

Credit Ratings and Climate Change – Challenges for Central Bank Operations

May 2022



In early 2019, the NGFS established a dedicated group of experts in the “Scaling up Green Finance” workstream chaired by Dr Sabine Mauderer, member of the Executive Board of the Deutsche Bundesbank, to analyse the impact of climate change on the conduct of monetary policy.

Since then, the NGFS published a number of reports on the implications that central banks face due to climate change.¹ This report highlights the key takeaways from a study on how climate-related risks are reflected in credit ratings from a monetary policy perspective.

Summary of key findings

- Monetary policy implementation at many central banks relies on credit ratings to assess the creditworthiness of issuers and other financial market entities. Therefore, the degree to which credit ratings reflect material risks including climate-related risks is of great interest to the central banking community.
- The need to better understand how climate-related risks affect credit ratings is supported by an emerging, but still limited body of academic literature which has found some evidence that climate-related risks can be a material credit risk component.
- Credit rating agencies indicate that climate-related risks have always been considered when a rating is issued, provided these risks were identifiable, relevant and material for the credit risk profile of the rated entity. At the same time, credit rating agencies point to the challenges they face due to the scarcity of consistent, high quality, granular and comparable climate-related data.
- However, and despite the considerable progress made lately, there is still a lack of transparency surrounding both the methodologies used by rating agencies to incorporate climate risk factors and how these factors contribute to the final rating. In addition, credit ratings are forward-looking assessments of the creditworthiness of issuers over horizons that are typically shorter than those that are considered relevant for the implications of climate change.
- At the time of the survey conducted for the purpose of this analysis, many central banks and market participants were still in the process of developing their approach to climate risk assessment and they were aware of the above challenges in using credit ratings for this purpose. More work and knowledge sharing within the central banking community will be needed to introduce appropriate modifications to central banks’ operational frameworks in order to properly address climate change-related risks. In the meantime, central banks may apply their own analysis to complement the information contained in CRAs’ traditional ratings.

¹ NGFS (2020), "[Climate Change and Monetary Policy: Initial takeaways](#)"; NGFS (2020), "[Survey on monetary policy operations and climate change: key lessons for further analyses](#)"; NGFS (2021), "[Adapting central bank operations to a hotter world: Reviewing some options](#)".

Background

In March 2021, the NGFS published a report examining the implications of climate change for central banks' operational frameworks and for the implementation of monetary policy.² One question that arose in this context concerned the extent to which the different risk indicators used by central banks for operational purposes incorporate climate-related considerations. **Given the important role that credit ratings play in the information set of central banks, a group of experts in the NGFS has conducted an investigation to understand how and to what extent credit rating agencies (CRAs) incorporate climate-related risk factors into their credit ratings.**^{3,4} This investigation was complemented by a review of the academic literature and selected national regulatory frameworks, and by a survey among member central banks to understand their needs and views as users of credit ratings for both policy and investment purposes.

Credit ratings play an important role in the operational frameworks of many central banks. They are used for different operational and risk management purposes (notably, in relation to the collateral framework of central bank monetary policy operations or for outright purchases of financial assets by the central bank). Given the extensive use of credit ratings by central banks across their operational frameworks and the consensus that climate change can act as a source of financial risks,⁵

central banks have a strong interest in understanding the extent to which and the manner in which CRAs incorporate climate-related considerations into their credit ratings.

Credit ratings agencies' approach to climate-related risk integration

Credit ratings are forward-looking assessments of the creditworthiness of issuers over multi-year horizons that are typically shorter than those considered relevant for the implications of climate change. They are metrics assessing the ability and willingness of an issuer to meet its financial obligations in full and on time over a horizon typically spanning the length of an economic cycle.⁶ However, CRAs state that their ratings can also reflect risks that may emerge beyond their typical horizon, provided that such risks are sufficiently visible, credit-relevant and financially material for the rated entity. Accurately assessing both physical and transition risks resulting from climate change requires an understanding of both the short-term impact and the longer-term trends of the global climate-related issues and policies. An assessment of that kind would go beyond the traditional horizon of credit ratings, thus making the impact of climate change-related

² See NGFS (2021), "[Adapting central bank operations to a hotter world: Reviewing some options](#)".

