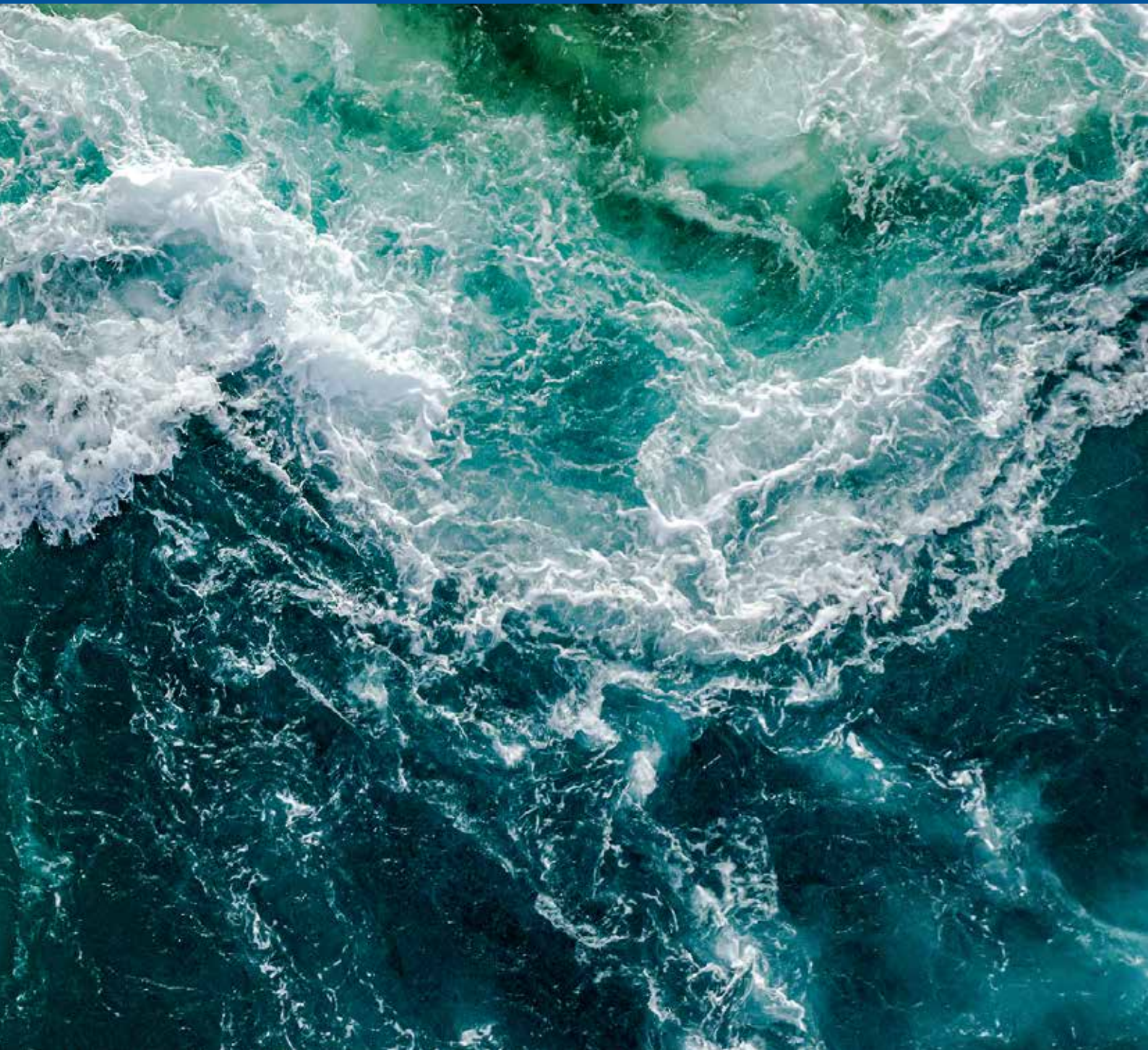




European Bank
for Reconstruction and Development

TASK FORCE **ON CLIMATE-RELATED** **FINANCIAL DISCLOSURES** **REPORT 2021**



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Acronyms

Abbreviation/acronym	Description
BAAC	Budget and Administrative Affairs Committee
CCG	Corporate climate governance
CCGAF	Corporate Climate Governance Advisory Facility
CO2e	Carbon dioxide equivalent
CRB	Climate resilience bond
CRG	Climate Risk Group
CRO	Chief Risk Officer
CSD	Climate Strategy and Delivery
EAD	Exposure at default
EIB	European Investment Bank
ESB	Environmental sustainability bond
ESP	Environmental and Social Policy
EU	European Union
FI	Financial institution
FOPC	Financial and Operations Policies Committee
GCAP	Green City Action Plan
GECA	Green Economy and Climate Action
GEFF	Green Economy Financing Facility
GET	Green Economy Transition
GHG	Greenhouse gas
GRI	Global Reporting Initiative
GTB	Green transition bond
ICA	Industry, Commerce and Agribusiness
LEED	Leaders in Energy and Environmental Design
LGD	Loss given default
MD	Managing Director
MDB	Multilateral development bank
NGFS	Network for Greening the Financial System
NPL	Non-performing loan
PCAF	Partnership for Carbon Accounting Financials
PD	Probability of default
PRI	Principles for Responsible Investment
RO	Resident Office
SCF	Strategic and Capital Framework
SEC	Securities and Exchange Commission
SLB	Sustainability-linked bond
SRI	Socially responsible investment
TCFD	Task Force on Climate-related Financial Disclosures
UNEP FI	United Nations Environment Programme Finance Initiative
VaR	Value at Risk

Foreword



As concerns about global climate change continue to grow and the international community works to limit these changes, the European Bank for Reconstruction and Development (EBRD) aims to be at the forefront of climate action, supporting the transition to a low-carbon world and adapting to the impacts of climate change in the economies where it operates. The Bank recognises that integrating climate considerations into its investment decisions, along with the transparent reporting of climate-related risk, is crucial to this commitment, as well as to its broader mandate to develop resilient, market-based economies.

Throughout 2021, the EBRD enhanced and expanded its procedures for identifying, assessing and managing climate-related risks in its operations, including:

- refining existing processes with regard to the financial impacts on its direct investments of both the low-carbon transition and physical impacts of climate change
- widening the scope of climate risk assessment to include indirect financing and exposures in the existing loan portfolio
- starting the process of embedding climate-related training for staff and clients
- carrying out a carbon transition risk stress test on its top 100 corporate clients.¹

These efforts support the Bank's goal of promoting systemic change in the economies where it operates and enhancing their economic resilience by aligning capital flows in a climate-smart way. To this end, in 2021, the Bank accelerated its progress on fully aligning its activities with the climate mitigation and adaptation goals of the Paris Agreement. Since June 2021, all new direct financing has been assessed for alignment with these goals. In addition, in 2021, the EBRD exceeded its 2025 target of 50 per cent Green Economy Transition (GET) financing for environmentally sustainable activities.

While the Bank made significant progress in identifying and disclosing climate-related risks in its operations, further work is required. Challenges include the limitations of greenhouse gas (GHG) emissions data and calculations; the variety and evolution of climate models, data and tools; and the quantification of the physical impacts of climate change.

The EBRD recognises that, in addition to risks, climate change and the transition to a low-carbon world presents opportunities to which the Bank is ready to respond. These include climate-smart investments, green capital-market financing, the EBRD Green Cities initiative, and supporting its clients, including via advisory services, to improve their own capacity to recognise and manage climate-related risks and opportunities.

The EBRD remains committed to further refining its approaches based on lessons learned and evolving best practices. The EBRD recognises the financial risk that climate change poses to its clients and will continue to integrate climate considerations into its short-, medium- and long-term strategies to help clients manage these risks and benefit from the opportunities associated with early carbon transition and climate adaptation.

Annemarie Straathof

Vice President, Risk and Compliance, and Chief Risk Officer
European Bank for Reconstruction and Development

¹ This stress test confirmed that the Bank should maintain its momentum to reduce exposure to industries at risk from the transition to a low-carbon future and to continue close cooperation with clients on their transition plans.

1. Introduction

In 2018, the EBRD became the first multilateral development bank to sign up to the Task Force on Climate-related Financial Disclosures (TCFD). The TCFD, established by the G20's Financial Stability Board, provides a framework for better understanding and promoting the disclosure of climate-related financial risks and opportunities. In recent years, climate-related risk has taken centre stage in many financial institutions around the world. The EBRD continues to recognise the relevance of the TCFD recommendations to its own mission and its ability to work with clients on opportunities to promote the transition to low-carbon and climate-resilient economies.

This report is the EBRD's third standalone disclosure using the TCFD framework as guidance. It marks a further step in its drive to appropriately disclose climate-related financial risk, with the objective of integrating TCFD-recommended disclosures into the Bank's annual *Financial Report* in future. It outlines the Bank's ambitions in relation to climate policy, its climate-related risk processes and the enhancements and developments in 2021 for identifying, assessing and managing climate-related risks. Mainstreaming climate considerations into investment decisions and disclosing these is a process that will take several iterations, particularly as practice evolves, standards are more firmly established and more data are collected.

In addition to its own internal actions, the Bank promotes the wider adoption of climate-related financial disclosure. In 2021, the EBRD remained an active observer of the Network of Central Banks and Supervisors for Greening the Financial System (known as the Network for Greening the Financial System, or NGFS) and participated in the United Nations Environment Programme Finance Initiative (UNEP FI) TCFD programme. The Bank also continues to lead a multilateral development bank (MDB) working-level group for the discussion and exchange of experience on implementing TCFD and climate risk-related processes to promote the adoption of best practices on climate issues. Furthermore, the EBRD established the Climate Corporate Governance Hub and Facility to support financial institutions and corporate clients in improving their internal governance to enhance the identification and management of climate considerations in their investment decisions and strategy.

Report overview

This report provides details on how the EBRD may be financially exposed to climate risks based on the two primary categories of climate-related risk highlighted by the TCFD:

- 1. Carbon transition risks** arise from the process of adjustment towards a low-carbon economy and are influenced by a range of factors, including developments in policy and regulation, the emergence of disruptive technologies or business models, shifting sentiment and societal preferences, and evolving legal interpretations. These developments may prompt a material change in operating costs or the value of assets and affect the credit exposure of banks and other lenders as the costs of the transition become apparent. A key aspect of carbon transition risk that the Bank considers is the potential financial effects of emissions cost on clients. The impact of this cost is based on their greenhouse gas (GHG) emissions.
- 2. Physical climate risks** arise from a changing climate, which may result in business disruptions and increased capital and operating costs to a wide range of economic activities. These risks can be acute (event-based hazards, such as storms or floods) or chronic (progressive shifts in weather patterns, such as increasing water stress). The Bank assesses the potential impact of 10 climate hazards on the financial performance of clients.

Carbon transition risk focuses on the financial impact of the low-carbon transformation on a company and is not directly related to the financial or non-financial impacts the company's activities may have on the climate or the environment. The Bank assesses the latter as part of the environmental risk review based on the EBRD's Environmental and Social Policy, which includes considerations of the client's GHG emissions impact on the environment. The EBRD's Sustainability Report provides further details on these climate and environmental impacts.²

In 2021, the TCFD updated its recommendations for the voluntary disclosure of such risks to guide companies and financial institutions in providing information to investors, lenders, insurers and other stakeholders. The

² See EBRD (2022a).

TCFD recommends grouping these disclosures into four pillars: (i) governance, (ii) strategy, (iii) risk management and (iv) metrics and targets. Table 1 provides a summary overview of EBRD's actions on these recommendations and the related content in this report.

Key messages from the report

- The EBRD expects its financial sustainability to be resilient to adverse climate scenarios, supported by the Bank's strongly capitalised balance sheet and shareholder support, as reflected in its AAA credit rating.
- Despite the challenges posed by rapidly evolving climate risk-assessment practices, mainstreaming climate risk across all operations is a priority for the Bank. It will continually assess the evolution of climate-risk best practices and refine the identification, assessment, management and disclosure of these risks.
- Through a wide array of engagements with clients and policymakers, the EBRD plays a central role in encouraging the low-carbon transition and greater climate resilience in the economies where it operates.

Table 1. Overview of EBRD actions based on TCFD recommendations

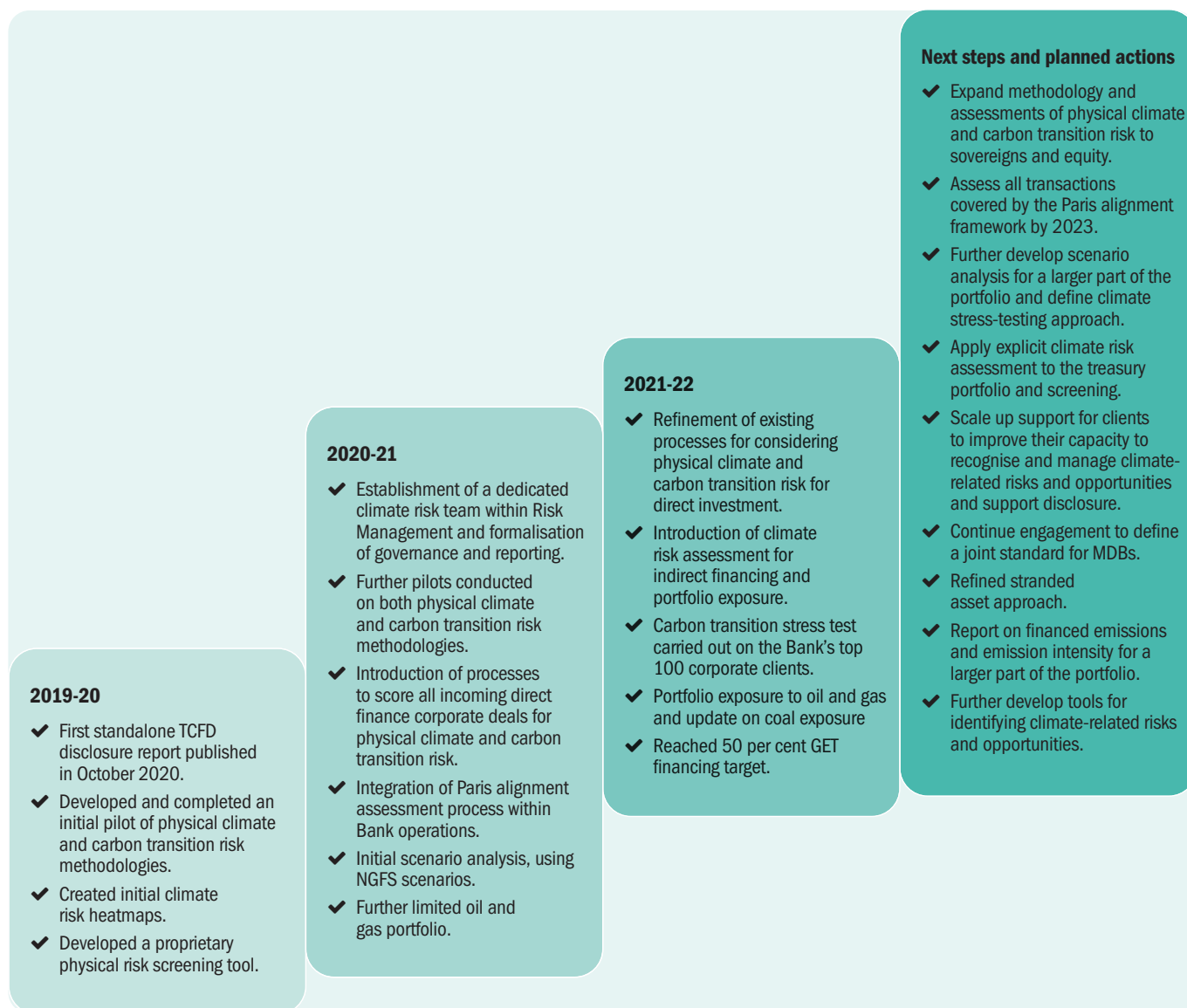
TCFD recommendation	EBRD TCFD report 2021	Report section	Status ³
Governance			
a. Describe the board's oversight of climate-related risks and opportunities.	The EBRD Board has overall responsibility for climate-related matters, has clearly defined roles and responsibilities and is updated regularly.	2.1	●
b. Describe management's role in assessing and managing climate-related risks and opportunities.	Accountability and coordination on climate-related matters are split between different management committees, and climate-related risks are integrated into the three lines of defence.	2.2	●
Strategy			
a. Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.	<p>Risk management:</p> <p>The EBRD has identified and analysed climate-related risks and financial impacts in the economies where it operates over different time horizons. EBRD Banking sectors in energy and manufacturing are primarily exposed to GHG pricing policies, disruptive technologies and supply-chain disruptions in the medium and long term. Countries in eastern Europe, the Caucasus and Central Asia are most exposed to carbon transition risk due to high fossil-fuel dependence, while south-eastern Europe is expected to experience more intense droughts and wildfires.</p> <p>Opportunities:</p> <p>Climate change features prominently in the EBRD's strategic opportunities, in financing climate-informed investments in the short and medium term. The overall long-term objective is to support the low-carbon and climate-resilient transition of the Bank's clients and investee economies. To this end, in 2021, the EBRD increased its work to support improvements to clients' corporate climate governance and the use of climate-related information.</p>	4.2- 4.3 3.2, 3.4	●
b. Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning.	<p>The Bank's Paris-aligned "use of proceeds" approach to financing the low-carbon transition is likely to result in fewer financed emissions and less exposure to transition risk over time. However, the EBRD's support for the transition of high-emitting sectors may result in temporary growth in exposure to some high-emitting clients as part of their decarbonisation, for example, through the addition of renewable sources of energy by such clients.</p> <p>The mainstreaming of the Green Economy Transition (GET) initiative throughout the Bank has allowed the EBRD to significantly boost its share of climate finance.</p>	3.2, 4.1- 4.3	●
c. Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	<p>See metrics and targets: The EBRD has carried out a carbon-transition stress test of its top 100 corporate clients using NGFS scenarios and concluded that the Bank has relatively little financial exposure to carbon transition risk.</p> <p>As part of its screening process, it also undertakes scenario analysis of certain deals to assess their financial resilience.</p>	5.3	●

³ Status is based on own judgement.

