

## CLIMATE CHALLENGES FOR THE BANKING SECTOR



### NEIL ESHO

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## The Basel Committee's approach to addressing climate-related financial risks

Climate-related financial risks are of considerable and increasing importance within the financial sector. Financial institutions are building their capacity in risk management to manage such risks and enhancing disclosure. Supervisors and international organisations are also augmenting their oversight frameworks, setting out coordinated plans for addressing such risks, and paving the way for implementation.

Despite the considerable progress that has been made and the work underway, including broadly-used scenario analysis/stress testing and the development of consistent sustainability reporting, significant work remains to tackle climate-related financial risks. There remains a need for broad agreement on fundamental issues such as consistent definitions, taxonomies

and risk measurement methodologies. For these reasons, the Basel Committee is coordinating with other international bodies and building on the progress that has been made.

The topic of climate-related financial risks is a priority area for the Basel Committee. As the primary global standard setter for banks, the Committee's work: builds on the expertise of its member organisations, is guided by a forward-looking and long-term view of risks, and seeks to develop common minimum international standards that promote the resilience of financial institutions and global financial stability. These are attributes that make the Committee well positioned to address climate-related financial risks. The Committee began its work on climate-related financial risks by first conducting rigorous analyses to better understand the risk features of climate change and its potential implications for individual banks and the broader banking system. On that basis, the Committee published two analytical reports in April 2021 on: *Climate-related Risk Drivers and their Transmission Channels*; and *Climate-related Financial Risks – Measurement Methodologies*.<sup>[1]</sup>

**The objective is to improve banks' preparedness to address climate-related financial risks.**

The reports conclude that climate-related risk drivers can be captured by traditional risk categories used by financial institutions and reflected in the Basel Framework (eg credit risk, market risk, liquidity risk and operational risk). Building off the analytical work, the Basel Committee is examining the extent to which these risks can be addressed within the Basel Framework, identifying potential gaps in the current framework, and considering possible measures to address any gaps.

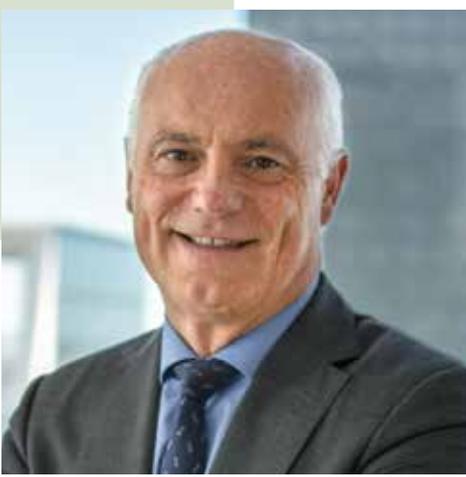
The Basel Committee is working to address a common set of challenges related to addressing climate-related financial risk, which includes the forward-looking nature of the risk (reliance can't be placed on historical

experience), complexity, uncertainty, and incomplete data. Given these challenges and the cross-cutting nature of climate-related financial risks, it is unrealistic to expect that any single measure or tool will be sufficient. The Committee is therefore adopting a holistic approach when considering potential regulation, disclosure, or supervisory approaches.

On disclosure, given the various initiatives to develop a globally consistent approach to sustainability reporting and uncertainties related to the measurement of climate-related financial risks, the Basel Committee will consider in the near term an appropriate response to support these initiatives. The Pillar 3 framework is designed in a modular way and can therefore be updated and adapted to reflect additional risks. In the area supervision, both the Basel Core Principles and Pillar 2 framework are flexible to accommodate additional supervisory responses. The Committee is also exploring principles for the effective supervision of climate-related financial risks and banks' risk management practices. In terms of regulation, the Committee is exploring where there might be potential gaps in the existing Basel Framework, but there is no pre-commitment to introduce additional Pillar 1 requirements or propose Pillar 1 solutions.

During this process, the Basel Committee will be led by its mandate to safeguard the resilience of the global banking system and to strengthen global financial stability. That is, the Committee's objective is ensure banks are better prepared to address any material financial risks caused by climate change, rather than using the regulatory and supervisory toolkit to affect climate change or meet broader societal objectives. If the Committee succeeds in its primary objective, it should support the latter.

