



# Report on Social, Environmental and Climate-related Risks and Opportunities

Volume 1 | September 2021





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# Report on Social, Environmental and Climate-related Risks and Opportunities

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## Preface

It is with great pleasure that the Banco Central do Brasil (BCB) makes public its first Report on Social, Environmental and Climate-related Risks and Opportunities. This new publication strengthens the transparency of the Institution's actions regarding relevant themes and also marks a commitment on the part of the BCB, within its institutional mandate attributions, to take part in facing one of the greatest challenges of our generation: the mitigation of risks stemming not only from environmental and climate changes but also from the existence of disparities in social affluence and participation opportunities that may hinder the BCB's mission accomplishment, which is to ensure the stability of the currency purchasing power, to foster a sound, efficient and competitive financial system, and to promote the economic well-being of society.

Social and environmental responsibility is a corporate value that has been present in our internal processes, as well as in the National Financial System (SFN) regulation and supervision activities for a long time. Especially during the last decade, the BCB moved forward and released regulation aiming to promote the integration of social and environmental risk factors into the risk analysis of financial institutions. As governments and the private sector across the globe started to formalize social, environmental and climate issues into their activities, it became clear that the BCB's early movement was correct. Nevertheless, the work of the monetary authority in putting forward prudential rules and inducing best (and necessary) practices is just at the beginning.

Indeed, from an environmental and climate perspective, several economic activities will be subject to changes and adaptations. This transition stage certainly will not happen overnight and, considering production and consumption dynamics, new economic sectors may emerge while others will disappear. It is under responsibility of the BCB to be vigilant, to monitor and control risks that may compromise its mission, as well as occasional economic consequences of increasingly common and extreme climate events.

But this time of risk awareness also reveals important opportunities. Brazil is an extremely privileged country when it comes to its environmental and climatic variety. We have vast biomes rich in animal and plant biodiversity, as well as cutting edge technology on agriculture and livestock business. Supported by an advanced financial system that is capable of swiftly and efficiently providing funding to these sectors, the transition to a low-carbon economy can undoubtedly be beneficial to the country's economic development.

And, embracing these much-needed changes towards a better and sustainable future, we understand that it is appropriate to move forward with equally relevant tasks. The BCB promotes the democratization of financial knowledge, ample access to the financial system, and options for efficient and widespread credit allocation. In order to achieve these goals, the BCB invests in partnerships for the diffusion of financial education. It also constantly implements new technological solutions for the public and the financial system. It is also promoting modernization in areas such as microcredit, cooperativism, currency convertibility, and capital markets. Moreover, the BCB recognizes the importance of reducing social disparities and, within the Institution, seeks equality in opportunities and treatment among its workforce. After all, dignity, prosperity, and welfare for society as a whole are undoubtedly part of the equation.

Fortunately, the BCB is not alone in dealing with the several challenges laid out throughout this report. Since 2017, central banks all over the world have joined a formal cooperation network, the Network for Greening the Financial System (NGFS), boosting the exchange of experience, recommendations, and best practices. There is a large coordinated global effort towards the identification and quantification of risks and opportunities, to make it possible to design effective actions aiming to reduce inequalities and reach a balanced relationship between nature and economic activity. Even though there is still no established pattern for the metrics, a body of knowledge is gradually taking shape and that helps us moving forward. This report already covers some initial measures and metrics, and others will certainly be incorporated as the building of a consensus on measuring and disclosing this kind of risk evolve. It is an important management tool for the institution and an accountability tool for society, by making the BCB's actions transparent.

The themes highlighted in this report are at the frontiers of knowledge, which is where central banks must be. Still, research and data generation on several fronts are of the utmost importance in this area. This very report is the first edition of a regular publication on the subject, and it will evolve continually. So, I hope that this report proves to be useful and informative and that it helps us find solutions to the coming challenges and opportunities, which are in our hands, both as individuals and organizations.

Roberto Campos de Oliveira Neto  
Governor of the Banco Central do Brasil

## Executive Summary

This report presents an integrated view of the BCB initiatives related to social, environmental, and climate risks and opportunities. These risks and opportunities are connected to the environmental, social, and governance (ESG) factors, including the risks and opportunities that are consequences of climate change, and that may have an impact on internal BCB processes and the National Financial System (SFN).

The BCB keeps a public agenda denominated as Agenda BC#, which is a set of initiatives focused on technology to develop structural issues on the SFN. The Agenda BC# has five dimensions: “Inclusion”, “Competitiveness”, “Transparency”, “Education” and “Sustainability”. Among the actions presented in this publication, there is a specific chapter dedicated to the dimension “Sustainability” of the Agenda BC#.

Detailed information on several fronts regarding the identification and management of ESG risks is laid out in this report, both within the BCB and in the financial system and society at large. In its role as the monetary authority, regulator, and supervisor of the SFN, the BCB launched the Sustainability dimension of the Agenda BC#, in September 2020. Since then, the BCB follows a detailed schedule of actions related to sustainability and the mitigation of social, environmental, and climate risks.

Among the actions in the Sustainability dimension are the improvements in the regulation on risk management and social, environmental and climate responsibility. Monetary and exchange rate policy discussions started to include ESG issues in decision-making. Furthermore, ESG considerations are becoming increasingly more relevant in the international reserves management process.

The report gives special attention to the management of the international reserves and the Task Force on Climate-related Financial Disclosure (TCFD) recommendations. Although there is no international standard for metrics disclosure, the BCB presents some information here aiming to contribute to the discussion about financial disclosure.

The BCB participated in international forums and organizations, workgroups from the Bank for International Settlement (BIS), the Basel Committee on Banking Supervision (BCBS), Financial Stability Board (FSB), Network for Greening the Financial System (NGFS), and the G-20. In the internal context, the report shows

improvements on activities related to social and environmental issues as well as to operational tasks as the destination of banknotes process residuals.

The data presented in this publication focused on the year 2020. However, some information refers to the year of 2021, and the reader can identify the reference period as the information appears in the text.



# 1

## Introduction

### 1.1 Initial remarks

This report presents an integrated view of the BCB initiatives in 2020 and 2021 related to social, environmental, and climate risks and opportunities. These risks and opportunities are connected to the environmental, social, and governance (ESG) factors, including the risks and opportunities associated to climate change.

There are some approaches for reporting ESG factors and this report uses the recommendations presented by the *World Economic Forum* (WEF), the *Task Force on Climate-related Financial Disclosure* (TCFD),<sup>1</sup> and the *Network for Greening the Financial System* (NGFS).

This report comprises actions by the BCB that impact other institutions, such as regulation and supervision of the SFN, as well as factors related to the context that may affect the BCB itself, such as the environmental impact of banknotes processes.

The BCB has been taking several initiatives to improve the SFN. These initiatives are in the institutional Agenda BC# organized in five dimensions: “Inclusion”, “Competitiveness”, “Transparency”, “Education” and “Sustainability” – and the BCB launched the “Sustainability” dimension in September 2020. This report has a specific chapter for the actions of the “Sustainability” dimension of the Agenda BC#.

The report is in its first edition and will evolve in the future as the discussion on ESG matures since other central banks are also in the process of developing best practices of evaluating and communicating social, environmental, and climate risks and opportunities. New issues of this report will contain the evaluation of the status of the “Sustainability” dimension of the Agenda BC#, and will incorporate the improvements of the central banks and global financial system discussions on ESG.

Therefore, with this publication, the BCB moves one step ahead in improving its transparency in managing risks and opportunities related to social, environmental, and climate change issues, and it keeps the BCB aligned to the best practices in disclosing ESG information.

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1 Industry-led task-force created in 2015 by the Financial Stability Board (FSB) with the aim of developing guidelines to clear, comparable and consistent information disclosure of risks and opportunities related to climate change.

## 1.2 Report structure

This report follows the recommendations of the WEF for disclosing information related to ESG factors.<sup>2</sup> According to the WEF, this information can be organized in four pillars: “Governance Principles”, “Planet”, “People” and “Prosperity”. Each pillar has a chapter on this report, and an additional chapter brings the information on the “Sustainability” dimension of the Agenda BC#.

In “Governance Principles” the reader finds information on the institutional purpose and organizational engagement on “Sustainability” and on the risk management associated with this issue.

In the “Planet” chapter, one can find information on the actions on the part of the BCB regarding the management of risks to the international reserves resulting from climate change. The chapter also contains a discussion of climate risks to financial stability, with a focus on regulation and supervision. Risk management is a necessary tool for the institution to preserve both economic and financial stability, thus avoiding potential losses to society. For the “Planet” chapter, the WEF suggests using TCFD recommendations, which include dividing financial climate risks information into four areas: “Governance”, “Strategy”, “Risk Management”, and “Metrics and Targets”. NGFS also suggests the use of the TCFD approach for reporting climate change risks.

The chapter titled “People” presents initiatives on financial citizenship, such as the program “Learning Value”, an important initiative of financial literacy in schools, integrated with disciplines of math, Portuguese, geography and history, and social and emotional skills of the students. The chapter also discusses actions to promote equal opportunities for the BCB employees.

The chapter named “Prosperity” reports initiatives related to financial inclusion, innovation, and relationship with society. Finally, the last chapter presents actions on the Sustainability dimension of the Agenda BC#.

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<sup>2</sup> See the document: *Measuring Stakeholder Capitalism – Towards Common Metrics and Consistent Reporting of Sustainable Value Creation*.

# 2

## Governance

### 2.1 Purpose

The mission of the BCB is to ensure the stability of the currency purchasing power, to foster a sound, efficient and competitive financial system, and to promote the economic well-being of society. Socio-environmental responsibility and integrity are among institutional values, and the BCB acts respectfully towards the citizens, the environment, the institution's workforce and all the stakeholders to achieve sustainable development. The vision of the BCB is to be recognized for promoting inclusion, transparency, sustainability, and competitiveness within the financial system and for stimulating citizens' financial education.



Based on its mission, the BCB contributes to the sustainable development in its three components: social, environmental, and economic. Furthermore, the BCB evaluates and monitors the climate risks to the SFN and to the economy.<sup>3</sup>

<sup>3</sup> These risks are related to the Planet's temperature increase above 2°C, in this century, comparable to the temperatures in the pre-industrial period. Brazil signed Paris accord that stabilishes that signatory countries commit to avoid a temperature increase higher than 2°C in this century, and countries will work to keep the tempreature increase below 1,5°C.

In its Institutional Strategic Planning, the BCB highlights the risks associated with the ESG factors in its vision and also in its strategic objective of promoting sustainable finance and contributing to the reduction of socio-environmental and climatic risks within the economy and the financial system.

Looking at the BCB's institutional strategic planning and its value chain, it is possible to identify the BCB's contributions to the Sustainable Development Goals (SDGs) from United Nations that can be found in the document "Transforming our World: the 2030 Agenda for Sustainable Development".



[Click here to access the UN website on SDG.](#)

## 1 No poverty

1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, (...) and **financial services, including microfinance.**

## 2 Zero hunger

2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, (...) **financial services, markets** (...).

## 5 Gender equality

5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

## 8 Decent work and Economic growth

8.1 **Sustain per capita economic growth** in accordance with national circumstances and, in particular, at least 7% gross domestic product growth per annum in the least developed countries.

