



CLIMATE-RELATED RISKS

GUIDANCE NOTE FOR CBB LICENSEES

MARCH 2022

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I. INTRODUCTION

- 1) Further to the CBB Circular OG/370 dated 8th November 2021, this Guidance Note is aimed at ensuring licensees regulated and supervised by the Central Bank of Bahrain (CBB) are kept abreast of the developments and practices in the area of climate-related risk management as it will shape business models and business operations across different geographies in years to come.
- 2) This Guidance Note has been developed by consolidating relevant information currently available; it considers the ‘inceptive stage’ of the climate-related risk management initiatives across many parts of the globe and it should be read in conjunction with relevant international best practices (see illustrative references at the end of this document).
- 3) The CBB encourages its licensees to monitor developments related to climate risk and identify any issues that may affect their business model, direction or financial position. Licensees should take account of the evolving nature of climate-related risk management and carefully consider the need for any risk mitigation measures.
- 4) One of the most significant, and perhaps most misunderstood, risks that organizations face today relates to climate change. While it is widely recognised that continued emission of greenhouse gases (GHG) will cause further warming of the planet and this warming could lead to damaging economic and social consequences, the exact timing and severity of physical effects are difficult to estimate. The large-scale and long-term nature of the problem make it uniquely challenging, especially in the context of economic decision making. The potential impacts of climate change on organizations, however, are not only physical and do not manifest only in the long term.
- 5) There is also a growing focus on potential risks to financial stability from climate change. A manifestation of physical risks as well as a disorderly transition to a low-carbon economy could have destabilising effects on the financial system, including through a rise in risk premia and falling asset prices in the relatively short term.
- 6) Climate-related risks are of two types:
 - (a) **Physical risk** of potential economic costs and financial losses. These could be acute or chronic:
 - (i) Acute – arise from climate and weather-related events;
 - (ii) Chronic – arise from progressive shifts in climate and weather patterns or gradual loss of ecosystem services.
 - (b) **Transition risk** – results from the process of adjustment towards a low carbon and more circular economy. Transition risk drivers are:

- (i) Climate-related mitigation policies (e.g. carbon pricing);
 - (ii) Technological advances;
 - (iii) Shifts in public sentiment, demand patterns and preferences and expectations.
- 7) While there are some physical and transition risks that are already evident, the impacts of climate change could manifest over varying time horizons and are likely to exacerbate over time. Some climate-related risks may also materialise within the maturities of shorter-dated exposures/positions. Other climate-related risks may materialise over a much longer time horizon.
- 8) The high degree of uncertainty around the timing of these risks suggests that the licensees should develop their capabilities and expertise on climate-related financial risks commensurate with the risks they face.

II. IMPACT OF CLIMATE-RELATED RISKS

- 1) Climate-related risks have far-reaching effects that are global in nature, and will have impact across all entities, sectors and economies. The impacts will, however, differ depending on geography, country and the nature of the business activities. The breadth of climate-related risks – including their possible simultaneous crystallisation across different countries and sectors – also has implications for the resilience of the financial system.
- 2) Climate-related risks may be highly non-linear, and their effects on the financial system may be subject to substantial tail-risk. It is foreseeable that some combination of physical and transition risks will materialise whose effects are spread over long time horizons. Actions today may determine the severity of those risks in the years ahead.
- 3) The magnitude of future impact will, at least in part, be determined by the actions taken today. This includes actions by governments, regulators, organizations and a range of other actors.
- 4) The Figures 1 and 2 that follow provide a high-level schematic of the risks to the financial system resulting from climate-related risks.

