S&P Global
Market Intelligence

CASE STUDY

A Large Asian Company Links Climate Change and Credit Risk

THE CLIENT:

An Asia-based financial services holding company

USERS:

Risk management team

Regulations on measuring climate-related risks and providing adequate disclosures continue to evolve quickly in Asia and abroad. This warrants the need for risk managers at financial institutions to develop ways to monitor their portfolios' resilience to climate-related financial risks. These financial institutions tend to use of different climate scenarios developed by the Network for Greening the Financial System (NGFS), especially since NGFS is endorsed by and comprises a group of over 120 central banks, financial authorities and observers.[1]

As a leader in ESG measurement and reporting, this Asia-based financial services holding company had been disclosing emission levels in its loan portfolio in line with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) for a few years now. The company will also need to conduct a regulatory-driven stress testing exercise related to climate risks in the near future. To comply with both of these undertakings, it was looking for a unified approach to climate scenario analysis and stress testing to meet the needs of investors, regulators and other stakeholders. While NGFS scenarios are in the public domain, members of the risk management team wanted to utilize a robust methodology that would enable them to link climate impacts, particularly transition risks, with a company's financials to assess and report on credit risks.

[1] NGFS, as of February 14, 2022, www.ngfs.net/en/about-us/governance/origin-and-purpose.

Pain Points

The risk management team wanted to look at the impact of different scenarios for transition pathways and risks on approximately 1,000 of the bank's corporate clients involved in high carbon-emitting sectors and the how this would affect the creditworthiness of obligors. Given the scope of the undertaking, the team needed:

- **A sound methodology to evaluate transition paths** to net zero under different climate scenarios.
- **An automated approach** to produce portfolio-wide results.
- The ability to **capture industry-specific nuances.**
- Access to **extensive and reliable financial and environmental data** required for the analysis.

The team had already worked with S&P Global Market Intelligence ("Market Intelligence") to calculate the carbon footprint of the holding company's operations and those of the companies and assets that it finances. Market Intelligence was contacted to discuss how it could help with this latest initiative.

The risk management team wanted to evaluate the impact of different climate scenarios on the financials of some of its top corporate clients and needed to identify a robust methodology that would generate reliable results.

The Solution

Market Intelligence began by discussing Climate Credit Analytics, a highly dynamic, sector-specific approach that enables counterparty- and portfolio-level analysis of climate-related financial and credit risks for thousands of companies across multiple sectors. The solution makes the critical link between climate change and credit risk by translating climate scenarios into drivers of financial performance tailored to specific industries. These drivers are then used to forecast complete company financial statements under various climate scenarios, including those published by NGFS.

Developed through a collaboration between Market Intelligence and Oliver Wyman,[2] Climate Credit Analytics includes an automated capability to evaluate more than 1.6[3] million public and private companies, as well as the ability for users to input proprietary information to expand this analysis. The solution covers five carbon-intensive sectors (Airlines, Automotive, Metal & Mining, Oil & Gas and Power Generation) and also provides a generalized approach for all other sectors to complete the portfolio analysis.

Climate Credit Analytics leverages Market Intelligence's proprietary datasets and capabilities, including financial and industry-specific data, sophisticated quantitative credit scoring methodologies and company-level data from Trucost, the data and analytics engine that powers many of S&P Global's ESG solutions. These capabilities would enable users at the risk management team to:

[2] Oliver Wyman is a third-party consulting firm and is not affiliated with S&P Global or any of its divisions.
[3] All coverage numbers as of December 2021.

Conduct climate scenario analysis

Climate Credit Analytics translates climate scenarios into scenario-adjusted financials and creates credit scores[4] at the company level. The solution enables climate scenario analysis through 2050 by natively incorporating the 2021 scenarios published by NGFS and evaluating both climate-related risks and opportunities. It also supports the evaluation of user-defined scenario values.

Embed differentiated data

Climate Credit Analytics automatically extracts relevant company financials, borrower-level credit scores and industry-specific data from Market Intelligence to support a bottoms-up modeling approach. This includes:

S&P Capital IQ Premium Financials that provides standardized data for over 5,000 financial, supplemental and industry-specific data items for over 150,000 companies globally

Private Company Data that covers more than 10 million private companies with financial statements, enabling users to utilize these datapoints alongside any other proprietary information for the purpose of the analysis

SNL Energy that covers more than 9,000 power plants, 3,000 North American energy companies, 1,700 active coal mines and 120 gas pipelines. This includes details on financials, supply and demand fundamentals, hourly market pricing and rate cases.

Trucost Environmental Data that contains information on over 16,000 companies, covering Scope 1, 2 and 3, with metrics on quantities and intensities of carbon-equivalent emissions (tCO2e, tCO2e/US$ revenues) and

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

	their estimated damage cost equivalents (US$), along with impact ratios. It includes sector revenue data that gives revenues and percentages of company revenues derived from each of 464 business sectors. For companies where this data is unavailable, the analysis is extended to estimate emissions using industry-specific environmental impact data along with quantitative macroeconomic data. Data goes back to 2005, where available.
Access cutting-edge analytics	**Credit Analytics** blends cutting-edge models with robust data to help users reliably assess the credit risk of rated and unrated, public and private companies across the globe.
Report on climate risks with confidence	**The tool produces full-blown financial statements,** including balance sheets, income statements and cash flow statements of counterparties for the forecasted period, plus on an aggregated basis for the sector. This provides clients with the flexibility to report transparently and efficiently on various operating metrics related to the impact of climate transition risk.

Key Benefits

The risk management team thought the combination of Market Intelligence's data resources and credit analytics and Oliver Wyman's climate scenario and stress-testing expertise was very impressive. A decision was made to utilize the Climate Credit Analytics offering to provide the holding company with:

- **A solution that embeds Market Intelligence's proprietary datasets,** including renowned financials and environmental information.
- **A unique methodology** to translate complex climate scenarios into drivers of financial performance.
- **Sector-specific modelling** that covers key high carbon-emitting sectors, plus others.
- A sophisticated approach to **calculate the impacts of climate change on credit scores and probabilities of default.**
- The option of **using the projected financials in an internal credit scoring platform.**
- A scalable standardized approach to serve operations in other jurisdictions.
- **Ongoing support** to thoroughly understand the underlying data and methodologies.
- **Access to Capital IQ Pro,** a robust desktop solution with tech-forward productivity tools.

Click here to explore some of the datasets and solutions used in this case study.

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