[1] See *Climate-related risk drivers and their transmission channels (bis.org)*, and *Climate-related financial risks - measurement methodologies (bis.org)*



## JOSÉ MANUEL CAMPA

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European Banking  
Authority (EBA)

### Enhancing measurement and management of climate related risks

Climate change and the transition to a more sustainable economy is in the top of the EU policy agenda. The financial sector, financial regulators and policymakers are all enhancing their efforts to mitigate risks stemming from climate change and broader environmental degradation.

The EBA recently published its findings from the 2020 Pilot Exercise on Climate Risk. The exercise was run on a sample of 29 volunteer banks and has allowed EBA and participating banks to explore how to best categorise exposures that are potentially vulnerable to risks from changing climate conditions.

The exercise provides evidence on the extent to which the banking sector non-SME exposures are subject to climate-change related risks. High and low carbon obligors each make up roughly 25% of banks' corporate non-SME holdings. However, further aspects need to be considered before reaching any final conclusions on the environmental sustainability of the exposures of the EU banking system. The pilot exercise also

showed that there is dispersion across banks in terms of impact on expected credit risk losses due to adverse climate risk scenarios. The results are driven by the impact on exposures to the electricity and manufacturing sectors. Non-SME corporate exposures towards high intensity carbon emission sectors, like mining and agriculture, represents less than 5% of the total exposures covered in the pilot.

Beyond the quantitative evidence, a second key finding is that there are clear data availability challenges and data gaps as well as methodological limitations that supervisors and the banking sector need to address to move forward. Limited data availability in particular affects the comparability of the results. These insights will help support regulators and supervisors in shaping robust methodologies and establishing data requirements going forward. Better disclosure by banks should over time allow for more robust risk assessments - including by allowing for the development of better climate change stress test scenarios.

**Active measurement  
and management of  
climate risks is needed  
for a transition towards  
sustainability.**

#### Next steps

Going forward, institutions need to continue their work to enhance their internal risk measurement, modelling and risk management skills. They also need to enhance their transparency on their sustainability risks. Institutions also need to integrate ESG aspects in business strategies, internal governance and risk management. These efforts in improving data and methodologies will continue to form part of a broader effort to develop regulatory and supervisory frameworks aimed at ensuring the resilience of financial institutions

The EBA will continue to prioritise its policy work on strengthening the institutions governance, and disclosure of related risks. Further and enhanced assessments of the overall resilience of the sector to climate risk. The EBA will publish prudential disclosure requirements for large banks related to ESG risks (Pillar 3 and transparency). The aim is to ensure comparable disclosures on climate-change transition and physical risks as well as actions taken by banks to support their counterparties.

The Green Asset Ratio (which provides information on the extent to which banks are financing climate sustainable activities) is one of the tools that will be used to support the monitoring and assessment of developments over time.

The EBA pilot exercise serves as a good starting point for a discussion on how to embed climate risk in the stress testing framework in the coming years. Further interaction with the industry will be also key to exploring possible solutions to key challenges for developing methodologies and ensure availability of data suitable for climate risk assessments.

The EBA welcomes the Commission's Renewed Strategy and will continue to help ensure the resilience and long-term sustainability of the banking sector.

[1] *EBA publishes results of EU-wide pilot exercise on climate risk*

[2] *See the EBA Report on management and supervision of ESG risks for credit institutions and investment firms, EBA/REP/2021/18*



## EDOUARD FERNANDEZ-BOLLO

Member of the Supervisory Board, Member of the Steering Committee, European Central Bank (ECB)

### Improving the management of climate-related and environmental risk

The European Green Deal aims to make Europe the first climate-neutral continent by 2050. As enshrined in the European Commission's strategy for financing the transition to a sustainable economy, the financial sector is expected to play a key role. Within its field of competence, ECB Banking Supervision has been taking steps to encourage banks under its direct supervision to incorporate climate-related and environmental (C&E) risks into their risk management frameworks and decision-making processes. There are two sides to the picture we have today: on one side, almost all directly supervised banks have already developed implementation plans for C&E risks, and many have started to gradually improve their practices. On the other, all banks still have several blind spots and may already be exposed to material climate risks. The May 2021 edition of the ECB's Financial Stability

Review suggests that the latter is the case for around 80% of European banks.

