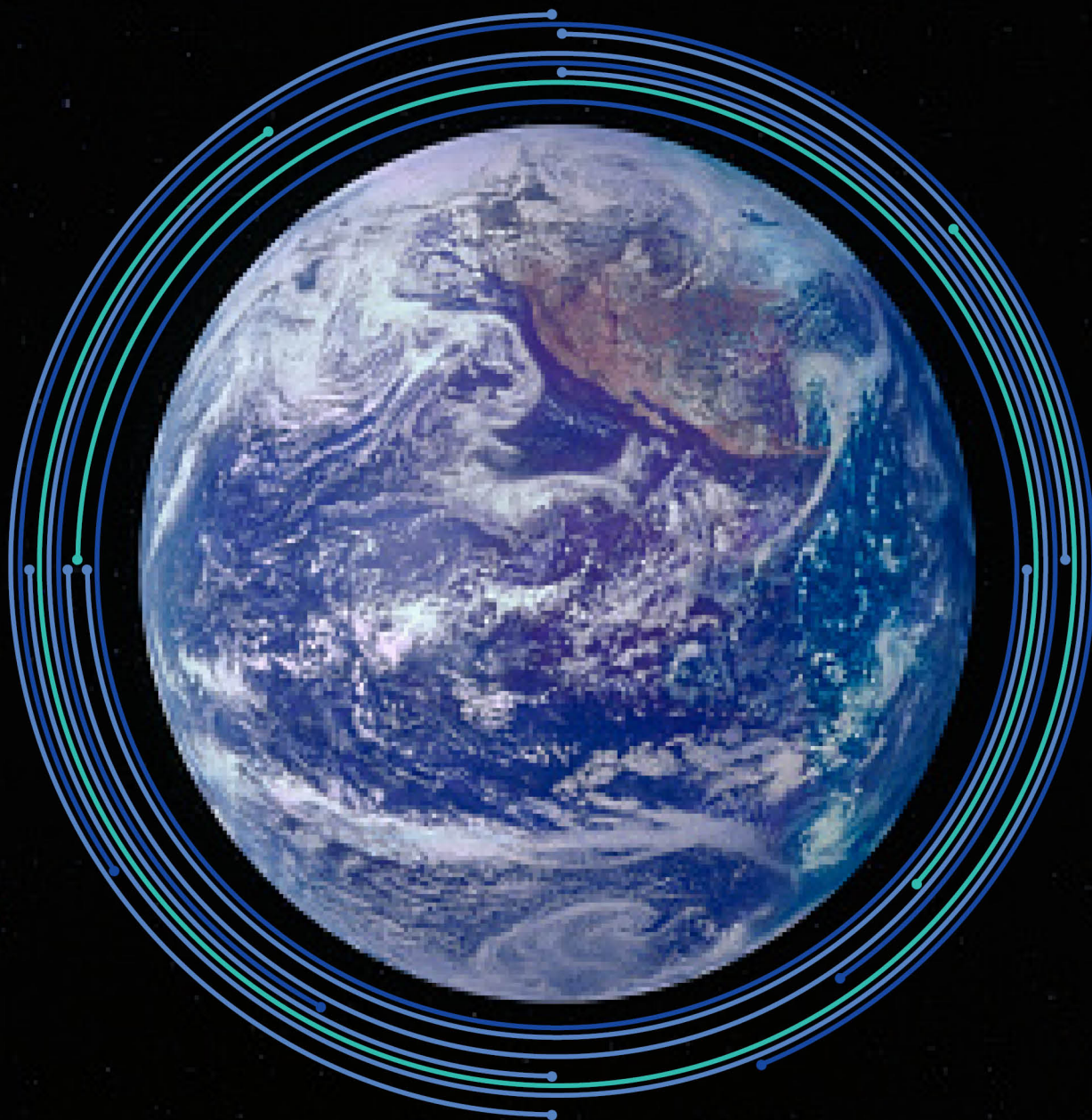




The Role of Capital in the Net-Zero Revolution



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Climate change is the single greatest challenge humankind has faced and its consequences are already all too apparent. There has been an enormous rise in climate disasters over the past two decades, leading to the deaths of over 1.2 million people and affecting more than 4 billion people in total.¹ The world has taken insufficient steps to confront this existential threat to our planet. According to our analysis, corporate carbon-emissions targets are inadequate to avert a climate catastrophe. In fact, on their current trajectory, listed companies will be scarcely greener in 2050 than they are today, with approximately 80% of companies exceeding the emissions budget needed to keep global warming well below 2 degrees Celsius (2°C).² The world cannot afford to delay any longer and capital-markets participants must be at the center of the revolution required to achieve net-zero carbon emissions.

