Capital Markets Association. 2023a. "Climate Transition Finance Handbook." *https://www.icmagroup.org/assets/documents/Sustainable-finance/2023-updates/Climate-Transition-Finance-Handbook-CTFH-June-2023-220623v2.pdf*.

Non-Financial Levers to Integrate Net-Zero Transition Plans

Asset Manager Education on Climate Analysis

Prioritizing education on the use of climate transition data and analysis tools helps asset managers and analysts enhance decision making, drive informed engagement with companies, and improve long-term portfolio performance. Understanding how to interpret and apply data is essential for making informed investment decisions that align with long-term climate objectives. Internal capacity-building around the use of scenario analysis, sectoral decarbonization pathways, and risk modeling tools ensures that asset managers are not just passively relying on third-party ESG data but are integrating complex climate information into portfolio construction and risk management decisions.

An example of this is Miller Howard Investments' integration of data and insights from the Transition Pathway Initiative (TPI) to assess corporate progress toward decarbonization goals.[21] By leveraging TPI data, Miller Howard evaluates how effectively companies are managing climate risks and transitioning their business models in line with climate objectives. In addition, Miller Howard incorporates climate scenario analysis into its investment decision-making process, which allows the firm to model various future climate pathways, assessing how different regulatory and market developments could impact portfolio companies. By fostering a deeper understanding of climate-related financial analysis within their teams, asset managers can make more informed, forward-looking investment decisions that promote enhanced resilience to future climate shocks.

Corporate Engagement

Corporate engagement is a critical tool for asset managers to enhance risk-adjusted returns and fulfill their fiduciary duties by exerting influence on the climate strategies of portfolio companies. Through one-on-one meetings, collective dialogues, and participation in board-level discussions and earnings calls, asset managers can press companies to disclose comprehensive climate data, adopt robust net zero transition plans, and set ambitious emissions targets. For firms with existing plans, engagement enables oversight of implementation and progress. This proactive approach helps ensure that companies manage physical and transition risks and seize opportunities in the emerging low-carbon economy. By directly engaging with corporate leadership, asset managers can drive industry-wide change, setting new standards that can ripple through entire sectors.

Policy and Regulatory Engagement

Asset managers play an important role in shaping the regulatory landscape for climate-related financial disclosures and climate transition practices. Through policy and regulatory engagement, asset managers advocate for frameworks that promote transparency, accountability, and climate resilience. This engagement can take many forms including participating in consultations, supporting enabling policy initiatives and collaborating with industry groups to ensure the development of robust regulatory frameworks.

Effective policy engagement helps to align asset managers' objectives with broader governmental and societal decarbonization goals. By working with regulators and policymakers, asset managers can advocate for the adoption of policies that mandate things like carbon pricing and enhanced emissions disclosures. These policies not only promote a level playing field but also ensure that climate risks are integrated into financial decision-making at multiple levels.

Proxy Voting and Shareholder Proposals

Proxy voting and filing shareholder proposals are essential mechanisms asset managers can leverage to influence corporate governance of climate practices and ensure effective implementation of transition plans. Through proxy voting, asset managers can hold companies accountable by voting in support of climate-related shareholder proposals that push for more rigorous emissions targets, improved climate risk disclosures, just transition planning and the adoption of long-term decarbonization strategies. Proxy voting signals to the market and to other shareholders that asset managers are committed to driving systemic change in corporate behavior.[22]

Filing climate-related shareholder proposals goes beyond proxy voting and allows asset managers to directly propose changes in corporate climate strategies, often encouraging companies to develop or strengthen elements within their transition plans. This strategy has become increasingly prevalent, with 2023 proxy season leading to a record number of corporate commitments. By engaging in both proxy voting and shareholder proposal filing, asset managers not only influence corporate behavior but also protect their investments by reducing exposure to climate-related risks. These tools provide a direct avenue through mandates in "shareholder rights" for improving corporate governance, ensuring transparency, and aligning companies with the broader climate transition. Investors often utilize a shareholder proposal filing strategy when all other forms of direct corporate engagement have failed to produce meaningful results. These tools can be utilized to make incremental progress and act as a mechanism to apply pressure to incentivize companies to engage in further dialogue.

Asset managers have a critical role in driving the global transition to a low-carbon economy. By utilizing a combination of financial strategies through portfolio screening and sustainable debt issuance, alongside non-financial strategies, such as corporate engagement and proxy voting, asset managers can effectively integrate transition plans into investment strategies. This comprehensive approach enables them to mitigate climate risks, capitalize on emerging opportunities and accelerate economy-wide transition. Through careful stewardship of capital and active ownership asset managers play a key role in shaping the transition.

Private Markets

Private markets hold enormous potential for accelerating the net-zero transition. This diverse investment category encompasses private equity, venture capital, growth equity, private credit, real estate, and infrastructure. The dramatic growth in private markets since the 1970's is driven by investors seeking higher returns, portfolio diversification, increased influence, longer-term investment horizons despite less liquidity, and exposure to a larger more diverse set of companies than those on public exchanges.

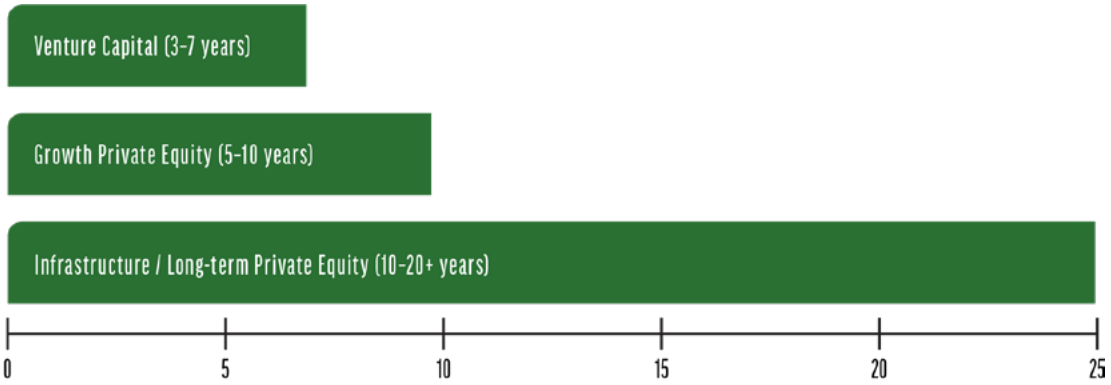
Private markets operate on agreements in which General Partners (GPs) manage investments and make decisions, while Limited Partners (LPs) provide capital and maintain oversight without direct involvement in day-to-day operations. Unlike public markets with extensive regulatory oversight, private markets involve fewer standardized reporting requirements, allowing for more flexible governance and strategic decision-making. This structure enables GPs to focus on value creation within portfolio companies while maintaining accountability through negotiated investor rights. The following section will focus specifically on private equity and venture capital firms.

Private Equity (PE) is a form of private market investment that typically acquires majority stakes in established companies with growth potential. The PE sector has experienced unparalleled growth, with assets expected to increase by 16 percent annually, almost doubling between 2020 and 2025.[23] Unlike public markets investors, PE firms employ a distinctive control model that enables direct operational influence through strategic repositioning, financial engineering, and performance improvements. This hands-on approach positions PE firms to drive climate action by implementing emissions reduction targets, supporting decarbonization strategies, and developing climate solutions that enhance enterprise value while generating attractive returns.

Venture Capital (VC) is a form of private equity that provides funding to early-stage companies with high growth potential but significant risk. While traditional private equity often targets established businesses, VC specifically focuses on startups and emerging companies. VC firms raise money from investors, then identify and invest in promising ventures in exchange for equity. In this relationship, VC fund managers have a fiduciary duty to their investors, requiring them to act with loyalty by avoiding conflicts of interest, exercise appropriate care in investment decisions, and provide transparent information. As climate considerations become financially material, evaluating climate-related risks and opportunities is increasingly recognized as part of this fiduciary responsibility.

Private market investors operate on different time horizons that significantly impact their ability to support climate solutions (see Figure 2). While venture capital can provide high-risk capital for innovative climate technologies, their typical 3 to 7 year investment horizon may not align with the development timelines needed for first-of-kind climate technologies or nature-based solutions that require patient capital. Growth-oriented private equity firms typically invest with 5 to 10 year horizons, making them better suited for scaling proven technologies. Infrastructure and long-term private equity investors, with 10–20+-year investment horizons, are often better positioned to support capital-intensive climate projects that require sustained investment over longer periods, such as nature-based solutions, grid infrastructure, and industrial decarbonization projects.

FIGURE 2: PRIVATE MARKET INVESTMENT TIME HORIZONS



Currently a push for climate-related investments is being driven largely by LPs, as they demand climate integration and responsible investment due to stakeholder, regulatory, and financial risk concerns. Governments all over the world, including EU, Canada and Australia, are advancing climate disclosure regulations, pushing both LPs and GPs to meet climate goals. Rising consumer demand for sustainable products is pressuring portfolio companies to adopt low-carbon operations. Additionally, participation in industry networks like Global Impact Investing Network (GIIN) and Climate Action 100+ encourages GPs and LPs to take leadership in climate action.[24]

Importance of Net-Zero Transition Plans in Private Markets

PEs and VCs represent $13.1 trillion in assets under management globally and thus are essential for ensuring the adoption and implementation of real economy transition plans.[25] The role of these financial institutions specifically supports innovation and emerging technologies that are essential to net-zero transition plans, like direct air capture and clean hydrogen.[26]

VC is critical in nurturing early-stage companies that develop disruptive technologies needed for the net-zero transition. By providing capital to startups and high-growth companies, VCs can accelerate the development and scaling of solutions that might otherwise struggle to gain traction in more risk-averse investment environments. This alliance between VC firms and innovative enterprises helps bridge the gap between groundbreaking research and market-ready climate solutions, fostering a pipeline of technologies that can drive systemic climate action.

