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Sustainability Insights:

Why Climate Risks Are Changing So Few Corporate Ratings

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Key Takeaways

- Since early 2022 we have taken very few rating actions on nonfinancial corporates stemming from climate-related risks. We believe this is primarily because of the growing gap between policy pledges and the tangible effects of regulations, as well as companies' so far limited spending on net zero investments.
- Climate transition and physical risks are nevertheless important considerations in our rating analysis for more than one-quarter of nonfinancial corporates.
- This reflects many stakeholders' increasing focus on decarbonization, which could weigh on credit quality as more disruptive regulations may emerge and as issuers make the generally costly low-carbon transition. It also factors in the more frequent and severe physical risks that will likely stem from global warming.

Given the scientific consensus that global warming is inevitable and will result in greater frequency and severity of climate-related risks, preparing for such events will also eventually weigh on credit quality. While we think climate transition and physical risks are important considerations in our credit analysis of more than a quarter of our rated nonfinancial corporates, we have taken very few climate-related rating actions since early 2022.

Why this matters. The sense of urgency to limit global warming has so far not been sufficient to bring the world closer to the Paris Agreement's global warming scenario of less than 2°C by century-end. In other words, it has translated neither into major regulatory impacts nor disruptive operating or financial models for most sectors.

What we think and why. Our few climate-related rating actions since early 2022 could understate the potential for more actions in the future. This could notably happen if net zero momentum accelerates and leads to more-abrupt regulatory changes, requiring companies to fast-track low-carbon investments, or if companies fail to adapt to heightened climate physical risks.

Our Credit Ratings Already Factor In Climate Risks

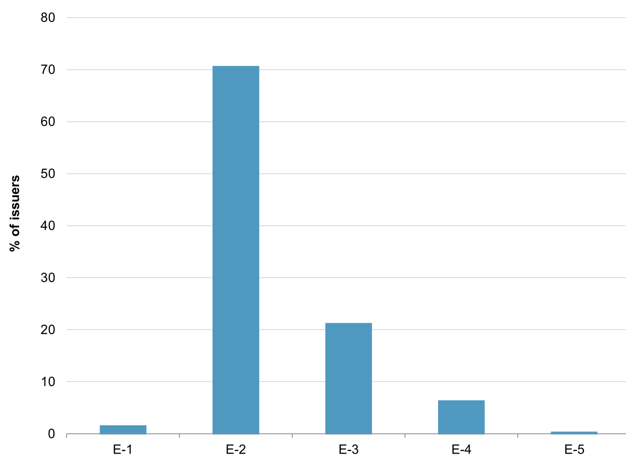
Our credit ratings measure the capacity and willingness of an entity to meet its financial commitments as they come due. We consider factors that we believe can materially influence the creditworthiness of a rated entity or issue, and about which we have sufficient visibility and certainty. For rated entities in certain industries, these factors may include climate-related transition risks. Companies may need to modify their production processes, supply chains, and/or product lines, as well as reshape strategies more broadly to respond to stricter regulations or taxonomies and to pre-empt changes in customer behavior. Potential pressure from stakeholders, including financiers, is another area we look at.

We are committed to transparently explaining our credit rating drivers. Our criteria, "Environmental, Social, And Governance Principles In Credit Ratings," published on Oct. 10, 2021, aims to enhance transparency about how environmental, social, and governance (ESG) factors, including those related to climate risk, can influence our opinion of an entity's creditworthiness.

We also added further disclosures to explain how ESG credit factors influence our rating analysis. We applied an assessment, using a 1-to-5 scale that is separate from our credit ratings--our ESG credit indicators (see "ESG Credit Indicator Definitions And Application," published on Oct. 13, 2021). These indicators showed that climate transition risks negatively affected our credit analysis for 25% of rated corporate entities--with indicator outcomes of '3', '4', or '5', to indicate a moderately negative, negative, or very negative influence, respectively (compared to 70% of ratings where environmental considerations are neutral as reflected by an indicator of '2'). These outcomes reflected decisions we had already made and incorporated into our credit ratings based on our opinions of current and future credit risks, including historic, current, and potential future climate-related credit risks. Many of these entities operate in carbon-emissions-intensive sectors (when considering scopes 1, 2, and 3) such as oil and gas, autos, airlines, power generation, and metals and mining. Over time, evolving market and regulatory influences could affect our credit analysis more, which would lead to changes in our ESG credit indicators. They also factor in our forward-looking views on the potential for increasingly tight regulations in some jurisdictions and in some emissions-intensive industries to address climate change and, for some, to strive to meet net-zero carbon targets over the coming decades.

