Sustainable Fitch

ESG Market Trends 2023

Macroeconomic and Geopolitical Challenges to Slow but Not Deter Sustainable Investing

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> Despite difficult market and economic conditions, ESG's importance in investments and corporate management has continued to grow. In 2023 we see ESG maturing as it is used to approach topics such as physical risk, energy security, natural capital, economic development, and social impact.
>
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Related Research

ESG Credit Trends 2022 (December 2021)

ESG Credit Trends 2021 (January 2021)

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Sustainable Fitch's five key ESG Credit Trends for 2023 are:

1. Economic and Political Challenges to Test ESG's Staying Power
2. Increased Focus on Climate Pledge Follow-Through and Implementation
3. Growing Physical Risks to Drive Short-Term Mitigation Strategies
4. Emerging Markets to Benefit from Focus on Nature and Climate Equity
5. Private and Retail Investors Bring New ESG Priorities to Capital Markets

ESG Momentum to Persist Despite Headwinds

Economic downturn, inflation and energy security are among the top political concerns at the moment and some are blaming ESG considerations for exacerbating costs and inhibiting investment to some sectors of the economy. Sustainable Fitch believes this is a short-term reaction to challenging conditions, with the long-term outlook for increased allocation of public and private capital to sustainability initiatives remaining positive.

More Scrutiny of Climate Pledges as Implementation Looms

After years of pledges, stakeholders are starting to question more closely how governments and companies will actually implement net-zero targets. We expect to see investors place a greater emphasis on the credibility of transition plans, especially in relation to strategies based on emerging technologies. Companies will need to allocate more resources, including staffing and training up to the board level, to deliver these outcomes.

Private, Retail Investors' ESG Influence to Grow

Sustainable Fitch has seen more private equity and debt investors integrating ESG and launching impact funds focused on climate change, education, and financial inclusion. Their ability to make direct investments means that ESG considerations can reach some activities difficult for public markets investors to access. The rising number of retail investors, particularly younger ones, will lead to a shift in ESG priorities and products among investment managers.

Economic and Political Challenges Test ESG's Staying Power

In our 2022 ESG Credit Trends we highlighted how investors, issuers and regulators have been pushing towards increased disclosure and inclusion of ESG-related data in entities' decision-making processes. While we expect this trend to continue overall, ESG is facing increasing pushback from various sides and we see 2023 as a key inflection point for how it will be applied and regulated.

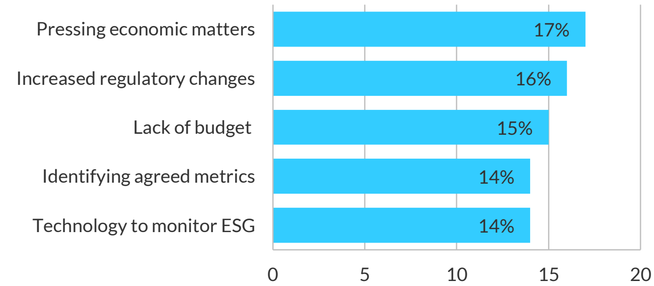
Corporates to Re-Evaluate ESG Strategies Ahead of Recession

With a looming recession, investors must consider whether they will continue to allocate capital based on ESG principles when returns are no longer as easy to come by. The onset of a bear market will also test companies' commitments to ESG investments and projects.

Some corporate leaders are already planning to put ESG projects on hold as many prepare their businesses to weather a potential recession, according to a KPMG survey. About half of 1,325 chief executives of companies with annual revenues of at least USD500 million indicated they "are pausing or reconsidering their existing or planned ESG efforts over the next six months" with about 34% already having done so.

Economic Matters Take Priority

Top five challenges in delivering ESG strategy over three years



Source: Sustainable Fitch, KPMG 2022 CEO Outlook

Companies lacking a concerted approach towards addressing material ESG gaps or that are unable to demonstrate progress may find it increasingly difficult to secure financing as financial institutions face rising regulatory requirements to increase their share of green or sustainable activities. This could eventually become a challenge in raising capital, obtaining insurance coverage, attracting talent and, in some cases, even maintaining a social licence to operate.

With recessionary concerns top of mind for many business leaders, we expect to see more companies reconsidering ESG spending in 2023. Delays in project timelines and outright cancellation of sustainable initiatives could materialise as firms seek to shore up financing for more pressing needs. Social aspects, which are sometimes thought of as 'nice-to-have', may be more at risk as such issues as diversity and inclusion, employee engagement and wage equality move down the priority list.

Energy Crisis Highlights Long-Term Role for Renewables

The Russia-Ukraine war has affected energy supply and prices, and some European countries, including Germany and Italy, are considering bringing back coal for power generation to offset the cut in Russian gas flows. The renewed emphasis on energy security may see more companies consume coal in the short term, which would negatively affect their ESG profiles and hamper transition efforts.

In Sustainable Fitch's view, high and volatile energy prices should underscore the urgency for governments to reach their full climate transition goals. Reducing reliance on imported fossil fuels through increasing the share of domestically generated renewable energy can contribute to energy security. However, as companies tighten budgets, energy transition could take a back seat as emerging technologies may be starved of critical funding. This approach risks encouraging excessive gradualism in the pursuit of carbon neutrality, potentially hindering timely progress towards global 2050 net-zero targets.

Potential Market Pullback Amid Increased Regulation

Greenwashing has become an emergent risk in the investment management sector. In May 2022, German police raided the offices of asset manager DWS and its majority owner Deutsche Bank AG as part of a probe into this area. Cathie Wood, chief executive of investment manager ARK Invest, which manages USD14 billion in thematic exchange-traded funds (ETFs), has expressed concerns about the misallocation of capital towards portfolios simply because they had an ESG label.

As regulation emerges from the US and Europe that aims to crack down on lax investment product labelling rules, financial institutions will begin to walk back ESG claims for investment products to align with the new laws. These changes risk attracting greenwashing allegations about funds formerly marketed as sustainable, which could as a result damage undermine confidence in ESG investing.

