



Febraban's roadmap for implementing the TCFD/FSB in the Brazilian banking sector

Progress since 2018

December 2022

Technical support:



Held by:



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Febraban's Roadmap for Implementing the TCFD/FSB in the Brazilian Banking Sector

Progress since 2018

HELD BY

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1. Introduction

The increase in Greenhouse Gas (GHG) emissions – mainly those resulting from human activity – has already warmed the planet by 1 °C¹ since the Pre-Industrial Era, according to studies by the Intergovernmental Panel on Climate Change (IPCC)². As a consequence, the effects of climate change have generated various economic, social, and environmental impacts around the world. In light of these facts, roughly two hundred countries signed the Paris Agreement in December 2015 and have pledged their commitment to the targets for reducing GHG emissions, by transitioning to a low-carbon economy. The aim of such commitments is not only to keep the increase in global mean temperature less than 2 °C by 2100, but to strive to limit such increase to 1.5 °C.

This global warming, in addition to the impacts on the environment in general, implies significant financial impacts. According to different studies, including one conducted by The Economist Intelligence Unit in 2015³, and another one published by Nature Climate Change in 2016⁴, it is estimated that – from the date of the study until the end of the century – the Value at Risk (VaR)⁵ of assets under management as a result of climate change ranges from US\$ 2.5 trillion (for the most moderate scenarios) to US\$ 43 trillion (for the most alarming scenarios). This estimate reflects the possible damage to assets resulting from extreme events such as droughts, storms and/or floods, and the expectation of lower growth and financial return on assets in general.

Faced with the potential impact of climate change (including impacts on the stability of the financial system) and the lack of adequate information on the exposure of assets to risks of this nature, the Financial Stability Board (FSB) sought to identify relevant information for assessing

¹ Available at: <https://www.ipcc.ch/sr15/chapter/spm/>

² Intergovernmental Panel on Climate Change (IPCC): The Intergovernmental Panel on Climate Change is a body of the United Nations formed to evaluate science relating to climate change. The IPCC provides regular assessments of the scientific knowledge base on climate change, its future impacts and risks, as well as adaptation and mitigation options that can be used by governments to develop public policies.

³ Available at: <https://impact.economist.com/sustainability/net-zero-and-energy/the-cost-of-inaction>

⁴ Available at: <https://www.nature.com/articles/nclimate2972/>

⁵ VaR is an indicator that measures the magnitude of possible loss that a portfolio may undergo within a given time horizon.

and pricing risks and opportunities⁶ of climate change, and should therefore be known to the financial sector.

For this reason, the TCFD was created in 2015: “Task Force on Climate-related Financial Disclosures (TCFD, in Portuguese: “Força-tarefa para Divulgações Financeiras Relacionadas às Mudanças Climáticas”).

The TCFD – a global initiative – has members from various organizations (banks, insurance companies, asset managers, among others) and has developed a unique and accessible framework for financial disclosures relating to climate change. Its recommendations, released in 2017, have since been adopted by public and private financial and non-financial institutions.

Vis-à-vis the demand for improving climate-related financial disclosures, Febraban – as the main representative entity of the Brazilian banking sector – in 2018 began the development of a Roadmap to support banks in implementing the TCFD's Recommendations. The initiative has the technical support of NINT⁷ and the participation of a group of banks associated with Febraban.

Committed to transparency and aimed at encouraging other players in this agenda, Febraban has annually published a progress report on the Roadmap. The document features updates on the implementation of the Roadmap's actions – not only those directed at the banks, but at Febraban as well –, in addition to improvements identified and developed throughout its implementation process.

This year's report also addresses the standards published in 2021 by the Central Bank of Brazil (BCB), which are aligned with the TCFD's Recommendations, as mentioned by the Task Force itself in the “2021 Status Report”⁸.

6 Climate risks are divided into two main categories, according to the Task Force on Climate-Related Financial Disclosures (TCFD): risks of transition to a low-carbon economy, which involve political, legal, technological, and market changes; and risks relating to the physical impacts of climate change, which can be caused by specific events (acute) or by long-term changes (chronic), such as direct damage to assets and indirect impacts due to supply chain disruption. Opportunities are related to resource efficiency and cost savings, the adoption of low-emission energy sources, and the development of new products and services, among others.

7 NINT Natural Intelligence is an ESG assessment and advisory company that operated for nine years under the umbrella of SITAWI as the Sustainable Finance Program, having separating from it in 2022.

8 Task Force on Climate-related Financial Disclosures: “Status Report 2021”. Available at: <https://www.fsb.org/wp-content/uploads/P141021-1.pdf>

In this way, Febraban's work with banks allowed several of them to anticipate (or at least prepare for) some of the BCB's new regulatory demands.

At the international level, Febraban's initiative has been recognized by relevant stakeholders. The TCFD itself highlighted the efforts of Febraban as a case of international progress in the implementation of the Recommendations⁹, and it was also mentioned by the International Finance Corporation (IFC), through the Sustainable Banking Network¹⁰. Furthermore, the Network for Greening the Financial System (NGFS) featured – as a case study in one of its publications¹¹ – the “Climate Risk Sensitivity Ruler”, a tool created within the scope of the Roadmap.

The present report, “Febraban's Roadmap for Implementing the TCFD/FSB in the Brazilian Banking Sector - Progress since 2018” presents an international overview of the TCFD and the regulatory situation in Brazil, indicates the support actions in the agenda implemented by Febraban up to 2022, and lastly, demonstrates the evolution of banks in adopting the TCFD's Recommendations, considering the start of the implementation of the Roadmap up to 2021.

9 The mention of Febraban can be read in the document “Task Force on Climate-Related Financial Disclosures: 2020 Status Report”. Available at: <https://www.fsb.org/wp-content/uploads/P291020-1.pdf>

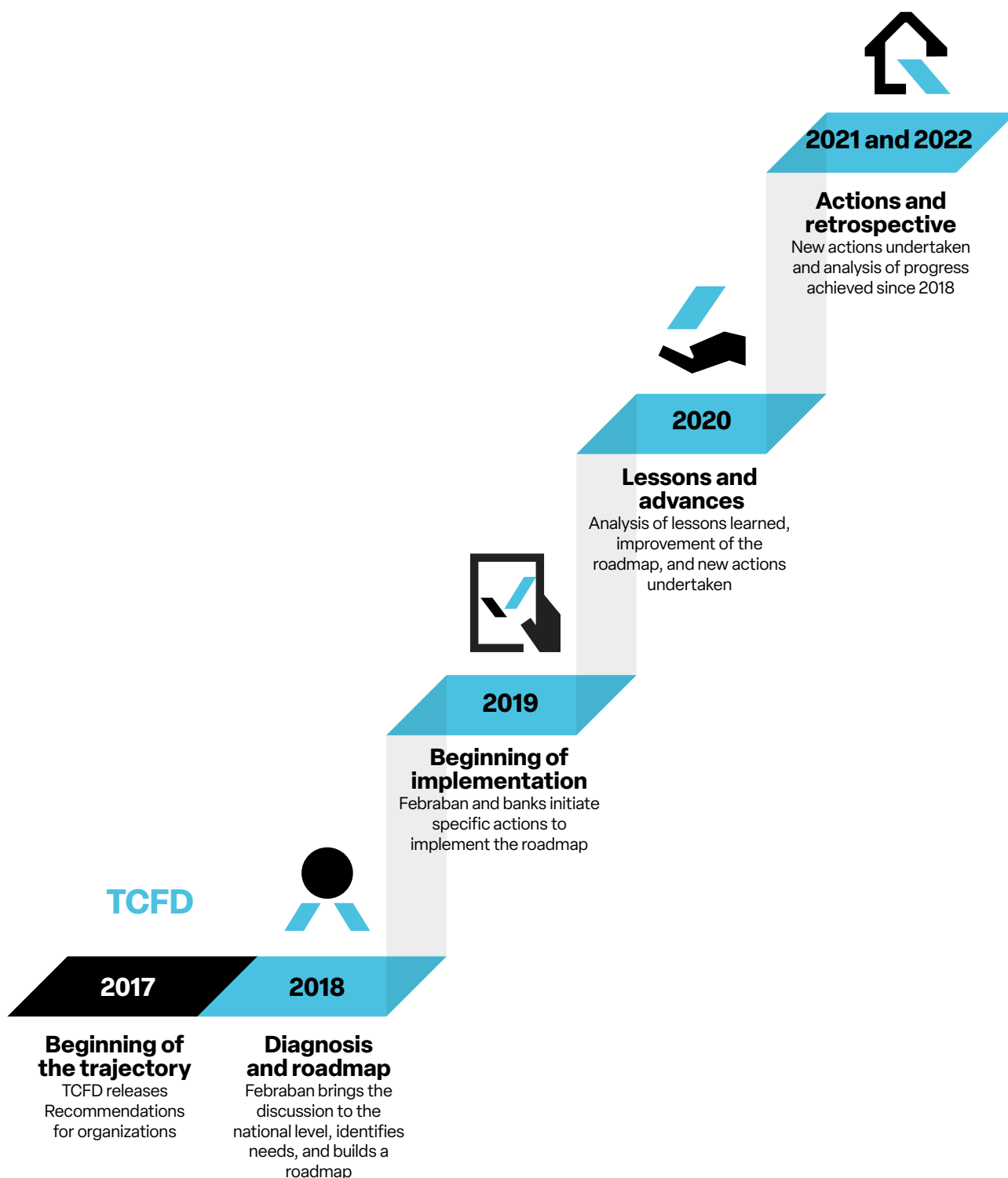
10 Available at: https://sbfnetwork.org/wp-content/uploads/pdfs/2019-Global-Progress-Reports/SBN_country_reports_country_with_framework_Brazil.pdf

11 Available at: https://www.ngfs.net/sites/default/files/medias/documents/capturing_risk_differentials_from_climate-related_risks.pdf

Febraban's Roadmap for Implementing the TCFD/FSB in the Brazilian Banking Sector

Progress since 2018

Figure 1: How the implementation of the TCFD has progressed in the Brazilian banking sector¹²



¹² The progress of banks in implementing the TCFD was measured up to December 2021, as the respective reports issued in 2022 incorporate information from the previous year. Febraban's actions included in this document cover the period up to December 2022.

2. International outlook

This chapter highlights advances in adopting the TCFD's Recommendations at the international level, including regulatory and voluntary initiatives, as well as practical market cases.

2.1 Overview

The TCFD's Recommendations have been implemented on a voluntary or mandatory basis by non-financial and financial companies since they were released in 2017. The agenda is being adopted not only through the publication of information – the main object of the Recommendations –, but also through the review of organizations' risk management practices, how they seize business opportunities, and review of their strategies.

According to TCFD's "2021 Status Report", among the four pillars of disclosure – Governance, Strategy, Risk Management, and Metrics and Targets – the greatest global advance, to date, has occurred under "Strategy". Of the disclosures recommended in this pillar, organizations particularly made progress in disclosing climate-related risks and opportunities that they identified in the short, medium, and long term. This suggests that companies and their investors are prioritizing the understanding of the factors that may in fact affect their businesses – which is natural, before reviewing Risk Management and Corporate Governance processes concerning this topic.

Other recommendations that received more attention from the market as a whole were "Climate-related metrics" and "Scope 1, 2 and 3 GHG emissions", both under "Metrics and Targets".

At the regional level, Europe-based organizations advanced further than those of other continents, reflecting the existing regulatory demands and the greater dissemination of ESG reporting practices. The effect of recent international moves (not only due to pressure from investors, but also by governments and civil organizations), with expectations of measuring

and offsetting GHG emissions, has also contributed to these advances around the world. A summary of the information mapped by the TCFD is shown in the following table.

Table 1: Disclosure of TCFD's Recommendations, by region

Recommendations	Recommended disclosure	Asia Pacific	Europe	Middle East and Africa (80)	America North America (762)	Latin America (52)
Governance	Board of Directors	26%	(424)	Middle East and Africa	20%	21%
	Top Management's role	23%	(80)	America	11%	13%
Strategy	Risks and opportunities	48%	North America	32%	48%	54%
	Impact on organization	39%	(762)	Latin America	35%	31%
	Resilience of strategy	15%	(52)	6%	7%	10%
Risk Management	Risk identification and assessment processes	35%	50%	20%	17%	29%
	Risk management processes	32%	47%	15%	19%	27%
	Risk management integration	32%	41%	11%	18%	21%
Metrics and Targets	Climate metrics	54%	75%	36%	23%	37%
	Scope 1, 2 and 3 emissions (GHG Protocol)	42%	64%	26%	21%	25%
	Climate targets	25%	61%	24%	25%	21%

* Numbers in parentheses represent, by region, the number of participating organizations analyzed.

Source: Adapted from the TCFD "2021 Status Report"

Since 2017, financial institutions and non-financial companies in Europe have maintained a leading position; the Asia-Pacific region has performed at levels close to those of Europe. It is worth noting that Latin America also shows performance close to that of Asia-Pacific, despite

the fact that the latter has more mature financial markets.

In Latin America, the Association of Mexican Banks (ABM), for example, in 2019 launched a training program on climate risk by developing the “TCFD readiness tool” to support Mexican banks. In addition, the country's Central Bank (Banco de México) issued recommendations for banks to improve their sustainable finance and ESG-related risk strategies, using the TCFD as a reference.

After advances in the banking sector, the issue has also expanded to the capital markets in the region. The Mexican Green Finance Advisory Council (CCFV) in 2020 published a call to public issuers to disclose climate-related risks, in line with the TCFD.

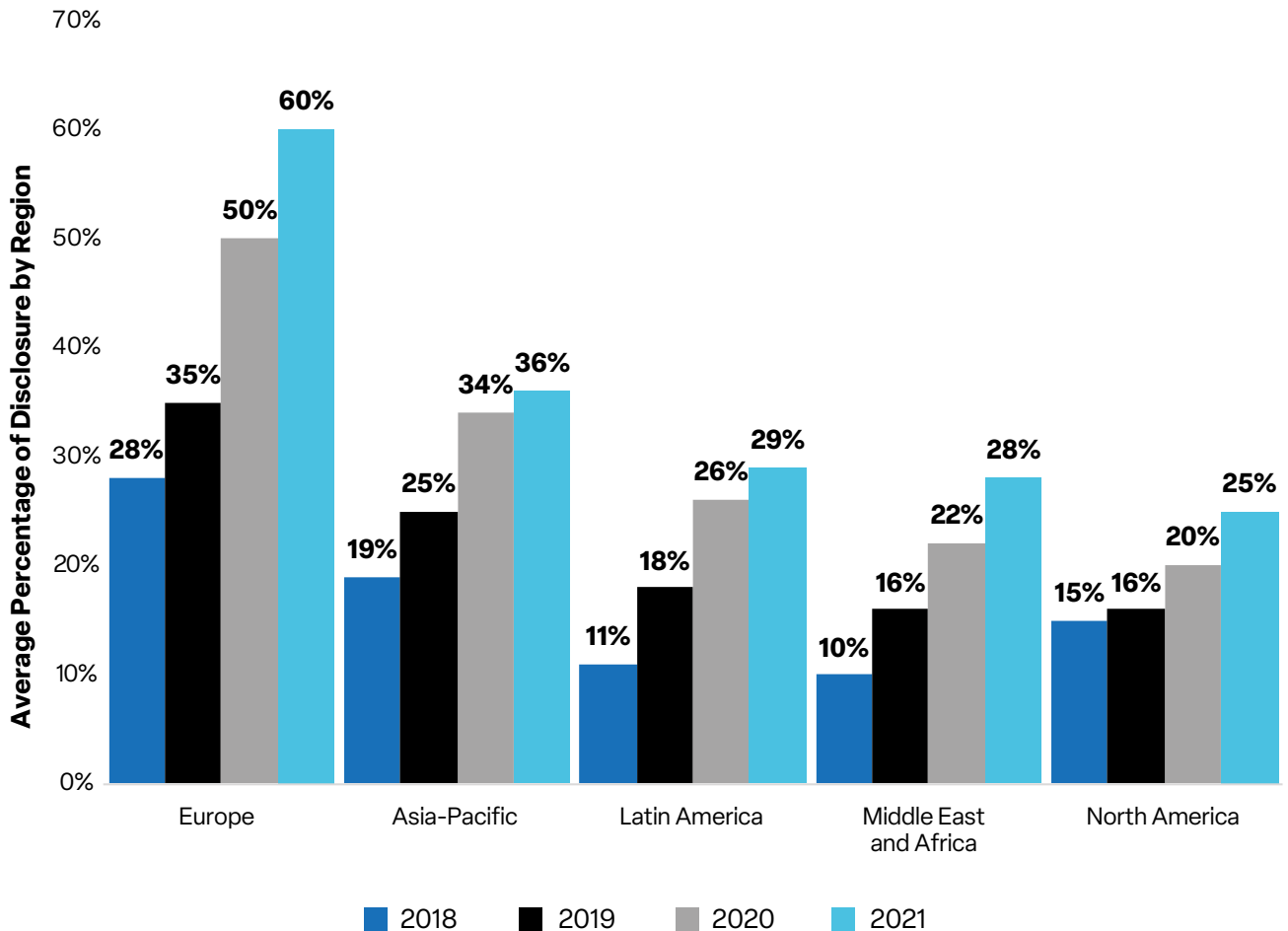
In the same year, the Peruvian Securities Commission (Superintendencia del Mercado de Valores) declared its support for the TCFD, in line with its commitment to promoting best practices in the securities market.