8.3 **Promote development-oriented policies** that support productive activities, decent job creation, entrepreneurship, creativity, and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, **including through access to financial services.**

8.10 **Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.**

## 9 Industrialization, innovation and infrastructure

9.1 **Develop** quality, reliable, sustainable and resilient **infrastructure**, (...) to support economic development and human well-being, with a focus on affordable and equitable access for all.

9.3 Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to **financial services, including affordable credit**, and their integration into value chains and markets.

## 10 Reduce inequality

10.c By 2030, reduce to less than 3 per cent the **transaction costs of migrant remittances** and eliminate remittance corridors with costs higher than 5 per cent.

10.5 Improve the **regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations**.

10.6 Ensure enhanced representation and voice for developing countries in decision-making in global international economic and financial institutions in order to deliver **more effective, credible, accountable and legitimate institutions**.

## 12 Sustainable consumption and production

12.6 Encourage companies, especially large and transnational companies, to **adopt sustainable practices and to integrate sustainability information into their reporting cycle**.

## 16 Peace, justice and effective institutions

16.a **Strengthen relevant national institutions**, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime.

16.b Promote and enforce **non-discriminatory laws and policies for sustainable development**.

16.4 By 2030, significantly reduce illicit **financial** and arms **flows**, strengthen the recovery and return of stolen assets and combat all forms of organized crime.

16.6 Develop **effective, accountable and transparent institutions** at all levels.

## 17 Partnerships and means of implementation

17.13 Enhance global **macroeconomic stability**, including through policy coordination and policy coherence.

## 2.2 Structure and engagement

The governing body of the BCB is its Board of Governors. The BCB has also an Executive Secretariat, a General Counsel-Legal Department, Departments, and Regional Offices. The highest decision-making level is the Board of Governors, with the Governor and Deputy-Governors. There are three Committees at the level of the Board of Governors:

- The Monetary Policy Committee (Copom) meets ordinary eight times a year to announce the target for the monetary policy interest rate.
- The Financial Stability Committee (Comef) defines strategies, guidelines to preserve financial stability and mitigate systemic risk.
- The Governance, Risk, and Control Committee (GRC) defines guidelines and strategies related to corporate governance, risk management, and internal controls. Among the risks addressed by the GRC are the social, environmental and climate-related risks.

In 2017, the BCB launched the Socio-Environmental Responsibility Policy and it created the governance structure to implement and monitor the policy. The Organizational Socio-Environmental Responsibility Committee was created in the same year to coordinate socio-environmental internal actions, to consolidate best practices and to promote integration and sharing of experiences about initiatives and projects related to sustainability in the BCB.

The BCB participates in several forums and international initiatives, such as the Basel Committee on Banking Supervision, Financial Stability Board (FSB), Network for Greening the Financial System (NGFS) and G-20, that have specific groups dedicated to discussions about climate change and the impacts in the financial system. The BCB also supports the TCFD.

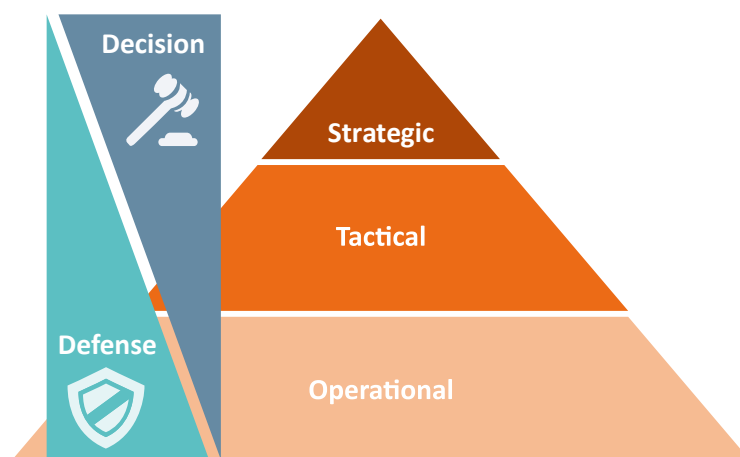
The Deputy-Governor of International Affairs and Corporate Risk Management is the BCB representative in the NGFS and is also in charge of promoting coordination between the BCB areas in their efforts related to green finance and climate change risks. In 2020, the BCB announced the “Sustainability” dimension of the Agenda BC#, which is comprised of actions addressed internally to the BCB and those addressed to the National Financial System. Chapter 6 presents details of the “Sustainability” dimension of the Agenda BC#.

## 2.3 Integrated risk management

BCB has a well-established corporate risk management structure, with models based on best international practices. By adopting the Enterprise Risk Management approach, risk management seeks to comprehensively assess BCB’s risk exposure, considering not only the different types of risks incurred, but also the interaction between them.

The information produced within the scope of corporate risk management process – using a specific methodology – supports decision-making and seeks to strengthen the defense of the organization’s processes. Thus, there are two different and complementary approaches – as illustrated at following figure: creating value by supporting strategic decisions; and protecting value, by identifying, assessing, controlling risks, and mitigating possible losses.

The figure shows that the relevance of these two approaches to corporate risk management – decision and defense – varies within the hierarchical structure of the organization. At the strategic level, the use of risk information is highlighted as an input for decision-making by senior management, such as resource allocation and strategic actions development.



Once a decision is made, risk management at operational level enables the implementation of that decision in a controlled manner, after the adoption of additional risk mitigation measures, when necessary. At the tactical level of the organization, the data produced by risk management serve as complementary approaches between decision and defense.

Social, environmental and climate risks are part of BCB’s Risk Management Policy and are being introduced in the models used for different types of risk, reaching all institutional processes. Therefore, those types of risk can be managed and are considered in the decision-making process.

### 2.3.1 Strategic risks

In order to ensure the achievement of institutional objectives, it is necessary to manage the risks related to BCB’s strategy. Consequently, the so-called strategic risks correspond to the measurement of uncertainty related to potential external and internal events that may affect the fulfillment of BCB’s institutional mission or its strategic objectives.

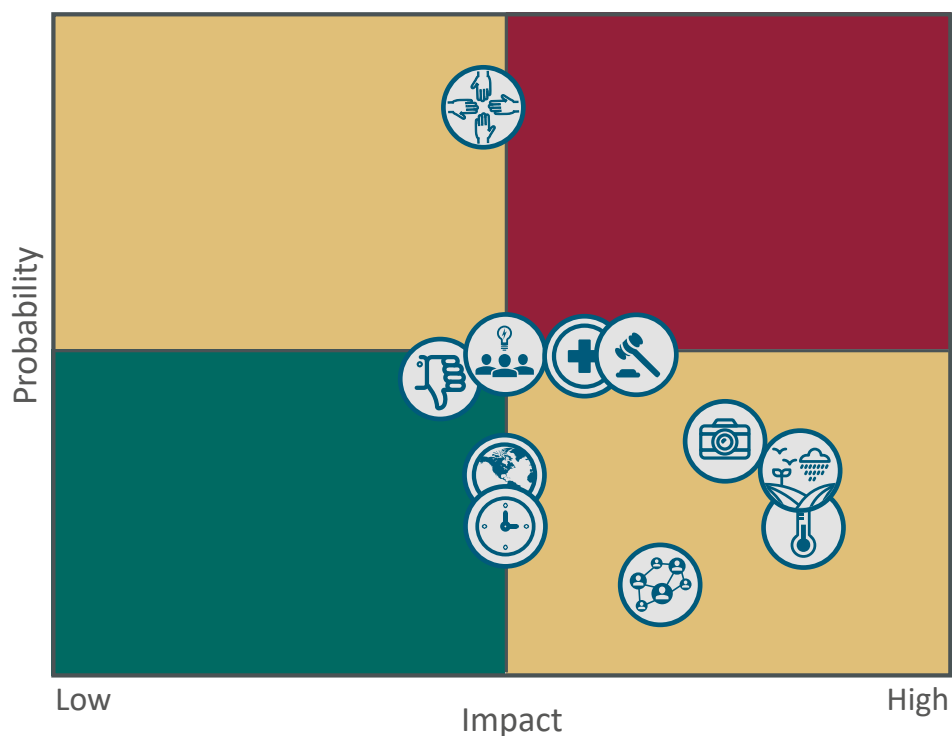
In addition to measuring impacts – by analyzing the magnitude of the possible effects on the strategic objectives – another element considered is the probability of occurrence of each risk.

The identification and measurement of strategic risks is carried out through a consensus perception model,<sup>4</sup> and followed by expert judgment.<sup>5</sup> Finally, the analysis of BCB’s strategic risk matrix and the criticality of each risk make it possible to identify top strategic risks and define priority for risk response.

Following it is possible to find the illustration of the 2021 strategic risk matrix referring to the strategic objective “Promote sustainable finances and contribute to the reduction of socio-environmental and climate-related risks within the economy and the Financial System” and the main measures to mitigate these risks.

<sup>4</sup> Consensus perception model: model developed by BCB and composed of rounds for risk assessment with the participation of BCB experts until consensus is reached on the relevance of risks and their measurements.

<sup>5</sup> Expert judgment: validation by the members of GRC of the risks mapped in the consensus perception model, and possible reassessment.



**A. Failure to coordinate actions**



Risk of failure to coordinate institutional actions in response to social, environmental and climate-related risks for the Brazilian economy. Possible consequences of this risk are uncertainties related to compliance with standards and agreements on climate between countries, which, in turn, may impact the flow of investments to Brazil.

To address this risk, BCB highlighted within the BC# Agenda the “Sustainability” dimension to promote transparency and effectiveness in actions within its scope of action, to facilitate coordination between economic agents, and to mitigate risks of achieving Institution's mission.

**B. Legal risk**



Risk of judicial and extrajudicial litigation involving social, environmental and climate issues, related to: (i) the role of the BCB as monetary authority or as regulator and supervisor of the Financial System, including the extension of its legal mandate; or (ii) the role of regulated entities, when such disputes are of systemic relevance.

This risk is mitigated by proactive action within the scope of Agenda BC#, dimension “Sustainability”, and through monitoring and preventive action with judicial bodies and control bodies, for permanent development of Agenda BC#.



### C. Economic deterioration due to health crisis



Risks related to increased incidence of diseases with consequences for the economy.

In response to risks of this nature, BCB expanded the set of policies and regulatory instruments available to foster society's economic well-being, whenever necessary, such as measures to encourage credit and maintain financial stability.

### D. Impact of climate change on the economy



Risks of climate change that could impact Brazilian agricultural production and, consequently, generate a relevant shock to the national economy.

The improvement in the management of social, environmental and climate risks in the financial system and the creation of the Sustainable Rural Credit Bureau are aimed at mitigating this risk and demonstrate BCB's care in relation to this issue.

### E. Image Risks



Risks of not achieving BCB's vision of being recognized for promoting sustainability in the Financial System.