Chart 1

E Credit Indicators Distribution Across Nonfinancial Corporate Issuers



Source: S&P Global Ratings. E-1 denotes positive impact on creditworthiness, E-2 neutral, E-3 moderately negative, E-4 negative, E-5 very negative.

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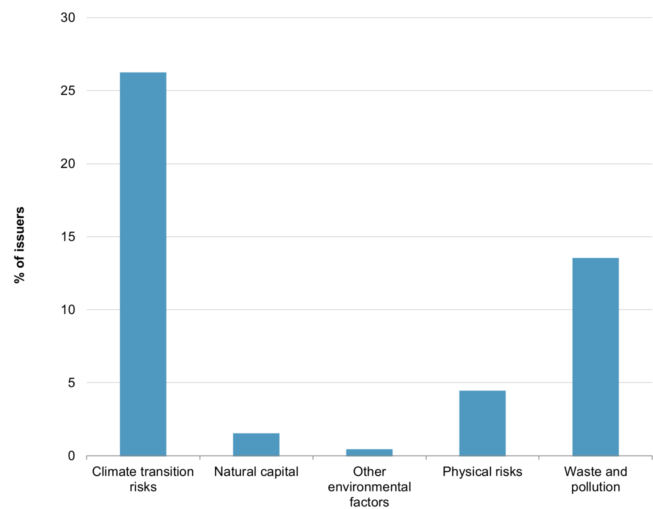
Chart 2

Environmental Factors Distribution Across Nonfinancial Corporate Issuers



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We have taken a handful of climate-related rating actions since early 2022

Despite some policy makers, investors, and business leaders increasing their focus on climate change, notably during the past couple of years, we have only taken five climate-related rating actions on non-financial corporates since the beginning of 2022:

- Dutch airport Royal Schiphol Group N.V. We lowered the ratings to 'A-/A-2' from 'A/A-1' following the Dutch government's announcement of its intention to reduce annual aircraft movements to 440,000 from 500,000. We now see a heightened risk of environmental policy objectives potentially hampering Schiphol's operations in the longer term. As the Netherlands strives to reach its goal of sharply cutting national emissions to 49% of 1990 emissions by 2030, Schiphol may be exposed to increasing government intervention or regulations that directly impact its credit profile.
- China-based automotive supplier Geely Automobile Holdings Ltd. We revised our outlook on the 'BBB-' long-term issuer rating to negative from stable. We see the company's push for higher electric vehicle (EV) production weighing heavily on its profitability and leverage. Its accelerated electrification processes to mitigate energy transition risk have led to higher capital spending. Also, small sales and production volumes and high battery costs (up at least 20%-30% in the first nine months of 2022 in China) have seen EVs generate notably lower margins than the group's internal combustion engine (ICE) models.
- Chilean power producers Enel Chile S.A. and Inversiones Latin America Power Limitada (ILAP). We downgraded these entities to 'BBB' and 'BB-', respectively, as a result of intense drought lowering hydroelectric generation and eroding domestic electricity market conditions. In the case of Enel Chile it also triggered higher-than-expected investments under its strategic plan to prioritize carbon reduction and accelerate its energy transition.

Materiality, Transition, And Mitigants

The low number of climate-related rating actions reflects several considerations that we build into our credit analysis, among which:

The absence of (more) very stringent, disruptive, and immediate environmental regulations in the most polluting sectors. While the EU appears to have led with certain tighter environmental laws, such as the ban on ICE sales by 2035, the impact of these has generally been manageable for most sectors. In some other jurisdictions there are arguably different policy priorities, and some jurisdictions may not see addressing climate change as a major priority.

