BANK OF GHANA

CLIMATE-RELATED FINANCIAL RISK DIRECTIVE

FOR BANKS, SPECIALISED DEPOSIT-TAKING INSTITUTIONS, FINANCIAL HOLDING COMPANIES, DEVELOPMENT FINANCE INSTITUTIONS, MORTGAGE FINANCE COMPANIES AND LEASING COMPANIES

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PART I – PRELIMINARY

A. Title

1. This Directive shall be cited as the Bank of Ghana Climate–Related Financial Risk Directive, 2024.

B. Application

2. This Directive is issued pursuant to section 92(1) of the Banks and Specialised Deposit-Taking Institutions Act, 2016 (Act 930), section 84 (1) of the Development Finance Institution Act, 2020 (Act 1032) and section 44(1) of the Non-Bank Financial Institution (NBFI) Act, 2008 (Act 774) and shall apply to Banks, Specialised Deposit-Taking Institutions (SDIs), Financial Holding Companies, Mortgage Finance Companies, Leasing Companies and Development Finance Institutions collectively referred to in this Directive as "Regulated Financial Institutions (RFIs)".

3. This Directive shall be read in conjunction with the Risk Management Directive dated 2021 and, where applicable, the Ghana Sustainable Banking Principles and Sector Guidance Notes, 2019.

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C. Definitions and Interpretation

4. In this Directive, unless the context otherwise requires, words used have the same meaning as that assigned to them in the applicable law (e.g., Act 930) or as follows:

   "Act 930" *means the Banks and Specialised Deposit-Taking Institutions Act, 2016 (Act 930).*

   "Acute physical risk" *means extreme climate change-related weather events (or extreme weather events) such as floods, landslides, wildfires, and droughts.*

   "Anthropogenic emissions" *means emissions of greenhouse gases (GHGs), precursors of GHGs and aerosols caused by human activities. These activities include the burning of fossil fuels, deforestation, land use and land use changes, livestock production, fertilisation, waste management and industrial processes.*

   "Bank" *means a body corporate which engages in the deposit-taking business and is issued with a banking licence in accordance with Act 930.*

   "BOG" *means Bank of Ghana.*

"Business model" *means an entity's system of transforming inputs through its activities into outputs and outcomes that aims to fulfil the entity's strategic purposes and create value for the entity and hence generate cash flows over the short, medium, and long term.*

"Chronic physical risks" *means longer-term gradual shifts of the climate such as changes in precipitation, extreme weather variability, ocean acidification, and rising sea levels and average temperatures.*

"Climate-related financial risks" *means potential risks that may arise from climate change or from efforts to mitigate climate change, their related impacts, and the associated economic and financial consequences.*

"Climate-related transition plan" *means 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.*

"Greenhouse gases (GHGs)" *means those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of thermal infrared radiation emitted by the Earth's surface, by the atmosphere itself, and by clouds. e.g., carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4) and Ozone (O_3) are the primary greenhouse gases in the earth atmosphere.*

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"Physical Risks" *means economic costs and financial losses resulting from the increasing severity and frequency of:*

- *extreme climate change-related weather events (or extreme weather events) such as landslides, floods, droughts, wildfires, and storms (i.e., acute physical risks);*
- *longer-term gradual shifts of the climate such as changes in precipitation, extreme weather variability, increase in temperature, ocean acidification, and rising sea levels and average temperatures (i.e., chronic physical risks or chronic risks); and*
- *indirect effects of climate change such as loss of ecosystem services (e.g., desertification, water shortage, degradation of soil quality or marine ecology).*

"Physical risk drivers" *means the changes in weather and climate mentioned above that lead to physical risks and impacts on economies and financial institutions (e.g., flood).*

"Regulated Financial Institution (RFI)" *means a bank, a specialised deposit-taking institution, a financial holding company, a development finance*

institution, a mortgage finance company or a leasing company under this Directive.

"Scenario analysis" *means a tool that challenges assumptions made for the purposes of risk analysis. A key feature of the scenario analysis is that it enables RFIs to explore alternatives that may significantly alter the basis for "business-as-usual" assumptions. Accordingly, scenario analysis needs to consider extreme but plausible events.*

"Stranded assets" *means asset that at some time prior to the end of its economic life are no longer able to earn an economic return as a result of changes associated with the transition to a low-carbon economy.*

"Three Lines of Defence Model" *means an organisational model of risk management in which the business lines that take risk form the first line of defence; the risk management and compliance oversight functions are the second line of defence; and independent internal audit and assurance form the third line of defence.*

"Transition Risks" *means the risks related to the process of adjustment towards a low-carbon economy.*

"Transition Risk Drivers" *means climate-related changes that could generate, increase, or reduce transition risks. They primarily refer to three types of risks drivers, which are:*

- *technological developments that would make less environmentally friendly or high-emitting technologies obsolete resulting in stranded assets;*
- *behavioural or social change, where consumers and investors demand more environmentally sustainable products and services; and*
- *changes in legislation, regulation or governmental policies intended to reduce carbon emissions and facilitate an orderly shift or transition to a lower-carbon economy*[1]*.*

"Transmission channels" *means the causal chains that explain how climate risk drivers give rise to financial risks that impact banks directly or indirectly through their counterparties, the assets they hold and the economy in which they operate.*

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[1] This may include carbon-pricing mechanisms or emission caps, measures aimed at shifting energy use towards lower carbon emission sources, adoption of energy-efficiency solutions, encouraging greater water efficiency measures, and promoting more sustainable land-use practices.

D. Objectives

5. This Directive seeks to ensure that Regulated Financial Institutions (RFIs):

   a) understand and mitigate against potential impact of climate-related financial risks on their business model and strategy;

   b) implement appropriate governance and risk management practices to effectively identify and manage climate-related financial risks;

   c) remain financially resilient under severe, yet plausible, climate risk events, and operationally resilient to disruptions due to climate-related disasters;

   d) integrate the management of climate-related risks into their Environmental, Social and Governance (ESG) initiatives which have a significant bearing on corporate investment decision-making processes;

   e) address any weaknesses in the management of material climate-related physical and transition risks which can adversely impact safety and soundness as well as the stability of the overall financial system[2];

   f) understand BOG's supervisory expectations on the approach that should be taken in the management and disclosure of climate-related financial risks; and

   g) disclose the impact of climate-related financial risk drivers (physical and transition risks) on risk management, strategy, governance and regulatory capital to enhance market discipline.

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6. The Directive is particularly aimed at creating transparency regarding BOG's view on a prudent approach to the management and disclosure of climate-related financial risks.