TCFD recommendation	EBRD TCFD report 2021	Report section	Status ³
Risk management			
a. Describe the organisation's processes for identifying and assessing climate-related risks.	In the second half of 2021 (and early 2022), the EBRD updated and refined its methodologies and procedures for identifying, assessing and managing climate-related risks and opportunities, based on its operational experience. The scope for climate risk assessment, including the screening of physical climate and carbon transition risk, widened in 2022 to include, in addition to direct debt, (i) exposures to financial institutions, (ii) sub-projects under the Risk-Sharing Framework, and (iii) deeper assessments of potential high climate risk in its portfolio.	4.1 - 4.6	●
b. Describe the organisation's processes for managing climate-related risks.	The climate-risk assessment process is further complemented by the EBRD's other green and climate-aligned initiatives, as well as the tracking and updating of sectors that are high emitters (coal and oil and gas). The EBRD has a strong capital base and takes on significant credit and market risk in pursuit of its development mandate, including climate-related risks.	4.1, 4.4, 4.5	●
c. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.	The EBRD identifies and manages climate-related risks through its existing risk-management framework, which specifically includes climate risk. The EBRD considers climate risk to be a cross-cutting risk that affects credit risk, in particular, but also other risk categories, such as reputational and operational risk.	4.1	●
Metrics and targets			
a. Disclose the metrics used by the organisation to assess climate-related risks and opportunities, in line with its strategy and risk-management process.	The EBRD's projects and portfolio metrics include, among other things: climate finance attribution, the scoring of carbon transition and physical climate risk at portfolio level, green bond issuance, and participation in and the tracking of exposure to highly emitting carbon-related assets, namely, coal. In 2022, the Bank will introduce a metric tracking the EBRD's exposure to clients with material exposure to upstream oil and gas.	5.1	●
b. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions and the related risks.	The EBRD plans to calculate and report on the carbon footprint (Scope 1, 2 and 3) and GHG emissions-intensity ratio of its own operations.	5.1	●
c. Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	The EBRD's key climate-related targets include: (i) the Paris alignment of Bank activities by end 2022, (ii) GET targets, including at least 50 per cent of financing to be green, (iii) achieving net GHG emission reductions of 25-40 million tonnes over the 2021-25 period through its projects (cumulative, ex ante), and (iv) the carbon neutrality of its internal emissions.	5.2	●
● In line ● In progress			



Figure 1. The EBRD's TCFD journey



2. Governance

2.1. Board oversight of climate-related risks and opportunities

The EBRD is owned by 71 countries, the European Union (EU) and the European Investment Bank (EIB). The **Board of Governors**, which represents the Bank's members, delegates the exercise of much of its authority to the **Board of Directors**, while retaining overall responsibility.

The **Board of Directors (the Board)** comprises 23 Directors and is chaired by the President of the Bank. It approves the EBRD's high-level policies, as well as its country, sectoral and thematic strategies. The Board has ultimate responsibility for the oversight of the EBRD's climate-related matters. The Board is also responsible for approving all new project operations, except where final approval has been delegated to Management. The documentation for every project submitted to the Board includes relevant information on financial risks associated with climate change.

2.1.1. Board committees

The Board of Directors has established three committees to assist with its work:

- The **Audit Committee** oversees all risk-related issues and reporting, including climate risk and the Bank's TCFD disclosure. The Audit Committee receives quarterly reports on the evolving risk profile of the Bank and conducts annual reviews of the risk management function. Quarterly reports cover the Bank's performance against its institutional

objectives, including the Bank's exposure to and management of climate-related risks from Q2 2021 with the intention of future semi-annual inclusion.

- The **Financial and Operations Policies Committee (FOPC)** is responsible for reviewing and exercising oversight of the EBRD's financial and operational policies, including those relating to climate issues. In 2021, the FOPC received two status updates on the Bank's work on alignment with the Paris Agreement, reviewed the EBRD's approach to fossil fuels and reviewed several individual projects.
- The **Budget and Administrative Affairs Committee** assists the Board of Directors in fulfilling its responsibilities in relation to approval and oversight of the Bank's budgetary, staff and administrative resources.

2.2. Management's role and management committees

The **President** is elected by the Board of Governors and is the legal representative and chief of staff of the Bank. Under the guidance of the Board of Directors, the President conducts the day-to-day business of the EBRD. Management's prioritisation and delivery of business activities are guided by the Bank's strategies and policies.

Listed in Table 2 are the committees that directly advised the President or a member of the Bank's Executive Committee on the management of climate-related risks and opportunities in 2021.

Table 2: **EBRD management committees relevant to climate-related risks and opportunities**

Management committee	Chair	Purpose	Meeting frequency
Executive Committee	President	Advises the President on all aspects of Bank-wide strategic significance, including issues related to climate risks and financially sound climate-related business opportunities (for example, the GET strategy)	Fortnightly
Operations Committee	First Vice President and Head of Client Services Group	Considers matters related to the Bank's projects, including climate risks and opportunities on an individual project basis	Weekly
Strategy and Policy Committee	Vice President, Policy and Partnerships	Considers matters that fall within the overall responsibility of the Vice President, Policy and Partnerships and certain matters within the responsibility of the Chief Economist; focuses primarily on transition, strategy and policy work, country, industry, sector and thematic strategies and policy-related research, including climate-related matters	Fortnightly
Operations Committee	First Vice President and Head of Client Services Group	Responsible for matters related to Bank-wide risks, including credit and operational risk, with associated follow-up actions; oversees risk aspects of the EBRD's portfolios, approves risk policies and risk reports and considers new products; reviews the Bank's climate risk principles, approves the TCFD report and other pertinent climate risk issues throughout the year	Weekly

2.2.1. “Three lines of defence” model for managing climate-related risks

Climate-related risks are managed the same way as other risks. In its day-to-day operations, the EBRD manages risks, including climate-related risks, using its “three lines of defence” model (see Figure 2). Each line of defence is independent, and this model provides greater objectivity of assessment, review and oversight of investment decisions and risk management. The model encompasses:

- First line of defence: The shared responsibility of all staff members, particularly the **Client Services Group**, to identify and manage climate-related risks and opportunities.
- Second line of defence: Independent, empowered and appropriately resourced functions led by **Risk Management** and the **Environment and Sustainability Department**, with control of and responsibility for matters falling within their respective areas of competence. This includes final accountability for the determination of climate-related risks.

- Third line of defence: **The Internal Audit Department**, which independently assesses the effectiveness of the processes within the first and second lines of defence. The work of the Internal Audit Department is complemented by that of the **Evaluation Department**, which independently evaluates the performance of the Bank against its mission and development objectives.

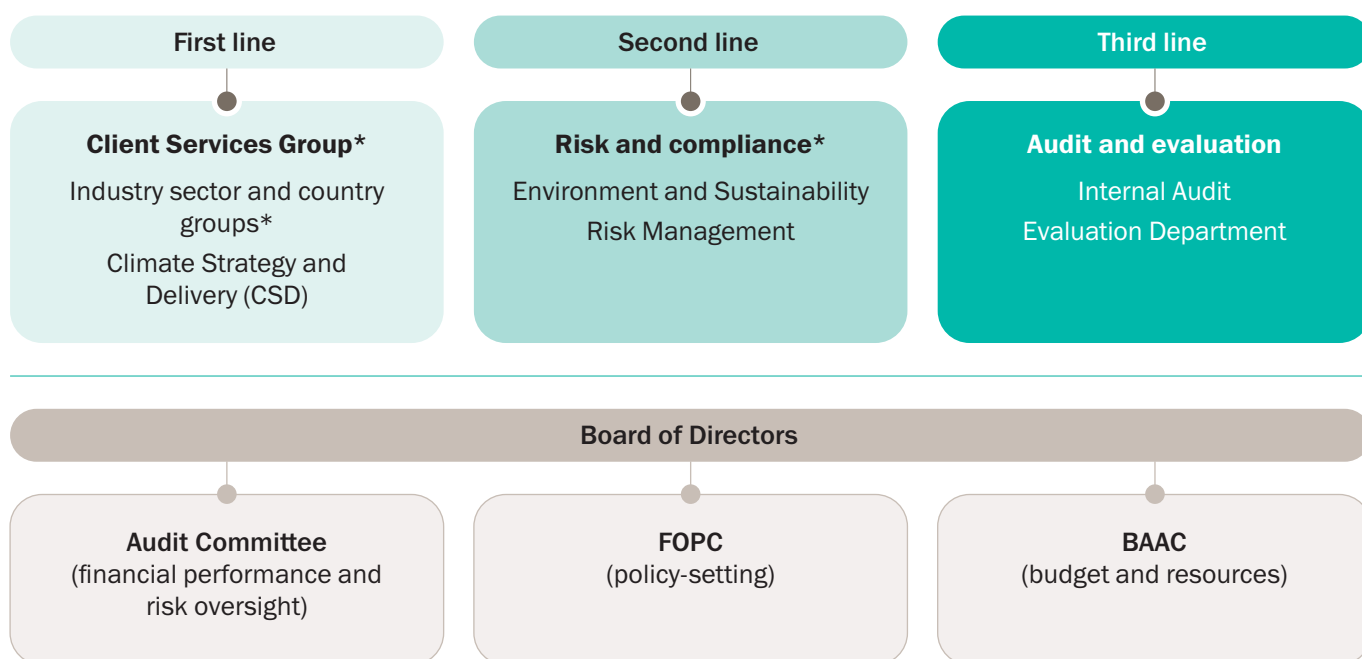
2.2.2. Coordinating the management of climate-related risks

The Bank’s organisational arrangements are designed to facilitate the coordinated management of climate-related risks.

First line of defence

Within the first line of defence, the **Climate Strategy and Delivery (CSD)** team⁴ is responsible for providing operational support for all frontline activities involving green strategy and policy engagement. This fulfils the Bank’s vision of centralising the climate agenda work of its frontline activities. CSD works across Banking sector groups to support project origination, integrate mitigants

Figure 2. “Three lines of defence” model



*The EBRD’s Banking sector groups include Financial Institutions, Sustainable Infrastructure, and Industry, Commerce and Agribusiness (ICA).

⁴ Formerly known as the Green Economy and Climate Action (GECA) team.

into project designs, provide technical assistance and foster policy dialogue with respect to climate-related business operations under the Bank’s GET approach. CSD is also responsible for determining the alignment of individual projects with the Bank’s climate objectives and the economic assessment of projects with significant GHG emissions.

Second line of defence

Within the second line of defence, the **Vice President, Risk and Compliance and Chief Risk Officer (CRO)** has overall accountability for the formulation, communication and implementation of the EBRD’s risk management strategy and policies, including for climate risk. The Vice President/CRO reports to the President, is a member of several management committees, including the Executive Committee, and engages directly with the Board of Directors. The Vice President/CRO has combined responsibility for the EBRD’s Environment and Sustainability Department and the Risk Management Department and, hence, for all climate-related risks in the second line of defence. This includes accountability for the final determination of Paris alignment and for clients’ level of climate risk (see Figure 3).

In March 2021, Risk Management established a dedicated Climate Risk team to manage the systematic integration of climate risk across the Bank. It acts as the coordinating function for the EBRD’s financial assessment of climate risks. This includes developing climate risk methodologies, testing their application, recalibrating them and overseeing their implementation across the Bank’s projects. In addition, the Climate Risk

team drives and controls the requisite data collection and analysis and establishes new procedures for project screening. These are the early stages of a process that will be revised periodically due to the evolving nature of climate risks and disclosure requirements. The Head of the Climate Risk team reports to the Managing Director, Risk Management.

The Environment and Sustainability Department is accountable, in particular, for:

- **Paris alignment confirmation** and the final confirmation of project alignment with the goals of the Paris Agreement for both climate change mitigation and adaptation
- **GET finance attribution confirmation** – final verification of green (GET) finance attribution, based on the contribution a project makes to climate action and other environmental benefits
- **Environmental and social impacts** – assessment and risk management of the broader environmental and social impacts of all investment projects
- Physical climate risk assessments – validation and final verification of physical climate risk assessments for counterparties.

The Risk Management Department is responsible for:

- **Climate risk methodologies** – the independent design of climate risk methodologies, as well as scoring, reviewing and overseeing the assessment process

Figure 3. Management coordination of Paris alignment and climate risk management in the second line of defence



- **Climate risk analysis** – independent challenge, review and overall confirmation of the acceptability of EBRD clients' climate-related financial risk
- **Portfolio-wide reviews and stress testing** – assessment and proposal of ways to manage climate risks arising from correlations and concentrations in the banking portfolio, along with climate scenario analyses and stress-testing exercises.

The Bank formed a **Climate Risk Group** in 2019 as an important cross-bank coordination group for the dissemination of information and the fostering of debate on climate-related financial risks. The Group meets periodically, typically quarterly, and is chaired by the **Managing Director, Risk Management**.

2.2.3. Climate-related remuneration and rewards policy

Board

The remuneration of EBRD Board Directors, as representatives of the Bank's shareholder governments and organisations, is fixed annually and not linked to the fulfilment of specific organisational objectives or to corporate climate-related performance.

Management staff

The Bank's 50 per cent green finance annual investment target by end of 2025 forms part of the departmental scorecard that determines total compensation for core staff. To incentivise EBRD staff to achieve the Bank's annual objectives, including climate-related objectives, all Banking-related teams, as well as CSD, have specific objectives when it comes to fulfilling the Bank's GET financing target, which forms an integral part of their remuneration scorecard requirements.

Furthermore, senior Risk Management leaders have specific objectives when it comes to delivering TCFD reporting and redesigning processes to assess climate risk in a systematic way, and this forms part of their remuneration. This requirement cascades down through the Risk Management Department to ensure climate risk is at the forefront of considerations when critically assessing projects.



3. Strategy

3.1. Overview of the EBRD's climate-related strategies

The promotion of environmental sustainability has been at the core of the EBRD's mission since the Bank was created in 1991. Indeed, environmental sustainability is enshrined in the Bank's founding document, the Agreement Establishing the EBRD. Article 2.1(vii) of the Agreement explicitly mandates the EBRD "to promote in the full range of its activities environmentally sound and sustainable development".⁵

The Bank's strategies relevant to climate considerations include:

1. The **Strategic and Capital Framework (SCF)**, the EBRD's primary planning instrument, approved every five years by the Board of Governors. At the EBRD's 2020 Annual Meeting, the EBRD's shareholders unanimously approved the SCF 2021-25, which includes **supporting the transition to a green, low-carbon economy** as one of its three strategic themes.
2. The **GET** approach, launched in 2015 and reapproved in 2020 to cover 2021-25, sets out the EBRD's objectives, particularly in relation to climate and environmental opportunities. The main **targets are for green finance to account for more than 50 per cent of the Bank's annual investment business** and for the Bank to achieve net annual aggregate GHG emission reductions of at least 25 million tonnes by the end of 2025.
3. At the EBRD's 2021 Annual Meeting, the EBRD Board of Governors resolved that **all EBRD activities** should be **fully aligned with the goals of the Paris Agreement by the end of 2022**, thus accelerating the Bank's support for ambitious low-carbon and climate-resilient pathways in the economies where it operates.
4. **Country strategies** cover individual economies in which the EBRD invests and are revised every five years according to country-specific timetables. They are designed to identify areas where the EBRD can assess, **manage and deliver on its climate-related objectives**, taking into account the economic context,

as well as the Bank's mandate and risk appetite. As of year-end 2021, 32 out of 36 country strategies addressed climate risk and/or green economy transition in at least one of their strategic priorities.

5. **Industry sector strategies** are revised every five years. Of particular relevance is the Energy Sector Strategy 2019-23, which was clarified in 2021 to further limit the scope of the Bank's engagement in fossil fuels.⁶ Other relevant, Board-approved strategies include: (i) the Agribusiness Sector Strategy 2019-23, approved in 2019;⁷ (ii) the Transport Sector Strategy 2019-24, approved in 2019;⁸ (iii) the Municipal and Environmental Infrastructure Sector Strategy, approved in 2019;⁹ (iv) the Property and Tourism Sector Strategy 2020-24, approved in 2019;¹⁰ and (v) the Financial Sector Strategy (2021-25) approved in 2021.¹¹
6. The EBRD **engages with stakeholders to support policies** that are in line with its sustainability objectives. In 2021, the Bank's outcomes from these engagements included:
 - a. the commitment of €2 billion in new funding to double current headroom for the **EBRD Green Cities** programme over the next two years
 - b. the approval of €500 million for the **Green Economy Financing Facility (GEFF) Türkiye**, which facilitates the provision of debt financing to participating financial institutions for on-lending for sustainable energy, resource efficiency and climate resilience
 - c. the creation and launch of two digital apps to guide **financial intermediary clients** through the environmental, social and governance (ESG) due diligence process
 - d. the development and launch of ESG reporting guidelines for the Warsaw Stock Exchange to help companies report non-financial information in line with international standards and best practices¹²

⁵ See EBRD (1990).

⁶ See EBRD (2018a).

⁷ See EBRD (2019c).

⁸ See EBRD (2019d).

⁹ See EBRD (2019e).

¹⁰ See EBRD (2019f).

¹¹ See EBRD (2021).

¹² See Warsaw Stock Exchange (2021).

- e. the presentation together with other MDBs at the COP26 climate conference in Glasgow of five **High-Level Principles for a Just Transition** to ensure the fairness of the benefits of a green economy transition¹³
- f. becoming a supporter of the **Global Methane Pledge**¹⁴
- g. the announcement of plans to double its **mobilisation of private-sector climate finance** by 2025 to support the low-carbon transition in the economies in which it operates.

Box 1. Focus on the EBRD's core climate-related strategies

Green Economy Transition (GET)

The EBRD's GET initiative operationalises the financing of climate and environmentally sustainable activities through a systematic assessment of these climate-related opportunities by:

1. assessing individual projects for their contribution towards a greener economy
2. enhancing policy engagement for the development of long-term, low-carbon strategies and the greening of financial systems, and
3. scaling up investments across a set of priority environmental, climate mitigation and resilience (adaptation) themes, including greening the financial sector, energy systems, industrial decarbonisation, climate-adapted cities and infrastructure, sustainable food systems, green buildings and sustainable connectivity.

The Bank also works closely with a range of donors and climate finance mechanisms, such as the Climate Investment Funds, the European Union (EU), the Global Environment Facility and the Green Climate Fund (GCF), to mobilise climate finance for its clients.¹⁵

In 2021, GET financing totalled 51 per cent of all EBRD investment, exceeding 50 per cent for the first time in the Bank's history and demonstrating its commitment to financing climate opportunities in the economies where it invests.

Alignment with the Paris Agreement

The EBRD's Paris alignment framework, based on an approach developed together with other MDBs, comprises six building blocks incorporating all aspects of the Paris Agreement relevant to MDB activities: climate mitigation, climate resilience (adaptation), climate finance and policy support for clients, reporting and institutional policies. The Bank's approach to Paris alignment centres on ensuring that each project meets the conditions on climate change mitigation and adaptation in Table 3. The Bank's methodology for assessing direct and indirect investment were subject to public consultation.

Table 3. Paris alignment mitigation and adaptation goals

Climate change mitigation goals	Climate change adaptation (climate resilience) goals
<ul style="list-style-type: none"> • Consistency with long-term, low-carbon development, in alignment with the Paris Agreement mitigation goals • Low likelihood of carbon lock-in, so that the project does not enable the continued operation of an emissions-intensive asset when economically preferable, lower-carbon options could replace it* 	<ul style="list-style-type: none"> • Physical climate risks have been identified and addressed • Client activities do not undermine climate resilience within the project's operational context

* A stranded asset approach is being tested as a complementary approach, alongside reputational risk considerations.