The Venture Climate Alliance (VCA) is instrumental in this process, serving as a collaborative network that pools resources, knowledge, and investment strategies to amplify the impact of individual VC firms to decarbonize their portfolios.[27] By uniting their efforts, members of the Alliance can reduce risks associated with high-stakes investments in emerging climate technologies and increase the chances of commercializing solutions that contribute to a net-zero future. This collective approach not only boosts funding opportunities but also ensures that investments are strategically aligned with long-term sustainability goals. The Paris Aligned Investment Initiative (PAII) has also expanded its Net Zero Investment Framework to include private equity, providing a structured approach for General Partners (GPs) and Limited Partners (LPs) to align their investments with net-zero goals. This guidance aims to close the gap between public and private markets by integrating private equity into net-zero strategies, driving real-world impact through standardized metrics, targets, and implementation actions. This helps ensure that private equity is held to the same sustainability standards as other asset classes, enhancing the contribution of all investments toward achieving net-zero emissions by 2050.[28]

Financial Levers to Integrate Net-Zero Transition Plans

Net-Zero and Climate Risk Assessment in Investment Decisions

Private market investors are increasingly incorporating net-zero commitments and climate risk assessments into their investment decision-making processes. At the investment-committee level, this often means requiring stringent due diligence to ensure that new investments align with credible net-zero pathways, especially in carbon-intensive sectors like thermal coal or tar sands. By doing so, private equity firms can enforce stricter guidelines on portfolio companies, guiding them toward sustainable business practices and reducing their carbon footprint.

A notable example is the Carlyle Group carbon foot-printing exercise for its portfolio, which includes scope 1 and 2 emissions, with efforts to incorporate scope 3 where data is available. This includes emissions related to purchased energy and other operational activities, helping the firm evaluate and set intensity-based carbon metrics. This analysis enabled Carlyle to evaluate their investments against measurable environmental performance standards. Such initiatives in the private market not only guide firms to make more informed, climate-aligned investment choices but also position them to capitalize on the financial benefits of a low-carbon transition.[29]

In the private markets, these efforts can be more impactful because investors often have more control and influence over the operations and strategies of their portfolio companies compared to public markets. This influence allows for greater agility in implementing net-zero strategies and setting concrete targets, ultimately driving transformative change across industries. By embedding climate risk and net-zero transition strategies into their operations, private market players are leading the charge in aligning their investments with the broader goals of a sustainable and resilient economy.

Building on these foundational efforts, private market investors are leveraging a range of financial levers to deepen net-zero integration across the investment lifecycle, from due diligence and capital allocation to portfolio management and divestment strategies. By embedding climate risk and net-zero alignment into investment decision-making, particularly in high-emitting sectors, they are guiding portfolio companies toward credible transition pathways and more resilient business models. Infrastructure investments have emerged as a major climate finance channel, with large-scale funds targeting renewable energy, sustainable infrastructure, and energy efficiency projects that offer both emissions reductions and stable returns. At the same time, investors are scaling capital allocation to climate solutions such as clean hydrogen, carbon capture, and early-stage decarbonization technologies, often through venture and growth equity strategies. These efforts are reinforced by firm-level decarbonization targets, typically science-aligned and tied to scopes 1, 2, and in some cases scope 3 emissions, that create accountability and enable tracking of progress toward net-zero goals. Investors are also adopting fossil fuel exclusion or transition policies to limit exposure to high-emitting assets without clear plans to decarbonize. Underpinning all of these strategies, private market firms are investing in upskilling legal, compliance, and investment teams to embed climate considerations into financial models, deal terms, and portfolio company engagement. This section explores how these integrated approaches enable private equity and venture capital to act as active owners driving both portfolio alignment and real-economy decarbonization at scale.

Infrastructure Investments

According to Sightline Climate's analysis, infrastructure funds have become a dominant force in climate finance, accounting for nearly 60 percent of new climate assets under management (AUM) raised in 2024.[30] Megafunds like Brookfield and KKR drive this trend, signaling the growing role of private equity and venture capital in financing the climate transition. Brookfield's second Global Transition Fund, the largest to date at $10 billion, focuses on renewable energy, decarbonization technologies, and energy efficiency projects globally.[31] Similarly, KKR's $2 billion Sustainable Infrastructure Investment Venture, launched in partnership with HASI, targets clean energy, sustainable infrastructure, and efficiency solutions across North America.[32] These funds highlight the growing appetite for climate-focused infrastructure investments in private markets, particularly for mature technologies like wind, solar, and energy storage that offer predictable returns.

Despite this momentum, the influx of private capital has not addressed the "missing middle," a persistent funding gap that threatens to slow the climate transition. This gap primarily affects First of a Kind (FOAK) projects, which represent the first commercial-scale deployment of innovative climate technologies. These projects are vital to scaling solutions like industrial decarbonization, clean hydrogen, carbon capture and storage (CCS) but struggle to secure financing due to their high risk and capital-intensive requirements. The "missing middle" reflects a mismatch in risk appetite, where venture capital prefers earlier-stage innovations and private equity gravitates toward proven, lower-risk technologies.

To bridge this gap, some private market players are experimenting with blended finance structures and specialized growth infrastructure funds, but these efforts remain limited in scale. With $86 billion in climate-focused "dry powder," including $56 billion earmarked for infrastructure funding, private equity and venture capital are well-positioned to take bolder steps[33]. By adopting innovative financing mechanisms that align venture capital's tolerance for risk with private equity's preference for stability, these investors can catalyze the deployment of FOAK projects, unlocking their potential to drive the climate transition forward and deliver scalable, transformative solutions.

Allocation to Climate Solutions

Private market investors are increasingly setting ambitious targets to significantly scale their capital allocation toward climate solutions, with key milestones for 2030, 2040, and 2050. These efforts are specifically focused on directing investments into sectors that drive decarbonization and develop climate-positive technologies like solar power, wind energy, hydrogen production, and innovative carbon capture solutions. In the private markets, this approach allows investors to engage more directly with early-stage companies and startups, providing not only capital but also strategic guidance to ensure these technologies grow and succeed. The agility and influence inherent in private equity and venture capital enable these investors to take on higher-risk, high-reward opportunities that might be overlooked in the public markets, positioning them at the forefront of the clean energy transition.[34]

A prominent example of this trend is the collaboration between BlackRock and Singapore's Temasek, where they launched a series of venture capital and early-growth private equity funds aimed at accelerating decarbonization solutions.[35] Their goal to raise $1 billion focuses on investing in companies that are innovating in renewable energy, sustainable infrastructure, and technologies that are crucial for reducing carbon footprints across industries. Such initiatives

in private markets are crucial as they support the growth of these startups from their inception through to commercialization, driving technological advancements that can transform traditional sectors like energy and heavy industry. By prioritizing these climate solutions, private market investors play a pivotal role in closing the funding gap for emerging green technologies, catalyzing innovations that can substantially reduce global emissions while also delivering competitive financial returns. This focus on early-stage investments in private markets underscores the sector's potential to lead the charge in meeting global net-zero targets through transformative, scalable solutions.

Portfolio Decarbonization Targets

Establishing specific emissions reduction targets for scopes 1 and 2 emissions and scope 3 where possible) enables firms to align their portfolios with regional and global decarbonization goals. This approach often involves setting measurable benchmarks to track progress, using either intensity metrics (emissions per unit of revenue or production) or absolute emissions reductions. By committing to these targets, firms signal their dedication to sustainability to investors, stakeholders, and regulators, making clear that decarbonization is a core part of their business strategy. Eurazeo, a major European private equity firm, exemplifies this strategy by pledging to achieve carbon neutrality across its entire portfolio by 2040.[36] This ambitious goal includes developing detailed decarbonization plans for its portfolio companies in line with the Science Based Targets initiative, aiming for a net-zero trajectory. Such commitments not only reduce climate-related financial risks but also position firms to capitalize on new market opportunities as the global economy shifts toward low-carbon solutions.

Fossil Fuel Policies

To further reinforce climate commitments, firms are encouraged to adopt policies that avoid new investments in high-emitting fossil fuel industries unless there is a clear transition plan aligned with net-zero goals. This approach goes beyond merely divesting from fossil fuels; it signals a broader commitment to responsible investing, where financial decisions actively support the transition to a low-carbon economy.

By integrating fossil fuel divestment strategies or imposing stringent ESG criteria, private market investors shift market dynamics toward low-carbon solutions and enhancing resilience to climate risks. This financial shift is critical because it both reduces the capital available for fossil fuel-based projects and puts pressure on these industries to innovate and adapt to remain viable in a changing economic landscape. As a result, companies are increasingly required to develop and articulate robust transition plans to attract and retain investment, which may include setting net-zero targets, reducing greenhouse gas emissions, and exploring cleaner technologies. This trend underscores the growing influence of capital markets in accelerating the global transition toward sustainability by making climate-conscious investing a central pillar of their strategies.

Upskilling Teams for Climate Alignment

Upskilling legal, compliance, and fund administration teams within Private Equity and Venture Capital firms is crucial to ensuring they integrate net-zero alignment within legal agreements and deal terms to formalize and operationalize climate commitments across private market transactions. This alignment is particularly important as more firms move toward sustainability-linked financing, where terms and conditions of investments are directly tied to achieving specific climate goals. Additionally, empowering these teams with the right skills ensures that climate considerations are consistently embedded into the due diligence

process, risk assessment, and reporting standards for all deals. Private equity and venture capital teams can further enhance their climate alignment by participating in specialized training programs that focus on sustainable finance, ESG integration, and understanding evolving regulations like the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.[37] These programs equip investment professionals with the skills to align their strategies with emerging global standards and the increasing demand for transparency in climate-related risks and opportunities.