The greatest headway in Latin America was in Brazil, where regulation is already in line with the practices of leading jurisdictions in the matter; see the next section for further details.

The TCFD's 2021 and 2022 Status Reports¹³ presented the progress of disclosure, by continent, based on the analysis of disclosure by companies and financial institutions. Graph 1 (page 11) shows the average percentage of disclosure of the 11 recommended sections by region, for the four years analyzed: 2018, 2019, 2020 and 2021. Europe remains the leading region in disclosure, followed by Asia-Pacific and Latin America. There was also considerable growth in all regions, but some of them had greater growth, such as Europe, Latin America, and the Middle East and Africa: these three regions practically tripled the average percentage of disclosure.

¹³ Task Force on Climate-related Financial Disclosures: 2022 Status report. Available at: <https://assets.bbhub.io/company/sites/60/2022/10/2022-TCFD-Status-Report.pdf>

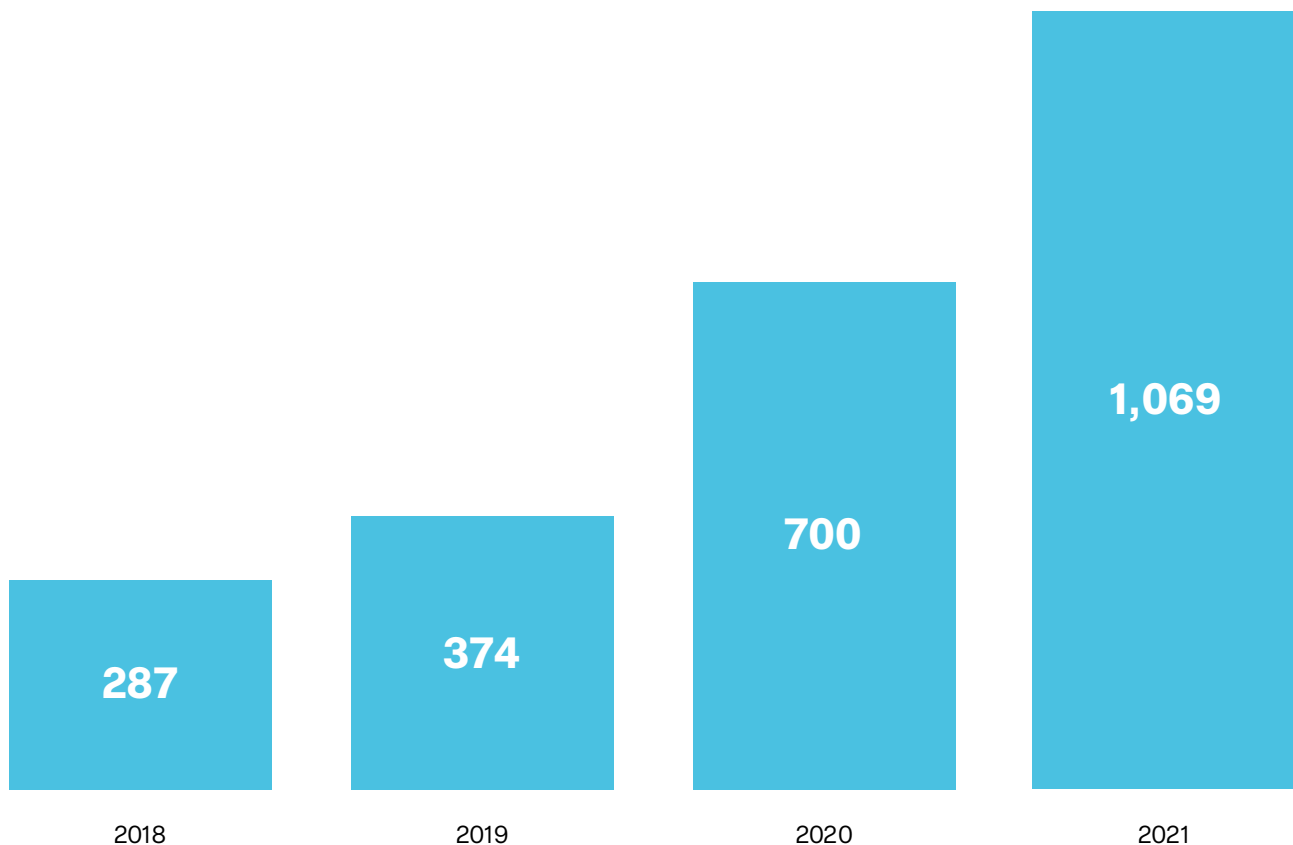
Graph 1: Disclosure by region



Source: Adapted from the TCFD's "2022 Status Report"

When comparing progress in implementing the TCFD's Recommendations between the financial sector and companies in the real economy, financial institutions are still lag behind, which can be attributed to their reliance on information from their clients (borrowers and investees). However, the outlook has been changing. The number of financial sector organizations formally supporting the TCFD has increased rapidly since 2018: from 2018 to 2021, this increase was 272% worldwide.

Graph 2: Number of financial institutions supporting TCFD globally

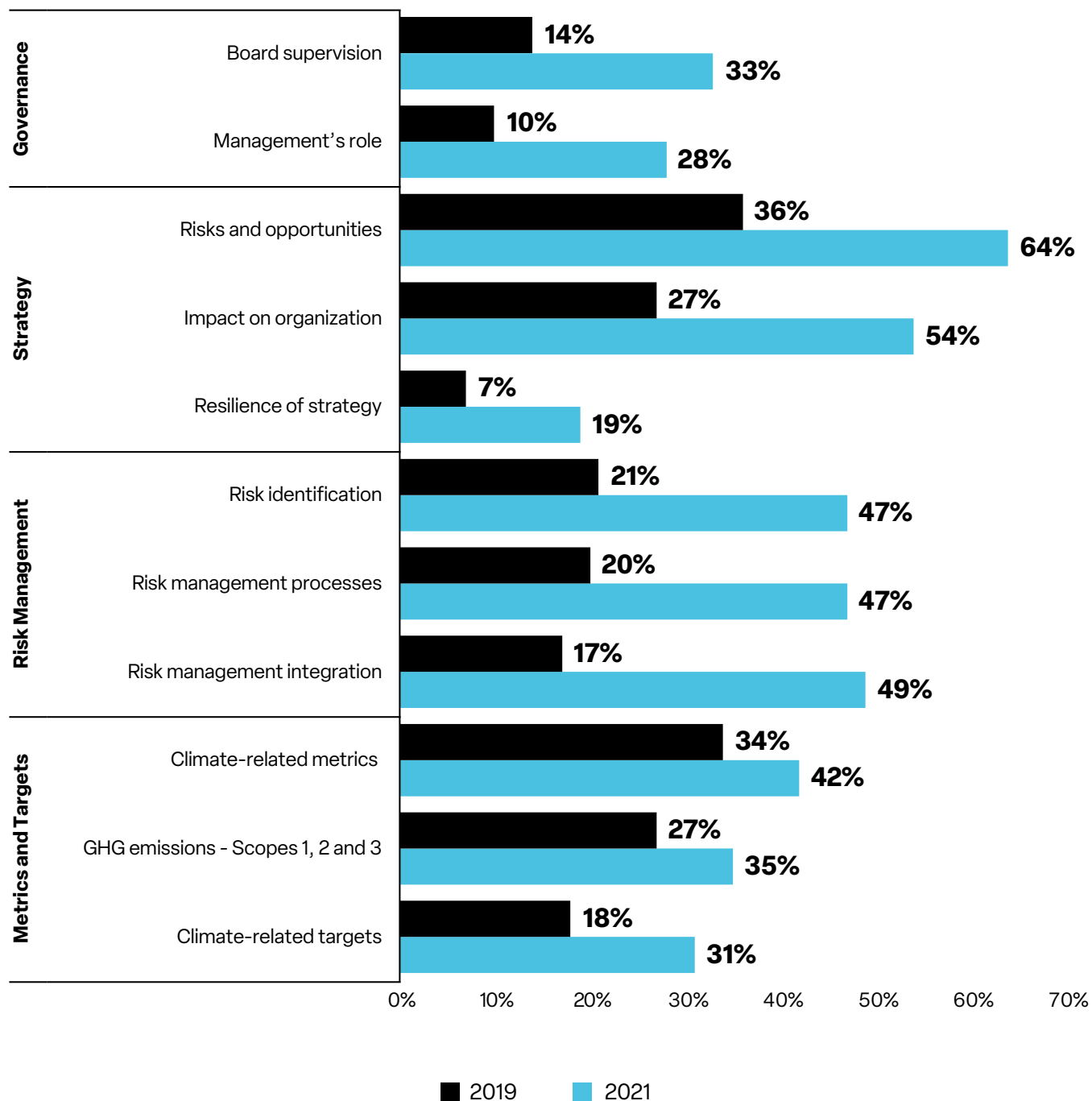


Source: Adapted from the TCFD “2021 Status Report”

Another analysis presented in the TCFD Status Report was the alignment of different sectors on the 11 recommended disclosures.¹⁴ In seven of the 11 recommended disclosures, the banking sector average was lower than that of companies in the other economic sectors analyzed. However, alignment with TCFD’s Recommendations increased from 2018 to 2020 in all of them, with the greatest increases in the following pillars: Strategy, 20 percentage points; and in Risk Management, 19 percentage points.

¹⁴ The banking sector sample consisted of 282 banks, divided into three smaller sectors: investment and asset management banks; large and diversified banks; and regional banks. For all sectors, around 1,082 companies were evaluated. Roughly 1,651 companies had their 2018, 2019, and 2020 reports analyzed using artificial intelligence techniques. The survey assessed the degree to which the disclosures by companies from different sectors adhered to the TCFD’s Recommendations.

Graph 3: Percentage of the sample of 248 banks that disclosed relevant information in line with the TCFD



Source: Adapted from the TCFD's "2022 Status Report"

Despite the advances, a considerable portion of financial institutions are still unable to disclose the financial impact caused by climate change, and consequently unable to develop the recommended resilience to deal with these impacts. This is not only due to the fact that many of the institutions only recently adhered to TCFD's Recommendations, but also due to the lack of internal capabilities, reliable data with a suitable level of granularity, and methodological challenges for measuring the materialization of risks and opportunities in time horizons that can be rather long. This makes the process even more challenging, thus implying the need for institutions to develop in such matters.

2.2 Regulation aligned with the TCFD's Recommendations

Since the release of the TCFD's Recommendations in 2017, government entities and other regulators in several jurisdictions have announced intentions to encourage market players to improve management and transparency related to the financial impacts of climate change. This move was primarily due to the involvement of Finance/Economy Ministers from G7 countries and leaders of Central Banks in the group responsible for the advent of the TCFD.

A study conducted by the FSB in 2021¹⁵ showed that most jurisdictions surveyed have either established or plan to establish requirements or directives for organizations to implement climate-related disclosures, as shown in Graph 1 (page 11). The study indicated that 15 out of the 25 jurisdictions (Australia, USA, France, Germany, Hong Kong, Indonesia, India, Italy, Japan, Netherlands, Singapore, Spain, Turkey, and the UK – with Brazil newly added to the list), have requirements in force; Eight jurisdictions (Argentina, Canada, China, South Korea, Mexico, Russia, Switzerland and USA) plan to introduce requirements; and two jurisdictions (Saudi Arabia and South Africa) have not yet indicated any plans.

Regulators of financial institutions in jurisdictions that have already developed initiatives reported that the efforts were based on the need to assess climate-related risk for financial in-

¹⁵ Report on Promoting Climate-Related Disclosures, Financial Stability Board, July 2021. Available at: <https://www.fsb.org/2021/07/report-on-promoting-climate-related-disclosures/>

stitutions; as well as building sustainable financial markets, assessing opportunities for financial institutions, and protecting investors.

Below are highlighted some of the recent regulatory initiatives that address the issue of climate change.

European Union

In April 2021, the European Commission published a proposal for a “Corporate Sustainability Reporting Directive”, in order to change existing reporting requirements. Such changes include the need for sustainability reporting by a larger group of companies, in addition to compliance with standards developed by the European Financial Reporting Advisory Group. Additionally, the Commission indicated that reporting standards must take into account existing standards and structures, including the TCFD framework.

Japan

Japan's Financial Services Agency, along with that country's Ministry of Economy and Ministry of Environment, published the final version of the document “Basic Guidelines on Climate Transition Finance”, considering references of the TCFD.

United Kingdom

In November 2020, the UK's Chancellor of the Exchequer at the time, Rishi Sunak, announced¹⁶ the UK's intention to require large companies and financial institutions to disclose climate-related information by 2025, yet going beyond what is recommended by the TCFD itself. In addition, the “Roadmap towards mandatory climate-related disclosures” was released¹⁷, which indicates the path to be taken to make TCFD disclosures mandatory.

¹⁶ Available at: <https://www.gov.uk/government/speeches/chancellor-statement-to-the-house-financial-services>

¹⁷ Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/933783/FINAL_TCFD_ROADMAP.pdf

Hong Kong

Hong Kong's financial authorities, including the Hong Kong Monetary Authority (HKMA), the Securities and Futures Commission (SFC), the Insurance Authority (IA), the Mandatory Provident Fund Schemes Authority, and Hong Kong Exchanges and Clearing Limited (HKEX), have announced their intention to make TCFD-aligned disclosures mandatory in all relevant industries by 2025¹⁸.

In July 2021, the Hong Kong Monetary Authority also issued a guidance model, indicating that financial institutions must make climate-related disclosures in line with the TCFD's Recommendations.¹⁹

United States

Support for the TCFD has come from several federal and state agencies:

- ◆ U.S. Commodity Futures Trading Commission: in September 2020 - a report titled "Managing Climate Risk in the U.S. Financial System" was released, with 53 recommendations to mitigate risks to financial markets, considering TCFD's Recommendations and other documents.²⁰
- ◆ US Securities Exchange Commission: in July 2021 - following a public consultation, the SEC disclosed that it strongly supports the TCFD as a climate-related mandatory disclosure recommendation.²¹

18 Available at: <https://www.hkma.gov.hk/eng/news-and-media/press-releases/2020/12/20201217-4/>

19 Available at: https://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/supervisory-policy-manual/GS-1_for_consultation_20Jul2021.pdf

20 Available at: <https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf>

21 Available at: <https://www.sec.gov/comments/climate-disclosure/ccl12.htm>

- ◆ New York State Department of Financial Services: since September 2020 - the Superintendent of Financial Services has taken several actions in New York State to contribute toward the commitment to deal with the financial risks of climate change, intending to incorporate the TCFD as one of the bases for carrying out such actions.²²
- ◆ State of California: in April 2021 – state senators introduced SB 449 into legislation, requiring California-based businesses with more than \$500 million in revenue to annually disclose their climate-related financial risks, in line with the TCFD's Recommendations. Since then, E2 (a coalition of 2,600 California business leaders and a coalition of institutional investors with more than 88 billion dollars in assets under management) has sent letters in support of SB 449 to the California State Legislature.²³

New Zealand

In April 2021, as a follow-up to its announcement of plans to include climate-related financial disclosures in line with the TCFD, New Zealand introduced the Financial Sector (Climate-related Disclosure and Other Matters) Amendment Bill. If passed, it will enter into force within 12 months of ratification.²⁴

Singapore

In December 2020, the Monetary Authority of Singapore (MAS) issued several guidelines: "Guidelines on Environmental Risk Management for Banks"²⁵, "Guidelines on Environmental Risk Management for Asset Managers"²⁶, and "Guidelines on Environmental Risk Management for Insurers"²⁷, requiring financial institution disclosures to be aligned with several international reporting frameworks and include the TCFD's Recommendations.

22 Available at: https://www.dfs.ny.gov/reports_and_publications/press_releases/pr202009221

23 Available at: [https://www.ceres.org/sites/default/files/Major%20Investor%20Support%20For%20SB%20449%20\(5_11\)%20\(1\).pdf](https://www.ceres.org/sites/default/files/Major%20Investor%20Support%20For%20SB%20449%20(5_11)%20(1).pdf)

24 Available at: <https://www.beehive.govt.nz/release/nz-becomes-first-world-climate-reporting>

25 Available at: <https://www.mas.gov.sg/regulation/guidelines/guidelines-on-environmental-risk-management>

26 Available at: <https://www.mas.gov.sg/regulation/guidelines/guidelines-on-environmental-risk-management-for-asset-managers>

27 Available at: <https://www.mas.gov.sg/regulation/guidelines/guidelines-on-environmental-risk-management-for-insurers>

In June 2021, the MAS published the “Inaugural Sustainability Report”²⁸, announcing that all financial institutions in that country are to be aligned with the TCFD by June 2022.

In May 2021, Singapore's Green Finance Industry Taskforce (GFIT) published the “Financial Institutions Climate-related Disclosure Document (FCDD)”²⁹, a guide for implementing climate-related disclosures, adopting the TCFD's Recommendations.

2.3 Volunteer initiatives engaged in the TCFD

Various international organizations responsible for voluntary information reporting and risk management standards are incorporating the TCFD or moving in this direction.