E. Proportionality

7. All RFIs are required to comply with this Directive. However, in assessing the quality of RFIs' management of climate-related financial risk, the BOG will take into account the principle of proportionality. In particular, the assessment will be aimed at ensuring that:

   a) RFIs processes and tools for management of climate-related financial risks are commensurate with their risk profile, and takes into account their business model, and the nature, scale, and complexity of their activities; and

[2] This will consequently contribute to a resilient financial system that is able to effectively contribute to sustainable economic growth and value creation for the various stakeholders.

b) the regulatory objectives of promoting safety and soundness of RFIs and ensuring the stability of the banking system are effectively achieved without placing undue regulatory burden on RFIs.

F. Transitional Arrangements and Effective Implementation

8. The effective implementation date of this Directive shall be **1st January 2026 in the case of banks and 1st January 2027 in the case of SDIs and NBFIs.**

9. RFIs are required to align their governance arrangements, risk management frameworks and internal policies and processes with the requirements of this Directive by **31st December 2025 in the case of banks and 31st December 2026 in the case of SDIs and NBFIs**. To facilitate the monitoring of implementation of this Directive by BOG, RFIs shall provide quarterly update on the initiatives being undertaken to ensure compliance with this Directive.

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PART II – INTRODUCTION AND OVERVIEW

A. Introduction

10. Bank of Ghana (BOG) recognises that Regulated Financial Institutions (RFIs) are potentially exposed to climate-related financial risks regardless of their size, complexity or business model, and that climate-related financial risk drivers can translate into traditional financial risk categories including: credit, market, liquidity, and operational risks. RFIs shall therefore consider the potential impacts of climate-related risk drivers on their individual business models and assess the financial materiality of these risks[3]. RFIs are also expected to manage their climate-related financial risks in a manner that is proportional to the nature, scale and complexity of their activities and the overall level of risk that it is willing and able to accept[4].

11. This Directive sets out the supervisory expectations for RFIs in relation to the approach to management and disclosure of climate-related financial risks with a focus on corporate governance, internal control framework, assessment of adequacy of capital and liquidity, risk management process, management monitoring and reporting, comprehensive management of specific financial risks, scenario analysis and disclosures[5]. Consequently, this Directive aligns with goals to address climate change mitigation and adaptation in line with Ghana's Nationally Determined Contributions (NDCs) to the Paris Agreement.

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12. In applying this Directive, RFIs are expected to take into consideration the unique characteristics of climate-related financial risks, including but not limited to potential transmission channels, the complexity of the impact on the economy and financial sector, uncertainty related to climate change and potential interactions between physical and transition risks, and the extended period of time to which such risks could materialize. RFIs are also expected to incorporate in their framework for managing climate-related financial risk the concept of double materiality[6].

13. Given that the management of climate-related financial risks, and the methodologies and data used to analyze these risks are still evolving and are expected to mature over time, RFIs shall continuously develop their capabilities and expertise on climate-related financial risks and ensure that such capabilities commensurate with the risks they face. RFIs shall also allocate adequate resources to management of these risks. The BOG will

[3] In assessing the materiality of climate related, RFIs shall, amongst others, consider the various time horizon, i.e., short, medium, and longer terms.
[4] The ability of RFIs to accept risk shall be informed by their capital and liquidity positions, and the quality of internal governance and risks management capacity.
[5] The specific risks addressed in this Directive include credit, market, liquidity, operational risks.
[6] The concept of double materiality means that RFIs can be impacted by, and/ or have an impact on climate change.

on its part update this Directive as and when necessary to reflect evolution in risk management practices, and emerging standards including on management, supervision, and disclosure of climate-related risks.

14. RFIs shall continuously monitor and incorporate developments in climate-related risk management, such as improvements in data quality and evolution in risk measurement methodologies, into their governance and risk management practices.

15. This Directive takes into considerations the expectations set out in the Basel Committee on Banking Supervision (BCBS) principles on the effective management and supervision of climate-related financial risks (published in June 2022), Basel Consultative Document-Disclosure of climate-related financial risks, published in November 2023 as well as the International Financial Reporting Standards (IFRS) S2 disclosure requirements on climate issued in June 2023 by the International Sustainability Standards Board.

B. Overview of Impact of Climate Related Financial Risks

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16. Climate-related financial risks, if not well-addressed, could materially impact on the safety and soundness of RFIs and have broader financial system stability implications for the banking sector. Specifically, climate change is expected to impact the frequency and intensity of natural disasters[7]. Climate-related financial risks are typically classified as physical and transition risks.

17. Physical impacts include the potential economic costs and financial losses resulting from the increasing severity and frequency of extreme climate-change related events, and longer-term progressive shifts in the climate while transition impacts relate to the process of adjusting to a low-carbon economy which could result in a decline in value of assets in carbon-intensive sectors[8].

18. Transition risk drivers have the potential to generate, accelerate, slow, or disrupt the transition towards a low-carbon economy[9]. Example of public policies to reduce greenhouse gas (GHG) emissions include: carbon-pricing mechanisms or emission caps, shifting energy use towards lower carbon emission sources (wind, hydro and solar), adoption of energy-efficiency solutions, encouraging greater water efficiency measures, and promoting more sustainable land-use practices.

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[7] This is according to the Intergovernmental Panel on Climate Change (IPCC, 2022)

[8] Basel Committee on Banking Supervision, Climate-related financial risks: a survey on current initiatives, April 2020.

[9] Transition risk also captures structural changes in the economy due to GHG emission reductions.

19. **Figure 1** below illustrates how climate risk drivers can transmit and translate into financial risks through the following key components[10]:

    a) **Climate risk drivers**: These are climate-related changes that could give rise to financial risks and can be either: physical risk drivers, which are changes in weather and climate that impact economies and financial institutions, or transition risk drivers, which are societal changes arising from transition to a low-carbon economy. Physical risk drivers can be related to extreme weather events (acute risks) or associated with gradual shifts in climate (chronic risks). Transition risk drivers, on the other hand, can arise through: changes in government policies, innovation, and changes in affordability of existing technologies or consumer and investor sentiments towards a greener environment.

    b) **Transmission channels:** These are the causal chains linking climate risk drivers to the financial risks faced by RFIs[11]. The transmission channels can be either microeconomic or macroeconomic. Microeconomic transmission channels are ways in which climate risk drivers affect RFI's: individual counterparties (sovereigns, households, corporates, and financial institutions), operations, funding, and name-specific financial assets such as bonds and equities. Macroeconomic transmission channels, on the other hand, are the mechanisms by which climate risk drivers affect macroeconomic factors such as productivity and economic growth and how these, in turn, may impact RFIs. They also capture the effects of climate risk drivers on macroeconomic factors such as: interest rates, inflation, commodity prices and foreign exchange (FX) rates.

    c) **Determinants of impact of climate-related risk drivers on RFIs:** The likelihood and size of the impact of climate risk drivers on RFIs can be affected by several factors including: geographic location of their operation and exposures[12], their business model and particularly exposure to sectors and counterparties that are vulnerable to climate-related risks, structure of the local economy and financial system. The effect of climate change may also be amplified by interactions between different climate risk drivers and transmission channels. RFIs can also use various mitigants to reduce or offset their exposure to climate-related risks. The mitigants may include: changes in RFIs behaviour and business models, the availability and price of insurance, and depth and maturity of the capital market.