Non-Financial Levers to Integrate Net-Zero Transition Plans

Peer engagement through industry networks and direct portfolio company engagement represent the most profound non-financial mechanisms for private equity firms to advance their net-zero transition plans. These complementary approaches allow firms to both learn from industry best practices and actively implement sustainability initiatives across their holdings. Peer engagement facilitates knowledge-sharing and establishes voluntary standards, while portfolio company engagement enables firms to directly influence corporate strategy and accelerate decarbonization through active ownership. These mechanisms are particularly powerful in private markets where firms have greater control over operational decisions compared to public markets, and where the lack of formal regulatory frameworks makes industry collaboration and direct engagement essential for driving systematic change. Through initiatives like the Venture Climate Alliance (VCA) and hands-on portfolio management, private equity firms can leverage their unique position to accelerate the transition to a low-carbon economy while creating long-term value.[38]

Peer Engagement

Private equity firms can engage in climate action through peer engagement by joining groups, initiatives, and alliances that promote sustainable investment practices. Some examples include the Venture Climate Alliance (VCA), Paris Aligned Investors Initiative (PAII), and networks like the Ceres Investor Network Private Equity Working Group, which supports over 25 leading GPs and LPs with a collective AUM of $1.9 trillion.[39] Through these initiatives, firms can accomplish important goals, such as improving their resilience to climate-related risks, enhancing long-term value creation, and contributing to global climate targets. Additionally, by engaging with their peers in these alliances, firms can access shared knowledge, tools, and resources that allow them to develop innovative investment strategies, align their portfolios with net-zero pathways, and improve overall ESG performance.

For firms operating in the private sphere, peer pressure and the desire to uphold industry reputation often drive the development of best practices, in contrast to the more formal regulatory frameworks seen in publicly traded companies. These dynamics foster a voluntary approach to climate action, where the incentive to maintain a competitive edge or attract environmentally conscious investors motivates firms to adopt sustainability measures. This lack of regulation has its drawbacks, as there is evidence of high-emitting assets moving from public to private as scrutiny of public company's carbon emissions increases. Maintaining that level of pressure through peer engagement can reduce the on-take of high-carbon projects.

A real-world example is Blackstone, one of the world's largest private equity firms. Through its membership in the Ceres Investor Network and commitment to the PAII, Blackstone has started embedding climate risk management into its investment strategies, setting targets for reducing emissions across its portfolio. This peer-driven approach to climate action is particularly effective in the private equity space, where firms can move quickly and flexibly to implement new strategies.

Portfolio Company Engagement

Private equity firms are increasingly playing a pivotal role in decarbonization by leveraging their active ownership model to directly engage with portfolio companies. This hands-on approach allows them to help portfolio companies scale more efficiently and support the buildout of critical competencies in areas such as emissions management, financial modeling, and the adoption of sustainable technologies. GPs and LPs collaborate to ensure that portfolio companies align with net-zero pathways, emphasizing science-based targets and transparent emissions reporting. By working closely with portfolio companies, private equity firms can foster innovation and guide businesses through complex decarbonization transitions, a process that is more challenging but potentially more impactful than—the strategies employed in public markets.

Berkshire Partners exemplifies this active engagement model. The firm has set a goal for its portfolio companies to establish decarbonization targets by 2027, or within two years of investment for companies acquired after 2025.[40] This strategy prioritizes emissions reductions across scopes 1, 2, and 3, and aims for net-zero emissions by 2050. Berkshire's approach is not merely about meeting regulatory requirements; it reflects a long-term commitment to driving sustainable growth through deep involvement in company operations. By offering decarbonization resources and sharing best practices, Berkshire Partners helps its portfolio companies reduce their carbon footprints while simultaneously strengthening their market positions.

This hands-on engagement model in the private equity space stands out because it allows firms to exert direct control over company strategy and operations. In comparison to the more passive role of investors in public markets, private equity firms like Berkshire can push for more immediate and significant shifts toward sustainability, thus driving value for both their investments and society at large.

Asset Owners

Asset owners oversee public and private pension funds, treasury funds, insurance companies general accounts, family offices, endowments and foundations, and sovereign wealth funds.[41] Their extensive capital pools, which span industries, give them substantial influence over capital markets, corporate behavior, and vast areas of the finance sector. These institutions serve as the ultimate owners of capital, making strategic decisions about how to allocate funds across asset classes and investment strategies to meet their long-term obligations to beneficiaries.

As the largest stewards of long-term investments, asset owners are uniquely positioned to drive the transition to a net-zero carbon economy. Their long term investment horizons align naturally with the timeframes needed for climate transition, while their size and influence enable them to shape market practices and corporate behavior. Through their investment decisions, engagement with portfolio companies, and influence over asset managers, asset owners can accelerate decarbonization across the broader economy while managing climate related risks to their portfolios. Their role as universal owners, invested across the entire economy, gives them a particularly strong interest in addressing systemic climate risks and supporting an orderly transition.

Traditionally, fiduciary duty of asset owners has focused on maximizing financial returns and managing risk through portfolio diversification. However, the changing climate landscape has redefined these obligations, requiring asset owners to incorporate climate risks into their decision-making and risk mitigation processes. According to an article in Pensions & Investments, large asset owners increasingly view climate-related risk management as critical to protecting the long-term value of their portfolios.[42] The Principles for Responsible Investment, a United Nations-supported international network of financial institutions seeking to incentivize responsible investment, further underscores the need for asset owners to address climate change to safeguard investments through targeted efforts that protect portfolios while contributing to broader climate goals and financial stability.

Importance of Net-Zero Transition Plans for Asset Owners

Net-zero transition plans enable asset owners to manage potential risks, such as stranded assets, while positioning their portfolios for long-term performance in a decarbonizing world. Beneficiaries, non-governmental organizations (NGOs), and regulators, are increasingly demanding transparency on how asset owners manage climate change risks.

Asset owners looking to demonstrate their ambition join voluntary initiatives like the Net Zero Asset Owner Alliance (NZAOA), where they publicly commit to achieving net-zero emissions by 2050.[43] This commitment reflects a growing recognition that aligning portfolios with global decarbonization goals is essential to protecting financial performance in the long term. Additionally, initiatives such as the Paris Aligned Asset Owners (PAAO) which draws on the Net Zero Investment Framework (NZIF) offers comprehensive guidelines for asset owners to structure their portfolios in alignment with the Paris Agreement's climate objectives. By integrating these frameworks into their investment strategies, asset owners can contribute to real-world emissions reductions while managing transition risks within their portfolios.

The University Pension Plan (UPP) is a leading example of how asset owners can effectively implement net-zero transition plans. UPP's Climate Action Plan

sets clear decarbonization goals, aiming to reduce the carbon intensity of its portfolio by 16.5 percent by 2025 and 60 percent by 2030, with a target of net-zero emissions by 2040 or sooner. This plan emphasizes the importance of transparency, regular reporting, and active engagement with portfolio companies.[44]

Financial Levers to Integrate Net-Zero Transition Plans

Portfolio Screening Criteria

Asset owners can establish stringent climate- and transition-related criteria to screen investments. These criteria assess the emissions associated with potential investments and identify companies leading the transition toward low-carbon operations. Implementation of these criteria helps avoid high-carbon assets, reduces risk, and ensures that portfolios are future-proofed against climate-related regulatory changes and market shifts.

Sustainable Investment

Asset owners have a powerful role in accelerating the transition by allocating capital toward sustainable investments in areas such as renewable energy and energy-efficient technologies. According to MSCI's Net Zero Asset Owners Guide, aligning investments with decarbonization pathways is essential for asset owners aiming to meet their net-zero commitments. By directing funds into projects and technologies like wind farms, solar energy, battery storage, and sustainable infrastructure, asset owners contribute to emissions reductions while positioning their portfolios for long-term resilience.[45]

Box 2: Investments Targeted at Improving & Enhancing Grid Infrastructure

The electric utilities sector is vital to the decarbonization of large sectors of the economy. Infrastructure investments targeted at upgrading and enhancing the electric grid are one of the most profound mechanisms that asset owners could leverage to accelerate the transition. The current grid infrastructure requires significant expansion and modernization to handle the increased load demand from data centers, renewable energy, and distributed energy resources (e.g., electric vehicles and battery storage). Asset owners can play a pivotal role in accelerating these efforts by directing capital toward projects that expand grid capacity, enhance energy storage capabilities, and improve grid resilience to climate-related disruptions. According to the Transition Plan Taskforce Sectoral Guidance for Asset Owners, these investments are not only necessary for decarbonization but also essential to ensuring system reliability and affordability as energy systems evolve*. A recent report from the National Academies of Sciences further emphasizes this urgency, indicating that without substantial upgrades to the transmission grid, the United States and other regions will struggle to meet decarbonization targets.

By addressing bottlenecks in energy distribution, asset owners can help accelerate the deployment of renewable energy, which is a critical component in achieving net-zero targets. Grid expansion and modernization projects not only facilitate the smooth integration of renewable sources but also mitigate risks related to energy intermittency and climate-related disruptions, ensuring greater resilience across portfolios. Prioritizing grid resilience enables asset owners to actively support the clean energy transition while securing stable, long-term returns from needed infrastructure investments.

* Transition Plan Taskforce, "Sectoral Guidance for Asset Owners: Ensuring Energy System Resilience," October 2024, *https://transitiontaskforce.net/publications/sectoral-guidance-asset-owners/.*

In addition to mitigating climate-related financial risks, these investments provide asset owners with the opportunity to generate competitive returns in emerging industries. Investments in renewable energy projects help to diversify portfolios and reduce reliance on high-carbon sectors. Furthermore, investments in energy-efficient technologies relating to green buildings and sustainable transportation can contribute to lower operational costs and long-term savings. By prioritizing sustainable investments, asset owners can align their portfolios with global decarbonization goals while securing stable returns that are increasingly demanded by beneficiaries and other stakeholders.