Figure 1: From physical risks to financial stability risks

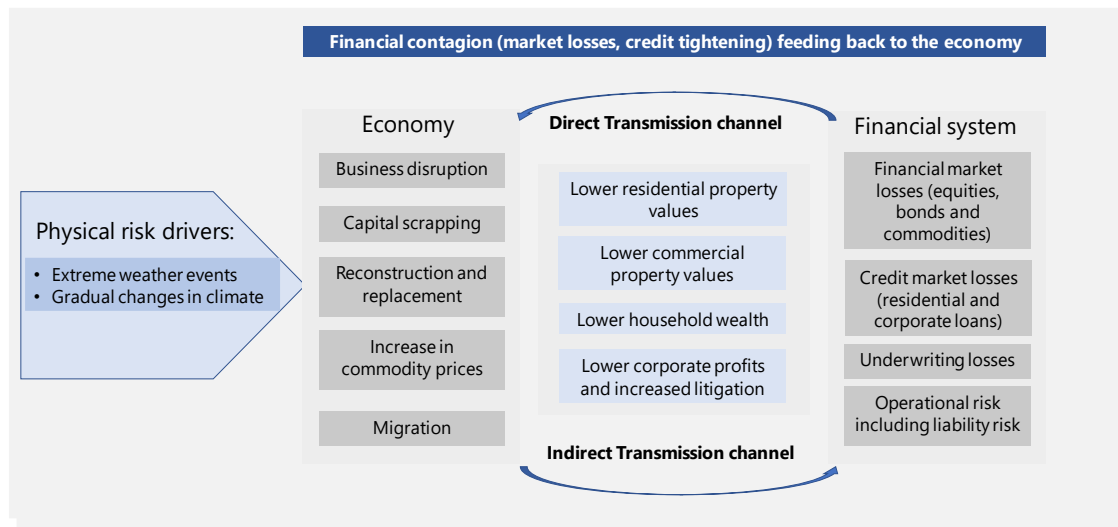
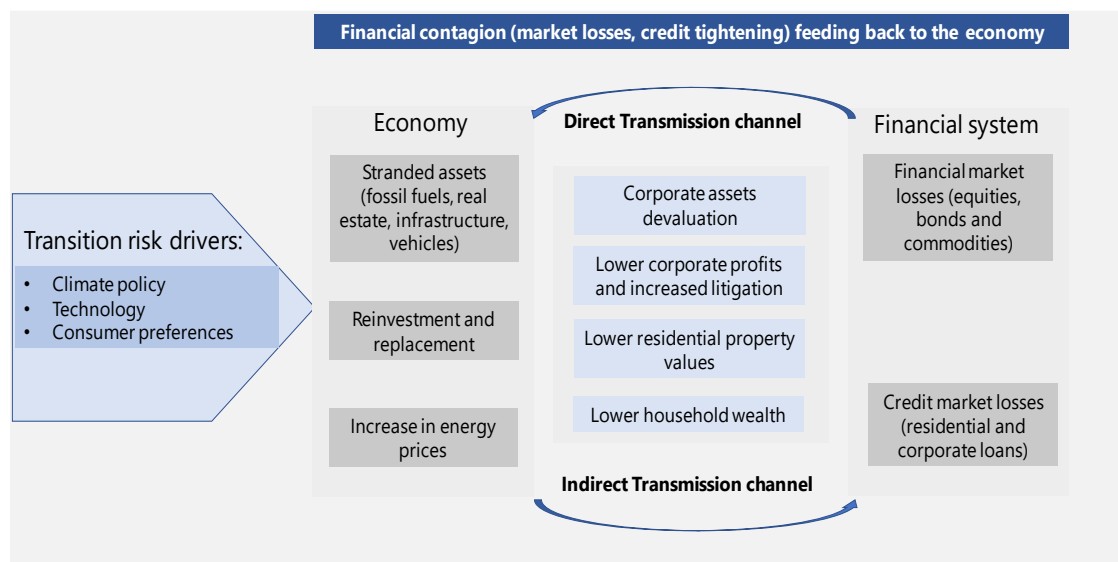


Figure 2: From transition risks to financial stability risks



Source: NGFS Guide for Supervisors – Integrating Climate-Related and Environmental Risks into Financial Supervision, May 2020, page 13

- 5) Financial services institutions are potentially exposed to climate-related financial risks regardless of their size, complexity or business model. In addition to risks, climate change also presents opportunities that institutions should be aware of (see Appendix I).

- 6) The following are some illustrative elements to be considered in building a framework of policies for climate-related risk management. These are based on approaches adopted by different markets and international organizations working on climate-related financial risks:
- (a) Tailored policies, procedures and controls for effective management of climate-related financial risks that are aligned with the financial institution's business model, strategy and size.
 - (b) Governance mechanism and involvement of the board and senior management.
 - (c) Sound process for understanding and assessing the potential impact of climate-related risk drivers on the financial institutions' businesses, operations, risks and the environments in which they operate.
 - (d) Designing of the risk appetite and risk management framework taking into consideration material climate-related financial risks.
 - (e) Climate-related financial risks embedded into their internal control frameworks across the three lines of defense.
 - (f) Quantification of risks where the risks identified are material.
 - (g) Public disclosures covering:
 - (i) **Governance**—the governance processes, controls and procedures the financial institution uses to monitor and manage climate-related risks and opportunities;
 - (ii) **Strategy**—the climate-related risks and opportunities that could enhance, threaten or change the financial institution's business model and/or strategy over the short, medium and long term, including:
 - (1) Whether and how information about climate-related risks and opportunities is aligned to the management's strategy and decision making;
 - (2) The current and anticipated effects of climate-related risks and opportunities on the financial institution's business model;
 - (3) The impact of climate-related risks and opportunities on the financial position, performance and cash flows of the financial institution, both at the end of the reporting period and the anticipated effects over the short, medium and long term; and
 - (4) The resilience of the financial institution's strategy to climate-related risks.
 - (iii) **Risk management**—how climate-related risks are identified, assessed, managed and mitigated by the financial institution; and
 - (iv) **Metrics and targets**—using quantitative metrics and targets to manage and monitor the financial institution's performance in relation to climate-related risks and opportunities over time.