At MSCI, we believe that addressing the impacts of climate change will require the largest reconstruction of the global economy since the Industrial Revolution. A key feature of the Industrial Revolution was a massive reallocation of capital from agriculture toward industrialization. Venture capitalists raced to build the longest railway networks, biggest blast furnaces and most powerful steam engines, which started the fossil-fuel era. Today, decarbonizing the global economy on a compressed timescale will require a similar structural reallocation of capital to establish a net-zero economy.³ For instance, transformative innovations and new products must be developed to provide alternative energy sources. Likewise, tremendous advances in technology will be required to resolve food and water shortages to enable societies to grow sustainably within the limits of the planet's resources.

There will be winners and losers from such an economic transformation. Companies not aligned with a net-zero goal may experience a negative impact on their access to and costs of capital. Investors in clean-energy companies may benefit from tremendous growth while fossil-fuel-related investments may become stranded. In [The MSCI Principles of Sustainable Investing](#), we sounded the alarm to global investors that a convergence of environmental, social and governance factors will impact the pricing of financial assets and precipitate a large-scale reallocation of capital. The climate crisis is foremost among those factors, creating economic and investment risks and opportunities on an unprecedented scale.

The time to act is now. Capital markets participants – owners and managers of capital, seekers of capital and financial intermediaries – must drive the transition to net-zero to end the fossil-fuel era and ignite a new era of sustainable growth.

To enable success, the political and economic framework that was designed to support the fossil-fuel era must change to support the reallocation of capital toward a sustainable economy.

¹ "Human cost of disasters: An overview of the last 20 years, 2000-2019." Centre for Research on the Epidemiology of Disasters and UN Office for Disaster Risk Reduction. Nov. 3, 2020.

² "[Climate Reality Bites: Actually, We Will Not Always Have Paris](#)." December 2020. MSCI.com

³ There are varying definitions of net-zero. We use the definition adopted by the 2015 Paris Agreement, which requires greenhouse-gas emissions to be balanced with an equivalent amount of carbon removal.

This process will require an extraordinary level of cooperation across capital markets, governments, industry and citizens.

MSCI's mission is to power better investments for a better world. We call on all stakeholders to embrace and accelerate the revolution away from fossil fuels and toward a net-zero economy.

- **Governments** must create a level playing field that provides positive incentives for investors and corporations to prioritize net-zero operations and investments, removes incentives that benefit “old energy” and prohibits “free-riding” on the achievements of those who have embraced and advanced the world’s transition.
- **Investors and asset managers** must decarbonize their portfolios, effect change through voting and shareholder engagement, and transition to investment policy benchmarks that reflect a path to net-zero.
- **Companies** must transition their operations, products and services to a net-zero business model as quickly as possible.
- **Citizens** must support a faster transition to a net-zero economy by demanding greener products and services and advocating for a more sustainable world.

Speed is of the Essence

Scientific experts have developed climate scenarios to illustrate potential pathways for the global economy to move toward a net-zero economy. While they differ on their assumptions and simulated pathways, they concur that the long-term cost-minimizing solution – i.e., humanity’s best outcome – is to achieve net-zero as quickly as possible and no later than 2050.

How we measure progress toward meeting this goal is critical. Through engagement and voting, investors have a direct and powerful influence on companies. The MSCI All Country World Investable Market Index (MSCI ACWI IMI), which includes approximately 9,000 public companies across 50 developed and emerging markets and has a market value of over USD 70 trillion,⁴ reflects investors’ sphere of influence in public equity markets. Hence, it is a natural starting point to measure the pace of the migration to the net-zero economy. The carbon footprints of the constituents of MSCI ACWI IMI can collectively reveal at any given point in time how well the world’s publicly listed companies are performing on the path toward net-zero.

An increasing number of companies are announcing their commitments to reach net-zero by 2050. By combining these commitments with data on corporate emissions and overall climate strategy, we computed forward-looking trajectories of emissions for each company in MSCI ACWI IMI. These forward-looking trajectories and the resulting temperature alignments can be used by investors when they choose to engage with companies on progress toward achieving their net-zero goals.

Based on current data, the world is very far from achieving net-zero by 2050:

- We estimate that the constituents of MSCI ACWI IMI annually emit approximately 11.2 gigatons of carbon-dioxide equivalent (CO₂e).⁵

⁴ Based on the sum of the free-float-adjusted market capitalization of all MSCI ACWI IMI constituents as of March 31, 2021.