Non-Financial Levers to Integrate Net-Zero Transition Plans

Asset Manager Engagement

Asset owners often rely on asset managers to execute their investment strategies, making it critical for them to ensure these managers are fully aligned with their net-zero objectives. Asset owners have significant influence over asset managers and can set clear expectations for portfolio management and engagement to support decarbonization goals. The Net Zero Asset Owner Alliance (NZAOA) provides a framework for asset owners to engage and hold asset managers accountable in service of decarbonization goals.[46] This framework focuses on ensuring managers develop actionable, science-based net-zero plans, including setting interim decarbonization targets, enhancing climate-related disclosures, and engaging with portfolio companies to address climate risks. Asset owners can also incorporate climate-related performance metrics into manager mandates, linking incentives to achieving specific climate goals. By continuously monitoring progress and maintaining open engagement, asset owners can ensure that asset managers are actively contributing to the global transition and that their investments align with broader climate objectives.

Regulator and Policy Engagement

Asset owners play a critical role in mitigating systemic risks posed by climate change through engaging with regulators and advocating for climate-aligned policies. By pushing for stronger regulatory frameworks that promote transparency and climate accountability, asset owners help address systemic risks that could threaten the stability of financial markets. Widespread economic impacts of climate change have the ability to destabilize entire sectors if not effectively managed. Through their sizable influence, asset owners can encourage policies like carbon pricing and other market-based mechanisms, ensuring that the true cost of carbon is factored into business decisions.

Proxy Voting

Proxy voting is a powerful tool that allows asset owners to use their sizeable portfolios to influence corporate performance and drive climate action. According to the UNEP FI's report, "Elevating Climate Diligence on Proxy Voting Approaches," proxy voting enables asset owners to push companies toward adopting and implementing effective climate strategies.[47] By ensuring that asset managers incorporate climate risks into their decision-making, asset owners can drive meaningful change across industries. The report highlights that climate-aware proxy voting can be a key lever for achieving portfolio decarbonization goals and managing climate-related risks.

The power of asset owners is further amplified through coalition building, as exemplified by CA 100+, one of the world's largest investor-led climate initiatives. The recent appointment of California Public Employees' Retirement System (CalPERS), chief operating investment officer Michael Cohen to head

the CA100+ Steering Committee underscores the growing influence asset owners have in shaping climate-aligned engagement. The CA100+ initaitve, which includes both asset owners and asset managers, collectively engages with the world's largest corporate greenhouse gas emitters to improve climate change governance, curb emissions, and strengthen climate-related financial disclosures.[48] By leveraging their combined influence, these coalitions can build substantial support for climate-focused shareholder proposals, effectively pressuring companies to adopt more robust climate strategies. This collaborative approach, coupled with strategic proxy voting, enables asset owners to increase their leverage and deepen impact.

Asset owners are key players in the global transition, though their role in considering climate factors has faced increased scrutiny and pushback in some regions. Despite political headwinds questioning ESG integration, asset owners have a fundamental duty to evaluate and manage climate risks that could impact their portfolios and beneficiaries over the long term. Through responsible investment, corporate engagement, and collaboration with asset managers who are increasingly affirming their own climate commitments, asset owners can ensure long-term financial stability while contributing to global decarbonization efforts, focusing on the materiality of climate risks rather than ideology. By grounding climate integration in fiduciary duty and risk management, asset owners can navigate opposition while maintaining their crucial role in shaping how the financial sector responds to climate change. As the world moves toward a more sustainable future, asset owners' systematic evaluation of climate factors will remain vital for protecting long term value, even as approaches evolve to address legitimate concerns about implementation.

Insurance/Reinsurance

The insurance and reinsurance sectors are vital yet often underappreciated segments of the broader financial and institutional investor community. Insurance companies primarily act as asset owners by investing the funds collected from their clients in the form of premiums. These investments are crucial to offsetting potential future claims and managing risks. Insurers must balance the need to generate profits with the responsibility of ensuring they have enough capital to cover claims and maintain their business's long-term stability. They aim to make investments that are at least neutral or preferably favorable in terms of their impact on the climate.

The primary function of insurance is to assess and price risk, which makes the industry particularly sensitive to climate change as it directly affects risk quantification. Reinsurance performs a similar function and is often referred to as "insurance for insurance companies." Per the National Association of Insurance Commissioners, reinsurance is a contract between a reinsurer and an insurer that transfers risk to the reinsurer. Through this process the reinsurer assumes the risk for policies issued by the insurance company.[49]

Insurance companies hold vast amounts of assets under management and their business models depend on accurately pricing long-term risks. Climate change, with its growing unpredictability and severity, poses a direct challenge to this model. Ceres' 2023 publication, The Changing Climate for the Insurance Industry, indicated that climate change affects both the profitability and stability of the insurance sector through events such as increased storms, floods, and other natural disasters in areas that previously were not vulnerable to such events.[50] For example, Hurricane Sandy caused major upheaval in the insurance industry. An unusual weather pattern forced the storm to pivot westward toward the Northeast Coast of the United States, intensifying the winds and storm surge aimed at the shores of Long Island, Connecticut, and New Jersey. The result was a single event insured loss of $35.1 billion. [51]

Importance of Net-Zero Transition Plans for Insurance and Reinsurance

As major asset holders and risk managers, insurers and reinsurers have a vested interest in supporting the transition to a net-zero economy. A well-planned transition to a low-carbon economy not only addresses environmental sustainability but also decreases systemic financial risk, which directly benefits the insurance sector's core business by reducing the likelihood of catastrophic climate-related events and claims.

Climate change-related disasters have already led to an increase in insurance claims. According to Deloitte's report Climate Change and Home Insurance: U.S. insurers have been hit hard by severe weather-related claims, in the United States alone, "the number of US catastrophic events increased by 32 percent between 2019 and 2022.[52] $25 billion in 2019 to US $99 billion in 2022."[53] This trend is forcing insurers to reassess their pricing models and their exposure to climate risks. Another Ceres report, The Changing Climate of the Insurance Industry, found that while asset managers have been subject to greater scrutiny regarding their fossil fuel investments, insurers have not been held equally accountable for the impact of their large investment portfolios.[54] This discrepancy is noteworthy given the size of the assets under management by insurers and the profound societal impacts of their underwriting activities.

Fiduciary duty requires insurance companies to act in the best financial interest of their policyholders and stakeholders. As major asset owners, insurers and reinsurers manage large, globally diversified investment portfolios that span the entire economy. This broad exposure makes them universal owners and leaves them particularly vulnerable to the systemic risks posed by climate change. Addressing these risks is a core component of their fiduciary responsibility, not a peripheral concern. Managing climate-related financial risk requires insurers to accurately assess and price these risks and to take meaningful steps to reduce long-term exposure across their portfolios, to safeguard long-term returns and fulfill their obligations to beneficiaries.

On a global scale, insurers represent $40 trillion in assets, with their influence extending across various sectors.[55] Given their size and investment power, insurers can play a transformative role in accelerating the transition to a low-carbon economy, but they are often overlooked in conversations about climate action compared to other institutional investors, such as asset managers.

One of the more prominent initiatives that insurance sectors can join includes The Forum for Insurance Transition to Net Zero (FIT) which aims to address this gap by creating a collaborative platform where insurers can collectively strategize and implement transition plans.[56] FIT brings together industry leaders to share best practices, set ambitious targets, and advocate for policy changes that align with a net-zero future. By fostering dialogue and action among insurers, the Forum ensures that these critical players in the financial sector are equipped to manage climate-related risks more effectively while driving investment toward sustainable solutions. Notably the forum is a reimagining of the Net Zero Insurance Alliance (NZIA). This alliance, part of the UN-convened net-zero initiatives, faced increasing scrutiny from regulators and legal challenges in some jurisdictions, particularly in the United States, over antitrust issues and anti-ESG sentiments. These concerns were based on the perception that participating in alliances like the NZIA could be seen as coordinating strategies in ways that might limit competition.

Financial Levers to Integrate Net-Zero Transition Plans

Underwriting

Underwriting involves assessing, pricing, and taking on risk by providing insurance coverage, which is fundamental to the industry's ability to offer protection against various risks. This process requires a deep understanding of risk factors and is critical for determining the terms and premiums of policies. The insurance industry can use underwriting as a powerful financial lever to encourage the low-carbon transition by integrating climate considerations into their risk assessment and pricing models.

Premium Discounts for Lower-Climate Risk

Insurers can offer preferential rates or tailored products to companies that demonstrate a commitment to reducing their carbon emissions or that have strong sustainability practices in place. Insurers can develop underwriting criteria that favor businesses with clear net-zero transition plans, investments in renewable energy, or adherence to science-based targets for reducing greenhouse gas emissions. By reducing premiums for these companies, insurers create financial benefits for those that proactively work toward a low-carbon future, while increasing premiums or even refusing coverage for organizations that continue to heavily invest in carbon intensive fossil fuels or lack robust climate strategies.

Exclusion Policies

In addition to premium discounts, the insurance industry can use exclusion policies as an underwriting discipline, limiting or denying coverage to high-carbon projects, such as new coal plants or oil and gas exploration activities.[57] This approach not only reduces the financial security for fossil fuel-intensive activities but also signals to the market that these types of investments carry higher risks and may not be insurable in the future. As insurers increasingly integrate climate risks into their underwriting processes, they create a powerful feedback loop that encourages clients to reevaluate their exposure to carbon-intensive assets and invest in more sustainable solutions.

The integration of climate risks into underwriting also contributes to the broader decarbonization of the economy by driving demand for cleaner technologies and more resilient infrastructure. By recognizing and pricing the physical risks associated with climate change, such as extreme weather events, flooding, and wildfires, insurers can help businesses better understand the financial impacts of these risks. This, in turn, encourages companies to adopt strategies that enhance their climate resilience and align with global sustainability goals. As the insurance sector plays a pivotal role in risk management, its actions in underwriting can guide the allocation of capital toward projects that support the transition to a low-carbon economy, thus amplifying the impact of its influence on climate action.