The proactiveness of some sector players in mitigating environmental risks. Entities have done this either through shifting their operations away from the most exposed activities, and/or investing in and developing new, greener products or technologies, or in some cases by adjusting their financial policies and increasing their financial flexibility.

Our previous integration into our credit ratings of environmental risks for entities operating in certain industries. For instance, over the past decade we have lowered several ratings in the coal sector in the U.S. and Europe. We also revised down our oil and gas industry risk score in early 2021 (see "ESG-Driven Industry Risk Assessments Update For Corporate And Infrastructure Ratings," published Jan. 27, 2021), which resulted in some rating actions.

The stickiness of consumer behavior. So far, widespread buying habits have not dramatically changed in favor of products that are less emissions-intensive. Consumer awareness of environmental considerations in some markets is growing but global demand for fossil-fuel based products or services is not abating.

The lack of substitution or technology alternatives for some carbonized products and services. This could imply very little reduction in volumes for some products. It also gives certain entities the ability to pass additional costs linked to environmental constraints on to the end-consumer.

Recent robust operating performances in extractive sectors such as oil and gas or metals and mining amid the surge in commodity prices. This has offset stakeholders' more negative stances related to environmental concerns and their implications for credit quality. Record profits from oil producers benefiting from the conflict in Ukraine and subsequent restrictions on Russian oil and gas, as well as the strong momentum calling for greater innovation in the mining sector to support the energy transition, have been overshadowing environmental policies worldwide.

Lastly, climate factors are just one consideration in our credit ratings analysis. For entities rated speculative grade ('BB+' or lower), liquidity, free cash flows, and leverage will typically be more influential credit risk drivers. Investment-grade issuers may have a greater ability to transition, either because of higher ratings headroom, product or geographic diversification, stronger cost or product positions, R&D capabilities, or general financial strength. All these factors can help mitigate a company's current climate-related exposure. We see this in the utilities sector, for instance, where many large players have demonstrated their ability to switch to a more renewables-based power generation portfolio and in some cases have become market leaders. Similarly, certain large automakers are showing they can adapt to stringent environmental regulations and grow their EV offerings ahead of, and beyond, what policy makers have envisaged. And in the cement sector large companies are using balance sheet strength--built up during previous years amid solid operating performance--to pursue climate-transition strategies such as

renewing their product offerings and increasing sales of low carbon cement and concrete, as well as investing in new technologies to capture carbon.

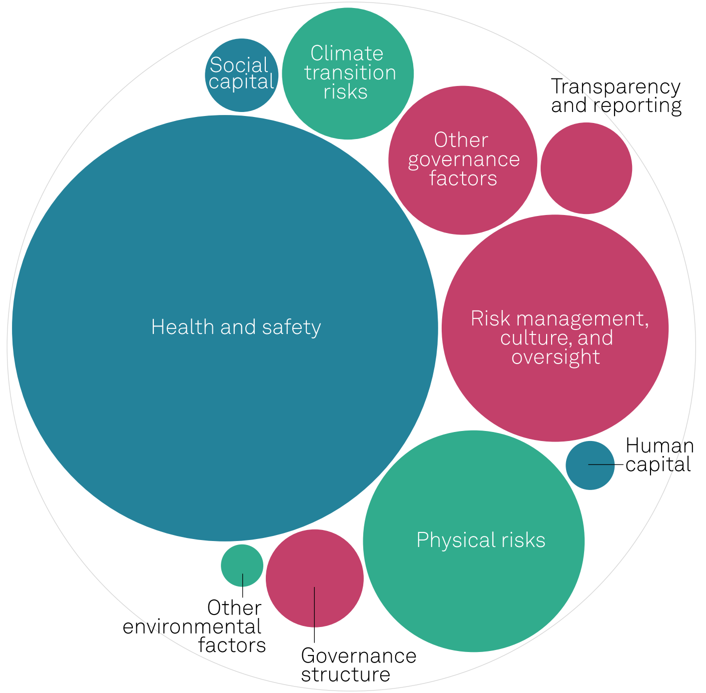
Leading ESG factors driving credit rating actions