The stance taken by ECB Banking Supervision is clear: further progress needs to be made, and we will see to it that every bank makes headway. In particular, the bottom-up, bank-specific climate stress test will be an important opportunity to assess and further promote this progress. Two areas will be key: the definition of a concrete, comprehensive strategy for C&E risks and progress in the collection and use of data, especially from clients.

Regarding the first area, one preliminary result of the recent ECB survey on banks' self-assessment of their alignment with the ECB's supervisory expectations on C&E risks shows that too many banks have not yet defined a strategy to manage these risks. Moreover, some have not yet begun to define an approach for assessing the impact of these risks on their business model and outlook. Given the growing importance of these issues, this approach clearly cannot be deemed compatible with the sound and prudent management of a credit institution. In fact, those banks that have defined their own systematic approach find that C&E risks are already having, or are about to have, a material impact on their risk profile. ECB Banking Supervision will therefore insist on the need for each bank to develop a strategy tailored to its particular situation. To make this operational from a risk management perspective, banks have to develop measurement and monitoring instruments. Nevertheless, of the banks that deemed C&E risks material in the short term in our survey, only one-quarter had already developed risk indicators to manage them. This shows that we need further progress on the measurement side to make these strategies operational. In relation to this, some banks highlight the real issue of the availability of relevant data, but there are ways in which this can be addressed.

First, banks should enhance their use of available data – public or from third-party providers – which many are still failing to do. Second, and most importantly for the development of their business, banks should collect new data on C&E risks from their clients: these data are key for their business and strategy. Roughly half of euro area banks have already started to integrate climate risks into their client due diligence. They have developed dedicated client questionnaires to better understand the climate risks to which they are exposed, and they use this information when deciding to whom they grant credit. In some cases, a specialised climate-risk function uses this information to advise the bank on higher-risk transactions and

customer acceptance. Some banks have also been proactively trying to overcome the scarcity of data on C&E risks by independently developing their own indicators – such as financed carbon emissions, financed technology mix and energy performance certificates – to identify corporate clients with high sensitivity to climate transition risks. They have then set limits at portfolio level to manage those risks. Banks should build upon these best practices, which the ECB will soon publish in a report. In particular, C&E risk aspects should become an integral part of the know-your-customer (KYC) approach: KYC has to integrate C&E risks, as this is the only way for banks to define and integrate a meaningful C&E approach into their business model.

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**Effective progress in the management of climate-related and environmental risks is essential for European banks.**

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All these ideas come from practices we are seeing in banks from different countries with different business models and different sizes. What the ECB will be asking banks to develop is thus perfectly possible across the industry, and we expect this progress to accelerate in the coming months: in the case of climate change and environmental degradation, the greater risk for banks is the risk of doing nothing.



## EMILIE MAZZACURATI

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### Net Zero commitments: implications for the banking sector

As the urgency of climate change rises on corporate agendas, over 50 banks representing more than 25 countries, the equivalent of almost a quarter of global banking assets (over US\$37 trillion) have committed to aligning their lending and investment portfolios with net-zero emissions by 2050.

These commitments constitute a momentous challenge for banks, who need to support and finance the decarbonization efforts of their clients across lending portfolios.

Yet the risks are greater if banks and other corporations fail to deliver on their net-zero commitments.

The risks related to the transition to a net-zero economy are generally well understood, though the scale of expected impacts varies widely under different scenarios. In a best-case scenario, where an orderly transition to a net-zero economy takes place supported by rapid technological progress and strong political alignment, banks can expect to

see moderate impacts: stranded assets in the fossil fuel industry, increase in reinvestment / replacement costs, could lead to corporate asset devaluation, lower profitability, increased litigation. These impacts may increase the probability of default of some corporate borrowers. Impacts on employment in industries and regions dependent on the fossil fuel industry, coupled with possible increase in energy prices, may lead to a drop in household wealth and an impact on creditworthiness of households.

In a scenario where a disorderly transition takes place, hampered by slow technological progress and lack of political alignment, these same risks grow exponentially: corporations may be ill-prepared, lack the chance to invest in adequate technology or reassess their business model, leading to a larger number of asset devaluations, bankruptcies, greater shocks on the economy and lower wealth across the board.

