Report of the C-ESG Risk Roundtable

Climate & Environmental (C&E) Credit Risk Data and Modelling

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About the C-ESG Risk Roundtable

Banks, as well as supervisors, recognize that environmental factors could be a source of financial risk, and stepping up efforts to ensure that such risks are properly identified, understood, measured and managed.

To achieve this, banks are well advanced in the process of revisiting their internal systems, models and processes, particularly those related to data collection, risk management and financing approval processes. As the risk profile of banks' portfolios are reflective of those of their clients, to mitigate the risk, banks are also rapidly deepening engagement with clients to understand their transition plans and assist them in the necessary business transformation.

However, while banks are making tangible progress, they are facing numerous operational and implementation challenges, many of which are neither originated, nor inherent to the banking industry. While some will need to be addressed at the level of individual organisations, others will benefit from collaborative approaches and collective solutions and discussions among banks, regulators and supervisors.

To further strengthen the dialogue within the banking sector and to facilitate the discussion with the European Central Bank (ECB), a high level Environmental, Social, and Governance Risk Roundtable (C-ESG Risk RT) was set up in February 2023 by the European Banking Federation (EBF) under the existing CEO Roundtable with the participation of 13 European banks, and the EBF and the ECB as observers.

The C-ESG RT is focusing on climate and environmental risks with the objective to discuss current practices, identify gaps and promote pragmatic and practical approaches, including interim solutions, that will be shared with the entire banking industry to support and facilitate their implementation efforts and enhance harmonization where relevant and possible.

Since its inaugurating meeting in February 2023, the C-ESG Risk RT identified several areas to work on in the following workstreams:

- Data Workstream
- Scenario Analysis – ICAAP – Risk Materiality Workstream
- Physical Risk Workstream
- Collateral Workstream
- Transition Planning Workstream
- Climate and Environmental Credit Risk Data and Modelling Workstream

The intermediary results of the Workstreams' (WS) deliberations have been presented publicly via a series of EBF webinars and made available on the EBF website[1] in the format of thematic papers. A yearly update is envisaged for some of the papers, notably for the Scenario Analysis – ICAAP – Risk Materiality one.

The views in these papers reflect the discussions of the WS members (contributors) and any suggestions in these publications are of a voluntary nature. The sole purpose of the initiative is to identify existing gaps and approaches shared by the WS members and further share such experience and knowledge to increase the level of collective awareness and deepen future dialogues on these topics that are expected to further evolve over time.

Individual institutions are free to consider the relevance of a particular approach for potential implementation within their own organization.

[1] https://www.ebf.eu/uncategorized/ebf-set-up-a-high-level-environmental-social-and-governance-risk-roundtable-c-esg-risk-rt-with-13-european-banks/

About the Climate and Environmental Credit Risk Data and Modelling Workstream

This document is the result of the collaborative work of the members of the Climate Credit Risk Data and Modelling WS of the C-ESG Risk Roundtable facilitated by BNP Paribas and Rabobank in its role as co-chairs of the WS and with the participation of the ECB and the EBF in an observing capacity.

The objective of the WS is twofold:

1) Sharing practices and identification of commonalities in terms of historical data gathering structure to serve the various modelling needs (e.g. data required, operational modalities of collection, rules to define relevance in terms of climate & ESG analysis)

2) Sharing of existing practices and identification of commonalities modeling climate & ESG impacts on financial risks and embark these impacts for their expected part in provisioning and for their unexpected part in capital (e.g. analysis of both regulatory and internal capital perspectives, interaction between the two perspectives for climate & ESG risks, consistency between expected loss measurement and unexpected loss approaches…)

Introduction

Over the past decade, there has been an increasing focus on the impact of climate and environmental (C&E) risk in the credit risk management of banks. **Initially, the focus was on improved disclosures under Basel Pillar 3. The focus gradually expanded to also include Pillar 2 activities, e.g., C&E credit risk stress testing. More recently, the emphasis evolved to assessment and inclusion (if found to be material) of C&E credit risk in Pillar 1 models** (e.g. paragraph 25, section 1.8 of the ECB guide to internal models, 2024).

The **supervisory expectations** concerning internal credit models (Pillar 1, IFRS 9, economic capital, etc.) **are challenging** due to several reasons. **One key reason is the vast and diverse data needed** to objectively assess and quantitatively include C&E risk in these credit risk models. **Another reason is the heterogeneity of credit risk modelling practices for C&E risk factors and the lack of shared materiality assessments.**

For this reason, **the C-ESG Risk RT conducted a survey among EBF members that focused on selected key aspects of C&E credit risk data**

and modelling to determine current practices amongst the EU banks. The survey focused on climate & environmental risk considered, the most advanced subset of the broader environmental, social and governance risk factor universe ("ESG" risk factors). The analysis prioritized **credit risk given its weight in the banking risk profile and the more advanced status of available methodologies.**

The survey included questions about current practices as well as practices being implemented to be fully operational by the end of 2025. All responses were anonymized.

