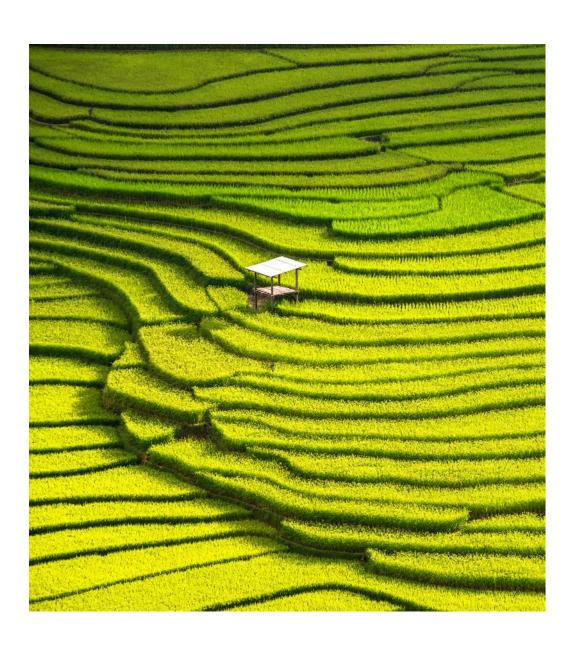
# **S&P Global** Ratings

# How Does S&P Global Ratings Incorporate Environmental, Social, And Governance Risks Into Its Ratings Analysis

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Environmental, social, and governance (ESG) risks and opportunities can affect the capacity and willingness of an entity to meet its financial commitments in many ways.

S&P Global Ratings incorporates these considerations into its ratings methodology and analytics, which enables analysts to factor in short-, medium- and long-term impacts--both qualitative and financial--into their considerations at a number of points in their credit analysis. For example, over the past two years (between July 16, 2015, and Aug. 29, 2017), environmental and climate (E&C) concerns affected corporate ratings in 717 cases, or approximately 10% of corporate ratings assessments and resulted in a rating impact (an upgrade, downgrade, outlook revision, or CreditWatch placement) in 106 cases. Some of these rating actions were triggered by specific events, while others were based on developments that we felt were likely to occur over a longer time horizon.

This represents a marked increase in the frequency with which E&C factors have affected corporate ratings compared with our previous study, published on Oct. 21, 2015 (see "How Environmental And Climate Risks Factor Into Global Corporate Ratings"). Our recent study shows that 717 research updates have featured E&C factors in their analysis, versus 299 in our October 2015 study. Similarly, an E&C factor was key to a rating action in 106 recent cases, versus 56 in the previous study. We believe this difference could reflect, in part, more instances where E&C risk factors are proving to be material to credit quality.

We monitor the impact of ESG factors, as we do all relevant factors, on an entity's credit profile. Our view will evolve as new information becomes available, or as the issuer's fundamentals change.

Our ratings are forward-looking and they incorporate our financial forecasts. These forecasts reflect the period over which we consider we have a clearer view of an entity's potential financial performance, taking into account capital structure, and the potential impact of relevant factors (including ESG risks and opportunities). Generally, our forecasts cover a time horizon of up to two years for speculative-grade corporate entities (that is, those rated 'BB+' and below) and no more than five years for investment-grade entities (rated 'BBB-' and above). We also consider whether the credit profile is sustainable beyond those periods. If we have a high degree of visibility and certainty about risks or opportunities that may crystallize for an issuer beyond the typical forecast period, we factor those into our credit ratings, and potentially into our financial forecasts, as appropriate.

# **Definition Of An Issuer Credit Rating**

An S&P Global Ratings issuer credit rating is a forward-looking opinion about an obligor's creditworthiness, which focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. We also assign issue ratings to certain obligations of the obligors. The factors that we incorporate into each rating are described in detail in our criteria for each sector.

Therefore, the impact of ESG risks and opportunities would, if sufficiently visible and material, be factored into our financial forecasts. In some cases, our view of the materiality and visibility of ESG risks and opportunities, and how effectively an entity is mitigating those risks, extends beyond our forecast time frame. These factors may still be captured in our qualitative rating considerations if we have a high degree of visibility and certainty about their risks and opportunities. We monitor the impact of these ESG factors and our view will evolve as new information becomes available, or as the issuer's fundamentals change.

