

# Beyond Environmental, Social, and Governance: **Re-estimating Climate Risk as Financial Risk**

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WHITEPAPER



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## Abstract/summary of the report

From recent financial reports on major global banks, it is evident that how climate changes has become important from both the financial risks and business strategy perspective. Climate-related changes have become inevitable across the globe due to various reasons which are not easy to control. This would take sustained efforts from governments and businesses, including putting together a consortium at an intercountry and intercontinental level. There are already focused efforts from various bodies to address the risks as well as minimize and manage the same.

The Basel Committee on Banking Supervision (BCBS) published a climate risk framework in April 2021 that would make banks and financial institutions look at this in more strategic way.<sup>1</sup>

Earlier, in 2017, the Network for Greening the Financial System (NGFS) which comprises a group of central banks and supervisors was established as a voluntary organization willing to contribute to the development of environment and climate risk management in the financial sector. The membership for NGFS has since then grown at a fast pace in the last few years with 95 members and 15 observers as of June 30th, 2021. This includes all the major regulators from across the globe.

BCBS has also set up a high-level Task Force on Climate-related Financial Risks (TCFR) to undertake specific initiatives on climate-related financial risks. FSB established TCFD and its recommendations are another reason to look at this strategically.

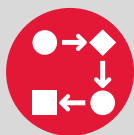
Multiple online reports state about three fourth of the banks are indicating climate risk as a financial risk to the business. Obviously, this means that banks have started looking at climate risk as another traditional risks like credit, market risks etc. Many of these banks have incorporated climate risk into the broader risk management framework that includes risk identification, assessment, management and reporting.

This paper discusses the impact of climate-related risks on banking and financial services institutions and a framework that can help assess and manage this risk.

## Key takeaways



How climate change impacts financial stability



Framework to address climate risk impact for banking and financial services firms



Pressure from regulators, investors and stakeholders



Current challenges



The way forward

## How Climate Change Impacts Financial Stability



Figure 1: Climate Factors Impacting Banks and Financial Institutions

As shown in Figure 1, climate risk can have significant impact on the financial firms and can be understood in the two dimensions. First is the type of climate risk such as physical risks, transition, and liability risk. Next is the transmission channel namely the macroeconomic and microeconomic channel.

These climate risks being the transverse risk would impact the vertical risks in the banks, such as credit, market, and operational risks, and so on. These risks and transmission channels have been described in the various articles available including the one published by BCBS.

While there are certain guidelines available from various regulators across the globe on a macro level, the macro level details are missing like risk weights for exposures to climate risks such as brown loans.

On a macro level, the binding prudential measures are missing from BCBS and national regulators. In the backdrop of these challenges, it is suggested that banks can apply the available guidance from BCBS and the local regulators in a conservative way. Banks can come up with a methodology for assigning the risk weights for exposure to climate risks and include the methodology in the disclosures to the regulator. The same methodology can be presented to the NGFS for acceptance by other banks, which can lead to acceptance by the BCBS. Banks can also calculate and deploy the additional capital requirements factoring in the climate risk impact. The additional capital requirements should be part of the disclosures and help external stakeholders understand the safety and soundness of the bank itself.

Indeed, stress testing would need to be conducted and factored in for climate risk scenarios much like other forms of risks and stressed capital requirements that are computed and disclosed.



# Addressing Climate Risk with a Holistic Framework



Figure 2: A Proposed Framework to Navigate Climate Risk

We understand that banks and financial institutions are on the path to manage climate risk at different levels of maturities. Figure 2 proposes a framework that can be applied in this climate risk journey. This would also mean that governance, policies, processes, risk models, and risk systems undergo change to address the various components in such a framework.

**Climate Risk Data** – While climate risk data points are available in various forms and shapes, there are standardization issue and data quality challenges. Without fixing these challenges, financial firms will not be able to use this meaningfully, resulting in inaccurate disclosures and potential impact on the larger economy as a whole. Many traditional data vendors are making forays into this domain and would mature with time. An active collaboration would be needed from the various stakeholders in this ecosystem to move to a matured state and that would happen with the time.