Asset Ownership Classification

Another core function of insurance and reinsurance companies relates to their role as an asset owner. Asset ownership in the context of the insurance and reinsurance industry refers to the management of investment portfolios that insurers hold to back their policy liabilities. This function focuses on generating returns to meet future claims and obligations while increasingly integrating sustainability considerations, such as aligning investments with net-zero targets. In the United States alone, insurers represented $8.5 trillion in cash and invested assets in 2023, signifying the large sway this type of asset owner has on the broader financial space.[58]

As with other large asset owners, insurers can drive change through their investment decisions (see asset owner section for more detailed financial levers). A report from the Boston Consulting Group found that a significant portion of insurers' carbon footprint comes from their investment portfolios, which can account for 50–55 percent of their emissions, compared to underwriting and claims management activities, which make up 35–40 percent of their emissions.[59] Utilizing portfolio screening tools to evaluate investments for their exposure to climate risks has become increasingly common, but it varies in rigor. To align with net-zero targets, insurers need to adopt more stringent portfolio screening methods for their assets under management such as divesting from carbon-intensive assets and investing in climate-resilient infrastructure and technologies. This is similar to strategies used by other asset owners and asset managers.

Non-Financial Levers to Integrate Net-Zero Transition Plans

Policy Advocacy and Regulatory Engagement

Insurance companies can influence climate policy through active engagement with regulators and policymakers by advocating for stronger climate regulations that support sustainability goals. One prominent example is Generali Group, which participates in advocacy efforts through its international public affairs and regulatory advocacy function.[60] Generali supports policies aligned with the

Paris Agreement, promoting transparency, the development of clean energy technologies, and a just transition to low-carbon economies. The company engages directly with policymakers and participates in industry coalitions, emphasizing the need for balanced regulations that drive both climate resilience and economic stability.

Moreover, insurers, such as those participating in the Principles for Sustainable Insurance (PSI) initiative, actively work with governments to promote regulatory changes that mitigate climate risks.[61] These companies often take part in dialogues to encourage the adoption of policies that incentivize green investments and climate resilience. As of today, PSI participants underwrite 25 percent of global premiums and influence significant aspects of climate-related decision-making by embedding ESG factors into both their insurance underwriting and investment portfolios. This approach helps insurers not only manage risks associated with climate change but also drive market-wide shifts toward sustainability.

Inter- and Intra-Industry Collaboration

Collaboration across the insurance industry and with other sectors is crucial in driving collective action toward climate resilience. Insurers often partner with banks, asset managers, and institutional investors to pool resources and expertise for large-scale projects to decarbonize key economic sectors. By working together, these stakeholders can finance initiatives accelerating the transition from carbon-intensive (brown) to low-emission (green) sectors. For example, collaborative efforts might involve investing in renewable energy infrastructure or supporting innovative technologies that reduce greenhouse gas emissions. Additionally, some formal initiatives like the Forum for Insurance Transition to Net Zero (FIT) include commitments to lead to a "zero-carbon economy." These partnerships also enable the sharing of knowledge and best practices, fostering a more unified approach to addressing the complex challenges of climate change. Through these alliances, the industry can amplify its impact, creating a stronger foundation for sustainable economic growth and resilience.

Collaboration with other sectors and thought leadership are essential non-financial levers. Insurers often work with other financial institutions, NGOs and international bodies to develop best practices and standards for managing climate risks. For instance, they might collaborate to create guidelines for assessing and disclosing the physical, transitional, and liability risks associated with climate change or join the United Nations Forum for Insurance Transition to Net Zero (FIT) to collaborate with other leaders in the insurance space from the private and public sectors.[62]

Data Sharing and Dissemination

Data plays a critical role in the net-zero transition, and insurers are well-positioned to lead in this area by leveraging their extensive experience assessing climate risks and impacts. By sharing this information with stakeholders such as policymakers, researchers, and businesses, insurers can provide valuable insights into evolving risk patterns and emerging trends. One prominent example is the partnership between the U.S. Treasury's Federal Insurance Office (FIO) and the National Association of Insurance Commissioners (NAIC), which collects ZIP code-level data from homeowners insurers to assess climate-related financial risks.[63] This initiative was designed to analyze the impact of climate-related disasters on insurance affordability and availability, evaluate disruptions in private insurance coverage, and monitor access to insurance for underserved

communities. The resulting data can guide strategic decision-making and help all parties better anticipate and manage the financial implications of a changing climate.

Since President Trump returned to office in 2025, however, the future of this initiative has become uncertain. The NAIC has publicly called for the elimination of the FIO, arguing that its functions duplicate those of state insurance regulators and complicate the national regulatory framework.[64] In this shifting policy environment, efforts to coordinate and share climate-related insurance data may face growing institutional resistance.

Even amid this uncertainty, insurers have an opportunity to lead. By advancing and promoting standardized data collection methodologies, they can enhance the quality and comparability of climate risk assessments across the industry. Continued efforts in data transparency and cross-sector collaboration can help maintain progress on climate risk management, even as federal support becomes less predictable.

Shareholder Proposals Focused on Underwriting Risk

Investors play a pivotal role in encouraging insurers and reinsurers to integrate net-zero goals into their underwriting practices. As shareholders, investors direct leverage to push for more stringent climate-related risk assessments and demand that insurers align their underwriting standards with the goals of a low-carbon economy. By advocating for sustainable business models, investors can influence insurers to limit coverage for high-emission industries and actively support sectors and projects contributing to the transition to net-zero. This pressure from investors drives insurers to adopt more responsible risk management strategies and motivates them to use their market influence to accelerate decarbonization across other industries. For example, a 2024 shareholder proposal on underwriting in line with 1.5°C filed by Green Century Capital Management and As You Sow at Chubb Limited asked the company to disclose the greenhouse gas emissions associated with its underwriting, insuring and investment activities.[65] The proposal is one of four shareholder proposals filed on the theme during the 2024 proxy season and pushes for a reduction in both climate-related financial risk from exposure to fossil fuel investments and regulatory risk from the growing climate-related regulations impacting the insurance industry. This shareholder proposal demonstrates increasing investor scrutiny on the topic of emissions associated with underwriting activities within the insurance industry.

Banks

Banks play an essential role in the global economy by providing credit, facilitating capital raising, and managing risk. Banks serve as intermediaries in the global financial system, providing the necessary capital to drive economic growth. Through these activities, banks enable businesses to grow, governments to finance public projects, and individuals to invest in homes and education. However, banks also play a crucial role in facilitating the flow of capital into both high-carbon and low-carbon industries. This dual responsibility underscores the need for banks to align their financing activities with climate goals.

Beyond these core functions, banks collaborate with a range of financial actors including asset managers, institutional investors, and insurers to co-finance major projects that support the decarbonization of hard-to-abate sectors. They also work closely with regulators and credit rating agencies, which play key roles in establishing accountability and transparency in managing climate-related financial risks.

In the United States, banks play a critical role in operationalizing the climate investment potential of legislation such as the Inflation Reduction Act (IRA) and the Bipartisan Infrastructure Law (BIL). These initiatives rely heavily on tax credits to accelerate clean energy deployment, yet many developers, nonprofits, and municipalities lack the tax liability needed to claim them directly. Banks help bridge this gap by structuring tax equity deals and facilitating credit transfers, enabling those without tax appetite to monetize these incentives. In doing so, they enhance project economics, broaden participation in the energy transition, and deepen market liquidity for climate-aligned investments.[66]

Banks are bound by a fiduciary duty to act in the best interests of their clients and shareholders. While traditionally focused on protecting financial returns and managing economic risks such as market volatility, fiduciary duty is increasingly interpreted to include long-term systemic risks related to climate change. Climate impacts pose material risks that can undermine asset values and portfolio resilience. As a result, banks are expected to integrate climate-related risks and opportunities into their investment and lending decisions, aligning capital allocation with the transition to a low-carbon economy to safeguard clients' long-term financial interests and support long-term value creation.[67]

Importance of Net-Zero Transition Plans in Banking

In the face of accelerating climate change, banks face intensifying pressure from institutional investors, regulators, corporate clients, and civil society organizations to take a more active role in financing the global transition to a low-carbon economy. As major global financial institutions, banks are broadly exposed to financial stability risks posed by climate change, and those making credible climate-related commitments are better positioned to manage legal, reputational, and financial risks while capitalizing on opportunities in the energy transition. According to the International Energy Agency, reaching net-zero by 2050 requires tripling global annual clean energy investment by 2030, with the pace of this scaling directly influencing how quickly fossil fuels can be phased down.[68] Net-zero transition plans provide banks with critical tools for managing climate-related risks, identifying growth opportunities, and fulfilling fiduciary responsibilities. Growing pressure from clients, civil society, regulators, and shareholders is pushing for banks to demonstrate how they are managing climate risks and aligning their portfolios with the goals of the Paris Agreement. Despite momentum, many banks' responses remain partial and inconsistent, highlighting the need for more transparent and comprehensive approaches.

Net-zero transition plans enable banks to manage both the risks and opportunities associated with the climate transition. By implementing these plans, banks can reduce their exposure to stranded assets, support the decarbonization of high-carbon industries, and seize growth opportunities in renewable energy, sustainable agriculture, and other green sectors. Through initiatives like the Net Zero Banking Alliance (NZBA), banks commit to aligning their lending and investment portfolios with net-zero emissions by 2050, setting interim targets and reporting progress to ensure accountability. However, many banks' disclosures remain partial, with gaps in areas such as scenario analysis and the treatment of off-balance-sheet liabilities, leaving room for improvement.[69] Strengthening transparency and integrating more comprehensive climate risk assessments can help banks align more fully with net-zero goals while better managing financial stability in the face of climate risks.