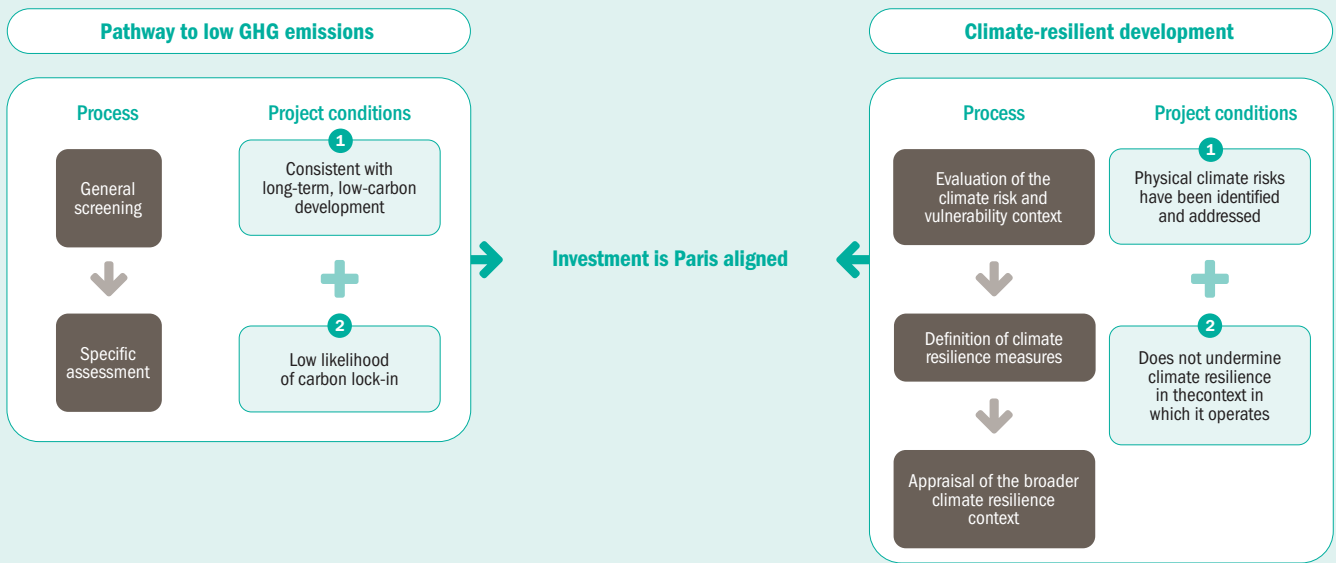
A project must meet each of these conditions to be deemed Paris aligned. For some projects, this assessment is straightforward (projects with a limited carbon footprint). Others (entailing significant GHG emissions or exposure to material physical climate risks) will require detailed analysis, drawing on complementary analytical tools and evidence, which will be further developed over time. These include a review against Nationally Determined Contributions and the application of carbon lock-in tests. For projects with significant GHG emissions, the Bank also conducts an economic viability assessment using a shadow carbon price (see Box 3).

¹³ See AfDB, ADB, AIIB, EBRD, EIB, IDB, IsDB and NDB (2021).

¹⁴ The Global Methane Pledge is a joint EU-US initiative aimed at reducing global anthropogenic methane emissions from all sectors by at least 30 per cent (from 2020 levels) by 2030.

¹⁵ For more details about the Bank's GET approach, see <https://www.ebrd.com/what-we-do/get.html>.

Figure 4. Methodology to determine the Paris alignment of EBRD investments



From June 2021, all direct finance projects require a determination in relation to the climate mitigation and climate resilience goals of the Paris Agreement. In 2022, the EBRD will produce Paris alignment methodologies for all other Bank financing, including indirect finance through financial intermediaries. The Bank is on track to complete the implementation of all six building blocks of the Paris alignment approach by the end of 2022. Although the determination of Paris alignment of projects does not necessarily imply that the transactions have low climate-related financial risk, the Paris alignment strategy is likely to contribute to a lower level of climate-related financial risk and higher level of climate-related financial opportunities for the Bank overall.



3.2. Strategic priorities in the short, medium and long term

Table 4 summarises the EBRD’s climate-related strategies and commitments, with specific objectives over short-, medium- and long-term time horizons. As

detailed in section 4.2, time horizons are defined as short term (less than one year), medium term (one to seven years) and long term (more than seven years). While some climate commitments are immediate priorities with specific near-term targets, other strategic priorities are continuous in their implementation over time.

Table 4. Strategic priorities over different time horizons

Strategy/commitment	Objective	Time horizon	Potential impact	Potential impact
Paris alignment	All EBRD activities aligned with the goals of the Paris Agreement by the end of 2022	Short	Temporary increase in balance-sheet volumes from some high-emitting clients as the EBRD finances their transition to low-carbon alternatives Reduced emissions and expenditures from the Bank’s own consumption of electricity, gas, travel, print paper and water	Key priority
GET finance Climate-related finance mobilisation	Green finance to account for more than 50 per cent of the Bank’s annual investment business by 2025 Achieve net annual aggregate GHG emission reductions of at least 25 million tonnes by the end of the five-year period (2021-25) Double the mobilisation of private-sector climate-related finance by 2025 to support the Bank’s investee economies in their low-carbon transition	Short- medium	Shift in balance-sheet focus to lower-emitting sectors over time and support for transition projects and activities following low-carbon strategies and initiatives Increased finance for private-sector climate finance	Key priority
Climate risk culture	Increased awareness and learning to fully embed a climate risk culture across the Bank Complement existing project-focused assessments of climate risk with counterparty-focused risk assessment, in line with the overall risk process Widespread ownership of climate risk responsibility	Medium	Increased focus on training and climate-smart development More effective climate impact of the EBRD’s loans and investments on clients Better structured and well-managed climate risk in investments	Continuous
Country strategies	Inclusion of climate risk considerations Encourage and finance low-carbon transition in economies where the Bank operates	Medium	Reduction in the climate impact and improvement in the climate resilience of the Bank’s clients More resilient balance sheets, with the ability to sustain carbon transition risk and mitigate expected material physical climate hazards	Continuous
Green investment initiatives	Maintain a leading role in green investment initiatives, declarations and commitments (including Paris alignment, TCFD, carbon neutrality, the Green Bond Principles, Global Reporting Initiative (GRI), Principles for Responsible Investment (PRI) and others)	Short-medium	Driver of market change and acceleration of transition to low-carbon and climate-resilient economies.	Continuous
Support transformation via corporate climate governance (CCG)	Support the transition and decarbonisation activities of clients through CCG support Transform partner banks to engage in climate risk management	Long	Gradual transformation of the corporate sector to identify, manage and assess climate-related risks Partner banks allocate capital in a climate-informed way, resulting in lower climate-related financial and economic impacts	Continuous

3.3. Climate-related opportunities pursued by the Bank

Climate change and the global response to it may, in addition to posing risks, present opportunities for some firms under certain conditions. The TCFD recommends the assessment and, where appropriate, disclosure of these financially sound climate-related opportunities, together with climate-related risks identified over different time horizons.

The Bank identifies and delivers identified opportunities over different time horizons as an important aspect of the EBRD's overall climate change operations, as detailed in its GET approach.

The EBRD explores two types of climate-related opportunity:

1. **project-level opportunities** to finance the transition to a low-carbon and climate-resilient economy, allowing firms to respond to growing demand for low-carbon and climate-adapted products and services, giving them a comparative advantage over competitors
2. **client-level opportunities** to support improvements in the way that businesses, financial institutions and other market participants use climate-related information in internal business processes and decision making, such as risk management, capital allocation and business strategy. These can help EBRD clients to adjust their business models and wider market behaviour to internalise climate change objectives and improve their long-term financial performance in a changing climate.

The mainstreaming of the EBRD's green finance initiative throughout the Bank's business, strategy and financial planning has allowed the Bank to significantly increase its share of climate financing opportunities. From its Sustainable Energy Initiative (2006) to the GET approach (2016), the EBRD has approved more than €43 billion in green investments through more than 2,300 green projects, leading to an annual CO₂ emission reduction of 112 million tonnes. This includes €23 billion invested through more than 1,200 projects under the GET approach in 2016-21, €2 billion of which was invested in dedicated climate-resilience projects.

The GET approach has been effective in delivering climate-related opportunities, from small-scale energy-efficiency investments in small and medium-

sized enterprises, financed through local financial intermediaries, to large-scale renewable energy projects. These investments play a particularly important role in supporting the development of the EBRD regions, which include some of the least energy-efficient economies in the world and, at the same time, some of the best potential locations for solar and wind energy.

From early 2022, a dedicated **Corporate Climate Governance Client Advisory Facility (CCGAF)** will help financial and non-financial companies to strengthen their disclosure practices and to increase their climate risk assessments. CCG recognises the need to assess climate-related risks and opportunities as part of business and financial planning. The support includes aspects such as improving companies' climate governance and the disclosure of climate-related risks and opportunities; developing and adopting CCG action plans and low-carbon pathways; and building capacity for climate risk assessments and scenario analyses. This effort will focus on improving EBRD clients' internal climate risk management and climate strategies to enhance their overall financial stability over time.

Specific financing initiatives related to climate opportunities

EBRD Green Cities

EBRD Green Cities provides an investment framework of more than €5 billion of Bank and donor support for cities in the EBRD regions in the form of targeted investment, policy actions and capacity building to address cities' transition to green, low-carbon and resilient futures.

Launched in 2016, EBRD Green Cities consists of four main components: (i) the delivery of strategy and policy support through **Green City Action Plans (GCAPs)**; (ii) the facilitation and encouragement of **Green Cities infrastructure investments**; (iii) capacity building, technical assistance and knowledge sharing for city administrators; and (iv) support in accessing green finance.

The Board is updated regularly on the Framework's progress through a review of projects that require Board approval.¹⁶ Updates on the Framework's progress were provided to the Board in October 2020 and November 2021.

¹⁶ Board approval is required for loans exceeding €25 million and sub-projects categorised as 'A' under the 2019 Environmental and Social Policy (ESP). See EBRD (2019a).

Financial intermediaries

The EBRD views the financial sector as a key partner on climate action due to its unique role of capital allocation to all other economic sectors. To drive transformative and systemic economic change in an economy, therefore, the Bank is helping financial institutions and financial-market regulators in the economies where it operates to integrate financial considerations associated with climate change in a comprehensive way. The EBRD's Financial Sector Strategy (2021-25) prioritises working with these financial institutions on their climate risk management to strengthen the financial sector.¹⁷

Based on a Q1 2021 survey of partner financial institutions, the EBRD is engaging at both the institutional and systemic level to identify, assess and manage climate-related financial risk. At the institutional level, the EBRD will support partner financial institutions in integrating climate considerations into their financial decision-making through technical cooperation and the new CCG Hub. The CCG Hub promotes institutional capacity-building partnerships to support financial intermediary clients on the path to climate risk integration and in their transition plans. At a systemic level, the EBRD engages with financial-sector regulators on policies that will support the integration and disclosure of climate considerations for financial decisions.

Capital market development

EBRD issuance of labelled bonds

The EBRD strives for a high standard of sustainable development in all of its operations, as reflected in its

mandate, its Environmental and Social Policy (ESP), its Sustainability Statement and its commitment to aligning all of its financial flows with the Paris Agreement. Hence, all of its bonds may be considered socially responsible investments (SRIs). In response to demand from SRI-focused investors, in 2010, the Bank began issuing green bonds, aligned with the Green Bond Principles. EBRD green bonds are linked to earmarked portfolios of eligible projects allocated, tracked and reported. The EBRD has been a member of the Green Bond Principles since its inception in 2014; it currently serves on the Executive Committee and in various working groups.

The EBRD issues three different types of green bond: environmental sustainable bonds (ESBs), climate resilience bonds (CRBs) and green transition bonds. All of the Bank's green bonds are underpinned by projects that have been scrutinised by the Environment and Sustainability Department for alignment with the framework established for each green bond programme. New eligible projects must not only comply with the relevant framework, but also meet specific hurdles in the Bank's GET approach, as well as strict selection criteria for one of the three types of green bond. In addition, all eligible projects are reassessed on a quarterly basis to ensure continued compliance with the relevant selection criteria. Any project subsequently deemed ineligible is removed.

Information relating to climate-related opportunities and targets can be found in section 5 on metrics and targets.



¹⁷ See EBRD (2021).

4. Risk management

4.1. Integration of climate risk management into the existing risk management processes and frameworks

The EBRD systematically assesses the risks associated with each investment, both at the initial investment review stage and throughout the life of the investment. An investment typically faces a range of risks, which are identified, prioritised and mitigated as far as possible. The residual risk (after mitigation measures) is then quantified through two complementary metrics: (i) the probability of default (PD) and (ii) loss given default (LGD). Taken together, these metrics enable the Bank to quantify the risk and expected loss on each project. This existing risk assessment process covers all risks, including climate-related risks, so they are already included in the Bank's standard risk assessment, although not yet included explicitly in PD and LGD estimates. While this process quantifies the overall risk, it does not quantify separately the individual component risks.

Because of its strong capitalisation, the EBRD assumes significant credit and market risk in pursuit of its development mandate, including climate-related risks. However, the Bank still makes considerable efforts to manage those risks, both at individual transaction and portfolio level.

At **individual transaction level**, climate-related risks in debt investments are normally mitigated by a combination of:

- **a conservative capital structure**, with sufficient equity or quasi-equity to absorb both physical and transition climate change-related financial impacts
- **tenors** that take into account the expected useful lifetime of the underlying asset(s), including potential obsolescence due to technological or regulatory change associated with transition
- **collateral or guarantees** that could offer an alternative repayment route should cash flows generated by the project be insufficient to repay the debt
- financial and operational **covenants**, as well as associated reporting obligations, including environmental and social action plans and climate risk mitigation action plans where required

- **key contracts** to facilitate lender-led restructuring where cash flows are insufficient to repay scheduled borrowings.

In addition, the EBRD manages exposure to individual transactions and clients by mobilising private-sector co-financiers to share in the financing. The Bank also relies on its network of Resident Offices to provide local oversight on transactions in those economies where the Bank invests.

Risk Management reviews all exposures within the Banking portfolio on at least an annual basis. The main objective of these reviews is to ascertain whether there have been changes in the risk profile and whether closer engagement with the client is required to support the project and protect the related repayment stream. Risk Management reports to Senior Management and the Board of Directors on the full portfolio on a quarterly basis, as mentioned in section 2.1.

At **the portfolio level**, the Bank also mitigates and manages climate-related risks by:

- abstaining from directly financing **industry sectors that are particularly vulnerable to carbon transition risk**, such as coal mining, coal-fired electricity generation, upstream oil exploration and upstream oil development projects, as guided by the EBRD's Energy Sector Strategy 2019-23 and clarified in 2021
- adopting **portfolio limits**, including country and industry sector-specific limits, to reduce the impact of adverse external events on its capital
- conducting regular stress-testing exercises to identify emerging risks and to enable appropriate risk-mitigating actions.

The EBRD also conducts an annual review of progress on green transition in all of the economies where it invests. The indicators and associated assessment of the remaining gaps then inform country and industry sector strategies, as well as planned Bank-wide stress tests and ad hoc sub-portfolio stress tests pursued in the course of regular risk management activities and as part of the annual business and financial planning cycle. The Bank recognises that any resulting risk mitigation is constrained by the geographical limitations of the EBRD's operations.

Integration of climate risk into the Bank’s risk management framework

The EBRD identifies and manages climate-related risks through its existing risk management framework, underpinned by its independent “second line of defence” control, as mentioned in section 2.2. The core elements of the Bank’s risk management framework include processes for assessing and managing credit risk, market risk, liquidity risk and operational risk, as detailed in the EBRD’s *Financial Report 2021*.¹⁸

The Bank considers climate risk to be a cross-cutting risk that impacts credit risk, in particular, but also other risk categories, including reputational and operational risk. In its own financing operations, the EBRD is focused on building internal capacity for integrating climate risk across the different risk types into the overall risk management framework through ongoing staff engagement, training and support for climate-informed decision-making. The links between these types of risk and climate risk are summarised in Table 5.

Table 5: **Impact of climate risk on the EBRD’s existing risk management framework**

Risk type	Impact from climate risk	Response
Credit risk Potential loss to a portfolio that could result from either the default of a counterparty or the deterioration of its creditworthiness	<ul style="list-style-type: none"> Client or project assets could become stranded in the event of a disorderly transition Client financial performance could deteriorate as a result of changing demand for its products/services Client operations could be impacted by damages resulting from physical climate events or changing weather patterns 	<ul style="list-style-type: none"> The EBRD identifies, assesses and manages climate-related risks in the process of due diligence, preparation and structuring of individual transactions. It then considers how to mitigate climate risk through climate-resilient investments or structures. Risk Management is involved as part of standard due diligence in reviewing and challenging where appropriate. The Bank systematically screens the climate risk of its clients. Exposure limits are defined and reviewed by Treasury Credit Risk Management, based on the counterparty’s probability of default.
Market risk¹⁹ Potential loss resulting from adverse market movements, primarily driven by: <ul style="list-style-type: none"> (i) interest-rate risk (ii) foreign-exchange risk (iii) equity risk (iv) commodity price risk 	<ul style="list-style-type: none"> Sudden fluctuations in the demand for and supply of financial instruments or changes in rates and/or commodity indices as a result of physical climate events or disruptive transition 	<ul style="list-style-type: none"> The Bank seeks to maintain very low residual market risk on its banking loan and guarantee transactions, as well as its Treasury assets and liabilities. This is achieved, among other things, by hedging foreign-exchange and interest-rate risk. The limits on the maximum amount of market risk accepted in this context are set out in the Bank’s Treasury Authority and Liquidity Policy. In the event of climate-related market turbulence, the Bank can either further hedge its Treasury exposure or carry the increased risk temporarily, thanks to the moderate base level. The Treasury portfolio is monitored using a value-at-risk (VaR) model. Risk-factor scenarios are calibrated on recent market-data time series and any implicit climate risks affecting market observables are taken into account. The Bank’s equity portfolio is subject to equity and foreign-exchange risk. The methodology used is independent of that for climate risk, but any risks affecting equity index observables (including climate-related risks) are taken into account.
Reputational risk Risks associated with the perception of various stakeholders, including debt and equity investors, customers, and external groups of the Bank’s commitment to and reliability on achieving its stated goals	<ul style="list-style-type: none"> Bank operations may be impacted by reputational risk based on conformity with the climate-related pledges the EBRD has made 	<ul style="list-style-type: none"> The Bank assesses transactions that have the potential to create reputational risk, including those related to climate change. Transactions are reviewed for consistency with the Bank’s goals of Paris alignment and climate risk management. Fossil-fuel transactions, in particular, are reviewed against the Bank’s Fossil Fuel Approach, the Energy Sector Strategy exclusions, their alignment with the goals of the Paris Agreement²⁰ and for risk that financing assets may become stranded, to assess potential reputational risk.