There may at the same time be opportunities for companies that approach ESG integration as a long-term strategy to add value, rather than as a discretionary cost that can be cut in challenging times. As investors are required to ensure the ambition of their ESG claims match their product offerings, there could be a "flight to quality" towards these types of issuers.

Widening Political Divide on ESG in US

ESG is facing increasing pushback from political stakeholders and we believe this tension will further increase in 2023. The continuing lack of regulation and clear terminology has led to confusion and misrepresentation of what ESG investing is supposed to achieve.

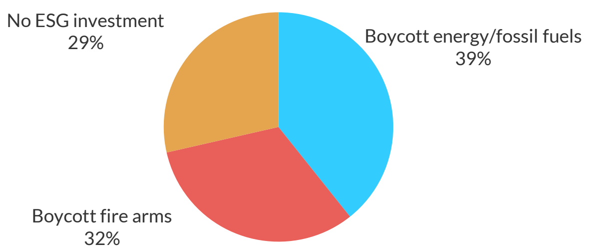
The growing wave of state-level legislation targeting ESG in the US comes among increasing polarisation of the political landscape with regards to sustainability topics.

In 2022, more than 15 US states announced or enacted legislation barring state governments, including public retirement funds, from either including ESG criteria in their investment process or from doing business with companies that include either ESG factors in their investment decision-making processes or have specific exclusion policies based on ESG considerations (e.g. excluding fossil fuel companies or fire arms producers).

In May, Texas passed a bill prohibiting state funds from engaging companies that "boycott" fossil fuel companies, defined broadly to include activities that "penalise, inflict economic harm on [...] or limit commercial relations" with companies in the sector.[1] Some financial institutions, including BlackRock Inc., Credit Suisse AG, BNP Paribas S.A., UBS AG, and Schroders plc, have been excluded from managing state funds under the law. Kentucky, Oklahoma and West Virginia have enacted similar bills.

Florida adopted a resolution in August that bars the state's USD200 billion pension fund from considering ESG in its investment decision making process. Arizona, Idaho and North Dakota have enacted similar anti-ESG bills.

Number of Anti-ESG Bills Enacted or Introduced in US States

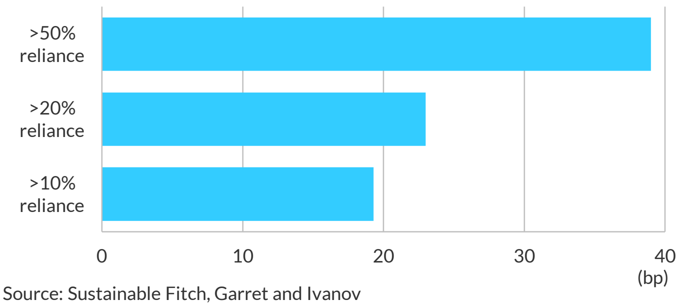


Source: Sustainable Fitch, Morgan Lewis

Excluding the largest asset managers and banks from managing state funds or arranging bond sales over ESG policies increases costs and transaction fees. A June 2022 study by a Federal Reserve economist and a professor at the Wharton School found that Texas taxpayers bore an additional USD532 million in interest costs on USD32 billion of municipal bonds issued since September 2021, when the state enacted its first anti-ESG policy excluding municipalities from arranging bonds with banks that restrict financing firearms.[2]

Texas Municipal Bonds Yield Increases

Issuers' reliance on banks targeted by anti-ESG laws (Jan 2017-Feb 2022)



Source: Sustainable Fitch, Garret and Ivanov

On the other hand, the August 2022 passing of the Inflation Reduction Act, designed to accelerate the move towards a low-carbon economy, has put the US back into a leadership position with regards to climate-related policy making. This will lead to a significant boost to domestic industrial investments with a focus on clean energy, construction and transport, and potentially an increase in issuance of labelled bonds, especially for municipal bond issuers. With the Democratic Party retaining control of the Senate after November's midterm elections, President Joe Biden has more latitude to push a climate policy agenda for the rest of his term.

This tension between state and federal approaches to the energy transition sends a confusing signal to the global markets. The SEC's delay in finalising its proposed climate change disclosure regulation, originally due to be implemented in 2023, further contributes to a lack of clarity on the overall direction of US sustainable finance policy.

ESG Political Tensions Continue Around the World

There are similar mixed signals occurring in other countries. China's President Xi Jinping reiterated a commitment to energy transition in October's Party Congress, but the risk of economic disruptions related to Covid-19 prevention may affect short-term priorities. Brazil narrowly re-elected Luiz Inacio Lula da Silva as president in October, signalling a major shift in the government's approach to environmental protection following increased deforestation under outgoing leader Jair Bolsonaro.

Polarised views on ESG are even appearing in the EU, which has long been a leader on climate change. Sweden, whose recently elected right-wing government scrapped the environment ministry in October, takes over the presidency of the EU Council in January 2023. Sweden's previous government, a coalition that included the Green Party, set "speeding up the climate transition" as one of the five policy priorities for its presidency before the election. It is unclear if this will remain the case.

We expect the complicated role of ESG in national politics to persist into 2023, increasing uncertainty in whether short- to medium-term policy programmes will be delivered as proposed. Governments may frame climate or environmental initiatives in populist language, such as clean energy investment as an "inflation reduction" strategy, appealing to concerns about energy prices and security, or promoting green jobs for employment generation.

Growing Focus on Climate Pledge Implementation

Sustainable Fitch believes there will be more pressure on policymakers, companies and financial markets participants to increase carbon reduction ambitions and follow through on existing net-zero pledges with binding targets and pathways to achieve them. In 2023, we expect to see a divergence between entities that follow through on their climate commitments, and those that decide to wait out the current phase of volatility by pursuing business as usual.