# **ESG Risks In Our Analysis**

# **Corporates**

Our corporate analysis typically considers ESG risks in the context of the company's business risk profile, financial risk profile, and management and governance assessment. A corporate entity's capacity and willingness to meet its financial commitments as they come due depends on factors such as:

- The size and stability of its earnings and cash flows relative to its financial commitments; and
- The current, future, or potential emerging risks and opportunities that could change the entity's earnings, cash flows, and financial commitments.

Therefore, when assigning corporate ratings, we consider factors such as the strength and durability of an entity's business, the size and structure of its financial commitments, its liquidity, and the quality of its management and governance. We also consider credit risks that could weaken the entity if they crystallize.

ESG risks and opportunities are most often considered in our assessment of the company's:

- Business risk (specifically, its competitive position);
- Financial risk (through our cash flow/leverage assessment and financial forecasts); and
- Management and governance.

The management and governance assessment includes consideration of environmental and social risk management, as relevant. At the industry level, we also consider industry-specific key credit factors, which may include the effectiveness of ESG risk management.

# Sovereigns

Our sovereign analysis will typically consider ESG factors in the context of the assessment of institutional quality and governance effectiveness, itself a key part of the overall analysis. Institutional quality and governance effectiveness is a key sovereign rating factor that typically accounts for roughly a quarter of the indicative sovereign rating. Social factors also function as an integral indicator of the quality of institutional effectiveness. Our view of social cohesion is linked to economic growth. In examining how environmental factors affect sovereign ratings, we typically consider a five- to 10-year time horizon.

Although climate change poses a negligible direct risk to sovereign ratings on advanced economies, on average, ratings on many emerging sovereigns (specifically those in the Caribbean or Southeast Asia) would likely come under significant additional pressure over time. Of course, in an integrated world such as today's, what happens in emerging and developing countries can have indirect repercussions for advanced economies as well, for example, through trade and migratory flows.

# U.S. public finance

Our U.S. public finance analysis will typically consider ESG factors in the context of management effectiveness and planning. Our assessment of U.S. municipalities, states, and not-for-profit enterprises specifically includes a focus on their management and the effectiveness of their long-term planning. Where relevant, this includes our analysis of the quality of their climate risk

assessments, identification by management of changes in climate regulation, and possible effects on the key credit factors outlined in our criteria.

#### Financial institutions

Our financial institutions analysis will typically consider ESG factors in the context of the Banking Industry Country Risk Assessment (BICRA), risk position, and governance assessments. Our analysis of ESG risks and strengths permeates our bank rating methodology. The starting point for assigning a rating to a bank in a given country is the anchor we derive from our BICRA methodology. In applying this framework, we seek to identify deficiencies in a banking system's governance and transparency, or material systemwide effects related to climate change.

As part of our analysis of a bank's business position, we also form a view of its governance. ESG factors are also included in our assessment of a bank's risk position, which incorporates risks that are not captured directly in our capital model.

#### Insurance

Our insurance methodology typically considers ESG factors in the assessment of industry and country risk; in our analysis of the insurer's competitive position; in our capital analysis; and in the assessment of management and governance and enterprise risk management (ERM). Our insurance methodology takes a similar approach to our corporate and bank criteria frameworks, weaving analysis of ESG risks and opportunities into several aspects of the overall rating process. For example, we incorporate ESG concerns into our assessment of insurance industry and country risk and into our analysis of each insurer's competitive position, as appropriate. We also explicitly incorporate a risk charge to capture the impact of one-in-250-year annual catastrophe losses in our capital model and assess management and governance and ERM for rated insurance entities, including ESG risks where relevant.