The performance of BCB in its corporate actions to achieve its mission, regarding social, environmental and climate-related risks and opportunities, seeking transparency with the disclosure of its BC# Sustainability agenda and the publication of Report on Social, Environmental and Climate Risks and Opportunities, mitigate the image risk. In addition, among other actions, the inclusion of the social and environmental theme in the BCB Money Museum and the role of the Organizational Social and Environmental Responsibility Committee also act as a vehicle for mitigating image risks.

### F. Climate change



Risks related to climate change, by events with potential to materialize through environmental conditions – more frequent and severe – unfavorable to the economy, and by long-term environmental changes, such as scarcity of resources, sea level rise and regime modification rainwater.

The definition of information disclosure requirements related to risks and opportunities arising from social, environmental and climate issues by financial institutions, and the homogenization of information to be published, acts to mitigate this risk. Furthermore, the development of financial system stress-testing incorporating climate risk scenarios will enable BCB to monitor and identify potential threats to financial stability arising from this risk.

### G. Understanding the concepts related to sustainability



Risks linked to misperception or lack of complete understanding of the new concepts that the BC# Agenda, dimension “Sustainability” requires.

The review of BCB's Social and Environmental Responsibility Policy, the promotion of a culture of sustainability by the Organizational, Social and Environmental Responsibility Committee and the development of this Report on Social, Environmental and Climate Risks and Opportunities are initiatives to improve the understanding of BCB's internal and external agents on the topic of sustainability.

### H. Loss of opportunity



Risks that BCB does not act urgently and in a timely manner, thus losing the opportunity to contribute to the transition to a cleaner and more sustainable economy.

To face this risk, BCB highlighted, within the BC# Agenda, the “Sustainability” dimension. The aim is to promote transparency and effectiveness in actions within its scope of action.

### I. Adherence to international practices



Risk of being seen as a central bank that does not adhere to the best practices of international organizations on social, environmental and climate-related risks. The occurrence of this risk may impact investor confidence in the country.

Brazil is committed to implementing the recommendations established by the Financial Stability Board (FSB) and the Basel Committee on the Banking Supervision (BCBS), and actively takes part in working groups focused on debates of possible impacts of climate change on the financial sector.

By signing a formal expression of support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and by joining the Network for Greening the Financial System (NGFS), the BCB also publicly establishes its commitment to the best international transparency practices in sustainability.

#### J. Internal coordination



Risks linked to BCB's internal procedures to plan, organize, control, and deliver the results of the BC# Agenda, dimension "Sustainability".

The appointment of the Deputy Governor of International Affairs and Corporate Risk Management to coordinate the efforts of BCB units related to green finance and climate risks promotes adequate internal governance of institutional processes. In addition, we highlight the inclusion of social, environmental and climate risks in the institution's Integrated Risk Management Policy and the review of internal Social and Environmental Responsibility Policy.

#### K. Delay in deliveries



Risks of delays in delivering the outcomes of BCB's sustainability agenda agreed with society.

The publicity of BC# Agenda, dimension "Sustainability", as well as the establishment of goals and deadlines for each announced action, determine BCB commitment to mitigating those risks. The publication of Report on Social, Environmental and Climate Risks and Opportunities presents the objective to provide more detailed information on the progress of actions.

### 2.3.2 Operational risks

Among the operational risks, those related to possible environmental impacts on internal work processes stand out in this report:

- Improper disposal of banknotes after the sanitation process. In response to this risk, since 2017, the material has been used as an energy input in cement manufacturing, through co-processing. The current goal is the full disposal of waste for co-processing by 2023.
- Floods at BCB buildings caused by extreme environmental conditions, to affect the maintenance of operations. BCB's business continuity plans consider this scenario to avoid compromising critical internal processes.
- Lack of water at BCB facilities may affect the maintenance of operations. BCB's business continuity plans also consider this scenario to avoid compromising critical internal processes.

# 3

## Planet

This chapter seeks adherence to the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD) for financial disclosure on climate risk. Building consensus on how best to measure financial risks associated with climate change is an evolving process, and the disclosure of this information contributes to the effort to reach a common understanding of how to measure it.

In line with the TCFD, the chapter also discusses the BCB's recent actions aimed at incorporating the treatment of social, environmental and climate risks in prudential regulation and in the set of supervision practices in the SFN.

Also presented in this chapter are initiatives from the banknotes management department that deal with waste disposal, as well as actions to reduce water, energy and material consumption.

### 3.1 Climate changes and financial impacts

Regarding BCB's initiatives related to the management of risks associated to climate change and its economic and financial impacts, the information presented in this section is divided in four pillars: "Governance", "Strategy", "Risk Management" and "Metrics".

The pillars recommended by the TCFD<sup>6</sup> and presented in the figure below inspired the organization of this section, seeking to emphasize the BCB's portfolio management process, with a focus on international reserves, and the BCB's actions to improve the treatment of social, environmental and climate risks and opportunities in prudential regulation and supervision practices in the SFN.

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<sup>6</sup> See document: Recommendations of the Task Force on Climate-related Financial Disclosures, published June 2017.



Source: Adapted from TCFD

### 3.1.1 Climate Change Risk Governance

#### International Reserves

The Balance Sheet of the BCB is presented in schematic form in the figure below. The federal government securities portfolio (Assets in Local Currency) is composed only of securities issued by the Brazilian National Treasury and will not be analyzed in this edition of the report. On the balance sheet, it can be seen that international reserves represent a significant part of the BCB's assets. These reserves are invested in several assets in the main international financial markets and the climate risk metrics presented below refer to these investments.

(BRL billion)	
Assets	Liabilities and Equity
Assets in foreign currencies 2,112	Liabilities in foreign currencies 166
	Liabilities in local currency 3,195
Assets in local currency 2,041	Currency in circulation 343
	Equity 322
	Income accounts 127
Total Assets 4,153	Total Liabilities and Equity 4,153

It is up to the Board of Directors, meeting as the Governance, Risks and Controls Committee of the Banco Central do Brasil (GRC) to establish the strategic objectives and the risk and return profile of the country's international reserves.

With respect to the management of the investments, the governance structure of the reserves is supported by the BCB's Integrated Risk Management Policy. The investments are made according to guidelines established by the GRC, which defines the risk profile and expected return through a detailed and replicable reference portfolio, operational limits for deviations from the reference portfolio and criteria for measuring returns. Among the strategic allocation criteria,

parameters related to environmental and climate risks are gradually being introduced in the decision-making process.

### **Regulation and Supervision of the SFN**

The Banco Central do Brasil regulates and supervises the Brazilian National Financial System (SFN). Climate events bring considerable risks for the entire SFN and are responsible for changes in the macroeconomic backdrop and economy that affect the monetary policy. Such events represent threats to the SFN, potential changes in currency demand and important financial costs for the whole society. In the BCB, the Financial Stability Committee and the Monetary Policy Committee assess these risks in their decision-making process.

Today, the risks associated with climate events, deemed to be relevant by BCB, are integrated under the regulatory and supervisory framework and the practices and procedures developed by the BCB's departments responsible for these areas.

#### **3.1.2 Strategy**

##### **Internacional Reserves**

Investments in International Reserves have a conservative profile and seek to hedge the country's gross external debt, with the objective of reducing the country's exposure to exchange rate fluctuations, and an allocation with a countercyclical profile. The allocation is performed with the support of portfolio risk-return optimization techniques, observing the criteria of safety, liquidity and profitability, prioritized in that order.

There are still no consolidated methodologies and metrics in the literature and in the international market as the best practices for climate risk assessment to building investment portfolios. On the other hand, an effort is underway for investors and institutions to monitor and disclosure the climate risks of their financial positions based on existing standards, in order to contribute to building a consensus on the best form of measurement. Optimization exercises for a strategic allocation of international reserves take into account various asset classes, including those associated with green bonds.

### **Regulation and Supervision of the SFN**

Over the past years, the BCB has been acting proactively in measures and regulations related to social and environmental issues, which is in line with other central banks' initiatives and the recommendations by international organizations in terms of best practices for sustainability policies. Due to the importance of these concerns and the potential impacts on the economy, the BCB is conscious and prepared to respond to the challenges, risks and opportunities related to the regulation and supervision of social, environmental and climate aspects.

The "Sustainability" dimension of the BCB's institutional agenda, referred to as "Agenda BC#", launched on September 8, 2020, assessed past initiatives and set new standards for a sustainable financial system.

Among the deliverables of its institutional agenda, BCB published a set of prudential regulation aiming to improve rules for risk management in order to include specific requisites directed at social risk, environmental risk, and climate-related risk incurred by institutions of the SFN, including new requisites on disclosures related to these risks.

In addition to such prudential measures, BCB is requiring of financial institutions the establishment of the Social, Environmental and Climate Responsibility Policy (PRSAC) consisting of a set of principles and guidelines involving social, environmental and climate related aspects that orientate business conduct, company activities and relations with stakeholders.

The regulatory process comprised public consultations of the proposed rules in an attempt to enhance legitimacy, transparency and the quality of decision-making on a subject that has far-reaching implications. The new rules are anchored in three fundamental objectives:

1. Maintaining the Brazilian initiative in the regulation of risk management and responsibility policy and benefiting from the most recent international discussions on social-, environmental- and climate-related issues;
2. Incorporating issues related to climate change in the Brazilian regulatory framework.
3. Improving definitions applicable to the treatment of social risk, environmental risk, and climate-related risk and to the establishment of a responsibility policy on social, environmental and climate-related issues.

The new disclosure rules are inspired by the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) but is not limited to a climate perspective. The scope was enlarged to include environmental, social and governance (ESG) issues, considering the importance of these topics for Brazil and its financial system.

Information is required to be disclosed by financial institutions according to standardized templates in order to improve transparency, to reduce information asymmetry and to foster market discipline in the financial system.

The BCB is working on the evolution of the Rural Credit and Proagro Operations System (Sicor), which will become a Sustainable Rural Credit Bureau, also guided by the principles of open banking, which will allow rural credit beneficiaries to make information registered in the new system available to any interested party.

In addition to these regulatory initiatives, the supervision department has been developing new procedures in collecting data from financial institutions to support better assessments of the social, environmental and climate-related risks.

### **3.1.3 Risk Management**

#### **International Reserves**

The analysis of the risks associated with the investment process is fundamental for the understanding of the financial returns and for the adequacy of the reference portfolio to the investment objectives of the reserves.

The different risks taken in the investment of the international reserves are monitored daily by the BCB. Besides financial risks such as market, credit and liquidity risks, the records of eventual operational incidents are also monitored as well as metrics associated with greenhouse gas emissions that are constructed based on CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e).

The monitoring of CO<sub>2</sub>e metrics aims to assess the impact of different investment strategies on the portfolio's carbon profile. The international reserves portfolio is mostly invested in sovereign bonds and, although there is exposure to the U.S. stock market, there is no acquisition of corporate shares. Thus, the monitoring of indices and metrics associated with the portfolio is predominantly influenced by indicators associated with countries rather than companies.

### **Regulation and supervision of the SFN**

BCB has been monitoring and considering as relevant not only the positive investor's perceptions regarding economic and social sustainable practices and actions but also the new guidances in facing properly the climate change risks. The same is valid for the discussions and initiatives taken by other central banks and financial regulators. It is an ongoing process to follow these matters to keep our regulatory and supervisory duties updated. The new rules published in September of 2021 represent some efforts in these directions.