In 2022, an increasing number of companies and investors have announced ambitions to align their business activities with the global aim to a 2050 net-zero emissions goal. These pledges are often not backed up by short- or medium-term targets or a detailed pathway outlining how to achieve them. The UN released a report during November's COP 27 criticising non-state actors for weak net-zero targets, affecting worldwide climate mitigation efforts.

[1] Texas Comptroller of Public Accounts, August 2022

[2] Gas, Guns, and Governments: Financial Costs of Anti-ESG Policies, DG Garrett and IT Ivanov, July 2022

Investor coalition Climate Action 100+ found that only 20% of companies whose plans they assessed had set medium-term targets covering Scope 1, 2 and 3 emissions aligned with 1.5⁰C, and only 10% had short-term targets. Only 30% of the more than 13,000 companies reporting to voluntary ESG disclosure platform CDP in 2021 stated that they are developing a low-carbon transition plan.

With the trend of regulatory and investor expectation towards greater transparency and disclosure of climate-related data expected to continue, we believe companies that are not able to back up their pledges with credible plans may increasingly face reputational and regulatory risks.

Human Capital Will Need to Be Developed or Redirected to Avoid Liability as ESG Expectations Tightens

As expectations from investors tighten and more regulations are implemented, liability risks associated with statements and claims will increase. This creates a need for additional due diligence and oversight from corporate boards and those in corporate compliance, legal, and audit functions.

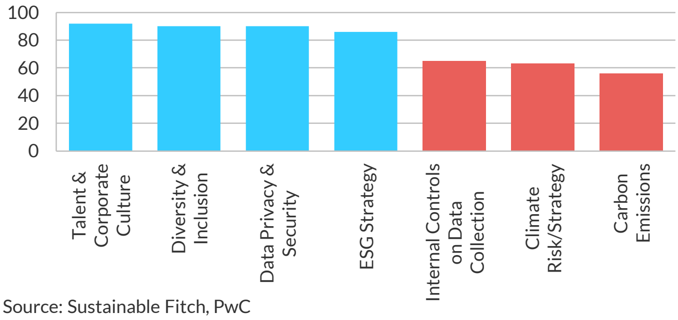
While many companies place responsibility for ESG data collection and reporting in a standalone sustainability function, the changing regulatory environment will require greater integration of ESG across corporate functions. This means the inclusion of ESG considerations into such activities as audit processes and controls, compliance monitoring, and legal due diligence and review. This places additional human capital requirements on companies, through training, hiring or the reallocation of employees, all of which are associated with higher costs. In the short term, companies may cover the shortfall of in-house sustainability skills by engaging external consultants.

As ESG generally includes elements of strategy, risk, and value creation, boards play an important role in of corporate sustainability. In a 2022 survey, PwC found that 86% of directors felt confident that their boards understood ESG at a strategic level. Confidence decreased for board understanding of climate-related issues, such as climate risk and strategy (63%) and carbon emissions (56%). This is despite the growing number of executive and board-endorsed net-zero commitments, which indicates a misalignment between corporate intentions and reality. Improvements in board understanding of climate change will help facilitate more credible and science-based climate commitments, although achieving these will still rely significantly on other factors, including investment in technology, financing capabilities and an enabling policy environment.

As scrutiny over commitments continues to grow and begins to materialise into legitimate regulatory or compliance risks, we anticipate that board-level education and skills on climate issues will become a greater focus.

Director Confidence of Board Understanding of ESG Issues

(% surveyed directors)



Source: Sustainable Fitch, PwC

In recent years, regulations requiring board oversight over sustainability and board diversity disclosures for large or listed companies have been introduced in the EU, Japan, Singapore and Hong Kong. We think this will continue, with additional focus extending to climate-specific issues. While this momentum may come from securities regulators, we expect stock exchanges to play an increasingly significant role in enabling disclosure and oversight over ESG issues. This includes work being completed through the UN Sustainable Stock Exchanges initiatives.

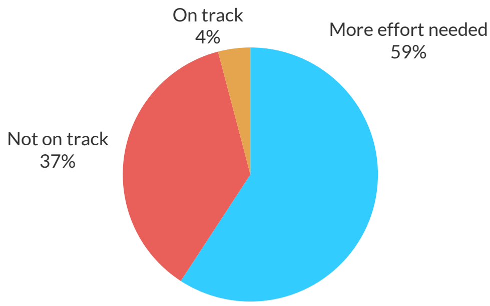
Countries Under Pressure to Implement Climate Pledges

At 2021's COP 26, governments agreed to 'revisit and strengthen' their nationally determined contributions (NDCs) in 2022. However, according to Climate Action Tracker, only 29 countries have submitted an updated NDC, covering only 18% of global emissions and just over 30% of the global population.

Existing NDCs are therefore not on track to meet the Paris goals and we expect growing public pressure on governments to act in response to climate-related extreme weather events. While the economic downturn, energy security and geopolitical issues will continue to be priorities next year, we believe that climate change will remain a key issue for voters, policymakers, businesses and investors.

Many national and sector-specific net-zero targets depend on the successful development and deployment of new low-carbon technologies, but this has lagged behind the high-level commitments. The IEA has assessed key components of the energy system that are critical to achieve the Net Zero by 2050 Scenario trajectory for 2030. Of the more than 50 components, only two are considered to be on track: growth in sales of electric vehicles, and deployment of light-emitting diodes and gains in lighting efficiency.

Tracking Clean Energy Progress



Source: Sustainable Fitch, IEA

Eighteen components are assessed to be not on track, with recent trends either going in the wrong direction or being substantially insufficient to meet the IEA's targets. These include heavy industry, such as steel and cement, transport, such as aviation and shipping, methane emissions from oil and gas operations, carbon capture and storage, and energy efficiency.

Energy-dependent heavy industry and sectors relying on global supply chains, such as renewable power equipment and electric vehicles, will have to contend with higher energy prices and general inflation in 2023. This increases the likelihood that the off-track components will require significant policy interventions, such as tax credits, subsidies, or investment incentives. One example is the Japanese government's policy framework to drive technological advancements for the low-carbon transition, which has been adopted by several Japanese companies with global operations this year.