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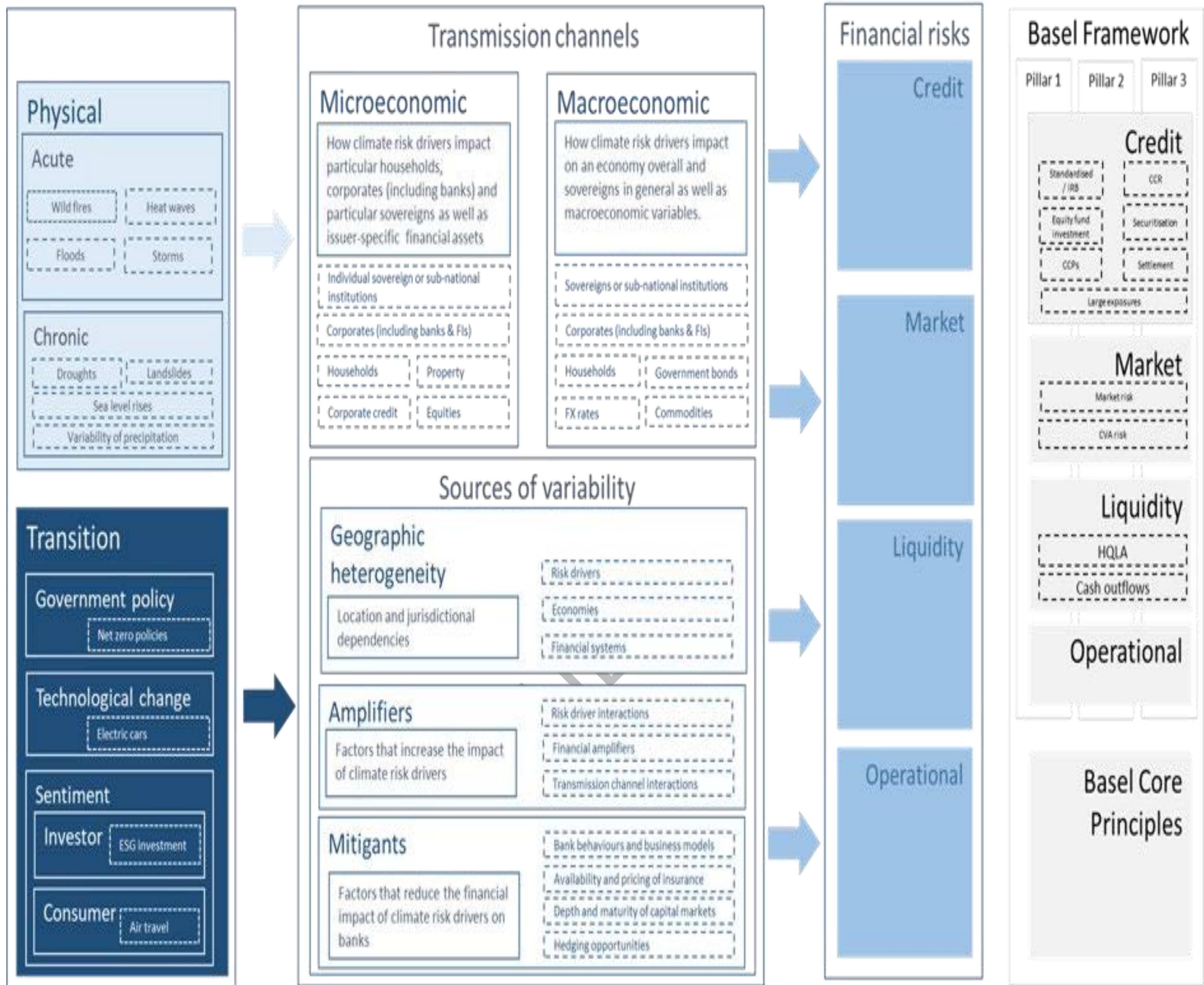
[10] See, BCBS, Climate-related risk drivers and their transmission channels of April 2021 for details.
[11] They can also be viewed as ways in which climate change may materialise as a source of financial risk.
[12] Some regions are expected to be more severely affected by climate-related risks due to their exposure and vulnerability to specific types of weather disasters, and level of development.

Figure 1: Transmission of Financial Risk from climate risk drivers



20. Climate-related risks can drive traditional risks categories including:

a) **Credit risk:** Rising frequency and severity of extreme weather events can impair the value of assets held by RFIs' customers, or impact supply chains affecting customers' operations and profitability, and potentially, their viability. For example, the destruction of a production site by wildfire or floods can increase the Probability of Default (PD) of the company operating the site[13]. The transition to a low-carbon

[13] Damage to physical collaterals can lead to increase in the Loss Given Default (LGD)

economy can also impact the profitability of customers in carbon-intensive businesses. These factors can lead to increased credit risk for RFIs, as borrowers' ability to repay their debt obligations are reduced (income effect), and collaterals held by RFIs are impaired hence reducing the RFIs ability to fully recover the value of a loan in the event of default (wealth effect)[14].

b) **Operational risk:** Extreme weather events can disrupt business continuity by negatively impacting the RFIs or main service providers' critical infrastructure, systems, processes, and staff. In addition, RFIs may face liability claims from parties who have suffered environmental-related losses and seek to recover those losses from RFIs they deem responsible[15].

c) **Market risk:** Severe weather events or political measures regarding the transition to a low-carbon economy could lead to re-pricing of financial instruments and corporate debt affecting the value of securities held on RFIs balance sheets and/or the value of collateral used in some operations. The introduction of a carbon tax can also result in investment losses and lower asset values or stranded assets. Climate risk could also lead to a breakdown in correlations between assets or a change in market liquidity for particular assets, undermining risk management assumptions.

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d) **Liquidity risk:** Natural disasters can cause widespread damage to physical property and incur significant costs (e.g., construction and repair), leading to a surge in withdrawal of funds and demand for emergency loans, which could exacerbate liquidity stresses in RFIs. RFIs may also experience difficulties in liquidating assets impacted by weather events or stranded in the transition towards a low-carbon economy. Further: (i) depositors and investors, who are increasingly environmentally conscious, may also cut back on sources of funding for RFIs that finance activities with a negative impact on the environment, (ii) access to stable sources of funding could be reduced as market conditions change, and (iii) climate risk drivers may cause RFIs' counterparties to draw down deposits and credit lines. Lack of reliable and comparable information on climate-sensitive exposures of RFIs could also create uncertainty including fire sales of carbon-intensive assets, and potential liquidity problems.

[14] Possible non-renewal of insurance policies on assets in risk-prone areas would transfer all the risk of the portfolio to the RFI should collateral be affected by a climate related event.
[15] The definition of operational risk includes legal risk but excludes strategic and reputational risk.

