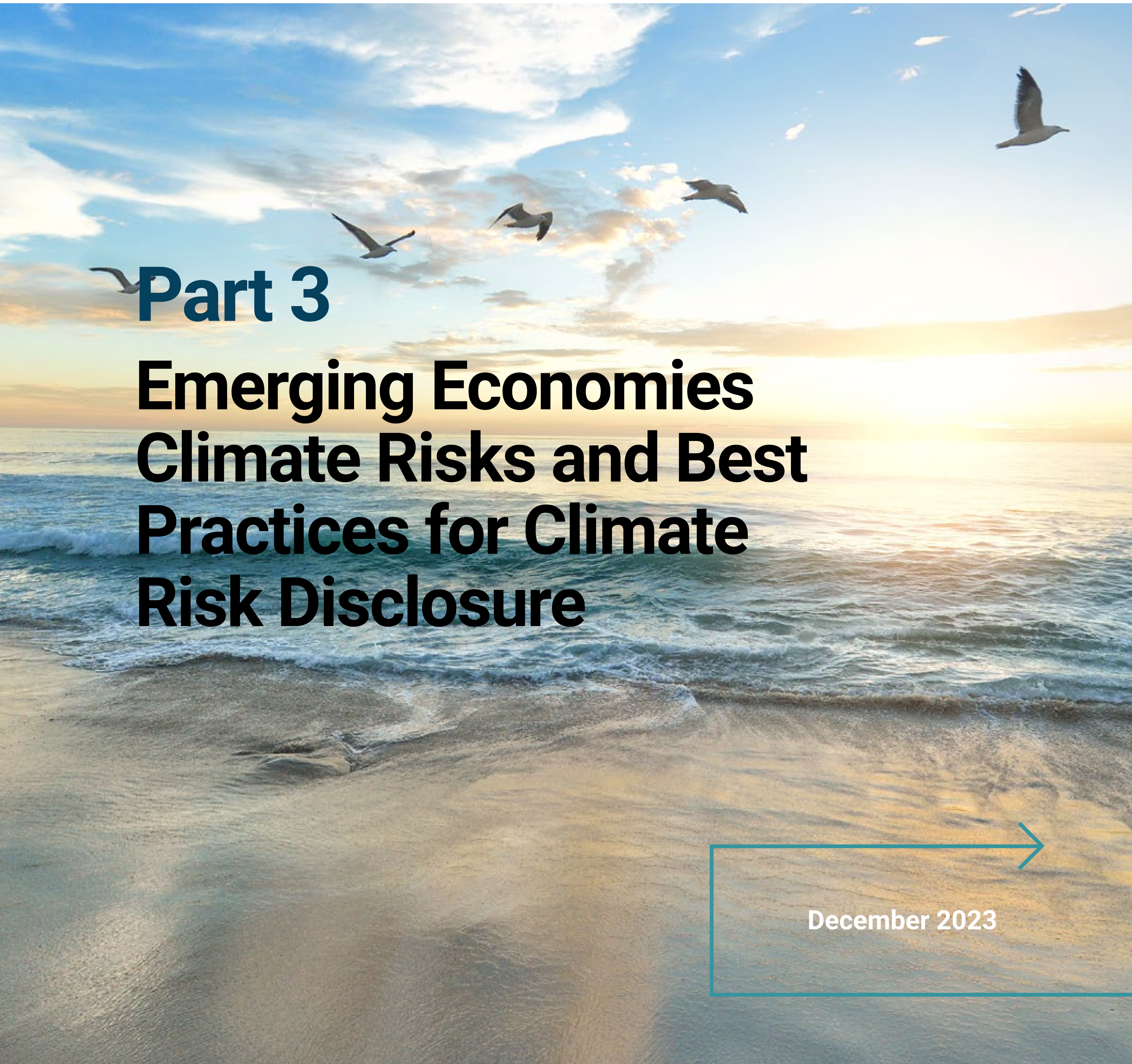
Tangible guidance for making ISSB and TCFD climate-related disclosures in emerging markets

UN environment programme

finance initiative



Part 3

Emerging Economies Climate Risks and Best Practices for Climate Risk Disclosure

December 2023

Disclaimers

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- Hikaru Hayakawa

List of abbreviations

BCB	Banco Central do Brasil
CDSB	Climate Disclosure Standards Board
CDP	Carbon Disclosure Project
CVM	The Brazilian Securities and Exchange Commission
EBA	European Banking Authority
EU	The European Union
FEBRABAN	The Brazilian Federation of Banks
FSB	Financial Stability Board
G20	The Group of Twenty
GDP	Gross Domestic Product
GHG	Greenhouse gases
GRI	Global Reporting Initiative
IFRS	International Sustainability Standards Board
IPCC	Intergovernmental Panel on Climate Change
ISSB	The International Sustainability Standards Board
NDC	Nationally Determined Contribution
NGFS	Network for Greening the Financial System
PRI	Principles of Responsible Investment
RBI	Reserve Bank of India
RE	Regulated entities
SDGs	The United Nations' Sustainable Development Goals
TCFD	Task Force on Climate-Related Financial Disclosures
TPT	The Transition Plan Taskforce (of United Kingdom)
United Kingdom	United Kingdom of Great Britain & Northern Ireland
UNCTAD	United Nations Conference on Trade and Development
UNEP FI	United Nations Environment Programme Finance Initiative
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
USD	U.S. Dollar

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Executive summary

The growing awareness of the profound impacts of climate change has prompted a worldwide focus on climate-related disclosures due to the urgent need to address the challenges posed by climate risks and opportunities. Climate change affects sectors, nations, regions, and financial systems, making it a critical consideration for businesses, investors, regulators, and policymakers.

The realisation of the wide-ranging consequences of climate change has led to an increased understanding of the importance of transparency and accountability in disclosing climate-related information. As a result, many countries have taken legislative action to enforce climate-related disclosures, leading to the development of various disclosure requirements and frameworks. This global attention on climate-related disclosures reflects the collective effort to foster sustainable finance practices and mitigate the adverse effects of climate change, making it an integral part of the broader sustainability agenda for organisations and economies worldwide.

The TCFD was established by the Group of Twenty (G20) Financial Stability Board in 2015 to address climate risk pricing and capital allocation for financial stability. Its 2017 final report provided voluntary disclosure recommendations to ensure consistent and comparable climate-related information in financial reports for investors, lenders, and insurers. In October 2021, the TCFD updated its implementation guidance, introducing transition plans and clarifying financial metrics and targets. The TCFD has gained over 2,700 global supporters, including corporates, investors, and governments. In July 2021, the G20 Finance Ministers and Central Bank Governors endorsed the TCFD, aiming for global coordination on reporting standards. The fifth status report from October 2022 revealed progress in disclosure but noted the need for further improvement.

The TCFD has made a major contribution to improving climate-related financial disclosures worldwide by serving as the foundation for many climate-related and sustainability disclosure or reporting frameworks and regulations. A notable achievement has been the recent finalisation of the IFRS Sustainability Disclosure Standards on General Requirements for Disclosure of Sustainability-related Financial Information (IFRS S1) and Climate-related Disclosures (IFRS S2), often referred to as 'the ISSB standards'. The ISSB standards and, in particular, the IFRS S2 climate standard represent the successors to the TCFD, relying on its framework and four pillar structure.

In parallel, the ISSB was established in November 2021 to deliver a global baseline of sustainability-related disclosure for global capital markets. On 26 June 2023, the ISSB issued its inaugural standards—IFRS S1 and IFRS S2—aimed at enabling companies to deliver decision-useful, consistent and comparable information to investors globally in a cost-effective and assurable way. IFRS S1 requires companies to disclose sustainability-related risks and opportunities, while IFRS S2 focuses on climate-related risks and opportunities. Both standards fully integrate the TCFD recommendations. Now issued, the ISSB will support adoption by collaborating with jurisdictions and companies, including creating a Transition Implementation Group and launching capacity-building initiatives. The ISSB will also continue working with jurisdictions and the Global Reporting Initiative (GRI) to facilitate efficient reporting when combining the standards with other frameworks.

This report, divided into three parts, offers comprehensive guidance for companies in emerging markets on each pillar of the TCFD recommendations, all of which have been incorporated into the IFRS S2 standards. The report references IFRS Sustainability Disclosure Standards, as well as recommendations and guidance issued by the TCFD where applicable. The aim is to assist companies in making climate-related financial disclosures. These resources address key questions, outline pathways for progress, and show practical case study examples to illustrate real-world disclosures. Together, these contributions aim to empower financial institutions with the knowledge and tools needed to effectively navigate climate-related financial disclosures and contribute to a more sustainable future.

Financial institutions in emerging economies play a critical role in shaping the future of sustainable development. It is essential for these organisations to embrace climate-related financial disclosures so as to proactively manage risks and seize opportunities. The TCFD and ISSB provide robust standards for organisations to assess and disclose climate-related risks and opportunities. By adopting and implementing IFRS S2, which incorporates the core recommendations or pillars of the TCFD framework, emerging economies can enhance their resilience, attract sustainable investments, and contribute to the global transition toward a low-carbon economy.