Physical Risk to Drive Investment Shift to Shorter-Term Mitigation Strategies

Much of today's discussion on climate finance is focused around climate transition risks, which are the business and financial risks arising as a result of the transition towards a low-carbon economy and associated policy, technology societal and economic shifts. Physical risks have been considered a more remote concern and difficult to quantify given their unpredictability. However, the multiplication and gravity of climate-related events has started to shift the attention to this area.

There have been several extreme weather events in 2022 with considerable losses of life and economic consequences, including the extended heatwaves and droughts across Europe, flooding in Pakistan and Hurricane Ian in the US. Early studies of these events point at climate change being an aggravating factor. These and other unavoidable climate hazards continue to cause widespread impacts and economic losses, affecting infrastructure, ecosystems, societies and settlements, highlighting the need to address near-term physical risk exposure.

Data from Intergovernmental Panel on Climate Change (IPCC) demonstrated that the global surface temperature rose between 2011 and 2020 reaching 1.09^{0}C above pre-industrial levels, and the possibility that it will reach or exceed 1.5^{0}C before 2040 remains high.[3] The UN's Emission Gap Report in October 2022 emphasized that the trajectory based on current policies will lead to a 2.8^{0}C rise by the end of the century.[4]

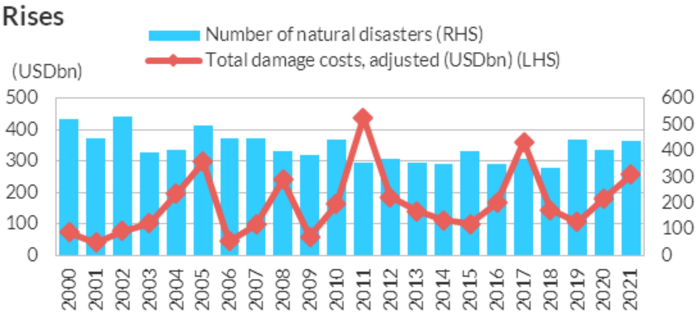
Examples of Climate-Related Physical Risks and Financial Impacts

Risk Category	Examples	Financial Impacts
Acute	Hot extremes on land and in the ocean	Reduced revenue from decreased production capacity (e.g. transport difficulties, supply chain interruptions, power outages)
	Heavy precipitation events	
	Drought and fire	Reduced revenue and higher costs from impacts on workforce (e.g. health, safety, absenteeism)
	Extreme weather	
		Write-offs and early retirement of assets (e.g. damage to property and assets in 'high risk' areas)
Chronic	Rising sea levels	Increased operating costs (e.g. inadequate water supplies for power generation)
		Increased capital costs (e.g. damage to facilities)
	Higher temperatures	Higher capital requirements (banks, companies)
		Stranded assets (assets becoming uninsurable)

Source: Sustainable Fitch, Task Force on Climate Related Financial Disclosures

Exposure to natural disasters and extreme weather events are a strong indication of how exposed economic activities are to physical climate risks. Capital intensive sectors in climate-vulnerable regions are more likely to be affected by extreme weather events, whereas asset-light sectors are less exposed to physical risk events.

Economic Losses Increase as Natural Disaster Frequency Rises



Source: Sustainable Fitch, EM-DAT, CRED/UCLouvain, Brussels, Belgium

[3] IPCC Six Assessment Report.

[4] Emission Gap Report 2022, UN

Fitch Ratings' analysis points to a growing number of sectors being negatively affected by rising physical risks. Sectors from utilities, oil & gas, manufacturing, infrastructure, real estate, metals and mining are more exposed, as the long lifespan of their physical assets coincide with the projected rise in physical risks. This can lead to disruptions in business operations or supply chain, loss or impairment of assets, which eventually result in the loss of revenue, higher rebuilding costs, higher capital and operational expenditure, and higher raw material costs.

Physical climate risks are growingly being factored into credit analysis as disruptions affecting physical assets and infrastructure persist. The general issue 'Exposure to Environmental Impact' under Fitch Ratings' ESG Relevance Score (ESG.RS) Framework captures an issuer's exposure to extreme weather events and the likelihood of the event turning into a key credit rating driver in the near term. Issuers with scores of '4' or '5' on 'Exposure to Environmental Impact' indicate the possibility of physical risks materialising to affect credit profiles.

For example, Port Commission of San Francisco (CA) is increasingly exposed to physical risk due to the port's location along the perimeter of the city. The port's assets face a significant unfunded capital needs including a significant seawall rehabilitation project and associated seismic upgrades, which may have a negative impact to the credit profile. The risk factor is captured under the issuer's ESG.RS with a score of '4' for 'Exposure to Environmental Impact'.

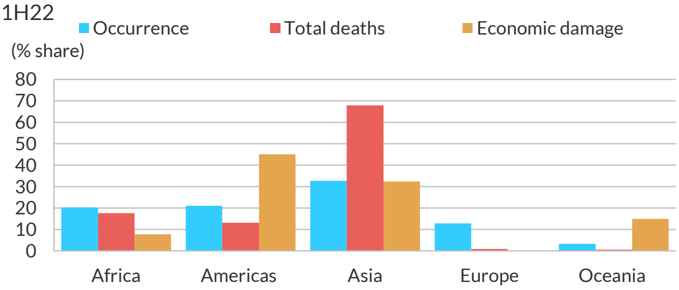
The severe weather conditions can directly lead to changes in credit ratings under extreme conditions. In February 2021, Fitch Ratings placed all 17 retail and wholesale electric utilities operating within the geographic footprint of the Electric Reliability Council of Texas (ERCOT) on Rating Watch Negative. This followed the unprecedented winter weather in Texas in the same month, which included multiple snow and ice storms and historic low temperatures, resulting in severe market price volatility and dislocation. Brazos Electric Power Cooperative Inc. TX was downgraded to 'D+' from 'A+' in March due to a fine from ERCOT of USD1.8 billion regarding its market practices during the storm. The amount of the fine was nearly twice the cooperatives' annual revenue and it had to file for bankruptcy.