³ This investigation was based to a large extent on surveys and bilateral meetings with selected credit rating agencies.

⁴ The findings are detailed in the NGFS report on "Capturing risk differentials from climate-related risks", 2022. More specifically, this report looks at how CRAs measure and classify the relevance and materiality of environmental, social and governance (ESG) factors for credit ratings, the interaction between ESG factors and credit parameters, and how they use scenario analysis to assess the long-term vulnerability of creditworthiness to ESG factors (with a focus on the "E" pillar). The present NGFS report on "Credit ratings and climate change – challenges for central bank operations" focuses on the implications of these findings for central banks, in particular for the conduct of monetary policy.

⁵ See NGFS (2019), "[A call for action. Climate change as a source of financial risk](#)".

⁶ "Through-the-cycle" as opposed to "point-in-time" credit assessments.

risks more difficult to gauge. Nonetheless, the consequences of climate change are already visible. Therefore, it is important to take a closer look at how climate-related risks are incorporated into standard credit ratings and to identify any obstacles that may impede the comprehensive incorporation of such risks into credit ratings.

CRAs state that they have long considered climate-related risk factors in their credit ratings. Since any factor affecting the credit quality of an issuer or asset is routinely taken into consideration in rating processes, climate-related risk factors are embedded in CRA's methodologies and procedures insofar as they are identifiable, relevant and material for the credit risk profile of certain issuers and assets. They back up this assertion by stating that environmental, social and governance (ESG) assessments have been a longstanding feature of their credit risk methodologies and have influenced the eventual rating outcomes whenever sufficiently relevant. ESG assessments reflect a company's exposure to risks in these three areas and/or their impact on its creditworthiness. Climate-related risks may be captured under the broader "E" pillar, which pertains to a wide scope of environmental factors. At the same time, it should be noted that CRA's have, in parallel, also developed an array of products, different from credit ratings, to specifically address the assessment of ESG factors.

The extent to which and the manner in which ESG factors are integrated into credit rating methodologies and assessments varies across CRA's and may not necessarily have a negative effect on the rating. Indeed, for some issuers, the impact of ESG factors on their credit rating

could also be positive or neutral. Nevertheless, some rating agencies mention that, at the current juncture, the impact of including ESG factors, where relevant, is mainly negative. Moreover, **an emerging body of academic literature is investigating the extent to which ESG factors affect credit risk and asset performance.** While the number of contributions is still limited, there is some evidence that ESG factors can affect credit ratings and market-based risk indicators, such as credit spreads.

Recent years have seen CRA's improve their disclosures on the role that ESG factors play in their credit risk methodologies, processes, and rating outcomes. This increased transparency is consistent with developments in the regulatory and supervisory space (e.g. in Europe, the ESMA Guidelines on Disclosure Requirements Applicable to Credit Ratings⁷) and the commitment by CRA's to foster sustainability in financial markets, for instance as signatories of the United Nations Principles for Responsible Investment's (PRI) ESG in Credit Risk and Ratings Initiative⁸ and as members of the Net Zero Financial Service Providers Alliance.⁹ However, recent evidence suggests that ESG disclosures still diverge significantly both across CRA's and across ESG factors, even for rated entities that are highly exposed to ESG factors relative to their sector peers.¹⁰ Furthermore, disclosures by CRA's have so far focused mainly on ESG factors as a whole, rather than on specific climate-related sources of risk, hence making it even more difficult to assess the particular impact of climate-related risk on rating outcomes. In addition, CRA methodologies rely heavily on qualitative assessments by credit rating analysts of the

⁷ See <https://www.esma.europa.eu/document/final-report-guidelines-disclosure-requirements-applicable-credit-rating-agencies>

⁸ The list of CRA's that have signed the PRI initiative can be found here: [Statement on ESG in credit risk and ratings](#)

⁹ See <https://www.netzeroserviceproviders.com>

¹⁰ See "[Text mining ESG disclosures in rating agency press releases](#)", ESMA TRV article, February 2022.