III. CONCLUSION

While governments and regulatory bodies are continuing to adapt and explore new methodologies and techniques to identify, assess, measure and address climate-related financial risks, it is evident that this is an area where best practices will continue to evolve. The licensees are encouraged to familiarise themselves with climate-related risks and opportunities and prepare themselves for a future where climate change will be an important factor in the economic and financial success of individual organisations.

The CBB will seek periodic feedback from the licensees on their preparedness to potentially implement a framework to identify and manage climate-related risks and also capitalise on climate-related opportunities.

Appendix I – Climate-Related Risks and Opportunities

Climate-Related Risks and Potential Financial Impacts

Type	Climate-Related Risks ¹	Potential Financial Impacts
Transition Risks	Policy and Legal	
	<ul style="list-style-type: none"> • Increased pricing of GHG emissions. • Enhanced emissions-reporting obligations. • Mandates on and regulation of existing products and services. • Exposure to litigation. 	<ul style="list-style-type: none"> • Increased operating costs (e.g. higher compliance costs, increased insurance premium). • Write-offs, asset impairment and early retirement of existing assets due to policy changes. • Increased costs and/or reduced demand for products and services resulting from fines and judgments.
	Technology	
	<ul style="list-style-type: none"> • Substitution of existing products and services with lower emissions options. • Unsuccessful investment in new technologies. • Costs to transition to lower emissions technology. 	<ul style="list-style-type: none"> • Write-offs and early retirement of existing assets. • Reduced demand for products and services. • Research and Development (R&D) expenditures in new and alternative technologies. • Capital investments in technology development. • Costs to adopt/deploy new practices and processes.
	Market	
	<ul style="list-style-type: none"> • Changing customer behavior. • Uncertainty in market signals. • Increased cost of raw materials. 	<ul style="list-style-type: none"> • Reduced demand for goods and services due to shift in consumer preferences. • Increased production costs due to changing input prices (e.g. energy, water) and output requirements (e.g. waste treatment). • Abrupt and unexpected shifts in energy costs. • Change in revenue mix and sources, resulting in decreased revenues. • Re-pricing of assets (e.g. fossil fuel reserves, land valuations, securities valuations).

¹ The sub-category risks described under each major category are not mutually exclusive and some overlap exists.

Physical Risks	Reputation	
	<ul style="list-style-type: none"> • Shifts in consumer preferences. • Stigmatization of sector. • Increased stakeholder concern or negative stakeholder feedback. 	<ul style="list-style-type: none"> • Reduced revenue from decreased demand for goods and services. • Reduced revenue from decreased production capacity (e.g. delayed planning approvals, supply chain interruptions). • Reduced revenue from negative impacts on workforce management and planning (e.g. employee attraction and retention). • Reduction in capital availability.
	Acute	
	<ul style="list-style-type: none"> • Increased severity of extreme weather events such as cyclones and floods. 	<ul style="list-style-type: none"> • Reduced revenue from decreased production capacity (e.g. transport difficulties, supply chain interruptions). • Reduced revenue and higher costs from negative impacts on workforce (e.g. health, safety, absenteeism). • Write-offs and early retirement of existing assets (e.g. damage to property and assets in “high-risk” locations).
	Chronic	
	<ul style="list-style-type: none"> • Changes in precipitation patterns and extreme variability in weather patterns. • Rising mean temperatures. • Rising sea levels. 	<ul style="list-style-type: none"> • Increased operating costs (e.g. inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants). • Increased capital costs (e.g. damage to facilities). • Reduced revenues from lower sales/output. • Increased insurance premiums and potential for reduced availability of insurance on assets in “high-risk” locations.