Insurance and reinsurance are another area that would continue to face challenges and near-term pressure in catastrophe risks. Re-assessing the rising frequency of natural disasters becomes necessary to help quantify potential losses for underwriting and pricing premium costs. Fitch Ratings expects the higher number of natural catastrophic events to drive insurance premiums of non-life insurers to rise moderately, with recent losses in business lines that had a high number of claims, such as property and casualty.

Developing economies are more likely to suffer greater economic losses due to population density, regional economic disparities, and a higher proportion of uninsured or underinsured infrastructure assets, which reduces economic resilience to climate events. We expect government spending to increase globally on climate mitigation and adaptation projects, including pre-emptive measures to build climate-resilience infrastructure, post-disaster recovery and emergency policy response.

Disaster Occurence and Impacts by Continent

1H22



Source: Sustainable Fitch, EM-DAT, CRED/UCLouvain, Brussels, Belgium-www.emdat.be

Central Banks' Stress Tests Put Climate Centre Stage for Bank Risk Management

There has been a significant acceleration of climate stress-testing initiated by central banks in 2022, which will continue to expand in 2023. These scenario-based exercises include the assessment of banks' vulnerability to both transition and physical risks. The regulatory focus on climate issues is likely to incentivise banks to consider physical risks in credit risk management, although this remains limited. This could eventually increasingly affect risk classification and loan pricing related to physical risks.

Over the past year, the ECB, the Bank of England, the Hong Kong Monetary Authority and the Bank of Canada all published results from their pilot stress tests, while other jurisdictions, including Australia, Brazil and Singapore, have said their intend to run similar tests. In 2023, the US Federal Reserve will run a pilot climate scenario analysis with six major banks. Taiwan's Financial Supervisory Commission will run a similar exercise.

In its stress test findings, the ECB noted banks seem to be in a very early stage in the development and implementation of climate-risk stress testing frameworks. In a study assessing climate risk integration at banks published in November 2021, the ECB found some integration of climate considerations into credit risk management in sectoral lending policies and client due diligence, but limited applications to collateral valuations, risk classification or loan pricing. The ECB also noted that very few of the region's institutions were considering the geographical location of real estate assets, which is a condition for understanding exposure to physical risks, such as flooding.

Most regulators are unlikely to directly integrate findings of climate stress tests into widespread capital charges or supervision, at least for now, due to the weaknesses and uncertainties in underlying methodology. However, central banks could look into bank-specific capital requirements, most likely for banks with persistent shortcomings.

We expect banks to increasingly integrate climate risks into their risk management practices and business strategies, but this will take time. The ECB's stress test found that most banks foresee a medium- to long-term timeframe (one to three years) for including physical or transition climate risks into their risk frameworks. The lack of standardised and comparable disclosures from counterparties remains the main difficulty. As such, rising compulsory climate-related disclosures from an array of players will help improve data collection and accuracy of climate risk analysis. For example, the US Securities and Exchange Commission's (SEC) compulsory climate disclosure proposal includes physical risks components.

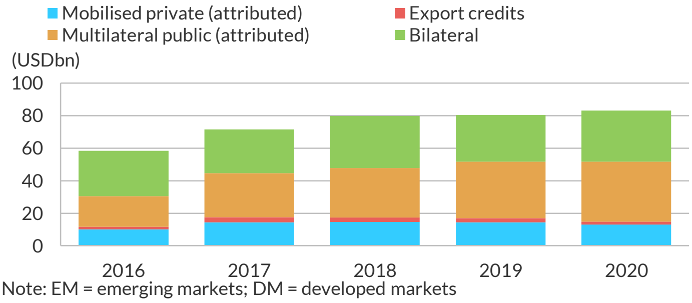
Emerging Markets to Capitalise on Growing Focus on Nature and Climate Equity

COP 27 focused on transition finance for EMs, so 2023 is likely to see policy attention focus on solutions to scale private sector finance for sustainability programmes, including climate mitigation and adaptation, and nature preservation. According to the OECD, annual climate finance for EMs missed the target of USD100 billion by 2020 adopted at COP 15 in Copenhagen. Private finance mobilised through such programmes remains small at just 15.7% of the total.[5]

Amid pledges of further support at COP 27, there are signs that blended finance mechanisms, for instance, to fund coal decommissioning in EMs, could make some progress in the coming months, but will be tempered by mounting market volatility. Meanwhile, rising investor interest in biodiversity and nature could open further avenues for financing, potentially benefitting EM sovereigns.

Total Climate Finance Mobilised for EMs by DMs

2016-2020



Note: EM = emerging markets; DM = developed markets
Source: Sustainable Fitch, OECD

Growth in Biodiversity Finance to Benefit Nature-Dependent Emerging Markets

EM governments and regulators have been at the forefront of initiatives to capitalise on rising investor interest in biodiversity ahead of the UN Biodiversity Conference (COP 15) – a trend that could benefit EM sovereigns.

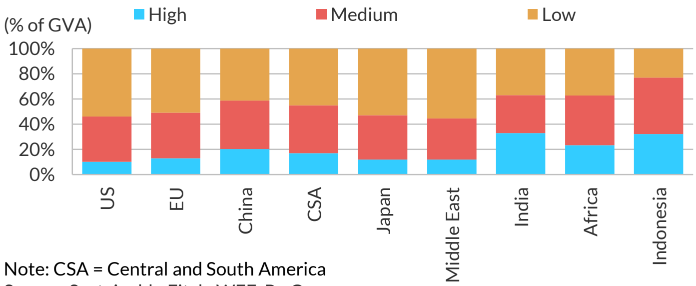
At the UN General Assembly meeting in September 2022, Ecuador and Gabon were among the sponsors of a 10-Point Plan for biodiversity financing, which calls for greater development finance, and actions to further develop biodiversity-related financial products and debt instruments. Uruguay's issuance of a sovereign sustainability-linked bond (SLB) is an illustrative example of the latter. The bond's framework includes maintenance of the country's rainforest area as a key performance indicator (KPI) and a coupon step-up/step-down mechanism linked to forest preservation.