¹⁸ See EBRD (2022c).

¹⁹ While there are other market risks (such as currency and commodity prices), the above are relevant to all transactions.

²⁰ Lower-emission substitutions, for example.

The Bank's approach to climate-related risk is detailed in its climate risk methodologies and procedures. In 2021, the Bank refined its methodologies and procedures for assessing and managing climate-related risks and opportunities, building on lessons learned since the implementation of the nascent systematic scoring system for the physical and carbon transition risk of directly financed projects from the first half of 2021. It made further refinements in 2022.

In 2021, the Bank also started working to incorporate climate risk into the Bank's Risk Appetite Statement. The Risk Committee approved its inclusion in 2022. This statement is updated annually and reviewed periodically by the Audit Committee.

Box 2. Note on materiality

Materiality is an important concept in climate-related financial disclosure, requiring detailed deliberation to determine which effects, positive and negative, should be substantial considerations in investment decisions. The Bank has been monitoring regulatory developments in this space, such as the EU's concept of "double materiality" and new proposals by the United States Securities and Exchange Commission (SEC), among others, to enhance its approach.

Disclosures in this report include a range of topics that the EBRD deems relevant and material to the Bank's strategy, its shareholders and investee economies.

Contrary to "materiality" in other financial disclosures, the EBRD acknowledges the evolving nature of climate-related financial disclosure and uses longer time horizons with a greater number of assumptions to determine material climate-related risks to the Bank.

At this stage, climate-related risks that are flagged as potentially having higher carbon transition and/or physical climate risk through the screening process (outlined in section 4.4) are prioritised for further analysis and scrutiny.

These methodologies, assessment approaches and related data sources continue to be developed and are likely to change over time, meaning that the statements and disclosures made in this report may be revised accordingly in future.

4.2. Climate risk time-horizon considerations

Time horizons are an important factor in understanding and managing climate risk, as these risks change non-linearly over time. For carbon transition risk, considerations with regard to the timing of regulatory ambition to lower emissions are a useful component of assessment. For physical climate risks, the occurrence of an acute event is more likely over a longer time period and, therefore, entails more financial risk. To support the long-term stability of the Bank and the achievement of its development goals, climate strategies and risk management approaches must incorporate all relevant time horizons as part of financial decisions.

The time horizons used by the Bank for the purposes of assessing climate risk take into account the useful life of the Bank's assets and are, therefore, based on the breakdown of the Bank's portfolio by remaining tenor. The time horizons the EBRD uses to assess climate-related financial risk are consistent with those it uses for other financial risks and broadly in line with industry practices. These time horizons are listed in Table 6, which also provides the percentage of the Banks' investment portfolio in each, in terms of remaining tenor. These time horizons are defined in the table below, which also provides the percentage of the Banks' investment portfolio in each of them, in terms of remaining tenor.

Table 6: Time horizons

Category	Time horizon	Share of the Bank's portfolio
Short-term debt	< 1 year	3%
Medium-term debt	1 to 7 years	38%
Long-term debt	> 7 years	47%
Equity	n/a	12%

Short-term debt exposures with a remaining tenor of less than one year accounted for 3 per cent of the Bank's portfolio as of December 2021. The Bank currently considers most climate-related risks less likely to materialise within such a short period, with the exception of reputational risk and acute physical risk. However, reputational risk on this segment of the portfolio is limited, as only 1 per cent of short-term debt exposure is in sectors considered "very high" carbon transition risk.

Medium-term debt exposures with a remaining tenor of one to seven years accounted for 38 per cent of the Bank's investments as of end 2021. The longest tenor in this segment (seven years) is the typical timeframe for which organisations set intermediate climate objectives.²¹ The majority of the medium-term exposure is in non-EU investee economies, where the low-carbon transition is generally expected to occur over a longer timeframe, attenuating the carbon transition risk. Furthermore, from 2022, the Bank is incorporating active monitoring of investments in high-climate-risk sectors, with further analysis carried out to determine the materiality of the risk and engagement with clients to support their transition plans.

Long-term debt exposures with a remaining tenor of more than seven years accounted for 47 per cent of the EBRD's banking portfolio as of end 2021. Almost half (49 per cent) of this long-term exposure was sovereign or sovereign-guaranteed exposure, partially limiting the EBRD's financial risk exposure in this segment. Moreover, 89 per cent of the long-term segment is exposure to sectors deemed to have low or moderate carbon transition risk.

Lastly, equity exposures accounted for 12 per cent of the Bank's portfolio. The vast majority of equity investments (83 per cent as of December 2021) were in sectors considered low risk for carbon transition, in particular, equity funds and banks. These two sectors accounted for 49 per cent of the Bank's equity investments and were considered less at risk from physical climate change due to their financial asset diversification.

The Bank's approach to identifying climate risk includes the tenor (or remaining tenor) of EBRD financing, which incorporates the impact of time horizons on the financial risk associated with climate change in the Bank's overall assessment of the transaction. In addition, the EBRD expects other climate-related Bank initiatives to help lower its exposure to climate risks over time.

4.3. Financial and economic impacts of climate change on EBRD Banking sectors and regions

The TCFD implementation guidance published in late 2021, recommends identifying the links between climate risk and other types of financial risk in its "Supplemental Guidance for the Financial Sector".²² Characterising climate risks in the context of other financial risks (such as credit risk, market risk or reputational risk) helps to integrate the financial risks of climate change into a bank's existing financial risk management processes. The EBRD designed its methodologies for identifying, assessing and managing climate-related financial risks, as detailed in sections 4.4 and 4.5, to focus on the impacts of these risks in terms of clients' revenues, costs and asset values.

The Bank will continue to refine its methodologies by further integrating the financial and economic impacts associated with climate change into all relevant financial risks considered for financing decisions. Refinements will focus on improving assessments based on time horizons for the manifestation of different risks at firm level and the macroeconomic impacts of those risks. Translating both physical climate and carbon transition risks into quantified financial risk will improve the assessment of climate risk for materiality and, where material, help to better evaluate the options for managing climate risks. Figure 5 provides an illustrative example of the interconnection of types of climate risk with relevant time horizons, as well as ways in which climate change can have financial impact on companies, the macro economy and the EBRD's Banking sectors, specifically. Figure 6 gives a high-level overview of the main physical and carbon transition risk to which the Bank's regions and, by extension, the EBRD are financially exposed. The climate risks presented in this figure provide an overview of broad climate considerations for the Bank's strategy and engagement in these regions. However, on an individual basis, the Bank reviews clients by assessing their business models as well as their core locations for carbon transition and physical climate risk. This approach is further detailed in sections 4.4 and 4.5.

²¹ Average remaining tenor in this segment is 4.2 years.

²² See TCFD (2021).

Figure 5. Climate risk drivers, time-horizon considerations and financial and economic impacts

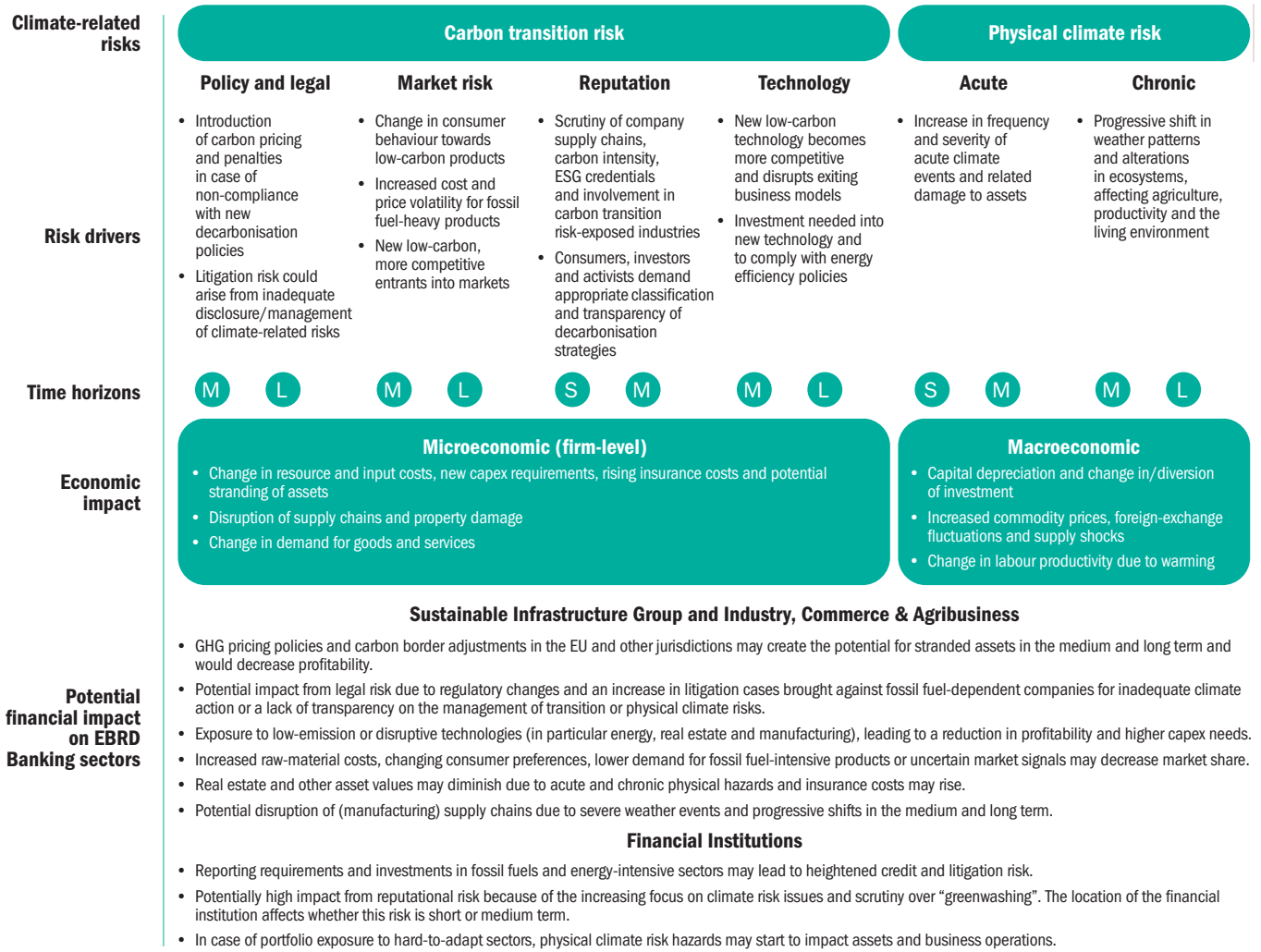
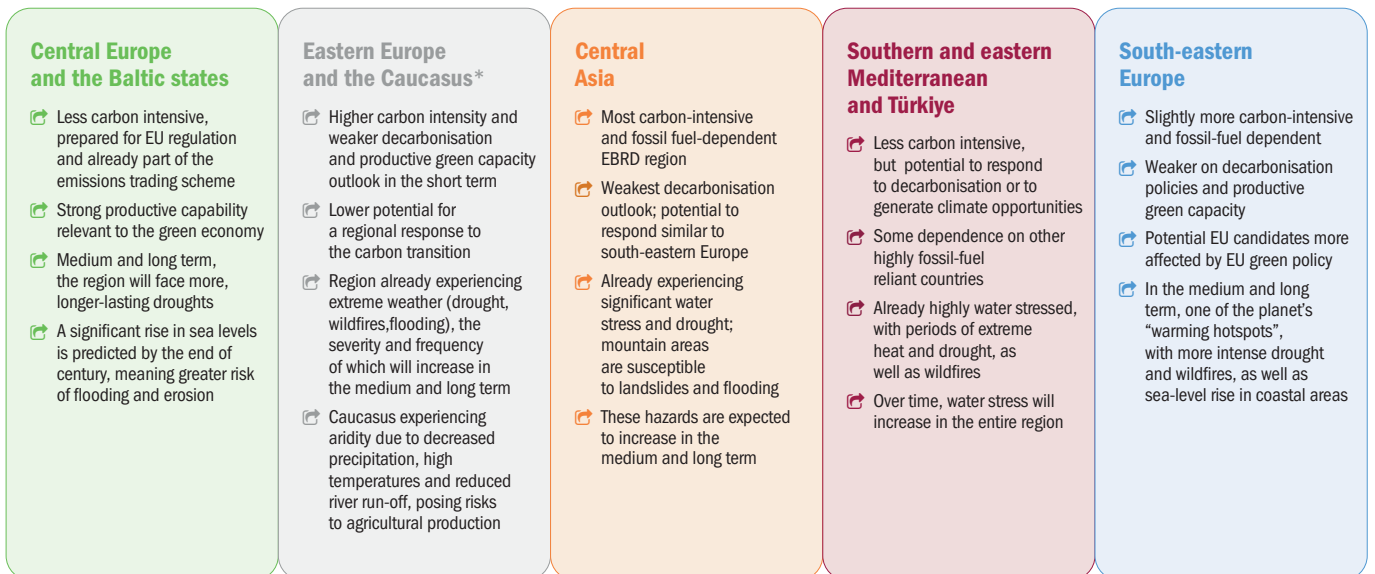


Figure 6. Overview of climate risks in the EBRD regions



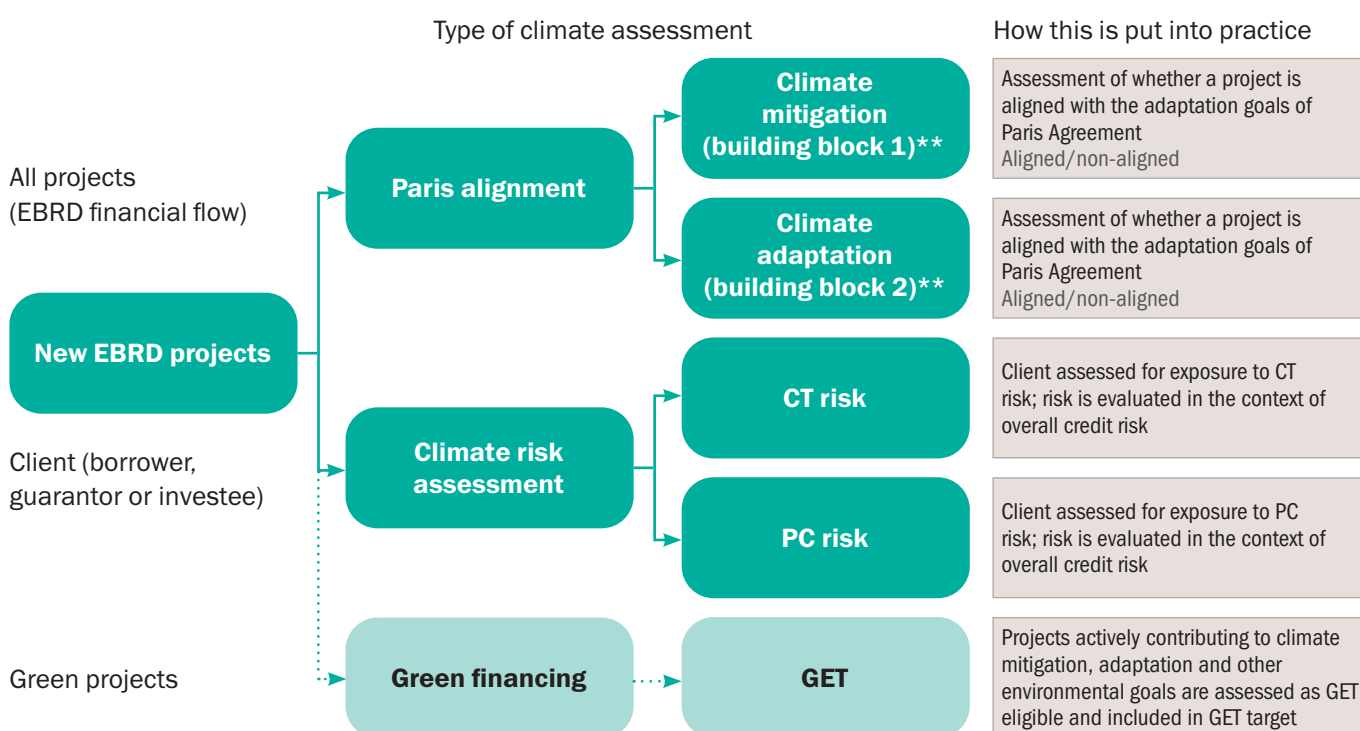
*On 4 April 2022 the EBRD announced that, following the invasion of Ukraine, its Board of Governors had formally suspended access by Belarus and Russia to EBRD funding for projects or technical cooperation.

4.4. Assessment of climate-related credit risks in direct finance projects

The EBRD identifies, assesses and manages climate-related risks in the process of conducting due diligence and structuring individual transactions. The first line of defence proposes measures to mitigate climate risk, including GHG emission reduction plans and/or

climate adaptation plans. Climate risks and mitigating factors are then assessed and challenged by Risk Management and the Environment and Sustainability Department. This is complemented by the assessment of other climate-related aspects of individual projects. These three climate-related assessment procedures are illustrated in Figure 7.

Figure 7. Green finance: new process for the assessment of climate risk, GET and Paris alignment



**The joint MDB approach to alignment with the objectives of the Paris Agreement was presented at the COP24 climate conference in 2018 (EBRD, 2018b). The approach has six "building blocks" for Paris alignment: (BB1) alignment with mitigation goals; (BB2) adaptation and climate-resilient operations; (BB3) accelerated contribution to the transition through climate finance (in the EBRD's case, GET finance); (BB4) strategy, engagement and policy development; (BB5) reporting; and (BB6) alignment of internal activities (example, administration, procurement and treasury). Paris alignment has a project-screening element (BB1 and BB2), a climate finance and policy element (BB3 and BB4) and a corporate element (BB5 and BB6).

While the EBRD has a long history of considering and assessing climate risks at project level, these risks are now reviewed as part of a cross-cutting risk-assessment process for clients. The Bank strives to ensure that climate risk is assessed systematically across its portfolio using a standardised approach.

Carbon transition risk assessment

To facilitate the transaction-level assessment of climate-related risks, the Bank developed an internal screening approach to better analyse its exposure to carbon transition risk, which applies a carbon transition screening score. These scores comprise: (i) an industry-specific assessment of carbon transition risk based on a

heatmapping approach, largely based on Moody's Investor Service's environmental heatmap and adjusted by the Bank's specialists; (ii) the EBRD's internal assessment of a country's preparedness for transition and the impact of climate risk policy and regulatory changes; (iii) the tenor of the exposure; and (iv) specific modifiers.²³

The Bank's carbon transition screening scores form a numerical heatmap of new transactions, which is used to flag any potential high-risk exposures that require deeper, second-stage analysis. This second-stage analysis includes a combination of qualitative and quantitative assessments, at times using the NGFS climate risk

²³ Industry-sector risk classifications are derived from the industry sectors classified by Moody's (2020; 2021) as having very high, high or moderate risk for carbon regulation. Country carbon transition assessment scores are based on HSBC (2019).

drivers, incorporated into financial scenario modelling. The carbon transition scores are also used to assess the Bank's existing portfolio exposures. Section 5.1.2 provides details of the Bank's current and historical exposure to carbon transition risk using these scores.

