TYPES OF RISKS AND ITS MITIGATIONS

ENVIRONMENTAL, SOCIAL, & GOVERNANCE (ESG) RISK MANAGEMENT

ESG Risk Management Coverage

Alignment of ESG aspects is also one of Bank Mandiri's priorities in long-term business transformation. Through the stream "Conduct Sustainable Business", Bank Mandiri has developed ESG frameworks, roadmaps and initiatives with a target focus on the transition to a low-carbon economy, emission reduction and net zero in bank operations and increasing social impact in achieving SDGs targets.

To achieve this target, particularly in fostering the transition to a low-carbon economy, Bank Mandiri continues to identify, measure and evaluate ESG risks including climate risks, specifically in the financing aspect.

The ESG risk management system in the loan process includes Bank Mandiri's loan services for the wholesale and retail segments. Bank Mandiri establishes and applies the Technical Guidelines for Environmental and Social Analysis in Lending which is used as a reference in conducting environmental analysis in lending analysis.

This is in line with the efforts made by the Financial Services Authority (OJK) regarding the Asset Quality Assessment of Commercial Banks, which regulates that the assessment of the debtor's business prospects is also associated with the debtor's efforts in maintaining the environment.

ESG Risk Management System

ESG risk assessment on loan is carried out at each stage of loan disbursement end-to-end and integrated by the Business Unit, Credit Operation Unit and Credit Risk Management Unit. Each Business Unit conducts an assessment based on the Portfolio Guideline then carries out a pre-approval process using credit risk tools including the application of ESG aspects, for the wholesale segment, the assessment is stipulated in the Industry Acceptance Criteria (IAC), while for the retail segment, the assessment is carried out through a credit risk scorecard, with reference to the Risk Acceptance Criteria of each product.

Bank Mandiri establishes risk appetite and industry appetite in line with ESG issues in the Bank's policies as outlined in the Industry Acceptance Criteria (IAC) technical guidelines in Internal Regulation No.B3.P1.T16.IAC. Details of businesses covered is presented in the Sustainable Banking section of this report.

The Business Unit conducts due diligence, if necessary, on prospective debtors to explore issues related to Escalation submitted by the Business Unit to the authority holder to approve credit, where this function is carried out by the Senior VP to the Board of Directors. Lending decisions are made by the Business Unit and Credit Risk Management Unit independently with a four-eye-principle process.

The Bank periodically reviews and refines general credit policies, credit procedures per business segment and risk management tools, particularly sectors with high ESG and climate risks. Each Business Unit conducts a more detailed and in-depth assessment of each business activity to determine related ESG requirements in IAC and RAC, including based on input and involvement from regulators and resource persons.

Bank Mandiri analyzes the performance of sectoral portfolios, using sensitivity analysis of which the results are presented at the Board of Directors Forum and used as guidelines in internal business decision making.

ESG Risk Surveillance

The ESG Risk Management framework and governance at Bank Mandiri involves the active role of the Board of Commissioners and the Board of Directors. The Board of Directors monitors the implementation and fulfillment of ESG targets through the Risk Management & Credit Policy Committee (RMPC) forum, in accordance with the duties & authorities stipulated in the Decree of the Board of Directors of PT Bank Mandiri (Persero) Tbk, No. KEP.Dir/009/2021 on Risk Management & Credit Policy Committee, held quarterly with the topic of Sustainable Finance Action Plan (RAKB) performance, ESG trends, to discussion of critical issues in ESG aspects.

Furthermore, the Board of Commissioners supervises ESG implementation, fulfillment of ESG targets or commitments through the Risk Monitoring Committee (KPR) forum, which is held quarterly with topics such as reviewing the effectiveness of ESG-related risk management and supervision in financing activities.

Bank Mandiri monitors compliance in lending related to ESG aspects in accordance with bank policy, with the following measures:

1. Periodically monitor the fulfillment of ESG requirements. Bank Mandiri reviews regularly to ensure that the progress of customer projects is in accordance with the action plan that has been set. To ensure compliance with lending policies and procedures, Bank Mandiri also conducts periodic reviews and audits conducted by the Internal Audit Unit. For debtors who have not been able to meet these minimum requirements, there will be a periodic monitoring mechanism, determination of action plans and schedules needed.
2. Implement the ALERT system (watchlist) as an early warning system to identify risks that can affect the debtor's credit quality to ensure that preventive actions can be taken immediately to prevent credit quality deterioration based on financial performance, industry prospects, and fulfillment of ESG requirements.
3. Conduct an annual review as a form of check and balance of compliance with the latest internal credit policy requirements, including ESG requirements.

