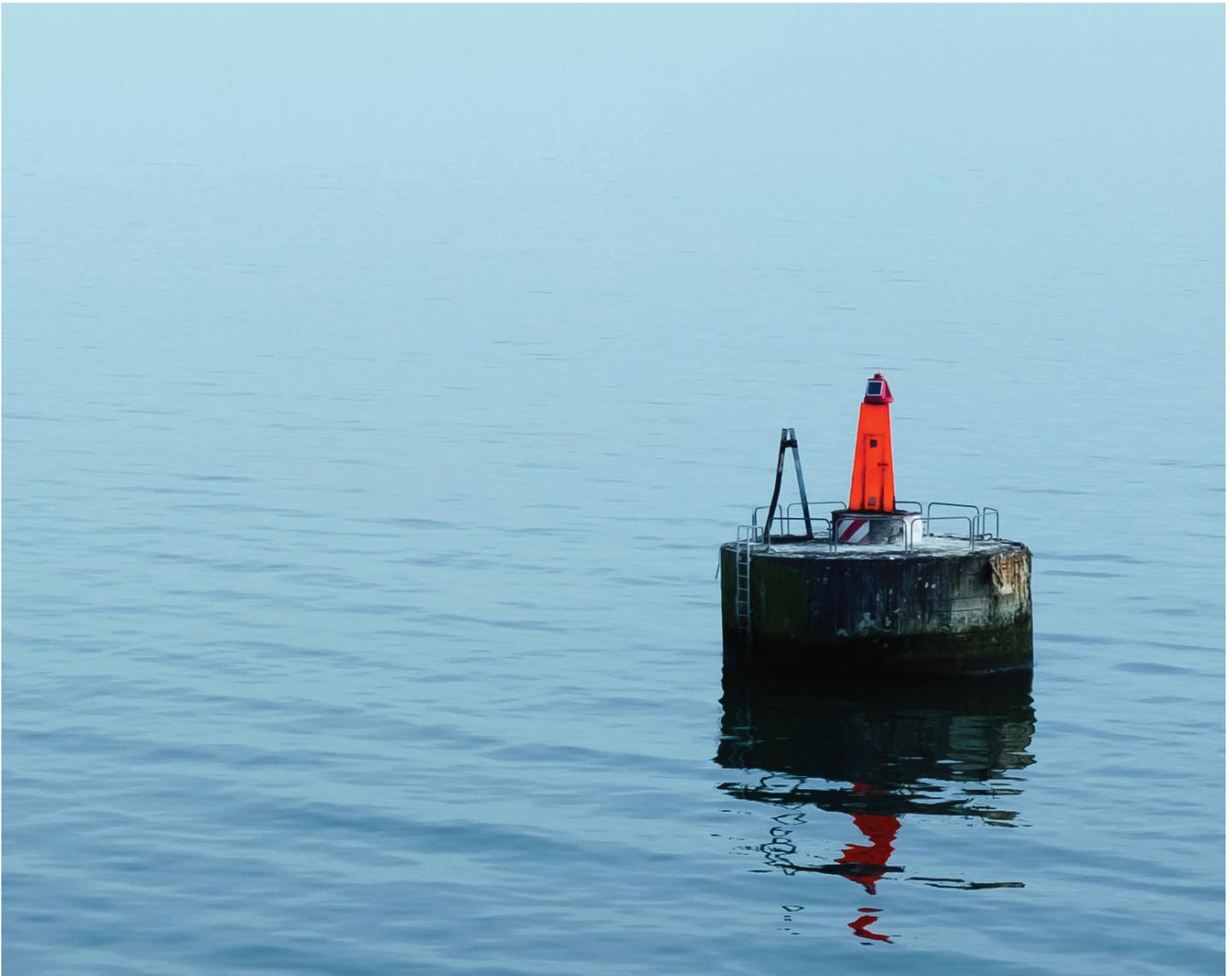# Leading climate scenario analysis for transition and credit risk

Introducing **Climate Credit Analytics,** from
S&P Global Market Intelligence and Oliver Wyman

S&P Global
Market Intelligence

OliverWyman

The five hottest weather years on record have all occurred since 2015.[1] Yet, the global temperature for 2021 is unlikely to be a record year due to the influence of the current La Niña.[2] In addition, 2019 marked the sixth year in a row in which ten or more billion-dollar natural disasters struck the U.S.[3] It was also the year in which California utility PG&E filed for Chapter 11 protection in what The Wall Street Journal dubbed "the first climate-change bankruptcy."