# **Frequently Asked Questions:**

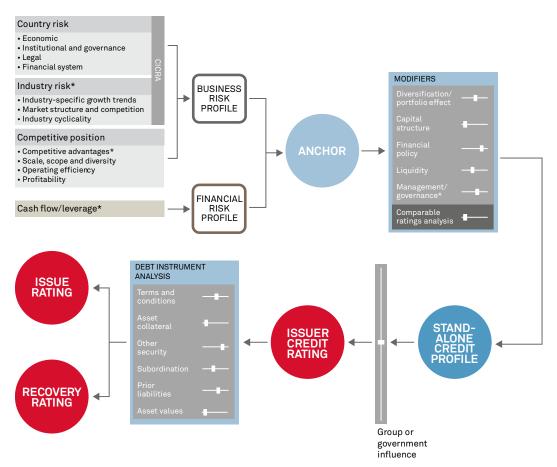
## **Corporate Entities**

# How do ESG risk factors affect S&P Global Ratings' view of the creditworthiness of corporate entities?

In our rating analysis, we evaluate the impact of material, known credit risks that could reduce the obligor's creditworthiness; these include ESG risks. Chart 1 shows which areas of our corporate criteria framework are most likely to include consideration of ESG risks: industry risk, competitive position, cash flow/leverage, and management and governance.

Chart 1

#### **Corporate Criteria Framework**



<sup>\*</sup>Factors most likely to include consideration of environmental, social, and governance risks.

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#### Management and governance:

We specifically include ESG considerations in our management and governance category of analysis. This analysis addresses how management's strategic competence, organizational effectiveness, risk management, and governance practices shape the company's competitiveness in the marketplace, the strength of its financial and risk management, and the robustness of its governance.

The management and governance criteria explicitly references environmental and social risk in the comprehensiveness of risk management standards and tolerances section, which states that:

"Corporate enterprises with a deliberate, consistent, articulated, resourced, and integrated approach that effectively identifies, selects, and prudently mitigates risks are more likely to build long-term credit strength as compared to enterprises with a casual, opportunistic, or reactive approach. Business managers demonstrate proficiency by institutionalizing comprehensive policies that recognize the complex interdependencies of the risks their businesses face, the trade-off between risk and reward, and the interplay between business and financial risk. The management of environmental and social risk is included under this subfactor."

#### Industry risk:

Visible environmental and social risks (and opportunities) that have or could have a material effect on the issuer's creditworthiness are analyzed within the appropriate section of the corporate criteria framework. For example, if we consider that emerging or increasing environmental or social risks will cause industry-specific growth trends to deteriorate, or the level and trend of industry profit margins to weaken, we may revise down our assessment of industry risk for that industry. This, in turn, would weigh on the business risk profiles of rated obligors in that industry.

#### Competitive position assessment:

If a ratings committee considered that environmental and social factors would affect an obligor's competitive position and so weaken or strengthen its creditworthiness, we would capture this in our competitive position assessment.

#### Cash flow/leverage--financial forecasts:

Similarly, if a ratings committee expects that an obligor's exposure to ESG risks and opportunities will affect its earnings, cash flow generation, and financial commitments (and that the impact can be reasonably estimated) we could factor the impact into our financial forecasts in our cash flow/leverage assessment.

In addition, the consideration of ESG is referenced throughout the criteria. We identified 98 directly relevant environmental and climate risk references in our corporate criteria (including the industry-specific Key Credit Factor criteria articles, which are used in conjunction with our corporate criteria to rate entities operating in specific industries).

Over what time horizon does S&P Global Ratings assess corporate entities' creditworthiness both from a qualitative perspective and in developing financial forecasts? Over what time frame is ESG considered? How do we differentiate between entities, sectors, and regions? How do we take into account changing circumstances or facts?

#### Qualitative ESG considerations:

We strive to factor in, on a qualitative basis, all risks and opportunities an issuer could face for which we have a high degree of visibility and that we anticipate could have a material impact on credit quality. Our ratings are also subject to ongoing surveillance and can be subject to change.

#### Financial impacts of ESG considerations:

That said, we consider that the appropriate forecast horizon over which to create our financial forecasts is generally less than two years for a higher-risk, speculative-grade rating and generally no more than five years for an investment-grade rating. The different rating horizons signify that entities rated investment-grade are less vulnerable than those rated speculative-grade to the many factors in the business, financial, natural, and social environments. We also consider whether the credit profile is sustainable beyond those periods. If we have a high degree of visibility and certainty about risks or opportunities that may crystallize for an issuer beyond the forecast period, we factor those into our qualitative credit considerations, as discussed above, as appropriate.