PART III – MANAGEMENT OF CLIMATE-RELATED FINANCIAL RISKS

A. Corporate Governance

21. The board of directors and senior management of an RFI shall formulate and implement climate-related financial risks management strategies, policies, procedures, guidelines and set minimum standards for the institution.

22. RFIs shall develop and implement appropriate processes for assessing the potential impacts of physical and transition climate-related risks on their businesses and operating environment (in the short, medium, and long term) and shall incorporate any material climate-related financial risks into their overall business objectives, business strategies and risk management frameworks[16]. To ensure that the processes for assessing the impact of climate-related financial risks are adequately robust, the RFI's board and senior management shall:

    a) be involved in all the relevant stages of the process; and

    b) ensure that the RFIs business strategies and Risk Appetite Statement (RAS) is consistent with its publicly communicated climate-related strategies and commitments[17].

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23. The RAS should, where practical, include quantitative and qualitative climate-related targets to facilitate monitoring of progress towards achievement of climate-related strategic goals and, where applicable, targets that RFIs are required to meet by law or regulations. The qualitative measures should, where applicable, be translated into risk limits to facilitate the assessment of RFIs climate-related risk profile against their board approved risk appetite and capacity[18].

24. The RFI's board and senior management shall clearly define and explicitly assign the roles and responsibilities for management of climate-related financial risks throughout the organisational structure in accordance with the three lines of defence model and shall provide effective oversight of these risks. The aim shall be to, amongst others, ensure that climate-related financial risks are appropriately considered as part of the RFI's business strategy and risk management framework. RFIs shall also ensure that:

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[16] In assessing the materiality of climate-related, RFIs should consider the various time horizon. That is, short, medium, and longer terms.

[17] The RAS should be forward looking and tailored to the firm's business strategy, business model and balance sheet.

[18] where applicable, the RAS should be subject to scenario and stress testing to facilitate the identification of climate-related events that might push the RFIs outside of its risk appetite or risk capacity and inform appropriate risk mitigation measures.

a) the board and senior management have adequate understanding of climate-related financial risks and that senior management are well-equipped to effectively manage these risks[19];

b) relevant functions and business units are adequately resourced to effectively manage climate-related financial risks; and

c) the Internal Audit Function (IAF) include these risks in its review of the effectiveness and adequacy of its internal governance arrangements, processes, and mechanism.

25. RFIs shall ensure that its management of material climate-related financial risks is embedded in all the appropriate policies, processes and controls that have been implemented across all the relevant functions and business units. These include, for example, in client onboarding and transaction assessment. Where possible, an RFI shall designate a Key Management Personnel charged with the responsibility of managing the financial risks from climate-change to ensure effective and holistic oversight of climate-related financial risks.

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26. The RFI's established approach for assessment of climate-related financial risks shall be clearly communicated to all the relevant internal stakeholders across the three (3) lines of defence.

27. Senior Management of an RFI shall:

a) regularly review the effectiveness of the strategies, policy frameworks, tools and controls and ensure that all material climate-related financial risks are addressed in a timely manner,

b) provide periodic reports to the Board on climate-related financial risks to which the RFI is exposed.

28. The Board of an RFI shall also ensure that there is:

a) an appropriate collective understanding of climate-related financial risks and related issues at both board and senior management level,

b) relevant ongoing capacity development and training programmes on climate related financial risks for the institution.

B. Internal Control Framework

29. RFIs shall incorporate climate-related financial risks into their internal control frameworks across the three lines of defence with the aim of ensuring

[19] Banks should continually build the capacity of the board and senior management on climate-related topics.

sound, comprehensive and effective identification, measurement, and mitigation of material climate-related financial risks[20]. Specifically, RFIs shall ensure that:

a) the internal control frameworks include clear definition and assignment of climate-related responsibilities and reporting lines across the three lines of defence;

b) the relevant staff have adequate understanding of the potential impact of climate-related financial risks; and

c) Internal Audit Function (IAF) provides independent review and objective assurance of the quality of the overall internal control framework and systems, risk governance framework and the quality of the underlying data.

30. RFIs shall enhance their Anti-Money Laundering (AML) and Countering the Financing of Terrorism and Proliferation (CFT) policy measures to ensure that they do not contribute to the impact on climate change through fostering money laundering and illicit financing of environmental crimes (including illegal mining, logging, waste disposal and pollution).

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C. Internal Capital and Liquidity Adequacy

31. RFIs shall identify and, where practical, quantify climate-related financial risks and incorporate those assessed as material over the relevant time horizons, which should be at least three (3) years and long enough to capture key vulnerabilities and exposures, into their internal capital and liquidity adequacy assessment processes, including their stress testing programmes where appropriate[21]. To achieve this, RFIs shall:

a) develop internal processes for evaluating the potential impact of climate-related financial risks on their solvency and liquidity buffers over their capital and liquidity planning horizons assuming both business-as-usual and stressed conditions[22];

b) incorporate material climate-related financial risks in their internal capital and liquidity adequacy assessment process; and progressively improve their approach to incorporation of climate-related financial risks into their internal capital and liquidity adequacy assessment as the

[20] In the first line of defence, climate-related risk assessments may be undertaken during the client onboarding, credit application and credit review processes, and in ongoing monitoring and engagement with clients as well as in new product or business approval processes.

[21] The time horizon for assessment of materiality and impact of climate-related risks should be long enough to capture the key vulnerabilities and exposures.

[22] Assessment of impact under stressed conditions should consider severe but plausible climate-related stress events.

methodologies and data used to analyze these risks continue to mature over time and as analytical gaps are addressed; and

c) where practical and depending on data availability, develop key risk indicators, metrics, heatmaps, risk matrix etc for assessing the impact of these risks.

32. Where relevant and practical, RFIs may consider the scenarios developed by the Network for Greening the Financial System (NGFS) (see **Annex I** for details) in their climate stress testing and scenario analysis. The NGFS scenarios if applied, shall be complemented by the relevant additional scenarios reflecting domestic and RFI's specific exposure and vulnerability to climate-related financial risks. The additional RFI's specific scenarios may be informed by, amongst others:

a) the physical risk vulnerabilities of the geographical locations where the RFI's activities, portfolios, collaterals, or counterparties are based; and

b) the sectoral distribution of the RFI's exposures and vulnerabilities of key sectors and counterparties in those sectors to transition and physical risks.

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33. RFIs Internal Capital Adequacy Assessment Process (ICAAP) shall provide sufficient information to allow a good understanding of analysis of its exposure to climate-related risks and impact on capital position (adequacy). The information shall, where relevant, include:

a) disclosure of assessment methodologies and underlying assumptions;

b) human judgement that has been applied in the assessment;

c) proxies used where there are data gaps and consequent uncertainties; and

d) details of their climate risk stress testing calculations and methodologies.