In 2018, the Carbon Disclosure Project (CDP) – which features a set of questionnaires to increase the transparency of companies and governments on environmental issues – revised its climate change questionnaire considering the TCFD. Between 2018 and 2021, the review advanced and a series of sectoral questionnaires was released, also in line with the TCFD's Recommendations.

The TCFD's Recommendations have also been considered in moves toward harmonizing different voluntary reporting standards. In December 2020, a group of five of the foremost organizations in sustainability reporting – the Carbon Disclosure Project (CDP), the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the International Integrated Reporting Council (IIRC) – launched “The Better Alignment Project”. This project seeks to explore how frameworks and standards support organizations in preparing Environmental, Social, and Governance (ESG) disclosures in order to bring more coherence, consistency, and comparability between the disclosed documents.

The adoption of the TCFD's Recommendations as a reference has been supported by organizations such as the International Financial Reporting Standards (IFRS), the Financial Stability Board, and the International Organization of Securities Commissions (IOSCO).

²⁸ Available at: <https://www.mas.gov.sg/publications/sustainability-report/2021/sustainability-report>

²⁹ Available at: <https://abs.org.sg/docs/library/financial-institutions-climate-related-disclosure-document.pdf>

In 2021, the FSB published a roadmap to continue advancing the approach to climate-related financial risks. Such work included partnerships with the IFRS³⁰ and with the Network for Greening the Financial System (NGFS). The FSB focuses on encouraging international coordination on climate-related policies.

Also in 2021, the International Organization of Securities Commissions (IOSCO)³¹ published its support for the IFRS initiative to establish international sustainability standards proposed by the Board. In June 2021, IOSCO released a “Report on Sustainability-related Issuer Disclosures”, outlining the work of its Sustainable Finance Taskforce (STF) to improve sustainability-related disclosures of corporate securities issuers, building on the TCFD’s framework.³²

The NGFS – which gathers a growing group of central banks and other financial regulatory and oversight agencies – has also advanced in discussions and guidelines for these entities to expand the incorporation of climate risks in their transparency, regulation, and supervision practices.³³

30 IFRS is a non-profit public interest organization established to develop high-quality, understandable, enforceable, and globally accepted accounting and sustainability disclosure standards, as well as to promote and facilitate adoption of the standards.

31 IOSCO is the international body that brings together securities regulators and is recognized as the global standard-setter for capital markets. IOSCO develops, implements, and promotes adherence to internationally recognized standards for securities regulation.

32 Available at: https://www.iosco.org/about/?subsection=about_iosco

33 Available at: <https://www.ngfs.net/en>

3. Regulatory outlook in Brazil

The Central Bank of Brazil (BCB) has made major headway in the climate agenda, especially since 2020, when it launched the Sustainability Pillar of its strategic agenda (Agenda BC#), so as to expand the incorporation of social, environmental, and climate issues in risk management and corporate responsibility of banks and other entities regulated by the BCB. That same year, the BCB formalized its support for the TCFD and adhered to the NGFS.

In 2021, in addition to releasing its first report on social, environmental and climate-related risks and opportunities,³⁴ the regulator updated its regulatory framework with the National Monetary Council (CMN). A series of regulatory resolutions and instructions has been published since then, adding to the previously existing socio-environmental standards.

- ◆ **CMN Resolution 4945/2021**, which establishes the Environmental and Climate Social Responsibility Policy (PRSAC) and superseded Resolution 4327/2014.
- ◆ **CMN Resolution 4943/2021**, which provides for integrated management of social, environmental and climate risk, superseding Resolution 4557/2017.
- ◆ **BCB Resolution 139/2021**, which aims to improve the disclosure of social, environmental and climate information by financial institutions, based on the TCFD's Recommendations, through the "Social, Environmental and Climate Risks and Opportunities Report" (GRSAC Report).
- ◆ **BCB Resolution 151/2021**, which discusses the submitting of information related to social, environmental, and climate risks by financial institutions (DRSAC).

³⁴ Available at: https://www.bcb.gov.br/content/publicacoes/relatorio-risco-opportunidade/relatorio_riscos_opportunidades_sociais_ambientais_climaticas_0921.pdf

In addition to the banking sector, progress has also been made regarding transparency requirements for publicly-traded companies. Brazil's Securities and Exchange Commission (CVM) published CVM Resolution 59/2021 to amend CVM Resolution 480/2009, which defined the rules for publishing the Reference Form of companies listed on the Stock Exchange. This document is used in order to present relevant information to investors; the new Resolution began to incorporate information related to environmental, social, and corporate governance (ESG) practices, with many of the points to be reported in the "report or explain" model. Among such information, questions are included in order to identify whether companies follow the TCFD's Recommendations and whether they carry out inventories of Greenhouse Gas emissions, in their different scopes.

Update of SARB Self-Regulation 014/14³⁵

In Brazil, progress was also made in the field of banking self-regulation. In December 2020, Febraban approved the revision of self-regulation commitments aimed at responsibility for and management of socio-environmental risks at financial institutions, by updating SARB self-regulation 014/2014.

The updated rule now incorporates (among others) requirements for managing and reporting the risks and opportunities of climate change in the institutions' business activity, in line with the TCFD's Recommendations. Signatory institutions had until June 2021 to adapt to the new requirements.

Due to the new regulatory demands of the Central Bank of Brazil in the social, environmental, and climate field, Febraban plans a new revision of the rules of the Socio-Environmental Axis of its Banking Self-Regulation, expected to be concluded in the first half of 2023.

³⁵ Available at: [http://cms.autorregulacaobancaria.com.br/Arquivos/documentos/PDF/Normativo%20SARB%20014%20-%20alterada%20pela%20Deliberacao%20031%20-%20sem%20marcas\(1\).pdf](http://cms.autorregulacaobancaria.com.br/Arquivos/documentos/PDF/Normativo%20SARB%20014%20-%20alterada%20pela%20Deliberacao%20031%20-%20sem%20marcas(1).pdf)

4. Progress of actions within the scope of Febraban

In late 2018, Febraban formalized its support for the TCFD; in addition to recommending a series of actions to be carried out by banks, it defined measures to be adopted by the Federation itself, in support of the implementation of the Task Force's Recommendations in the Brazilian banking sector.

These actions were part of a Roadmap released in 2019³⁶, which was developed with member banks that voluntarily form part of the Federation's work fronts on the matter. Since then, progress of these actions and updates to the Roadmap has been reported annually, in the publications "Febraban's Roadmap for Implementing the TCFD/FSB in the Brazilian Banking Sector"³⁷.

This chapter updates the progress of actions carried out according to the Febraban Roadmap, which include the dissemination and exchange of knowledge, the development of methodologies, and the production of tools.

Table 2 (page 23) shows the more than 20 actions developed by Febraban since the publication of the Roadmap, divided into four categories:

- a)** Training – in order to expand the knowledge of employees from different areas of the banks;
- b)** Tool – development of methodologies and/or tools for use by banks, aiming to meet the specific demands of the TCFD;
- c)** Guide – preparation of publications on elements of the TCFD, in order to guide the actions of banks and disseminate knowledge; and
- d)** Engagement – holding of events to share information, aimed at promoting the subject matter and sensitize stakeholders.

36 Available at: <https://cmsarquivos.febraban.org.br/Arquivos/documentos/PDF/Roadmap%20Febraban%20para%20implementa%C3%A7%C3%A3o%20da%20TCFD-FSB%20-%20FINAL.pdf>

37 Available at: <https://febraban.org.br/pagina/3085/43/pt-br/estudos-sustentabilidade-2019>

Table 2: Actions developed by Febraban

	Category	Activity	Description	Publication	Status
1	Tool	FTCFD Correlation Tool vs Other Frameworks	<p>A correlation tool that makes it possible to identify the match between the TCFD disclosure guidelines and other demands for management and transparency regarding socio-environmental risk and opportunities, such as the GRI and CMN/BCB Resolutions. The aim of this tool is to meet all these demands.</p> <p>N.B.: An updated version developed by Febraban was made available in early 2023.</p>	2019 [prepared] and 2022 [updated]	Concluded
2	Tool	Review of Febraban's Green Taxonomy	<p>Review of Febraban's Green Taxonomy³⁸ (initially developed in 2014–15). One of the classification categories, "Exposure to Climate Change", identifies economic activities that, by their nature, are more exposed to the impacts of climate change.</p> <p>The methodology considers Brazil's National Classification of Economic Activities (CNAE) and the TCFD's definition of sectors that are more sensitive to the issue. Thus, among other uses, banks can use the taxonomy to identify their portfolios' exposure to sectors that may be most heavily impacted by climate change.</p> <p>The categories of "Green Economy" and "Exposure to environmental risk" were also updated, using international references such as the European Union's Taxonomy, the Climate Bonds Standards, and the Social Bond Principles; the federal financing lines for sustainable agriculture and renewable energy were mapped out as well.</p> <p>The review process provided greater transparency to the methodology, which underwent public consultation, became 100% available, and was accompanied by a "Febraban Green Taxonomy Guide"³⁹, featuring detailed information about the methodology, its possible uses, and its limitations.</p>	2020 and 2021 [review]	Concluded

38 Febraban Green Taxonomy, available at: https://cmsarquivos.febraban.org.br/Arquivos/documentos/MSEExcel/Febraban%20-%20Vers%C3%A3o%20Final%20da%20Taxonomia_20210217.xlsx

39 Available at: https://cmsarquivos.febraban.org.br/Arquivos/documentos/PDF/Guia_Explicativo_da_Taxonomia_Verde_da_Febraban.pdf

Febraban's Roadmap for Implementing the TCFD/FSB in the Brazilian Banking Sector

Progress since 2018

3 and 4	Tool	Multisectoral Climate Risk Sensitivity Ruler (pre-prepared and updated)	Preparation of a tool, initially called "Climate Risk Sensitivity Ruler" ⁴⁰ , to enable an analysis of how sensitive the banks' credit portfolios are to climate risks in different sectors and at different levels of granularity. After pilot applications by the banks, the "Ruler" was updated	2019 [pre-prepared], 2021 and 2022 [updated]	Concluded
5	Tool	Tool for estimating emissions	Launch of the tool for estimating CO ₂ ⁴¹ emissions, developed in partnership with the "Investidores Pelo Clima" (IPC) initiative ⁴² . It provides emission factors for key sectors of the Brazilian economy, facilitating the measurement of financed emissions by financial institutions. The estimate is based on public information on Scope 1 and 2 emissions of more than 600 publicly traded Brazilian companies.	2021 and 2022 [preparation]	Concluded
6 and 7	Tool	Analysis tools of tropicalized scenarios (physical and transition risks)	Development of climate scenarios for sectors considered a priority by financial institutions, with participation by WayCarbon, for physical risk scenarios; and COPPE/UFRJ, for transition risk scenarios. The work resulted in databases made available for internal use by the member banks, containing projections of key variables in the sectors of Agriculture, Electricity Generation, Oil and Gas, and Biofuels. [See the box at the end of this section for further details.]	2019 and 2022 [preparation]	Concluded
8 and 9	Tool	Sensitivity Ruler for the Agrobusiness to Climate Change (preparation and pilot program)	Development of the Sensitivity Ruler for the Agrobusiness portfolio, a tool that allows an analysis of the sensitivity of banks' credit portfolios to climate risks for their agriculture and livestock financing portfolios. Pilot program for the application of the Ruler, with a round of discussions among banks. A "Guide to Support the Application of the Sensitivity Ruler for the Agrobusiness" is publicly available..	2021 [prepared] and 2022 [pilot program and review]	Concluded

40 Climatic risk sensitivity scale: Instructional guide for use by banks. Available at: <https://portal.febraban.org.br/page/3085/43/pt-br/sustainability-studies-2019>

41 Tool for estimating CO₂ emissions and beta version. Available at: <https://info.sitawi.net/emissao-co2>

42 The IPC is an initiative of NINT, with the support of Instituto Clima e Sociedade (ICS), through its Zero Emissions Economy Program, and its primary objective is to engage and train local professional investors to advance in the portfolio decarbonization agenda, while seeking better risk-adjusted returns. Available at: <https://www.investidorespeloclima.com.br/oipc>

Febraban's Roadmap for Implementing the TCFD/FSB in the Brazilian Banking Sector

Progress since 2018

10 and 11	Training	TCFD training (climate risks and opportunities; and sectoral impacts)	Workshops with member banks, regarding the potential impacts of climate change, climate risks on the financial sector, and TCFD's Recommendations. Workshops on transmitting climate risks to banks, mitigation strategies, and opportunities in three specific sectors: Agriculture, Energy (including Electric Utilities and Oil & Gas), and Mining & Metallurgy.	2019 and 2020	Concluded
12	Training	Guidelines for banks on adapting to the new BCB/CMN regulations	Meetings with member banks for presentation and technical discussion regarding the new resolutions and regulatory instructions, published by the CMN and BCB, which now include climate risk and are aligned with the TCFD's Recommendations. Sharing of explanatory material on the resolutions.	2022	Concluded
13 and 14	Guide / Training	Curation of restricted and open tools (Guide and technical meetings)	Development of a "Climate Risk Management Support Tools Guide", presenting a set of priority tools aimed at helping banks in analyzing climate risks when granting credit, including free and restricted tools. Technical meetings with organizations responsible for some of the main tools available on the market. Updating of the "Tool Guide" ⁴³ , with the incorporation of new tools for banks to use.	2019 [prepared] and 2021 [updated]	Concluded
15 and 16	Guide	Progress reports (2019, 2020 and 2021)	Preparation of the "Febraban Roadmap for Implementing the TCFD/FSB in the Brazilian Banking Sector" reports, with information on the progress of actions carried out by Febraban and the Brazilian banking sector, including the evolution of the issue internationally, in order to generate references for Brazilian banks..	2019 [prepared], 2020 [updated], 2021 and 2022 [updated]	Concluded
17	Guide	Guide on measuring and reporting GHG emissions	Preparation of the "Guide on measuring GHG emissions in the banking sector" ⁴⁴ , which provides an overview of the emissions of these gases in the Brazilian banking sector as well as methodologies and good practices for measuring financed emissions, in addition to the difficulties and recommendations for implementing such measures in Brazil.	2020 [prepared]	Concluded

⁴³ Guide to open and restricted tools. Available at: https://cmsarquivos.febraban.org.br/Arquivos/documentos/PDF/Guia_Ferramentas_Riscos_climaticos_2021.pdf

⁴⁴ "Guide on measuring GHG emissions in the banking sector" Available at: https://cmsarquivos.febraban.org.br/Arquivos/documentos/PDF/Guia_Mensuracao_GEE_final.pdf

Febraban's Roadmap for Implementing the TCFD/FSB in the Brazilian Banking Sector

Progress since 2018

18	Engage-ment	Holding public events	<p>Events held in order to raise awareness and disseminate the TCFD theme, such as:</p> <ul style="list-style-type: none"> > 56th edition of Febraban's "Café com Sustentabilidade"⁴⁵, featuring the theme "Financial impacts of climate change on business" by Febraban, with support from SITAWI. > 58th edition of the sustainability-themed breakfast event called "Café com Sustentabilidade"⁴⁶, featuring the theme "Toward a greener banking system: The Brazilian experience" by Febraban, the Central Bank of Brazil, and the Bank of International Settlements⁴⁷. > 59th edition of "Café com Sustentabilidade"⁴⁸, featuring the theme "Climate Challenges and Advances in the Financial Sector" by Febraban, featuring the participation of the organizations UNEP-FI, COPPE-UFRJ, CNSEG, Abrapp, Amec, B3, and NINT (at the time, as SITAWI).⁴⁹ <p>In addition, the following podcasts took place:</p> <ul style="list-style-type: none"> > Banks intensify issuance of green, social, and sustainable bonds.⁵⁰ > What is the role of the financial sector in the race for zero carbon?⁵¹ > Sustainable and social practices steer business and society.⁵² > Banks help develop businesses in the Green Economy.⁵³ <p>Lastly, the article "The role of banks is to support companies in the transition to the Green Economy, according to experts"⁵⁴, was published.</p>	2019 to 2022	Ongoing action
19	Engage-ment	Dialog with jointly-controlled entities	<p>Seeking to present the banking sector's engagement on this issue, and to build a collaborative agenda with key associations, Febraban has been carrying out a series of dialogues with other entities that represent the financial and business sector.</p>	2019 to 2022	Ongoing action

45 "Guide on measuring GHG emissions in the banking sector" Available at: <https://cafecom sustentabilidade.febraban.org.br/edicoes/edicao-56/>

46 Available at: <https://cafecom sustentabilidade.febraban.org.br/edicoes/edicao-58/>

47 Available at: <https://noomis.febraban.org.br/videos/rumo-a-um-sistema-bancario-mais-verde-a-experiencia-brasileira?pesquisa=Rumo%20a%20um%20sistema%20banc%C3%A1rio%20mais%20verde:%20a%20experi%C3%Aancia%20brasileira>

48 Available at: <https://cafecom sustentabilidade.febraban.org.br/edicoes/edicao-59/>

49 Available at: <https://noomis.febraban.org.br/videos/especialistas-falam-dos-desafios-da-transicao-para-economia-verde-e-de-baixo-carbono-no-setor-financeiro-assista?pesquisa=sitawi>

50 Available at: <https://febrabantech.febraban.org.br/videos/bancos-intensificam-emissao-de-titulos-verdes-sociais-e-sustentaveis?pesquisa=sustentabilidade>