The report explores best practices and summarises industry knowledge for climate-related risks and opportunity disclosures. This report was designed both for financial users who are developing climate-related financial reports and for decision-makers within their organisation. By fostering a deeper understanding of climate-related implications, this resource aims to bolster sustainability efforts and facilitate more resilient decision-making for a better future.

As a result, this report aspires to be a resource for policymakers and financial institutions, as well as organisations just starting out on their climate journey and other stakeholders in emerging economies. By harnessing the insights presented in this report, participants can strengthen their climate risk management practices, facilitate informed decision-making, and ultimately contribute to the sustainable growth and development of their respective economies.

In summary, the objectives of this report are as follows:

1. Provide participants with a comprehensive overview of climate risks and opportunities in emerging economies, enabling them to develop a nuanced understanding of the challenges and potential responses to these challenges.
2. Highlight best practices for climate-related financial disclosure, offering participants practical guidance to effectively integrate climate-related financial considerations into their reporting processes.
3. Support policymakers and financial institutions in creating an enabling environment for climate risk management and sustainable finance in emerging economies.
4. Foster international collaboration and knowledge-sharing, facilitating the adoption of standardised approaches to climate-related financial disclosures in emerging economies.

With a focus on financial institutions in emerging economies, this report aims to empower participants to embrace climate resilience, seize opportunities for sustainable development, and contribute to the global efforts in combating climate change.

5. Conclusion and recommendations for financial regulators and financial institutions in emerging economies

This chapter focuses on recommendations for financial regulators and financial institutions in emerging economies regarding climate-related financial disclosures. The recommendations for financial regulators include integrating climate change into macro-prudential and micro-prudential supervision, promoting best practices of climate disclosures, developing green taxonomies, and conducting assessments of climate-related systemic risks. The recommendations for financial institutions include building robust transition plans, joining climate-related financial initiatives, and committing to capacity-building on climate-related topics. These actions aim to enhance the understanding and management of climate-related risks, promote transparency and consistency in climate disclosures, facilitate green finance, and support the transition to a sustainable economy in emerging economies.

5.1 Recommendations for financial regulators in emerging economies

Financial regulators play a crucial role in assisting the financial sector in emerging economies with the implementation of climate. Below are several actions that regulators can take to support and facilitate this process.

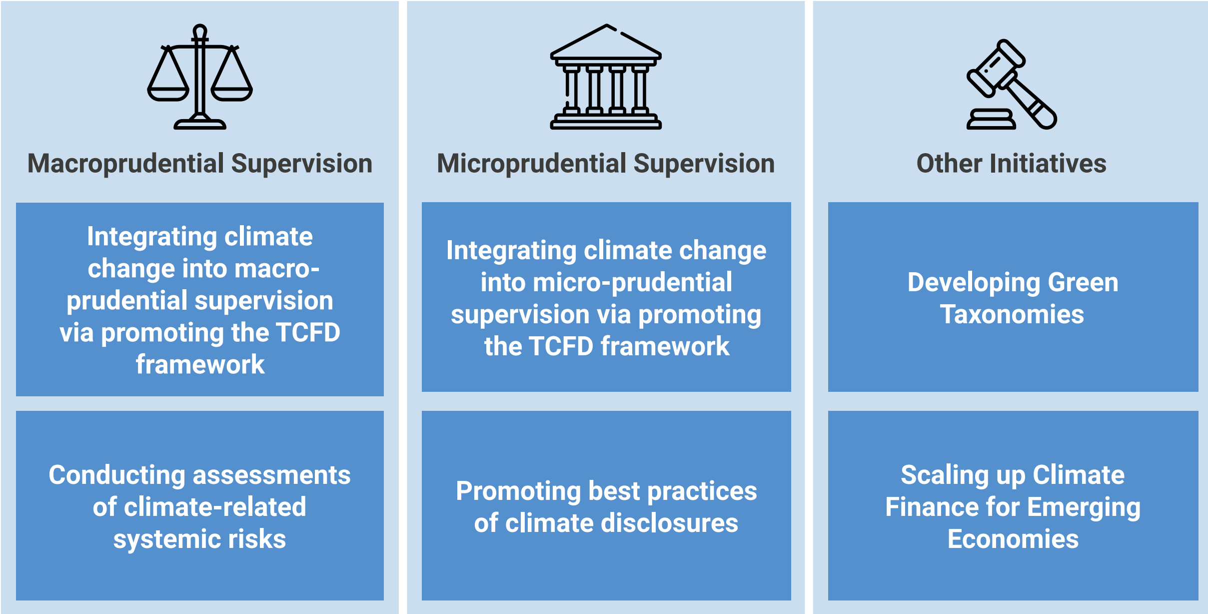

Figure 1: Overview of recommendations for financial regulators in emerging economies curated by UNEP FI for this report in 2023

5.1.1 Integrating climate change into macro-prudential supervision via promoting the TCFD recommendations and ISSB standards

Examining the stability of the financial system requires considering the impact of climate risks to the financial sector. In this regard, climate stress testing serves as a regulatory tool for assessing the stability of the financial system and the financial soundness of institutions in the face of climate-related risks. Climate stress testing often involves scenario analysis based on different policy and emissions trajectories. Financial regulators can invite participating financial institutions to conduct modelling exercises to assess their potential reaction to climate-related shocks.

5.1.2 Integrating climate change into micro-prudential supervision via the promotion of the TCFD recommendations and ISSB standards

Financial regulators can provide clear guidance and establish mandatory disclosure requirements aligned with the TCFD/ISSB framework. By setting regulatory expectations, regulators create a level playing field and encourage consistency in climate disclosures across the financial sector. This guidance should outline the key components of climate disclosure, such as governance, risk management, scenario analysis, and metrics, enabling financial institutions to effectively align their reporting practices.

5.1.3 Promoting best practices of climate disclosures

While there are variations in climate-related prudential policies among central banks and financial regulators across countries, adhering to best practices is crucial for institutions, particularly those operating in multiple jurisdictions with varying compliance and disclosure requirements. By following best practices, institutions can ensure a consistent policy and strategy for managing and reporting climate risks, even in the presence of different regulatory frameworks and mandates. This approach helps promote alignment and coherence in climate risk management efforts, facilitating effective risk assessment and disclosure practices across borders. It also supports transparency and comparability in assessing climate-related risks and enables institutions to meet the expectations of regulators and stakeholders in different jurisdictions. Adopting best practices as a guiding principle assists institutions in navigating the complex landscape of climate-related prudential policies while maintaining a robust and comprehensive approach to climate risk management.

5.1.4 Developing green taxonomies

Green taxonomies can help lay the groundwork for climate-related disclosures by providing a standardised framework for identifying environmentally sustainable economic activities. They establish a common language and criteria, enabling consistent and comparable reporting of environmental impacts. By classifying investments and operations, green taxonomies help assess climate risks and opportunities, enhancing transparency and informed decision-making. They also support the alignment of financial flows with climate objectives, guiding investments towards low-carbon and climate-resilient activities.

Given differences in terms of the make-up of economic and financial systems amongst regions and jurisdictions, it is therefore conducive for emerging economies to develop their own green taxonomies. The following table provides some examples of existing guidance that could assist this process.

Table 1: Examples of existing guidance for understanding green taxonomy, (World Bank, 2020), (OECD, 2020).

Guidance	Descriptions
Developing a National Green Taxonomy: A World Bank Guide (World Bank, 2020)	A report by the World Bank that aims to establish a common language for discussing climate resilience and to assist in decision-making regarding climate risk in fundraising, lending, and investment activities. In response to a discussion paper issued by Bank Negara Malaysia in September 2019, which outlined principles for identifying economic activities that contribute to climate change mitigation and adaptation, this guide provides recommendations for the creation of national green taxonomies. The guide also includes a comparison of existing taxonomies, aiming to offer support to countries in clarifying which activities market participants consider as environmentally sustainable. With growing global concerns about environmental sustainability and the increasing interest among countries in providing clear guidance on green activities, the World Bank hopes that this guide will assist all stakeholders in their transition towards a more environmentally sustainable future.

Guidance	Descriptions
Developing Sustainable Finance Definitions and Taxonomies (OECD, 2020)	A report by the OECD that focuses on the definitions and taxonomies related to sustainable finance in five jurisdictions: the European Union, People's Republic of China, Japan, France, and the Netherlands. It highlights the importance of taxonomies in providing clarity and certainty about the environmental sustainability of different types of investments. The report aims to improve market transparency, build investor confidence, and enable the measurement and tracking of sustainable finance flows. By discussing preliminary considerations for the design of taxonomies, the report assists policymakers in developing and expanding sustainable finance markets to support environmental and sustainable development goals. It also identifies both differences and commonalities among the taxonomies, with the potential to create comparable frameworks that facilitate international investment while acknowledging national circumstances.

5.1.5 Conducting assessments of climate-related systemic risks

Financial regulators have the opportunity to go beyond issuing climate-related financial risk disclosures and instead conduct comprehensive assessments of climate-related risks within their financial systems. Similar to stress tests, these assessments can identify the major transition and physical risks faced by the nation's financial sector. They provide valuable insights into the relative magnitudes of these risks and suggest mitigation measures to minimise potential impacts and enhance resilience under various climate scenarios.