Physical climate risk assessment

The Bank also developed a proprietary physical climate risk-screening tool, which identifies physical climate hazards based on clients' core locations.

The Bank's physical climate scores comprise:

(i) a combination of the client's industry sector sensitivity to 10 physical climate hazards, (ii) the likelihood of those hazards occurring based on an analysis of the client's core location coordinates, (iii) a tenor adjustment and (iv) a verification step.²⁴ The likelihood of these physical hazards occurring is based on a range of data, listed in Table 7. These data sources were chosen after a detailed review of the publicly available physical climate risk data.

The EBRD determined these 10 hazards to be the most likely material hazards to EBRD client operations. The Bank reviews these hazards periodically and will add to or change this list as and when other hazards are deemed material to EBRD clients.

These factors produce a score based on a client's potential sensitivity to identified hazards, as well as hazard likelihood at core client locations. Bank counterparties screened as potentially high risk are subject to a deeper, second-stage assessment of the potential effects of physical climate risk. Here, the Bank's specialists assess the potential impact and develop climate resilience plans, as needed.

The Bank is looking to establish a process to assess its existing portfolio using the same tool. The metrics and targets section provides a high-level internal expert view of the vulnerability of the Bank's industry sectors to physical risks. Ultimately, however, this assessment is location specific and carried out for each transaction based on client location. Due to gaps in location data and the significant resourcing required, this physical climate risk assessment of the portfolio is being done gradually.

Both the carbon transition and physical climate risk methodologies require further refinement and adjustment and will evolve based on operational use and best practices for the assessment of climate-related financial risks. Today, they act as a scalable and informative initial platform.

Table 7. Physical climate hazards and data sources

Category	Chronic or acute	Physical climate hazard	Data source
Temperature-related	Chronic	Increasing mean temperatures	Swiss Re – CatNet
	Acute	Extreme heat event	World Bank – Climate Change Knowledge Portal (CCKP)
		Wildfires	Swiss Re – CatNet
Wind-related	Acute	Extreme wind event	Swiss Re – CatNet
Water-related	Chronic	Increasing water stress	WRI – Aqueduct
		Sea-level rise	Climate Central – Coastal Risk Screening Tool
	Acute	Drought	World Bank – CCKP
		Flood	Swiss Re – CatNet
Solid mass-related	Chronic	Erosion	Swiss Re – CatNet
	Acute	Extreme mass movement	Swiss Re – CatNet GeoNode

²⁴ At this stage, counterparties with numerous operational locations are typically deemed to be diversified in relation to the financial impacts of physical climate risk. The Bank's physical climate client risk screening is similar to the process it uses to assess a project's alignment with the climate resilience goals of the Paris Agreement. The Bank plans to continue reviewing this approach, which may evolve.

4.5. Assessment of climate-related credit risks in financial institution projects

In 2021, the Bank also piloted the introduction of climate risk assessment at a financial institution counterparty level with a subset of financial institution clients. From this pilot, the Bank produced an annual climate risk assessment of partner financial institutions to be implemented over the course of 2022 on new and existing clients. Assessments of climate risk at institutional level will be incorporated into EBRD transaction assessments with partner financial institutions from 2023.

The Bank will screen and assess both carbon transition and physical climate risks of partner financial institutions in parallel to its annual client credit review process, enabling the majority of partner financial institutions to be screened over the course of 2022. To facilitate this assessment, the Bank has developed a climate risk questionnaire aimed at better understanding partner institutions' internal climate risk management, as well as their exposure to climate risk through their loan portfolios. This carbon transition and physical climate risk screening process also takes into account partner financial institutions' primary country of operation and the EBRD's longest financial exposure. Financial institution clients that screen as potentially higher risk for either type of climate risk undergo further assessment by the Bank to determine whether there is material climate-related

financial risk. In cases where climate risk is determined to be potentially material, such clients may be prioritised for a more thorough engagement with the EBRD on integrating climate considerations into their internal investment and risk management decisions.

4.6. The EBRD's regulatory requirements and commitments

The regulatory landscape is evolving rapidly. Although the EBRD, as an international financial institution, has special status as an unregulated organisation, the Bank strives to follow the most advanced climate-related risk management guidance and regulation. The Bank closely observes emerging international standards and regulatory developments, particularly in the EU and United Kingdom.

Both jurisdictions have laid the foundations for requiring climate-related disclosure and stress testing for large organisations.²⁵ The Bank is monitoring the outcomes, feedback and lessons learned, and aligning its internal climate risk stress-testing exercises where possible (see section 5.3).

In addition, the Bank engages in policy dialogue with the authorities in economies where it invests to promote the stability of the regulatory environment, the progressive adoption of solutions and the provision of support aimed at climate risk mitigation and adaptation.



²⁵ Such as the European Central Bank stress test for 2022 and the Bank of England Biennial Exploration Scenario in 2021.

5. Metrics and targets

In line with the recommendations of the TCFD, the EBRD is working to provide clear and consistent metrics and targets that enable the Bank and outside stakeholders to measure and track the risks and opportunities presented by climate change and the associated implications for the Bank's financial performance.

5.1. Metrics overview

Table 8. Metrics overview

5.1 Metrics		
Section	Subsections	Pages
Metrics related to internal operations	<ul style="list-style-type: none"> Internal operational footprint Physical climate risk to EBRD offices 	26-30
Investment portfolio metrics	<ul style="list-style-type: none"> Portfolio heatmap and exposure to carbon-related assets Remaining coal exposure 	30-32
Additional risk metrics	<ul style="list-style-type: none"> Capital markets transactions Climate finance attribution (policy dialogue) Economic assessment 	32-36

5.1.1. Metrics related to the Bank's internal operations

GHG emissions of the Bank's internal operations

The Bank calculates and reports on the carbon footprint and the GHG emissions-intensity ratio of its own operations. These disclosures are included in the Bank's Global Reporting Initiative (GRI) Disclosure Report, which also includes the energy consumption, waste and biodiversity impacts of the Bank's activities.²⁶ The Bank's Scope 1 emissions are related to on-site heating, cooling and fuel use in EBRD-owned vehicles. Scope 2 emissions relate to purchased electricity. As a financial institution, the majority of the EBRD's emissions are Scope 3 financed emissions, which are the Scope 1 GHG emissions of the Bank's clients.²⁷ The Scope 3 emissions figures presented below do not include financed emissions. Due to the complexities of gathering reliable data on clients' Scope 1 emissions in many of the EBRD's regions, the Bank is evaluating solutions to estimate these emissions using proxies where data are not available from the client. Despite this data constraint, the Bank is working to account for and report its full Scope 3 emissions over time. Table 9 provides a summary of the Bank's resource consumption.

Table 9. Selected EBRD sustainability indicators

Type	2019	2020*	2031*
Scope 1 (tCO ₂ e)	1,610	1,595	1,694
Scope 2 (tCO ₂ e)	4,632	3,852	3,479
Scope 3 (tCO ₂ e)**	15,275	8,148	7,610
Electricity (MWh)	15,300	14,500	13,100
Gas (MWh)	4,500	4,500	4,300
Travel (million km)	46.1	7.3	3.7
Printer paper consumption*** (tonnes)	32.0	6.5	1.9
Water consumption*** (thousand m ³)	48.6	35.6	27

Note: Electricity for the EBRD's London office (14.0 MWh in 2019) is purchased from renewable energy suppliers.

* Due to the Covid-19 pandemic, the overwhelming majority of EBRD staff worked remotely from March 2020 to September 2021. These figures do not include energy consumption associated with home working.

** Scope 3 emissions figures represent emissions from business travel and estimates of employee commute, waste and purchased goods and services. They do not include the Bank's financed emissions.

*** Figures are for the EBRD's London Headquarters.

²⁶ See EBRD (2022b), p.29. For more information on the methodology of the economic assessment of EBRD projects with high GHG emissions, see Box 1 or EBRD (2019b).

²⁷ Financed emissions are clients' scope 1 emissions, allocated proportionally to a financial institution based on use of proceeds or for general financing, the proportion of the financing provided versus the overall debt and equity financing of the client

Physical climate risks to EBRD offices

The EBRD assessed the physical climate risk of its own operations using the same methodology applied to the Bank's direct finance counterparties, namely, an assessment of core locations based on sensitivity and the likelihood of 10 climate change hazards. As the Bank's Headquarters is moving to a new location in 2022, the assessment encompasses both the existing and new Headquarters buildings, as well as its two largest Resident Offices, Cairo and Istanbul. This screening exercise concluded that three of these four locations are exposed to potentially high physical climate risks: the (new) London Headquarters (flood), the Istanbul Resident Office (extreme heat event and increased water stress) and Cairo (extreme heat event). The EBRD reviewed the flood risk at the new Headquarters building and deemed it acceptable, as the UK Environment Agency considers flooding at Canary Wharf to be extremely unlikely this century. Canary Wharf sits on higher ground than the surrounding area. Flood defences, including the Thames Barrier and associated tidal defences, which sit between the site and the sea, are higher than the maximum water levels predicted to the end of the century, and the height of the river is monitored closely throughout the Greater London area.

As far as the site of the Istanbul Resident Office is concerned, the EBRD reviewed both the increase in water stress and extreme heat event hazards and deemed them acceptable risks. Increased water stress is not considered a material risk to the Bank's operations at this location, as the office does not have water-intensive operations. Where extreme heat events are concerned, the EBRD's office building was constructed in 2006 and meets the criteria for a Class A office space, denoting, among other things, Leadership in Energy and Environmental Design (LEED) certification and state-of-the-art mechanical systems, including a high-quality air conditioning system. Consequently, this hazard is unlikely to be material for EBRD operations on this site. Similarly, the extreme heat event hazard is deemed acceptable for the Cairo Resident Office, as the building is also a Class A office space with a high-quality air conditioning system. The building was constructed in 2011 in New Cairo, a newly developed area of the city.

5.1.2. Investment portfolio metrics

Recognising the accelerating growth of climate-related risks and their potential for impact on many types of client, the Bank is in the process of identifying, assessing and quantifying the separate climate-related risks in its projects and portfolio. This process, which is still in the early stages, involves assessing the individual carbon transition and physical climate risks for each financial exposure. The Bank has also begun to examine its portfolio for exposure to climate risk using a climate-risk heatmap of the total banking portfolio, its exposure to fossil fuels and an initial assessment of carbon transition and physical climate risk in the corporate debt portfolio. The figures in Table 10 reflect post-accounting adjustments presented in a method consistent with the EBRD's financial reporting of its balance sheet in its *Annual Report*.

Portfolio heatmap and exposure to carbon-related assets

Extensive investment in climate mitigation and adaptation projects has had a clear impact on the Bank's balance sheet and climate risk profile, with the total GET share of the overall portfolio growing from 40 per cent in 2020 to 45 per cent in 2021. In 2021, the GET share of newly signed deals was 51 per cent. The Bank's exposure to coal continues to fall as these legacy loans mature. The EBRD's exposure to the oil and gas sector declined by more than €230 million over the course of 2021, while the share of financing to the sector classified as GET increased to 27 per cent (from 15 per cent in 2020), demonstrating how the EBRD's new engagement with these clients is increasingly focused on decarbonisation and support for low-emission investments.

Other significant increases in GET share in certain industries, indicating investment in the low-carbon transition, are evident in the automotive, utilities, transport and logistics sectors. The Bank also continues to expand its direct investments with renewable energy sector clients; these grew to €2.6 billion by year end 2021, nearly 6 per cent of the total portfolio. While, the Bank's overall financing for renewable energy solutions is much higher, as indicated by the high GET share of financing, its lending to pure-play renewable companies increased by around €500 million on the year in 2021.

The TCFD, in its latest guidance, broadened the scope of its definition of carbon-related assets. It now suggests defining carbon-related assets for the purposes of disclosing information on significant concentrations of credit exposure as those assets tied to energy,

transportation, materials and buildings, agriculture, food and forest products. It may be appropriate to exclude certain industries or sub-industries, such as water utilities and renewable electricity producer industries.²⁸

The EBRD includes all sectors cited by the TCFD in a broader disclosure of the portfolio, in line with its internal classification. Industry sensitivity to carbon transition risk is flagged as low, moderate, high or very high.

The moderate, high and very-high risk classifications are deemed carbon-related assets. This sensitivity categorisation is based largely on Moody's environmental heatmap and internal expert analysis. A summary of the EBRD's portfolio and associated broad carbon transition and physical climate risk classifications for the sectors can be found in Table 10.

²⁸ See TCFD (2021)

Table 10. EBRD debt portfolio based on high-level counterparty industry sector classification

EBRD debt and guarantee portfolio at year end										
Counterparty after risk transfer, industry sector	2020				2021				Classification	
	Total debt portfolio € million	% of debt portfolio	Share classified as GET	GET-related portfolio € million	Total debt portfolio € million	% of debt portfolio	Share classified as GET	GET-related portfolio € million	Carbon transition risk	Physical climate risk
Coal and consumable fuels****	169	0.4%	24%	41	118	0.3%	15%	18	Very high	Moderate
Independent power producers & energy traders	767	2%	48%	365	727	2%	45%	327	Very high	High
Oil and gas	1,401	3%	15%	214	1,167	3%	27%	319	Very high	Moderate
Chemicals (incl. fertilisers)	786	2%	76%	600	770	2%	72%	556	High	Moderate
Metals and mining, forestry, paper products	1,210	3%	26%	318	1,170	3%	29%	336	High	High
Transport and logistics	1,732	4%	12%	206	2,005	5%	17%	335	High	Moderate
Automotive (incl. parts and equipment)	513	1%	21%	110	742	2%	38%	284	High	Moderate
Utilities	2,198	5%	46%	206	1,726	4%	54%	937	High	High
Construction materials, containers and packaging	372	1%	14%	52	274	1%	13%	35	Moderate	Moderate
Industry and machinery	531	1%	24%	125	468	1%	25%	115	Moderate	Moderate
Consumer goods, food and beverages	1,565	4%	17%	261	1,602	4%	17%	268	Moderate	Moderate
Retail and tourism	1,175	3%	31%	366	1,089	2%	31%	342	Low	Moderate
Healthcare	775	2%	27%	208	809	2%	29%	235	Low	Moderate
Technology and telecommunications	545	1%	43%	233	710	2%	42%	300	Low	Moderate
Renewable electricity	2,077	5%	83%	1,721	2,579	6%	75%	1,943	Low	Moderate
Real estate investment trusts / other real estate	765	2%	53%	407	924	2%	74%	682	Low	High
Sovereign states and municipalities	15,065	36%	50%	7,542	16,230	37%	53%	8,677	Low	Not yet assessed**
Financial intuitions and funds	10,294	24%	27%	2,810	10,510	24%	37%	3,910	No classification*	No classification*
Other	380	1%	42%	160	452	1%	34%	154	N/A***	N/A***
Total debt portfolio assets	42,319	100%	40%	16,749	44,072	100%	45%	19,772		

NB: Table includes EBRD Banking portfolio investments based on the industry sector of Bank counterparties, which may differ from the industry sector of Bank-financed projects. Indicative exposure classifications of carbon transition and physical climate risk are included for high-level heatmapping purposes only. Physical climate classifications are based on a high-level aggregation of the industry's sensitivity to 10 physical climate hazards without taking into account the physical locations of those exposures, although the Bank's internal physical climate risk methodology is based on counterparty core locations. The figures presented for total debt portfolio and GET amounts are adjusted for the effective interest rate associated with the amortised value of the financial assets in the portfolio. This heatmap also does not cover the Bank's equity positions.

* Climate risk assessment for financial institutions follows a different process and is, therefore, not classified broadly for carbon transition and physical climate risk, but rather based on a function of internal risk management processes, gross loan portfolios, country of operation and remaining EBRD financing tenor (see section 4.4 on risk management for financial Institution transactions).

** Climate risk assessment for sovereign states is currently under development and, therefore, not yet assessed for physical climate risk. Due the location-specific nature of physical climate risk, there is no general sensitivity assigned for regions and municipalities.

*** The broad "other" category does not include sector-specific carbon transition or physical climate risk classification.

**** The coal and consumables figures represent both legacy direct and legacy indirect coal exposure (see Figure 8: Coal exposure run-off as of 31 December 2021).

The EBRD's debt and guarantee portfolio exposure to very high carbon transition risk industries is low, with 3 per cent of the portfolio exposed to clients in the oil and gas sector, 2 per cent to the independent power producer sector and 0.3 per cent to the coal sector (the sectors most at risk from low-carbon transition). Of the 2 per cent exposure to independent power producers and energy traders classified as very high risk, 40 per cent of the financial exposure is to clients engaged only in electricity transmission, which is less exposed to carbon transition risk. The weighted average remaining tenor of financing to this sector is 7.9 years.

Overall, the debt and guarantee portfolio is well diversified from a sectoral perspective, with the largest concentrations being to sovereign/sub-sovereign and financial institution counterparties (37 per cent and 24 per cent, respectively). At year end 2021, the portfolio was predominantly exposed to sectors that the EBRD classified as low for carbon transition risk. At the same time, 19 per cent of the portfolio was exposed to sectors classified as high or very high for carbon transition risk. This declined from 21 per cent in 2020 and the GET share for clients classified as high or very high for carbon transition risk increased by nearly €250 million, or 8 per cent, on the year, showing how the Bank's involvement in the carbon transition of these sectors continued to grow. Also notable was its strong growth in GET financing to the financial sector, which saw a nearly 40 per cent year-on-year increase in GET-related financial institution portfolio assets to €3.9 billion.

Sovereign and sub-sovereign government entities are considered to have lower climate-related financial risk than other sectors due to their diversified revenue base and ability to raise revenue through policy.²⁹ Although climate risks can become concentrated in the financial sector, financial institutions' own portfolio diversification, regulated sector concentration limits, and strong capital and liquidity buffers can mitigate their exposure to climate risk. However, although the financial sector may have relatively lower climate risk, the Bank acknowledges that individual financial institutions may have higher exposure. It, therefore, carries out individual assessments of each of its partner financial institutions to assess the materiality of climate risk at firm level and takes appropriate steps to manage any material risks.

The EBRD's coal portfolio exposure as of end 2021

Decarbonisation requires a transition away from coal. In line with the EBRD's Environmental and Social Policy (2019)³⁰ and Energy Sector Strategy 2019-23,³¹ The EBRD will not knowingly finance, directly, or indirectly through financial intermediaries, projects where EBRD proceeds are used for activities relating to thermal coal mining or coal-fired electricity generation capacity. New financing to such counterparties for non-coal investments, for example, to support the transition to low carbon, is ring-fenced from their coal activities and considered to be indirect exposure.