D. Risk Management Process

34. RFIs shall have a process in place for the identification, measurement, monitoring and management of all the material climate-related financial risks to which they are exposed to over appropriate time horizons and shall ensure that these risks are clearly defined and addressed in their Risk Appetite Statement (RAS) and Enterprise Risk Management (ERM) frameworks[23]. These risks shall include those posed by concentration to specific industries, economic sectors, and geographic locations[24]. In the

[23] These are risks that could materially impair the banks financial condition, including their capital resources and liquidity positions.
[24] Example is a drought affecting all loans to farmers in a specific region.

identification and assessment of climate-related financial risks, RFIs shall consider different time horizons.

35. To facilitate the effective management of climate-related financial risks, RFIs shall:

a) Put in place a framework to identify, collect, and use reliable, timely, and accurate data on physical and transition risks relevant to their business activities, which may include data on geophysical location of exposures and on GHG emissions. Where data gaps exist, RFIs shall put in place appropriate measures to bridge such gaps and, in the interim, shall consider the use of appropriate alternative data sources or reasonable proxies.

b) Implement relevant tools and, where applicable, models for measurement and assessment of climate-related risks including those for undertaking climate scenario analysis.

c) Have sufficient understanding of the embedded data, methodology, assumptions and limitations of any tools and models that have been developed by external third parties.

d) Set specific climate-related risk limits including Key Performance Indicators (KPIs) in accordance with their risk appetite and shall, where necessary, adjust their business processes to reflect the climate-related strategic objectives.

e) Embed climate risk within the terms of reference of the relevant Board and Senior Management committees and in all stages of the Three Lines of Defence.

f) Consider how climate-related events could have an adverse impact on business continuity and the extent to which the nature of their activities could increase reputational and/or liability risks.

g) Evaluate the appropriateness of their stress testing, with a view to incorporating material climate-related risks into their base line and adverse scenarios.

h) Have a counterparty engagement strategy to facilitate effective consideration of climate risk within their business strategy and risk appetite. The engagement shall inform RFIs on how their counterparties (borrowers) plan to manage their climate exposures by, for example, developing new products and services as they change the carbon footprint of their business over time.

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i) Put in place a framework for mitigating material climate-related financial risks with an appropriate risk mitigating plan including regular engagement with counterparties to understand and monitor risk mitigating plans.

j) Establish a climate-related financial risks management policy, consistent with this Directive and at minimum shall include:

   a) responsibilities of the board and senior management in climate-related financial risks management;

   b) roles and responsibilities of frontline staff, risk management, compliance, and internal audit functions in climate-related financial risks management;

   c) a framework for identification, measurement, monitoring, mitigating, controlling, and reporting of climate-related financial risks;

   d) hierarchy, lines of authority and responsibility for managing climate-related financial risk; and

   e) contents and frequency of management reports to the board on climate-related financial risks.

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E. Management Monitoring and Reporting

36. RFIs shall develop internal risk reporting systems and framework for monitoring material climate-related financial risks and producing timely information to facilitate effective decision-making by the board and senior management. This include ensuring that:

a) The RFI has appropriate systems in place for collecting climate-related financial risk data as part of their data governance and IT infrastructure, and internal process for ensuring the accuracy and reliability of the data.

b) The RFI actively engages its clients and counterparties and collect any additional data to facilitate a better understanding of their transition strategies and risk profiles.

c) The RFI develops relevant risk indicators to categorise counterparties, industries, economic sectors and geographical locations based on the extent of climate-related financial risks.

d) The RFI develops internal metrics, limits, or indicators to assess, monitor, and report climate-related financial risks and incorporate climate-related risks into internal monitoring and reporting of business performance and effectiveness of risk management[25]. The monitoring metrics can be at exposure, counterparty and/or portfolio levels.

e) The internal reporting systems can produce reliable, timely, and accurate reporting on climate-related risks and exposures, including risk concentrations (e.g., geographies, sectors, products, or counterparties) to support strategic planning and risk management.

Table 1: Example of metrics on the impact of climate change

Metric category	Unit of measure	Example of metrics[26]
Climate-related transition risks	amount and percentage	– concentration of credit exposure to carbon-related assets – volume of real estate collaterals highly exposed to transition risk – percentage of revenue passenger kilometers not covered by the Carbon Offsetting and Reduction Scheme for International Aviation
Climate-related physical risk	amount and percentage	– proportion of property, infrastructure or other alternative asset portfolios in areas subject to flooding, heat stress or water stress – proportion of real assets exposed to climate-related hazards – number and value of mortgage loans in 100-year flood zones – wastewater treatment capacity located in 100-year flood zones – revenue associated with water withdrawn and consumed in regions of high or extremely high baseline water stress
Climate-related opportunities	amount and percentage	– revenues from products or services that support the transition to a lower-carbon economy

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[25] Limitations that prevent full climate risk data assessment should be made explicit to stakeholders where relevant.
[26] Source: IFRS, Accompanying Guidance on Climate-related Disclosures, June 2023.

Metric category	Unit of measure	Example of metrics[26]
Capital deployment	presentation currency	– percentage of annual revenue invested in research and development of lower-carbon products or services – percentage of investment in climate adaptation measures

F. Comprehensive Management of Climate-Related Financial Risk[27]

37. RFIs shall assess the impact of climate-related risk drivers on their credit risk profiles, market risk positions and liquidity risk profile, and ensure that their risk management systems and processes take into consideration any material climate-related financial risks. To achieve this, RFIs shall particularly:

a) Have clearly articulated credit policies and processes that addresses material climate-related credit risks and incorporate these risks into the entire credit life cycle, including client due diligence as part of the onboarding process and ongoing monitoring of the borrowers or counterparties risk profile.

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b) Identify, measure, evaluate, monitor, report and manage concentration risk associated with climate-related financial risks including concentration of exposures to geographical location and industrial sectors with higher climate-related risks.

c) Assess the impact of climate-related risk drivers on the value of financial instruments in their portfolios including through the use of stress tests that incorporate climate-related risks and, where material, establish effective processes to mitigate the associated impacts[28].

d) Assess the impacts of climate-related financial risks on net cash outflows or their liquidity buffers and, where material and appropriate, shall incorporate these impacts into their liquidity risk management frameworks and calibration of liquidity buffers[29].

e) Assess the impact of climate-related risk drivers on their operational risk and other risks such as strategic, reputational, regulatory, and litigation or liability, and ensure that their risk management systems and processes

[27] These includes: credit, market, liquidity, operational, litigation, reputational and other risks.
[28] The scope of assessment shall include current market risk positions and future investments.
[29] Climate-related financial risks could, for example, result in: increased drawdowns of credit lines and accelerated deposit withdrawals.

appropriately consider material climate-related risks and put in place adequate measures to account for these risks, if material.

38. This shall particularly include the assessment of the impact of climate-related risk drivers on RFI's operations and their ability to continue providing critical services. Further, RFIs shall consider material climate-related financial risks when developing their business continuity plans and strategic planning process.