#### ESG impact on entities, industries and regions:

ESG risks and opportunities may be relevant to our opinion of the creditworthiness of rated entities across sectors, but the materiality and visibility of those risks--as well as our assessment of the cost and effectiveness of any measures taken to mitigate or eliminate those risks--and opportunities can differ by entity, industry, and country, and can change over time.

#### Impact of policy changes:

In addition, rating actions may depend on future policy actions that impose new costs or create opportunities for rated entities. A rating can reflect the potential effects of a given policy action once we believe that policy is highly certain (for example, if a related law or regulatory requirement has been, or is close to being, adopted). This makes its potential credit implications more predictable. In some cases, we would also consider the potential credit implications, and possibly take rating actions, where a policy's implementation date lags when it was agreed and put in place.

#### How are credit risks, including ESG risks, surveilled?

We maintain surveillance on outstanding credit ratings on an ongoing basis. The frequency, timing, method, and extent of surveillance are dynamic; surveillance activity may include assessment of:

- Specific risk considerations and expectations relevant to an issuer/issue, transaction, group, or class of rated transactions;
- The impact of changes in macroeconomic or financial market considerations; and
- The availability of new information, derived from a variety of sources, that is relevant to creditworthiness.

An obligor's exposure to credit risks, including environmental, social, and management and governance risks, may evolve over time. A risk may become more visible or more certain, or the obligor may take action to mitigate the risk that reduces or eliminates its risk exposure. As a result, the effect of ESG risks and opportunities on obligor creditworthiness may evolve.

In some cases, an insignificant risk or strength that is not currently considered material to the obligor's creditworthiness can later become material. This could happen, for example, if new information becomes available or there is a relevant policy or legal change. Our opinion regarding the potential size and visibility of the risk or opportunity, or when it may crystallize affects the impact and the timing of the impact on the obligor's overall creditworthiness.

As new information emerges over time, we monitor emerging credit risks, including ESG risks and opportunities. These may affect a single obligor or some or all of the obligors operating within a specific industry. We capture and incorporate such risks through the surveillance and review of all existing and future information that is relevant to the obligor's creditworthiness.

### How do ESG risks affect credit ratings?

In a recent commentary ("How Environmental And Climate Risks And Opportunities Factor Into Global Corporate Ratings - An Update," published on Nov. 9, 2017) we detail the results of our second two-year review of how E&C factors affected corporate ratings between July 16, 2015, and Aug. 29. 2017. During that period, we found 717 cases where E&C concerns were relevant to the rating, and 106 cases where E&C factors--both event-driven and those occurring over a longer time horizon--resulted in a change to the rating or outlook, or a CreditWatch action. As in our previous review of E&C factors, most affected ratings were in the oil refining and marketing industry, among regulated utilities, and in the unregulated power and gas subsector.

To show the variety of E&C risk and opportunity in our corporate credit ratings, we also mapped the 106 cases where E&C risks and opportunities have had a material impact on credit quality to the Financial Stability Board's Task Force On Climate-Related Financial Disclosures (TCFD) climate-related risk and opportunity definitions.

#### Other ESG research:

We complement this entity- and issue-specific research by publishing thematic, macrolevel articles describing how we consider and assess particular risk factors, and current and emerging risks. This body of research includes several scenario-based research commentaries specifically addressing how E&C risk could affect credit quality in more exposed sectors such as utilities and commodities. In the related research section below, we list 29 recent climate-related research articles we have published. These articles examine climate-related factors across the sovereign, public finance, insurance, banks and other financial institutions, and corporate sectors. We further complement our body of published research through an ongoing program of outreach to stakeholders to explain our criteria, our ratings, and our analytics, including our ESG analytics.

The July 2017 UN Principles for Responsible Investment report "Shifting Perceptions: ESG, Credit Risk and Ratings" acknowledged our ongoing work. The report described in its summary of Progress on ESG that the global credit rating agencies, including S&P Global Ratings, are "leading the pack--strong efforts".