2022 versus 2021

Environmental　Social　Governance

2022: 440 factors

2021: 580 factors



Data as of Dec. 31, 2022. Bubble size is determined by occurrence of factors within the year per chart, irrespective of positive or negative actions. The sum of environmental, social, and governance factors exceed total ESG-related rating actions because some actions are influenced by multiple factors. ESG--Environmental, social, and governance. Source: S&P Global Ratings.
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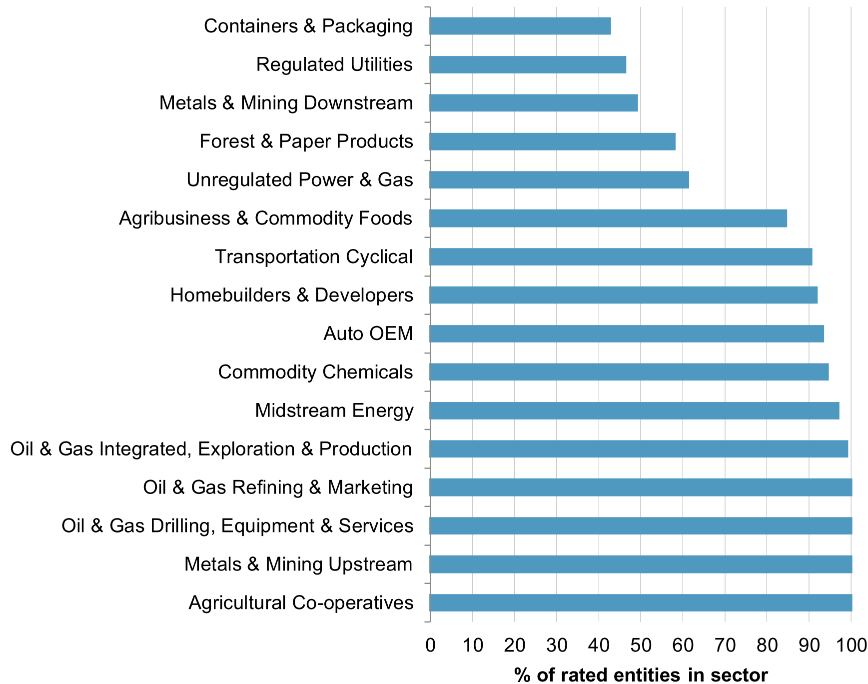
Chart 3

Top 16 Sectors In Which Environmental Factors Are A Negative Influence On Our Credit Analysis



Source: S&P Global Ratings.