It is worth mentioning the exploratory work, with regards to social, environmental and climate risks, to verify the current stage in terms of identification and risk management framework of the supervised institutions classified in S1 and S2 segments.<sup>7</sup> This work consists of collecting data and information related to social, environmental and climate risks in connection with credit lines. Furthermore, the idea is to enhance the Social, Environmental and Climate Matrix<sup>8</sup> classifying the risks according to the economic sectors that generate credit exposures using applicable and proper public information.

The indicators to monitor social, environmental and climate risks are under construction. It is expected is that BCB will use them by 2023.

#### **3.1.4 Metrics**

Metrics can consider two aspects. The first would relate to the BCB's exposures to climate risks (inward). The second would involve BCB actions that impact climate risks (outward).

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7 Resolution 4,553, of 01/30/2017, establishes the segmentation of the set of financial institutions and other institutions authorized to operate by the Banco Central do Brasil for purposes of proportional application of prudential regulation. S1 and S2 are the largest institutions.

8 BCB's Social and Environmental Risk Matrix consists of two dimensions: the adequacy of environmental and social risk management by financial institutions, and the relevance of their credit exposures, considering the sectors of economic activity of the institutions' clients. The combination of scores for these two dimensions results in each institution's residual score, which is used to prioritize supervisory actions.



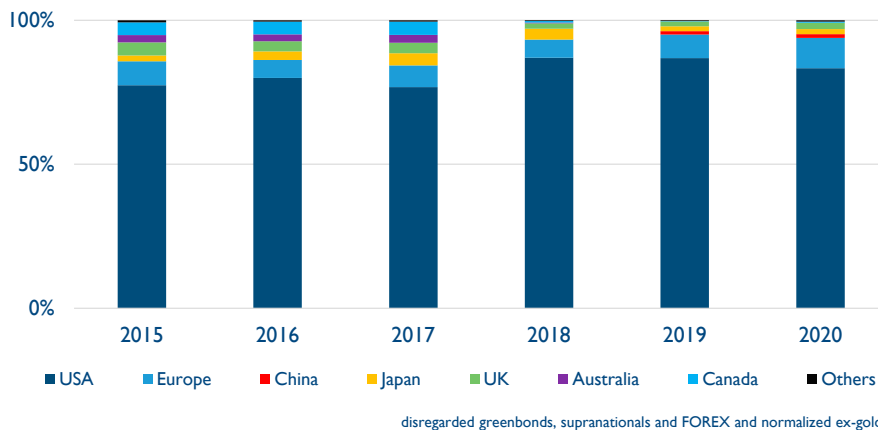
## International Reserves

The academic literature still does not offer a single metric for evaluating the investments of the international reserves in terms of sustainability. Thus, given the absence of a consensus and aiming to increase transparency and contribute to the discussion on the topic, this report uses alternative measurements in an exploratory way.

Chart 1 below shows the evolution of the country allocation of international reserves investments at the end of each year. Throughout the period, the North American dollar is the currency with the largest participation in the investment of international reserves, primarily due to the strategy of hedging foreign liabilities, where the US dollar is the dominant currency in Brazil's gross foreign debt.

In managing the portfolio of international reserves, the BCB follows metrics that are used internationally, such as weighted average carbon intensity (WACI). The combination of country allocation with CO<sub>2</sub>e emission data normalized by GDP leads to the composition of the metric that is shown in Chart 2 below.

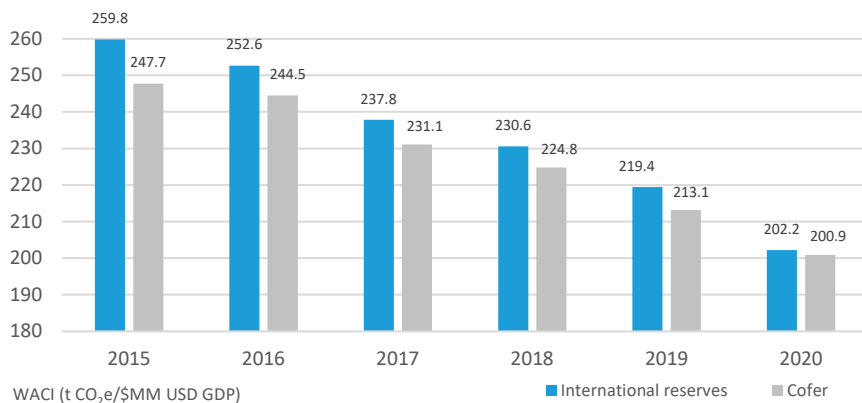
**Chart 1 – Distribution of Brazilian International Reserves by country**



disregarded greenbonds, supranationals and FOREX and normalized ex-gold

Source: Banco Central do Brasil

**Chart 2 – Weighted average of the carbon intensity of international reserves**



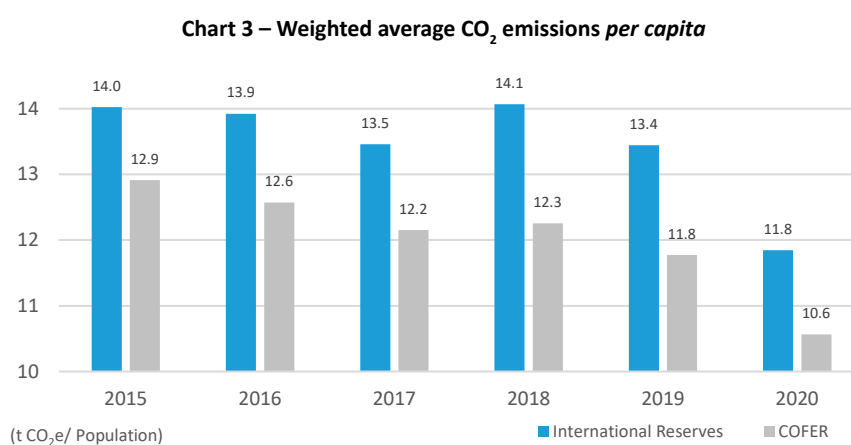
Source: BCB, with data from IEA – International Energy Agency and IMF

Chart 2 also presents, as an illustration, the WACI of a theoretical portfolio of central banks composed of the distribution of currencies of international reserves, as presented on the IMF website (COFER - Currency Composition of Official Foreign Exchange Reserve). The consistent drop between 2015 and 2020 in the WACI value

of the portfolios analyzed basically reflects the drop in countries' carbon emissions normalized by GDP. One also notices the greater participation of countries with lower carbon emissions relative to GDP in the theoretical COFER portfolio.

Another metric for evaluation refers to CO<sub>2</sub>e emissions per capita, which allows tracking the intensity of emissions in relation to the country's population. The current global average per capita emission is 6.5 t CO<sub>2</sub>e per person, and in order to meet the Paris Agreement target by 2050, it would be necessary to average around 2 t CO<sub>2</sub>e per person by 2030.

Similar to the WACI metric, Chart 3 presents the weighted average given by combining the allocation across countries with CO<sub>2</sub>e emissions data now normalized by population, i.e., emissions per capita. The emissions data by country in 2020 are estimated and indicate a drop in country emissions standardized by population compared to 2020.



Source: BCB, with data from IEA – International Energy Agency, IMF and World Bank

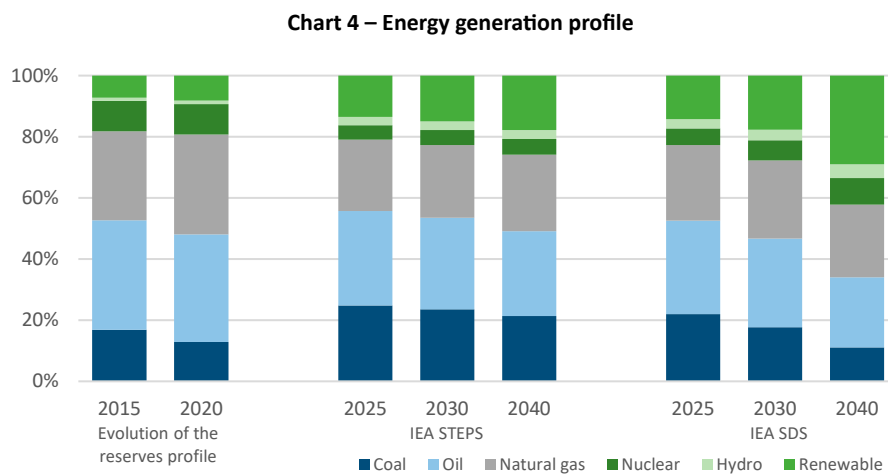
One of the main sources of greenhouse gas emissions is power generation. Using data from the International Energy Agency (IEA) on the composition of the energy matrix of countries, it is possible to compose the profile of energy generation associated with the allocation of international reserves in different countries. This composition allows one to follow how the international reserves are distributed among the various sources of energy generation produced by the countries. The IEA discusses two scenarios for the evolution of the power generation profile and its adherence to the commitment established by the Paris Agreement. This commitment is that the increase in global temperature should not exceed two degrees Celsius this century in relation to the temperatures of the pre-industrial period.

The IEA does not seek to make projections of what will happen, but rather to explore different possible scenarios: one scenario reflecting the policy intentions and targets announced to date and another based on full achievement of sustainable energy targets. These are the Stated Policies Scenario (STEPS) and the Sustainable Development Scenario (SDS), respectively.

The Stated Policies Scenario (STEPS) reflects not only existing policies but also already announced intentions and plans and their impacts on climate.

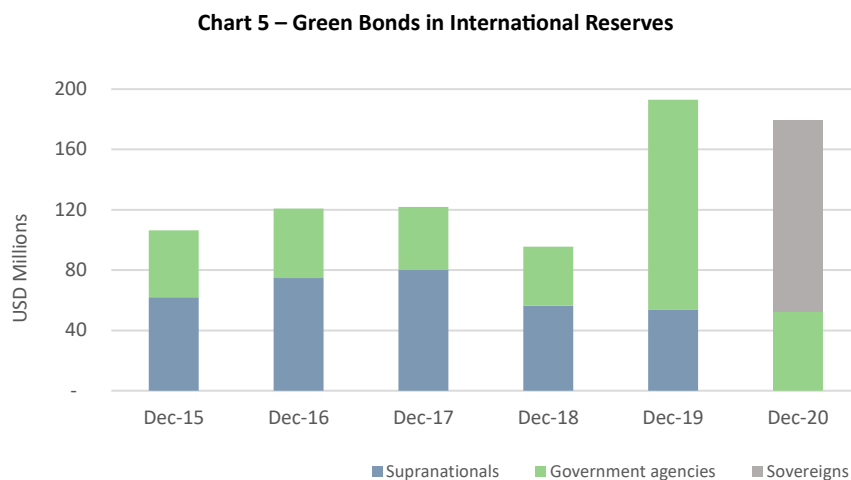
The Sustainable Development Scenario (SDS) proposes an evolution of the policy profile in line with the Paris Agreement goals of “keeping the global average temperature increase below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels”. Achieving this goal requires a level of net-zero emissions (balance of emissions produced with removals by carbon capture and sequestration) in the second half of this century.