51 Available at: <https://noomis.febraban.org.br/podcasts/qual-o-papel-do-setor-financeiro-na-corrida-pelo-carbono-zero-ouca?pesquisa=sitawi>

52 Available at: <https://febrabantech.febraban.org.br/podcasts/praticas-sustentaveis-e-sociais-direcionam-negocios-e-sociedade-ouca?pesquisa=sitawi>

53 Available at: <https://noomis.febraban.org.br/podcasts/bancos-ajudam-a-desenvolver-negocios-na-economia-verde-ouca?pesquisa=sitawi>

54 Available at: <https://febrabantech.febraban.org.br/temas/sustentabilidade/papel-dos-bancos-e-apoiar-empresas-na-transicao-para-economia-verde-avaliam-especialistas?pesquisa=sitawi>

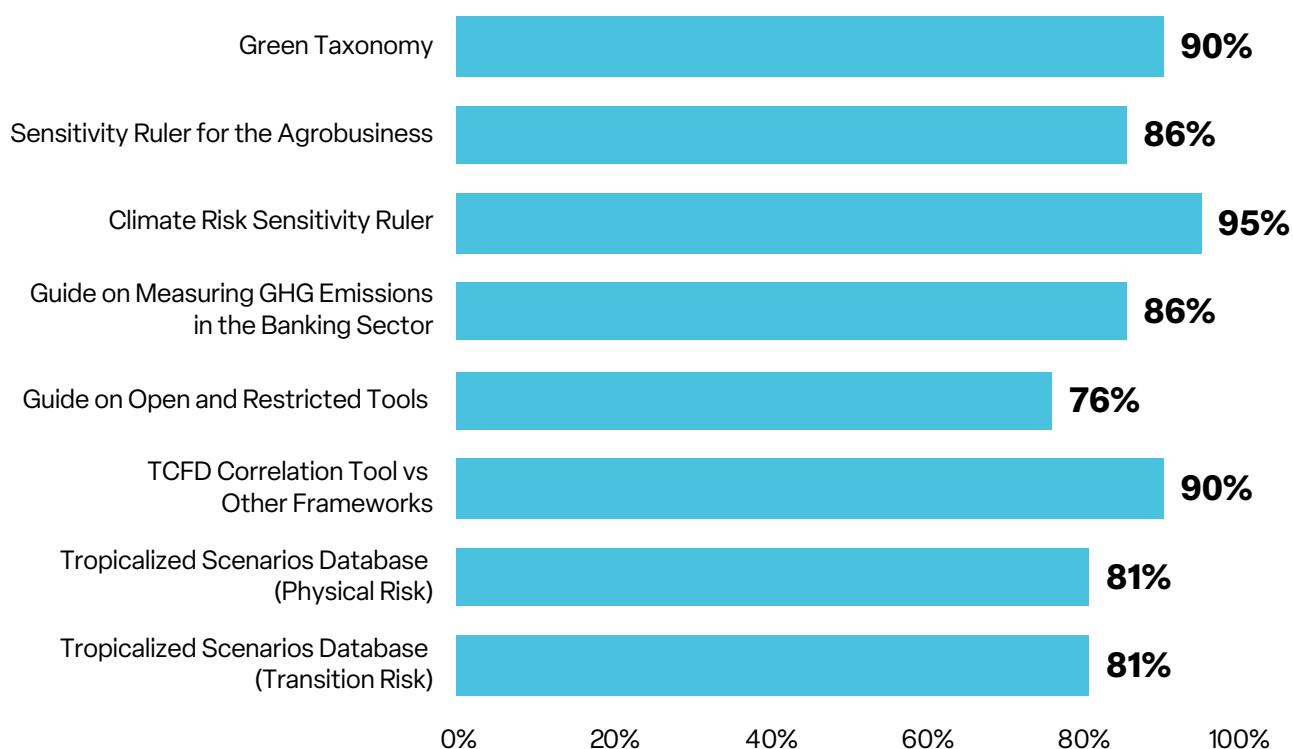
Febraban's Roadmap for Implementing the TCFD/FSB in the Brazilian Banking Sector

Progress since 2018

20	Engage-ment	Sharing TCFD content with other Febraban's stakeholders	In order to expand the knowledge and awareness of different areas/departments of financial institutions regarding the TCFD's Recommendations, Febraban dialogued with other groups of the Federation, such as those related to the Economy, Risks, and Prudential Regulation, in addition to organizing discussion committees such as the Social Responsibility and Sustainability Committee (CRSS, up to 2021) and ESG Committee (since 2022).	2019 to 2022	Ongoing action
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Among the deliverables, the frequent use by banks of the “Climate Change Sensitivity Ruler”, the “Green Taxonomy”, the “Guide on Measuring GHG Emissions in the Banking Sector”, and the “Guide on Open and Restricted Tools”.

Graph 4: Use of tools provided by Febraban for banks



Note: Research conducted with 21 Febraban's members, referring to 2021.

Source: Prepared by NINT, 2022

The following tables highlight some of the results of the initiative related to Tropicalized Climate Scenarios:

Tropicalized Climate Scenarios

One of the necessary actions for the implementation of the TCFD's Recommendations is the analysis of climate scenarios. Challenges to advancing on this front include access to data and prospective climate models that indicate how each economic activity in Brazil may be affected by climate change – which varies depending on the nature of the activity, geographic location, and management practices – and understanding how these impacts are transmitted to financial institutions and their capital requirements.

After conducting a pilot program with the United Nations Environment Program Finance Initiative (UNEP FI), Brazilian banks signaled the scarcity of variables with national and local granularity – given that Brazil is a country of continental proportions – to feed climate scenarios. In this regard, a need to advance in “tropicalization” was identified, i.e., the construction of scenarios adapted to the specificities of physical and transition risks in Brazil, so that banks would have suitable information for developing scenarios.

In light of the foregoing, within the scope of the TCFD Roadmap, Febraban has developed climate scenarios for certain sectors of the Economy. The work was carried out by the Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering at the Federal University of Rio de Janeiro (COPPE-UFRJ), for transition risks; and by WayCarbon, for physical risks. Both provided databases that can be used for tailored analyses of banks' credit portfolios.

Transition risk climate scenarios

The aim was to analyze trajectories for energy and agricultural systems in Brazil, in a model of transition to a low-carbon world, to assess risks and opportunities. The methodology, developed in partnership with COPPE/UFRJ, was based on Integrated Assessment Models (IAMs) that allow for the evaluation of interactions between different sectors of the economy.

Sectors evaluated:

- ◆ Electric (hydroelectric, coal, nuclear, wind, and solar electricity generation)
- ◆ Oil And Gas (O&G)
- ◆ Bio-fuels
- ◆ Agriculture (rice, sugarcane, coffee, beans, fibers, maize, soy, wheat, planted forests)

Scenarios:

- ◆ Current Policies
- ◆ NetZero 2050 with faster reduction of deforestation (zero illegal deforestation by 2030)
- ◆ NetZero 2050 with a trajectory of slower reduction of deforestation

Time projection: 2025, 2030, 2035, 2040, 2045, 2050

Granularity: logistics blocks (regions: Central-West, North, Northeast, South, Southeast)

Based on the modeling results made available for internal use by Febraban's members, the database included supply and demand projections for energy and agricultural commodities for each long-term climate scenario.

Figure 2: Sample of the Transition Risk Scenario Analysis Database

SCENARIO: **Current Policies** VARIABLE: **Production** UNIT: **Thousand tons (kt)**

Region	Culture	2020	2025	2030	2035	2040	2045	2050
Southeast	Rice	42	44	45	46	46	46	46
South	Rice	9,231	9,769	10,231	10,676	10,982	11,141	11,245
Northeast	Rice	324	336	344	351	354	353	350
North	Rice	992	1,028	1,053	1,075	1,084	1,080	1,071
Midwest	Rice	594	616	631	644	649	647	641
Brazil	Rice	11,183	11,792	12,304	12,792	13,115	13,266	13,352
Southeast	Coffee	3,309	3,484	3,665	3,896	4,075	4,184	4,257
South	Coffee	57	57	58	59	59	60	61
Northeast	Coffee	239	247	254	228	205	184	166
North	Coffee	147	148	150	152	154	156	158
Midwest	Coffee	24	25	26	26	27	28	28
Brazil	Coffee	3,776	3,961	4,152	4,361	4,521	4,612	4,670
Southeast	Sugarcane	415,044	490,986	517,792	559,274	476,327	427,412	475,527
South	Sugarcane	34,384	42,332	42,882	46,306	39,456	35,408	39,391
Northeast	Sugarcane	49,121	51,726	50,341	50,813	50,537	50,379	51,003
North	Sugarcane	3,723	3,920	3,815	3,851	3,830	3,818	3,865
Midwest	Sugarcane	140,446	174,896	175,158	189,148	161,166	144,632	160,899
Brazil	Sugarcane	642,718	763,860	789,988	849,392	731,317	661,648	730,685
Southeast	Beans	753	785	812	838	855	862	867
South	Beans	760	793	820	846	863	870	875
Northeast	Beans	859	908	953	1,000	1,032	1,048	1,059
North	Beans	76	78	80	82	83	82	82
Midwest	Beans	774	807	835	861	879	886	891
Brazil	Beans	3,222	3,372	3,500	3,627	3,710	3,750	3,773

Physical risk climate scenarios

Regarding the physical risk climate scenarios, prepared in partnership with WayCarbon, the Energy and Agricultural sectors were evaluated. In the study, a business-as-usual (BAU) scenario was used, considering a set of global and regional climate models, in addition to the following time horizons: historical (1976-2006), 2030 and 2050. The scenarios considered variables of temperature, water availability, agricultural area, and wind potential density. For the agricultural sector, different crops were considered, such as cotton and coffee, by mesoregion. For the energy sector, hundreds of hydroelectric generation and wind power generation assets were included.

The data used come from the average of CORDEX's set of regional climate models, forced by the CIMP5 global models, to reach more robust results with better performance consistency by considering more forecast-related aspects based on a set of models.

Sectors evaluated:

- ◆ Electric (electricity generation – hydroelectric and wind)
- ◆ Agriculture (sugarcane, soy, maize, cotton, and coffee)

Scenario:

- ◆ RCP 8.5

Time projection: 2030 and 2050

Granularity: mesoregions (agro and wind), ottobasins (hydroelectric)

Figure 3: Sample of physical risk scenario analysis database

Culture	State	Municipality	Mesoregion	Gain or loss of areas (hectares)		
				History	2030	2050
Maize	Rio Grande do Sul	Cachoeirinha	Porto Alegre Metropolitan Region	41672	42484	43250

Gain or loss of areas (in hectares) of crops, by mesoregions of Brazil

Area planted or intended for crops							
Coffee (hectares)					Maize (hectares)		
History	Area 2030	2030 change (%)	Area 2050	2050 change (%)	History	Area 2030	Change by 2030 (%)
NA	NA	NA	NA	NA	15689	16576	5.66
NA	NA	NA	NA	NA	33160	30120	-9.17
1101	1104	0.30	1124	2.13	35025	32042	-8.52
NA	NA	NA	NA	NA	17411	14445	-17.04
NA	NA	NA	NA	NA	57342	45651	-20.39
813	912	12.23	1023	25.84	40352	40128	-0.55
2008	2224	10.73	2348	16.93	12589	12979	3.10
17317	17629	1.80	18231	5.28	246683	244769	-0.78
NA	NA	NA	NA	NA	38	37	-2.31
70	64	-8.42	63	-10.67	44380	40472	-8.81
14502	15475	6.71	16201	11.71	68264	69049	1.15
NA	NA	NA	NA	NA	21227	17583	-17.17

5. Progress in implementing TCFD's Recommendations

This chapter provides information on the evolution in the implementation of the TCFD's Recommendations by banks in Brazil. The information comes from two surveys carried out by Febraban, the first of which conducted during preparation of the Roadmap, in 2018, answered by 28 banks; and the second one answered of 21 banks, referring to 2021.

5.1 Overview

The survey shown in Table 3 shows the evolution of the engagement of banks in Brazil – in view of the TCFD's Recommendations – in 2018 and 2021. One can see a relevant reduction of banks that were unacquainted with the initiative, but it is emphasized that the sample space used in 2021 is smaller than that of 2018, which may cause distortions in the conclusion.

Table 3: Banks' commitment to the TCFD's Recommendations

Support for the TCFD's Recommendations	2018	2021
We intend to implement or are currently implementing the Recommendations, and we already formally support them	16 ⁵⁵	6
We intend to implement or are currently implementing the Recommendations, but we have not yet formally supported them		13
We are not yet acquainted with the TCFD's Recommendations	10	2
We have no intention of implementing them	2	0
Total respondents	28	21

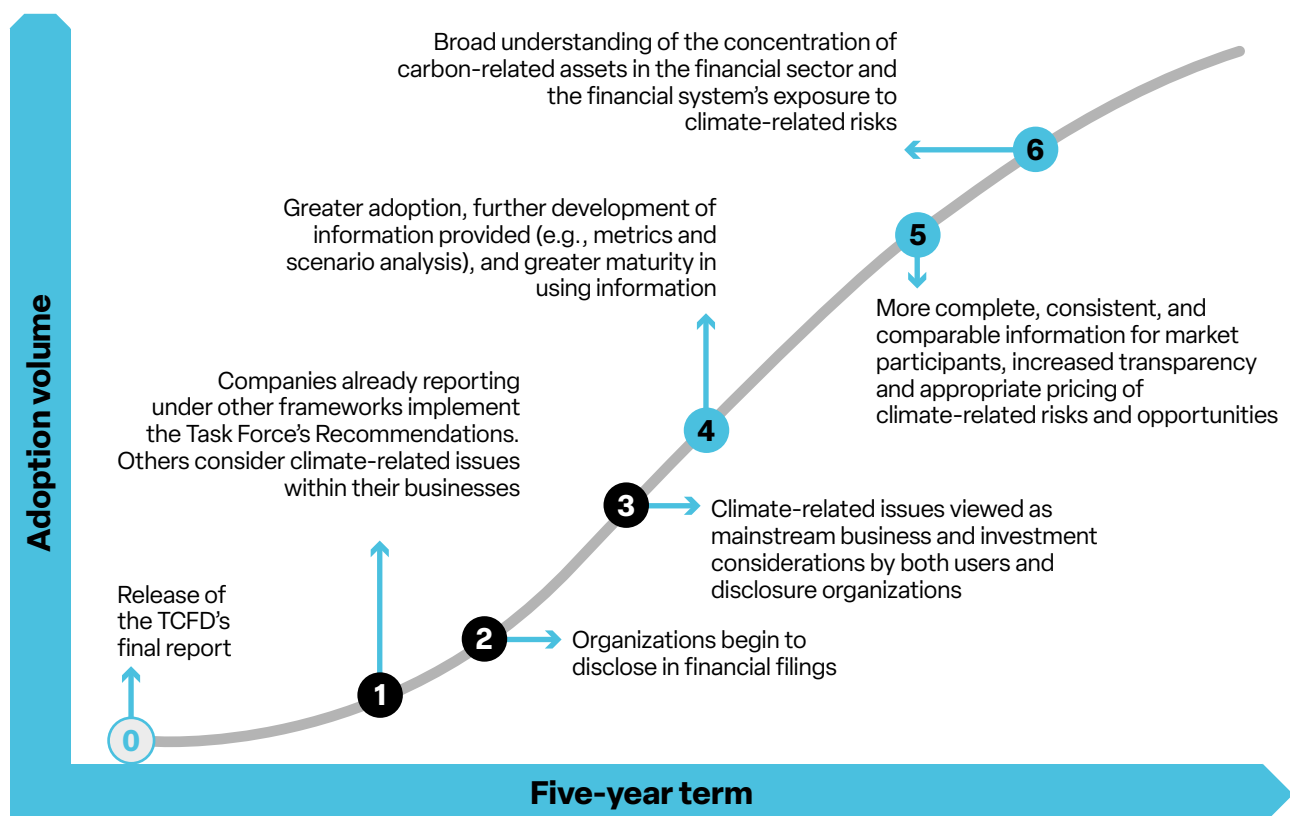
Source: Prepared by Febraban, 2022

⁵⁵ In 2018, there was no opening of banks that already formally supported the initiative.

Based on Figure 4, “Implementation Path”, adapted from the “Recommendations of the Task Force on Climate Related Financial Disclosures” report, it is possible to carry out an exercise of the progress of banks in Brazil.

The figure indicates a possible trajectory in the development of the TCFD agenda, with a gradual and widespread increase in the adoption of the Recommendations over a five-year period. It is worth mentioning that a considerable portion of Brazilian financial institutions have already reached Point 3 in the figure below, having passed through the first three (black) points, and are now developing internally to reach the next points (blue).

Figure 4: Implementation Path – adapted to the state of Brazilian banks



Source: Adapted from the TCFD “2021 Status Report”

Below, each of the stages indicated in Figure 4 (page 34) is analyzed in the context of the implementation of the TCFD's Recommendations by banks in Brazil:

1. Companies already reporting under other frameworks implement the Task Force's Recommendations. Others consider climate-related issues within their businesses

Most banks disclose climate-related information in their Annual/Sustainability Reports (10 banks) or have incorporated the climate issue into credit operations (13 banks). These numbers may signal that institutions which do not disclose such information through frameworks are incorporating the TCFD's Recommendations.