Financial Levers to Integrate Net-Zero Transition Plans

Climate-Aligned Financing

Climate-aligned financing has emerged as a crucial strategy for banks to support and accelerate the transition to a low-carbon economy across various sectors. This approach involves aligning lending and investment activities with long-term climate goals, thereby incentivizing companies to develop and implement robust net-zero transition plans. Recognizing the need for coordinated action, the Rocky Mountain Institute launched the Center for Climate-Aligned Finance in 2020 to help the financial sector transition the global economy toward a zero-carbon, sustainable future.[70] A prime example of the Center's impact is the recent initiative in the aviation sector, announced in November 2023, where six major banks including Bank of America, BNP Paribas, Citi, Crédit Agricole CIB, Societe Generale, and Standard Chartered, committed to a common approach for measuring and disclosing emissions from aircraft financing. By adopting these guidelines, banks can more effectively engage with airlines and manufacturers to support their transition efforts, potentially offering preferential terms for low-emission aircraft or sustainable aviation fuel projects.[71]

The scope of climate-aligned financing extends to initiatives that encompass other major emitting sectors. In the shipping sector, a group of leading banks updated the Poseidon Principles in 2022 to align with the International Maritime Organization's ambition to reduce shipping emissions by at least 50 percent by 2050.[72] For the steel industry, six global banks, including Citi, Goldman Sachs, ING, and UniCredit, announced the Steel Climate-Aligned Finance Working Group in October 2021, aiming to develop a climate-aligned finance agreement for the steel sector[73]. These examples illustrate how banks are rapidly evolving their climate aligned financing approaches to meet the specific needs and challenges of different sectors while driving climate action.[74] These initiatives also demonstrate that by working together and establishing clear, consistent standards, banks can significantly influence the pace and direction of decarbonization efforts.

Sustainability-Linked Loans (SLLs)

One of the most effective tools for banks is Sustainability-Linked Loans (SLLs), which tie the terms of a loan, such as interest rates, to the borrower's environmental performance. By incentivizing borrowers to meet specific sustainability targets, banks can align their lending practices with broader environmental goals.[75] SLLs are an increasingly popular financial product, as they allow banks to support companies in their transition toward more sustainable operations while managing their own exposure to climate-related risks. Nordea's recent $400 million bond, the first of its kind, exclusively funds

SLLs, supporting companies in achieving ambitious sustainability targets as part of their transition plans. This innovative framework helps align corporate financial practices with global climate objectives.[76]

Blended Finance

Blended finance is a powerful tool that brings together public, private, and philanthropic capital to fund sustainable development projects. This approach helps mitigate risks for private investors by using public or concessional capital to absorb potential losses, making investments in climate projects more attractive.[77] For banks, blended finance enables the funding of high-impact, low-carbon projects that might otherwise be considered too risky. By leveraging this model, banks can support large-scale investments in sectors like renewable energy, sustainable agriculture, and clean infrastructure, which are essential for the global transition to a low-carbon economy. Blended finance not only unlocks more capital for decarbonization it also fosters collaboration between diverse stakeholders, driving greater innovation and impact in sustainable finance.

Off-Balance-Sheet Liabilities

Financial risks are not limited to what appears on banks' balance sheets. One of the most significant challenges that banks face is managing off-balance-sheet liabilities. These liabilities, often tied to high-carbon sectors, are not always immediately visible in traditional financial statements but represent significant risks as the world moves toward decarbonization. According to an analysis by Natasha Landis-Mills of Sarasin and Partners for Reuters, these hidden climate risks could become a major source of financial instability as banks continue to finance high-emission projects that may become stranded assets under tightening environmental regulations and due to unpredictable climate events.[78] The role of auditors is becoming increasingly critical in addressing these hidden risks, with the Public Company Accounting Oversight Board (PCAOB) emphasizing that auditors must enhance their consideration of climate-related risks when reviewing financial statements.[79] This includes evaluating whether banks have appropriately assessed and disclosed potential stranded asset risks and climate-related liabilities in their financial reporting. Recent examples highlight this evolving responsibility. For instance, the PCAOB has begun incorporating climate considerations into its audit firm inspections, examining whether firms adequately evaluate climate-related risks that could materially impact financial statements. As the global economy transitions to low-carbon alternatives, banks must proactively address these off-balance-sheet risks by integrating them into their net-zero transition plans and taking steps to mitigate potential losses. This approach not only protects banks from financial instability but also ensures alignment with sustainability goals and regulatory requirements.

Non-Financial Levers to Integrate Net-Zero Transition Plans

Governance Structures

Establishing robust governance structures is crucial for banks to effectively develop and implement net-zero transition plans. The NZBA emphasizes integrating climate considerations across all levels of a bank's operations. At the board level, climate-related issues should be a regular agenda item, with directors receiving comprehensive training on climate risks and opportunities. Some leading banks have gone further by establishing dedicated board-level climate or sustainability committees to oversee transition strategies, monitor climate-related risk exposure, and guide disclosure practices. Executive management plays a critical role in translating board-level strategy

into actionable plans, often through a dedicated climate or sustainability team led by a senior executive. Cross-functional engagement is essential, with working groups or committees bringing together representatives from various departments to embed climate considerations across all operations and decision-making processes. Accountability and transparency are central to effective climate governance in banks. To drive progress and reinforce responsibility, an increasing number of banks are linking executive compensation to climate-related KPIs such as financed emissions reductions, net-zero alignment of loan portfolios, or delivery of green financing targets. This alignment is recognized as a mechanism to enhance accountability and support long-term performance. These governance structures also strengthen banks' ability to identify, assess, and manage climate-related financial risks in line with regulatory expectations and investor demands.

The Bank of England's Net Zero Transition Plan provides an exemplary model of comprehensive climate governance. It features executive sponsorship, a cross-functional Climate Strategy Group, a Climate Risk Oversight Committee, active participation in international forums, integrated risk management, and transparent annual climate-related financial disclosures.[80] While implementing such structures can present challenges like skill gaps, data quality issues, regulatory uncertainty, and cultural resistance, banks can overcome these through targeted solutions like investment in training, robust data systems, regulatory engagement, and cultural change initiatives. By adopting a phased approach to transitioning toward climate-focused governance structures, banks can ensure their net-zero transition plans are fully integrated into overall risk management and strategic planning processes, positioning themselves as leaders in the transition to a low-carbon economy.

Stakeholder Engagement

Engaging with clients, regulators, and investors is a critical aspect of banks' efforts to develop and implement effective net-zero transition plans. Banks can play a pivotal role in helping clients, particularly those in high-emission sectors, transition operations. By working closely with these clients, banks can offer advisory services, structure SSLs, or finance projects through sustainable bond issuance that supports the shift from carbon-intensive to low-carbon business models. Through proactive engagement, banks both help clients decarbonize and enhance their own portfolio resilience by reducing exposure to high-carbon assets. This collaboration strengthens relationships with clients while ensuring that banks' lending practices contribute to broader climate objectives.

In addition to working with clients, banks must engage with regulators and investors to align their practices with evolving expectations. Regulatory bodies are increasingly focused on climate-related financial disclosures, risk management, and the development of policies aimed at enhancing financial stability in the face of climate change. Banks can engage with regulators to stay ahead of compliance requirements and contribute to shaping policies that promote sustainable finance. Investor engagement is also important, as investors demand transparency around how banks are managing climate risks and aligning their portfolios with net-zero goals. By maintaining open dialogue with all stakeholders, banks mitigate reputational and financial risks, while positioning themselves as leaders in the transition

Energy Supply Ratio Disclosure

Major banks are facing growing pressure to disclose their energy supply ratios. These ratios measure the proportion of bank-facilitated financing directed to low-carbon energy compared to fossil fuel projects, offering a clear picture of how financial institutions are directing capital toward climate solutions. In 2024, New York City's pension funds, led by the NYC Comptroller's Office, successfully pushed shareholder proposals at JPMorgan Chase, Citigroup, and Royal Bank of Canada, compelling these banks to calculate and disclose their energy supply ratios. Each institution ultimately agreed to these disclosures and announced large sustainable finance targets[81].

Investors view energy supply ratios as a critical component of a bank's climate transition disclosure, helping to evaluate whether a bank is actively redirecting capital toward low-carbon sectors or merely managing legacy fossil fuel exposure. According to BloombergNEF, energy supply ratios are among the most effective indicators of alignment with net-zero pathways, as they reflect actual capital flows rather than forward-looking pledges.