Other biodiverse EMs may develop similar frameworks and increase issuance of biodiversity-related SLBs and other green, social and sustainability (GSS) bonds in the coming months, while leveraging growing interest in debt-for-nature swaps as Barbados did in September 2022 in a USD150 million transaction backed by a guarantee from the Inter-American Development Bank. EMs seeking financing through SLBs can benefit from technical assistance through the recently launched Sustainability-Linked Sovereign Debt Hub, an initiative of Finance for Biodiversity (a group of financial institutions with over USD14 trillion in assets under management, AUM) that aims to substantially scale up the sovereign SLB market.

EM sovereigns are particularly well-positioned to benefit from rising interest in biodiversity, given that the majority of countries classified as 'megadiverse' by the UN Environment Programme are developing countries, notably Brazil, Malaysia and South Africa. EMs also tend to be the most heavily dependent on ecosystem services, with over 20% of GVA considered to be 'highly dependent' on nature in African economies, India and Indonesia, in an assessment published by the World Economic Forum.

High Nature Dependency in Emerging Markets

Nature depency classification by region



Note: CSA = Central and South America
Source: Sustainable Fitch, WEF, PwC

Regarding nature preservation, the growth and gradual maturing voluntary carbon markets – through increased standardisation and regulation – may also hold benefits for developing countries in the coming years. In particular, carbon credits generated via nature-based solutions are growing in popularity. These refer to schemes that provide offsets through projects such afforestation and avoided deforestation – a prominent example being Gabon's planned issuance of over 90 million tons of CO_2e of sovereign carbon credits connected to forest preservation under the UNFCCC's REDD+ scheme. The issuance is the largest ever and Bloomberg reports the credits may sell for as much as USD35/ton.

[5] https://www.oecd.org/environment/climate-finance-provided-and-mobilised-by-developed-countries-in-2016-2020-286dae5d-en.htm

In the coming years, such schemes could facilitate greater capital flows into developing countries, although concerns remain about the quality of credits.

Growing policy concern for biodiversity and nature could also pose downside risks for some sectors in EMs. The EU is adopting a regulation that will effectively ban the import of deforestation-linked commodities and place a due-diligence requirement on companies' supply chains. An earlier draft of the regulation targeted commodities that have traditionally been associated with deforestation, such as soy and palm oil, but an updated version in September 2022 also includes meats, poultry and corn. While aspects of the policy may prove challenging to implement, it points to growing understanding of 'embedded deforestation' in many supply chains – notably in consumer goods.

As awareness rises, investors and regulators may become more demanding with respect to nature-related disclosures – along the lines being developed by the Taskforce on Nature-related Financial Disclosures, and slated for release in September 2023 – and addressing deforestation impacts is likely to become an increasingly prominent theme in investor engagement.

Innovative Financial Structures to Help Channel Investment to EMs

New financial instruments are needed for EMs that are highly vulnerable to climate risks and rely heavily on international financing for their climate adaptation, transition and mitigation plans. Concessional financing from supranationals plays a key role in creating an enabling environment for private capital flows into EMs.

One proposed solution is blended finance, a structuring approach that uses catalytic capital from public or philanthropic entities, including multilateral development banks (MDBs), impact investors, commercial investors, and foundations, to de-risk projects in EMs and attract private sector investment aimed at achieving SDGs. Blended finance has the potential to address the fact that most EMs are among the smallest contributors to greenhouse gas emissions while facing higher borrowing costs and carrying the greatest burden of climate change.

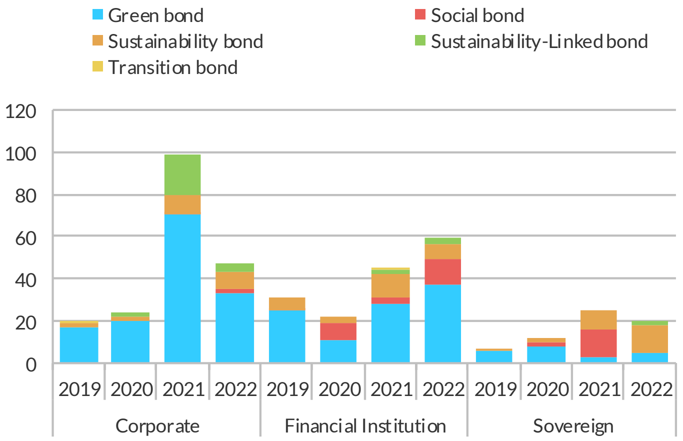
According to IMF estimates, EMs must invest USD1 trillion a year in energy infrastructure by 2030 and up to USD6 trillion a year for all sectors by 2050 to meet climate change mitigation goals and substantially reduce greenhouse gas emissions. Financing adaptation would be USD300 billion a year by 2030 and, depending on how effective mitigation strategies are, could jump to an annual USD1.75 trillion after 2050.

However, progress towards these goals is likely to face challenges in 2023. Blended finance plans may be hindered by rising interest rates, high volatility and a strong US dollar. Moreover, investors are demanding greater clarity in the divergent ESG regulatory and framework environment, where carbon pricing initiatives often lack effectiveness, ESG standards proliferate, and the lack of available data in EMs adds to the confusion. Under these conditions, investing in EMs could be considered too high-risk, posing a challenge for private-sector climate finance. MDBs and regional initiatives will need to scale up and play a pivotal role for EMs to gain access to capital while achieving sustainability outcomes.

Intergovernmental partnerships are also catching on. The IMF launched the Resilience and Sustainability Trust in April to support low and middle-income countries during external shocks, focusing on climate change and pandemic preparedness. As of October, it had received pledges of USD37 billion from IMF member countries and entered into financing agreements with Barbados, Costa Rica and Rwanda. In October, the US Treasury signed a USD950 million loan to the Clean Technology Fund, which channels its funds through African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank, and the World Bank Group.