Several regulators, including those in France, Canada, and Hong Kong, have already completed or are in the process of conducting such exercises tailored to their specific policy and physical contexts. Similarly, individual central banks can utilise local scenarios or adapt global scenarios to each emerging economy's unique circumstances for their assessment.

By involving participants from the financial sector, these exercises in France, Canada, and Hong Kong have facilitated collaborative learning between financial institutions and regulators regarding climate risks and scenario analyses. The feedback gathered from these exercises can also be utilised in the development of climate stress tests, further enhancing the understanding and management of climate-related risks within the financial system.

5.1.6 Scaling up Climate Finance for Emerging Economies

The need for immediate climate action is evident. Simply making incremental improvements in sustainability will not be sufficient to achieve net-zero emissions and build resilient economies. Our attention must now shift towards embracing emerging climate-friendly technologies and integrating reduced emissions and enhanced climate resilience into business models and practices across all industries. Considerable financial support has been committed to turning this vision into a reality. During the COP26 conference in Glasgow, the Climate Finance Delivery Plan was unveiled. This outlines the strategies that developed nations will employ to mobilise USD 100 billion annually. This funding will enable developing countries to effectively address the climate crisis and adapt to its consequences.

Emerging economies present vast opportunities to utilise climate finance for the purpose of achieving green economic transformation. These opportunities span across various areas, such as clean energy, sustainable transportation, eco-friendly infrastructure, and innovative technologies for adaptation and resilience. By tapping into these possibilities, we can effectively combat the climate crisis while fostering prosperity and facilitating a fair transition to a new, sustainable economy.

How regulatory initiatives could contribute to green finance: example from India

In a report (2023) by the Reserve Bank of India (RBI), India's central bank and financial regulator, the role of regulatory initiatives in promoting a green financial system is comprehensively discussed. One such initiative is the introduction of the Green Deposits framework. Under this framework, financial institutions are encouraged to offer green deposits to customers, ensuring the protection of depositors' interests, addressing concerns related to greenwashing, and facilitating increased credit flow towards green activities and projects.

To effectively allocate these green deposits, RBI mandates that regulated entities (REs) establish a Board-approved financing framework (FF). This FF outlines the criteria for the allocation of green deposits and covers various eligible green activities and projects. These activities and projects are identified based on the Government of India's 'Framework for Sovereign Green Bonds', published in November 2022. The identified sectors include renewable energy, energy efficiency, clean transportation, climate change adaptation, sustainable water and waste management, pollution prevention and control, green buildings, and sustainable management of natural resources and land use, as well as terrestrial and aquatic biodiversity conservation.

To ensure transparency and accountability, REs are required to conduct an annual impact assessment and undergo third-party verification. The reports resulting from these assessments and verifications must be made available on the REs' respective websites.

5.2 Recommendations for financial institutions in emerging economies in managing and reporting climate risks

This section outlines key actions that financial institutions in emerging economies could consider taking to effectively manage and report on climate-related risks and opportunities.

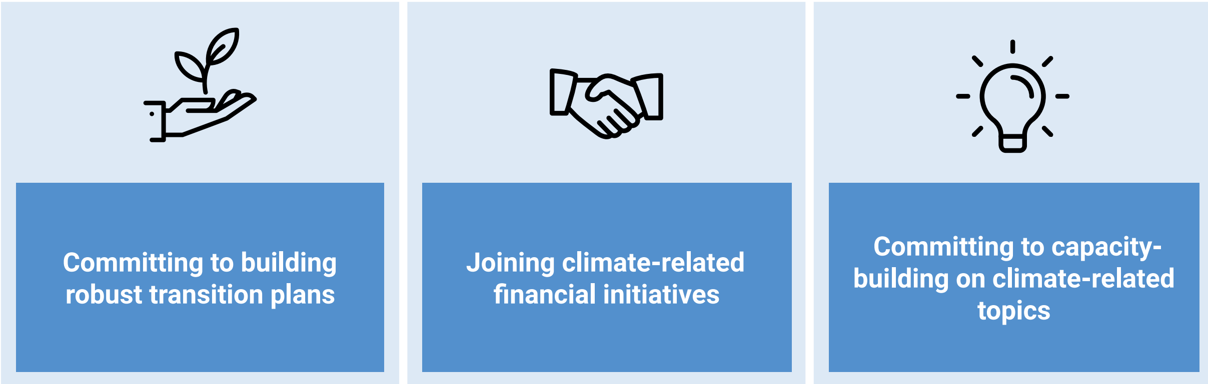

Figure 2: Overview of recommendations for financial institutions in emerging economies curated by UNEP FI for this report in 2023

5.2.1 Committing to building robust transition plans

Banks worldwide are committing to achieving net-zero emissions by 2050, signalling their dedication to addressing climate change. Now, they must develop detailed transition plans with clear targets and metrics. Transition plans[1] are essential tools recommended by the TCFD and the new ISSB standards, enabling banks to translate their climate commitments into actionable steps.

Banks in emerging economies have unique opportunities to build robust transition plans that simultaneously support sustainable economic growth and address climate change. Doing so brings a range of benefits for emerging economies.

These benefits include: (i) achieving economic resilience by diversifying towards sustainable industries, creating jobs, and attracting investment; (ii) building energy resilience via reducing reliance on imported fossil fuels with a shift to cleaner energy sources; and (iii) accessing green finance, demonstrating environmental stewardship, and gaining a competitive edge in the global market.

Realising the importance of credible transition plans that create transparency and accountability for financial institutions and companies to meet their net-zero targets, a number of initiatives have been established. One notable example is the Transition Plan Taskforce (TPT) in the United Kingdom, which has launched a Disclosure Framework that aims to serve as a gold standard for private sector transition plans (Transition Plan

1 ISSB defines climate-related transition plan as "[an] aspect of an entity's overall strategy that lays out the entity's targets, actions or resources for its transition towards a lower-carbon economy, including actions such as reducing its greenhouse gas emissions", (p.19, IFRS, 2023d).

Taskforce, 2023a). TPT is consulting on sector-specific guidance as of November 2023 (2023b).To help financial institutions and companies in their preparation for transition plans, a Sandbox has been launched (2023c). The Sandbox will contribute to facilitating robust transition planning through tools, metrics, and datasets that support the analysis of transition plans, as well as the verification and assurance of transition plans.

5.2.2 Joining climate-related financial initiatives

Climate-related financial initiatives are experiencing rapid growth worldwide. UNEP FI plays a significant role in the expanding landscape of climate-related financial initiatives worldwide. Development financial institutions (DFIs) are actively facilitating the collaboration of regional financial institutions to address shared climate challenges. In this context, UNEP FI, along with the Principles for Responsible Investment (PRI), offers dedicated working groups that enable financial institutions to enhance their climate risk management practices through expert consultations and peer discussions. Through these initiatives, UNEP FI acts as a valuable platform for financial institutions seeking to improve their understanding of, and response to, climate-related risks and opportunities.

5.2.3 Committing to capacity-building on climate-related topics

As highlighted in existing research (UNCTAD, 2020; Goel *et al.*, 2022), a gap in climate disclosures exists between emerging and developed economies. Many emerging economies may face challenges in terms of resources, expertise, and data availability. Considering this, the disclosure gap could be addressed through capacity-building within the financial sector, in terms of: (i) raising awareness of the importance of climate risks and opportunities to the long-term resilience and competitiveness of financial institutions; (ii) trainings to facilitate sustainability and climate risk assessments in financial institutions; and (iii) committing resources to enable the development of sustainability and climate teams within financial institutions.

6. Additional regulatory and commercial bank case studies from the market

The case studies in the following section provide examples of practices for institutions in emerging economies, largely derived from initiatives in other emerging economies. The first subsection covers regulatory case studies, specifically from Brazil and China, and is relevant to supervisors and those looking to understand supervisory practices. By exploring these real-world examples, financial institutions can gain actionable strategies to navigate the unique challenges and opportunities presented by emerging markets while fostering a positive impact on the environment and society.

The second subsection provides examples for each of the 11 TCFD recommendations/IFRS S2 requirements and is most relevant to those drafting their climate-related financial disclosure. By delving into these cases, stakeholders can better understand how to effectively communicate their environmental efforts and align with global disclosure standards.

6.1 Brazil regulatory case studies

Brazil's net-zero strategy

Brazil is the twelfth-largest economy in the world, the largest economy in Latin America, the sixth largest emitter in the world at present time, and home to around 40 percent of the world's tropical forests (CDP, 2021; Huck, 2021; UNEP, 2019). As such, its role in addressing climate change is significant, as are the domestic impacts of climate change that is faces. Brazil updated its Nationally Determined Contributions (NDC) in March 2022, identifying emissions reduction goals for 2025 and 2030 and introducing a plan to stop illegal deforestation by 2028 (Government of Brazil, 2022a). The federal government aims to achieve net-zero emissions by 2050 and to halve its emissions relative to a 2005 baseline in 2030 (Government of Brazil, 2022a). Although the Brazilian government has room for improvement of its NDC commitments and the implementation of carbon pricing, the country has a robust regulatory framework to address climate change. Furthermore, a May 2022 presidential decree also initiated planning for sector-based carbon markets. This means that the federal government may implement carbon pricing in the medium term, subject to legislative approval (OMFIF, 2023; Government of Brazil, 2022b).