G. Scenario Analysis

39. Where possible, RFIs shall use scenario analysis to assess the resilience and vulnerabilities of their business models and strategies to a range of plausible climate-related pathways and to determine the impact of climate-related risk drivers on their overall risk profile. Where there are data and methodological challenges, RFIs shall at a minimum consider the use of qualitative approaches to scenario analysis.

40. The scenario analysis shall particularly consider the impact of physical and transition risks on credit, market, operational and liquidity risks over a range of relevant time horizons[30]. The climate scenario analysis shall:

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a) Facilitate the assessment of the impact of climate change and the transition to a low-carbon economy on the RFI's strategy and the resilience of its business model, identification of the relevant climate-related risk factors, measurement of vulnerability to climate-related risks and estimation of potential losses, and diagnosis of data and methodological limitations in climate risk management;

b) Inform the assessment of the adequacy of an RFI's risk management framework, including risk mitigation options;

c) Reflect physical and transition risks that are relevant to the RFI's business model, exposures, and business strategy. The selected scenarios shall cover a range of appropriate plausible transition pathways;

d) Consider the impact of a range of time horizons (short, medium, and long-term) in order to address different risk management objectives[31]; and

[30] This should be aligned with the RFI's Strategic Plan Horizon.

[31] Shorter time frames can be used to analyze risk within a bank's typical business planning horizon at a lower level of uncertainty while longer time frames can be used to evaluate the resiliency of existing strategies and business models to structural changes in the economy, financial system or distribution of risks.

e) Where applicable, consider cumulative and feedback effects arising from both physical and transition risks and their economic impacts, interdependencies between physical and transition risk, geographical and sectoral risks, as well as improvements in understanding of impacts on financial risks, and other system-wide aspects of climate-related risks such as indirect exposures, risk transfer including through insurance products, and spillovers.

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PART IV – PRUDENTIAL DISCLOSURES AND REGULATORY REPORTING

A. Disclosure of Climate-Related Financial Risk

41. RFIs shall disclose relevant information on climate-related financial risks and shall be:

    a) specific and complete;

    b) clear, balanced, and understandable;

    c) comparable with those of other similar financial institutions;

    d) reliable, verifiable, and objective;

    e) provided on a timely basis; and

    f) sufficiently detailed to enable users make informed economic decisions regarding the impact of climate-related financial risks.

42. RFIs are required to disclose their climate-related financial risks in their Audited Financial Statements (Directors' Report) and in the Annual Report, in a manner that is clear and meaningful to its stakeholders[32]. The disclosure shall, in addition to the specific provisions of this Directive, take into account:

    a) the requirements of the International Sustainability Standards Board (ISSB) Standards on Climate-related Disclosures (IFRS-S2) published in June 2023;

    b) the ISSB's Accompanying Guidance on Climate-related Disclosures IFRS-S2 published in June 2023;

    c) the specific approach to adoption of the ISSB Standards as communicated by the Institute of Chartered Accountants, Ghana (ICAG) [33]; and

    d) applicable guidance on disclosure of climate-related risks from the Securities and Exchange Commission (SEC), Ghana.

43. In accordance with the ISSB's Standard on Climate-related Disclosures (IFRS S2) and other widely accepted international standards on disclosure of climate-related risks including those issued by BCBS, RFIs disclosures shall at a minimum incorporate the following:

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[32] The climate-related financial risks disclosures will also form part of the Pillar 3 disclosures once formally introduced.
[33] The ISSB Standards will become effective once adopted by the Institute of Chartered Accountants, Ghana (ICAG).

a) Governance. This should, at a minimum, include description of:

(i) the governance structure (board, committee, or individuals) responsible for oversight of climate-related financial risks including breakdown of responsibilities as reflected in the terms of reference, role description and other related policies;

(ii) management's role in the governance processes, controls and procedures used to monitor, manage, and oversee climate-related financial risk. This could include information on: whether the role is delegated to a specific management-level position or committee and how oversight is exercised over that position or committee, and whether management uses controls and procedures to support the oversight of climate-related risk and, if so, how such controls and procedures are integrated with other internal functions;

(iii) how the board ensures the availability of appropriate skills and competence to oversee strategies designed to respond to climate-related financial risks;

(iv) The frequency and how the board and its committee are informed about climate-related financial risks; and

(v) how the board and its committee consider climate-related financial risks when overseeing the bank's strategy, its decisions on major transactions, and its risk management processes and related policies.

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b) Strategy for managing climate-related financial risks. This should include information on:

(i) climate-related financial risks that could reasonably be expected to affect the RFI's prospects and particularly cashflow, access to finance and cost of capital;

(ii) the current and anticipated impact of those climate-related financial risks on the RFI's business model and value chain[34];

(iii) the effect of material climate-related risks on RFI's strategy and decision-making including its climate-related transition plan;

(iv) the effect of those climate-related financial risks on the RFI's financial position, financial performance and cash flows for the

[34] This should include a description of where in the bank's business model and value chain climate-related risks are concentrated (for example, geographical areas, facilities and types of assets).

reporting period, and their anticipated effect on the RFI's financial position, financial performance, and cash flows over the short, medium, and long-term, taking into consideration how those climate-related financial risks have been factored into the RFI's financial planning; and

(v) the resilience of the RFI's strategy and business model to climate-related changes, developments, and uncertainties, taking into account the identified climate-related financial risks.

As part of the disclosure on the effects of material climate-related financial risks on strategy and decision-making, RFIs should, where possible, include specific information on how they have responded to, and plan to respond to, climate-related financial risks in their strategy and decision-making including plans to achieve any climate-related forecasts it has set and, where applicable, forecast that they are required to meet by law or regulation. RFIs should also, where applicable, disclose information on their:

(i) current and anticipated changes to their business model, including resource allocation, to address climate-related financial risks;

(ii) current and anticipated indirect mitigation and adaptation efforts; and

(iii) any climate-related transition plans including key underlying assumptions and the dependencies.

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c) **Risk management.** This should include description of:

(i) the processes and related policies that the RFI uses to identify, assess, prioritise, and monitor climate-related financial risks including information on:

- the input parameters used by the RFI;
- whether and how the RFI uses climate-related scenario analysis to inform its identification of climate-related financial risks;
- how the RFI assesses the nature, likelihood, and magnitude of the effects climate-related financial risks;
- whether and how the RFI prioritises climate-related financial risks relative to other risk types;
- how the RFI monitors climate-related financial risks; and

  - whether the RFI has changed the processes it uses from the previous reporting period.