#### Risks are greater if banks and other corporations fail to deliver on their net-zero commitments.

The worst-case scenario is a failure to deliver on net-zero targets altogether: economic models provide but a pale image of the economic costs and risks to the financial system that may arise due to the physical impacts of climate change. The risks vectors go well beyond what economic models traditionally capture. A continued increase in temperature rise could drive mass migration, water and food shortages, health impacts, and conflicts, all of which drive disruptions to the economy and create unforeseen risks for banks.

In this context, net-zero commitments emerge as sound risk management policy, and banks are now faced with the collective challenge of understanding whether and how their clients are reducing carbon emissions at a pace aligned with the urgency and scale of climate change. While banks are highly exposed to transition risk by virtue of their business, they also hold important levers to lower this risk for themselves, their clients and society at large.

Proper accounting and disclosure of greenhouse gas emissions is foundational, with regular reporting to track changes in emissions for every borrower. Asking clients as a matter of business to report emissions or key indicators (energy efficiency rating

of houses in Europe, auto make and model for retail customers) when they apply or renew their line of credit will help build a much more precise picture of a portfolio's emissions and transition capacity.

Many corporations need help understanding what is expected of them, what technical and market solutions may be available to reduce their emissions – banks may be able to provide simple guidance and pointers for these clients, or offer access to advisory firms through partnerships to support the process.

Where banks' role will be most important, however, is in financing the transition. Corporations may need financing to retrofit their production facilities, decommission high-emitting assets, and invest in energy efficiency or distributed renewable generation. Small and medium enterprises or households may be incentivized with mechanisms like preferential conditions on mortgages for efficient cars, houses, or low interest loans for retrofits. A number of banks have started piloting such mechanisms – now is the time for the industry to share lessons on what financial products are most effective in driving emission reductions and scale these programs so they become embedded into regular banking operations.

Banks can leverage their role as key intermediaries to become a driving force in supporting the decarbonization of the economy, hence lowering their individual and collective exposure, and creating opportunities for new financial products and services.



## SHINSUKE TODA

Chief Executive Officer for  
Europe, Middle East and Africa,  
Mizuho Financial Group, Inc. /  
Mizuho Bank, Ltd.

### Climate and sustainability risks: implications in the banking sector

Mizuho Financial Group, Inc. views tackling climate change as a key management and strategic priority. We support the objective of the Paris Agreement and will proactively fulfil our role to achieve carbon neutrality by 2050 and have set the following initiatives: (i) direct finance flows towards achievement of the Paris Agreement targets through phased transformation of our finance portfolio, (ii) proactively engage with clients to support their transition pathways and (iii) publish climate-related disclosures aligned with the TCFD recommendations. We published our second TCFD report in June 2021.

Financial institutions play a critical role in supporting clients' transition pathways. A huge amount of investment will be required to implement fundamental changes in the business and operating models of market participants, to ensure that sustainability and mitigating climate change are as much a part of their strategy as generating profit.

Banks alone cannot provide the liquidity required for such a monumental shift, and therefore it is vital to attract investors on a cross-regional basis through harmonised disclosure regimes to ensure that the relevant risks and opportunities are uniformly understood.

However, the pace of reform is crucial. Reactive short-term policies issued in response to pleas from activist investors and influential campaigners risk paralysing entire industries and choking transition, which defeats the very purpose. For example, penalising fossil fuel industries too heavily and too early could create irreparable damage, including impairment losses due to premature halting of production and disposition of facilities. The urgent need to transition should be balanced against evaluating the continuing operation of such industries which could provide funding to be reinvested in alternative sources of energy, as well as benefiting market participants and the wider economy through increased economic output. We urge policy makers to holistically consider the broad impact of reforms, to determine their feasibility and ensure there is a sufficient implementation period, in particular for those corporates and sectors that will find it more difficult to transition successfully. To that end, notwithstanding the importance of momentum, mid-to-long-term targets seem more appropriate than subsequently having to remediate unintended and unwanted consequences.

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#### The pace of reform is crucial for effective transition.

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In addition to transition risk, physical risk is also important for our clients. For example, recent floods in continental Europe have had a significant impact on global supply chains. In Japan, where there have been incidences of unprecedented torrential rainfall, there is an increasing risk of heavy flooding and the government has created hazard maps to prepare for such significant natural disasters. These help Japanese financial institutions to quantitatively assess physical risk through scenario analysis. EU policy makers may wish to adopt a similar approach to help market participants to quantify their exposure to the physical risks of climate change in a consistent manner. For financial institutions, this will include the consequent impact on credit risk as a result of asset quality deterioration and the increase in credit cost.