As of 31 December 2021, EBRD had coal-related exposure of €895 million, an 18 per cent decrease from year end 2020. This corresponded to about 2.6 per cent of the EBRD's total Banking portfolio. For the purposes of this disclosure, the EBRD includes coal-related exposure to clients that generate more than 20 per cent of their revenue from coal-related activities. This exposure breaks down as follows:

- **Legacy direct coal exposure** decreased by 47 per cent from end 2020 and, at €49 million, accounted for 5 per cent of total coal exposure. This included projects where the proceeds directly financed coal-fired power generation or coal mining – all signed more than 10 years ago. This exposure will decline to zero by 2025.
- **Legacy indirect coal exposure** decreased by 9 per cent from end 2020 and, at €69 million, accounted for 8 per cent of total coal exposure. While the EBRD proceeds did not finance coal directly, the client is involved in coal mining or coal-fired power generation and does not have a plan to transition away from coal.
- **Indirect coal exposure** decreased by 16 per cent from end 2020 and, at €777 million, accounted for 87 per cent of total coal exposure. This exposure was to clients that may have coal activities, but the EBRD financing was to support their transition away from coal to cleaner energy sources, including energy-efficiency improvements, renewables and GHG emission reductions. Many of these clients have credible decarbonisation plans in place,

²⁹ This statement applies generally to these categories, however, sub-sovereign governments may be exposed to material physical climate risk, as much of these entities' revenue is derived from a specific geographic location and their authority to raise revenue is typically more limited than that of a sovereign entity.

³⁰ See EBRD (2019a).

³¹ See EBRD (2018a).

including coal exit strategies. In some cases, the EBRD facilitates policy dialogue to further support the rollout of renewables or the enhancement of energy-efficiency strategies.

Figure 8 presents the exposure for these three categories, as well as their run-off as of year end 2021. It shows the assets based on maturity date, not taking into account scheduled repayments, and keeps all other assumptions static.

Geographically, the coal exposure remains concentrated in Kazakhstan, Bulgaria, Serbia and Greece. The Bank's combined coal exposure to these four countries declined by 15 per cent from €797 million in 2020 to €675 million in 2021, amounting to 75 percent of all coal exposure. The remainder of the Bank's coal exposure is mostly to

electricity or district heating providers that are starting their transition to cleaner fuels and lower GHG emissions. Overall, 83 per cent (€739 million) of coal exposure was to fully or majority sovereign-owned entities, giving some comfort on financial risk.

Overall, the EBRD's coal exposure remains small, short-dated and at a manageable level with regard to climate-related financial risk. The majority of the exposure does not involve the direct financing of coal activities and, in most cases, the clients have environmental action plans in place, or the EBRD is supporting them in their transition to renewable energy.

The EBRD's oil and gas portfolio exposure as of end 2021

This assessment covers exposure to clients that operate directly in the oil, gas and energy generation sectors. It spans the extraction, transportation, processing, storage and distribution subsectors, as well as oil and gas-fuelled electricity and heat generation. It includes both: i) exposures where proceeds are used for these activities and ii) exposures where the Bank's financing is to a company that operates in one of these sub-sectors, but Bank proceeds are not used for those business lines.

As of December 2021, the Bank's exposure to the oil and gas sector and oil/gas-fuelled energy generation was €4.3 billion.³² This amounts to 9 per cent of the banking portfolio, with exposure divided as follows: sovereign, 32 per cent; state-owned and municipal companies, 33 per cent; and private, 35 per cent. In conducting this initial assessment, the Bank classified its oil and gas exposure (including energy generation) per Table 11.

Figure 8. Coal exposure run-off as of 31 December 2021

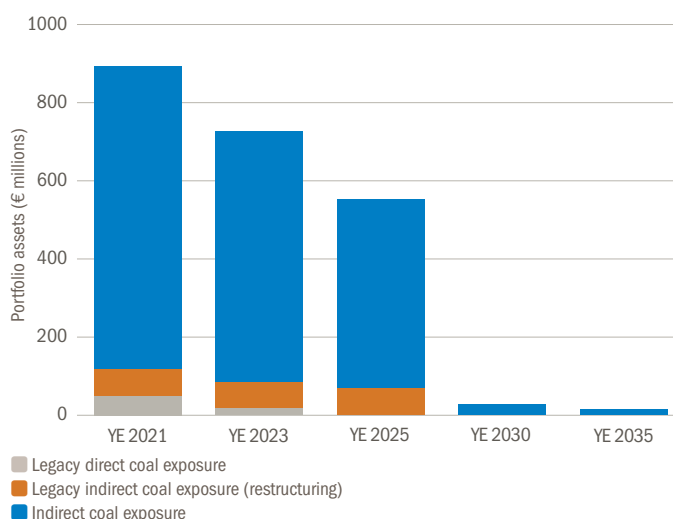


Table 11. Selected EBRD sustainability indicators

	Legacy	Low-carbon pathway support	Emergency response	Total	
Oil and gas vertically integrated	126	117	322	565	13%
Oil and gas extraction	565			565	13%
Oil and gas transportation and storage	804	129	95	1,028	24%
Oil and gas processing and distribution	185	322		507	12%
Electricity and heat generation	514	996	162	1,672	39%
Total	2,195	1,565	578	4,338	100%
	51%	36%	13%	100%	

³² Note: The oil and gas portfolio exposures outlined here include direct exposure to the industry, as well as exposure to other sectors, such as utilities, municipal heating, electric power producers, marine ports, etc., where the client or the Bank's financing is substantially exposed to the oil and gas industry. These figures also include equity positions and debt guaranteed by a sovereign state, so may not align with portfolio oil and gas exposures outlined in the portfolio project heatmap.

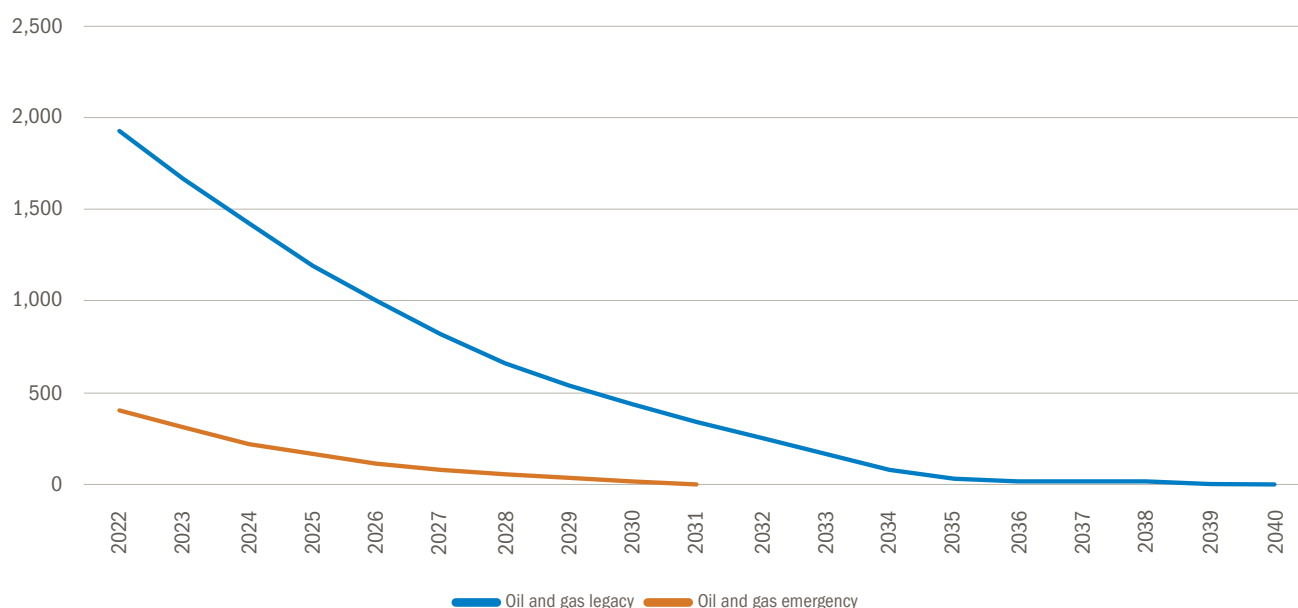
- Legacy exposure:** Exposure to oil and gas, where the use of the EBRD proceeds does not contribute to a reduction in the GHG emissions of the counterparty or to its progression to a low-carbon pathway. For the most part, these deals were signed prior to the introduction of the Bank's climate risk assessments and the Fossil Fuel Approach update in 2021. Of the legacy exposure, as of the end of 2021, 67 per cent was in six projects: two gas pipelines (40 per cent), two combined cycle gas turbine power plants (16 per cent) and two vertically integrated electricity companies (10 per cent). Sovereign/sovereign-guaranteed transactions accounted for 40 per cent of legacy transactions and state-owned companies a further 17 per cent.
- Low-carbon pathway support:** Exposure to oil and gas, where the use of the EBRD proceeds helped to reduce the GHG emissions of the client and/or to develop low-carbon pathway strategies and transition plans. Examples of these investments include projects to implement energy efficiency measures, switch to renewable energy or upgrade infrastructure to facilitate the transition to a low-carbon economy (for example, charging stations for electric vehicles).
- Emergency response:** Exposure to oil and gas, where the Bank's loan was part of an emergency response. These are short-term loans in response to an acute situation, such as Covid-19 or energy security issues.

Figure 9 shows the expected reduction in legacy and emergency response exposure, assuming linear amortisation to maturity.

With climate change mitigation now a key priority for the Bank, the volume of legacy exposures is set to decline rapidly in the coming years, as can be seen from Figure 9. Of this exposure, 50 per cent will be repaid in the next four years and 80 per cent will be repaid by 2030. The post-2030 legacy exposure comprises five large infrastructure projects with long tenors, including three gas pipelines, one combined-cycle gas turbine power plant and one LNG regasification plant. Of this exposure, 62 per cent is sovereign owned or guaranteed, so classified as having relatively less financial risk to the Bank.

Conversely, the exposure in the low-carbon pathway support category is likely to rise as the Bank seeks to support oil and gas clients with investments that reduce their GHG emissions, accelerate their transition to low-carbon alternatives and help them develop clear strategies to meet the net-zero target. Any new transactions with such clients require strong decarbonisation commitments and credible low-emission pathways. Many of these projects would also be subject to an economic assessment and a stranded asset assessment to determine their viability in higher carbon-price scenarios. The Bank will also assess the reputational impact of involvement with these clients.

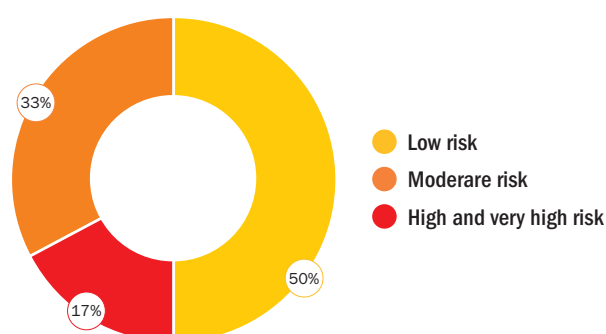
Figure 9. Legacy and emergency exposures run-off (€ million)



Initial assessment of carbon transition risk in the banking portfolio

In 2021, the Bank started to assess the exposure to carbon transition risk of its existing Banking portfolio. As with the assessment of new transactions, this initial assessment focused on corporate debt transactions directly financed by the Bank. To hone in on the most material exposures, the Bank excluded counterparties with small exposures or a remaining tenor of less than a year. The value of the portfolio examined was €17.1 billion, which was around 85 per cent of the Bank's corporate debt portfolio as of December 2021. Figure 10 shows the percentage of clients operating in high, moderate and low carbon transition risk sectors within this sample as of December 2021.

Figure 10. High-level carbon transition risk classification of the EBRD's direct debt portfolio, December 2021



As outlined in Figure 10, 33 per cent of the counterparties had a potential carbon transition risk screening of high or very high, while 67 per cent were moderate or low. The key high-risk sectors were electrical utilities and power and energy producers (11 per cent), oil and gas storage and transportation (3 per cent), and metals and mining (3 per cent). Turkey, Kazakhstan and Poland had the most EBRD clients in high- and very high-risk sectors. With the exception of Poland, these countries also have less aggressive decarbonisation targets and timeframes and a greater reliance on fossil fuels, which combine to increase the costs and challenges and decrease the speed of transition in these countries. Overall counterparties in high-risk sectors had an average tenor of 6.9 years as of end 2021, which was slightly lower than that of the Bank's overall debt portfolio, at 7.5 years.

Counterparties screened as having potentially high carbon transition risk accounted for €5.7 billion in aggregate exposure as of end 2021 and will be subject to further assessment over the course of 2022. As part of

this analysis, the Bank will assess these counterparties' GHG emissions to understand their potential financial impact, coupled with a review of their decarbonisation plans and climate-risk management strategies.

Through this pilot assessment of carbon transition risk, the EBRD will gain a better understanding of the potential risks in the banking portfolio in order to develop better approaches to managing these risks through the overall project monitoring process.

Initial assessment of physical climate risk in the banking portfolio

The Bank also began to assess its exposure to physical climate risk in its existing direct corporate debt portfolio. For this first review, the Bank focused on the top 200 counterparties³³ of EBRD exposure, which amounted to a significant portion of the Bank's debt portfolio as of December 2021. The Bank scored these clients using its internal physical climate risk-screening tool, which identifies the physical hazards to which each client may be exposed. The screening results are summarised in Table 12.

Table 12. Distribution of physical climate risk scores for top 200 EBRD portfolio counterparties

Physical climate risk score	Physical climate risk score	Physical climate risk level
1	54.0%	Very low
2	8.5%	Low
3	14.5%	Moderate
4	13.5%	High
5	9.5%	Very high

Of the top 200 counterparties assessed, 23 per cent screened as potentially high or very high for physical climate risk, while 77 per cent screened as moderate, low or very low risk. Diversification of location was a leading factor in placing counterparties in the lower-risk categories. The top three physical climate risks (by frequency of occurrence) were: i) extreme heat events, ii) flooding and iii) increased water stress. The sectors with the highest physical climate risk were renewable energy and healthcare facilities.

These findings on hazard prevalence and industry sensitivity, as seen in Figure 11, are consistent with the hazards and sector exposures so far identified in the Bank's new transaction screening.

³³ The entities to which the EBRD has ultimate recourse for repayment, ranked by financial exposure.

Figure 11. Hazards' relative frequency in high/very high physical climate risk-screening scores

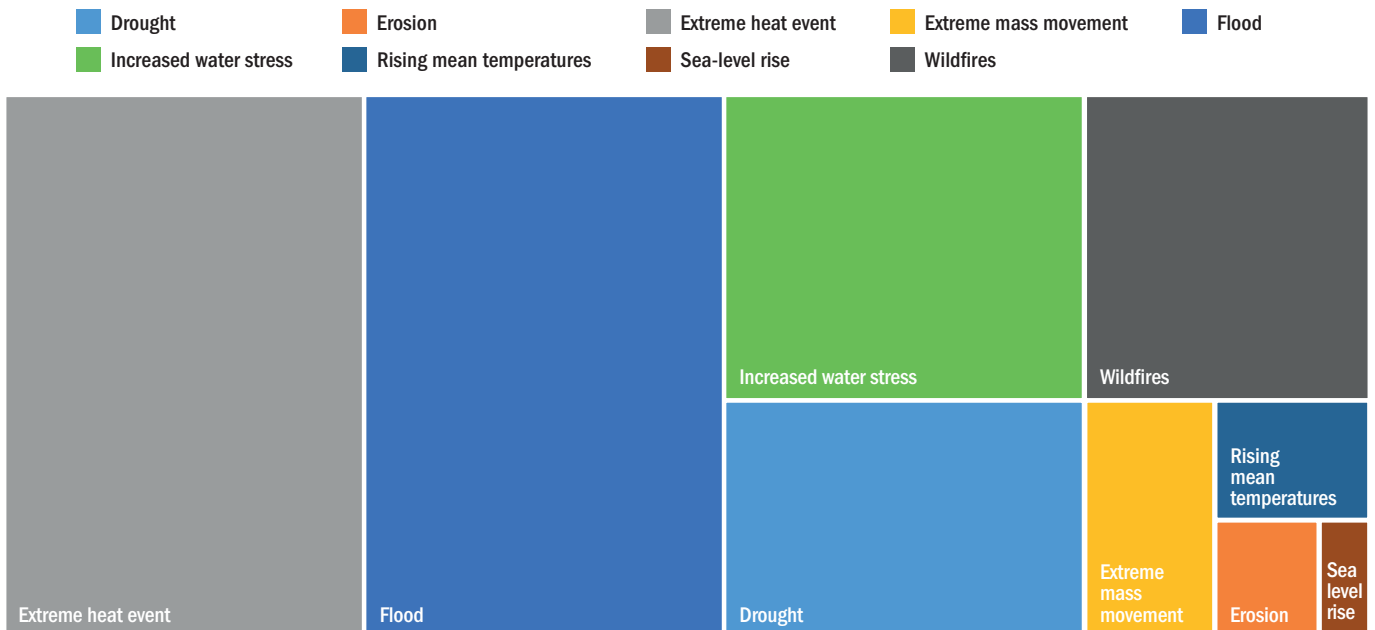
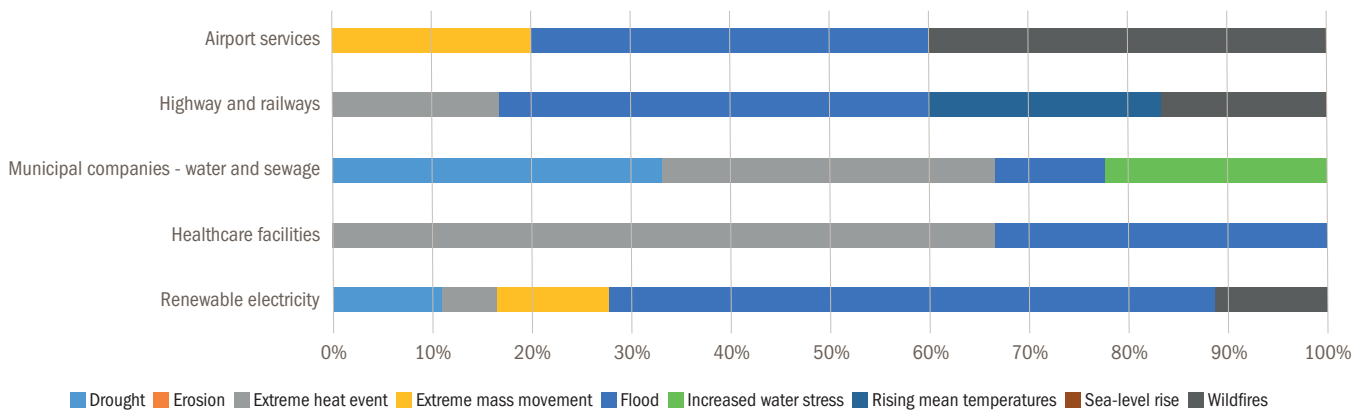


Figure 12 illustrates the relative prevalence of risk types for sectors screened as high physical climate risk.