The use of third-party questionnaires (e.g.: Corporate Sustainability Index, CDP, Dow Jones Sustainability Index) for disclosing information was the second most widely used type of report, being adopted by eight banks. This confirms the engagement of the banks that respond to these frameworks, and demonstrates that the questionnaires have absorbed the TCFD's Recommendations.

2. Organizations begin to disclose in financial reports

According to the survey, seven banks out of the 21 respondents have begun disclosing climate-related information in their financial reports, such as CVM Reference Forms and risk management reports. Nonetheless, the reporting has mostly been done in a partial way, i.e., reporting only some of the disclosures recommended by the TCFD.

3. Climate-related issues viewed as mainstream business and investment considerations by both users and disclosure organizations

The assessment of impacts of climate risks and opportunities on business, strategy, and financial planning was reported by 12 banks, and the issue of climate was incorporated into the development of products by 10 banks. There was also a relevant increase in the participation of the Boards of Directors and Executive Boards in the management of climate risks and oppor-

tunities, with 14 banks. These indicators demonstrate the increasing importance of the matter at such institutions, as it reaches strategic governance forums, in addition to the business agenda.

4. Greater adoption, further development of information provided (e.g., metrics and scenario analysis), and greater maturity in using information

Despite the sample difference between the 2018 and 2021 surveys, there has been an overall increase in the adoption of the TCFD's Recommendations by banks in Brazil. On the other hand, many points assessed in the Metrics and Targets pillar had a more modest result, with less progress in terms of depth. For example, only one bank reported information about this pillar on the Reference Form, and only three banks measured financed emissions. In this way, it is understood that banks are heading toward this item, which will be strengthened by the BCB's new rules, by requiring the development of methodologies for managing climate risks (CMN Resolution 4943), as a stress test.

5. More complete, consistent, and comparable information for market participants, increased transparency and appropriate pricing of climate-related risks and opportunities

The information disclosed by banks is predominantly partial, mainly in financial reports. Banks are still maturing their processes and methodologies to make more complete and robust disclosures, with pricing of climate risks and opportunities. With the BCB's new rules, which demand standardization in the disclosure of information related to the TCFD through tables (BCB Resolution 139), banks are expected to advance in this item.

6. Broad understanding of the concentration of carbon-related assets in the financial sector and the financial system's exposure to climate-related risks

In all, 11 of the 21 responding banks already internally evaluate the concentration of their portfolios in sectors with high exposure to climate change, whether through Febraban's Green Tax-

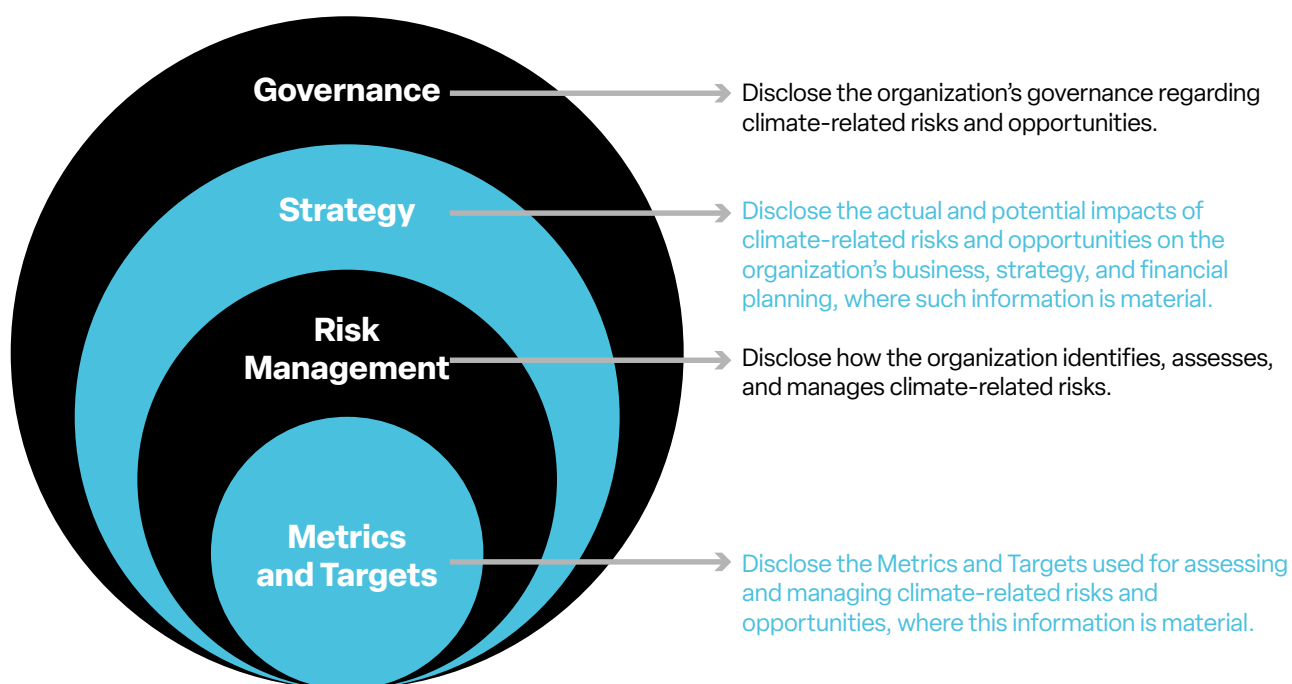
onomy or their own methodologies. The requirement of the BCB's new rules on the disclosure of Social, Environmental, and Climate Risk Documents (DRSAC, from Portuguese) will enable oversight agencies to assess the financial system's exposure to climate change.

In light of the foregoing, the BCB's new rules were published at a good time on the banks' agenda on their journey to implement the TCFD's Recommendations. As highlighted earlier, most banks are approaching point 4, listed above in Figure 4 (page 34), which will be reinforced by this set of regulations.

5.2 Reporting in relation to the TCFD's core elements

The TCFD's disclosure recommendations are structured in four dimensions, indicated in Figure 5, which are important for the operation of any organization: Governance, Strategy, Risk Management, and Metrics and Targets. This disclosure framework enables stakeholders to understand how organizations analyze and manage climate risks and opportunities.

Figure 5: Dimensions of the TCFD's disclosure recommendations



Source: Figure from the 2017 Report "Recommendations of the Task Force on Climate Related Financial Disclosures"

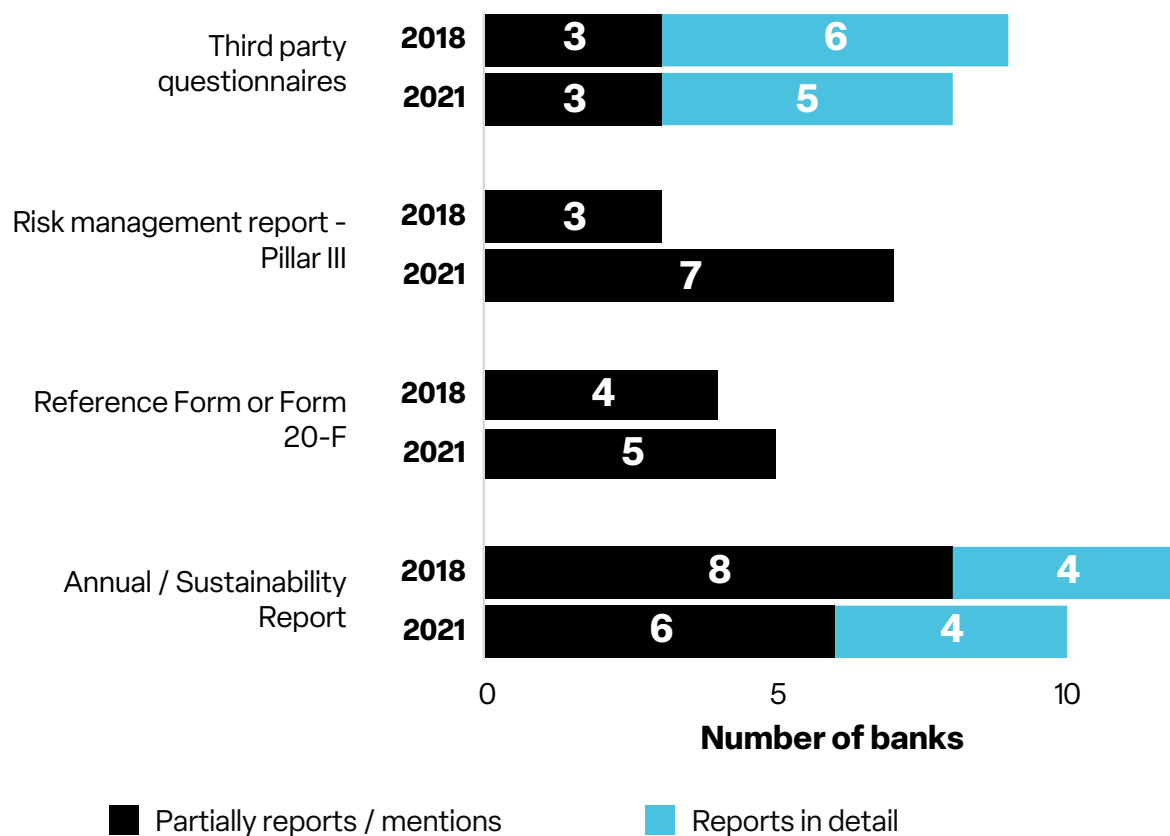
5.2.1 Governance

Banks have publicly disclosed the responsibilities of different corporate bodies in managing climate-related risk in different management reports, especially the following: Annual / Sustainability Report, Reference Form or Form 20-F, and Risk Management Report - Pillar III.

A smaller group, formed by banks participating in initiatives that require specific transparency on ESG issues, have also used the initiatives to report on their governance regarding climate risks and opportunities. Examples are the Corporate Sustainability Index, Dow Jones Sustainability Index, and CDP (formerly Carbon Disclosure Project) questionnaires.

Furthermore, between 2018 and 2021, there was an increase in the inclusion of information on Governance in the Risk Management Report – Pillar III, as can be seen in Graph 5 (page 40).

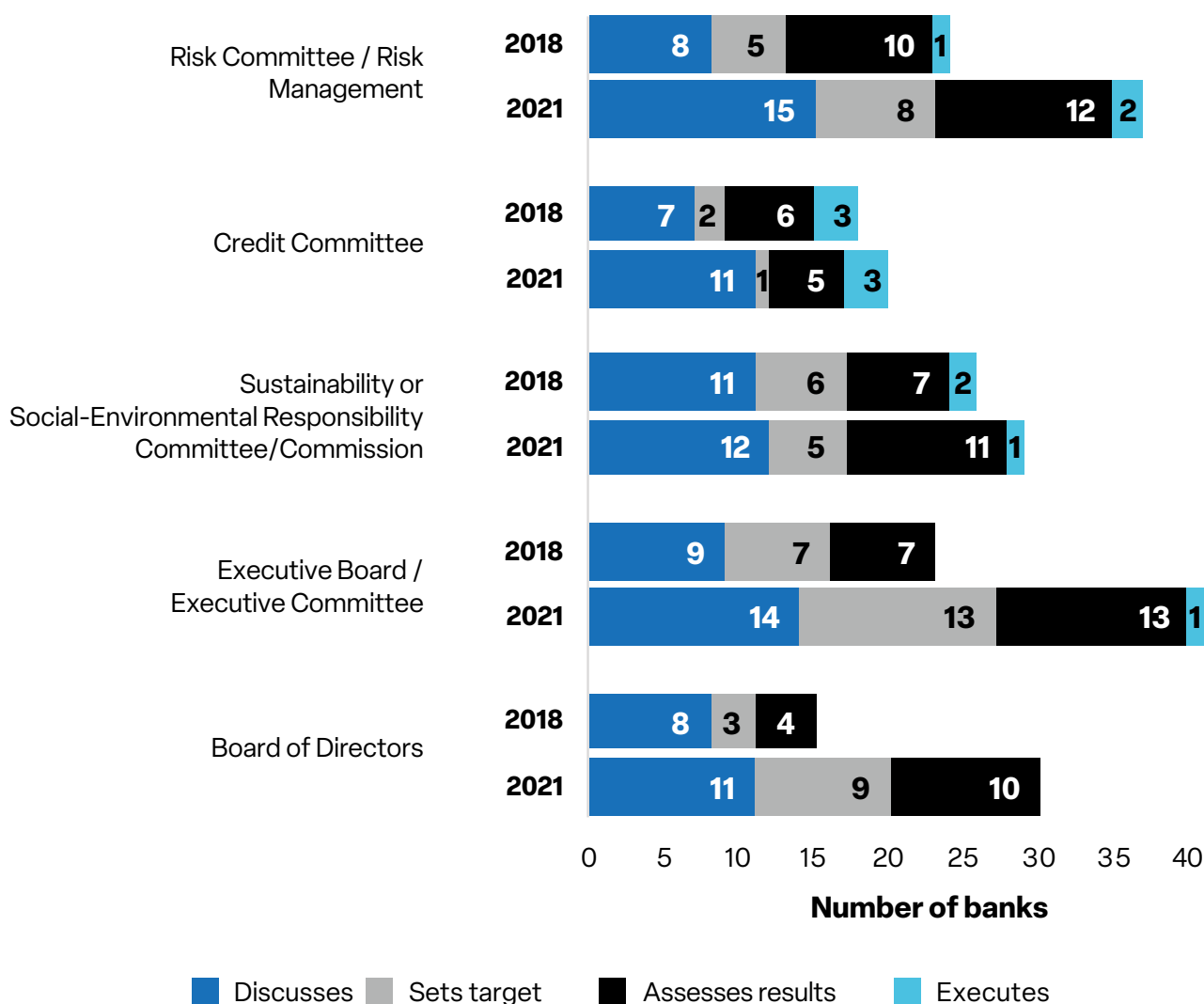
Graph 5: Report on the Governance Pillar, 2018 and 2021



Source: Prepared by Febraban, 2022

Various corporate bodies of the banks have assumed responsibilities associated with the managing climate risks and opportunities, including Risk and Sustainability Committees, Executive Boards, and Boards of Directors, as shown in Graph 6. Even considering more banks in the 2018 sample, an overall increase in the number of banks can be seen in 2021, in which the main roles and responsibilities of the administrative bodies evaluated are related to the discussion and evaluation of results.

Graph 6: Responsibilities associated with managing climate risks and opportunities, 2018 and 2021



Source: Prepared by Febraban, 2022

The figures show progress in integrating climate risks and opportunities into the agenda of the corporate bodies that oversee company management and strategy, involving not only those that work directly with sustainability aspects, but also those responsible for discussing risks and credit or that define the organization's strategy, such as the Board of Directors.

The increase in the frequency with which the Board of Directors addresses climate change was relevant. While, in 2018, only six banks reported that the Board dealt with this matter at intervals of less than 12 months, in 2021 this figure increased to 10. In 2021, a greater number of banks also reported that the Executive Board / Executive Committee not only has started to address climate issues, but is doing so more frequently.

Regarding policies and planning instruments, many were revised by these corporate governance bodies to include the issue of climate change, as described in Table 2 (page 23). Among them, we point out:

- ◆ the Socio-Environmental Responsibility Policy (PRSA), which, with the new CMN Resolution 4945/2021, now integrates the climate aspect and is called the Social, Environmental and Climate Responsibility Policy (PRSAC);
- ◆ socio-environmental policies regarding financial operations, such as credit;
- ◆ the Risk Appetite Statement (RAS); and
- ◆ strategic business plans.

It is worth mentioning that the inclusion of climate issues in the PRSA of some banks had taken place even before the new regulatory standards, published by the BCB in 2021.