Source: Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, October 2021, page 75

Appendix I – Climate-Related Risks and Opportunities (continued)

Climate-Related Opportunities and Potential Financial Impacts

Type	Climate-Related Opportunities ²	Potential Financial Impacts
Resource Efficiency	<ul style="list-style-type: none"> • Use of more efficient modes of transport. • Use of more efficient production and distribution processes. • Use of recycling. • Move to more efficient buildings. • Reduced water usage and consumption. 	<ul style="list-style-type: none"> • Reduced operating costs (e.g. through efficiency gains and cost reductions). • Increased production capacity, resulting in increased revenues. • Increased value of fixed assets (e.g. highly rated energy-efficient buildings). • Benefits to workforce management and planning (e.g. improved health and safety, employee satisfaction) resulting in lower costs.
Energy Source	<ul style="list-style-type: none"> • Use of lower-emissions sources of energy. • Use of supportive policy incentives. • Use of new technologies. • Participation in carbon market. • Shift toward decentralised energy generation. 	<ul style="list-style-type: none"> • Reduced operational costs (e.g. through use of lowest cost abatement). • Reduced exposure to future fossil fuel price increases. • Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon. • Returns on investment in low-emission technology. • Increased capital availability (e.g. as more investors favor lower-emissions producers). • Reputational benefits resulting in increased demand for goods/services.
Products and Services	<ul style="list-style-type: none"> • Development and/or expansion of low emission goods and services. • Development of climate adaptation and insurance risk solutions. • Development of new products or services through R&D and innovation. • Ability to diversify business activities. • Shift in consumer preferences. 	<ul style="list-style-type: none"> • Increased revenue through demand for lower emissions products and services. • Increased revenue through new solutions to adaptation needs (e.g. insurance risk transfer products and services). • Better competitive position to reflect shifting consumer preferences, resulting in increased revenues.

² The opportunity categories are not mutually exclusive and some overlap exists.

Markets	<ul style="list-style-type: none"> • Access to new markets. • Use of public-sector incentives. • Access to new assets and locations needing insurance coverage. 	<ul style="list-style-type: none"> • Increased revenues through access to new and emerging markets (e.g. partnerships with governments, development banks). • Increased diversification of financial assets (e.g. green bonds and infrastructure).
Resilience	<ul style="list-style-type: none"> • Participation in renewable energy programs and adoption of energy-efficiency measures • Resource substitutes/diversification 	<ul style="list-style-type: none"> • Increased market valuation through resilience planning (e.g. infrastructure, land, buildings). • Increased reliability of supply chain and ability to operate under various conditions. • Increased revenue through new products and services related to ensuring resiliency.

Source: Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, October 2021, page 76

Appendix II – Relevant international bodies and volunteer groups regarding climate-related risks and standards

- The Paris Agreement³ is a legally binding international treaty on climate change. It was adopted by 196 parties in Paris on 12 December 2015 and it came into force on 4 November 2016. Its goal is to limit global warming to well below 2 degrees Celsius and preferably to 1.5 degree Celsius, compared to pre-industrial levels.
- The Basel Committee on Banking Supervision (BCBS) has established a high-level Task Force on Climate-related Financial Risks which will review the extent to which climate-related financial risks are reflected in the existing Basel framework, and identify effective supervision practices to mitigate such risks.
- The IFRS Foundation is behind the establishment of International Sustainability Standards Board (ISSB) which will produce global sustainability related reporting standards, likely by mid-2022. The ISSB will develop IFRS Sustainability Disclosure Standards, including disclosure requirements that address companies' impacts on sustainability matters relevant to assessing enterprise value and making investment decisions.
- The Financial Stability Board (FSB) established the Task force on Climate-related Financial Disclosures (TCFD) in 2015 to develop recommendations for more effective climate-related disclosures that could promote more informed investment, credit and insurance underwriting decisions. The Task Force consists of 32 members from across the G20, representing both preparers and users of financial disclosures. In 2017 the TCFD released climate-related financial disclosure recommendations designed to help companies provide better information to support informed capital allocation.
- G20 Sustainable Finance Working Group is working closely with the FSB to develop the broader G20 Roadmap on Sustainable Finance. The FSB Roadmap is climate focused and therefore part of the broader G20 Roadmap.
- Sustainable Banking Network (SBN) is a knowledge sharing and capacity building platform for financial sector regulators and banks from emerging markets. It is unique in its focus on emerging markets. Its 43 member countries represent 86% of total banking assets in emerging markets. It was established in 2012 with International Finance Corporation's (IFC) facilitation which also provides secretarial and technical support.

³ www.unfccc.int

- Network for Greening the Financial System (NGFS) is a voluntary group consisting of 105 regulatory and supervisory authorities in five continents. It was established at the Paris “One Planet Summit” in December 2017 by 8 central banks. The Network’s purpose is to help strengthening the global response required to meet the goals of the Paris agreement and to enhance the role of the financial system to manage risks and to mobilise capital for green and low-carbon investments in the broader context of environmentally sustainable development. To this end, the Network defines and promotes best practices to be implemented within and outside of the membership of the NGFS and conducts or commissions analytical work on green finance.