**Risk Framework Redesign** – These firms would need to relook at their existing risk framework in light of recent developments in climate risk. This is a transverse risk that impacts vertical risk such as credit, market, and operations. The existing framework would need to be extended to factor in the impact of climate risk on these risks. BCBS has also come up with a report that talks about how banks will get impacted through macro and micro economic transmission channels. As part of this process, a fresh look is needed on the existing framework along the dimensions of impact analysis, risk framework, new risk limits, and policies.

**Risk Models Development** – While banks already have risk models as shown in Figure 2, these models need to be revamped to include the climate risk variables. Needless to say, the model validations and entire model lifecycle will get impacted. Banks will need more talent in this area which is already a challenging as this comes at a very high cost. They will also need to think of technology options that come with artificial intelligence (AI) or machine learning (ML) based model management including model risk management.

**Stress Testing** – This is a practice for the banks to conduct stress testing to assess the risk impact and accordingly allocate the capital, however the stress testing would need to factor in the climate risk scenarios in the stress testing scenario bucket. NGFS has published climate scenarios for central banks and supervisors but that may also be useful for the private sectors.<sup>2</sup> Transition risk scenarios like macroeconomic aggregates, sectoral revenues, share prices, credit ratings or credit spread, sovereign bonds ratings, and physical risk scenarios like ‘full damages’, ‘shock’ can be added.<sup>3</sup>

**Disclosures** – While the regulators still have not come up with the definitive requirements on the regulatory reporting, it’s just a matter of time. All these elements discussed above would not fully fructify unless it gets disclosed to the regulator and other stakeholders. Once again, the existing regulatory reporting framework would need to a relook to factor in the climate risk.

## Navigating Pressure from Regulators, Investors, Stakeholders

Many financial institutions are already following disclosure frameworks, such as the Task Force (TCFD), annually on a voluntary basis for climate risk management as well as publishing the TCFD report. The EU Taxonomy Regulation<sup>4</sup> adopted by the European Parliament and Council in June 2020, is a regulation that establishes a classification scheme for economic activities based on their environmental sustainability. The crux of any such frameworks from other regulators also would largely follow the similar theme as TCFD. Largely, the regulators recommendations are around the theme of governance, risk management, scenario analysis, and disclosures as shown in the Figure 3.

Figure 3: Regulator Recommendations



Firms board should understand and assess the financial risk impact due to climate risk. And the risk impact should be factored into the business and strategy and risk appetite

Firm should address climate risk in the existing financial risk management framework this being a transverse risk. A policy and process should be established to identify, measure, manage, monitor and report the exposures linked to these risks.

Stress scenarios to be developed for shorter term as well as longer term for physical and transition risks. Shorter term scenarios would be mostly quantitative whereas the longer term can be more qualitative for strategic discussion. Evidence of stress should be included in the various disclosures

Disclosures should include the identified risks exposure, potential impact on the firms and should reflect the evolving understanding of the climate risk as a financial risk. Simultaneously this should be insightful for the regulators.

A report on sustainability in MDPI, published in 2020 regulators from 22 countries, highlights the expectation on a macro level and that is included in the referenced paper.<sup>5</sup> The list of 22 countries include major economies of the world. Irrespective of the micro level regulatory requirements from the regulators banks and financial institutions should focus on the risk data (including the external data on climate risk) quality, lineage, granularity, and so on to prepare for the accurate reporting to the regulator and the management. This would help in strategic decision-making.

The risk data quality in general and on borrowers would also ensure the safety and soundness of the bank against climate risk. Alongside, banks should start keeping aside a capital for climate risk based on certain internal risk models and assumption till the regulators come up with certain concrete methodology for capital requirements. Other risks stress testing should also be considered to arrive at the stressed capital requirements. Risk models' lifecycle aspects like model development, validations, model risk management, and so on, will play a critical role. Concentration risk, correlation risk, and wrong way risk will be just as critical.