⁵ Calculated as of March 31, 2021, based on the sum of MSCI ACWI IMI constituents’ Scope 1 emissions, using publicly reported data where available and MSCI’s Carbon Estimation Methodology where no reporting is available. One gigaton is equal to one billion metric tons.

- Our model indicates that, without any change to current practices, the annual emissions of these companies could reach 16.8 gigatons of CO₂e by 2050.⁶ We estimate that this scenario would keep the world on a calamitous path toward becoming approximately 3.5°C warmer by the end of this century.⁷ Companies must collectively reduce this figure to net-zero if we are to keep the global temperature rise to well under 2°C by 2100.

Companies worldwide face increasing pressure by stakeholders to drastically cut their emissions. If companies respond with sufficient scale and speed, we could see their collective emissions drop precipitously over the next three decades. As companies head toward net-zero emissions, MSCI ACWI IMI can act as the tracker of global progress, reflecting the collective success or failure of the world’s investors and companies.

If successful, decarbonization over time will inevitably mean industries and companies that continue to rely on fossil fuels will decline sharply in value; in their place will rise new businesses that facilitate and thrive in a zero-emission world. Just as the internet revolution spawned a generation of companies whose share of MSCI ACWI IMI’s market value tripled to 19% from 1998 to 2020, the climate-driven transition may supercharge the growth of zero- or negative-emissions companies.

Our Call to Action

How can capital-market participants contribute? We believe that the owners of capital – whether institutions or individuals – have a critical catalytic role to play in effecting this market-wide transformation. They may miss large investment opportunities and face material investment risks if they fail to address this challenge. To achieve net-zero as soon as possible, **asset owners** (including sovereign wealth funds, pension funds, endowments, insurance companies and individuals) must immediately start reallocating their capital toward less emissions-intensive investments and green solutions in line with broadly accepted climate scenarios.⁸ Owners of capital can accomplish this through three distinct approaches:

- **Decarbonization.** To achieve net-zero by 2050, owners of capital will need to target a year-on-year decarbonization in line with what is needed to reduce the world’s total emissions by nearly 10% each year. This reduction is needed to limit global warming to well below 2°C.⁹ To do so, they could reduce their exposure to investments most at risk of becoming stranded, while directing capital toward the rapid scaling up of clean energy through a variety of green technologies and infrastructure. This may require a shift in strategic asset allocation and risk management for institutional asset owners. For climate-engaged individual investors, their advisers could tilt their model portfolios toward more climate-oriented solutions.
- **Engagement.** Owners of capital need to monitor whether their shift in capital allocation shows the desired effect in greening not only their own portfolios but the global economy

⁶ Projection based on the sum of MSCI ACWI IMI constituents’ Scope 1 emissions, taking into account publicly announced carbon-emissions reduction targets. The projection uses an annual emission growth rate of 1.4%, which is the average annual emission growth rate of the world between 2010 and 2019. See: “Emission Gap Report 2020.” UNEP, Dec. 9, 2020.

⁷ Compared to pre-industrial temperatures, as estimated by MSCI’s Warming Potential model, as of March 31, 2021. As highlighted in the TCFD’s Forward Looking Financial Sector Metrics consultation, the financial industry is currently working on aligning the core parameters between the methodologies for Implied Temperature Rise metrics such as MSCI’s Warming Potential model.

⁸ For example, see the Intergovernmental Panel on Climate Change’s 1.5°C scenarios and the Network for Greening the Financial System scenarios for central banks and supervisors.

⁹ See Exhibit 1 in the Appendix.

more broadly. They must be prepared to use intensive shareholder engagement as an additional lever with companies that lag.

- **Benchmarking.** Institutional asset owners will need to transition to an investment policy benchmark that provides clear direction and a reference point to help portfolios move toward net-zero. A climate index, for example, could be an option for certain asset owners who actively promote the path to a net-zero economy.

Asset managers must support asset owners’ ambitions by building expertise to fund clean energy. They must also develop risk management and reporting expertise in accordance with the guidelines of the Task Force on Climate-related Financial Disclosures (TCFD), including capabilities to conduct climate stress testing and climate benchmarking. Critically, asset managers must exercise shareholder voting power and engage with portfolio companies, pressing them to align with net-zero targets.

The move to a net-zero economy also requires asset managers to adapt their own business models beyond reduction of their own operational footprints; they must formally commit to ambitious goals for greening their investment product offerings. Scaling up the availability of investment options aligned with the net-zero trajectory – and being accountable to the alignment in a transparent and measurable way – is imperative for accelerating the flow of capital toward net-zero solutions.