(ii) the extent to which and how the processes for identifying, assessing, prioritising, and monitoring climate-related financial risks are integrated into and inform the overall risk management.

d) Metrics and targets. This should include specific metrics and targets used by RFIs to assess performance in relation to climate-related risks including progress towards any climate-related targets it has set and, where applicable, those that it is required to meet by law or regulation. The specific metrics may include:

(i) exposure by the RFI to non-financial corporates by economic sectors as per BOG's prudential standard for sectoral allocation of credit and the proportion of exposure to each economic sector to total exposures;

(ii) exposures subject to physical risk by geographical area and the proportion of such exposures to total exposures and total assets;

(iii) maturity profile of exposures subject to climate-related transition and physical risks;

(iv) exposure to carbon intensive sectors and counterparties, and renewable (sustainable) projects as a proportion of total exposures;

(v) exposure to each of the vulnerable sectors as per the Sustainable Banking Principles (SBP) Sector Guidance Notes and the proportion of exposure to each vulnerable sector and to all vulnerable sectors as a percentage of RFI's total exposures.

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e) Transition risk. This should include:

(i) information on the extent to which the RFI is supporting its counterparties in climate change mitigation and adaptation including, where relevant, information on the types of instruments used, nature and type of projects financed and any other relevant information that will help users understand the RFI's climate risk management framework; or

(ii) Where the RFI is not currently estimating its counterparties' emissions associated with their financing activities, information on any plans to implement methodologies to estimate and disclose this information.

f) **Physical risk.** This should, where applicable, include details of the methodology used by RFI to determine which exposures are vulnerable to physical risk, particularly:

(i) a description of selected climate-related events (chronic and acute) and the rationale for selecting the particular physical risk events given the RFI's business model;

(ii) the criteria used to determine the geographical breakdown and/or granularity used to assess the physical risk arising from each climate-related event;

(iii) the time horizons and scenarios used to assess the physical risks; and

(iv) considerations taken into account in identifying exposure that are vulnerable to physical risk based on the geographical location of the activity of the counterparty.

g) **Concentration risk.** This should include information on:

(i) the potential impact of exposures to counterparties associated with high transition or physical risks on the RFI's overall risk and financial performance;

(ii) the process(es) for identifying vulnerable concentrated exposures and assessing the likelihood and impact associated with such risks;

(iii) whether and how the RFI is monitoring concentration of exposures within sectors or geolocations; and

(iv) the impact of climate-related concentration risks on RFI's strategy and decision-making, including how the RFI is responding to and mitigating climate-related concentration risks.

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44. RFIs shall disclose to the market their climate-related transition plans and particularly information on how they have responded to, or plans to respond to, climate-related risks including their climate-related targets, plans to achieve those targets, review processes and quantitative and qualitative information on progress against prior disclosed plans. The specific information disclosed may also include, where available and relevant:

a) current GHG emissions performance;

b) impact of transition to low-carbon economy on RFIs businesses, strategy, and financial planning; and

c) specific actions and activities to support transition to a low-carbon economy, including GHG emissions reduction targets and planned changes to businesses and strategy.

45. In their disclosures, RFIs shall also provide information specific to the current and potential future impact of climate-related financial risks on its markets, businesses, corporate or investment strategy, financial statements and reports, and future cash flows.

Other Requirements

46. The format for the disclosures expected by this Directive shall be as per the **Standardized Climate-related Disclosure Templates** that will be provided by BOG, and which will be developed in consultation with the ICAG.

47. RFIs shall also regularly review their climate-related disclosures with the aim of improving on their comprehensiveness, clarity, and relevance. The reviews shall take into account:

a) the expectation of widely accepted international standards, frameworks, and recommendations on disclosure of climate-related financial risks; and

b) the climate-related disclosure practices in other comparable financial institutions and jurisdictions.

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B. Regulatory Reporting of Climate-Related Financial Risks

48. To facilitate the supervisory assessment of RFIs exposure to climate-related risks, RFIs are required to submit the following information to BOG on a **semi-annual basis** or as and when there are material changes or developments.

a) Description of material climate-related financial risks and the approach taken to address them with regards to governance, risk management and strategy.

b) Quantitative and qualitative information on how the RFI is accounting for the impact of climate change, including metrics on the assets held by counterparties connected to carbon intensive activities and operations, and those in other highly vulnerable sectors and geographical locations.

c) Internal policies and commitments taken to reduce the carbon footprint of the RFI.

d) Climate-related requirements that the RFI has imposed on firms they invest in or on borrowers (counterparties).

e) Steps the RFI is taking in its investments and credit portfolios to account for energy sector transition.

f) Description of risk assessment methodologies including stress testing scenarios and assumptions.

g) Information on corporate transition plans to support forward-looking assessment of risk and, where applicable, alignment with broader national climate policy objectives.

h) Physical risk data on vulnerability of assets as well as climate risk drivers and exposures.

i) Forward-looking information such as RFIs transition plans, the results from climate stress testing or scenario analysis and forward-looking metrics (as they become more mainstream in their application).

j) RFIs' exposure to sectors or economic activities impacted by transition risk including exposures to mining and carbon intensive sectors, and the proportion of such exposures to total exposures and assets.

k) The process for identifying vulnerable concentrated exposures and for assessing the likelihood and impact associated with such risks.

l) Exposures subject to physical risks including chronic and acute events split by geographical region or location subject to physical risk, and the proportion of such exposures to total exposures and total assets.

m) Details of methodology used to determine exposures which are subject to the impact of physical risks.

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49. RFIs shall also submit to BOG their climate-related transition plans on an annual basis together with the ICAAP or when there have been material changes to corporate structure or business model impacting on previously submitted transition plans.

50. RFIs should be able to explain to BOG how they identify their significant data gaps, what plans they have to close those gaps, and what processes they have in place to ensure that developments in data and tools will be identified and incorporated into their disclosures and management reporting.

PART V – CLIMATE-RELATED TRANSITION PLANS[35]

51. RFIs shall develop credible climate-related transition plans with specific timelines aimed at implementing their board-approved strategies and policies towards net-zero transition and integrating climate-related financial risks into their governance and risk management frameworks as well as in their strategic objectives and day-to-day operations[36]. The climate-related transition plans shall cover, amongst others:

a) **Transition strategy:** This shall include:

(i) the overall strategy for reaching net zero including overall objectives and priorities, interim and longer-term targets, and proposed strategies for financing the transition; and

(ii) details of how the RFI aims to mitigate, manage, and respond to climate change.

b) **Implementation strategy**: This shall include, where applicable:

(i) products and services to support and increase counterparties and RFI's transition efforts;

(ii) specific activities aimed at embedding net zero priorities into the RFI's core activities and decision-making tools and processes; and

(iii) organization-wide policies on priority sectors and activities.

c) **Metrics and targets**: This shall include metrics and targets for measuring and monitoring the execution of the climate-related transition plans and progress over time towards reduction in emissions. The metrics may include actual and forecasted exposure to non-carbon intensive borrowers and renewables as a proportion of total exposures.

d) **Engagement strategy:** This shall include details of engagement with:

(i) counterparties and, where applicable, portfolio companies on their own net zero strategies and plans;

(ii) financial industry including, as appropriate, peer institutions with the aim of addressing common challenges and ensuring a consistent approach; and

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[35] This area is evolving, and further guidance on transition plans will be provided as best practice and international standards emerge.