2021 Rules on social, environmental, and climate-related disclosure

In September 2021, the Banco Central do Brasil (BCB) amended earlier ESG protocols to require the banks and corporations it regulates to establish "Social, Environmental and Climate Responsibility Policies". These policies includes: social, environmental, and climate-related risk governance; stress testing for potential risk impacts, and; a risk management process (Mandl, 2021). The same resolution requires regulated financial institutions to disclose social, environmental, and climate-related risks and their governance and management annually in a dedicated report, beginning at the latest within 120 days of December 2023 (BCB, 2021). Financial institutions are also required to submit data on social, environmental, and climate-related risk exposures every six months to the BCB, starting in February 2023 for larger institutions (FSB, 2022; BCB, 2022). These rules were inspired by the TCFD. As of July 2023, however, the BCB had yet to require the reporting of climate-related business opportunities and quantitative indicators to measure risk, as recommended by the TCFD (BCB, 2021). The BCB also does not require this information to be incorporated into mainstream reports. For now, however, very few major economies have disclosure regulations that completely or almost entirely align with recommendations under IFRS S2.

Other initiatives by Brazilian financial institutions to align with TCFD recommendations/ISSB standards

The BCB has addressed sustainability at the same level as other major macroeconomic issues. It has carried out various initiatives to improve climate-related risk and opportunity disclosure. The BCB participates in the Network for Greening the Financial System and is serving as a steering committee member for a two-year term (BCB, 2022). This past year, the BCB collaborated with the Ministry of Science and Technology to produce its first ever climate stress test, published in its 2023 Financial Stability Report (Sharan, 2023). The stress test includes the sensitivity of the BCB's credit portfolio to climate-related events in 2020, 2030, and 2050 for all municipalities in the country. It also analyses transition risks at the industry level (Sharan, 2023).

The Brazilian Securities and Exchange Commission (CVM) has also established ESG regulations, including a requirement to regularly report to the CVM whether issuers of securities follow TCFD/ISSB or other entities' standards and disclose their greenhouse gases (GHG) emissions inventories publicly (or to provide proper justification if they do not) (Chambers and Partners, 2022; Clydeco, 2023). The Brazilian Federation of Banks (FEBRABAN)—a non-profit membership group that represents over 119 banks (over 98 percent of the total assets of the Brazilian financial sector)—has also played an important role in promoting climate-related risk disclosure in Brazil. it incorporated TCFD disclosure into its policies a year before the BCB implemented its new rules (Chambers and Partners, 2022; FEBRABAN, 2021). FEBRABAN has also established a working group comprising of 14 banks to improve implementation of TCFD recommendations and now the recommended disclosure under IFRS S2, as well as shariong knowledge and methods (FEBRABAN, 2021). So far, around 22 Brazilian financial institutions have publicly supported the TCFD/ISSB (OMFIF, 2023).

There is still much progress to be made. As Cesar Tarabay Sanches, Head of Sustainability at the B3 Stock Exchange, said in a December 2022 ISSB press release: "With around 20 million active companies in Brazil, our biggest challenge is building capacity, sharing best practice, and growing knowledge" (IFRS, 2022). Brazilian banks are well-engaged in global initiatives to improve disclosure, and have developed climate-related commitments and strategies (Assali *et al.*, 2023). Engagement in climate-related risk management and disclosure still needs to improve among asset managers, asset owners, and insurance companies (especially the latter two), as seen in the figure below. Across the financial sector, improvements in transparency with regards to metrics and data still need to be made (Assali *et al.*, 2023). Thus, while new regulations are helpful, some firms have experienced technical and resource challenges in fulfilling their climate-related risk and opportunity disclosure obligations. It is also difficult to track climate finance as a whole because the Brazilian federal government has not yet developed a green taxonomy, so financial flows are not labelled as green or sustainable (Assali *et al.*, 2023).

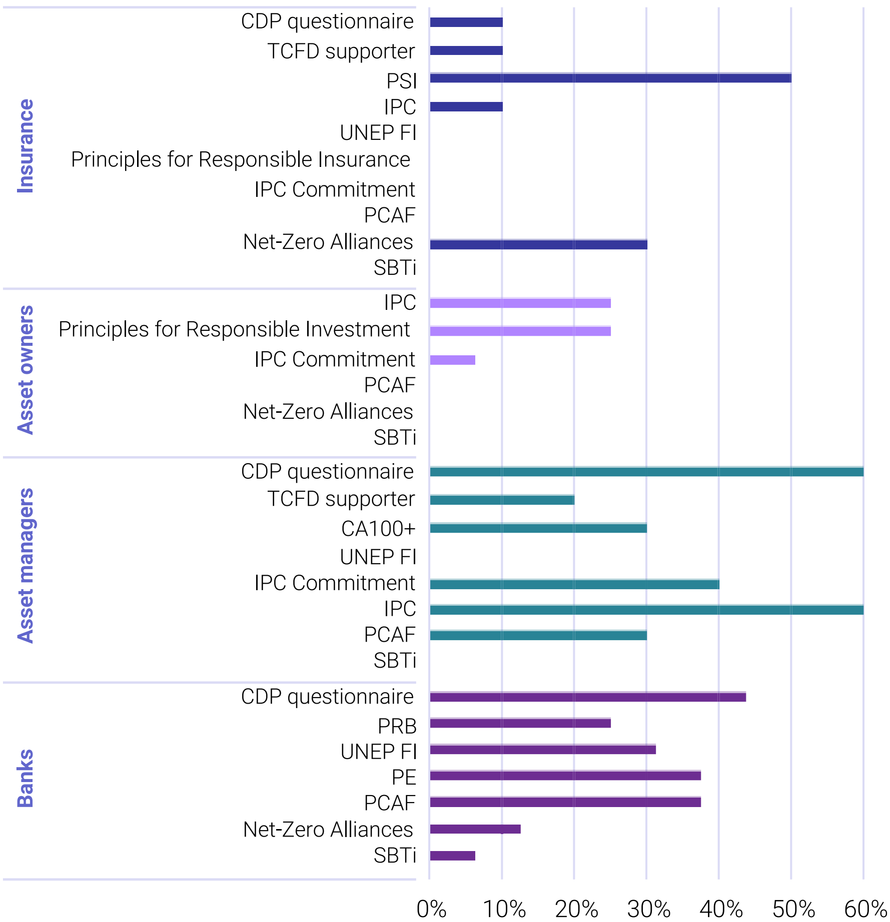

Figure 3: Participation of key Brazilian financial institutions in climate-related initiatives, (Assali *et al.*, 2023).

Brazil's climate-related risk disclosure regulations in global context

Still, Brazil's climate-related risk disclosure regulations and initiatives put the country at the forefront of global efforts, though many opportunities for improvement remain. As of December 2022, the UK, Singapore, Japan, India, Hong Kong, the EU, New Zealand, Brazil, and a few other countries all have some mandatory disclosure requirements that align with the TCFD framework (Becher and Noy, 2023; Wu & Uddin, 2022).

Jan–Feb	Mar–Apr	May–Jun
United Kingdom Financial Conduct Authority rules on TCFD come into force **Singapore** Requirements for issuers to adopt climate reporting by the SGX comes into force	**United States of America** Securities and Exchange Commission publishes its climate disclosure rule for public comment **Switzerland** initiates consultation on ordinance on climate reporting by large companies **Japan** Financial Services Agency will require prime-segment listed companies to disclose against TCFD	**India** Requirement for largest listed issuers to disclose their business-sustainability reports become mandatory for fiscal year 2022-2023
Jul–Aug	**Sep–Oct**	**Nov–Dec**
Hong Kong The Securities and Futures Commission requires all large fund managers to disclose their climate-related risks	**EU** First set of reporting standards for the Corporate Sustainability Reporting Directive will be adopted	**New Zealand** The External Reporting Board will publish first set of climate reporting standards **Brazil** The Central Bank of Brazil's regulation on climate-risk disclosures will come into force

Figure 4: 2022 TCFD-aligned regulations in major economies, (Wu & Uddin, 2022).

6.2 China regulatory case studies

China's net-zero strategy

China is the second-largest economy and emits a third of the world's GHGs (Mufson & Dennis, 2023). Although China is not the largest historical emitter or largest per capita emitter, its financial institutions are critical to ensuring a global clean energy transition, as China may soon supersede the United States of America (USA) economy and China is the second top destination for foreign direct investment after the USA (Lee, 2021; U.S. State Department, 2022). Although China is climatically diverse and might benefit in the short run from improved agriculture, climate change will disproportionately affect China's low-lying coastal cities, which house a quarter of the Chinese population and are the source of a third of the country's Gross Domestic Product (GDP) (McKinsey, 2020; World Bank, 2022). Correspondingly, China has established a net-zero target by 2060 and an emissions peak target by 2030; for now, however, the country's policies are off-track to achieve several sub-targets related to carbon intensity, while emissions are expected to remain at a high level (despite peaking by 2025) (Climate Action Tracker, 2023). As of June 2023, China ranks top in the Renewable Energy Country Attractiveness Index for Asia. Internationally, it is in third place, behind the USA and Germany but ahead of significant economies such as the United Kingdom, France, and India (Warren & de Giovanni, 2023). As such, climate risk disclosure could forward China's emissions targets through pricing climate risks and opportunities, especially with such attractive renewable energy investment opportunities.