impact of ESG factors on the final credit rating. ESG-related analyses themselves suffer from a lack of transparency surrounding the underlying data and methodologies. This feature is shared by CRAs methodologies far beyond the assessment of ESG factors; it partly reflects the need to preserve the confidentiality on intellectual property, but, in particular, also the regulatory vacuum in which the ESG rating providers operate.¹¹ Comparability across CRAs is complicated further when different asset classes are considered, since methodological approaches to reflecting climate-related risks may vary substantially for different categories of rated entities.¹²

In summary, while CRAs have considerably improved the information they disclose on their websites and to their clients, there is still a lack of clarity on how exactly climate-related risks (and, more generally, ESG risks) influence the final rating. In addition, the process of integrating these risks into CRA ratings is mostly qualitative in nature, and CRAs should continue to work to ensure increased methodological transparency and comparability. Some CRAs' regulators have already taken initial concrete steps in this direction.

Challenges

In addition to the improvements made concerning the disclosure of methodologies, **CRAs point to certain obstacles that prevent**

ESG factors and in particular climate-related risks from being integrated into credit risk analysis in a more systematic manner. Like market participants and public authorities, CRAs face some challenges: 1) the nature of the climate change process compared to the shorter horizon relevant to credit ratings, 2) the scarcity of consistent, high quality, granular and comparable climate-related data, and 3) the fact that market standards and methodologies are under development and subject to revision.

Central banks as well as market participants are aware of the current limitations of CRAs' credit ratings in fully capturing climate-related risks, despite the significant progress made in the last few years. Addressing these limitations is a complex task to which both academic research and policy analysis will need to continue to contribute in the future. Academic scholars also see the traditionally short horizon of credit ratings as a key obstacle to fully incorporating climate risk into credit ratings and call for CRAs to expand the horizon of their assessments, at least for financial instruments with long maturities. Furthermore, the use of climate scenario analysis could help assessing the short-term implications of typically longer-term climate risks. **In the meantime, central banks may need to consider additional tools and/or apply their own analysis to complement the information contained in CRAs' traditional ratings. In parallel, central banks, as well as other key users of credit ratings, should continue to seek more clarity from CRAs on their assessment of climate-related risks and how these assessments affect the credit ratings they issue.**

¹¹ Implementation of IOSCO's (2021) recommendations in "Environmental, Social and Governance (ESG) Ratings and Data Products Providers" should help increase transparency on ESG scoring methodologies, which will in turn help CRAs improve their methodologies.

¹² A recent in-depth discussion on ESG factors in credit ratings can be found here: <https://documents1.worldbank.org/curated/en/812471642603970256/pdf/Credit-Worthy-ESG-Factors-and-Sovereign-Credit-Ratings.pdf>

Survey of central banks and market participants

A dedicated survey conducted among NGFS member central banks and selected market participants in late 2021 indicated that most central banks and market participants responding to the survey are still in the process of developing their approach to **climate risk assessment**, complementing their existing credit risk assessment framework. Several central banks report that they consider it relevant to include an assessment of climate-related risks in the conduct of their monetary policy operations. In most cases, they are still in the phase of analysing the available products, data and metrics and exploring alternative methodologies with a view to enhancing their conventional risk assessment routine. **More work is needed to introduce appropriate modifications to their operational frameworks in order to properly address such risks.**

Selected banks, asset managers and financial industry associations surveyed agreed that there was a lack of transparency in the methodologies of CRAs. However, when compared to central banks, they report more progress in their own ESG risk assessments, since client demand has led them to build up more extensive expertise in conducting independent credit risk analysis across a wide range of assets. Some central banks, in turn, have made more progress in assessing and, where possible, reflecting climate-related risks in their investment portfolios than in their monetary policy implementation, since investment portfolios follow different objectives and usually have relatively more leeway to reflect climate-related

considerations. Some of the approaches to credit assessment and risk management (such as scenario analysis) used to incorporate climate-related risks into non-monetary policy portfolios could also be applied to monetary policy operations.

As with all financial risks, it is up to each central bank to assess the most appropriate tools to shield themselves from climate-related risks when conducting monetary policy operations, and to decide how to use credit ratings in this regard. This effort must be coupled with knowledge sharing within the central banking community in order to limit the financial risks to the central bank's balance sheet more globally and to support the change towards a net zero trajectory.