# **Sovereigns**

# How does S&P Global Ratings incorporate governance quality in its sovereign rating analysis?

#### Institutional quality and governance:

Institutional quality and governance effectiveness is a key factor for sovereign ratings. Indeed, it accounts for roughly one quarter of the indicative sovereign rating (see <u>"Sovereign Rating Methodology,"</u> published on Dec. 23, 2014). We also consider this factor to be important when deriving the corporate and insurance country risk assessment (see chart 1).

When assessing institutions and governance, S&P Global Ratings opines on the effectiveness, stability, and predictability of policymaking, political institutions, and civil society. We also analyze accountability and transparency. The transparency and accountability of institutions has a direct bearing on sovereign creditworthiness--transparent, accountable institutions reinforce the stability and predictability of both political institutions and the political framework, although they may not reinforce the stability of a ruling political class or party.

In addition, transparent and accountable institutions, processes, and data are important because they enhance the reliability and accuracy of information. They also help spread news of any significant shifts in a country's policymaking or the occurrence of risks relevant to sovereign credit risk in a timely manner.

All of the analysis is highly judgmental, rather than numbers-driven. In our view, the existing quantitative indicators that measure certain facets of sovereign governance standards do not fully encapsulate what we are attempting to measure: the ability and willingness of governments to take effective and timely action to avert financial crises and default in the long term (see, for example, "Sovereign Postcard October 2017: Corruption," published on Oct. 11, 2017).

Institutional factors can shape sovereign credit risk in any country, not just in developing and emerging countries. Indeed, when we lowered the sovereign rating on the U.S. to 'AA+' from 'AAA' in August 2011, we did so based on our view that the effectiveness, stability, and predictability of American policymaking and political institutions had weakened at a time of ongoing fiscal and economic challenges. Similar considerations led to the two-notch downgrade of the U.K. after the Brexit referendum in June 2016.

One important distinction needs to be emphasized: Although we believe that political factors matter in assessing sovereign credit risk, we don't take political positions in a normative way.

## How do you integrate environmental and social factors into sovereign ratings?

#### Environmental and social factors:

In our view, environmental and social considerations both matter, and could be significant, but they have a less formal place in our methodology than the quality of governance. Social cohesion is an integral part of the previously described institutional assessment. We consider that stable, effective, and predictable policymaking often goes hand-in-hand with the cohesiveness of civil society, as demonstrated by social mobility, social inclusion, prevalence of civic organizations, the degree of social order, and the capacity of political institutions to respond to societal priorities.

We consider that a growing sense of economic exclusion and unfair distributional outcomes has promoted political polarization across a number of advanced economies (see "Why Eurozone Sovereign Ratings Have Not Recovered Despite The Cyclical Recovery," published on June 19, 2017). Although it is difficult to disentangle from other factors, social inclusion is therefore likely to lift ratings, as it fosters the stability and effectiveness of policymaking, and also underpins a productive economy where skills and jobs bolster growth, national savings, and public finances.

On the other hand, where a country has a significant shortfall in basic services to the population and infrastructure, its finances are likely to come under prolonged pressure. Our methodology indicates that in such circumstances, we should lower the public finances assessment. All else being equal, this would weigh on the rating.

We consider environmental degradation or a weakening natural resource base unlikely to undermine economic and social indicators or political institutions to such an extent that it would destabilize the sovereign rating within the typical rating horizon of five to 10 years. That said, we

consider that ecological underpinnings do play a role; indeed, climate change could have significant implications for sovereign ratings in the decades to come.

In our view, natural catastrophes such as droughts, floods, or storms are likely to increase as the planet warms up and an increase in the number of extreme weather events, especially storms and floods, could affect sovereign ratings. Although climate change poses a negligible direct risk to sovereign ratings on advanced economies, on average, ratings on many emerging sovereigns (specifically those in the Caribbean or Southeast Asia) would likely come under significant additional pressure over time. Of course, in an integrated world such as today's, what happens in emerging and developing countries can have indirect repercussions for advanced economies as well, for example, through trade and migratory flows.