Table 4: Number of banks that revised policies or planning instruments to incorporate the issue of Climate Change, 2018 and 2021

Type	Document	2018	2021
Policy	Social, environmental and climatic responsibility policies	11	12
	Socio-environmental policy / ESG (covering credit operations and/or third-party resource management and/or proprietary investments)	6	9
	Purchasing policy / Relationship with suppliers	4	3
	Risk management policy	4	7
	Remuneration policy	1	1
Plan	Multi-year strategic plan / Business plan	1	5
	Capital plan / Capital contingency plan	0	2
Other	Risk Appetite Statement (RAS)	0	8
	Annual budgets	1	3

Source: Prepared by Febraban, 2022

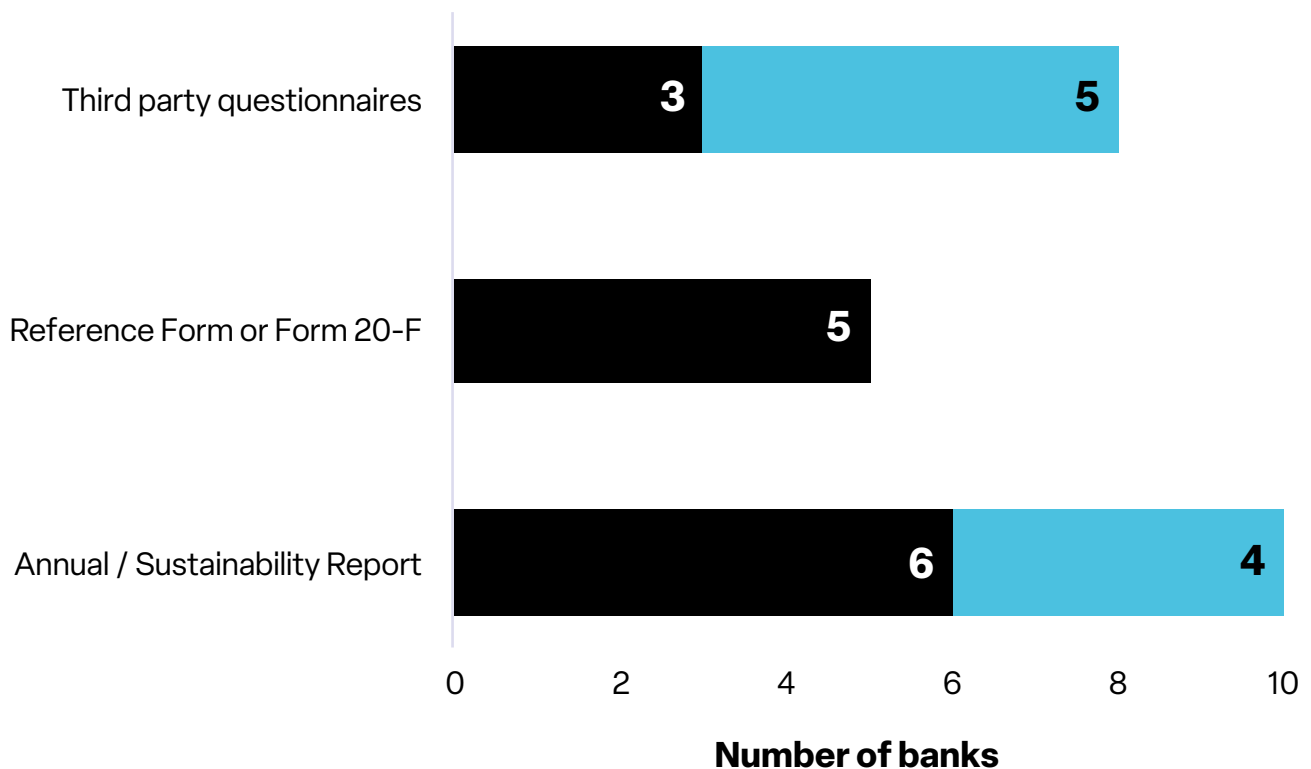
From another perspective, few banks indicated that they had included climate-related issues in their Capital Contingency Plans or Annual Budgets, suggesting that they are still mapping their exposure and financial impact in order to subsequently make any changes in capital composition. Additionally, only one bank reported that it incorporated climate change into its Compensation Policy, which, if implemented, is a potential measure to accelerate the achievement of climate-related targets.

In summary, one can see significant advancement in the Governance pillar, ranging from greater involvement by various administrative bodies of banks on this issue, to the review of policies and strategies. The main challenges seen for this pillar are measurement, integration and reporting of the financial impacts arising from climate risks and opportunities. Overcoming these challenges depends on advances that are also aligned with the pillars of Strategy, Risk Management, and Metrics and Targets.

5.2.2 Strategy

Progress was made by the banks in terms of assessing and reporting the impacts of climate-related risks and opportunities on the organization's business, strategy, and financial planning.

Graph 7: Reporting on the Strategy pillar



Source: Prepared by Febraban, 2022

One possibility for banks to disclose climate-related information within the scope of this pillar is to carry out an internal assessment in three stages:



Table 5: Assessment of aspects of the Strategy pillar by the responding banks

Step	Description	Climatic risks	Climate opportunities
1	Identification of types of risks/opportunities	4	6
2	Assessment of impacts on the organization's business, strategy, and financial planning	4	6
3	Resilience of the organization's strategy	2	[not applicable]

Source: Prepared by Febraban, 2022

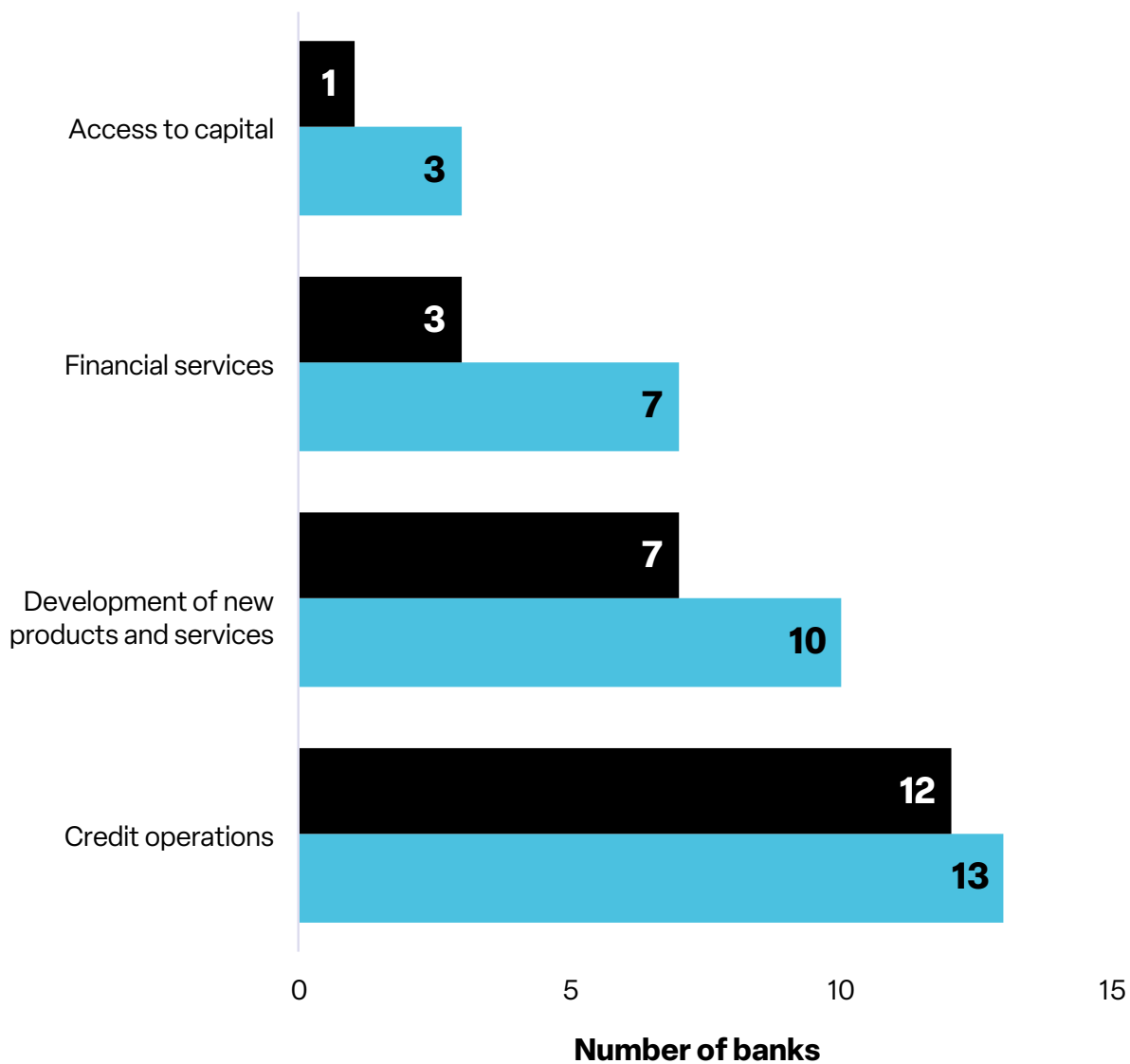
Considering the information in Table 3 (page 33), one can see that most banks are still in the two initial stages of identifying and assessing impacts, which is natural in view of the path of the gradual advancement of an agenda of recent implementation. Additionally, banks have simultaneously prioritized the perspective of opportunity, with the assessment of how to expand the offer of products or services and the disbursement in credit operations that are focused on supporting customers in the transition to a low-carbon economy.

As there is still no sufficiently robust historical database of the impacts of climate change on financial institutions, any advance in the risk perspective involves the construction of these histories, for example, based on losses related to climate-related issues and the conducting of climate stress test on credit portfolios. As these capabilities are still under development, the resilience assessment step becomes more challenging.

Even with fewer respondents in 2021, there has been an increase in the number of institutions that have incorporated the climate issue into their business and corporate structures, as shown in Graph 8 and Graph 9 (pages 47 and 48). Prioritization is given to incorporating these issues into credit operations and team training, the latter being important to broaden understanding on the subject matter and support the implementation of the agenda at the organization. Moreover, climate change brings major opportunities in the development of sustainable products and services, such as granting labeled loans and structuring labeled debt, and in raising sustainable funds, increasingly recurring by development banks, through labeled operations on the market (notably green bonds, sustainability bonds and sustainability-linked bonds, and loans).

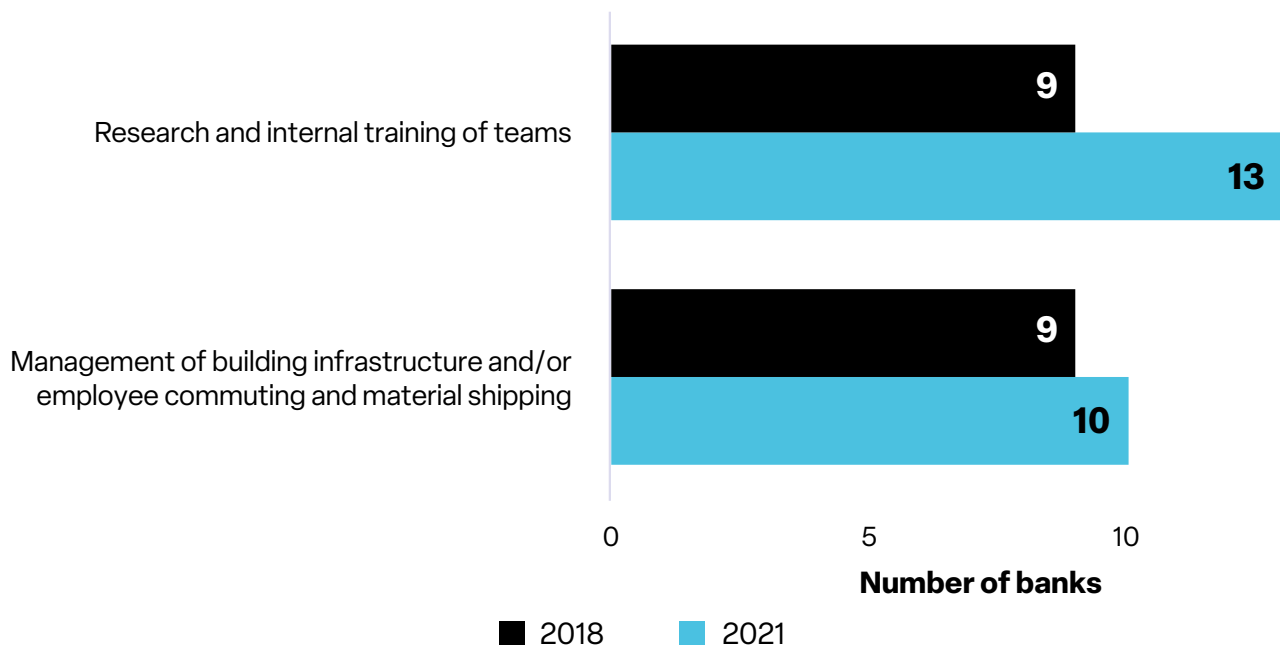
At the corporate level, banks are concerned with building infrastructure management, eco-efficiency, employee commuting and material shipping. Some banks have launched specific programs to reduce the carbon footprint of vehicles used by employees and to increase water and energy efficiency in the institutions' buildings.

Graph 8: Business practices, in which banks explicitly considered the climate issue, 2018 and 2021



Source: Prepared by Febraban, 2022

Graph 9: Corporate practices, in which banks explicitly considered the climate issue, 2018 and 2021



Source: Prepared by Febraban, 2022

In general, banks are advancing in two areas that are crucial to their business: granting credit (60% of respondents indicated that they already explicitly incorporated the climate issue) and development of new products and/or services (roughly half indicated incorporating the issue). A major challenge is to quantify the climate-related impact on banks' strategy and resilience. This challenge requires advances in Risk Management practices.

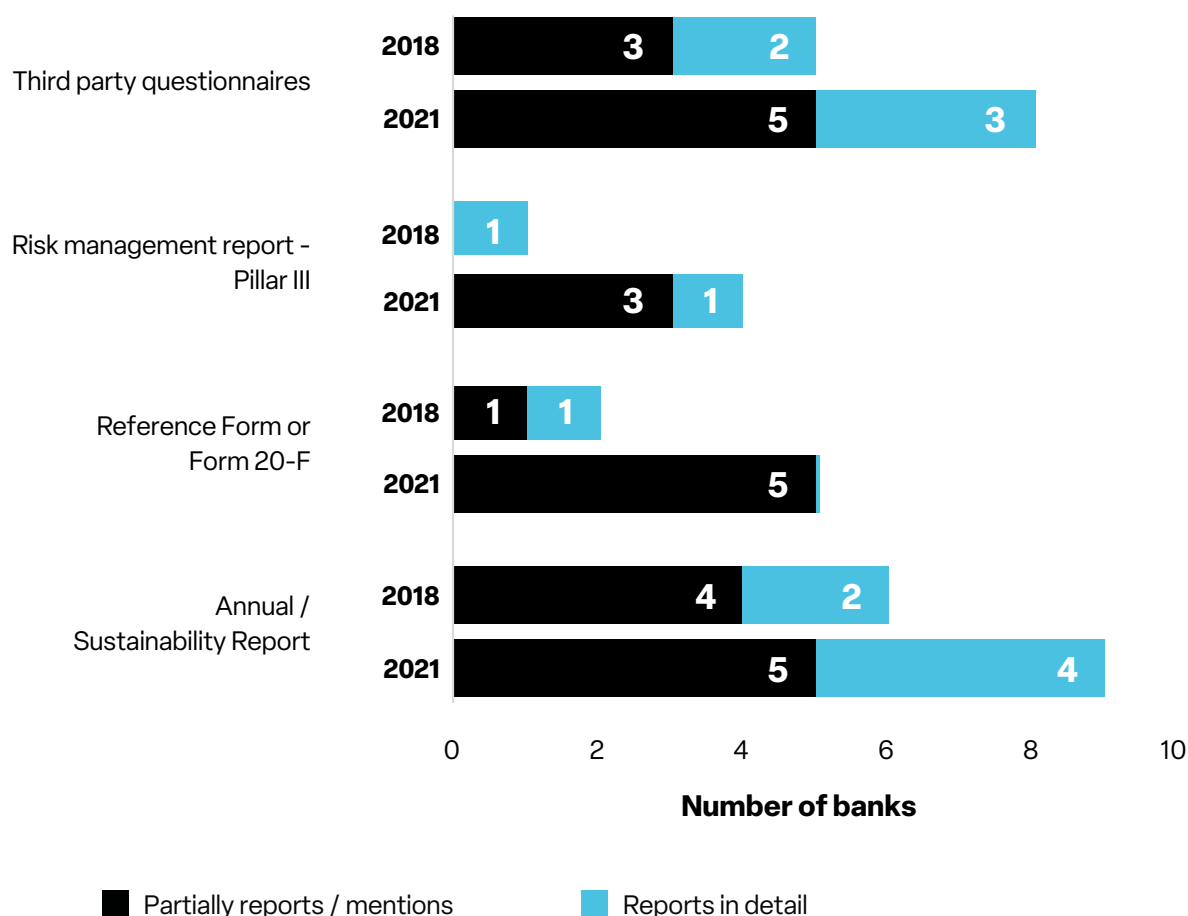
5.2.3 Risk management

Some banks have publicly disclosed how they identify, assess, and manage risks related to climate change in different types of reporting, as shown in Graph 10 (page 49).

In 2021, reporting through the Annual Report (or Sustainability Report) and Third-Party Questionnaires were the most widely used methods for disclosure of this information by the banks (with nine and eight responding banks, respectively), using them as a means of process transparency. These means of reporting (e.g.: Global Reporting Initiative, ISE, CDP) follow specific standards for social, environmental, and climate-related issues and have been recently revised

to incorporate the TCFD's disclosure requirements as presented in the International Overview chapter (page 8).

Graph 10: Reporting on the Risk Management pillar, 2018 and 2021



Source: Prepared by Febraban, 2022

Comparing the 2018 and 2021 surveys, one can see that the main concern incorporated by banks in their management is related to reputational risk. Legal risk and acute physical climate risk were also relevant in both mappings: the first one was likely due to the ease in identifying customer liabilities, and the second one, due to the increasingly clear connection between acute climate-related events and financial impacts on customers. Table 6, below, presents these types of climate risks that banks have considered in the management of their credit operations.

Additionally, more banks reported in 2021 that they are considering regulatory and market risks, which are reinforced by the BCB's new rules and the expansion of discussions on the subject in Brazil and around the world. Lastly, technological risk is the least commonly addressed, indicating a possible difficulty for banks to map it in credit operations thus far.