As the effects of climate change and the importance of mitigation become more widely known, the financial risks and implications of inaction have come to the forefront. From the Task Force on Climate-related Financial Disclosures (TCFD) to Climate Action 100+,[4] investors, lenders, regulators, and other stakeholders are calling for greater assessment and disclosure of climate change impacts and financial risks.

To support these efforts, S&P Global Market Intelligence and Oliver Wyman have designed Climate Credit Analytics, a climate scenario analysis and credit analytics model suite. These tools combine S&P Global Market Intelligence's data resources and credit analytics capabilities with Oliver Wyman's[5] climate scenario and stress-testing expertise.

Via a highly dynamic, sector-specific approach, Climate Credit Analytics enables counterparty- and portfolio-level analysis of climate-related financial and credit risks for thousands of public and private companies across multiple sectors globally. The capability is designed for **risk managers, investment professionals, sustainability teams,** and others to assess credit risks related to climate change and the transition to a low-carbon economy.

A comprehensive, tailored approach to assess credit risks under multiple climate scenarios.

Consistent sector-specific analysis

Climate Credit Analytics enables comprehensive and consistent sector-specific modelling, including an evaluation of key high carbon-emitting sectors. This includes: Oil & Gas, Power Generation, Metals & Mining, Automotive Manufacturing, Airlines, and Generalised (i.e., all other industry sectors except Financial Institutions).

Flexible scenario analysis and alignment to supervisory guidance

Climate Credit Analytics enables analysis of the climate transition reference scenarios published by the Network for Greening the Financial System (NGFS), a group of over 80 central banks and supervisors representing 75% of global GHG emissions. NGFS scenarios are based on integrated assessment models developed by the climate science community and include multiple climate transition pathways over multi-decade time horizons.

In addition, users have the option to run customized scenarios or assess near-term exposure to climate transition risks, such as the implementation of a global carbon tax.

Users can access a wider range of scenarios, with options for:

– Time horizons out to 2050

– Multiple temperature targets and transition pathways

– Variety of carbon pricing levels

– Transition opportunities

[1] "Global Temperature Change", Bloomberg, www.bloomberg.com/graphics/climate-change-data-green/temperature.html
[2] "Earth plays it cool, but global warming is unrelenting", Met Office, www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2020/2021-global-temperature-forecast
[3] "Climate at a Glance", NOAA, www.ncdc.noaa.gov/cag/global/time-series/globe/land_ocean/ytd/6/1880-2020
[4] An investor initiative launched in 2017 to engage the world's largest corporate carbon emitters in taking necessary action on climate change.
[5] Oliver Wyman is a global management consulting firm and is not an affiliate of S&P Global, or any of its divisions.

Differentiated data and analytics

The solution is powered by S&P Global Market Intelligence's proprietary datasets and analytics, including:

- Financials and industry-specific data
- Sophisticated quantitative credit scoring methodologies from Credit Analytics
- Company-level greenhouse gas (GHG) emissions and environmental impact data from Trucost
- Coverage of 750,000+ public and private companies globally

The solution automatically extracts relevant company financials, borrower-level credit scores, and industry-specific data to support a bottoms-up modeling approach.