CLIMATE RISKS

Climate risk is an emerging risk embedded in key financial risks, such as credit risk, market risk, and operational risk. Bank Mandiri has assessed key financial risk accordingly and has considered ESG aspects in it. Climate risk is also embedded in every other type of risk managed by the Bank, including credit risk, liquidity risk, market risk and operational risk, enabling Bank Mandiri to carry out a comprehensive risk management process in accordance with existing procedures including climate risk.

Bank Mandiri has conducted an Initial Phase Climate Risk Stress Test for credit, market, and operational risks in accordance with OJK guidelines. On credit risk, credit portfolios that are potentially vulnerable to floods and forest fires have been identified; and sectoral portfolios that are characteristically classified as high emission sectors and are affected by government policies to control climate risk. For market risk, the Bank identifies market value movements in the Bank's securities portfolio which are included in the high emission sector category as a result of changes in government policy for carbon emissions.

Bank Mandiri manages climate-related financial risks, starting from risk identification and risk management framework, including conducting scenario analysis. The results of the climate risk analysis become inputs to increase the Bank's resilience to the impacts of climate risk and strengthen through various initiatives and alignment of ESG aspects in internal business processes. The impact of climate change on Bank Mandiri's sustainability based on the risk period is as follows:

1. In the short term (next 1-2 years). Climate change can have a risk impact on Bank Mandiri's financing through the potential impact of changes in government policy, inappropriate technological developments, and shifts in consumer and investor preferences, resulting in a decarbonization transition that affects borrower profitability, cash flow, and asset value.
2. In the medium (5-10 years) and long term. Severe and prolonged climate impacts can threaten the environment, such as floods, landslides, heat waves, food crises and other natural disasters.

Climate Risk Mitigation

Bank Mandiri is committed to managing its business and operations by prioritizing ESG principles to become "Indonesia's Sustainability Champion for Better Future". This commitment is Bank Mandiri's response in supporting the Government's aspirations towards a low-carbon economy.

In sectors that have high climate risk such as plantations, mining and energy, Bank Mandiri conducts intensive monitoring in fulfilling the ESG aspects that have been required by the Bank. Going forward, Bank Mandiri strives to conduct more comprehensive climate risk impact measurements, such as conducting climate scenario analysis and testing credit portfolios for customers against climate risks including transition and physical risk.

TYPES OF RISKS AND ITS MITIGATIONS

Climate-related Risks	Mitigation
Rising prices of raw materials and/or commodities due to climate change, weather problems, or crop failure	• Conduct stress tests and create watchlists to be monitored regularly in order to analyse customers affected by related issues.
The risk of energy transition in countries that still rely on coal as the main energy source such as in Indonesia	• Bank Mandiri adjusts its lending policy to the energy sector that uses coal in accordance with the Government's energy transition plan, such as phasing out financing for the coal sector starting in 2040.
Acute physical risk caused by extreme climate change, such as floods, landslides and haze due to forest fires.	• Implementation of Business Continuity Plan and establishing data centers in several different places to mitigate disruption of customer convenience in transactions and protect the risk of data loss due to hydrometeorological disasters. • Implementation of BCM according to international standards based on ISO 22301: 2019 to realize a resilient organization from potential internal and external threats through the readiness of BETH13 components (Building, Equipment, Technology, Human Resource & 3rd Parties). • BCM also interacts with climate institutions such as the Meteorology, Climatology and Geophysics Agency (BMKG), in order to identify early and be able to carry out early action plans and socialize to all employees.

Climate-related opportunities	Response
Investment in technologies for new renewable energy is on the rise. According to records from the Ministry of Energy and Mineral Resources, in 2021, the use of renewable energy reached 11.5% of the total national energy.	Bank Mandiri builds internal capabilities to assist the transition to green energy in the sector. As of December 2022, Bank Mandiri has financed 10 renewable energy projects

Governance Bodies' Involvement on Climate Risk

Coordination of ESG-related aspects, including climate risk, at Bank Mandiri is carried out by ESG Group under the Vice President Director who is authorized to manage the framework, alignment of provisions in line with ESG and climate change issues, sustainable portfolio management, and responsible operational strategies of the Bank, including communication and reporting functions to external and internal parties. Reports from the ESG Unit are then regularly forwarded to the Board of Directors as needed and to the Board of Commissioners with a frequency of at least 4 times per year.