Data and Reporting

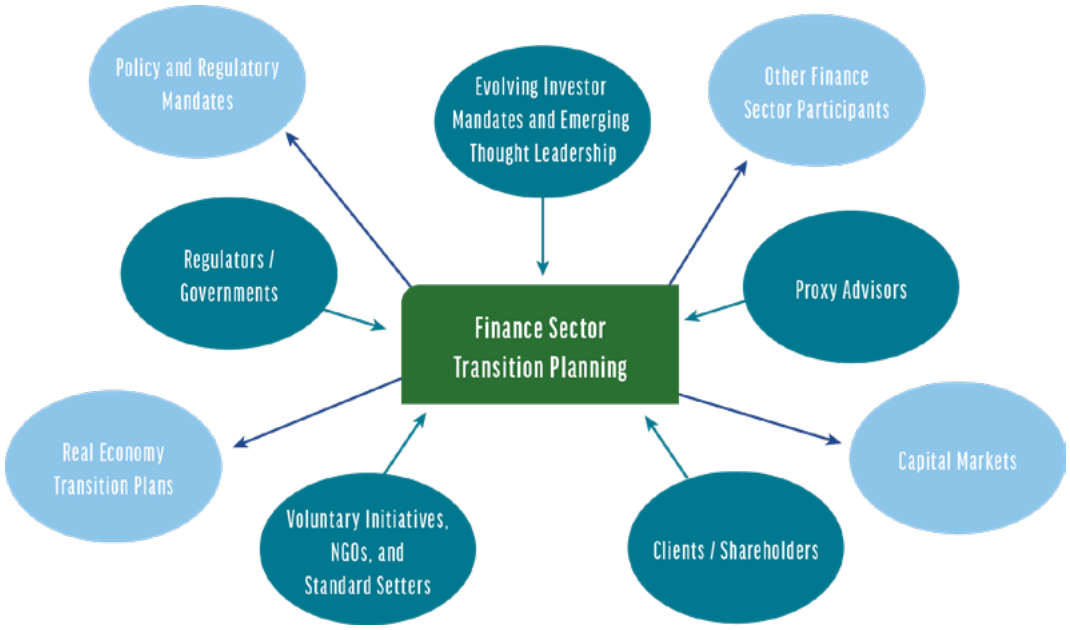
Robust data management and comprehensive disclosure are fundamental to the successful implementation of net-zero transition plans in the banking sector. Banks face significant challenges in gathering and managing climate-related data, both for their own operations and for their financed emissions. To address these challenges, banks are investing in advanced data management systems, leveraging artificial intelligence and machine learning, and forming partnerships with data providers. Once collected, banks must analyze this data to derive meaningful insights. Key metrics and analyses include emissions intensity, portfolio alignment with climate scenarios, transition risk exposure, climate opportunity identification, and impact measurement.

Transparent reporting of climate-related data and strategies is crucial for accountability and stakeholder trust. Banks are also facing increasing pressure to disclose off-balance-sheet liabilities related to climate risks, including potential exposures from loan commitments and financial guarantees that could be impacted by climate change or transition risks. These disclosures provide a more comprehensive view of a bank's climate-related risk management and its progress in aligning with net-zero goals. However, challenges remain, including data quality issues, the need for greater standardization in measurement and reporting methodologies, and a tension between providing transparent disclosures and maintaining client confidentiality. As data quality improves and reporting practices mature, banks will be better equipped to make informed decisions, manage risks, and capitalize on opportunities in the transition.

Finance Sector Net-Zero Transition Planning: Ecosystem Influences

Finance sector net-zero transition plans are shaped by a diverse array of influences, each playing a vital role in steering the industry towards a sustainable future. NGOs and voluntary initiatives provide guiding frameworks, pressure to make and meet commitments, and facilitate the development of best practices that help financial institutions develop and implement effective transition strategies. Regulators and governments establish legal frameworks, while clients and shareholders drive demand and pressure for climate action. Proxy advisors influence corporate governance standards through their voting policies and recommendations. Thought leadership contributes to the evolving mandate of "fiduciary duty" and systemic risk management, expanding these concepts to encompass long-term climate considerations. Finance sector net-zero transition plans, in turn, significantly impact the broader economy. They shape capital flows, inform policy development, drive transition planning in other sectors, and promote more robust climate action across the financial sector. This interconnected ecosystem has the potential to accelerate the shift toward a low-carbon economy, creating a positive ambition loop that enhances climate risk management practices across various industries (See Figure 3).

FIGURE 3: FINANCE SECTOR TRANSITION INFLUENCES



Voluntary Initiatives, NGOs, and Guidance Standard Setters

NGOs and voluntary initiatives have played a pivotal role in driving the finance sector's transition to a low-carbon economy, particularly through formalizing commitments, developing frameworks, establishing best practices, and creating platforms for institutional collaboration on climate action. However, the landscape of these initiatives is evolving significantly in response to changing political, legal, and regulatory environments. These shifts include the election of Donald Trump, which triggered a U.S. regulatory rollback marked by the SEC's abandonment of its climate disclosure rule and the weakening of Rule 14a-8,[82] along with the introduction of a diluted Omnibus package in the EU.[83]

These developments have made it increasingly difficult for NGOs and voluntary initiatives to create impact through the channels that once gave them influence.

The effectiveness of voluntary climate initiatives historically stemmed from their ability to coordinate action across financial institutions and establish shared standards for climate-related commitments and disclosures. These organizations exerted significant influence by developing comprehensive frameworks for climate action, establishing industry best practices, creating accountability mechanisms for climate commitments, fostering collaboration between financial institutions, and providing technical guidance and implementation support.

However, the model of standard climate initiatives is undergoing substantial transformation. Recent developments have highlighted fundamental challenges with these organizations' approach. NZAM once touted as a flagship and transformative finance industry coalition for climate action, exemplifies this shift. Following BlackRock's January 2025 departure, NZAM suspended tracking of signatory implementation and reporting, and temporarily removed all commitment statements, signatory lists, targets, and case studies from its website pending a comprehensive review. Similarly, the Glasgow Financial Alliance for Net Zero (GFANZ) has shifted away from requiring specific net-zero commitments from banks, announcing it would drop requirements for members to publish firm targets and welcome "any financial institution working to mobilize capital and lower the barriers to financing energy transition."[84]

These changes reflect a broader reassessment of the role and effectiveness of voluntary climate initiatives. Research has shown little to no difference between the financing and engagement impact of initiative members versus non-members. Some studies have even found that banks that present themselves as environmentally responsible lend more to polluting industries than those that do not[85] . These findings raise questions about whether voluntary initiatives have meaningfully influenced real-world decarbonization outcomes.

Recent developments suggest a shift is underway, moving from an emphasis on public commitments toward a newer model. This shift reflects a growing recognition of the need for a more nuanced approach to support financial institutions more effectively as they navigate evolving external challenges. Looking ahead, this means concentrating efforts on technical expertise, implementation support, knowledge sharing, and standardized methodologies while maintaining platforms for voluntary collaboration that can withstand increasing public, political, and legal scrutiny. These recent developments demonstrate both the limitations of purely voluntary approaches and the need to complement private sector initiatives with more robust policy frameworks and direct government action to achieve meaningful climate progress.

The Kinetic Coalition is another form of a voluntary coalition consisting of countries and private-sector actors designed to support power sector decarbonization. It provides a platform for developing countries to sell high-integrity carbon credits and attract private finance for the transition to clean energy. In partnership with Winrock's Environmental Resources Trust and the World Bank, the Kinetic Coalition is piloting a "power sector crediting" standard to ensure credibility and impact. It exemplifies a newer model of voluntary initiative that emphasizes technical rigor and public-private collaboration.

TABLE 3: VOLUNTARY INITIATIVES

Voluntary Initiatives	Sector Coverage	Developing Organizations
Net Zero Asset Owner Alliance (NZAOA): global initiative of asset managers aiming to support the goal of net-zero greenhouse gas emissions by 2050 or sooner.	Asset Owners	UNEP FI, PRI
Net Zero Asset Managers Initiative (NZAM): global initiative of asset managers that aims to achieve net-zero greenhouse gas emissions by 2050 or sooner.	Asset Managers	Ceres, AIGCC, IIGCC, IGCC, CDP, PRI
Net Zero Banking Alliance (NZBA): global initiative of banks that have committed to reducing their greenhouse gas emissions to net-zero by 2050.	Banking	UNEP FI
Paris Aligned Investment Initiative (PAII): collaborative investor-led global forum supporting investors aligning portfolios and activities to the goals of the Paris Agreement.	Asset Owners, Asset Managers, Private Markets	IIGCC, Ceres, AIGCC, IGCC
Paris Aligned Asset Owners (PAAO): investors committed to aligning their portfolios with the Paris Agreement, aiming for net-zero emissions by 2050 or earlier.	Asset Owners	IIGCCC, Ceres, AIGCC, IGCC
Forum for Insurance Transition to Net Zero (FIT): initiative that guides the insurance industry in developing strategies and actions to support the transition to a net-zero economy. This will replace the Net Zero Insurance Alliance (NZIA), which was discontinued as of April 25, 2024.	Insurers	UNEP FI
Paris Aligned Asset Owners Initiative (PAAO): coalition of investors committed to aligning their portfolios with the Paris Agreement, targeting net-zero emissions by 2050.	Asset Owners	IIGCC, AIGCC, IGCC, Ceres
Venture Climate Alliance (VCA): coalition of investors focused on supporting startups and innovation, often with a commitment to sustainable and impactful growth.	Private Markets (Venture Capital)	23 VC firms, GFANZ

TABLE 4: TRANSITION PLAN GUIDANCE COVERAGE

Guidance	Asset Managers	Asset Owners	Private Markets	Banks	Insurance/ Reinsurance
Net Zero Investment Framework (NZIF): guides investors in aligning portfolios with net-zero by 2050. Part of GFANZ	✓	✓	✓	✓	
Partnership for Carbon Accounting Financials (PCAF): standardized framework for measuring financed emissions.	✓	✓	✓	✓	✓
ISO Standards: frameworks for measuring and reporting GHG emissions.	✓	✓	✓	✓	✓
Transition Plan Taskforce (TPT) Sector Guidelines: guides disclosure of net-zero transition plans. *This is rolling up into the ISSB.	✓	✓		✓	
GFANZ Financial Institution Net Zero Transition Plan Guidance: creates best practices, recommendations and guidance for finance sector participant to align operations with net-zero by 2050 and create credible net-zero transition plans	✓	✓	✓	✓	✓
The Investor Agenda's Investor Climate Action Plans (ICAPs) Expectations Ladder and Guidance: guides investors to align their strategies with the Paris Agreement through climate integration, engagement, and portfolio decarbonization.	✓	✓	✓	✓	✓

Regulators and Governments

Governments and regulators are essential in driving the adoption of transition plans across the finance industry by establishing policies, frameworks, and standards that integrate sustainability into financial practices. There is a clear trend of climate-related disclosure and transition planning requirements moving from voluntary initiatives to mandatory regulation across major markets. Key regulations like the European Union's Sustainable Finance Disclosure Regulation (SFDR) and the UK's TCFD mandate require financial institutions to disclose climate risks, pushing them to align their strategies with net-zero goals.