We calculated the potential impact of climate change on sovereign ratings in "Storm Alert: Natural Disasters Can Damage Sovereign Creditworthiness," published on Sept. 10, 2015. The research attempts to quantify the severity of the economic and ratings impact of rare but calamitous events such as earthquakes, tropical storm and surge, winter storms, and floods. The calculated impact is only partial because it doesn't reflect all the risks that come with climate change and it stops in 2050. The actual ratings impact of climate change could, therefore, be larger than we already assume. The pressure on ratings would manifest itself through an enfeebled growth performance, pressures on public finances, and the balance of payments, but also through social and institutional dislocations. Like the aging of societies, climate change is a slow process that will over time have an increasing impact on nations' economic and social realities, and therefore on sovereign ratings (see "The Heat Is On: How Climate Change Can Impact Sovereign Ratings," published on Nov. 25, 2015)

# How are ESG risks evaluated in sovereign, international public finance, and U.S. public finance?

#### U.S. public finance--management and governance:

Our criteria for rating U.S. public finance (USPF) entities varies across general government and many different tax-secured and municipal enterprise sectors. These include many specific pledged securities of governmental taxes, states, school districts, hospitals, utilities, public power providers, transportation authorities, housing authorities and educational, and not-for-profit entities. All of our USPF criteria include an assessment of management, including to what extent long-term planning is in place and actively used.

Where relevant, our criteria specifically identify climate risk assessments in our analysis of management and operational characteristics. For example, our water utility criteria include an assessment of drought planning, whereby regional or statewide water plans provide high-level frameworks; establish best practices for resource management; and define priorities among users, such as homes and agriculture. Our electric utility and wholesale cooperative criteria have long evaluated environmental regulations, including those associated with transitioning to less carbon-intensive production, the current regulatory climate notwithstanding. Similarly, a component of criteria for assessing general obligation debt of state or local government is our Financial Management Assessment. This includes assessing policies and practices such as long-term financial and capital planning, and maintaining a minimum level of reserves.

### **Financial Institutions**

# How do ESG risk factors affect S&P Global Ratings' view of banks' creditworthiness?

#### BICRA:

Our analysis of ESG risks and strengths permeates our bank rating methodology. The starting point for assigning a rating to a bank in a given country is the anchor we derive by applying our BICRA methodology (see "Banking Industry Country Risk Assessment Methodology And Assumptions," published on Nov. 9, 2011). This macroanalysis of the industry and economic risks in a given market could, for instance, be affected by identified deficiencies in the overall quality of a banking system's governance and transparency, or material systemwide effects related to climate change.

#### Business, capital, and risk profiles:

To derive a rating on a specific bank, we then modify the anchor by incorporating our assessments of factors including its business, capital, and risk profiles (see "Banks: Rating Methodology And Assumptions," published on Nov. 9, 2011). In assessing the business position, we analyze a bank's revenue stability, the diversification of its revenue stream, and the quality of its management and strategy. If a bank's business activities are concentrated in an area or sector we consider could be marred by climate change, this could weaken its business position and put its rating under pressure. Even if a bank reduces its exposure to climate-sensitive industries, the pressure on its business position may not ease until it finds an adequate replacement for the lost revenue.

That said, if a bank develops expertise and becomes an industry leader in a climate change-related niche, it could reinforce its business profile, to some extent, by strengthening revenue stability and increasing market share.

#### Governance:

As part of our analysis of a bank's business position, we also form a view of its governance, which is an important component of our assessment of the quality of management and strategy. For example, in Russia and the Commonwealth of Independent States, we have recently observed that in several cases management and governance shortfalls have contributed to bank failures (see "How Management And Governance Lapses Contributed To Bank Failures In Russia And The CIS," published Oct. 12, 2017). These weaknesses include opaque ownership, business models that rely too heavily on new business at unsustainable margins, unstable management teams, inflated capital values, and extensive engagement in related-party lending.

The risk of ineffective governance is not region-specific or inherent to countries that have a weak institutional framework. For instance, some financial institutions in developed economies, including those in Western Europe and the U.S., have uncovered large-scale governance failures, frequently arising from the interaction of poor incentive structures and limits on managerial oversight over large and complex financial institutions.

#### Risk position:

Although our capital assessment looks at expected credit- and market-risk elements of a bank's activities, our assessment of a bank's risk position incorporates risks that are not captured

directly in our capital model. Therefore, we consider ESG factors in our assessment of risk position. For example, our ratings could be affected if we anticipate that a bank will suffer losses due to the impact of climate change on its loan and investment portfolios. This could include losses from climate-risk-related exposures that emerge on assets that act as collateral for loans.

The risk position assessment may also weaken if, in our view, the bank is exposed to significant legal risks. Costly litigation arising from weaknesses in governance has, in many recent cases, given rise to new risks not related to the credit quality of loans and investments, even for traditional banking activities (see "U.K. Banks Start To Emerge From Their Past Misdemeanors," published on June 7, 2017). Alternatively, expected losses can also weigh on our projected earnings for a bank, and thus on our capital and earnings assessment. Potential losses could, for example, be linked to the upcoming settlement of pending litigation, losses on investments, or an expectation that reserves could rise significantly due to climate change exposure in the underlying loans.

# How do ESG risk factors affect S&P Global Ratings' view of insurers' creditworthiness?

Our insurance methodology takes a similar approach to our corporate and bank criteria frameworks, weaving analysis of ESG risks and opportunities into several aspects of the overall rating process. Our criteria for determining insurance ratings (see "Insurers: Rating Methodology." published on May 7, 2013) incorporate our assessments of insurers' business and financial risk profiles.

In assessing an insurer's business risk profile, we analyze the risks inherent to the insurance markets in which it operates. Our insurance industry and country risk assessment incorporates our view of the insurance markets' economic, political, and financial system risks; its regulatory framework; and its growth prospects--climate change could affect all of these factors. An insurer's competitive position may also be affected by exposure to ESG risks, which could affect the strength of the insurer's brand name and its profitability.

Our assessment of an insurer's financial risk profile includes our prospective view of capital adequacy. Applying our capital model criteria, we incorporate a risk charge to capture the impact of one-in-250-year annual catastrophe losses (that is, the level of annual losses that has a probability of 0.4% of being exceeded) in our capital model. Although climate change may affect the magnitude or frequency of such extreme weather events, there is no scientific agreement about the precise quantitative impact that the industry could use in its natural catastrophe models. The uncertainty in an insurer's capital and exposure management relating to catastrophe models could lead us to conclude that risks are understated in our capital analysis and that this weighs on our capital and earnings assessment.

The financial risk profile assessment also incorporates our analysis of the insurer's risk position. Here, we measure risks not captured in the capital and earnings analysis and risks that could make capital more volatile. If we conclude that exposure to climate change (or other ESG risks) is material and contributes to above-average volatility in prospective capital adequacy, we may revise down our risk position assessment.

Our ratings analysis also incorporates our view of an insurer's management and governance and ERM. How well insurers prepare themselves to deal with the challenges presented by ESG risks could be a relevant consideration in these assessments.

## How are ESG factors assessed as part of our project finance methodology?

Under our project finance methodology, ESG risks will generally flow through in our analysis and assessment of a project's construction and operations phases. On the construction side, our methodology assesses the likelihood that a project will have adequate funding, so that it can be built and completed on time and within budget; and that the project will be capable of operating as designed and as expected. If ESG risks materially affect funding adequacy, timing of completion, or the size of the budget required to complete construction on time, we could modify the construction stand-alone credit profile (SACP) of a project finance entity. Similarly, ESG risk and opportunity (if applicable) may also affect our operations phase SACP assessment and forecasting of revenues, operating and maintenance costs, and capital costs.

Our Nov. 9, 2017 update on how E&C risks and opportunities factor into global corporate ratings identified 20 cases over the past two years where such issues have directly resulted in a rating action on a project financing. Of these, over two-thirds were negative rating actions. Once such example highlighted in the report was Aberdeen Roads (Finance) plc where the outlook was revised to negative and the ratings was subsequently lowered due to severe flooding causing delays in the project's construction program, an example of acute physical risk under the TCFD terminology.

ESG factors may also affect counterparties on which a project finance transaction depends. In these situations, we would apply the relevant methodology--most often, our corporate or financial institution rating methodology--to the counterparty first, and then determine how the knock-on ESG risk would affect the transaction. Counterparties in a typical project finance deal would include: construction counterparties; equipment supplier counterparties; operating and maintenance counterparties, raw material and supplier counterparties; and revenue counterparties.

### Are ESG risks relevant to structured finance ratings?

Structured finance vehicles typically comprise a pool of financial assets such as loans, bonds, leases, or receivables that generate cash flow over time. Our analytics focus on the following factors: the credit quality of the securitized assets; legal and regulatory risks; payment structure and cash flow mechanics; operational and administrative risks; and counterparty risks. For example, as part of the operation and administrative risks, we review key transaction parties, such as the party that acts as the ongoing servicer of the asset pool (see the "Global Framework For Assessing Operational Risk In Structured Finance Transactions," published on Oct. 9, 2014). Though ESG is typically not a factor directly considered in our structured finance analytics, it may have a negative indirect impact due to ESG risks. For example, the possible effects of ESG risks include:

- The credit rating on a key transaction party, such as the servicer of the pool is lower;
- The credit rating on a counterparty is lower; or
- The ratings on specific corporate obligors in a collateralized loan obligation pool are lower.

We would consider the impact of this information in our analytics when reviewing the specific transactions, although it may not ultimately affect the ratings on the structured finance transaction.

# Related Criteria And Research

#### **Related Criteria**

- Sovereign Rating Methodology, Dec. 23, 2014
- Project Finance Framework Methodology, Sept. 16, 2014
- Corporate Methodology, Nov. 19, 2013
- Methodology: Industry Risk, Nov. 19, 2013
- Insurers: Rating Methodology, May 7, 2013
- Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- Banking Industry Country Risk Assessment Methodology And Assumptions, Nov. 9, 2011
- Banks: Rating Methodology And Assumptions, Nov. 9, 2011
- Principles Of Credit Ratings, Feb. 16, 2011

#### Climate-Related Research

- How Environmental And Climate Risks And Opportunities Factor Into Global Corporate Ratings -An Update, Nov. 9, 2017
- Credit FAQ: Understanding Climate Change Risk And U.S. Municipal Ratings, Oct. 17, 2017
- Credit FAQ: An Overview Of U.S. Federal Disaster Funding, Sept. 19, 2017
- In A Storm's Aftermath: Assessing The Impact On Local Government Credit Quality, Sept. 13, 2017
- How Long 'Til We Get There? Major Post-Hurricane Recoveries In Recent Years, Sept. 7, 2017
- Near-Term Rating Stability Does Not Preclude Longer-Term Challenges For Hurricane Harvey-Affected Texas MUDs, Sept. 5, 2017
- Beyond Green Bonds: Sustainable Finance Comes Of Age, April 26, 2017
- Policymakers Play A Role In Preparing Financial Systems For Climate Change Risk, Nov. 10, 2016
- Evaluating The Environmental Impact Of Projects Aimed At Adapting To Climate Change, Nov. 10, 2016
- Climate Finance A Year After Paris: Driving Politics Into Action, Nov. 8, 2016
- Climate Change-Related Legal And Regulatory Threats Should Spur Financial Service Providers To Action, May 4, 2016
- The Heat Is On: How Climate Change Can Impact Sovereign Ratings, Nov. 25, 2015
- Insurers May Anticipate A Smooth Road Ahead On Climate Change, But Their View Could Be Restricted, Nov. 16, 2015
- Economic Research: Reversing Global Warming Requires Nothing Less Than A Global Effort, Nov. 16, 2015
- Climate Change: Building A Framework For The Future, Nov. 13, 2015
- Climate Resilience Can Protect Ratings From Sea-Level Rise And Threats To U.S. Coastal Infrastructure, Oct. 22, 2015
- How Environmental And Climate Risks Factor Into Global Corporate Ratings, Oct. 21, 2015

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