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Climate Transition Risks

So far, rated entities are managing the main climate transition drivers

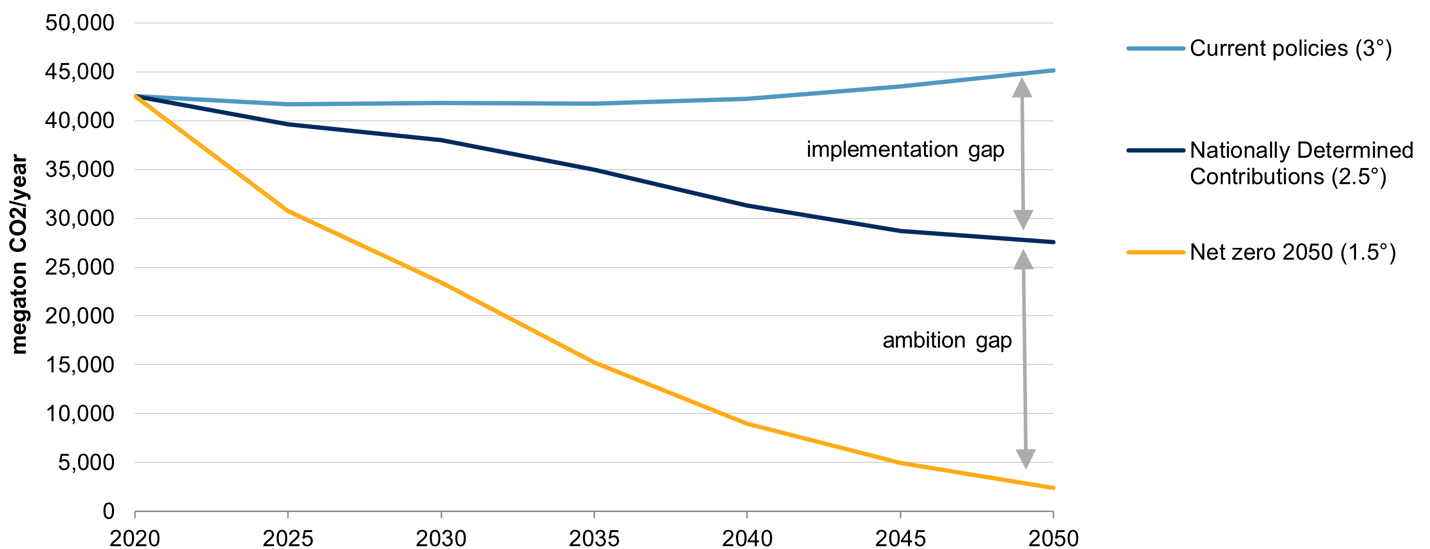
Climate transition risks can be classified around four pillars: regulation, technology, litigation, and consumer behavior. These are broadly similar to the Task Force on Climate-related Financial Disclosures' (TCFD) transition risk pillars of policy and legal, technology, market, and reputation. Among them, at this stage we view regulatory and policy risk as the most relevant to a company's credit standing. This is because we believe the effects of technology and consumer behavior may take more time to happen at scale and disrupt a whole sector, whereas regulation can change the landscape much faster.

We also see litigation risk as manageable for now. While we see climate-related litigation risks increasing, notably stemming from a lack of action to address climate change, we believe such risks are so far generally financially manageable for our issuers (see "Climate Change Litigation: The Case For Better Disclosure And Targets," published Oct. 6, 2021). In previous research, we anticipated that 2023 would test companies and investors' strength and depth of sustainability commitments as well as their priorities in light of growing ESG-related litigation risks (see "Key sustainability trends that will drive decision-making in 2023," published Jan. 16, 2023). We

anticipate that some investors will increasingly check to see if companies are backing their words with actions, particularly on climate. This means companies may face more scrutiny on appropriate board oversight and the maturity of their sustainability strategies and processes. We also expect companies and investors' lobbying activities will come under greater scrutiny to ensure they are consistent with public commitments to both sustainability and fiduciary mandates.

Chart 4

CO2 Emissions By Scenario



Sources: NGFS climate scenarios database, REMIND model. End-of-century warming outcomes shown.

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We see implementation and ambition gaps in the transition to a net-zero world. Environmental regulations and/or policies have so far lagged governments' stated ambitions on climate, both in terms of actions and timing. So far, since the Paris Agreement in 2015, the world has been unable to curb global carbon emissions and the path to a less than 2°C rise in temperature is looking increasingly challenging. This difference between pledges and reality is commonly called the implementation gap, while the difference between pledges and actions needed to cap global warming at 1.5°C is called the ambition gap (see chart above).

The IPCC has reported on the climate urgency and the UN has relayed the need to limit global warming to well below 2°C. But this has so far not translated into radical and immediate changes to industrial plans or economic models. This absence of disruptive action could also explain the so far very few credit rating actions related to the climate transition. In addition, some jurisdictions either do not prioritize an environmental agenda to reduce global warming, or do not classify it as a top priority. In some countries decarbonization and related net-zero initiatives may be viewed as socially disruptive and economically costly, raising concerns related to affordability, employment, or fiscal revenues. For example, renewable power growth tends to be aligned with energy security because it is indigenous. But renewable sources are intermittent and weather-dependent and in some markets domestically sourced coal-fired power still has the edge as a reliable, dispatchable

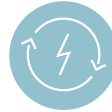
fuel.