China's current alignment with TCFD recommendations and ISSB standards (as of August 2023)

Climate disclosure regulations in China are advancing quickly. In 2020, the China Securities Regulatory Commission and China's Ministry of Ecology and the Environment required all listed companies to disclose ESG risks by the end of the year (although much reporting related to climate-related risks remains voluntary) (Hasmath, 2020). Similar disclosure requirements were implemented in February 2022 for other major emitters and companies with recent environmental regulatory violations; these regulations are not climate-specific, however, and no rules exist for Scope 3 emissions as yet (Fu, 2022; Uhrynuk *et al.*, 2022). The Ministry of Ecology and Environment intends to implement a mandatory system by 2025. It also has plans to publish information from reports in a centralised system, accessible to the public (and, consequently, to financial institutions) (Fu, 2022). The People's Bank of China has also implemented trial zones for green finance policy. These have led to high-quality reports from banks in these zones, especially in the city of Shenzhen (Fu, 2022). Two of the selected practice examples are from the Shenzhen-based China Merchants Bank. The People's Bank of China has also recently conducted stress tests to assess climate risks on all 4,024 regulated banks, the results of which will be published in the future (Bloomberg News, 2021). However, room for improvement exists: there is still a need to strengthen methodologies and tools for reporting quantitative data, for example, and to increase institutional capacity for disclosure (Fu, 2022). Among institutions that have submitted reports to the Carbon

Disclosure Project (CDP), 83 per cent have reported their Scope 3 emissions, although this proportion is much lower for Chinese financial institutions (CDP, 2020). However, Chinese financial institutions outperform others in terms of their reporting on pillar three, risk management—although governance, strategy, and risk management are easier to obtain and report on than metrics and targets (CDP, 2020).

Building capacity for TCFD recommendations and ISSB standards in China

The People's Bank of China's three trial zones have provided good models for national policy and examples for Chinese financial institutions. Furthermore, various organisations have been working with Chinese financial institutions to pilot climate risk disclosures. In particular, since 2017, UK PACT has partnered with 20 Chinese financial institutions to exchange information and best practices for ESG risk disclosures and to raise awareness about the importance of climate and environmental risk factors on investment outcomes (CDP, 2020). PRI has also developed webinars on TCFD capacity building for Chinese financial institutions that are available online in Mandarin Chinese and English (PRI, 2023). Moving forward, Chinese financial institutions need to continue to increase their capacity for disclosure, and national policy should support a phased transition as the country sets to implement mandatory climate-related disclosures.

6.3 Commercial bank case studies

The case studies in this section are presented to give readers examples of best practices in climate-related risks and opportunities disclosure, featuring different commercial banks for each recommended disclosure element. We only provide a short overview of sections of select TCFD reports that are especially strong. Given the IFRS S1 and S2's alignment with the TCFD recommended disclosures, the case examples presented here should also support ISSB-aligned reporting. To facilitate readers' understanding of how the TCFD recommendations the and ISSB standards align, the presentation of example disclosures excerpted from selected TCFD reports has been organised into four sections, each of which aligns with the four core recommendations or pillars of the TCFD framework, namely governance (6.3.1), strategy (6.3.2), risk management (6.3.3), and metrics & targets (6.3.4). Interested readers should download the full reports for further information. A brief summary of the examples selected for case studies corresponding to each TCFD pillar, with which IFRS S1 and S2 integrate, can be found in the Appendix.

6.3.1 Governance

The first pillar of the TCFD framework which has been integrated into the first core content of IFRS S2 is governance. The governance core content in IFRS S2 can be understood as "understand the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities" (IFRS, 2023a).

Under IFRS S2, there are two specific requirements concerning disclosures related to governance (IFRS, 2023b):

a. An entity shall disclose information about the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities.
b. An entity shall disclose information about management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities.

Industry practice on requirement a):

1. **Axis Bank—Annual Report for the Year 22–23** (Axis Bank, 2022)
   Axis Bank is the third largest private sector bank in India. As of 2022, Axis Bank became the first financial institution in India to establish an ESG committee at the Board level. The committee meets quarterly, initiates company-wide commitments to ESG across all activities, and strengthens the bank's climate risk management capacities. The committee is attended by the Managing Director and the CEO. Axis Bank also has three other Board-level committees that discuss and act on sustainability issues. The report has a brief explanation of the various committees' work related to climate. Axis Bank's annual report also provides a chart that outlines its key ESG committees on page 64.

2. **Industrial and Commercial Bank of China—TCFD Report 2022** (Industrial and Commercial Bank of China, 2023)
   The Industrial and Commercial Bank of China is a state-owned multinational commercial bank. Its 2022 TCFD report provides an overview of the company's ESG governance structure, which includes the board of directors, its committees, the board of supervisors, senior management, and the senior management's committees. The report describes the specific sustainability mandate and accomplishments of the Board's Sustainability Committee. It also describes the Board's efforts to increase sustainability training, monitor progress, and conduct research. Board members also participate in committees with management across various departments in the bank.

Industry practice on requirement b):

1. **Grupo Financiero Banorte—TCFD Report 2022** (Grupo Financiero Banorte, 2022)
   Grupo Financiero Banorte is a banking and financial services holding company based in Monterrey and Mexico City. Its most recent TCFD report provides a comprehensive diagram that shows the governance of climate-related risk and opportunities on page 7. To ensure active communication with the board, board members sit on various committees with high-level management, including the Risk Policies Committee and the Audit and Corporate Practice Committee. The high-level managers have been trained on ESG best practices. The Risk Policies Committee manages financial risks and monitors operations. The Risk Policies Committee discusses sustainability risk every committee meeting (as of November 2021) and meets monthly. The committee reports directly to the Board of Directors of the Group. The Sustainability Committee is under the Risk Policies Committee,

and oversees the Group's overall sustainability strategy, including approving parts of the strategy, creating and validating an action plan, establishing targets, integrating climate-related risk management into the Group's risk universe, and promoting strategic partnerships. The Sustainability Committee also authorises and reviews proposals from the Climate Change Working Group, which develops and executes climate strategies. The membership of the Working Group consists of members of management from risk, credit, specialist, and sustainability areas, and meets weekly. Altogether, members of the working groups have received around 929 hours of training on climate-related topics.

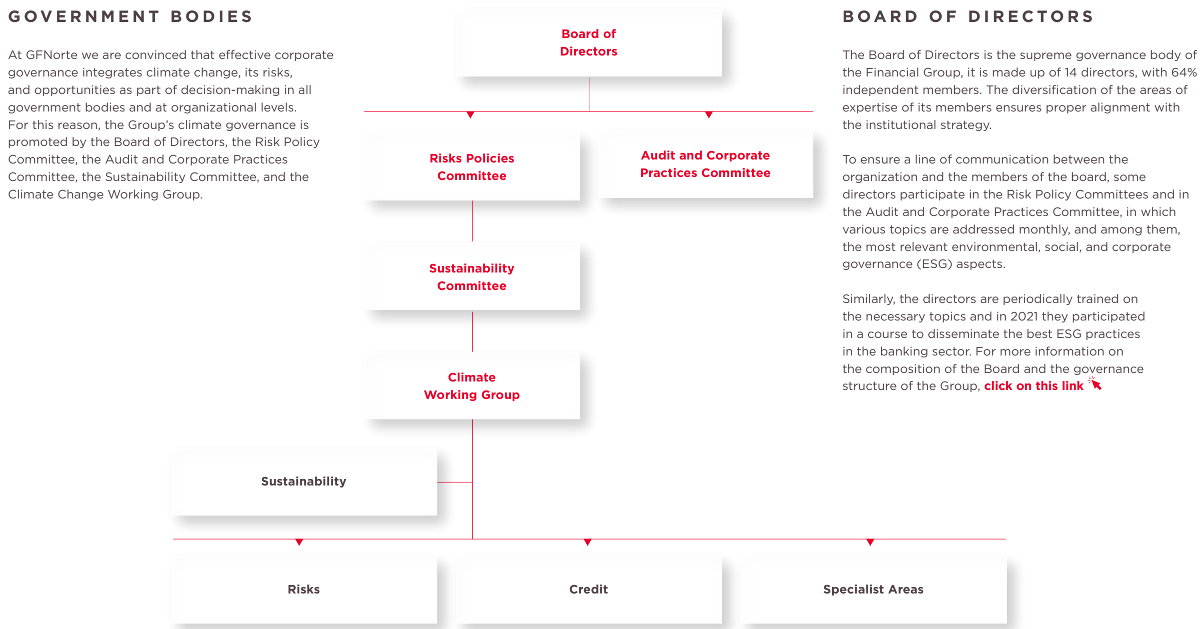

Figure 5: Case study: Grupo Financiero Banorte's climate-related risk governance (p.7), (Grupo Financiero Banorte, 2022).