Chart 4 illustrates the profile of sources of energy generation weighted by the share of country allocation of the international reserves investments. The profile is affected by changes in the country allocation and also by the profile of the energy matrix of the countries. The graph also presents the profiles for the scenarios (STEPS and SDS).



Source: BCB, with data from IEA – International Energy Agency

Chart 5 presents the allocation of reserves in green bonds at the end of each year since 2015. The investment in green bonds took place in fixed income securities issued by government agencies, supnationals and central governments under the active management of international reserve investments. The total maximum amount reached \$195 million in March 2019.



Source: BCB, Dec/2020

## 3.2 Water, Energy and Materials

The Committee for Organizational Social and Environmental Responsibility (CRSO) is responsible for coordinating social and environmental responsibility actions, consolidating good practices and fostering integration and the exchange of experiences on sustainability actions and projects developed at BCB.

Approved by the CRSO, the BCB published the Sustainable Logistics Management Plan (PGLS) 2019-2020, with the aim of implementing sustainability practices in its facilities and processes with the potential to generate waste. It is worth mentioning that, since 2018, the BCB has adhered to the Environmental Agenda for Public Administration (A3P).

In view of the sustainability principles applied to its facilities, the BCB is involved in several initiatives, ranging from composting to the use of banknote waste as fuel for cement kilns or inputs in the manufacture of cladding, furniture items, and briquettes, which are shredded banknote bricks distributed as a gift. It is also worth mentioning the formalization of a project to evaluate the life cycle of cash.

In the last ten years, the BCB has removed from circulation, by means of a process of selection and fragmentation, more than 15 thousand tons of worn out and inadequate banknotes for use. These activities were carried out in the nine regional offices of the BCB in the country.

Furthermore, integrating sustainability principles with social concerns, the BCB also maintains a recyclable material disposal policy with waste picker cooperatives. Unserviceable computers and other electronic items are donated in accordance with the Policy for the Disposal of Electronic Goods, under the responsibility of the Ministry of Science, Technology and Innovation.

In 2020, the project “Operation of a LEED Silver Certified Sustainable Building”, which deals with environmental actions carried out in the building of the BCB regional office in Salvador, won the 8th Best Sustainability Practices Award - A3P Award, in the category “Innovation in Public Management”. The award is promoted every two years by the Environmental Agenda in Public Administration Program (A3P), linked to the Ministry of the Environment.

The purpose of the A3P Award is to recognize the merit of the initiatives of public sector agencies and institutions in the promotion and practice of A3P, including the contribution to sustainability; the implementation of innovative initiatives of social and environmental management that contribute to improving the organizational environment and the environment; the sharing of information that serve as inspiration or reference for initiatives of other institutions; and the encouragement and rewarding of institutions that have a commitment to the implementation of A3P, according to information on the A3P website. BCB was the winner among 29 projects competing in the same category, with 137 projects competing in total.

In the period from 2010 to 2020, there was a reduction of approximately 75% in the consumption of A4 paper, as a result of the more rational use of printers and

the mandatory use of electronic processes. The BCB also adopted measures to increase energy efficiency and reduce water consumption by carrying out building revitalization works.

Among the actions taken in 2020 to encourage a reduction in the consumption of natural resources, we highlight the following:

- a public tender for the purchase of selective collection garbage cans in order to replace individual garbage cans with shared garbage cans in all BCB buildings by 2021;
- execution of the first phase of the national awareness campaign about selective waste collection, which is being implemented in all BCB buildings;
- destination, all over the country, of discarded recyclable waste to associations and cooperatives of recyclable material collectors, in compliance with Decree no. 5,940, of October 25, 2006;
- destination, in Brasilia, São Paulo and Rio de Janeiro, of the residues generated by the destruction of the BCB's Document Elimination List (LED) to cooperatives of recyclable material pickers;
- holding meetings with members of the SFN, in order to present the sustainability practices that have been developed within the BCB, serving as benchmarking for them;
- adaptation of the authorization processes to eliminate the reception and remittance of paper documents, being that the adoption of the Digital Protocol was made possible, eliminating the reception of documents in paper in the instruction of authorization requests made by institutions to the BCB. Annually, in the authorization processes, around 7,000 documents are filed, and communications of decisions are sent for approximately 3,500 processes. Therefore, the elimination of the transit of paper documents brought gains to both the BCB and the applicants by making the process faster, more secure and less costly. Added to this is the benefit in sustainability brought about by the significant reduction in paper consumption;
- participation in editions of the event "Café com PLS", in which PLS stands for Sustainable Logistical Plan, organized by the Federal Attorney General's Office (AGU), aiming to exchanging experiences with other public agencies and entities about the best sustainability practices that have been adopted.

# 4

## People

This chapter is dedicated to the opportunities identified by the BCB to promote the respect for and protection of human rights, including its fundamental rights and guarantees. The advancement of financial education and citizenship aims to contribute to the fulfillment of the BCB mission since it promotes conscious consumption, capital formation through the habit of saving, and the reduction in loan delinquency rates. In addition, the BCB takes into careful consideration topics such as diversity, dignity, equality, health and well-being as it serves the Brazilian public. The institution also values its employees and third-party workers as its most prized assets.

### 4.1 Financial citizenship

The BCB strives to promote financial citizenship, that is, the exercise of rights and duties that allows the citizens the possibility to adequately manage their resources. Financial citizenship can be developed by fostering an environment of inclusion, financial education, financial consumer protection and participation in an ample dialog about the financial system.

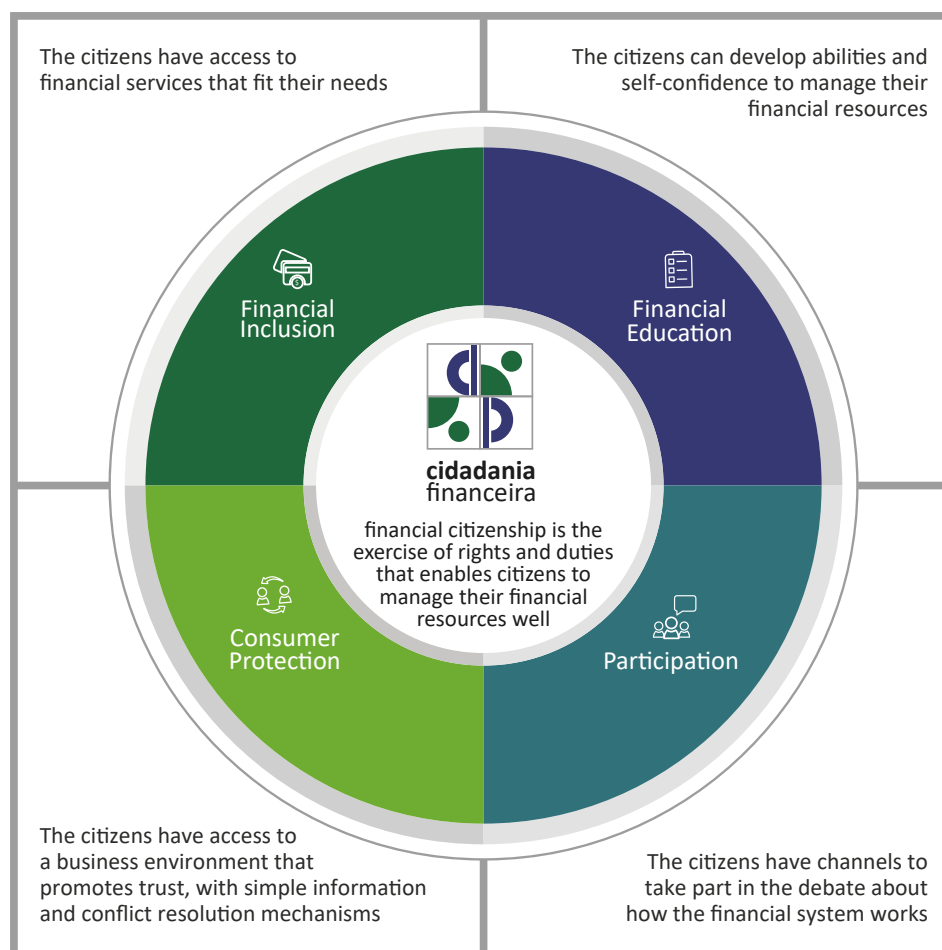
One of the ways in which the BCB promotes financial citizenship is through the National Strategy for Financial Education (ENEF). In 2020, a new ENEF was created, along with the Brazilian Financial Education Forum. The presidency of this forum will rotate among its members every 24 months, starting with the BCB in July 2020. The redefinition of ENEF and the creation of the Forum ensure Brazil's adherence to international best practices while improving financial stability, inclusive development and the well-being of individuals and their families across the country.

In 2020, forty financial education talks took place with an audience of 10,339 people, being 7,406 participants in the 7<sup>th</sup> ENEF week. In the beginning of 2020, before the start of the Covid-19 pandemic, five workshops took place with over 400 people attending in person.

In 2020, 1614 people visited the Money Museum and 354 visited the Art Gallery. Both the Museum and the Gallery have been closed since March 2020, due to the restrictions imposed during the Covid-19 sanitary crisis.

The virtual courses "Personal finance management" and the series "My money and I" were made available, and were completed by 16,753 students. In addition, the financial education video series made by the BCB had 101,686 views, and 229,191 people visited the Financial Citizenship page, as well as its subpages, at

the BCB website. Along this line, the BCB also launched a *hotsite* with tips regarding financial education during the crisis.



Read more about the BCB's actions, online courses, handbooks, reports, and studies on our website at [bcb.gov.br/cidadaniafinanceira](http://bcb.gov.br/cidadaniafinanceira)

## 4.2 Education

### “Learn Value” Program trains managers and teachers

The “Learn Value” Program provides educators with school projects that integrate financial education to the contents of traditional school subjects such as mathematics, Portuguese, geography and history while working on aspects linked to the students’ socio-emotional abilities. The program has the potential to reach over 21 million students all over the country. The target groups of this program also include teachers, school administrators, and technicians in education departments, since they are the ones who will implement the program in each school.

Around 2,000 of these professionals registered for the launch event of the Training Program in its pilot phase, in five states and the federal district.

The program follows the guidelines in the National Common Core Curriculum (BNCC), and is funded by the Fund for the Defense of Diffuse Rights (FDD), from the Ministry of Justice and Public Safety. This is a strategic initiative by the BCB and is part of the “Education” dimension of the Agenda BC#.

To implement this action, the BCB is supported by the Center for Public Policy and Education Evaluation of the Federal University of Juiz de Fora (CAEd/UFJF), responsible for the development of the platform that will host the contents.