The analysis begins by translating different climate scenarios and sector-specific supply and demand elasticities and market dynamics into drivers of financial performance tailored to each industry, such as production volumes, fuel costs, and capital expenditures (capex) spending. These drivers are then used to forecast company financial statements under various climate scenarios.
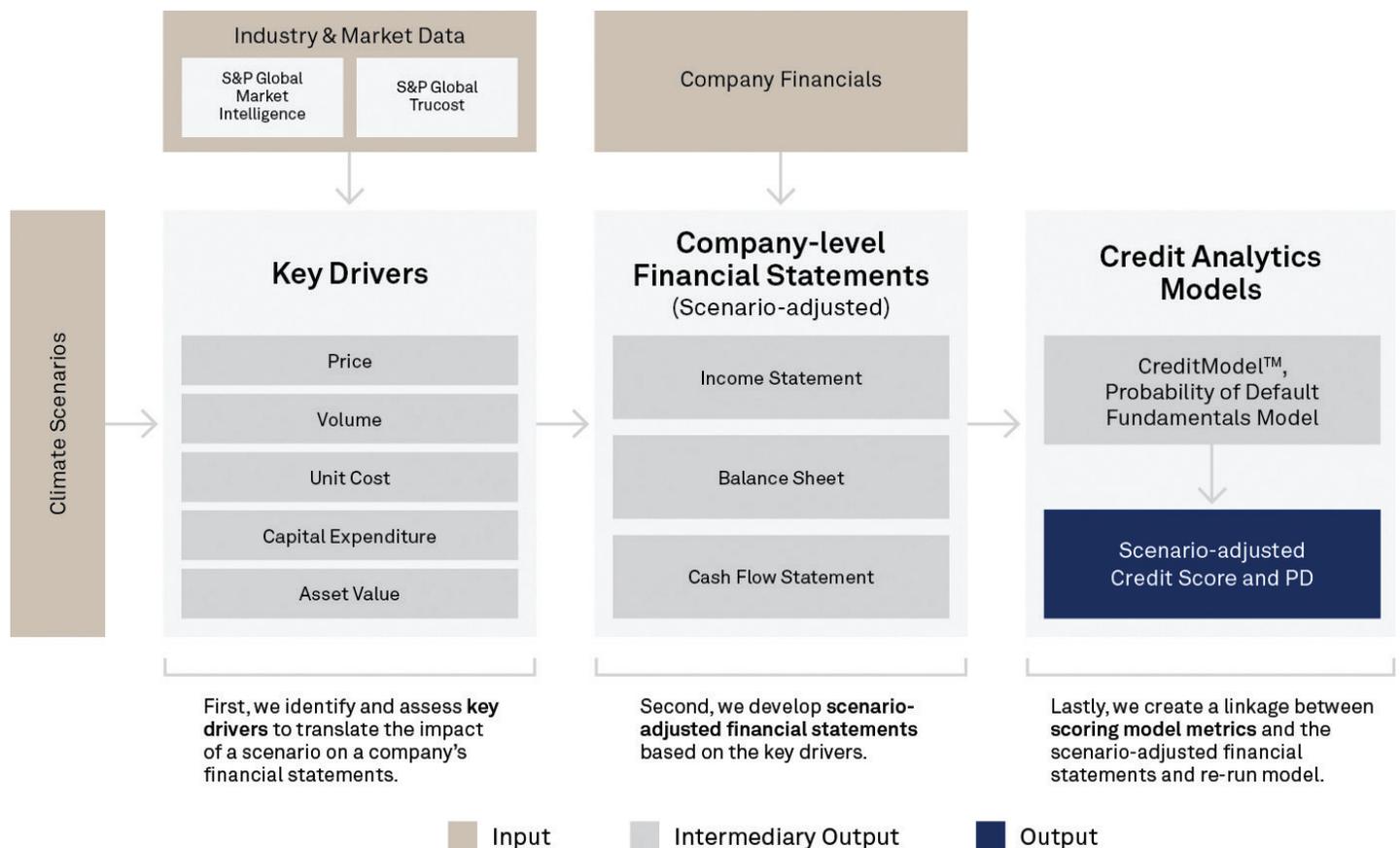
Finally, the financial forecasts are analyzed through Credit Analytics models to calculate impacts on credit scores and probabilities of default. Alternatively, the projected financials may be used independently with internal credit scoring platforms.

A selection of delivery channels

Users can receive information via:

- S&P Capital IQ Pro Excel® templates
- Web Services to integrate with user workflows

Assess the climate exposure of your portfolios with Climate Credit Analytics, a one-stop solution for climate risk assessment.

Industry & Market Data

| S&P Global Market Intelligence | S&P Global Trucost |

Company Financials

Climate Scenarios

Key Drivers
- Price
- Volume
- Unit Cost
- Capital Expenditure
- Asset Value

Company-level Financial Statements (Scenario-adjusted)
- Income Statement
- Balance Sheet
- Cash Flow Statement

Credit Analytics Models

CreditModel™, Probability of Default Fundamentals Model

Scenario-adjusted Credit Score and PD

First, we identify and assess **key drivers** to translate the impact of a scenario on a company's financial statements.

Second, we develop **scenario-adjusted financial statements** based on the key drivers.

Lastly, we create a linkage between **scoring model metrics** and the scenario-adjusted financial statements and re-run model.

■ Input   ■ Intermediary Output   ■ Output

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.

About Oliver Wyman

Oliver Wyman is a global leader in management consulting. With offices in 60 cities across 29 countries, Oliver Wyman combines deep industry knowledge with specialized expertise in strategy, operations, risk management, and organization transformation.

The firm has more than 5,000 professionals around the world who work with clients to optimize their business, improve their operations and risk profile, and accelerate their organizational performance to seize the most attractive opportunities. Oliver Wyman is a business of Marsh McLennan Companies [NYSE: MMC].

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