2. **Bank of the Philippine Islands—Integrated Report 2** (Bank of the Philippine Islands, 2022)
 The first established bank in Southeast Asia, the Bank of the Philippine Islands is today one of the largest banks in the Philippines. Its Integrated Report specifies the sustainability governance structure of the bank, including the board of directors and their committees and high-level management and their committees.
 The Board of Directors has two committees that engage with sustainability. One has a mandate over climate risk and opportunities; namely, the Risk Management Committee. The Executive Committee oversees general integration of sustainability principles into the bank's work. High-level management has two main committees—the Sustainability Council and the Sustainable Funding Committee—that deal with climate risk and opportunities. The bank also has two dedicated management teams to manage climate risk and opportunities—namely, the Sustainability Office, and the Environmental and Social Risk Management Unit. The report includes a diagram on page 82.

6.3.2 Strategy

The second pillar of the TCFD framework which has been integrated into the second core content of IFRS S2 is strategy. The strategy core content in IFRS S2 can be understood as "understand a company's strategy for managing climate-related risks and opportunities." (IFRS, 2023a).

Under IFRS S2, there are five specific requirements concerning disclosures related to strategy (IFRS, 2023b):

a. the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects.
b. the current and anticipated effects of those climate-related risks and opportunities on the entity's business model and value chain.
c. the effects of those climate-related risks and opportunities on the entity's strategy and decision-making, including information about its climate-related transition plan.
d. the effects of those climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how those climate-related risks and opportunities have been factored into the entity's financial planning.
e. the climate resilience of the entity's strategy and its business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities.

Industry practice on requirement a):

1. **Banco de Chile—ESG Supporting Document DJSI 2023 (FY 2022)**
   (Banco de Chile, 2023)
   Banco de Chile is a Chilean bank and financial services company based in Santiago, the country's capital city. In its 2022 ESG Supporting Document, it provides a detailed list of 36 climate-related risks (physical and transition) and opportunities. Included are descriptions of the risk/opportunity, the activity or process type of the risk (acute/ chronic/reputation/legal/political) or opportunity (market/eco-efficiency/products and services/energy), the main impact (in forms of costs or assets and direct/indirect), the specific number of years for the time horizon, the probability of the hazard, and the predicted magnitude of the risk/opportunity in question.

2. **China Merchants Bank—2022 Sustainability Report**
   (China Merchants Bank, 2022)
   The China Merchants Bank is a commercial banking company headquartered in Shenzhen, China, with over 500 hundred branches in mainland China. It provides a detailed list of climate change risks and opportunities in its 2022 sustainability report over the short, medium, and long term, including the risk aspect, type of risk, description of risk, potential key financial impacts, top climate-related risk driver, time frame, and planned response. It also provides specific definitions for the time frames (i.e. 'short term' is one year, and so on).

Industry practice on requirement b):

1. **Banco Itaú Unibanco S.A.—Climate Report 2023** (Itaú Unibanco S.A., 2023)
Itaú Unibanco Holding S.A. is the largest banking and financial institution in Brazil and Latin America. In its report, it provides a comprehensive plan that includes stakeholder and client engagement and assessment of clients' climate-related risk. It also provides several diagrammes that show how identification of climate-related risks and opportunities factors into strategy and decision-making, such as on page 19. Its strategy is in-depth and includes decarbonisation, divestment, and projects such as a start-up hub for Latin American innovators working on climate and social issues. Altogether, these measures address a wide spectrum of risks, from reputation and physical risks to transition risks.

2. **Standard Chartered—Annual Report 2022** (Standard Chartered, 2022)
Standard Chartered is a British multinational bank that is headquartered in London but whose operations mostly concentrate in Africa, Asia, and the Middle East. It has integrated climate-related risk and opportunities into its strategy and financial planning. It has actively reduced its GHG emissions since 2008, and, since 2018, has targeted a reduction in its Scope 1 and 2 emissions to fit a scenario below a 2°C increase in global average temperatures relative to pre-industrial levels. Standard Chartered encourages its suppliers to improve environmental protection and has defined strategies to address its Scope 3 emissions. Its sustainable finance target stands at USD 1 billion for 2025 and USD 300 billion for 2030. As of 2022, its sustainable finance income is around USD 500 million. It is also investing in research at Imperial College London on climate risk. Further, it has incorporated climate risk into its formal strategy and financial planning process.

b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning		
Impact of climate-related risks and opportunities on business areas	The specific areas impacted by climate issues include: **Operations** • We have measured and reduced our greenhouse gas (GHG) emissions since 2008 and since 2018 we have been actively targeting a reduction in our Scope 1 and 2 emissions towards a well-below two degrees Celsius scenario. • We intend to optimise our office and branch network, continually maximising efficiency while leveraging clean and renewable power where appropriate, in line with our commitment to the global corporate renewable initiative, RE100, and to help us meet our own challenging targets. **Suppliers** • Through our Supplier Charter, we encourage our suppliers to support and promote standards in environmental protection and to manage and mitigate environmental risks. • In 2022, we launched a global project to define strategies to address emissions related to Scope 3 Category 1, 2, 4 and 6. Our internal targets cover reducing our emissions related to Upstream transportation and distribution and Business travel by 28 per cent against 2019 levels over the next seven years. Simultaneously, for Purchased goods and services and Capital goods categories, we plan to engage our suppliers (covering circa 67 per cent of spend) to set science-based targets in the next five years. **Products and services** • We have set targets to achieve $1 billion of Sustainable Finance income by 2025, to mobilise $300 billion of Sustainable Finance by 2030, and to launch and grow green mortgages in key markets across our footprint. • In 2022, we made progress against these targets, reporting $0.5 billion Sustainable Finance income, mobilising $23.4 billion through our Sustainable Finance activities, and launching green mortgages in three new markets. **Investment in research and development** • Our four-year partnership with Imperial College London covers long-term research on Climate Risk, advisory on shorter-term, internally focused projects to enhance Climate Risk capabilities and training of our colleagues, Management Team and Board.	Reducing emissions in our operations – page 74 Our suppliers – reducing Scope 3 upstream emissions – page 75 Catalysing finance and partnerships for transition – page 84

Figure 6: Case study: Standard Chartered's impact of climate-related risk and opportunities on businesses, strategy, and financial planning (p.69), (Standard Chartered, 2023).

3. **Banco BBVA Argentina S.A.—Report on TCFD 2022** (Banco BBVA Argentina, 2022)
Banco BBVA Argentina S.A. is a financial services company in Argentina, and it is the oldest private bank in the country. The strategy section from its most recent ESG report provides a good example for criteria a). Its report provides a detailed list of 22 climate-related risks (physical and transition) and opportunities, grouped into subtypes with short descriptions for each risk/opportunity. Importantly, it provides a specific definition for timespans: short-term (<4 years), medium-term (4–10 years), and long-term (>10 years).

TABLE 02. **Transition risks**

Risk subtype	Risks associated with climate change	Risk description	Time Horizon ST <4 years	 MT 4-10 years	 LT >10 years
Legal and regulatory	Increase in the cost of CO_2 emissions	Financial risk to BBVA customers whose liquidity or earnings could be harmed from having to face higher costs or, alternatively, higher investments in emission neutralization, resulting from regulatory changes	ST		
		Increased cost of direct emissions from the Bank in its operations	ST		
	Increase in monitoring and tracking requirements	Increased staffing and economic resources for the study and monitoring of the Group's clients, and tracking of their compliance with environmental requirements	ST		
	Changes in the regulation of existing products and services	Uncertainty for financial agents regarding changes and their implementation	ST		
		Impairment of client asset positions due to the generation of stranded assets (assets that prior to the end of their economic life are no longer able to earn an economic return)		MT	
		Sales drop due to adjustments to offerings, to align with new legal specifications for a product		MT	
	Increase in regulatory capital requirements due to risk associated with climate change	Possibly different prudential treatment of financial assets in terms of riskweighted assets based on their exposure to physical and transition risks		MT	
		Adverse regulatory changes that may cause certain exposures on BBVA's climate change balance sheet to have higher capital consumption		MT	
	Risks of environmental lawsuits	Possible lawsuits against BBVA for not complying with environmental regulations in its business or supply chain	ST		
	Risk of lawsuits against third parties	Potential lawsuits for environmental crimes against BBVA clients. BBVA could be impacted by its clients' loss of solvency resulting from an increase in litigation costs	ST		

Figure 7: Case study: Banco BBVA Argentina's legal and regulatory risks, (p.29) (Banco BBVA Argentina, 2022).

Industry practice on requirement c):

4. **UBS—TCFD Report 2022** (UBS, 2023)
UBS is an international investment bank and financial services company founded and based in Switzerland. In its 2023 TCFD report, the bank outlines its commitment to supporting the global economy's transition to net zero by 2050 and employs multiple tactics to disclose the effects of climted-related risks and opportunities on the bank's strategy and decision making. The bank employs a materiality-driven approach to assess climate-related risks and opportunities. This involves an annual evaluation aligned with the TCFD 'Strategy' pillar and utilizes materiality mapping to analyze specific focus themes over time. Opportunities are identified based on factors such as immediate commercial potential and operational significance, while risks are assessed through enhanced ratings for each climate risk transmission channel. UBS considers geographic, jurisdictional, and sectoral factors, continually refining its methodology as data quality and understanding of transmission channels improve.