## Challenges Ahead

Establishing a unified green classification taxonomy and applying that effectively is going to be a challenge. EU is trying to identify and classify environmentally sustainable economic activities ('green' activities). Certain general-purpose loans (or revolving credit facilities) do not indicate if the borrower is utilizing the amount for one of its subsidiary in green or non-green activities. This leads to incorrect classification of loans and is a data quality issue which would impact all the downstream risk assessments. Based on the availability of obligor level information, the Taxonomy Alignment Coefficient (TAC) or the bank's estimated method for calculating coefficients of greenness has to be applied. One of the most anticipated challenges is the evaluation of EU Taxonomy alignment coefficient when the use of proceeds of a loan or transaction is not specified. The availability of reliable data for applying the EU taxonomy is also a challenge. Linking the EU Taxonomy classification system to economic activities results in operational challenges for banks as borrowers' activities may be connected to several EU Taxonomy economic activities.<sup>6</sup>

The banks' exposures could be classified based on the sector of the counterparty. This methodology of classifying the exposures is called climate policy relevant sectors (CPRS). Another widely used approach to quantify transition risk consists of using carbon footprints and mapping greenhouse gas (GHG) emissions to individual borrowers or to their sectors. Inherent data quality issue both in the CPRS and GHG approach to quantify risk might pose challenges when comparing results across banks. Both the approaches being static lack forward-looking features.<sup>6</sup>

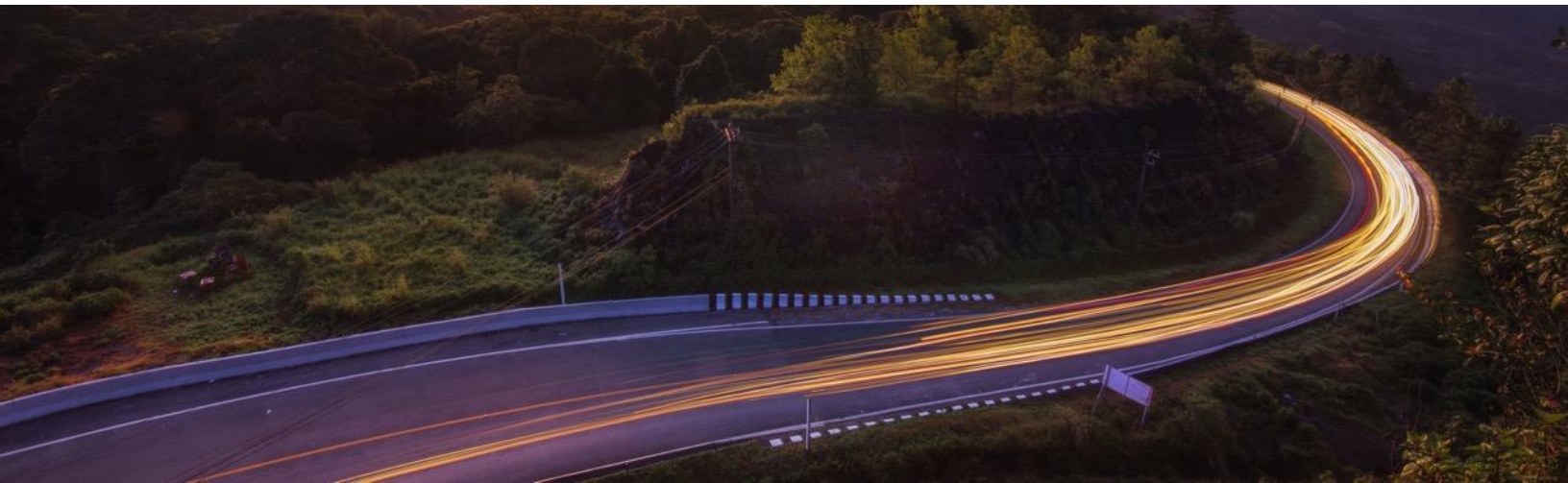
There are many such environmental, social, and governance (ESG) data or ratings providers in the market. While all have examples of health warnings, they may not be comparable, and the methodologies are not transparent or future-forward.

There are modelling challenges in calibrating climate risk scenarios for transition and physical risks due to interaction between policy implementation, technology shock, and their effects on different economic sectors. Transition scenarios often project impacts over 30-year horizons while banks and supervisors typically use one- to five-year periods to conduct business planning and stress testing exercises.