Carbon pricing, the most common (and most efficient according to many economists) environmental policy tool, has so far been limited in scope and has had little impact on credit performance. There are currently relatively few carbon-pricing regulations, covering less than one quarter of global GHG emissions. And apart from Europe, where the price of GHG emissions under the EU Emissions Trading Scheme (EU ETS) has risen significantly in recent years, costs have generally remained insignificant (see "Carbon Pricing, In Various Forms, Is Likely To Spread In The Move To Net Zero," published Aug. 9, 2022). Furthermore, polluting sectors continue to benefit financially from significant free allowances awarded under the EU ETS. The EU aims to phase out these allowances with the introduction of its cross-border adjustment mechanism (CBAM), but the main cost impact will be toward the end of the decade to give in-scope sectors time to adapt. We also believe that, in some cases, higher carbon costs could partly be passed through to end-customers, with limited effects on margins. Furthermore, many EU-based issuers have an international footprint so only part of their business is affected by such regulations. These issuers could, for instance, mitigate risk by growing their presence in jurisdictions that do not impose similar GHG emissions costs. Finally, EU regulation still gives issuers some time to adapt. As a result, while we see some mounting pressures, we have not taken any negative rating actions related to this more stringent carbon regulation. See also our report "Decarbonizing Cement Part Two: Companies Could See Pressure On Ratings As The EU Firms Up Carbon Rules," published Oct. 27, 2022 and "Europe's Airlines To Bear Highest Carbon Costs," published April 3, 2023.

The Inflation Reduction Act (IRA) in the U.S. is another recent significant policy development. It aims to support investments in decarbonization solutions over the coming years and may help grow new technologies. The IRA could prove consequential as it will support renewables development and general decarbonization efforts. Its subsidies and incentives could shift some production to the U.S. for tax reasons (see "U.S. Inflation Reduction Act Highlights Diverging Approaches With Europe," published March 1, 2023). We also believe certain segments in the power, autos, midstream utilities, agribusiness, and health care sectors could see marginal positive credit impacts from improved cash flows and reduced development and technology costs for renewables and carbon capture. That said, we have not taken any rating actions as a result of the IRA because related credit improvements will take time to materialize. New technologies and product developments will be only gradual and would need to be material to significantly alter a company's competitive advantage and overall creditworthiness.

The Inflation Reduction Act: What We're Watching

Net-zero economic shift
Federal subsidies to incentivize the transition to net-zero emissions could, from a credit perspective, favorably position U.S. entities over EU-based organizations.



Energy transition in high gear
Turbocharging renewables development while protecting nuclear and oil and gas base-load generation underscores broad-based provisions for the power sector.

Economic growth
Near-term financial benefits in the act are unlikely to dramatically offset S&P Global Economists' 2023 full-year baseline or downside scenario forecasts.

Fine print
As federal agencies approach the implementation deadline, the final rules could influence outcomes and limit participation by some entities.

EU-based entities could become more exposed to tougher environmental regulations. Generally speaking, climate transition risks may increase in future years if regulations become more impactful. The potential for environmental regulations to tighten, and therefore increase climate transition risks for companies, is particularly relevant for EU-based entities with significant and carbonized footprints given the EU's stringent climate regulations. Indeed, the EU's Green Deal and Fit for 55 policies feature higher carbon pricing as the main policy instrument, as well as binding sector targets, to both decarbonize and reduce dependence on fossil fuels. The EU's intention is to curb demand for more carbon-intensive products and services. This comes at a cost, which could affect the competitiveness of EU-based export industries--notably, but not only, compared to U.S peers.