Banks and broker-dealers have a critical role to play as financial-market intermediaries to facilitate the flow of green capital. It is essential that they support entrepreneurs and innovators with capital needed to invent and scale clean energy. Innovations in corporate lending and corporate debt and equity issuance will be required to tie the terms of capital to the net-zero objective. At the same time, banks need to develop and support new services and tools such as carbon markets to help providers of capital manage risks.

In the end, however, **companies** must provide the primary solutions that compete for a redirected flow of capital. In line with leading industry groups such as the Net Zero Asset Owners Alliance and the Climate Action 100+, as well as the UNFCCC’s Race to Zero campaign, we call on all companies to set emission-reduction targets that keep them well under their allotted sectoral net-zero budgets by no later than 2050. These reduction targets should cover a company’s direct and indirect emissions, including upstream, downstream and financed emissions;¹⁰ they should be articulated clearly in quantitative and, ideally, in absolute terms. To date, companies have demonstrated a poor track record in meeting their self-declared emission-reduction goals.¹¹ It is essential that they articulate a credible path and specific plans on how they will achieve their reduction, including their assumptions for the deployment of nascent technologies or the extent of reliance on carbon offsets. They must also provide timely and detailed updates on their progress.

To achieve a net-zero economy, however, it will not be enough for today’s companies to focus only on reducing their dependence on a fossil-fuel-based economy. Over the next decades, companies must invent solutions and services that displace and overtake existing business

¹⁰ In accordance with [Greenhouse Gas Protocol](#).

¹¹ Based on MSCI ESG Research’s analysis of over 3,500 distinct targets set by 1,190 companies, as of May 2020. Of the 1,190 MSCI ACWI IMI constituents with current carbon targets, 32% had set and met at least some previous targets; 34% failed to meet all previous targets. 34% set no previous targets, so they do not yet have a track record. See: “Breaking Down Corporate Carbon Targets.” MSCI ESG Research, May 2020.

models. We anticipate an accelerated era of “creative destruction,” akin to the dawn of the Industrial Revolution, that will lead today’s companies to innovate or risk extinction. In many cases, new companies that are not wedded to legacy business models may figure this out sooner, like today’s digital giants who are displacing brick-and-mortar businesses.

MSCI: Doing Our Part

At MSCI, we are committed to providing necessary research, tools and solutions to help all market participants accelerate this economic transformation. In addition to climate indexes and other climate-related data, MSCI will provide advanced analytical tools to help companies better measure their transition and physical risks to better align with a net-zero trajectory.

Importantly, on a quarterly basis we will publish on our website the MSCI ACWI IMI Net-Zero Tracker. This report will indicate the aggregate temperature alignment of MSCI ACWI IMI with a 1.5°C trajectory. It will also highlight the companies and sectors that have made the greatest progress in the path toward net-zero, as well as the world’s laggards. MSCI will consult with market participants to develop and enhance the tracker over time.

MSCI’s Net-Zero Commitment

We believe that we should conduct MSCI’s business in line with the expectations we have asked of others, upholding the same high standards. We want to lead by example.

To achieve this goal throughout MSCI’s global operations, MSCI has committed to achieve net-zero emissions before 2040. Accordingly, we will prioritize:

- **Reducing emissions:** accelerate carbon-reduction initiatives focusing on the most material and controllable emissions, such as electricity consumption, business travel and employee commutes; favor green-certified buildings for MSCI offices; promote a flexible working environment for employees; and encourage virtual meetings and low-carbon options for business travel
- **Engaging suppliers:** tackle emissions in the MSCI supply chain and prioritize engagement with major suppliers to achieve shared net-zero goals

To the extent that we have unavoidable residual emissions, we expect we would use carbon offsets to achieve our net-zero target.

MSCI had previously pledged to reduce by 2035 the company’s Scope 1 and 2 emissions by 50%, and Scope 3 emissions by 20%, using science-based methodologies. With the commitment to transition to net-zero prior to 2040, MSCI will review and publish revised interim targets using standardized metrics and initiatives, such as those developed by TCFD. MSCI commits to improving our transition strategy as best practices and technological developments emerge.