Internally, when it comes to formal training in sustainability, several BCB employees took part in the course *Climate Risks and Sustainable Finance*, offered by the *London University*, which was designed especially for the BCB and paid for by the German Society for International Cooperation (GIZ). The course laid out the effects of climate change on the financial system and the economy at large, and how the most important regulators and supervisors in the world are acting to facilitate the transition to a low-carbon economy. Furthermore, the BCB keeps participation in the Green and Sustainable Finance Project (FiBraS – *Finanças Brasileiras Sustentáveis*), which has been financially and technically supported by the Federal Republic of Germany and is jointly operated by the GIZ and BCB Units. The project aims to “improve the structuring conditions for the development of the Green Finance Market in Brazil”, especially for the supervision of the regulatory framework implementation as regards the management of environmental and social risks faced by financial institutions concerning credit transactions. The BCB has already promoted improvements on the regulatory framework, provided BCB public servants with a range of green finance-specific training and implemented supervision tools thanks to the FiBras project. In addition, the project enables a broad exchange of experiences and knowledge in the sustainable field.

### 4.3 Dignity and equality of treatment

The BCB prides itself in striving for equality of opportunity and treatment in the institution. Its workforce has different gender and ethnic compositions from that of the Brazilian population. However, this is beyond its power, since hiring decisions are made exclusively by public service entrance exams. Nonetheless, within its workforce, there is ample evidence of equality of access to promotions in terms of gender and ethnicity. Currently, 18% of the workers define themselves as non-white, which is the same percentage as those in supervisory positions. Among those in supervisory positions, 2.2% are people with disabilities, compared to 2.6% in the workforce. Women are 23% of the workforce and fill 19% of the supervisory positions. With the goal of achieving equal opportunity, the institution expects there to be greater gender equality, as is already seen when it comes to ethnicity and persons with disabilities.

In the last organizational climate survey, the item “I do not suffer discrimination due to age, gender, race or sexual orientation” had an average of 87.7 on a scale from 0 to 100. The average for women (81.5), although lower than that for men (89.7), is still considered adequate in the model adopted for the survey. The average for those self-identified as “black” was 86.8 while those self-identified



as “brown”, “yellow” or “white” were respectively 89.3, 87.8 and 88.4. With the aims of eradicating any unequal treatment, ensuring that it is an inclusive and welcoming organization to all of its workforce, and of using its diversity as a driving force for the institution, the BCB strives to promote awareness, as in the celebration of International Women’s Day, where the participation of women in public management was discussed. In addition, the Master Plan for Human Resource Management includes the Diversity and Inclusion Promotion Program, with activities aimed to promote equality in the workplace.

# 5

## Prosperity

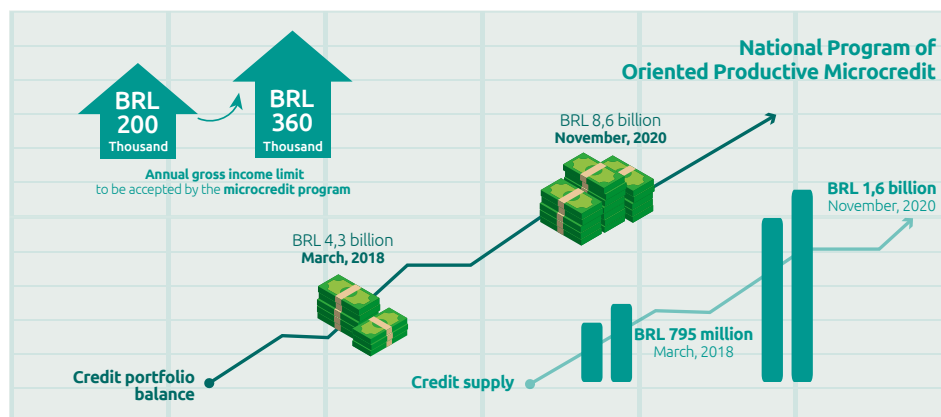
Prosperity is closely linked to the theme of sustainability because it reflects the ability of human beings to lead a prosperous life, marked by continuous development and progress in the light of social, economic and technological evolution. All of this in harmony with the environment, in order to generate development and, at the same time, preserve the resources for future generations. The BCB understands that financial inclusion, the development of innovations and the expansion of competitiveness represent opportunities that contribute to the achievement of its mission, since they facilitate access to the financial markets, favoring the stability of the SFN and the promotion of society's economic well-being. Furthermore, the strengthening of the relationship with society enhances the Institution's credibility.

### 5.1 Inclusion

In the Inclusion dimension of the Agenda BC#, the actions and initiatives are aimed at facilitating access to the financial market for everyone: small and large users, investors and borrowers, Brazilians and foreigners. Once this dimension is a premise, the topics micro-credit, cooperativism, convertibility, and capital markets are developed.

The process for guiding small entrepreneurs in obtaining oriented productive microcredit is now 100% digital. Previously, it was required that the first contact between the financial institution and the micro-entrepreneur had to be in person. Now, all the credit granting stages can be done remotely. This measure speeds up the process and reduces the travel costs of the credit agents, which is significant in relation to the value of microcredit operations.

The income range of the potentially contemplated microentrepreneurs has also increased. The annual gross income limit to be accepted in the microcredit program has increased from BRL 200 thousand to BRL 360 thousand. Since the National Program of Oriented Productive Microcredit (PNMPO)'s inception, the balance of the credit portfolio with microcredit resources aimed at microentrepreneurs has risen from BRL 4.3 billion in March 2018 to BRL 8.6 billion in November 2020, as shown in the figure below.



The cooperativism, in turn, contributes importantly to the financial inclusion of the population and has played an increasingly important role in providing credit, especially to micro-entrepreneurs and micro and small enterprises, in operations such as loans and working capital. It also has a relevant role in rural credit, especially to individuals. The cooperatives offer financial products and services to a growing number of Brazilian citizens, even in the most remote locations, including people with less access to the traditional banking system, which favors inclusion, citizenship, and financial education. For example, in December 2020, in 231 municipalities (8.3% of the municipalities where cooperatives operated) these institutions were the only face-to-face alternative for obtaining financial services. The very participation of members in the management of cooperatives, especially, but not only, through the assemblies, contributes to the formation of financial awareness.

## 5.2 Innovation and competitiveness

### The Regulatory Sandbox

The Regulatory Sandbox is an environment in which entities are authorized by the BCB to test, for a determined period, an innovative project in the financial or payment area, observing a specific set of regulatory provisions that support the controlled and delimited performance of its activities.

On December 17th, 2020, the Resolution BCB nº 50<sup>9</sup> was published, establishing the requirements and procedures for the service and defining the registration dates for the 1st Cycle of the initiative, with a duration of one year, which can be extended for an equal period, being limited to ten participants, and this number can be increased up to fifty percent.

The BCB listed priority themes such as solutions for the foreign exchange market, promotion of the capital market through mechanisms of synergy with the credit market, promotion of credit for micro and small entrepreneurs, solutions for the Open Banking, solutions for the Pix, solutions for the rural credit market, solutions to increase competition in the National Financial System and in the

9 <https://www.in.gov.br/en/web/dou/-/resolucao-bcb-n-50-de-16-de-dezembro-de-2020-294621288>.

Brazilian Payment System, financial and payment solutions with potential effects to stimulate financial inclusion and promotion of sustainable finance.

The product or service that is the object of these themes must comply with the rules of money-laundering prevention and fight against terrorism financing, and with the rules of the BCB on dealing with the complaints from customers and users, and on conducting transactions with integrity, reliability, security and confidentiality.

### **Payment Transaction Initiator**

The BCB has created a new payment institution, called payment transaction initiator, which will operate in Open Banking and in the Pix. Currently, every time customers purchase or make a wire transfer, they need a payment instrument, which in most cases is the card. From now on, purchases can be initiated by this new institution, which does not manage or move the account resources.

The payment transaction initiator is responsible for triggering the payer's command, even without holding the payer's account and making the funds go directly into the receiver's account. The initiator is only responsible for this initial step, i.e. it cannot and does not need access to the funds moved by the customer.

This new institution's creation has the objective of giving more options to the consumer, without extinguishing any payment means or instrument. It is up to the citizens and the companies to decide which instrument to use. This new institution will allow the expansion of the Open Banking's coverage, an ecosystem whose participants are institutions authorized to operate by the BCB. In this environment, the payment transaction initiation service is provided independently of the contracts established between the payment transaction initiator and the entities holding the deposit or payment accounts.

### **The Pix**

Pix is a Brazilian instant payment system; the payment means created by the BCB in which funds are transferred between accounts within seconds, at any time or day. The Pix can be made from a checking account, a savings account, or a prepaid payment account.

In addition to increasing the speed at which payments or transfers are made and received, Pix aims to boost market competitiveness and efficiency; lower the cost, increase security, and enhance the customer experience; encourage the electronization of the retail payments market; promote financial inclusion; and fill a number of gaps in the basket of payment instruments currently available to the public.

The Pix was created to be a very broad payment method. Any payment or transfer that is currently made using different means (TED, credit or debit card, payment ticket etc.) can be made with Pix, simply by using the mobile device or the internet banking.

Pix is one more option available to the population that coexists with traditional types. Using Pix is simple and practical, the transaction can be initiated, for example,

by reading a QR Code or by entering the recipient's Pix key, which is a method that facilitates the identification of the beneficiary account from a single piece of data.

Pix is free for individuals, including individual entrepreneurs. For legal entities, the use of Pix may be charged, but its cost is lower than other electronic payment instruments, given Pix's structure with fewer intermediaries and with the central platforms being provided by the Central Bank, in addition to the highly competitive environment.

Another advantage is that Pix has no time limit, it operates every day in a week, and the resources are available to the recipient in a few seconds. Pix works 24/7 among participating institutions, which can be banks, fintechs, payment institutions, cooperatives, and others.

### **Open Banking**

In Open Banking, or in the open financial system, financial products and services customers can allow the sharing of their information among different institutions authorized by the BCB and to manage their bank accounts not only through the bank's application or website, but also from several other platforms, in a safe, agile and convenient way. The Joint Resolution No. 1 of May 4, 2020, provides for the implementation of the open financial system.

It is expected to increase efficiency, competitiveness and transparency in the financial system. The model's premise is that the financial consumers are the holders of their personal data, in accordance with the provisions of the General Law of Protection of Personal Data, and that it is up to them to choose what to do with these data to pursue for better and cheaper services.

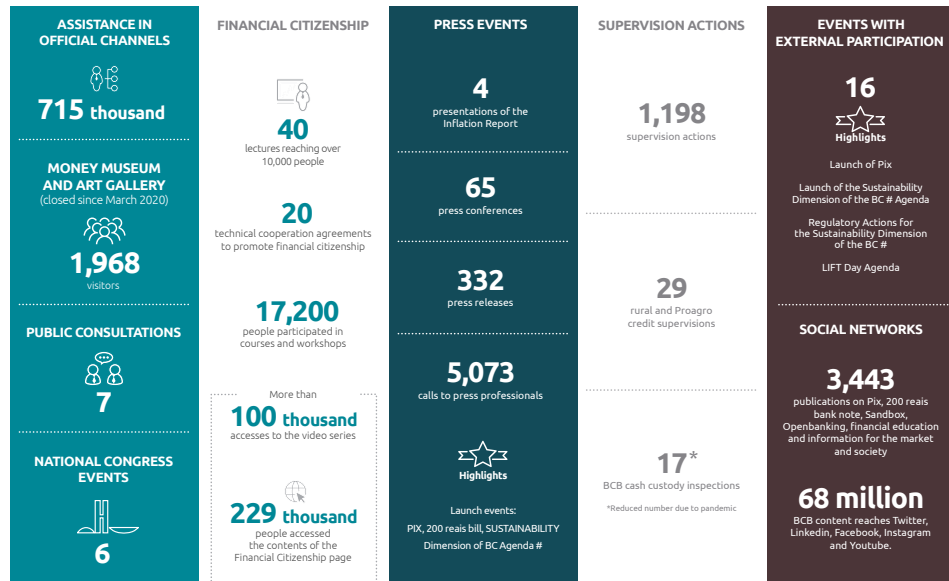
This data sharing will be gradually implemented, according to the level of complexity, sensitivity, and accessibility of the shared data.