Table 6: Number of banks that consider different types of climate risks in the management of their credit operations

Types of climate risk	2018	2021
Reputational risk	11	9
Legal risk	9	8
Physical risk – acute	7	8
Regulatory risk	5	8
Physical risk – chronic	7	6
Market risk	3	6
Technological risk	4	5

Source: Prepared by Febraban, 2022

The survey also indicated that 38% of the responding banks still do not adopt specific procedures for assessing climate risks in the credit portfolio. On the other hand, 43% assess climate risks for customers in more exposed sectors, such as Oil & Gas and Agriculture; 38% for customers with greater credit exposure (e.g.: higher credit limits or higher contracted credit amounts); and 33% for specific financial products (e.g.: project finance).

The results show that banks that have already made progress in incorporating climate issues into the credit process are concentrating their efforts on following the requirements of the risk management framework⁵⁶ stipulated by Resolution 4557/2017 issued by the National Monetary Council (CMN).

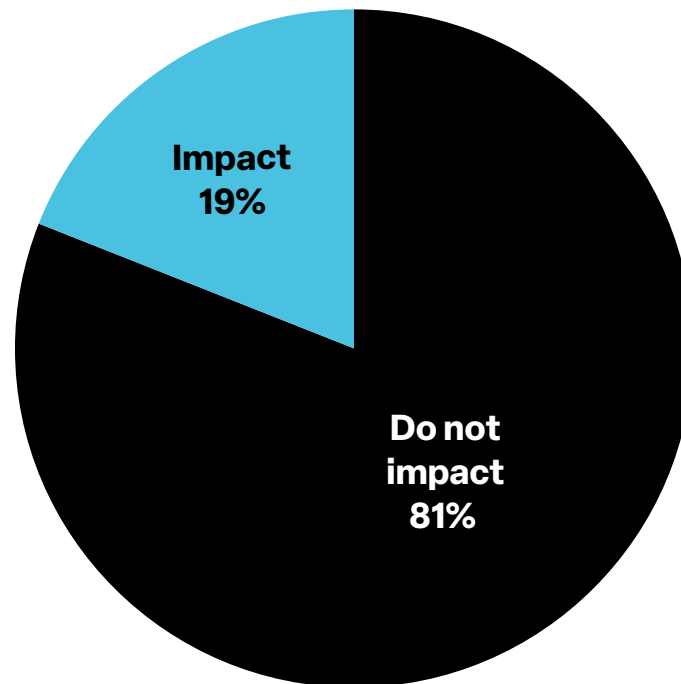
Banks that have procedures for assessing climate risks have collected information from customers and operations from a variety of sources. The main method used is to request information directly from customers, through questionnaires or other inquiry models. Moreover, several banks use publicly available customer information (such as in annual reports and on websites) and third-party tools, such as CDP Questionnaires, information made available by financial and ESG research agencies, and publicly accessible databases, such as maps and tools offered by the INPE and the World Resources Institute. To see a selection of open and restricted tools available to support Climate Risk management, access the “Guide to Climate Risk Management Support Tools”⁵⁷ from Febraban.

As for integrating climate issues into the credit rating, there are still challenges, as shown in Graph 11 (page 52). A likely bottleneck is the lack of historical data and/or robust methodologies to properly assess and estimate these impacts.

⁵⁶ Management structures should be: I - compatible with the business model, the nature of the operations and the complexity of the Institution's products, services, activities and processes; II - proportionate to the size and relevance of exposure to risks according to criteria established by the institution; III - adequate to the Institution's risk profile and systemic importance; and IV - able to assess the risks arising from macroeconomic conditions and the markets in which the institution operates.

⁵⁷ Available at: https://cmsarquivos.febraban.org.br/Arquivos/documentos/PDF/Guia_Ferramentas_Riscos_climaticos_2021.pdf

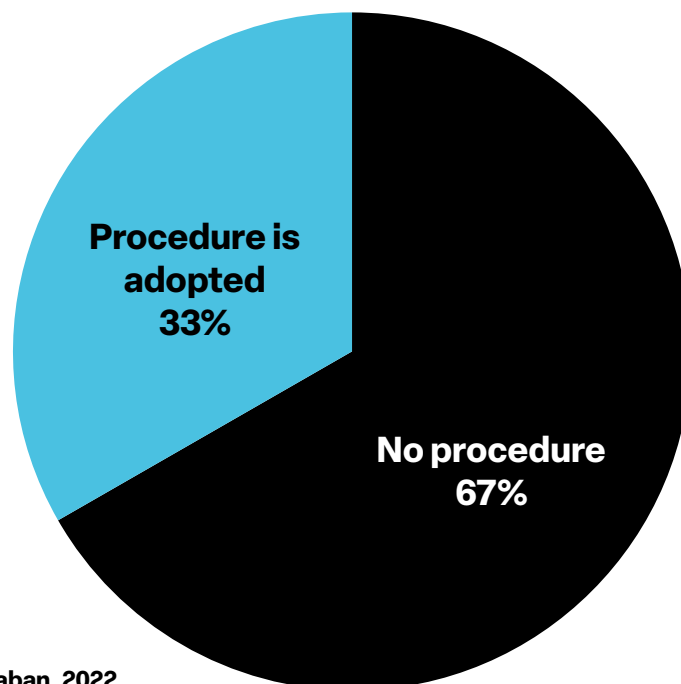
Graph 11: Incorporation of climate issues into credit ratings, 2021



Source: Prepared by Febraban, 2022

With regard to monitoring the credit portfolio, around 33% of the sample indicated that they already had procedures in place for monitoring climate risks in these operations, as shown in Graph 12 (page 53). This indicates that, while the consideration of climate issues for new credit operations has evolved, making headway in monitoring these operations is still challenging. This point is especially important for operations with longer terms and for sectors that are critical from climate standpoint.

Graph 12: Use of procedures for monitoring climate risks in credit operations, 2021



Source: Prepared by Febraban, 2022

The TCFD recommends that companies and financial institutions should address the climate issue in an integrated manner with the types of risk traditionally managed, e.g., market and liquidity risks. Integrated risk management has also been subject to regulatory demands, as presented in the previous chapters. The survey conducted indicates that the integration of climate issues to traditional risks has occurred, mainly in credit risk and operational risk. This can be explained by the fact that credit risk is central to the banking business and that operational risk is the subject of regulatory requirements by the CMN and BCB, which require banks to have an operating loss base.

Table 7: Types of risks banks take regarding climate issues

Type of risk	Number of banks
Credit risk	9
Operating risk	6
Market risk	1
Liquidity risk	1
Reputational risk	3
Cyber risk	1

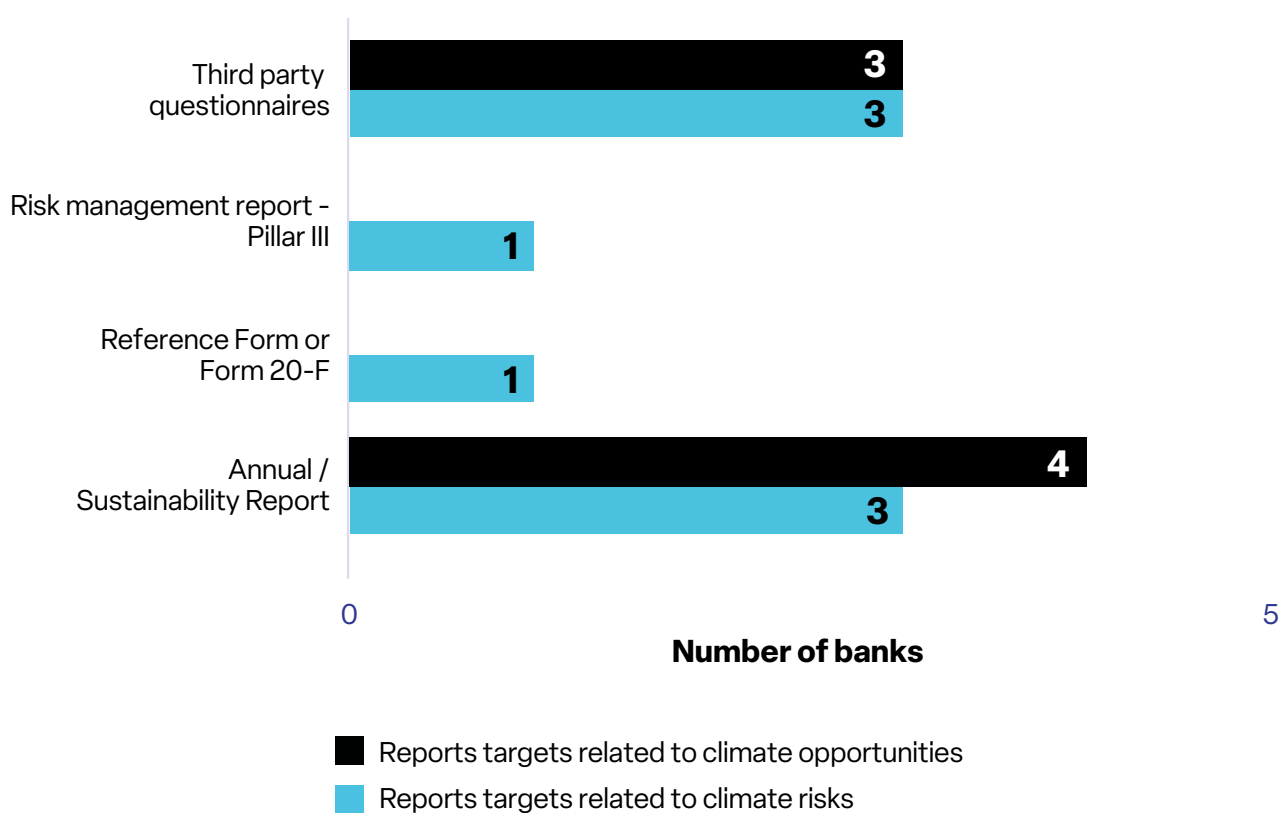
Source: Prepared by Febraban, 2022

5.2.4 Metrics and Targets

Regarding the disclosure of Metrics and Targets related to climate risks and opportunities, in Graph 13 (page 55) one can see that three banks reported their targets related to climate opportunities on Third Party Questionnaires and three banks used Third Party Questionnaires to report targets related to climate risks. Furthermore, four banks reported their targets related to climate opportunities in their Annual / Sustainability Report, and three banks use these Annual / Sustainability Reports to report targets related to climate risks.

Compared to the other TCFD pillars, there are fewer banks reporting information associated with this one, indicating a gap to be developed. This finding is largely expected, since the definition of Metrics and Targets is a result of Risk Management and Strategy practices. Therefore, this is a pillar that requires progress in relation to the others.

Graph 13: Report on the Metrics and Targets pillar, 2021

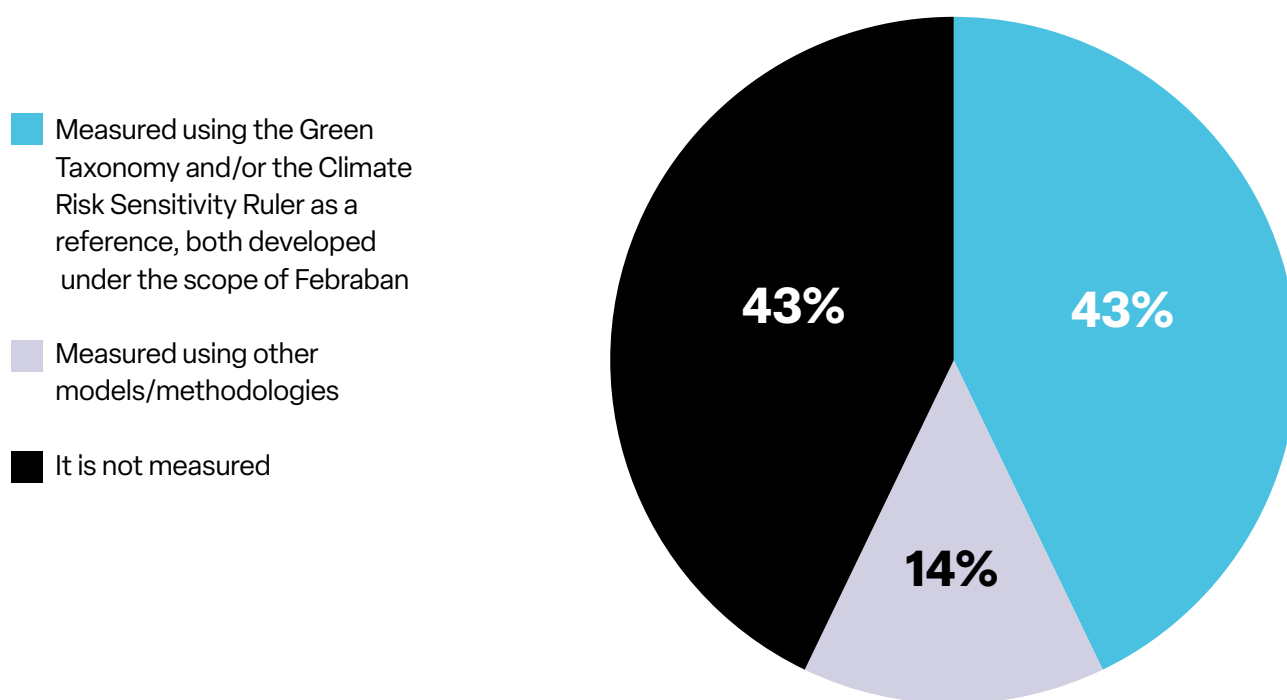


Source: Prepared by Febraban, 2022

However, progress can already be seen. In 2018, only two banks measured the credit portfolio's exposure to climate risks. This number increased to 12 (43% of all responding banks) in 2021, which can be explained by the need for banks to define metrics and baselines from which to set targets.

The engagement of banks within the scope of Febraban is also worth mentioning. The topic was addressed in different initiatives, such as Febraban's Green Taxonomy⁵⁸ – which brings a specific methodology for identifying economic activities with greater exposure to climate change – and the Climate Risk Sensitivity Ruler⁵⁹. Banks have been using these references, as well as other methodologies developed within the scope of this nationwide effort and other sources, as shown in Graph 14.

Graph 14: Measurement of the percentage of the credit portfolio with high exposure to climate risks, 2021



Source: Prepared by Febraban, 2022

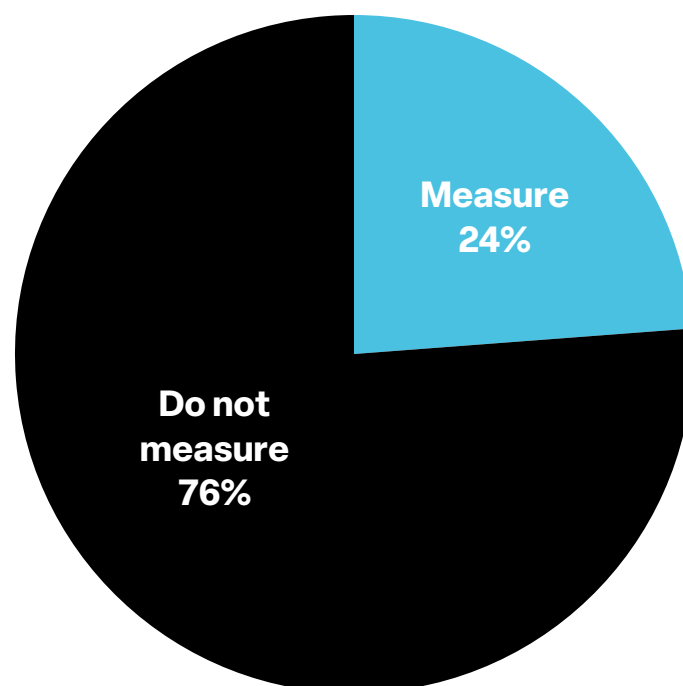
58 Available at: https://cmsarquivos.febraban.org.br/Arquivos/documentos/MSEExcel/Febraban%20-%20Vers%C3%A3o%20Final%20da%20Taxonomia_20210217.xlsx

59 Available at: <https://portal.febraban.org.br/pagina/3085/43/pt-br/estudos-sustentabilidade-2019>

In addition to monitoring the portfolio's climate risk, some banks measure their contribution toward mitigating and/or adapting to climate-related issues: Five banks (24% of the sample) indicated this practice.

This number is lower than those that measure the percentage of credit with high exposure to climate risks. This shift is the opposite of what has occurred in the Strategy pillar, in which the development of opportunities is a highlight.