Conclusion

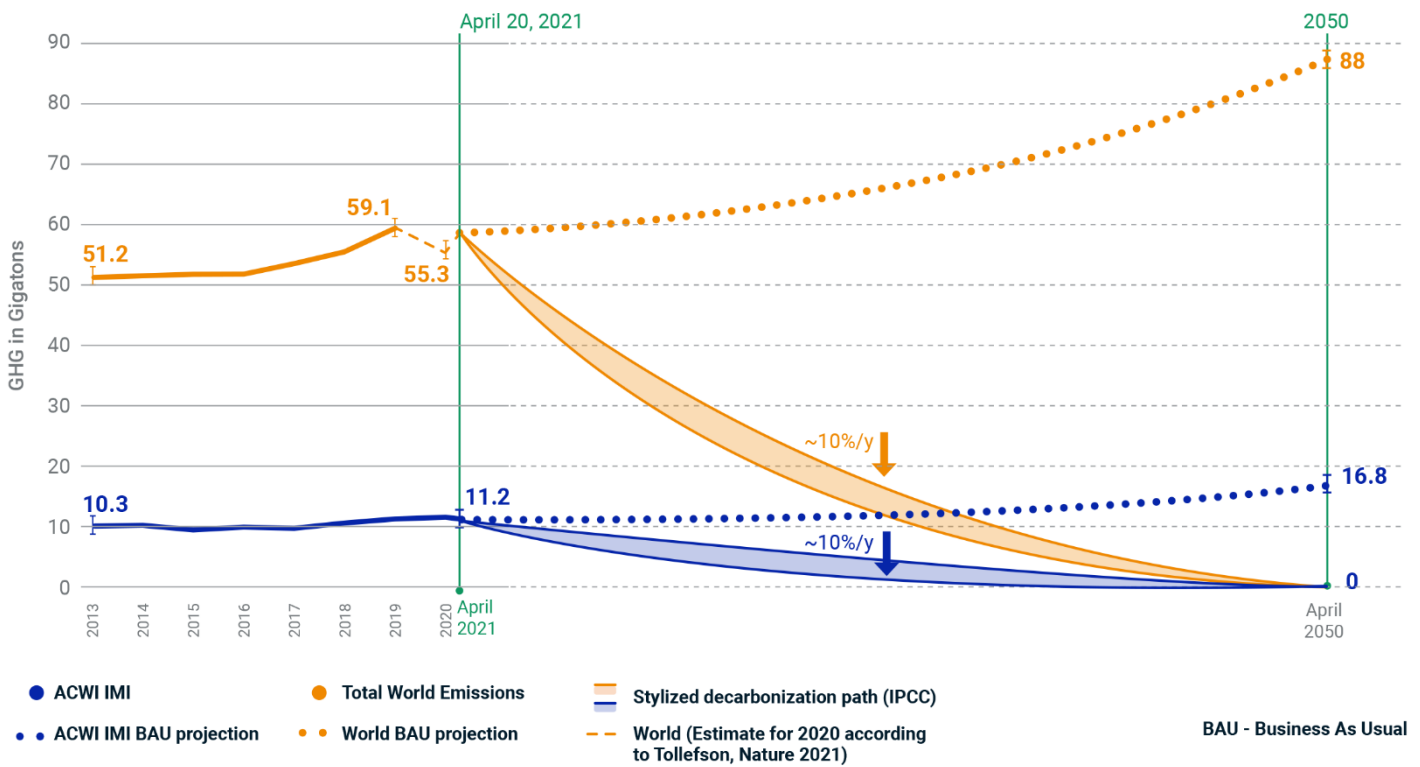
We urgently call on all capital-markets participants to play a vital role in the net-zero revolution to keep global temperature rise well below 2°C. This will require a massive re-allocation of capital to ensure the long-term health of the planet and the long-term sustainability of companies and portfolios. This is a rare — perhaps unprecedented — moment when the environmental, social and financial outcomes and aims are perfectly aligned. What is best for the planet is also what is best for long-term investment returns and the preservation of our societies. Capital markets are uniquely positioned to effect the necessary changes that are required to succeed. Let us seize the opportunity.

APPENDIX

Exhibit 1: The MSCI ACWI Net-Zero Tracker provides an objective gauge for the total emissions that companies included in MSCI ACWI IMI contribute to the world’s total emissions and their progress toward a net-zero economy.

Current Emission Trajectories

The chart shows the historical and potential future trajectories of the world’s total greenhouse gas emissions. These figures are measured in metric tons of CO₂ equivalent emissions relative to the history of the sum of scope 1 emissions of all MSCI ACWI IMI constituents (without index weight adjustments).



The total emissions of the world are sourced from annual UNEP Emissions Gap reports. World emissions for 2020 are estimated to be 6.4% below their previous year levels and to rebound in 2021 towards pre-pandemic levels (J. Tollefson. “COVID curbed carbon emissions in 2020 – but not by much.” Nature 2021). The BAU projections are based on the realized 1.4% annual growth rate in historical world emissions as reported by UNEP Emissions Gap Report 2020. The required annual decarbonization rate according to IPCC ranges between 5% and 15% per year, depending on the shape of the decarbonization trajectory and the use of carbon capture. Source: UNEP data from 2013 to 2019; MSCI illustration from 2020 until 2050.



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