In the first stage, only the data from the participating institutions themselves will be shared. In the second stage, customers' and representatives' account information and customers' transactional data related to the products and services indicated in the first stage will be shared. In the third stage, data related to payment transaction initiation and credit transaction proposal submission services will be shared. In the fourth stage, data of products and services and customers' transactions related to foreign exchange operations, accreditation services in payment arrangements, investments, insurance, open-end complementary pension plans, and salary accounts will be shared.

## **5.3 Relationship with the society**

The BCB's relationship with the society is built and maintained through actions to promote financial citizenship, the SFN's regulation and supervision, press service, service to the Public Authorities, investors and rating agencies; collaboration with government and civil society; technical cooperation with national and foreign entities; participation in international forums and organisms; and knowledge

exchange with the academy and the market, among others. The active and passive communication channels maintained by the BCB, as well as the governance efforts, strengthen these interactions with transparency and credibility.



# 6

## Sustainability in the Agenda BC#

The “Sustainability” dimension on the Agenda BC# aims to promote sustainable finance, to improve social, environmental and climate risk management in the economy and in the SFN, and to integrate sustainability issues in the BCB decision making.

The sustainability opportunities are related to sectors that share basic values in the BCB’s institutional agenda, as innovation, efficiency and transparency. In order to keep BCB ahead of the curve in the sustainability issues, it is important to adjust regulation and to develop new concepts, tools and to expand frontiers.

The BCB is aware that it has to manage communication barriers. The “Sustainability” dimension on the Agenda BC# is a “lead by example” step, supported by internal actions and also by discussions with the financial system. It is possible to mitigate bottlenecks by aligning agents in the concepts of sustainability, sharing knowledge and perceptions. The communication improvement allows important partnerships that support sustainability data generation and knowledge dissemination.

The BCB launched the “Sustainability” dimension of Agenda BC# in September 2020 and this chapter presents a follow-up of the actions.

Action		Deadline
Regulation	Improvements to the regulatory framework on risk management and social, environmental and climate responsibility	Done
	New regulation on social, environmental, and climate-related risk disclosures, based on the TCFD recommendations	
	<ul style="list-style-type: none"> <li>Phase 1 – Qualitative aspects</li> <li>Phase 2 – Quantitative aspects</li> </ul>	Done December/2022
	Creation of the Sustainable Rural Credit Bureau and establishment of incentives to the sustainability of rural credit operations	December/2022
Supervision	Structuring and broadening the scope for collecting information on S, E & C risks	December/2021
	Stress Test for climate risks	April/2022
Policies	Inclusion of sustainability criteria for selecting counterparties and for investment decisions in international reserves management	December/2021
	Creation of the sustainable financial liquidity facility	November/2021

Internal actions	Reducing environmental impact of banknotes processing	December/2023
	Social-environmental theme in the Money Museum	June/2023
	BCB report on social-environmental risks	Done
	Inclusion of social and environmental issues in the BCB's Integrated Risk Management Policy	Done
	Strengthening the culture of sustainability	March/2023
	Review of the BCB's Socio-environmental Responsibility Policy	December/2021
Partnerships	Climate Bond Initiative memorandum	Done
	BCB supports TCFD	Done
	BCB at NGFS	Done

## 6.1 Regulation

### Improvements to the regulatory framework on risk management and social, environmental and climate responsibility

Action completed in September 2021, with the publication of the following prudential regulation approved by National Monetary Council in August 2021:

1. amendments to Resolution CMN 4,557 of 2017, including a specific section with definitions and requirements for the management of social risk, environmental risk, and climate-related risk, applicable to institutions allocated to Segment 1 (S1), Segment 2 (S2), Segment 3 (S3), and Segment 4 (S4);
2. amendments to Resolution CMN 4,606 of 2017, including a specific section with definitions and requirements for the management of social risk, environmental risk, and climate-related risk, applicable to institutions allocated to Segment 5 (S5); and
3. new resolution CMN, including rules related to the Social, Environmental and Climate Responsibility Policy (PR SAC) that must be established by institutions allocated to S1, S2, S3, S4 and S5, as well as actions to ensure the effectiveness of the PR SAC.

The new risk management rules focus on addressing the possibility of losses deriving from exposure to such risks. The new rule improves the definition of social risk, which is related to the violation of fundamental rights and collective interests, as well as an environmental risk, associated with practices of environmental degradation. It is also introduced the definition of climate-related transition risk, associated with the adjustment towards a low-carbon economy, and climate-related physical risk, associated with extreme weather events, which may be linked with changes in climate patterns.

The amendments reinforces the integration of such risks to the management of traditional risks (credit, market, liquidity, and operational) by establishing minimum criteria to be observed by institutions. Requirements such as the inclusion of social, environmental, and climate-related risks in the Risk Appetite Statement



(RAS) and in the stress testing program will apply more objectively. Complex institutions will be required to perform scenario analyses considering hypotheses of climate changes and the adjustment towards a low-carbon economy. Other relevant improvements are the institution identification of negative impacts on its reputation, and the identification of possible concentrations in economic sectors or geographic regions more subject to social, environmental, or climate-related damage.

Regarding the new rules related to Social, Environmental and Climate Responsibility Policy (PRSAC), which is a document required to be prepared by financial institutions, a new climate dimension is added to the already required social and environmental dimensions. The focus of the document is on the establishment, by the institution, of principles for its business and its relationship with customers, suppliers, employees, among other stakeholders. A new important improvement is the requirement for disclosure of actions aimed at the effectiveness of PRSAC, as well as the criteria adopted to evaluate such effectiveness.

### **New regulation on social, environmental, and climate-related risk disclosures, based on the TCFD recommendations**

Disclosure requirements on social, environmental, and climate-related risk are based on the four core elements of the TCFD recommendations: governance, strategy, risk management, and metrics and targets.

Due to the complexity of climate-related issues, the Banco Central do Brasil decided to incorporate the TCFD recommendations in the prudential regulation in two phases:

- I. Phase 1, completed in September of 2021, which addresses qualitative aspects related to governance, strategy, and risk management; and
- II. Phase 2, expected to be concluded in 2022, will address quantitative aspects like metrics and targets.

### **Additional details regarding the new regulation**

The regulation includes the following disclosure requirements:

- I. management of social risk, environmental risk, and climate-related risk, considering the governance of risk management and the strategies undertaken by the institution in different time horizons;
- II. indicators used in the management of social risk, environmental risk, and climate-related risk; and
- III. business opportunities associated with social, environmental, and climate-related issues.

Building on the experience of the Pillar 3 standards in the Basel framework, information is required to be disclosed in a standardized “GRSAC Report”, consisting of templates that focus on each of the core elements in TCFD recommendations. This approach is useful for achieving consistency and comparability among different institutions.

The new rule defines mandatory templates for disclosing information regarding governance of risk management, strategies and management of social risk, environmental risk, and climate-related risk, in both dimensions of transition risk and physical risk.

Disclosure of quantitative indicators and business opportunities associated with social, environmental, and climate-related issues is optional in the first phase. This choice has the objective to recognize the financial sector's advances in the use of these indicators and in the identification of these opportunities.

The new regulation follows the principles of proportionality that consider an institution's size and risk profile and will apply to institutions allocated to Segment 1 (S1), Segment 2 (S2), Segment 3 (S3), and Segment 4 (S4), as defined in Resolution CMN 4.553, of January 30, 2017.

Institutions allocated in Segment 5 (S5) will be exempted from disclosure, aligned with Pillar 3 requirements, considering the compliance cost for smaller institutions and with a simplified risk profile.

### **Creation of the Sustainable Rural Credit Bureau and Establishment of incentives for sustainable rural credit operations**

Rural credit, governed by Law No. 4.829, of November 5, 1965, is based on guidelines and instructions issued by the National Monetary Council (CMN), and the BCB is responsible for coordinating and supervising compliance with its decisions.

Monetary authorities around the world have been adopting measures that reflect the recognition of the impact of social, environmental and climate risks, which are reflected in risks to financial institutions and, consequently, in the short and long term stability of financial systems. For this reason, the BCB and the CMN have established, since 2008, social and environmental guidelines for credit granting by financial institutions, which includes the specific regulation applicable to rural credit.

Among the initiatives in the scope of the BC# Sustainability, is the evolution of the Rural Credit and Proagro Operations System (Sicor), which will become a Sustainable Rural Credit Bureau, also guided by the principles of Open Banking. This action will allow beneficiaries of rural credit to make available information registered in the new system to any interested party, without the need for intermediation by financial agents.

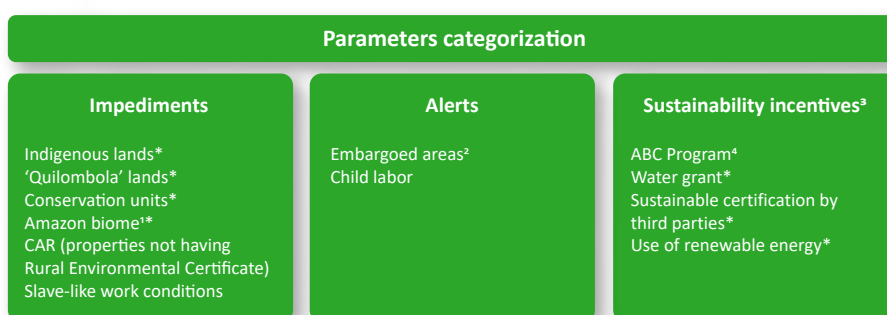
Sicor, whose registration operations are processed in real time, cross-references databases and consults other systems outside the BCB, validating records and certifying the veracity of information, preventing operations that are not in conformity with the regulations from being formalized as rural credit. Every year Sicor registers around two million rural credit operations, totaling more than BRL 180 billion in contracted amounts. When registering the operations, information is collected in 270 data fields, which are subject to 1,300 verifications. Several of these fields bring information that shows good environmental and sustainability practices of each operation.

Based on consultations with several specialized technical entities dedicated to establishing standards for the issuance of green bonds, and meetings with experts from various public and private institutions involved with the issue of sustainability in rural credit operations, a set of parameters associated with the sustainability of rural projects will be prepared, which will allow agricultural policy makers to assess the possibility of granting additional incentives to the financing of these projects, enabling the directing of a greater flow of resources to sustainable projects.