Mizuho has and will maintain its engagement with clients to provide appropriate liquidity to facilitate their transition to a carbon neutral environment. A transparent and harmonised global framework with reference to an objective understanding of achieving "transition" will incentivise stakeholders to progress. Currently there is significant fragmentation in the regulatory framework and divergence in market practice, for example there being no uniform standard to quantitatively assess emissions reductions. This is perhaps a consequence of the fast pace of reform, which is paradoxically inhibiting progress. The EU's recent legislative package and the upcoming COP26 will aim to resolve some of these issues, although a material obstacle remains the unavailability of consistent market-wide data.

The implementation of legislative initiatives such as harmonised disclosure requirements for financial institutions and corporates in respect of non-financial information may accelerate transition. These will encourage market participants to consider at a granular level their exposure to sustainability risks and focus their minds on the measures taken to mitigate such risks, as well as enabling them to take into account their wider role in enabling transition. Banks and regulators should work together to facilitate reforms that both achieve the desired policy objectives and are viable from a business perspective.

A clearer globally aligned standard will galvanise the private sector to implement reforms with less fear of being "off market", as well as creating sound and robust markets for sustainable finance. Therefore we encourage EU policymakers to coordinate and accelerate discussions on a global basis in respect of ESG reform.



## RICARDO LAISECA

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Transition for Clients,  
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Argentaria (BBVA)

### Sustainability Risks: “Beyond the Sea”

I was afraid of swimming in the open sea when I was a child. However, I overcame my fear thanks to a lot of training, perseverance and prudence. Sustainability risks (and opportunities) are the same.

Sustainability risks are new and there is a high level of uncertainty as there is neither enough expertise nor data or long-term modelling techniques. Furthermore, there is growing evidence signaling that climate change-related risks could materialise much faster than previously expected. Therefore, we need to accelerate and adapt our risk models, our strategies, our businesses and our internal processes to progressively integrate them through learning by doing and by trial and error.

Risk understanding and management is a building block to develop sustainable finance. It helps in a smooth transition towards a low-carbon economy, to foster the resilience of the financial system and to better identify and take advantage of the opportunities. However, too much acceleration and leaving prudence behind can bring about two undesirable consequences:

- 1) An increase in risks for banks and the financial system, in case that due to the excessive speed we cannot manage risks, price formation and assigning investment efficiently. Going faster than what is recommended by prudence can be a risk. For those reasons, a long enough roll-out period is needed.
- 2) A significant amount of work and resources inefficiently assigned with a high opportunity cost, moreover given the current cost saving environment in the banking sector. There is a risk of doing too many things simultaneously, instead of focusing on the most important and to provide valuable solutions. There seems to be an excess of both private and public initiatives that sometimes are overlapping, inconsistent and have tight timeframes. First things first: to carry out a cost-benefit analysis and focusing on the most important matters is a must. We need to prioritize using a cost benefit analysis.

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needed. Going faster can  
be a risk.**

In that vein, supervisory expectations offer a valuable path to the needed prioritization, and can be a lever for coordination and credibility. For example, in the EU, the ECB Guide on climate-related and environmental risks management and disclosure has helped us to clarify and to prioritise our main challenges: firstly, understanding and measuring them as drivers of the already existing risks (credit, market, liquidity, operational). Secondly, towards quantifying their impacts in our balance sheet and in our P&L (using taxonomies, scenario analysis, stress testing) and, finally, implementing adaptation and mitigation techniques (such as frameworks for the admission, an active engagement with clients and a risk appetite framework). Indeed, portfolio alignment is a useful tool because it allows for i) a comprehensive view (of the whole portfolio), ii) tracking the achievement of the strategic goals and iii) promoting an active asset management.

Having said that, a demanding regulatory and supervisory agenda is accelerating. In EU, the European Commission Renewed Sustainable Finance Strategy proposes some amendments to ensure ESG factors are consistently included in banks' risk management in this year's review of Capital Requirements

Regulation and Directive; the first ECB bottom-up climate stress testing will be carried out in 2022, jointly with a the full supervisory review; and the EBA mandate to consider a dedicated prudential treatment of sustainable exposures has been brought forward from 2025 to 2023 to consider a dedicated prudential treatment of sustainable exposures.