## The Way Forward

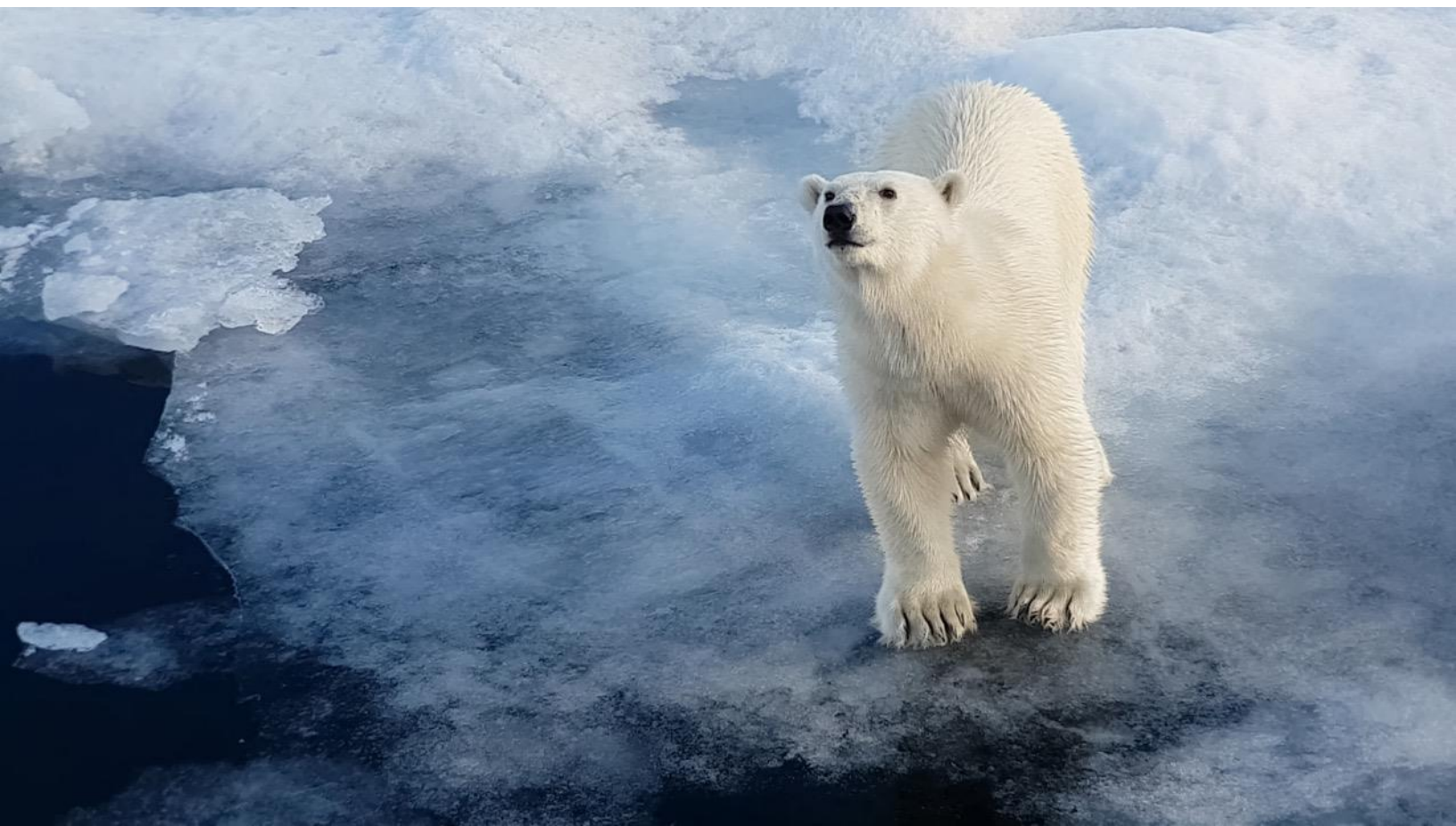
While banks and financial institutions are still evolving their climate risk agenda, it is certain that climate risk is not just an ESG issue. It does have a significant financial risk impact, making highly imperative to look at this from the business and strategy perspective rather than as a standalone risk issue. This should find its place in boardroom discussions and firm's risk appetite statement. Needless to say, if not handled, it can have severe impact at a macro level due to interconnectedness of all banks.

A comprehensive ESG framework is required that can draw on ratings as well as other inputs and analysis to give an overall picture of the ESG status vis-à-vis the company's desired outcomes. This will also help these institutions be better prepared for any kind of regulatory pressure. Although most banks today understand that regulations are necessary for the safety of the institution. Our prescribed framework can help banks navigate the impact of climate risk and embark on this risk mitigation journey.



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