In the capital markets, EMs have continued to innovate in the selection of bond labels and structures, despite macroeconomic conditions dampening overall issuance. Chile and Uruguay issued the first two sovereign sustainability-linked bonds in 2022, with the latter including a rarely used bi-directional coupon adjustment mechanism. The sovereign governments of Philippines, Malaysia, Mexico, and Chile issued more than USD13 billion in sustainability bonds, combining green and social uses of proceeds.

ESG-Labelled Bonds in EMs by Issuer Type (Jan 2019 - Oct 2022)
USD bn



Source: Sustainable Fitch; EF Data

Private and Retail Investors Shape New ESG Priorities

ESG Integration Moves into Private Debt and Equity

While our primary analytical focus is on the public credit market, the growing role of ESG in private investment – debt and equity – may have important impacts across sustainable finance. In sectors where private investment plays a larger role in the capital structure, such as technology, infrastructure and project finance, investors' ESG priorities will have a significant effect.

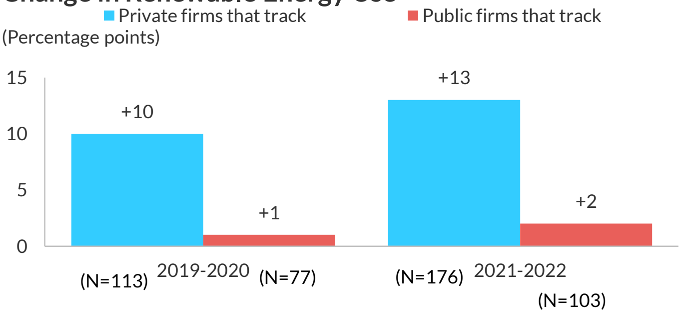
While governance has always been a core aspect of private investment due diligence, focus on environmental and social aspects has been far more limited aside from specialist impact or thematic investment firms. This is starting to change, as major private equity investors, such as Carlyle Group, Blackstone and EQT, increasingly allocate resources to integrating ESG into their investment and portfolio management practices.

In Ernst & Young's 2022 Global Private Equity Survey, 39% of all private equity investors said they had invested in ESG-related products, up from 33% the year before. The survey also found that 42% of the largest fund managers said they consider ESG factors either seriously or very seriously when making investment decisions. More than half of total fundraising flowed to private equity firms with formal ESG policies in 2021, the highest percentage on record, according to McKinsey & Company.

The nature of business models in private equity gives it a distinct advantage over investors in public equities when it comes to driving and implementing sustainability agendas. In a typical private equity investment model, firms usually hold both ownership and control with a long-term investment horizon and mindset. This allows sizeable influence over bringing about positive change in its investee companies.

In a study conducted by BCG, it was found that PE funds that have tracked their portfolio companies' use of renewable energy over time report significant improvement. Their portfolio companies increased renewable energy usage by 10pp from 2019 to 2020 and by 13pp from 2020 to 2021. This surpasses the meagre progress made by their publicly owned peers, which have increased usage far less over the past two years.

Change in Renewable Energy Use



Source: Sustainable Fitch, ESG Data Convergence Initiative; BCG

Recently, we have observed more dedicated capital allocated to the energy transition. In 2021, Brookfield Asset Management, Inc. announced an initial USD7 billion closing for its Global Transition Fund; it reached a final closing of USD15 billion in June, making it the world's largest net-zero transition-focused impact fund. The fund, co-managed by former Bank of England governor Mark Carney, targets investments in clean energy and low-carbon technology.

Private equity impact funds are targeting a range of sustainability themes beyond climate change. TPG manages three impact funds totalling USD15.8 billion, around 15% of its AUM. USD8.1 billion is allocated to The Rise Fund and Evercare, which focus on healthcare, education, agriculture and financial inclusion. Apollo Global Management, Inc. raised USD1 billion for its first impact fund, launched in 2022, where its priority themes are economic opportunity, education, health, safety, and wellness, industrial innovation, and resource sustainability.

As sustainability moves up the agenda, private debt funds can help mobilise action on ESG issues from an institutional level. This asset class offers further diversification in terms of industry exposure and risk-return profiles. It also affords greater access to and engagement with borrowers than mainstream lending or public market fixed-income investment.

Given that private credit is an illiquid asset class with a typical lock-in period of three to five years or more, it can be a useful source of funding for companies that require more time and resources to transition. With concerns mounting over inflation and rising interest rates, such debt also offers institutional investors higher yields.

While integrating ESG within private debt will face challenges in the interim on account of a lack of structural drivers, such as regulatory requirements, we see potential for more issuance of ESG-focused private debt as demand continues to grow. In a June survey by Natixis CIB, 65% of investors indicated an appetite for sustainability-linked debt products with a pricing adjustment mechanism. In addition, 70% said they see ESG integration as a way to strengthen risk management and lead to better returns in the long run in infrastructure and real estate private debt investments.

The growth in sustainability-linked loans in recent years shows that companies are also increasingly coming to appreciate the bespoke nature of private debt, as well as the speed and flexibility that a privately negotiated loan can deliver.

Several major private credit investors have issued sustainability-linked loans including Blackstone Group, Legal & General, and PGIM. Sustainability-linked private debt can be attractive to companies in hard-to-abate sectors that are increasingly affected by bank's ESG exclusion policies. The USD77 million sustainability-linked loan by Riverstone Capital Partners to oil & gas pipeline operator EPIC Propane Pipeline LLC in October 2022 is one example; the loan's KPI is the reduction in methane leaks from its gas liquids and crude oil pipelines.