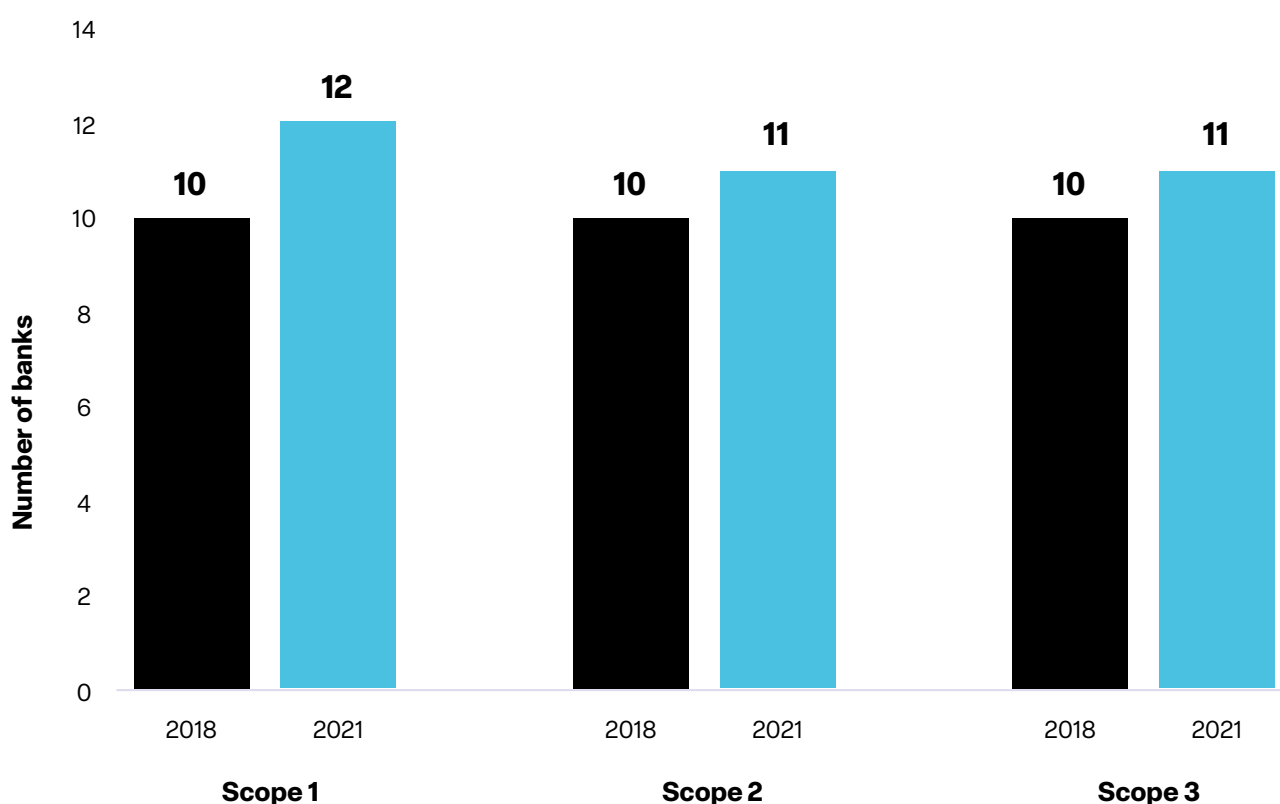
Graph 15: Measurement of the percentage of the credit portfolio with a high contribution toward mitigating and/or adapting to climate issues, 2021



Source: Prepared by Febraban, 2022

The number of banks that measure scope 1, 2 and 3 Greenhouse Gas (GHG) emissions of activities (e.g.: bank branches, administrative offices, travel, etc.) varied little between 2018 and 2021, as shown in Graph 16.

Graph 16: Measurement/reporting of Greenhouse Gas emissions from bank activities – Scopes 1, 2 and 3

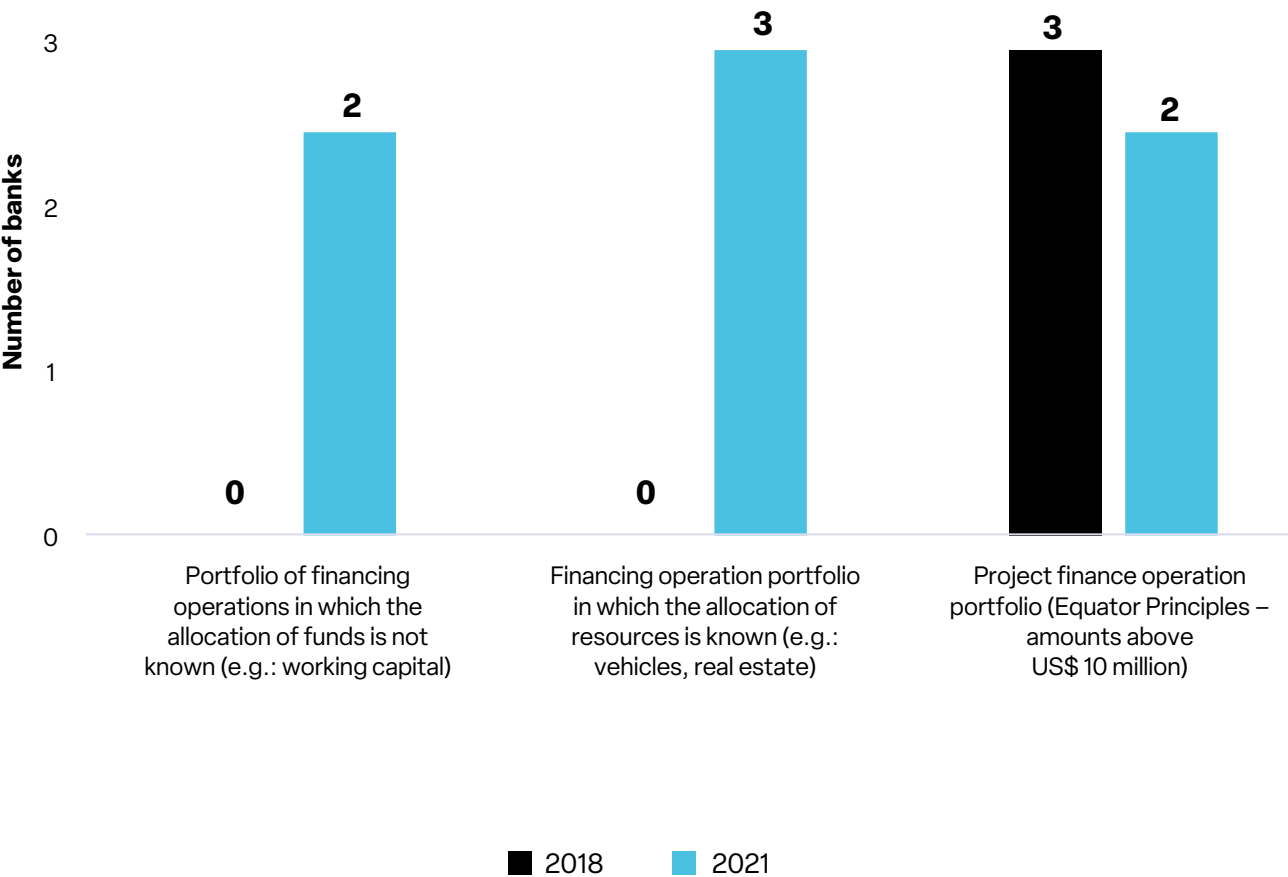


Source: Prepared by Febraban, 2022

Regarding Scope 3 (financed GHG emissions), some progress can already be seen. In 2021, in addition to measuring Project Finance emissions, some banks also began to assess those of financing operations in which the allocation of resources is known (three banks), such as vehicles and real estate, or the portfolio of financing operations in which the allocation of resources is not known (two banks). These numbers are still modest, since the measurement of this scope is more complex, depending on information on GHG emissions from customers, which is often fragmented, not always comparable, or unavailable.

This advance is important, as measurement of financed emissions is a tool to identify the transition risk of carbon-intensive companies, subject to regulatory risks, such as carbon taxation.

Graph 17: Measurement of financed GHG emissions

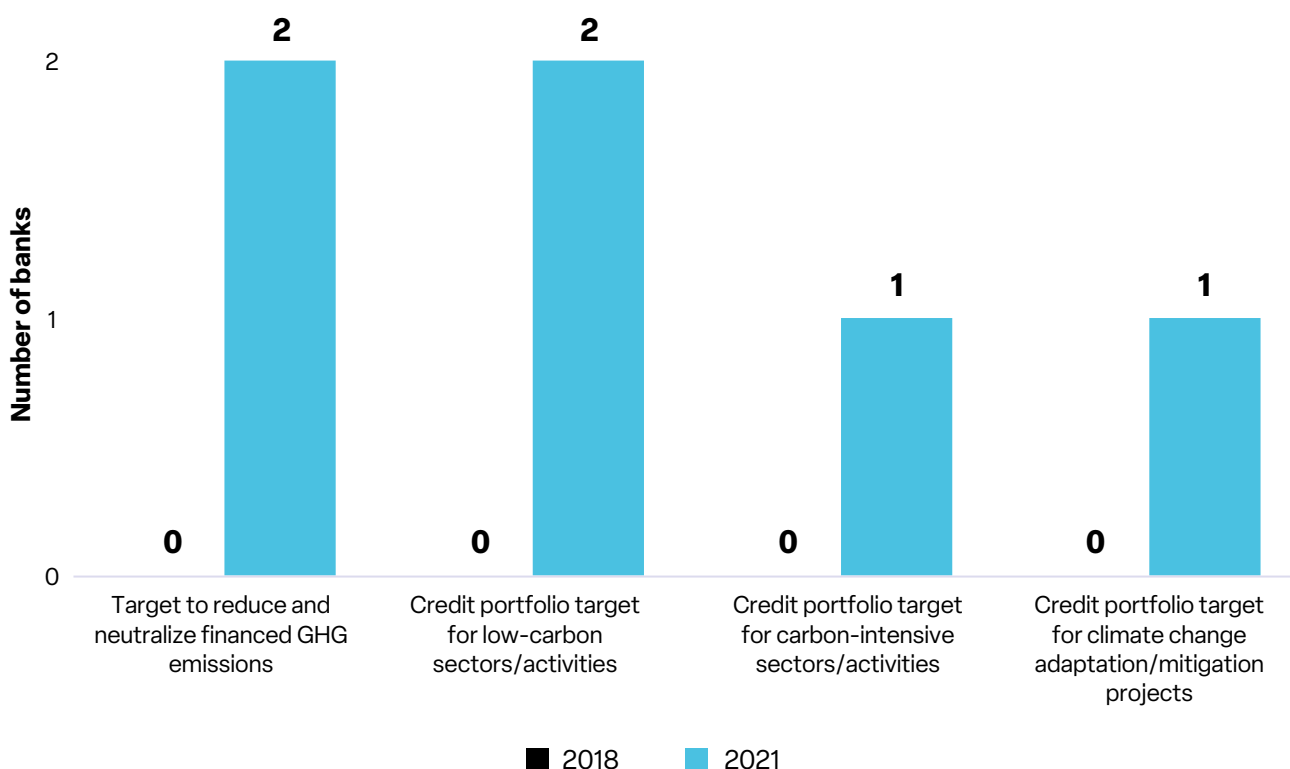


Source: Prepared by Febraban, 2022

In the banking sector, the most material targets are those related to the business itself, especially in the granting of credit. Graph 18 shows that, despite a slight variation in the number of banks, there was diversification in the adoption of types of target: “credit portfolio for carbon-intensive sectors/activities”, “credit portfolio for climate change adaptation/mitigation projects”, “reduction and neutralization of financed GHG emissions”, and “credit portfolio for low-carbon sectors/activities”.

The difficulty of advancing in this point also occurs in other countries, particularly due to the need to calculate a baseline before setting targets. Methodologies for calculating baselines and targets are still incipient, but banks have been taking measures to increase the targets, assessing their portfolios and capabilities before stipulating them, and often establishing their own methodologies for doing so. This performance may be reinforced by joining recent initiatives such as the Science Based Targets Initiative (SBTi) and the Net Zero Banking Alliance (NZBA).

Graph 18: Have a measurable target of transitioning to a low-carbon economy for their credit operations

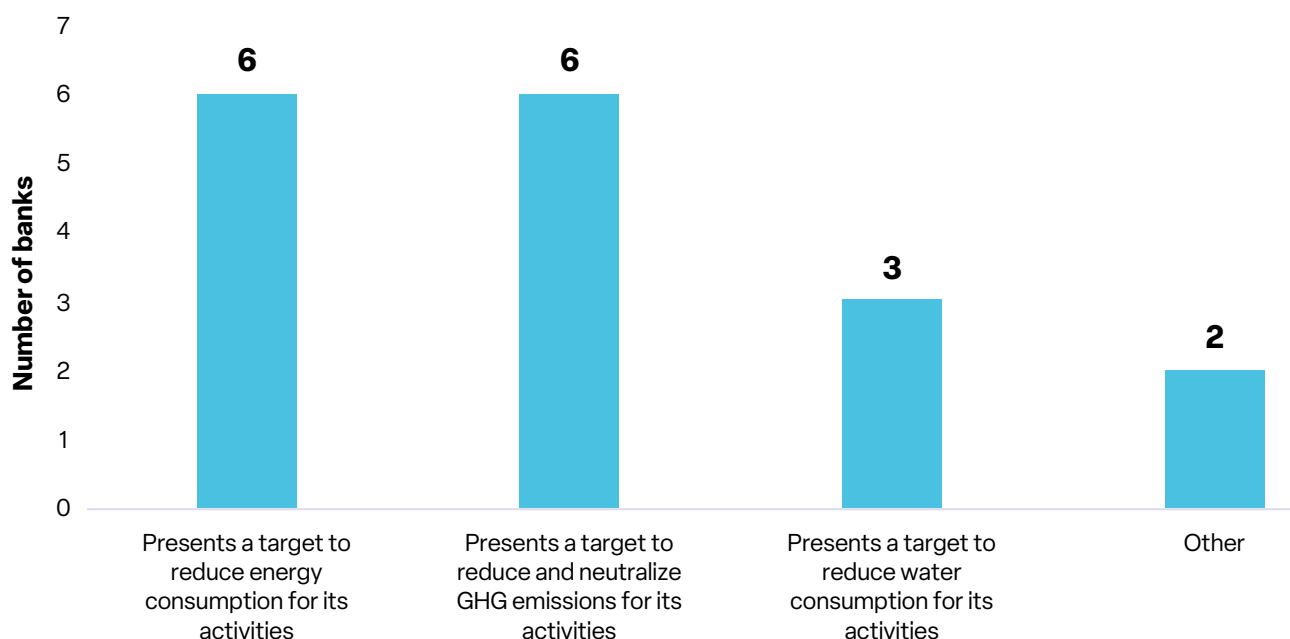


Source: Prepared by Febraban, 2022

Banks have also used other metrics, to assess not only climate risks but opportunities as well. Some examples: identification of agricultural area financed with sustainable practices; impact of the price of carbon for project investment analysis and corporate acquisitions; and consolidated analysis of the portfolio, using metrics such as the CDP and tools such as the Paris Agreement Capital Transition Assessment (PACTA).

Based on the measurement of GHG emissions from activities, banks can outline actions and targets for transitioning to a low-carbon economy. Few banks have adopted targets related to corporate activities, such as water consumption – which is in fact of little relevance in the sector, when compared to the impacts of their portfolios.

Graph 19: Measurable targets for transitioning to a low-carbon economy for activities



Source: Prepared by Febraban, 2022

6. Conclusion

Since the publication of the TCFD's Recommendations in 2017, adherence by financial institutions and companies has advanced significantly in the international context. This agenda has been driven by different factors, such as regulations in more than 15 countries, and increased demand from investors regarding transparency in the management of climate risks and opportunities. In the Brazilian scenario, the Sustainability pillar of the BCB's strategic agenda culminated in the publication of resolutions and regulatory instructions aligned with the TCFD's Recommendations, serving as an accelerator for adoption of the Recommendations by the local banking sector, which, consequently, will also encourage various sectors of the real economy to follow suit.

Febraban was the first associative entity in Brazil to have an institutionalized agenda for implementing the TCFD's Recommendations. The more than 20 initiatives described in this report, such as the collective development of tools, guides, and trainings, in addition to a roadmap guiding actions to be carried out individually by the banks, have enabled them to advance in a guided manner and to anticipate the new demands of the Central Bank of Brazil (BCB) and other stakeholders.

With that said, progress has been seen in the banks' performance from the start of the Febraban's project through the end of 2021, mainly in the first two pillars (or core elements) of disclosures recommended by the TCFD: Governance and strategy. Some of the points verified during this period were:

- ◆ Increase in the number of banks aware of the TCFD's Recommendations;
- ◆ Increased importance of this issue at banks, reflected by the greater involvement of Boards of Directors and Executive Boards in internal climate-related agendas, in addition to the Febraban's Climate Squad⁶⁰ (which went from 12 to 20 banks);

⁶⁰ Formerly called the Climate and Green Economy Working Group.

- ◆ Increase in the number of banks that report climate-related information, including in their financial reports;
- ◆ Greater incorporation of the climate issue in product development and risk management processes; and
- ◆ Dissemination of practices for measuring the concentration of assets exposed to climate change.

It is therefore understood that several banks in Brazil have already taken the first steps toward implementing the TCFD, shown in Figure 4 (page 34), and have reached the stage of “Climate-related issues viewed as mainstream business and investment considerations by users and preparers”.

The current challenge on this journey is to become firmly established in the stage of “Greater adoption, further development of information provided (e.g., metrics and scenario analysis) and greater maturity in using the information”. To this end, banks have already been maturing their processes and methodologies in order to make more complete and robust disclosures.

It is expected that there will be a relevant advance in the agenda over the coming years, mainly with the beginning of the BCB's supervision practices regarding recent regulations, with the ongoing support of Febraban and engagement of the banks.

Febraban's Roadmap for implementing the TCFD/FSB in the Brazilian banking sector

Progress since 2018

Technical support:



Held by:

