

Evaluate the impact of climate-related scenarios on your portfolios with **Climate RiskGauge**



The prominence of environmental, social, and governance (ESG) issues today is heightening attention on the need to move to a low-carbon economy to protect society. One of the main policy tools considered by governments to facilitate this transition is the introduction, or increase, of a carbon tax that penalizes firms with greenhouse gas (GHG) emissions. Scenario analysis, which looks at different future outcomes based on alternative assumptions, provides a way to better understand the possible risks and opportunities that may arise as a result of such policies.

A Market-Valuation Approach for Climate-Related Transition Risk Assessment

Overview

S&P Global Market Intelligence's Climate RiskGauge is a market-valuation approach that estimates the financial impact of climate transition and physical risk, looking at a compact set of financials as well as a firm's implied market capitalization, in order to arrive to the estimation of the credit score change¹ over a given time-horizon.

This tool can be employed to support a variety of use cases, including (but not limited to) the following:

- **The Task Force on Climate-related Financial Disclosures**² ("TCFD") recommendations on forward-looking scenario analysis.
- **Climate-related stress testing** that regulators are increasingly expecting from financial institutions, at both, single counterparty, and portfolio level.
- Incorporation of climate related risks into **credit-related policies, procedures, strategies, and overall risk appetite** of the financial institution.
- Climate risk-adjusted **valuation of companies** for the purpose of capital markets issuances, merger and acquisitions, and other types of corporate financing and investment activities.

Features

Comprehensive Solution

Climate RiskGauge leverages S&P Global Trucost's database of company-specific Scope 1 and 2, with potential to include Scope 3 carbon emissions as well as the forward-looking data on both, physical and transition risk from the Network for Greening the Financial System ("NGFS"). As a result, the solution provides a granular, company-specific assessment for 45,000+ public companies (financial and non-financial) and several million private companies across industries².

Rigorous Methodology

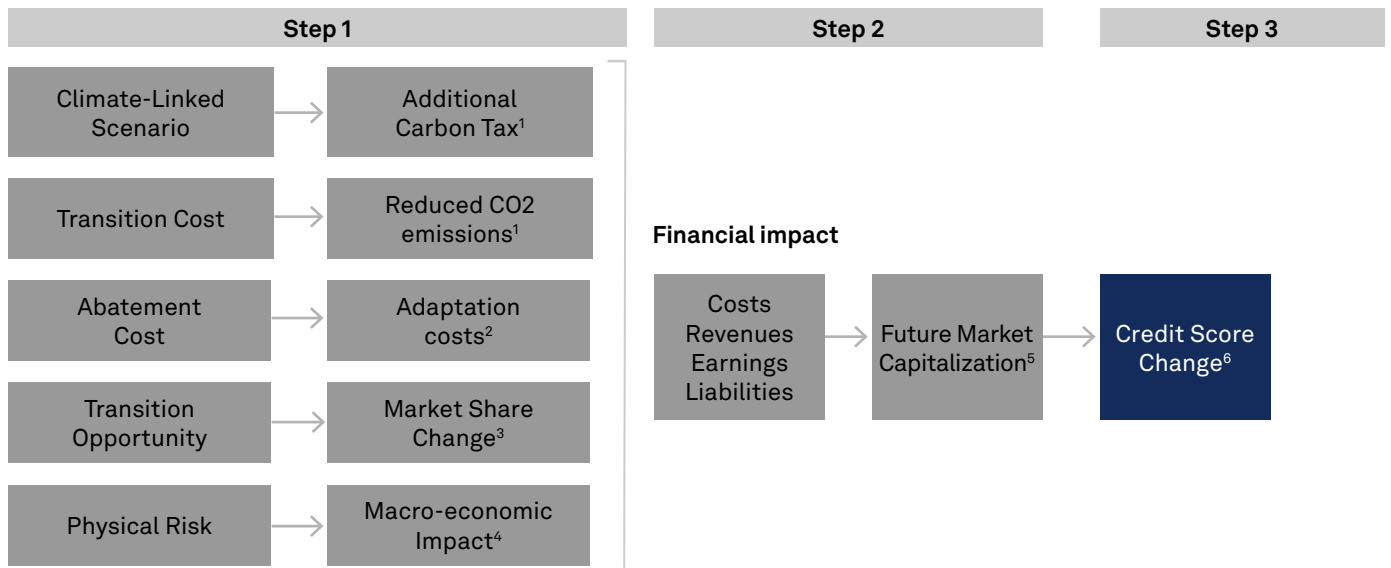
Step 1. The tool considers multiple company responses and captures both transition risks and opportunities at an individual company level. Additionally, the macro-economic impact of physical risk and its related downstream effect on individual companies is factored in.

Step 2. The model's primary outputs include the main financial impact (additional costs, revenues, and change in earnings) and the future market capitalization of each company in the chosen sector, scenario, and year. For private companies, the model generates the main financial impacts, an implied current and future market capitalization leveraging standard market-valuation techniques.

Step 3. Future market capitalization is then used within S&P Global Market Intelligence's Probability of Default Model Market Signals ("PDMS"), a market-driven probability of default (PD) model, to determine the change in creditworthiness of those companies.

¹ S&P Global Ratings does not contribute to or participate in the creation of credit scores generated by S&P Global Market Intelligence. Lowercase nomenclature is used to differentiate S&P Global Market Intelligence credit model scores from the credit ratings issued by S&P Global Ratings.

² Source: S&P Capital IQ Platform, as of September 1, 2019.



Additional Outputs: Scope 1 and Scope 2 emissions data, Additional Carbon Tax costs, Net Earnings Change, Future Market Capitalization, Revenues, EBITDA and Total Liabilities.

Source: S&P Global Market Intelligence, as of November 24th, 2021. Charts and graphs are for illustrative purpose only.

Scenarios Aligned to Renowned Agencies/Associations

The tool enables users to select between:

- A slow, moderate, or fast scenario developed by S&P Global Trucost, spanning a period of 30 years, from 2020 to 2050.
- A user-defined scenario applying a global carbon price risk premium, where the severity of the overall tax increase from current levels is assumed to be independent of the industry sector, the geography, and the time horizon.

It has the flexibility to align with the scenario values from both, the International Energy Agency (“IEA”) and the NGFS. The tool is also regularly updated to reflect the continued evolution in climate-related risk trends.

Flexible and Efficient User Options

Besides flexibility on scenarios, the tool also allows users to utilize the output in several ways. Credit score notch changes can be used in conjunction with internal credit scoring models/frameworks or the credit risk models/frameworks from S&P Global Market Intelligence. Projected financials may also be used independently for a variety of non-credit risk related requirements including company valuations.

The tool can be accessed via S&P Capital IQ/Market Intelligence Excel® templates which help automate financial spreading and provide ease in integration, as these are not dependant on any software or technology.

¹ Applied to Scope 1 and 2 emissions. Includes forecasted CO2 reduction.

² Depends on oil price and long term interest rate

³ Based on proxies for company investments and “fire-power” and “consumer awareness”

⁴ Assessed at the country level on the basis of which downstream impact on individual companies is calculated

⁵ Assuming “Valuation multiple” remains constant

⁶ Using S&P Global Market Intelligence’s Probability of Default Model Market Signals (PDMS), a market-driven probability of default (PD) model

About S&P Global Market Intelligence

At S&P Global Market Intelligence, we understand the importance of accurate, deep and insightful information. We integrate financial and industry data, research and news into tools that help track performance, generate alpha, identify investment ideas, perform valuations and assess credit risk. Investment professionals, government agencies, corporations and universities around the world use this essential intelligence to make business and financial decisions with conviction.

S&P Global Market Intelligence is a division of S&P Global (NYSE: SPGI), the world's foremost provider of credit ratings, benchmarks and analytics in the global capital and commodity markets, offering ESG solutions, deep data and insights on critical business factors. S&P Global has been providing essential intelligence that unlocks opportunity, fosters growth and accelerates progress for more than 160 years. For more information, visit www.spglobal.com/marketintelligence.

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