Figure 12. Overview of hazards identified in industry screening as high physical climate risk



Due to the limited availability of location-specific data for this pilot review of physical climate risks in the portfolio, the EBRD will review this approach and test its accuracy for screening physical climate risks as new transactions with these clients arise. In particular, those clients screened as potentially high or very high risk have been flagged and will be subject to increased scrutiny during due diligence on proposed new financing. Moreover, the Bank will continue to assess the consistency of findings from the screening of new transactions with the portfolio results to test and refine the physical climate risk methodology and assess whether adjustments are required to manage portfolio exposure.

5.1.3. Additional metrics for measuring and disclosing climate-related risks

The EBRD's metrics for measuring opportunities include:

Capital market finance and participation metrics

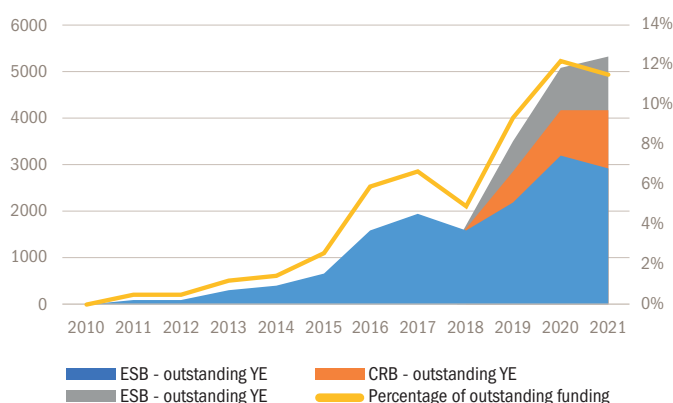
EBRD issuance of labelled bonds

The Bank has issued **environmental sustainability bonds** (ESBs) since 2010. These are bonds issued against a portfolio of the EBRD's green, climate-relevant and sustainable resource projects, such as renewable energy, energy efficiency, water and waste management, and sustainable transportation.

The Bank first issued **climate resilience bonds** (CRBs) in 2019, designed to align with both the Green Bond Principles and the Climate Bonds Initiative's Climate Resilience Principles, published in September 2019. CRBs provide an opportunity to finance projects aimed at building climate resilience by addressing physical climate change vulnerabilities and risks identified in public- and private-sector projects in the economies where the EBRD operates. Some key sectors for CRB issuance are infrastructure, business and commercial operations, as well as agriculture and ecological services.

The Bank started issuing **green transition bonds** (GTBs) in 2019 to focus on key economic sectors that are highly dependent on the use of fossil fuels, to enable their transition to low-carbon and resource-efficient operations. In assessing these investments, it is vitally important to go beyond the typical green bond's primary focus on projects' environmental sustainability goals and contextualise the investments within the overarching mandate, strategies and policies of the borrower. Projects financed through GTBs must also incorporate the broader context of better climate governance and the low-carbon transition of the borrower. This structure ensures that financing is redirected from carbon-intensive assets and/or processes to activities that enable a country to fulfil its climate commitments and objectives. Projects under the GTB framework concentrate on manufacturing, food production and the construction and renovation of buildings.

Figure 13. **EBRD issuance of climate-, environment- and sustainability-linked bonds**



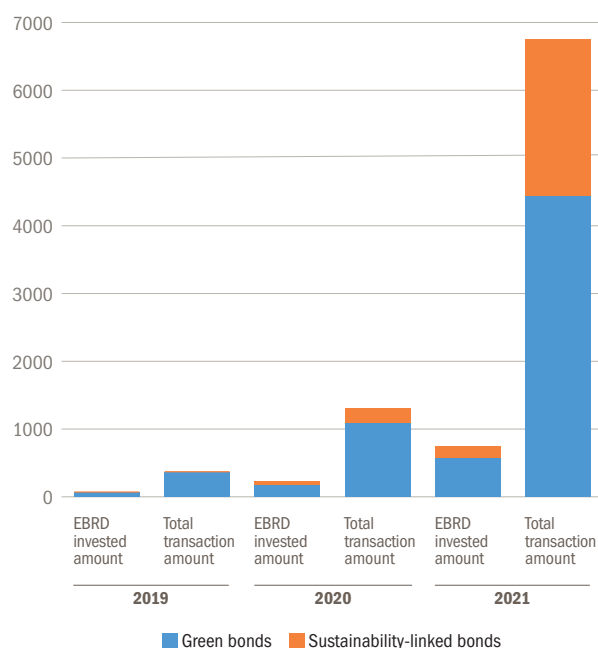
Given the growing importance that the SRI-focused investor community places on the impact of projects underlying green bond issuance, the EBRD has continued to develop its annual impact reporting for all three green bond programmes, referencing the best-practice and

impact metrics of the Green Bond Principles *Handbook – Harmonised Framework for Impact Reporting*.³⁴ Figure 13 provides an overview of the evolution of the Bank's issuance of climate- and sustainability-related bonds.

EBRD participation in labelled bonds

In 2021, the EBRD invested in 22 green and sustainability-linked bonds, for a total of €747 million. This corresponded to an increase of 232 per cent in such investments year on year (see Figure 14). The EBRD played an important role as an anchor investor, supporting its clients in raising more than €6.7 billion, especially first-time issuers, preparing them for future and repeat issuance.

Figure 14. **Evolution of EBRD investments in green and sustainability-linked bonds, 2019-21 (€ million)**

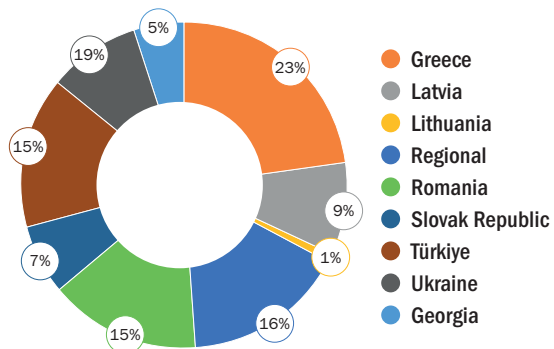


Figures 15 and 16 illustrate the key sectors for EBRD investments in green and sustainability-linked bonds. Energy utilities, financial institutions and real estate were the main issuers thanks to the magnitude of their eligible green assets in need of financing. Observed trends included: i) growing demand, ii) growing sector diversification and iii) credit enhancement facilities pegged to various offerings. While issuance was diversified across the EBRD regions in 2021, economies with larger and more developed capital markets featured more prominently.

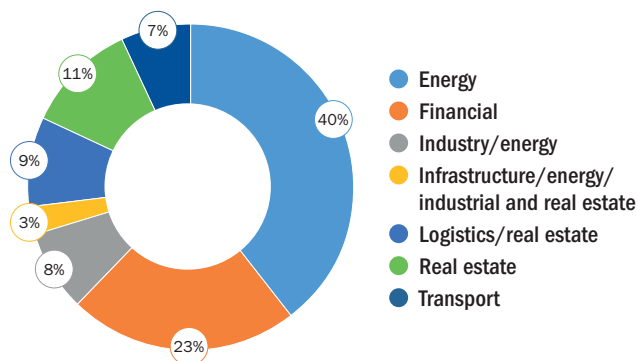
³⁴ See ICMA (2021) and EBRD (n.d.).

Figures 15 and 16. **EBRD green and sustainability-linked bond investment characteristics, 2021**

EBRD green bond and SLB investments in 2021, by country



EBRD green bond and SLB investments in 2021, by sector



Climate finance attribution and policy dialogue

The EBRD's GET 2.1 approach covers climate (mitigation and adaptation) and other environmental objectives. Climate finance attribution adheres to the joint MDB methodology on climate finance tracking. MDBs, including the EBRD, disclose their individual and total climate finance commitments as part of their annual joint MDB report on climate finance.³⁵

GET finance via financial institutions

The EBRD's GET 2021-25 approach is a key measure of the Bank's progress on investments in climate change mitigation and adaptation.³⁶ The EBRD signed a record €1.7 billion of GET financing to financial institutions in 2021. Its GET share of financial institution financing increased from 13 per cent to 40 per cent of Annual Bank Investment (ABI) in 2021, as shown in Figure 17. Total financial institution GET finance commitments by region are shown in Figure 18. The financial commitment included strong growth in green capital market transactions. In 2021, green and GET-eligible bond investments amounted to €616 million (up from €138 million in 2020), with 20 clients in eight countries.

Figure 17. **Financial institution GET financing, € million**

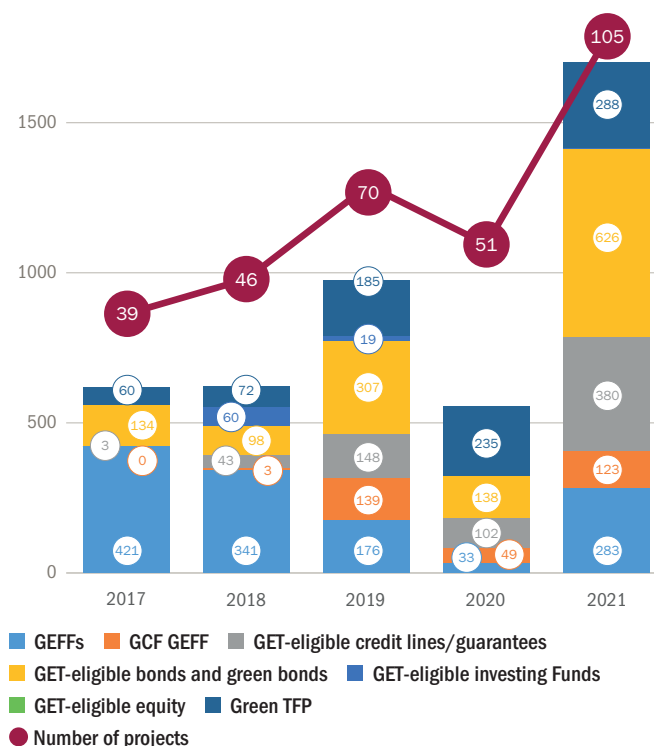
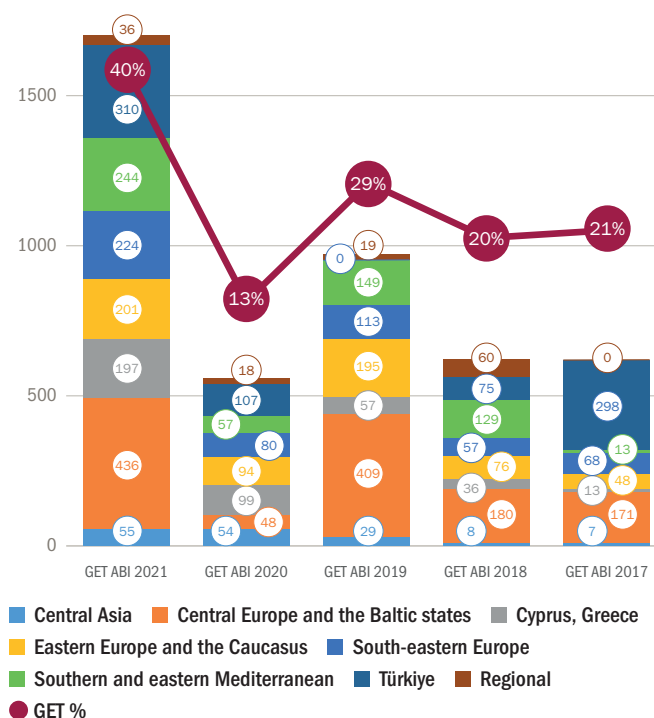


Figure 18. **Financial institution GET financing by region, € million**



³⁵ See ADB, AfDB, AIIB, EBRD, EIB, IADB, IsDB and World Bank Group (2020).

³⁶ See EBRD (2020a).

In addition, 40 EBRD financial institution clients in 15 countries signed Green Economy Financing Facilities (GEFFs) for a total of €406 million in 2021 (up from €82 million in 2020). Green trade under the EBRD's Trade Facilitation Programme continued to grow, showing more than a 23 per cent increase from 2020 to 2021. GET-eligible credit lines and guarantees also grew from €102 million in 2020 to €390 million in 2021, with 42 new green credit lines.

EBRD Green Cities

As of year end 2021, EBRD Green Cities had **provided more than €1.6 billion in financing to 64 projects in 20 countries, generating significant CO₂ savings**. The initiative helped 22 cities to complete the development of their city-owned GCAPs.

Through the EBRD's Green Cities investments, the GCAPs and its cities network (53 cities by the end of 2021), the EBRD Green Cities programme promotes the Bank's SCF – green, digital and equality of opportunity.

Economic assessment and GHG emissions

The EBRD screens all projects for GHG emissions (in metric tonnes of CO₂e) and performs a detailed economic assessment of projects that have significant emissions. The screening and assessment are typically done on the basis of ex ante estimates of Scope 1 and 2 emissions of projects. Scope 3 emissions are also assessed where they are material and attributable to the project and where reliable estimates can be found (for example, where there are significant downstream or upstream emissions). The Bank bases its GHG accounting methodologies on the International Financial Institution Framework for a Harmonised Approach to Greenhouse Gas Accounting.³⁷ A summary of the results of each year's investments is published in the EBRD's *Sustainability Report*.³⁸

The economic assessment is based on the application of a shadow carbon price, as explained in Box 3. The resulting metrics typically include an expected economic rate of return, economic net present value and/or cost effectiveness assessment.

The Bank also uses other quantitative and qualitative indicators to appraise climate risk – for example, specific GHG emissions indicators in carbon-intensive industries and installations – which are then compared with international best practice. Collaboration with other MDBs led to the development and publication of a common framework for climate risk metrics in 2019.

Table 13. **EBRD Green Cities metrics (as of December 2021)**

EBRD Green Cities portfolio	Green cities	53 cities	Benefitting 71 million citizens
GCAPs	No. of action plans	38	22 GCAPs adopted or completed, 12 initiated and 4 in procurement
Green impacts	Annual CO ₂ e savings	1,285 kilotonnes CO ₂ e/year	Equivalent to taking 279,300 cars off the road each year
	Annual water savings or wastewater treated	209 million m ³ /year	Equivalent to the annual water consumption of 3.985 million people (EU average)
	Annual energy savings	4,350,334 GJ/year	Equivalent to the annual electricity consumption of 323,300 households (EU average)
	Annual material savings	382,645 t/year	Equivalent to the annual municipal solid waste of 777,730 people (EU average)

³⁷ See ADB, AFD, AfDB, EBRD, GEF, IDB, KfW, NEFCO, NIB and World Bank Group (2015).

³⁸ For more information, see EBRD (2021a).

Box 3. Economic assessment of EBRD direct investment projects with high GHG emissions

Since January 2019, the EBRD has conducted economic assessments of projects with high GHG emissions. The Bank's current shadow carbon prices are based on values recommended by the High-Level Commission on Carbon Prices (2017). A shadow carbon price assigns a monetary value to GHG emissions to correct for market failures. This is particularly important in instances where carbon prices remain limited or non-existent, as is the case in many of the economies in which the EBRD invests. The shadow carbon prices applied are expected to evolve over time to reflect international best practice and available evidence.

This economic assessment is conducted for projects with a known use of proceeds that leads to a net increase in emissions of 25,000 tonnes or more per year after EBRD investment, or those that have gross emissions of 100,000 tonnes or more per year in absolute terms. The methodology compares projects with a no-investment case and with feasible low-carbon alternatives. The assessment provides EBRD Management with useful information on the economic value of projects and potential alternatives to it. The results are included in project approval documents and presented to the Board of Directors in a dedicated "green annex".



5.2. Target overview

Table 14. Target overview

5.2 Targets			
Section	Subsections	Progress	Pages
Paris alignment	<ul style="list-style-type: none"> Alignment with six building blocks Timeframe: end of 2022 	On track	38
GET	<ul style="list-style-type: none"> Green financing to account for more than 50 per cent of Bank investment Timeframe: 2021-25 	Target reached for 2021, needs to be reached every year	38
Emissions reduced through financing	<ul style="list-style-type: none"> GHG emission reduction of 25-40 million tonnes over 2021-25 (cumulative, ex-ante estimates) Time frame: ongoing 	Emissions reduced by 6.9 MtCO ₂ e (ex ante) in 2021	39
Carbon neutral in internal operations	<ul style="list-style-type: none"> Operating GHG emissions offset since 2017 Remain carbon neutral in future Timeframe: ongoing 	Operating GHG emissions offset since 2017	39

5.2.1. Target: Paris alignment

The Bank has set itself the target of aligning with the Paris Agreement by end 2022 and is on track to complete the implementation of all six building blocks of the Paris alignment approach. Since June 2021, all direct finance projects require screening and a determination in relation to the climate mitigation and climate resilience goals of the Paris Agreement. In the second half of 2022, the Bank will expand this assessment to cover all investments.

5.2.2. Target: Green Economy Transition (GET)

The GET approach for 2016-20 (GET 1.0) aimed to increase the Bank's green financing to around 40 per cent of all of its financing. The highest GET share, of 46 per cent of total EBRD financing, was recorded in 2019, but this dipped to 29 per cent in 2020 due to the Covid-19 pandemic and the need to provide short-term liquidity to clients during this period.

In 2020, the Board of Directors approved the new GET approach for 2021-25³⁹ (GET 2.1) as part of the SCF 2021-25. The new approach aims to scale up the Bank's contribution to addressing the climate and environmental crisis. Through the new GET approach, the EBRD will increase green finance to more than 50 per cent of its annual business volume by 2025.

In 2021, the EBRD invested €5.4 billion in green finance, corresponding to a GET share of 51 per cent. It spanned climate mitigation, climate adaptation and other environmental activities, leading to an expected annual emission reduction of almost 7 million tonnes of CO₂e and the committed installation of around 1,979 MW of renewable energy capacity. The Bank's 2021 GET results are further detailed in the EBRD's *Sustainability Report 2021*.