5. **CitiGroup—2022 TCFD Report** (CitiGroup, 2022)
CitiGroup is an American multinational financial services company headquartered in New York. Itsr 2022 TCFD report mentions its climate risk scenario analysis,

which includes stress testing based on various prevailing scientific studies. CitiGroup has conducted stress tests in multiple jurisdictions based on climate reference scenarios from the Network for Greening the Financial System (NGFS) and the IPCC. Some of its scenario-based stress testing has been based on heat-mapping activities, and it plans to conduct further internal testing. CitiGroup provides a summary of its climate scenario analysis in a chart on page 46.

6.3.3 Risk Management

The third pillar of the TCFD framework which has been integrated into the third core content of IFRS S2 is risk management. The risk management core content in IFRS S2 can be understood as "understand the processes to identify, assess, prioritise and monitor climate-related risks and opportunities, including, whether and how those processes are integrated into and inform the company's overall risk management process." (IFRS, 2023a).

Under IFRS S2, there are three specific requirements concerning disclosures related to risk management (IFRS, 2023b):

a. An entity shall disclose information about the processes and related policies the entity uses to identify, assess, prioritise and monitor climate-related risks.
b. An entity shall disclose information about the processes the entity uses to identify, assess, prioritise and monitor climate-related opportunities, including information about whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related opportunities.
c. An entity shall disclose information about the extent to which, and how, the processes for identifying, assessing, prioritising and monitoring climate-related risks and opportunities are integrated into and inform the entity's overall risk management process.

Industry practice on requirement a):

1. **Momentum Metropolitan—TCFD Report 2022** (Momentum Metropolitan, 2022)
   Momentum Metropolitan is a South African insurance and financial services company. It integrates climate-related risks into its Group-wide risk management processes. Its approach is both bottom-up and top-down as its business units are responsible for reporting identified risks to the Group Risk Strategy Committee, which includes all its business units' Chief Risk Officers. The Group Risk Strategy Committee also developed a focused Climate Risk Strategy Committee, which focuses on making the process of identifying climate-related risks more efficient, and scores risks based on severity and materiality (i.e., market, regulatory, longevity, mortality, etc.). A diagramme of its identification and assessment process is available on page 18.

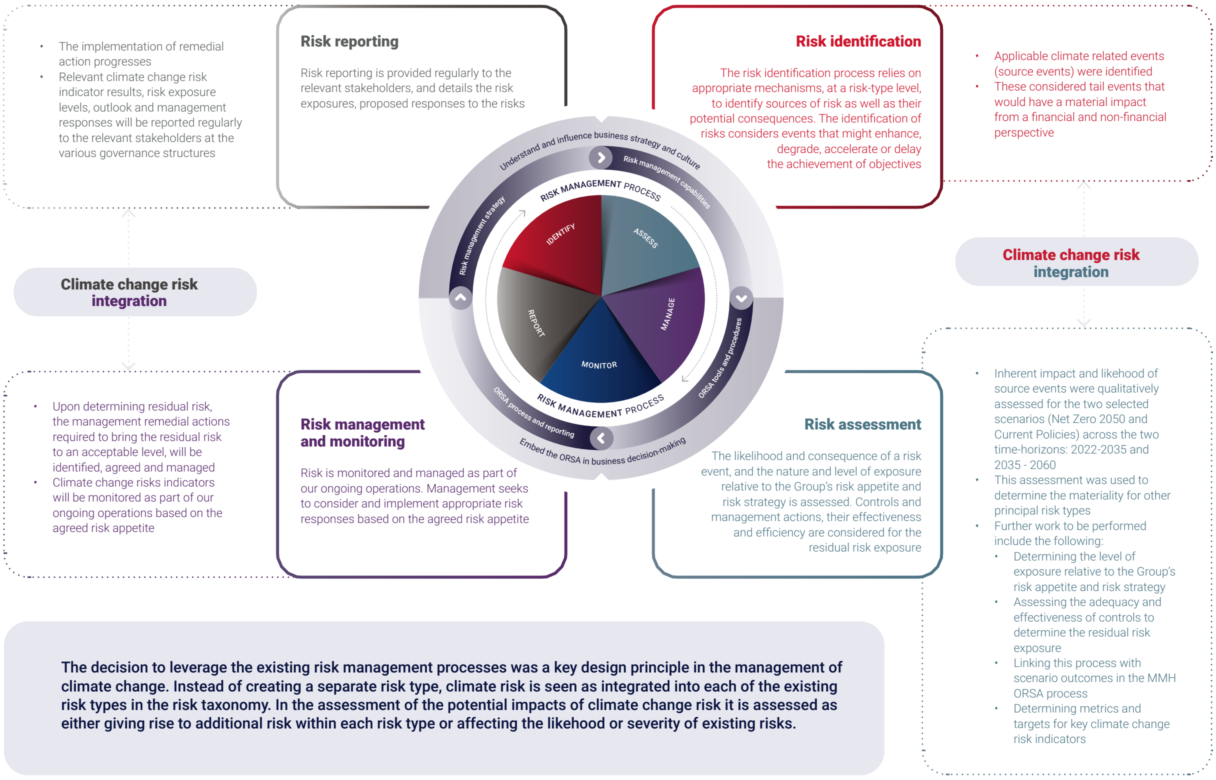

Figure 8: Case study: Momentum Metropolitan's climate-related risk identification, assessment, and management diagram, (Momentum Metropolitan, 2022).

2. **Banco BBVA Argentina S.A.—TCFD Report 2022** (Banco BBVA Argentina, 2022)
   Banco BBVA Argentina S.A. is a financial services company in Argentina, and it is the oldest private bank in the country. It has integrated climate-related physical and transitional risks into the traditional banking industry risk categories, such as credit, market, and liquidity, meaning that identification and assessment takes place based on long-standing governance processes. Banco BBVA has a sustainability data strategy, in which it has identified gaps in its data and has developed a model to correct these gaps. It also conducts a climate risk assessment parallel to its global risk assessment at least twice a year. The highest executive risk committee receives the climate assessment. Notably, Banco BBVA has developed an internal taxonomy to classify industries according to transition risk sensitivity. It has also assessed differing transition risks based on location of its banks as it also has operations outside Argentina. Last year, it also began scenario testing to produce loss projections.

Industry practice on requirement b):

1. **Nedbank—TCFD 2022** (Nedbank, 2022)
   Nedbank is a South African financial services group, which provides various retail and banking services primarily in South Africa although also overseas. Nedbank integrates climate-related risks into its existing risk management processes, which includes Risk and Control Self-Assessment and scenario analysis methodologies.

Its management process includes effective identification, assessment, monitoring, and reporting, both internally and externally. On page 52, it provides a diagramme that shows its exposure to GHGs and climate-vulnerable industries. On page 42, it has a diagramme that provides an overview of its risk management process. Regarding regulatory risk, Nedbank tracks whitepapers and guidelines from South African financial institutions and assesses compliance risk and consequences. Regarding credit risk, Nedbank has integrated physical climate-related credit risks into its credit policies, including reporting requirements during the client onboarding process and monitoring requirements afterwards. In addition, it analyses the potential impacts of climate-related risks on its liquidity and operations in its planning processes.

2. **Hong Leong Banking Group—Sustainability Report 2022** (Hong Leong Bank, 2022)
   Hong Leong Bank is a major commercial banking group based in Malaysia and with operations in various locations in Southeast Asia, China, the USA, and Australia. It has integrated climate-related risks into its existing risk universe, and actively considers them in its decision-making. On page 23, it provides a diagramme that shows how it regularly monitors and manages risks. On page 24, meanwhile, it presents another sustainability-specific diagramme outlining the processes to manage risks. Its Board of Directors and Board-level committees set risk appetite and tolerance limits and strategic sustainability priorities. The management-level Sustainability and Sustainability Working Committee implements Hong Leong's sustainability strategy, and the corresponding Sustainability and Sustainability Risk departments monitor and validate the effectiveness of ESG risk management. Management is responsible for providing regular reporting to the Board-level Risk Management Committees. Hong Leong Bank also has provisions to conduct sustainability risk assurances and/or independent reviews of credit evaluation processes for clients and compliance with sustainability goals. It is also developing sustainability risk monitoring reports.

Industry practice on requirement c):

1. **Halkbank—CDP Climate Change Questionnaire 2022** (Halkbank, 2022)
   Halkbank is a major Turkish bank. Halkbank has integrated climate-related risks and opportunities into its company-wide risk management process, which it assesses multiple times a year. The board-level Sustainability Committee determines risks based on various time horizons, which it has defined internally (more information on time horizons is available on pages 9–11). The Sustainability Committee discusses climate-related risks four times a year, and it takes its conclusions to the main Board at least once a year during Management Review. The Risk Management Departments determine possible impact levels, and the information is disseminated across relevant business units, such as the Sustainability Practices, Environment, and Energy Management divisions. Halkbank also requests information on environmental impacts from some potential clients/investees. From May 2021 to May 2022, Halbank requested 8,160 evaluation reports; of those, 7,085 were asked to submit environmental impact assessments. The bank may deny loans based on its targets, including a commitment to a net-zero portfolio by 2050.