By explicitly characterizing rural credit operations sustainable from social, environmental, and climatic point of views, the expectation is that the financial system will offer more favorable conditions for producers with sustainable characteristics when accessing new rural financing, since the current scenario indicates that financial institutions should mitigate more rigorously the risk of granting credit for financing with higher social, environmental, or climatic risk. In addition, information related to sustainable operations allows their use by green bond certifiers, rating agencies specialized in environmental, social and governance criteria, and service providers hired to audit the adherence of enterprises to social, environmental, or climatic requirements.

The application of the sustainability criteria will result in the following situations:

- a) projects that cannot be financed with rural credit, due to pre-existing legal or infra-legal commands that prevent the concession of the financing or the exploration of the area presented in the credit proposal;
- b) projects that can be financed with rural credit, with the alert to supervision that the operation represents social, environmental, or climatic risk due to the fact that the area of the project is inserted in some portion of an area with restrictions established by environmental legislation, or for having characteristics that increase the social, environmental, or climatic risk;
- c) projects that may receive incentives for sustainable operations, due to their compliance with social, environmental, or climatic sustainability parameters.



<sup>1</sup>Areas embargoed by Ibama because of illegal deforestation; When under the National Land Reform Program, for proponents with restrictions due to illegal deforestation.

<sup>2</sup>Areas embargoed by Ibama.

<sup>3</sup>To be defined in a working group formed by the Ministry of Agriculture, Ministry of Economy, and the Central Bank.

<sup>4</sup>Low-Carbon Agriculture Program (ABC).

\*New verifications in Sidor based upon pre-existing regulations.

With the Sustainable Rural Credit Bureau, Sidor will integrate with government databases, increasing efficiency in the granting of rural credit; fostering the improvement of risk management by financial institutions, with the consequent increase in efficiency and soundness of the SFN, and also allowing access to new sources of funding, due to its integration with Open Banking principles.

## 6.2 Supervision

### Structuring and broadening the scope for collecting information on S, E & C risks

Through the *Social, Environmental and Climate Risks Document (DRSAC)*, a new file exchange format on its electronic data transfer system, BCB intends to collect qualitative data on social, environmental and climate risks assessment carried out by financial institutions for selected operations and clients.

The *Social, Environmental and Climate Risks Document* aims to assess financial institutions' evaluations of counterparty risk of:

- I. violating fundamental individual rights or collective interests;
- II. causing environmental degradation; or
- III. being affected by events related to extreme environmental conditions that could be related to climate change, or by the transition towards a low-carbon economy.

The DRSAC is expected to allow BCB to extensively map the National Financial System credit exposure to social, environmental and climate issues, providing the means to gather statistics and time series on the topic. By allowing consistency and comparative analyses, the collected data will enable BCB to evaluate the financial institutions' assessment processes. Once integrated with relevant public datasets on the subject, the information will also help BCB to refine its existing Social, Environmental and Climate Risks Matrix. As result, the BCB expects to fully develop its micro and macro-prudential monitoring processes, which in turn will help direct supervision efforts. As a practical reference, the *document* would also help to equalize the market/industry expectations regarding supervision.

The steps required for "Structuring and broadening the scope for collecting information on S, E & C risks" are as follows.

#### Document

- a. Information exchange document layout and basic instructions proposal;
- b. Approval of the information exchange document layout
- c. Publication of related regulations;
- d. Development of IT infrastructure.

#### Risk Matrix

- a. Gathering of previously mapped public data related to social and environmental risks;
- b. Research on new potential public data sources;
- c. Improvement of the existing Risk Matrix.

After internal BCB procedures, the proposal will be discussed with the industry.

The pre-identified data base of social and environmental risks for economic sectors qualification are available for homologation.

## Stress test for climate risks

The main goal of traditional stress tests is to assess whether a bank, or a group of financial institutions, have enough capital to absorb losses under adverse scenarios. The BCB already has developed its stress test models whose results are published in the semi-annually Financial Stability Reports, on an aggregate basis.

In addition, it has been decided that the BCB will incorporate climate change scenarios into its existing stress tests frameworks. Thus, the development of the climate stress test will comprehend not only the impact of losses stemming from traditional financial risks into banks' balance sheet but also potential losses related to the exposures of financial institutions to both transition as well as physical risks.<sup>10</sup> Hence the BCB will begin to monitor and identify potential vulnerabilities to the Brazilian financial stability originating from this new type of risk. This item of the Agenda BC# is divided into the following steps:

- 1) Literature review and research about climate risk stress tests.
- 2) Data gathering and outline of the climate risk stress test.
- 3) Preliminary version and programming of the climate risk stress test.
- 4) Final version of the climate stress test and disclosure of results.

Initially a literature review was performed by the BCB staff, through an extensive research in several working papers related to climate-related risks and stress tests published by academics, regulatory authorities and standard setting bodies. As great part of these papers was written by foreign authors, this step allowed the BCB specialists to become aware of international best practices about climate-related risks stress tests and scenario analyses.

The staff is currently structuring the dataset and working on the specification of models to be used in this framework. The stress test will follow a top-down approach, providing a better comparison of results and allowing for an ongoing monitoring of risks.

## 6.3 Policies

### **Inclusion of sustainability criteria for selecting counterparties and for investment decisions in international reserves management**

As banks are interested in being BCB's counterparties, there is an annual counterparty assessment process, where criteria such as execution, back-office and research are scored. This ranking is used for occasional rotation between banks, with some leaving the list of eligible institutions to negotiate with the BCB. The idea is to add a criterion that punctuates the sustainability ranking of these counterparties, which encourage banks to pay more attention to their actions in relation to sustainability. The BCB is studying the best provider of the sustainability

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<sup>10</sup> Physical risk drivers are the changes in weather and climate mentioned above that lead to physical risks and impacts on economies and banks (eg a flood). Transition risk refers to the risks related to the process of adjustment towards a low-carbon economy. *Climate-related risk drivers and their transmission channels*. BCBS, 2021. <https://www.bis.org/bcbs/publ/d517.htm>.

rankings to be used. It is expected this new variable to be incorporated by the Counterparty Evaluation Committee at the annual meeting in December 2021.

The BCB monitors sustainability indicators in the international reserves management. The BCB includes the asset class “green bonds” in the universe of eligible assets for the investments, which is a strategic approach aligned to the BCB focus on sustainability, as an additional criteria in the investments of the international reserves, constrained by other criteria like safety, liquidity and profitability.

### **Creation of the sustainable financial liquidity facility**

The BCB has been studying the adoption of criteria linked to sustainable finance in the design of its new liquidity financial lines. The inclusion of the sustainability pillar requires the maturation of social, environmental and climate features in the capital and credit markets, especially in corporate debt instruments traded on markets, and the incorporation of the positive externalities of these features in terms of liquidity and credit risks. Once these effects have matured, the consideration of aspects related to social, environmental and climate risks in the credit risk rating of issuers will differentiate sustainable assets in the Liquidity Financial Lines in an organic way, without the need for regulatory or operational changes to the Lines.

Furthermore, conditional on the evolution and maturity of the market and the taxonomy practices of social, environmental and climate risks, the Central Bank is considering using a specific classification for these risks as an additional component to be considered in the pricing model and in the definition of the haircut percentages applied, as is currently done with incentivized debentures. For this, it is necessary that the relevant sustainability characteristics are organized, specified, classified, standardized and publicly accessible by regulators in general. Only from these conditions it is possible to study the behavior of some of the fundamental variables for the establishment of specific criteria for sustainable assets. With this, it becomes possible to design specific policies according to the classification of social, environmental and climate risks, such as the acceptance of guarantees, pricing and risk mitigation factors for securities associated with liquidity provision operations by the BCB.

## **6.4 Internal Actions**

### **Reducing environmental impact of banknotes processing**

In 2020, the BCB removed from circulation, through a process of sorting and shredding, 280 tons of worn and unfit banknotes. The BCB has been working to identify and adopt sustainable approaches of banknote waste disposal. Since 2017, the material has served as an energy input in cement manufacturing, through co-processing, which helps to reduce the use of non-renewable natural resources, mitigate CO<sub>2</sub> emissions, and eliminate new environmental liabilities in landfills, in accordance with the guidelines of the National Solid Waste Policy. This model is currently adopted by BCB offices in Rio de Janeiro, Belo Horizonte, Curitiba,

Porto Alegre, Recife, and Salvador, which together are responsible for more than half of the annual volume of shredded banknotes. The goal is to fully migrate the remaining BCB offices to the co-processing model by 2023.

### **Social-environmental theme in the Money Museum**

The sustainability theme is one of the principles that should guide the development of the exhibition of the new money museum. Sustainability must be content in itself or in a transversal way, to be presented throughout the exhibition. It must also be a practice of the museum itself and an invitation to the visitor for sustainable practices. Thus, the inclusion of the topic of socioenvironmental responsibility represents an opportunity for the BCB to expand its interaction with society, being yet another element that integrates with the content of the new money museum.

The action is carried out under the Decentralized Execution Term 07/2019, celebrated between the Ministry of Justice and Public Security, through the Fund for the Defense of Diffused Rights (FDD) and the BCB to develop the first museum in South America fully dedicated to economics, personal finance, and sustainable development. The project foresees 36 months and BRL 19.3 million in financial resources for renovation and new museography of the money museum.

### **BCB report on social-environmental risks**

Launching this Report on Social, Environmental and Climate-related Risks and Opportunities is the objective of this task on the Agenda BC#. The report aims to improve accountability and transparency of the main BCB's activities on sustainability. The report is an institutional effort to contribute on building a consensus about best practices on metrics and management of social, environmental and climate risks.

### **Inclusion of social and environmental issues in the BCB's Integrated Risk Management Policy**

The BCB reviewed and approved the Integrated Risk Management Policy in 2021 and the new policy highlights the social and environmental risks in the risk matrix and in the decision making processes.

### **Strengthening the culture of sustainability**

The BCB continued its efforts to strengthen its sustainability culture, with the highlights presented in chapter 3.2 of this report.

### **Review of the BCB's Socio-environmental Responsibility Policy**

The revision of BCB's Socio-environmental Responsibility Policy is in progress.

## 6.5 Partnerships

### **Signing of a Memorandum of Understanding with the Climate Bonds Initiative (CBI)**

The CBI is a nonprofit organization that supports the development of green financial instruments in order to accelerate the transition to a global low carbon economy. The Memorandum establishes the common goal of the institutions promoting the sustainable finance agenda and the appropriate management of climate and socio-environmental risks in the financial system.

### **Formal expression of support to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)**

The TCFD works to increase and improve the quality of financial information reports provided by companies and other organizations. The premise is that the availability of high quality, clear and comprehensive information on climate change impacts allows market agents to better manage risks and capital allocation. As a TCFD Supporter, the BCB demonstrates a compromise to encourage a higher level of transparency on climate aspects in the financial system and, thus, to contribute to its resilience.

### **Become a member of the Network for Greening the Financial System (NGFS)**

The NGFS is a network of central banks and financial supervisors that aims to adopt sustainable practices in the financial system. Its work is structured in five fronts: research, bridging data gaps, supervision, macrofinancial and scaling up green finance. As a member of the NGFS, the BCB has access to valuable exchange of experiences with its peers on climate and socio-environmental risk mitigation.





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