In the implementation of ESG and climate management, the Board of Directors takes a role in strategic functions, to:

1. integrate ESG aspects bank-wide, establish the direction of Bank Mandiri's Sustainable Finance (Sustainability) which includes Framework, Commitment, Strategy, Initiatives, Roadmap related to climate targets and SDGs achievement;
2. carry out supervisory functions related to ESG and climate risks and opportunities, implementation of Sustainable Finance, fulfillment of appropriate ESG targets and initiatives;
3. accountable in ensuring the achievement of sustainability aspirations to stakeholders; and
4. build the collaboration and partnership needed to accelerate the Company's progress towards achieving SDGs and climate targets.

The Board of Directors in this case is assisted by the Risk Management and Policy Committee (RMPC). The forum with Risk Management and Credit Policy Committee (RMPC) is held quarterly on the topic of Sustainable Finance Action Plan (RAKB) performance, ESG trends, including discussion of critical issues in ESG aspects.

The Company's Board of Commissioners takes an important role in managing ESG and climate aspects, particularly to ensure the integration of ESG and climate aspects in Bank Mandiri's long-term goals, including fostering efforts beyond compliance and adoption of best practices, and overseeing the management of risks and opportunities related to sustainability and climate. To carry out this task, the Board of Commissioners is supported by the Risk Oversight Committee (ROC). The Risk Oversight Committee (ROC) forum is held quarterly including discussing the effectiveness of ESG-related risk management and supervision in financing activities.

The functions and obligations of the Board of Directors and in the implementation of Bank Mandiri's sustainable finance are stipulated in Board of Directors Decree No. KEP.DIR/009/2021 dated 13 January 2021 on Risk Management & Credit Policy Committee and Decree of the Board of Commissioners No. KEP.KOM/007/2022 dated 18 November 2022 on the Risk Monitoring Committee Charter. The specific organ, ESG Group, was established in accordance with the Decree of the Board of Directors of KEP.DIR/32/2022 dated 12 September 2022.

Climate Risk Resilience

In the reporting period, Bank Mandiri has conducted a climate risk resilience assessment based on OJK Letter No. S-16/PB.013/2023 which requires KBMI 3 & 4 banks to assess climate risk in the portfolio. In the study, climate-related risks were compared with qualitative initial assessments associated with credit risk, market risk, and operational risk to physical risk events, namely flooding for residential and commercial property collateralized loan portfolios and drought/forest fire risk events for portfolios to corporations and MSMEs for the forestry and plantation sectors.

The assessment provides an overview of potential losses that will occur and their impact on credit, market, operational and capital risks of the Bank. For transition risk, an assessment was conducted on the portfolio of several high emission sectors by looking at the projected impact of increased carbon emissions and changes in government policy on credit risk, market risk, operational risk and the Bank's capital. The transition scenario uses the NGFS scenario according to OJK guidelines, namely Net Zero 2050, Delayed Transition and Current Policies.

In credit risk, portfolios that are potentially vulnerable to floods and forest fires have been identified as well as sectoral portfolios that are classified as high emission sectors and affected by government policies to control climate risk. For market risk, the Bank identifies market value movements in the Bank's securities portfolio which are included in the high emission sector category as a result of changes in government policy for carbon emissions.

We analyze drought/forest fire/flood climate risk events to Bank Mandiri's operations and property which, based on the study, have the potential to cause damage and loss to the Bank's technology system and property, as well as disruption to employee mobility and health. In this scenario, the Bank already has a Disaster Recovery Plan mitigation plan that includes a contingency plan for catastrophic events.

Bank Mandiri will continue to develop climate risk stress testing in accordance with regulatory directives and the Bank's needs in planning climate risk management in the Company's portfolio. In accordance with technological advances, going forward it is necessary to develop specific models and analytics used in quantifying climate and environmental impacts, more detailed current data and information, scenarios and assumptions according to the direction of regulators.