Jointly with the regulatory and supervisory agenda, transition will have a leading role in the future. The social component of the ESG will be at the core: there is no sustainability without society. And a huge and complex challenge will emerge: demographics. We need to consider that extra longevity needs to be linked to some years of social engagement and to the creation of some new long-term financial products and value-added solutions. Transforming the longevity liability into an asset for society, subject to the profitability-risk combination will be an elephant in the room.

Achieving all of the aforementioned targets is not easy. Therefore, I would like to emphasize again the relevance of the cost-benefit analysis to focus on the most relevant needed advancements.



## SANGHAMITRA KARRA

Global Head of Market Risk  
Stress Testing, Morgan Stanley

### Role of banks in a sustainable transition

Banks have a crucial role of mobilising capital to help aid the EU transition to a low-carbon sustainable economy. The transition to low carbon sustainable economies involves all parts of the economy – from households, corporates to governments. To truly embed the principles of sustainability involves looking at the overall business strategy for a bank including the various stakeholders from clients, customers, employees, shareholders, supervisors and public authorities. At the highest level, this involves having a well-articulated vision such as commitment towards Net Zero pathway or in ensuring Diversity and inclusion.

The vision itself can be translated into asking specific questions regarding how the bank can help support its clients to transition to a low-carbon economy. It also involves have a closer look at the operations of the bank a from corporate sustainability standpoint whether it's around a bank's own footprint, embedding climate and sustainability risks into risk management practices or ensuring adequate disclosures to play its part in improving the transparency agenda.

Political and regulatory stability is key for ensuring the required progress in the

ever accelerating transition pathway. As we attempt to solve some of the truly global issues of our times in an interconnected world, the ability to use a common language for expressing the risks, common approaches for testing the risks and a common understanding of what good looks like is crucial. The work by some of the international bodies such as NGFS, FSB and BIS in this space is crucial to develop common principles, scenarios and methodologies. The EU Taxonomy helps with developing the common language for communication and the various disclosure requirements help with improving the transparency around these communication. Some barriers to implementation include accessibility of data, costs associated with implementation and the fast evolving understanding in these areas may require the need for an evolving regulation.

Financing a transition, poses a number of risks to banks and other financial institutions. At the core, this is about supporting innovation in both new and existing companies. Climate risks and sustainability risks more generally have unique features such as deep uncertainties involved in modelling the nexus of climate science and economics, the long duration involved in the projects that aid transition as well as the availability and ability to measure the appropriate data for making decisions. In addition to the financial risks, there are increasing reputational and legal risks in this area.

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**Banks have a crucial  
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transition.**

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The speed of change in sentiment in a connected and social-media fuelled world is measured today in a matter of hours and days and this is expected to only grow faster. The legal landscapes are also fast evolving and are quite disparate across countries. Over the last few decades, banks have enhanced their risk management capabilities but the broader sustainability agenda requires more investment in both financial and non-financial risk management frameworks associated with it. An increased transparency over the direction of policy and legal frameworks in this space will be beneficial to manage the transitions.

Data required for assessing climate and sustainability risks needs to be both global (as the issues themselves are global

in nature) but granular (as the risks vary materially across entities, sectors and jurisdictions). In considering the transition risk and climate mitigation data, the data is broadly well defined but exposure data is required from both financial and non-financial firms, a number of which is still in nascent journey through the disclosure route, particularly around items such as scope 3 emissions. For financial institutions and banks, it's also important to understand how the risk may be propagated (e.g. through insurance or suppliers) to understand the indirect impacts of climate change risks. The availability of this kind of data is currently sporadic. For physical risks, by definition requires granular local data which often poses a challenge and is more acute in emerging markets where access to such data is sparse but is also more relevant given the propensity for risks. Comparability across third party vendors for ESG data/ratings is also low raising challenges for managing the risks. As highlighted by the recent FSB report on climate related data, it's important to ensure filling these gaps within the data requirements and aiming for better disclosures.

There is momentum in the banking industry to support the transition to a low carbon development pathway. While issues around political and regulatory instability, evolving nature of risks and a need for comprehensive data pose barriers, these are not unsurmountable, particularly with the innovation within the industry as well as the stable policy frameworks provided by supervisors and public authorities.