ClimWise – Assessment of climate risk for credit portfolios

Identifying climate risks, the road to resilience

According to the latest report of the Intergovernmental Panel on Climate Change (IPCC) dated August 2019, time is running out for mankind to avoid the major impacts arising from the build-up of greenhouse gas in the atmosphere. Climate change has numerous complex effects on the global economy that are difficult to assess. If the physical impacts (climate events, rising sea levels, desertification, etc.) are easier to identify, the more or less brutal transition to a low carbon economy will also have major repercussions on economic activities (carbon tax, major regulatory restrictions, changes in consumer demand, etc.).
Certain players, who have already been singled out, will be held legally liable for their direct influence or failure to act in this transition. Even though all economic sectors will be affected to varying degrees, the banking industry is particularly exposed since there is a possibility of risk concentration. The identification of such risks is a valuable opportunity to develop credit portfolio management, extend the scope of analysis and optimize the resilience of economic activity.

A scenario-based approach to anticipate regulatory restrictions

Alarmed by the potential destabilizing effects of the climate emergency, financial players and supervisory bodies, such as the Network for Greening the Financial System (NGFS) or the French Prudential Supervision and Resolution Authority (ACPR), recommend that specific work be carried out to identify risks, via modelling, to ensure global economic resilience.
At the same time, the possibility of a regulatory requirement is becoming increasingly plausible. The European Banking Authority (EBA) has taken a stance on the need to integrate climate change into the risk identification process and in the UK, the Prudential Regulation Authority (PRA) encourages banks to manage these same risk factors. Certain financial players anticipate medium-term regulatory restrictions. For banking institutions, this would mean developing a scenario-based climate risk analysis methodology for credit portfolios.

An end-to-end solution tailored to the current risk identification process

Due to the multitude of information and variables to be taken into account, the identification of climate risks for a credit portfolio is considered to be a difficult task. We have combined the expertise of two teams (Sustainable Development and Credit Risk) to provide a comprehensive market response to the demands of banking institutions.

Drawing on its knowledge of stress testing for credit portfolios and ability to assess interactions between climate and financial variables, the team has been put together to offer a solution that blends perfectly into our clients' internal operations. Following a thorough analysis of existing scenarios and models, a methodology framework for an approach combining global management and risk identification via climate scenario modelling has been defined to assist banking institutions in rolling out climate stress tests for all or part of their financing portfolio.

Support in building an appropriate methodology approach

- **Specific expertise in climate scenarios**: our team has extensive knowledge of climate scenarios and their applications and can guide its clients in selecting tailored scenarios to identify risks for a given portfolio.
- **Support in collecting information**: the set-up of this approach will require a substantial amount of macroeconomic and environmental information. Our team has begun building a major database that can be used as a starting point for the development of a specific methodology tailored to our clients' requirements.

Set-up of climate modelling specific to the portfolio under review

- **Deep understanding of credit portfolios**: drawing on its bank modelling experience, our team can conduct a precise analysis of bank credit portfolio specificities and incorporate these requirements into a climate risk analysis approach.
- **Development of a tailored climate risk model**: our model takes into account socio-economic and technological parameters and anticipates changes in regulations, for application over a time-scale adapted to the climate change phenomenon. We compare climate change impacts with changes in macroeconomic variables to build migration matrices adapted to the overall risk assessment of the portfolio being analyzed.
- **Development of a cross-sector model**: based on our banking portfolio knowledge and the diversity of the approaches included in our model, we can assess climate risk in a large number of sectors. Our methodology framework is modular and designed to gradually increase the level of complexity in data searches and the calibration of the model.

Set-up of an efficient governance framework

- **Integration of existing stress tests in the approaches**: we have in-depth knowledge of EBA risk assessment approaches and stress test processes. Our offering has been designed to blend into our clients' internal operations, thereby limiting operational disruption and optimizing the additional work load required.
- **Roll-out of a suitable data reporting system**: the external data needed to model scenarios shall be supplemented by internal client data that can be collected from multiple sources. By setting up an efficient system to exchange quantitative and qualitative information, we offer our clients a governance system designed to optimize employee involvement.

Presentation of results in a dashboard designed to monitor primary KPIs

- **Creation of a results viewing tool**: based on the global approach forged with our clients, we can assess the financial risk of climate change for a credit portfolio. This information should be easily exploitable so that it can be used in the portfolio management team's decision-making process.

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