Input received from a material part (61%) of the large EU banks resulted in set of recommendations on credit risk data and modelling practices in this document. The survey will be updated regularly to complement the analysis and review the recommendations in this report and their further elaboration.

Key outcomes

The workstream believes that outcome of their initial analysis will be valuable for banks for insights, planning, and benchmarking purposes. There are seven recommendations in this paper intended for future investigation, which will result in follow-up work to further enrich this paper. The outcomes are summarized in the paragraphs below, together with recommendations.

Finding 1: C&E event taxonomies vary across banks in terms of the diversity of the event types used, the granularity, and the cause-and-effect level of events.

Recommendation 1: Improve the consistency of event taxonomies across banks to improve the comparability of methods and results.

Finding 2: The relevance of specific C&E event types varies between banks. Banks that responded the survey (surveyees) generally do not see physical risk factors as default drivers but consider transition risk factors to be relevant. Physical and transition risk factors are seen as dependent on industry sector and region. To frame these results, surveyees commented that multiple factors contribute to default, which makes it hard to isolate C&E risk factors as a driver of default. Furthermore, only once banks use long forecasting horizons (>12 months) materiality is expected to increase.

Real-world examples of C&E events support the finding that multiple factors that are not all related to C&E events can contribute to a default classification

classification. In addition, where multiple C&E events occur simultaneously or in close succession, the rating migration/default is more likely.

Recommendation 2: Set up and support a knowledge base of C&E default events. This knowledge base will be analyzed to improve identification, default attribution and consistency in C&E credit risk measurement.

Finding 3: Banks do not systematically add a C&E-related flag to defaults that are C&E-related, which is a barrier to improving C&E risk measurement. If recognized, surveyees use mostly expert judgment to decide if defaults are C&E-event related. The key challenges in proving the link between C&E risk events and default are limited empirical data, multiple contributing factors, untested forward-looking assumptions, and lack of established methodologies.

Recommendation 3: Further guidance is recommended on how banks should identify C&E-related defaults and flag these defaults in internal data sources.

Finding 4: Exploring the relative importance of physical risk factors versus transition ones for various time horizons, surveyees emphasized that conclusions are highly dependent on the climate-change scenario retained, actual progress with implementing transition plans, the specific industry sector and geography under consideration, future policy responses, technology changes, the bank's current portfolio composition, and changes to banks' risk appetite for exposures impacted by C&E risk factors.

On collateral valuation, both physical and transition risk factors are considered. These are implicitly included where the impacts of these risks are reflected in reference market values, and more explicit adjustments may be made where these risks are not fully priced in for the remaining term of the loan. The reliance on third-party mitigants, such as insurance and government relief for collateral-asset damage, introduces an added third-party risk.

Recommendation 4: Elaboration of guidelines about the reliance on third-party mitigants for collateral-asset damage caused by physical risk events, where these mitigants are considered in risk modelling.

Finding 5: Banks use multiple external data sources for their C&E risk management needs. However, all available sources are typically not explored by all surveyees. This hinders advancing C&E risk measurement.

Recommendation 5: Improve the awareness of available data sources, including limitations, so that a wider range of data sources can be accessed to further improve C&E risk measurement.

Finding 6: Concerning the maturity assessment across a list of C&E-related risk management activities, results of the survey show that more progress is needed with the linking of defaults or rating migrations to C&E events, which is the first step to include C&E risk factors in Internal Rating-Based models. Considering the key challenges already listed earlier in this report, these results are unsurprising. Progress on the recommendations in this report will contribute to enhancing the maturity level across these lagging risk measurement activities.

To review the existing and targeted C&E credit risk modelling practices, the first version of the survey has focused on approaches used and planned to quantify the impact of climate and environmental risk drivers and the results of impact quantifications over short, mid and long term horizons.

Recommendation 6: Share high level impact quantifications for C&E risk factors, favoring as an expression metric Expected Credit Loss impacts, including through internal capital percentage impact which could complement expected loss assessment with unexpected loss consequences.

Finding 7: Integration of C&E risk drivers in banking provision and capital quantifications and the initiatives taken to ensure consistency between existing or future provision and capital calculations is still in early stage.

Recommendation 7: Promote consistent quantification framework for both expected and unexpected credit losses associated to C&E risk factor.

The C&E CRDM WS is continuing its work with the objective to provide a working papers following each recommendation to share the good practices and the remaining challenges These papers are expected to be issued in the first quarter of 2026.