2. **Industrial and Commercial Bank of China—TCFD Report 2022** (Industrial and Commercial Bank of China Limited, 2022)
The Industrial and Commercial Bank of China is a state-owned multinational commercial bank. It has integrated their climate risk management into its broader risk management system. On page 25, it provides a comprehensive diagramme that shows its climate risk management governance. The Board of Directors formulates a risk strategy and appetite system, which includes climate risk. The Board of Supervisors monitors the Board of Directors and senior management. Senior management implements risk management. The business departments are the primary stakeholders in controlling climate risk. The risk management department also works on climate risk management policies and standards, and it does monitor and report the climate risk status of the business departments. An internal audit department is responsible for monitoring climate risk governance.

6.3.4 Metrics and targets

The final pillar of the TCFD framework which has been integrated into the final core content of IFRS S2 is 'metrics & targets'. The 'metrics and targets' core content in IFRS S2 can be understood as "Understand a company's performance in relation to its climate-related risks and opportunities, including progress towards any climate-related targets it has set, and any targets it is required to meet by law or regulation." (IFRS, 2023a).

Under IFRS S2, there are three specific requirements concerning disclosures related to 'metrics & targets' (IFRS, 2023b):

Understand a company's performance in relation to its climate-related risks and opportunities, including progress towards any climate-related targets it has set, and any targets it is required to meet by law or regulation.	A. An entity shall disclose information relevant to the cross-industry metric categories.
	B. An entity shall disclose industry-based metrics that are associated with particular business models, activities or other common features that characterise participation in an industry.
	C. An entity shall disclose targets set by the entity, and any targets it is required to meet by law or regulation, to mitigate or adapt to climate-related risks or take advantage of climate-related opportunities, including metrics used by the governance body or management to measure progress towards these targets.

Industry practice on requirement a):

1. **The FirstRand Group—TCFD Report 2022** (The FirstRand Group, 2022)
The FirstRand Group is a financial services company in South Africa. In its 2022 Integrated Report, it discloses the key metrics that it uses for transition and physical risks, including detailed statistics that show one-year changes and case studies based on portfolio geo-mapping and climate-related risk assessments (i.e. flood, fire, and drought risks). It is the regional lead for Africa for the Partnership for Carbon Accounting Financials (PCAF), and is working to develop a standardised methodology for disclosing GHG emissions associated with its regular business with clients. For now, it uses intensity metrics, baseline pathways, and total financed emissions to measure some of its GHG emissions, and thus, its climate-related risks.

2. **China Merchants Bank—2022 Sustainability Report**
(China Merchants Bank, 2022)
The China Merchants Bank is a commercial banking company headquartered in Shenzhen, China, with over 500 hundred branches in mainland China. It provides detailed metrics for its climate-related risk and opportunities, including over 50 indicators that measure waste, water consumption, Scope 1–2 emissions, energy consumption, paper consumption, and green loans.

Industry practice on requirement b):

1. **Itaú Unibanco Holding S.A.—Climate Report 2023**
(Itau Unibanco Holding S.A, 2023)
Itaú Unibanco Holding S.A. is the largest banking and financial institution in Brazil and Latin America. In its 2023 Climate Report, it provides detailed key metrics, including the bank's Scope 1–3 emissions based on various categories, such as: overall, by purchase option, by location, without financed emissions, by company, by individual, and for operations in Brazil and other Latin American countries. Its data span from 2020 to 2022, and include additional context with regards to related targets or risks.

Targets or related topic	Associated metric To learn about our performance in previous years, access our ESG Report
Target: reduce scopes 1,2 and 3 emissions and become Net zero by 2050 in our direct and indirect emissions.	**Scope 3 emissions, except financed emissions – Brazil** 2022 - 40.525 tCO_2e 2021 - 58.478 tCO_2e 2020 - 76.998 tCO_2e
	Scope 3 emissions, except financed emissions – LATAM countries 2022 - 41.659 tCO_2e 2021 - 59.479 tCO_2e 2020 - 78.619 tCO_2e
	Financed emissions - companies (scope 3, category 15) – Brazil 2022 - 18.7million tCO_2e 2021 - 17.3 million tCO_2e 2020 - 15.5 million tCO_2e
	Financed emissions – individuals (scope 3, category 15) – Brazil 2022 - 1.9 million tCO_2e 2021 - 1.7 million tCO_2e
Target: invest in the use of bikes as a mode of transportation in large urban centers to promote a more inclusive and low carbon economy.	• In 2022, emissions of 5,360 metric tons of CO^2 were prevented. • 15,933,815 travels in 2022, (42% employee commuting, 33% entertainment and 24% deliveries).
Target: reduce by 63% the intensity of emissions of the power generation industry by 2030 and complete thermal coal phase-out by 2030.	**Intensity of sector emissions** 2022 - 103 gCO_2e/kWh
Target: Offset 100% of remaining scopes 1 and 2 emissions.	**Commitment to climate** Purchase of 19,800 Emission Reduction Certificates generated under the project for renewable energy generation and project for replacing consumption of firewood from deforestation with biomass from renewable sources.
Target: reduce energy consumption by 31% in 2018 - 2030.	**Total energy consumption - Brazil** 2022 - 401.310 MWh 2021 - 430.599 MWh 2020 - 479.409 MWh Accordingly, we reviewed our target from 31% to **34.5% in energy consumption reduction** in relation to the base year 2018.
Target: reduce waste sent to landfills by 36% in 2018 -2030.	**Waste generation** 2022 - 4.715 t 2021 - 17.188 t 2020 - 19.445 t Due to evolution, we reviewed our target from 36% to **88% in waste generation reduction** in relation to the base year 2018.

Figure 9: Case study: Itaú Unibanco's targets and associated metrics (p.51), (Itaú Unibanco Holding S.A, 2023).

2. **Sanlam—Annual Sustainability Report 2022** (Sanlam, 2022)
   Sanlam is a South African insurance company. It is among South Africa's largest financial services groups and Africa's largest insurance company. In its 2022 sustainability report, it provides Scope 1–3 data and 16 other key metrics that it employs to assess its environmental impact, with data from 2019 to 2022 and measured against their 2025 targets.

Industry practice on requirement c):

1. **Nedbank—TCFD Report 2022** (Nedbank, 2022)
   Nedbank is a South African financial services group. In its recent TCFD report, it has a thorough discussion of its targets across emissions and waste reductions and divestment. It also provides details of its current performance against these targets. On page 58, it shares its internal climate-related qualitative targets, including the phasing-out of new financing for coal and oil production, and its current performance against these targets in order to fulfil its net-zero goal by 2050. On page 60, it also shares its goals to reduce its fossil-fuel investments. It measures its progress on this based on statistics from 2022 and 2021. On page 62, it shares some of its quantitative targets for paper, water, waste, and recycling. On page 63, meanwhile, it shows its energy and electricity reduction targets, coupled with its current progress. Finally, on page 64, it shares its GHG emissions reduction target by 2025 and reveals that it is on target to achieve it.

2. **Banco BBVA Argentina S.A.—TCFD Report 2022**
   (Banco BBVA Argentina S.A., 2022)
   Banco BBVA Argentina S.A. is a financial services company in Argentina, and it is the oldest private bank in the country. Banco BBVA's strategy is to reach carbon neutrality by 2050; however, it also has other intermediate alignment goals for sectors in which it has clients, such as power generation, automotive, steel, cement, and coal. It intends to phase out its exposure to coal by 2030 in developed countries and by 2040 in emerging economies. On page 74, Banco BBVA lists its 2020 baseline, 2030 target, target reduction, 2021 and 2022 emissions, reduction in 2022 vs. the baseline, and the methodology employed. On pages 75–79, the bank provides graphs with the performance of the BBVA portfolio relative to the market pathway since 2020 in various sectors with regards to decreases in emissions intensity. On page 81, it lists its alignment metrics for proportion of assets aligned with net zero, emissions intensity of assets, and sovereign fixed income. It also has additional listed targets and accompanying data, such as for branch eco-efficiency and green investments.

Appendix

Governance	Strategy	Risk management	Metrics and targets
A. Describe the board's oversight of climate-related risks and opportunities. Axis Bank, **India** Industrial and Commercial Bank, **China**	A. Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term. Banco de Chile, **Chile** China Merchants Bank, **China**	A. Describe the organisation's processes for identifying and assessing climate-related risks. Momentum Metropolitan, **South Africa** Banco BBVA Argentina S.A., **Argentina**	A. Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process. FirstRand Group, **South Africa** China Merchants Bank, **China** Citibank, **USA**
B. Describe management's role in assessing and managing climate-related risks and opportunities. Grupo Financiero Banorte, **México** Bank of the Philippine Islands, **Philippines**	B. Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning. Standard Chartered, **United Kingdom** Banco Itaú Unibanco S.A., **Brazil**	B. Describe the organisation's processes for managing climate-related risks Nedbank, **South Africa** Hong Leong Group, **Malaysia**	B. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks. Banco Itaú Unibanco S.A., **Brazil** Sanlam, **South Africa**
	C. Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario. CitiGroup, **USA** UBS, **Switzerland**	C. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management. Halkbank, **Türkiye** Industrial and Commercial Bank of China, **China**	C. Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets. Banco BBVA Argentina S.A., **Argentina** Nedbank, **South Africa**

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