Table 15. EBRD annual GET finance commitments, 2016-21

Type	GET					
	2016	2017	2018	2019	2020	2021
GET finance commitments (€ million)	2,942	4,054	3,344	4,618	3,192	5,366
GET share of Annual Bank Investment (%)	34%	43%	36%	46%	29%	51%

³⁹ See EBRD (2020a) and EBRD (2020b)

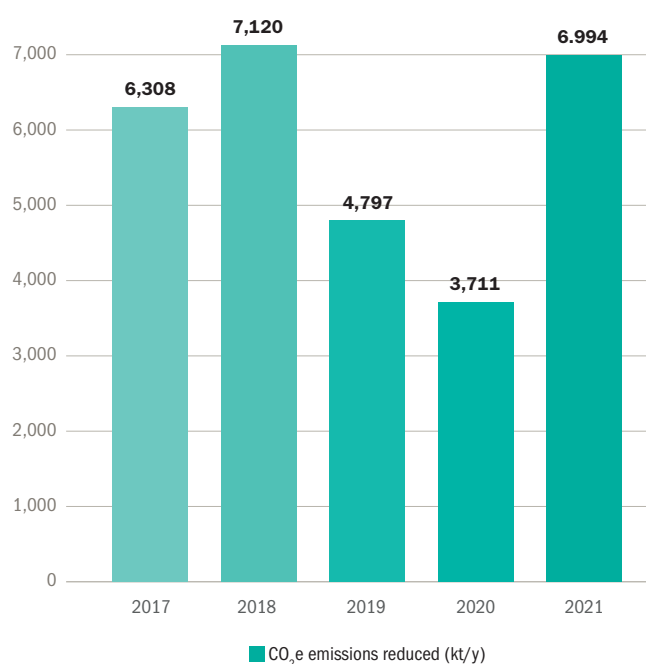
5.2.3. Target: Emission reductions through financing

The Bank seeks to achieve net GHG emission reductions of 25-40 million tonnes through the projects it finances between 2021 and 2025, based on cumulative ex ante estimates. In 2021, GET projects reduced approximately 7 million tonnes of CO₂e emissions. The Bank's estimated emission reductions in recent years are presented in Figure 19.

5.2.4 Target: EBRD internal operations – carbon-neutral GHG emissions

The Bank aims to be carbon neutral in its internal operations. To this end, it has introduced a number of measures in recent years to decrease its internal operating GHG emissions. This includes LED lighting, upgraded heating and cooling systems, purchasing electricity from renewable sources and encouraging low-carbon business travel. For the remaining operational emissions (12,783 tCO₂e in 2021), Gold Standard carbon offset credits have been purchased since 2017 to achieve the carbon-neutral target. The Bank's *GRI Report 2021 – Sustainability Disclosures* provides further information.⁴⁰ For clarity, this does not cover the Bank's Scope 3 emissions due to the complexities of gathering reliable data on client emissions in the EBRD's regions. The Bank is working to account for and report its Scope 3 emissions over time.

Figure 19. Annual estimated GHG reductions through projects financed, 2017-21



5.3 Carbon transition risk stress tests overview

Table 16. Carbon transition risk stress test overview

5.3 Carbon transition risk stress test		
Section	Subsections	Pages
Initial stress test	<ul style="list-style-type: none"> Bottom-up stress test of top 100 corporate clients Top-down sensitivity analysis of banking portfolio Overall stress-test conclusions 	39-40

5.3.1 Bottom-up carbon transition stress test of top 100 clients

In 2021, the EBRD carried out its first pilot carbon transition stress test of its top 100 corporate counterparties. This was a preliminary attempt to estimate the magnitude of credit losses the Bank might face due to the low-carbon transition. The Bank used three NGFS scenarios (Table 17) to test two balance-sheet approaches: static and dynamic. The main parameters used to stress the clients were a shadow carbon price to measure carbon transition risk as a proxy for government policy and the price signals needed to meet these different emission reduction scenarios.

The Bank's 100 largest clients account for 59 per cent of its total corporate portfolio (of which 94 per cent are debt investments and 6 per cent equity). In conducting the test, the Bank used three climate risk scenarios, broadly based on the NGFS phase II representative scenarios (outlined in Table 17).⁴¹

Table 17. NGFS scenarios used in stress testing

Scenario	Dimension	Description
Net zero 2050	Orderly	Net zero 2050 limits global warming to 1.5°C through stringent climate policies and innovation, reaching global net zero CO ₂ emissions around 2050. Some jurisdictions such as the US, EU and Japan reach net zero for all GHGs.
Delayed transition	Disorderly	Delayed transition assumes annual emissions do not decrease until 2030. Strong policies are needed to limit warming to below 2°C. CO ₂ removal is limited.
Current policies	Hot house world	Current policies assumes that only currently implemented policies are preserved, leading to high physical risks.

⁴⁰ See EBRD (2022b).

⁴¹ See NGFS (2021).

The EBRD applied each of these scenarios using **static and dynamic balance-sheet approaches**. Under the static approach, the size and composition of the Bank's balance sheet was unchanged over the projection period. Exposure at default was fixed at the start date and it was assumed that there were no subsequent disbursements or repayments. This approach does not provide for potential changes in risk profile based on the replacement of amortising exposure by lower-climate-risk investments. In contrast, in the dynamic approach, the Bank considers loan amortisation prior to the potential default, allowing for the modelling of changes in the composition of the balance sheet and, thus, climate risk exposure. The static approach is the more conservative of the two.

Stress-test results

The impact of the carbon transition stress test indicates relatively small exposure to carbon transition risk for the 100 corporate clients included in the test. This preliminary analysis shows "worst-case" financial losses to be in the order of 3 per cent of exposure at default (EAD), on a par with a cyclical 30-year downturn scenario assessed as part of the EBRD's bank-wide stress test.

The test results indicate that the carbon transition scenario would have a high impact on 18 per cent of the Bank's exposure to its top 100 corporate clients. The most prominent sectors in the high-impact category are electricity generation, oil refining, petrochemicals, metallurgy and aviation.

Of those classified as high financial impact, the proportion of exposure expected to default is about 30 per cent of the EBRD's total assets related to its top 100 clients. The key sectors impacted are energy generation and petroleum refineries. Five counterparties are projected to default under both scenarios (three power plants and two oil refineries).

Key results – static balance sheet

- Losses were estimated to be low: 2 per cent in the net zero 2050 scenario and 3 per cent in the delayed transition scenario.
- Five corporate clients were projected to default in both the net zero 2050 and the delayed transition scenario. The impact would cause non-performing loans (NPLs) to increase by 5 percentage points.
- Most losses comprised specific provisions under both scenarios.
- In the delayed transition scenario, total losses were slightly higher due to a greater amount of general provisions, reflecting a more severe downgrade assumption.

Key results – dynamic balance sheet

- Losses were lower in the dynamic approach than in the static approach: 1 per cent rather than 3 per cent.
- NPLs only reached about 35 per cent of the amount projected under the static balance-sheet assumption in the net zero 2050 scenario (15 per cent in the delayed transition scenario).

The dynamic balance-sheet approach is more realistic, as it allows for a change in the composition of the balance sheet and, thus, the climate risk profile, matching the Bank's overall strategy. EAD factors in future disbursement and amortisation profiles are constructed in accordance with the Bank's capital adequacy policy.

Table 18. **Overview of stress-test results**

	Static balance sheet		Dynamic balance sheet		
	Increase in NPL ratio	Cumulative losses /loss ratio as % of EAD	Increase in NPL ratio	Cumulative losses pre-replacement/loss ratio as % of EAD	Cumulative losses post-replacement/loss ratio as % of EAD
Net zero 2050	5 pp	€194 million (2%)	2 pp	€79 million (1%)	€70 million (1%)
Delayed transition	5 pp	€236 million (3%)	1 pp	€96 million (1%)	€69 million (1%)

Note: EAD = exposure at default; NPL = non-performing loan.

5.3.2 Simplified top-down sensitivity analysis of the total banking portfolio

Alongside the top 100 client carbon transition stress test, the EBRD analysed the total banking debt portfolio using a simplified top-down sensitivity analysis. As part of the exercise, the Bank applied probability of default (PD) downgrade assumptions depending on the type of exposure (sovereign or non-sovereign) and the level of carbon transition risk.

Applying the downgrade assumptions as set out in Tables 19 and 20, the Bank estimated losses of €330 million (1 per cent of EAD), not taking into account specific provisions from projected defaults.

For sovereign exposure, the downgrade assumption in Table 19 was guided by the level of country risk. The EBRD's carbon transition risk classifications for countries were largely based on the HSBC *Fragile Planet 2021* report.⁴²

For non-sovereign exposure, the EBRD determined the downgrade assumption by the level of industry sector risk. The EBRD's carbon transition risk classification for industry sectors is detailed in 5.1.2 and roughly based on Moody's 2022 environmental heatmap,⁴³ with adjustments based on internal expert review.

Table 19. Downgrade assumptions for sovereign debt

Carbon transition risk classification (country component)	PD downgrade assumptions
Low risk	0 notch
Moderate risk	1 notch
High risk	2 notches

Table 20. Downgrade assumption for non-sovereign debt exposure

Downgrade assumption for non-sovereign debt exposure	PD downgrade assumptions
Low risk	0 notch
Moderate risk	1 notch
High risk	2 notches

5.3.3 Overall stress-test conclusions

The EBRD estimates its financial exposure to carbon transition risk to be moderate to low. It is important to note that these are preliminary stress-test results. This initial estimation of losses is based on a relatively high-level approach using expert judgement, which will be improved in future iterations. Furthermore, the stress test, as a pilot exercise, was subject to the following limitations:

- The test was for climate transition scenarios only and did not take into account physical climate risk scenarios.
- The test involved a high-level assessment of each client's ability to adapt using expert judgement and in-house knowledge of the clients. No quantitative models were used, nor were these necessarily informed by actual client transition plans.
- Some of the required input data were not available for all clients, in particular, reliable GHG emissions data.
- The risk horizon for climate stress testing is substantially longer than that for a conventional stress test, resulting in less visibility and a higher degree of uncertainty around projections.

Despite the aforementioned limitations, these tests reinforce the Bank's efforts to continuously assess and adjust its balance sheet through the identification and reduction of high transition risk exposure by examining clients' ability to adapt to a low-carbon economy and develop transition plans. Moreover, the Bank remains committed to further developing its stress-testing capabilities, both with respect to carbon transition and physical climate risk.

Incorporating climate risk into risk management metrics

The Bank assigns internal credit ratings to all of its clients. These ratings reflect the financial strength of the client and, where relevant, incorporate considerations of the projected financial impact of climate change. Sovereign ratings take into account external agency ratings, which also increasingly reflect the impact of climate change.

The climate risk methodologies the Bank currently uses do not have direct implications for the EBRD's standard risk management metrics, in particular, its PD and LGD ratings and capital ratios, as these metrics already incorporate

⁴² See HSBC (2021).

⁴³ See Moody's Investors Service (2021).



some climate-related factors in their underlying analysis. While the EBRD is not yet in a position to establish a link between its climate risk scores and PD and LGD ratings, it is working to collect these data over time and eventually plans to incorporate them more clearly into its internal credit ratings. The Bank is also working to ensure its climate risk data are appropriately stored, so they can be analysed once a significant amount of data are available.

Assessing climate risk remains challenging due to its inherent uncertainty and the lack and unreliability of historical data for forward-looking climate projections. Consequently, there are gaps and inconsistencies in the EBRD's methodology that need to be remedied. The Bank is taking a balanced approach by developing transparent

methodologies and conducting pilot tests based on the latest information available. It is also disclosing climate risk information based on the data and tools currently available.

At the same time, the Bank keeps abreast of new developments by engaging with credit rating agencies, data providers, commercial banks, other MDBs and international efforts on climate-related risks. Through these processes, the Bank continues to improve its assessments and the quality of its climate risk data, with the view that, over time, the data quality, indicators and methods of analysis will improve so that these methodologies can become more consistent and more fully integrated into the EBRD's risk management processes.

6. Conclusion and planned enhancements

The EBRD will continue to implement more comprehensive climate risk-assessment frameworks for the analysis of all new and existing projects and clients and utilise the information gathered to improve its overall strategy and procedures. The integration of climate considerations into all aspects of its business will improve the financial resilience of the Bank, the clients it works with and the broader economies in which those clients operate in the face of a changing climate.

The Bank employs “sound banking practices” in all of its operations, as required by the Agreement Establishing the EBRD. In line with its approach to other emerging regulations, the Bank will continue to engage with other institutions, including regulated banks, to monitor developments and implement emerging best practices in assessing climate-related financial risk. In this spirit, the Bank intends to:

- expand its climate risk assessment to cover all transactions within its Paris alignment framework by 2023, including assessments for carbon transition and physical climate risks
- further refine carbon transition and physical climate risk methodologies to include equity, sovereign/sovereign-guaranteed and treasury transactions
- apply climate stress tests and scenario modelling to larger sections of its existing portfolio using the NGFS scenarios and modelling of physical climate risk
- establish processes for identifying the materiality of climate-related risks in its portfolio relative to other risks


- report on financed emissions
- develop internal tools to monitor climate risk commitments and the transformation of clients’ business models
- monitor the evolution of climate-related regulation and best practices
- continue to collaborate with external organisations, including MDBs and private-sector banks, to refine the methodologies for climate risk management
- continue to participate as an observer in the NGFS alongside other multilateral development organisations and contribute to the EU Platform on Sustainable Finance and the EU International Platform on Sustainable Finance
- share its experience and lessons learned with relevant external institutions.

The Bank also intends to scale up its support for clients to improve their capacity to recognise and manage climate-related risks and opportunities. The Bank’s corporate climate governance Client Advisory Facility aims to boost clients’ capacity to manage financially relevant climate considerations throughout all aspects of their business operations. Through this new endeavour, as well as continued expansion of the Bank’s climate financing programmes, the EBRD aims to disseminate good practices on climate governance and risk management, expand climate finance and enhance climate resilience for its clients and throughout the regions in which it invests.



References

- ADB, AfDB, EBRD, EIB, IADB, IsDB and World Bank Group (2019) *A Framework and Principles for Climate Resilience Metrics in Financing Operations*, London. Available at: <https://www.ebrd.com/documents/climate-finance/a-framework-for-climate-resilience-metrics-in-financing-operations.pdf>.
- ADB, AfDB, AIIB, EBRD, EIB, IADB, IsDB and World Bank Group (2020) *2020 Joint Report on Multilateral Development Banks' Climate Finance*, London.
- AfDB, ADB, AIIB, EBRD, EIB, IDB, IsDB and NDB (2021) *MDB Just Transition High-Level Principles*, Glasgow, UK. Available at: <https://www.adb.org/sites/default/files/related/238191/MDBs-Just-Transition-High-Level-Principles-Statement.pdf>.
- ADB, AFD, AfDB, EBRD, GEF, IDB, KfW, NEFCO, NIB and World Bank Group (2015) *International Financial Institution Framework for a Harmonised Approach to Greenhouse Gas Accounting*, London. Available at: https://www.worldbank.org/content/dam/Worldbank/document/IFI_Framework_for_Harmonized_Approachper cent20to_Greenhouse_Gas_Accounting.pdf.
- EBRD (n.d.) "EBRD's Green Bond Issuance", London. Available at: <https://www.ebrd.com/work-with-us/sri/green-bond-issuance.html> (last accessed 5 July 2022).
- EBRD (1990) *Agreement Establishing the European Bank for Reconstruction and Development*, Paris. Available at: <https://www.ebrd.com/news/publications/institutional-documents/basic-documents-of-the-ebrd.html>.
- EBRD (2018a) *Energy Sector Strategy 2019-2023*, London. Available at: <https://www.ebrd.com/power-and-energy/ebrd-energy-sector-strategy.pdf>.
- EBRD (2018b) *The MDBs' alignment approach to the objectives of the Paris Agreement: working together to catalyse low-emissions and climate-resilient development*. London. Available at: <https://www.ebrd.com/paris-alignment-indirect.pdf>.
- EBRD (2019a) *Environmental and Social Policy*. London. Available at: <https://www.ebrd.com/news/publications/policies/environmental-and-social-policy-esp.html>.
- EBRD (2019b) *Methodology for the economic assessment of EBRD projects with high greenhouse gas emissions*, London. Available at: <https://www.ebrd.com/news/publications/institutional-documents/methodology-for-the-economic-assessment-of-ebrd-projects-with-high-greenhouse-gasemissions.html>.
- EBRD (2019c) *Agribusiness Sector Strategy 2019-2023*, London.
- EBRD (2019d) *Transport Sector Strategy 2019-24*, London.
- EBRD (2019e) *Municipal and Environmental Infrastructure Sector Strategy*, London.
- EBRD (2019f) *EBRD Property & Tourism Sector Strategy 2020-2024*, London.
- EBRD (2020a) *Green Economy Transition Approach 2021-2025*. London. Available at: <https://www.ebrd.com/documents/comms-and-bis/get-20212025.pdf?blobnocache=true>.
- EBRD (2020b) *EBRD Strategic and Capital Framework 2021-2025*. London. Available at: <https://www.ebrd.com/what-we-do/strategies-and-policies/strategic-and-capital-framework-2021-2025.pdf>.
- EBRD (2021) *EBRD Financial Sector Strategy 2021-2025*, London. Available at: <https://www.ebrd.com/what-we-do/strategies-and-policies.html>.
- EBRD (2022a) *Sustainability Report 2021*, London. Available at: <https://www.ebrd.com/news/publications/sustainability-report/ebrd-sustainability-report-2021.html>.
- EBRD (2022b) *GRI Report 2021 – Sustainability Disclosures*, London. Available at: <https://www.ebrd.com/gri-2021>.
- EBRD (2022c) *Financial Report 2021*, London. Available at: <https://www.ebrd.com/news/publications/financial-report/financial-report-2021.html>.
- HSBC Global Research (2019) *Fragile Planet: The politics and economics of the low-carbon transition*, London. Available at: <https://www.sustainablefinance.hsbc.com/carbon-transition/fragile-planet-the-politics-and-economics-of-the-low-carbon-transition>.
- HSBC Global Research (2021) *Fragile Planet 2021 – Scoring climate risks: who is the most resilient?* London. Available at: <https://www.research.hsbc.com/C/1/1/320/BzSGfhL>.
- ICMA (2021) *Handbook: Harmonised Framework for Impact Reporting*, Paris. Available at: <https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Handbook-Harmonised-Framework-for-Impact-Reporting-June-2021-100621.pdf>.
- Moody's Investors Service (2020) *ESG – Global revised classification of environmental considerations reflects evolving standards*, New York.
- Moody's Investors Service (2021) *Environmental heat map: Updates to scores for certain sectors*, New York.
- NGFS (2021) *NGFS Climate Scenarios for central banks and supervisors*, Paris. Available at: https://www.ngfs.net/sites/default/files/media/2021/08/27/ngfs_climate_scenarios_phase2_june2021.pdf.
- PCAF (2020) *The Global GHG Accounting and Reporting Standard for the Financial Industry*. First edition. Available at: <https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf>.
- TCFD (2017) *Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures*, New York. Available at: <https://www.fsb-tcfd.org/publications/final-recommendations-report/>.
- TCFD (2021) *Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures*, New York. Available at: <https://www.fsb.org/wp-content/uploads/P141021-4.pdf>.
- Warsaw Stock Exchange (2021) *2021 Integrated Report of the GWP Group*, Warsaw. Available at: https://www.gpw.pl/pub/GPW/files/raporty_roczne/GPW_Raport_21_EN.pdf.



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