Carbon pricing mechanisms and emissions trading systems further incentivize these institutions to shift investments away from high-carbon projects toward low-carbon technologies, as seen in Canada and the European Union. Governments enhance these efforts by aligning national policies with global agreements like the Paris Agreement, encouraging investments in renewable energy and other sustainable initiatives through incentives like the U.S. Inflation Reduction Act and the EU Green Deal. Additionally, international platforms like the International Platform on Sustainable Finance help harmonize regulations globally, making sustainable finance standards more consistent and reducing the risk of greenwashing by enforcing strict disclosure requirements. Through these actions, governments and regulators promote sustainable finance and position the financial industry as a critical player in achieving global climate goals.

Clients and Shareholders

Clients and shareholders wield significant influence in driving the adoption of net-zero transition plans across the finance sector. Shareholders, exercising their rights through engagement and proxy voting, have become increasingly vocal on climate-related issues. According to Proxy Preview, climate change remains a top environmental concern for shareholders.[86] These shareholder actions create direct pressure on financial institutions to develop and implement robust climate strategies. Simultaneously, client demand plays a crucial role in shaping the sector's approach to climate change. Individual and institutional clients, including high-net-worth individuals and asset owners, are increasingly seeking investment products that incorporate climate and transition-related criteria. This market demand extends beyond retail customers to include other finance sector participants acting as clients, such as asset owners engaging asset managers or banks providing services to other financial institutions.

Proxy Advisors

Proxy advisors play a crucial role in shaping climate-related shareholder voting, investor engagement and generally establishing norms for corporate best practices around climate. Glass Lewis and Institutional Shareholder Services (ISS) benchmark voting policies and recommendations significantly guide proxy voting behavior and have the potential to sway the outcomes of shareholder proposals and director elections. However, proxy advisors now face criticism from multiple directions. On February 11, 2025, ISS announced that it will indefinitely halt consideration of gender, racial, or ethnic diversity of directors of U.S. companies when making vote recommendations with respect to director election or re-election proposals. Sustainable investing advocates have condemned the decision with the Interfaith Center on Corporate Responsibility calling this retreat "deeply disappointing" and potentially undermining progress on corporate governance.[87]

The evolving proxy advisory landscape reflects growing investor concern about climate risks while also navigating intense political pressures. Republican lawmakers have intensified scrutiny of proxy advisors, with the Trump administration signaling plans to investigate these firms for potential antitrust violations related to their ESG recommendations. Senator Bill Hagerty has already introduced legislation aimed at regulating proxy advisors more stringently, arguing they exert "outsized influence on public companies without adequate oversight[88]." These converging pressures place proxy advisors in a precarious position as they attempt to balance investor demands for climate risk management with political pushback, potentially affecting how aggressively they promote climate transition plans in the financial sector.

Emerging Thought Leadership on Traditional Investor Mandates

Emerging thought leadership on traditional investor mandates is reshaping the landscape of finance sector transition planning, particularly through the evolution of fiduciary duty and emerging theories on ownership and risk. Traditionally, fiduciary duty focused narrowly on maximizing short-term financial returns. However, a more recent examination of these concepts, as seen in "Moving Beyond Modern Portfolio Theory" by Jon Lukomnik and James P. Hawley, argues that there is a growing recognition that the traditional approach is insufficient in the face of systemic risks posed by climate change. The book supports a paradigm shift toward "system-level investing," which acknowledges the interdependence between investment returns and the health of environmental, social, and financial systems.89

The concept of system-level investing is further elaborated by the Principles for Responsible Investment (PRI), which defines it as an investment approach that intentionally seeks to influence systems that impact long-term value creation.90 System-level investing recognizes that investors can shape the overall context in which they invest, moving beyond traditional portfolio construction to address systemic issues that affect the stability and sustainability of financial markets and the broader economy.

John Adler, Head of Public Markets at the NYC Comptroller's Office, emphasizes that their approach to climate risk is fundamentally grounded in their mandate of fiduciary duty. Adler states, "Everything we do is in the name of fiduciary duty," highlighting that addressing climate risk is not just about values, but about protecting long-term returns for beneficiaries. As a universal owner, the NYC Comptroller's Office recognizes its unique position and responsibility in addressing systemic risks like climate change.91

The Financial Markets Law Committee's paper, Pension Fund Trustees and Fiduciary Duties: Decision-making in the context of Sustainability and the subject of Climate Change, asserts that fiduciary duties require pension fund trustees to consider climate-related risks and opportunities as part of their obligation to act in the best interests of beneficiaries, emphasizing that such considerations are not just permissible but potentially necessary for prudent long-term investment management.92 This expanded understanding of fiduciary duty is driving financial institutions to develop more comprehensive transition plans that account for long-term climate resilience.

The concept of beta-focused strategies is also gaining prominence in investment approaches influencing transition planning. Unlike traditional alpha-focused strategies that aim to outperform the market through security selection or market timing, beta focused strategies seek to improve the overall market's performance by addressing systemic risks like climate change. This approach recognizes that for large, diversified investors, the majority of returns come from beta rather than alpha. The California State Teachers' Retirement System (CalSTRS), managing over $300 billion, exemplifies the universal owner approach and focus on beta.93 CalSTRS addresses systemic risks through sustainable investing and active ownership, notably with their "Low-Carbon Transition Readiness" strategy. This strategy involves engaging with high-emitting companies to accelerate their transition plans, expanding investments in climate solutions, and integrating carbon pricing into investment analyses.

Consequently, there's an increasing focus on investment strategies that not only aim to decarbonize individual portfolios but also contribute to economy-wide emissions reductions. The shift towards beta-focused and systems-level approaches is reflected in the growing adoption of net-zero commitments and the development of comprehensive transition strategies that extend beyond traditional risk management. Finance sector adoption of these emerging concepts has contributed to sector participants' recognition of their influence on the net-zero carbon transition through their investment decisions and engagement practices, leading to an acceleration in the development of transition plans across the sector.

Alpha represents the excess return an investment generates compared to a market index or benchmark. It reflects the value added (or subtracted) by active management. A positive alpha indicates outperformance relative to the benchmark, while a negative alpha indicates underperformance.

Beta is a measure of an investment's systematic risk, or its sensitivity to movements in the overall market. It quantifies how much an asset's price is expected to move in relation to a benchmark index, such as the S&P 500.*

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Conclusion

The finance sector stands at a critical juncture faced with the imperative to leverage every available resource to meet ambitious climate targets and drive decarbonization at an unprecedented pace. The urgency of the climate crisis creates increasing pressure for financial institutions move beyond incremental changes and utilize all existing levers to catalyze a transformative shift across the global economy. By mobilizing vast pools of capital, reimagining risk assessment frameworks, and innovating financial products, the sector has the unique ability to create powerful feedback loops that incentivize system-level decarbonization. This involves not only aligning portfolios with net-zero goals but actively reshaping markets to reward low-carbon instruments and penalize high-emission activities. The sector has the opportunity to harness its influence over corporate behavior through engagement strategies, voting practices, and financing terms that demand credible net-zero transition plans from clients across all industries. Furthermore, collaboration within the sector and with policymakers will be essential to develop standardized methodologies, enhance data transparency, and create regulatory environments that facilitate decarbonization.

The finance sector has the opportunity to extend its role beyond risk mitigation to becoming an active architect of a net-zero future, using its expertise to identify and scale emerging technologies and business models that can accelerate the net-zero transition. Beyond individual actors, the finance sector operates within a broader ecosystem that includes regulators, non-governmental organizations, governments, and shareholders. This interconnected network amplifies the sector's capacity to affect change on a global scale. Through collaborative efforts and alignment with voluntary initiatives, financial institutions can help reshape entire industries, guiding the transition of the global economy. In doing so, the sector safeguards both long-term financial stability and broader climate action, positioning itself as a key architect of the future net-zero economy.

While 2023 and 2024 saw high profile departures from the Net Zero Banking Alliance, with all major U.S. banks withdrawing including JPMorgan Chase & Co., Goldman Sachs Group Inc., Wells Fargo & Co., Citigroup Inc., Bank of America Corp., and Morgan Stanley—amid growing political pressures, asset owners have notably strengthened their climate commitments and increased ambition.[94] The political headwinds intensified as Texas and 13 other states filed antitrust lawsuits against BlackRock, Vanguard, and State Street, alleging anticompetitive practices related to their climate policies and involvement in climate coalitions that affect the coal industry.[95] This scrutiny has extended to other major climate initiatives, with Climate Action 100+ facing increased political attention, including a House Judiciary Committee report questioning its collaborative engagement model, and the withdrawal of several major U.S. financial institutions despite its track record of engaging with high-emitting companies to enhance climate risk management and disclosure.[96] Despite these pressures, major asset owners have reinforced their climate commitments. The New York City Employees' Retirement System (NYCERS) joined the Net Zero Asset Owner Alliance in late 2023, adding its $77 billion in assets to the coalition of investors committed to transitioning portfolios to net-zero emissions.[97] Similarly, the CalPERS CEO Marcie Frost publicly reinforced the $444 billion fund's commitment to addressing climate risks regardless of political opposition, emphasizing that climate action remains fundamentally about protecting long-term returns.[98]

These varying reactions illustrate a stark contrast in climate strategy across the finance sector with stakeholders like major banks retreat from formal commitments amid political and legal pressures, while many asset owners have intensified their climate efforts, grounding these actions firmly in their fiduciary responsibility to protect long-term returns. This suggests that while the form and forums of climate cooperation continue to evolve, the uneven progress across the finance sector must be addressed to achieve the systemic transformation needed for meaningful climate action

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