Climate Physical Risks

Infrastructure, scale, scope, and diversification can be key mitigants, and location matters

Climate physical risks could have significant financial implications for some assets in certain jurisdictions, if and when such risks materialize. But where and when physical risks might crystallize and cause economic loss is inherently unpredictable, as are the frequency and severity and how risks and costs might be mitigated. This is the main reason why climate physical risks have negatively influenced the credit quality of only about 4% of nonfinancial corporates, or about 170 rated entities, as reflected in our ESG Credit Indicators. This limited overall net credit influence on our rated universe reflects the inherent difficulty of estimating a net economic loss ahead of a climate physical risk event, which are mostly unpredictable. It also reflects that many corporates have a fair degree of diversification of their operating assets and can potentially divert supply chains through alternative channels to avoid material operating disruptions. Many entities can also trigger insurance coverage to manage losses. However, exposure to increasingly extreme

weather events can adversely affect the cost of insurance and can lead to coverage becoming unaffordable or not available at all. We have observed significant insurance rate hikes in areas that habitually experience weather-related losses, and some insurers have withdrawn from certain markets--for example, Florida and California (hurricanes and wildfires, respectively)--where writing new business or renewing policies is unattractive. In our view, the future availability and affordability of insurance coverage should not be taken for granted and could create additional risks for corporates.

More generally, the limited visibility of future climate impacts and companies' efforts to adapt might constrain our ability to factor in potential effects in advance. At the same time, certain geographic areas could face greater physical risk exposures than others (see "Weather Warning: Assessing Countries' Vulnerability To Economic Losses From Physical Climate Risks," published April 27, 2022). An entity's degree of exposure to physical risks through extreme weather events depends on, among other things, geographic location, levels of economic development and vulnerability, and the choices, implementation, and success of climate adaptation options. For instance, this could be the case for entities that operate in areas of the U.S. that are more exposed to climate hazards, such as California or the South Eastern states, which represent a greater proportion of our negative environmental credit indicators (that is, E-3, E-4, and E-5; listing physical risks as a factor) in our credit analysis. Similarly, entities that rely more heavily on nature, such as those operating in the agricultural sectors, are overly represented. An entity that would find it harder to move assets due to its inherently local footprint, such as a regulated utility or airport, could also be more exposed to climate physical risks.

Surveilling climate-related factors

Despite the low number of climate-related rating actions historically, including over the past two years, we believe climate transition risk and physical risk could become highly significant ESG credit factors that affect the creditworthiness of rated entities. This is both because of policymakers' efforts to reduce emissions or ensure GHG emissions reflect their full social costs, and because of the potentially increased impacts from more frequent and extreme weather events.

We believe climate regulations and policies will continue to evolve, but likely similarly to how they do today--in an uncoordinated and often unpredictable manner across sectors and regions. This will make our task of measuring the effects of regulations and policies on entities' operating and financial performances ever more complex. This, in our view, may require more granular surveillance within sectors as we assess the credit effects of sometimes diverging regional regulations. Significant incentives worldwide to develop new environmentally-friendly technologies and production processes could also result in greater rating differentiation over time. Entities' ability to access capital is another area of our focus, as pledges and regulations can rapidly evolve and lead to credit underperformance.

We acknowledge the scientific consensus that global warming is inevitable even under the most optimistic (and therefore most disruptive) transition scenario, leading climate physical risks to become more frequent and severe. We believe this will require greater adaptation efforts of our rated issuers, regarding their own assets as well as their supply chains, to minimize disruptions. As we see these risks increasing, we will more closely scrutinize the management of and adaptation to these risks.

Editor: Julie Dillon

Related research

- U.S. Inflation Reduction Act Highlights Diverging Approaches With Europe, March 1, 2023
- Key sustainability trends that will drive decision-making in 2023, Jan. 16, 2023
- Decarbonizing Cement Part Two: Companies Could See Pressure On Ratings As The EU Firms Up Carbon Rules, Oct. 27, 2022
- Carbon Pricing, In Various Forms, Is Likely To Spread In The Move To Net Zero, Aug. 9, 2022
- Weather Warning: Assessing Countries' Vulnerability To Economic Losses From Physical Climate Risks, April 27, 2022
- ESG-Driven Industry Risk Assessments Update For Corporate And Infrastructure Ratings, Jan. 27, 2021

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