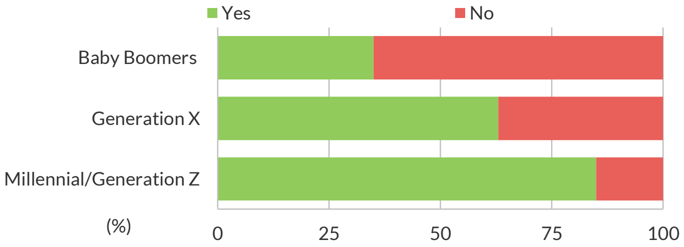
Changing Retail Investor Profile to Raise ESG's Importance

The growth in retail investing during the peak of the Covid-19 pandemic introduced a new type of investor to the capital markets. A 2020 Charles Schwab survey found that 15% of investors in the US stock market had only begun investing that year. Two-thirds of these new market entrants are Millennials (born in 1981-1996) or Generation Z (1997-2012).

Attitudes on the importance of ESG differs sharply between the generations. An overwhelming majority of Millennial and Generation Z investors in a 2022 Stanford Graduate School of Business survey said they want investment managers to influence companies on environmental (85%) and social (80%) practices, even if it means a decrease in their investment's value.

Retail Investor Willingness to Give Up Financial Return to Influence Company Environmental Practices

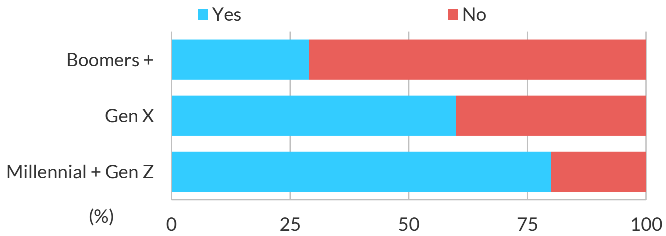
Survey of 2,470 American Investors



Source: Sustainable Fitch, Stanford Graduate School of Business

Retail Investor Willingness to Give Up Financial Return to Influence Company Social Practices by Age

Survey of 2,470 American Investors



Source: Sustainable Fitch, Stanford Graduate School of Business

Last year, we commented on the role of sustainability-focused asset owners on the institutional investors who manage their funds. Many of these firms will increasingly face pressure from the retail market to provide more transparency on ESG factors and more thematic products addressing core sustainability concerns. More than half of Millennial and Generation Z investors in the Stanford survey invest through mutual funds or ETFs managed by six US-based providers[6], compared with only around a quarter of Generation X (1965-1980) and Baby Boomers (born before 1964).

Research published by The Ohio State University in October 2022 indicates that specialised ETFs, defined as those based on a theme, are disproportionately held by retail investors based on analysis of holdings by users of Robinhood, a retail investment platform.[7] As of August 2022, there were more than 1,100 ESG ETFs, both funds that incorporate ESG screening and those with an ESG theme, representing USD377 billion in AUM, according to data from ETF GI. Eight of the top 20 ESG ETFs based on net new assets in 8M22 are fixed-income funds, which brought in more than USD4.2 billion.

As demand drives asset growth in ESG retail investment products, asset managers will need to increasingly consider this type of investor in its fund offerings and its own sustainability practices. There have been new providers launching thematic ETF products to allow retail investors access to the type of engagement not normally available to them, such as climate-change activist fund Engine No. 1, which has launched two ETFs since 2021.

The same demands from anti-ESG voices are also leading to new investment products. Strive Asset Management began offering so-called "anti-woke" ETFs in 2022 that prioritise returns over other factors but nonetheless tells investors that it will use its "voice and vote as a shareholder to drive positive behaviour".

We expect companies to face greater pressure following ESG-related controversies as retail investors' views tend to be more influenced by publicity and media reporting alongside financial data. High-profile issues with greenwashing, diversity, labour rights and employee well-being, and community relations are among those that tend to generate negative feedback for consumer-facing companies. As consumers increasingly become investors, their ability to express their views on ESG topics will expand beyond purchasing decisions to potential influence through asset allocation and influence through fund managers.

[6] Fidelity Investments, American Funds (Capital Group), Vanguard, Invesco, BlackRock (iShares), State Street (SPDRs)

[7] Competition for Attention in the ETF Space, I. Ben-David, F. Franzone, B. Kim, and R. Moussawi, *Fisher College of Business Working Paper Series*, 3 October 2022

Appendix

Related Research – Sustainable Fitch

Japan Promotes Transition Financing as Global Market Seeks Further Clarity on Label (November 2022)

Global Biodiversity Finance Framework Begins to Take Shape (October 2022)

US Inflation Reduction Act to Accelerate Low-Carbon Transition (September 2022)

Insights from Fitch's Inaugural ESG Ratings (July 2022)

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ESG in Credit – Exposure to Social Impacts (May 2022)

Credit Relevance Will Increase as Voluntary Carbon Markets Grow (April 2022)

SEC's Proposed Climate Disclosures Would Bring the US into Line with Global Practices (April 2022)

Ukraine War Intensifies Low-Carbon Supply-Chain Disruptions (April 2022)

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Natural Gas and Nuclear in EU Taxonomy (February 2022)

What Investors Want to Know: Bank Climate Stress Tests and Credit (February 2022)

Related Research – Fitch Ratings

Global Insurance Through an ESG and Sustainability Lens (November 2022)

LatAm Regulatory Developments Advance ESG Investment Initiatives (September 2022)

Asian Reinsurance Market - Reinsurers Grapple with Economic Challenges and Climate Risk (August 2022)

ECB Climate Stress Test Highlights Challenges for Banks (July 2022)

ESG Regulatory Focus Presents Risks for Global Money Market Funds (June 2022)

Fitch Affirms Port Commission of San Francisco at 'A'; Outlook Stable (May 2022)

Climate Vulnerability Scores (April 2022)

LatAm Sovereign GSS Bond Market Will See Further Growth (March 2022)

Fitch Downgrades Brazos Electric Power Cooperative, Inc. TX IDR to 'D' on Bankruptcy Filing (March 2021)

Fitch Places Texas Public Power Utilities and Electric Cooperatives on Rating Watch Negative (February 2021)