[36] IFRS S2 Standard on Climate-related Disclosures expect entities to disclose information about any **climate-related transition plan** the entity has, including information about key assumptions used in developing its transition plan, and dependencies on which the entity's transition plan relies.

(iii) where applicable, government and the public sector aimed at ensuring that the public sector appropriately support an orderly transition towards net zero.

e) **Governance and accountability mechanism:** This shall include the approach taken by RFIs to embed transition plans into their governance arrangements and to ensure accountability in relation to:

(i) responsibilities of the board and senior management and, where applicable, remuneration and other incentives in place to support the delivery of the plan; and

(ii) providing the necessary training to staff and other stakeholders and embedding the transition plan into the RFI's culture and practices.

f) **Other Information:** The transition plans shall also, where relevant, include:

(i) details of anticipated changes to RFIs strategies or business models in response to transition to net zero;

(ii) assumptions, dependencies, and sensitivity analysis associated with the transition strategy; and

(iii) actions to be taken by RFIs to reduce risks as they transition to a low-carbon economy.

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52. The climate-related transition plans shall be commensurate to the RFI's exposure to climate-related risks and shall reflect RFI's individual circumstances, including relevant industry-specific information. An RFI shall particularly be required to demonstrate the appropriateness of its transition plan to BOG on an ongoing basis.

53. RFIs shall also, where available, collect information on future climate exposure trajectory and transition plans of their significant counterparties to inform their own transition strategy, risk appetite and management of climate-related risks.

PART VI – IMPLEMENTATION ROADMAP

54. RFIs shall develop and submit to BOG a time bound plan approved by the RFI's Board on how they plan to implement this Directive herein by **end January 2025 in the case of banks and end June 2025 in the case of SDIs and NBFIs**. The plan is to be signed by both the Board Chair and Chief Executive Officer (CEO) of the RFI.

55. RFIs shall submit a quarterly report to the BOG on the progress of its implementation of the plans within 14 days after the end of every calendar quarter from **the quarter ending March 2025 in the case of banks and quarter ending September 2025 in the case of SDIs and NBFIs**.

Table 2: Roadmap for Implementation of the Climate-Related Risk Directive - 2024

Activity	Period/Dates Banks	Period/Dates SDIs & NBFIs
1. Sensitization of RFI's Boards, Chief Executive Officers and Senior Management	Quarter 4 2024	Quarter 2 2025
2. RFI's Key Management Personnel (KMP) sensitization on climate-related financial risk management	Quarter 4 2024	Quarter 2 2025
3. Submission of Board approved Implementation Plan by RFIs	January 2025	June 2025
4. Quarterly updates on implementation of Board approved plans	From March 2025	From September 2025
5. Disclosures of climate-related information to enhance transparency as per the expectation of the ISSB Standards on Climate-related disclosures (IFRS S2)	December 2026[37]	December 2027
6. First submission of credible climate-related transition plans	December 2026	December 2027

[37] BOG's timeline or the timeline issued by the Institute of Chartered Accountants, Ghana.

ANNEX I – NGFS REFERENCE CLIMATE SCENARIOS[38]

The reference climate scenarios of the NGFS provide a starting point to explore economic impacts and financial risks arising from climate change. Each scenario explores a different set of assumptions about how climate policy, emissions and temperatures evolve. Scenarios are characterised by their overall levels of physical and transition risks. These levels are based on assumptions relating to policy ambition, timing, coordination and technological developments. The NGFS scenarios fall into three categories: orderly, disorderly and "hot house world". Each category consists of two scenarios reflecting different levels of physical and transition risks. The categories and scenarios are as follows:

- **Orderly scenarios** assume that climate policies are introduced early and become gradually more stringent, allowing physical and transition risks to be subdued. The two scenarios are ***Net Zero 2050***, where global warming is limited to 1.5° Celsius (C) by that date through stringent climate policies, reaching net zero carbon dioxide (CO2) emissions around 2050, and ***Below 2°C***, where gradually more stringent policies provide a 67% chance of limiting global warming to below 2°C.

- **Disorderly scenarios** explore higher levels of transition risks due to policies being delayed or divergent across countries and sectors. The two reference scenarios are ***Divergent Net Zero***, in which net zero is achieved around 2050 but with higher costs due to divergent policies introduced across sectors to phase out fossil fuels, and ***Delayed Transition***, where annual emissions are assumed not to decrease before 2030 and, therefore, harsher policies are needed after 2030 to limit global warming to below 2°C.

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- **Hot house world scenarios** assume that global efforts are insufficient to halt global warming and lead to the most adverse economic impacts in the long run. These scenarios result in severe physical risks, including irreversible impacts like sea level rises, but low transition risk. The reference scenarios are ***Current Policies***, the most adverse of all, where only implemented policies are considered and median temperatures reach 4°C by 2100, and ***Nationally Determined Contributions***, which considers all pledged targets even if not yet supported by implemented policies. Physical risks would be lower than under Current Policies, but median temperatures would exceed 3°C by 2100.

Note: The NGFS scenarios are updated annually. In their third vintage, the scenarios were updated with new economic and climate data and policy commitments. In the fourth vintage for 2023, the NGFS aims to improve scenario design by increasing sectoral granularity and geographical coverage, introducing a short-term scenario, better representing physical risks, and updating the underlying data and models.

[38] BOG shall continue to monitor developments with regards to reference climate scenarios by the Basel Committee on Banking Supervision and any other relevant Standard-Setting Body and update the scenarios accordingly.

REFERENCE

1. Basel Committee on Banking Supervision (BCBS), Principles for the effective management and supervision of climate-related financial risks, June 2022.
2. Basel Committee on Banking Supervision (BCBS), Climate-related risk drivers and their transmission channels, April 2021.
3. Basel Committee on Banking Supervision (BCBS), Climate-related financial risks: a survey on current initiatives, April 2020.
4. Basel Committee on Banking Supervision (BCBS), Consultative Document, Disclosure of climate-related financial risks, November 2023
5. Network for Greening the Financial System (NGFS), Guide for Supervisors for Integrating climate-related and environmental risks, May 2020.
6. Network for Greening the Financial System (NGFS), Stocktake on Financial Institutions' Transition Plans and their Relevance to Micro-prudential Authorities, May 2023.
7. IFRS, Accompanying Guidance on Climate-related Disclosures, June 2023.
8. NGFS Climate Scenarios Portal (updated annually): https://www.ngfs.net/ngfs-scenarios-portal/
9. NGFS Transition Plans Package (April 2024): https://www.ngfs.net/en/ngfs-transition-plan-package
10. IFC's Climate Governance Progression Matrix & Tip Sheet: https://www.ifc.org/en/insights-reports/2023/publications-climate-governance-matrix-tip-sheet

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