CLIMATE-RELATED FINANCIAL DISCLOSURES OF THE BANCO DE PORTUGAL'S OWN FINANCIAL ASSETS

CLIMATE-RELATED FINANCIAL DISCLOSURES OF THE BANCO DE PORTUGAL'S OWN FINANCIAL ASSETS

2022

BANCO DE PORTUGAL
EUROSYSTEM

Lisboa, 2023 • www.bportugal.pt

Contents

1 Introduction

This report presents the Banco de Portugal's first climate-related financial disclosures on its own financial assets. Publishing climate-related financial disclosures is the first step to measuring and publicly disclosing the environmental impact of the Eurosystem's own financial assets, in line with the Eurosystem's public commitment to do so. The Eurosystem has initially decided to follow the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in terms of structure and indicated that the report will include, as a minimum, the information in the category "Metrics and Targets".

The Banco de Portugal discloses information under all four TCFD categories: "Governance", "Strategy", "Risk Management" and "Metrics and Targets". The Bank decided to report on its euro-denominated portfolios as well as on other currencies.

2 Governance

Social and environmental responsibility is one of the Banco de Portugal's values, embodied in its successive strategic plans and reflected in its action as a central bank and financial supervisor, as well as in its internal management.

Over the past five years, the Bank has stepped up its efforts to incorporate ESG sustainability into its strategy, policies, operations, and internal management. The focus has been on environmental sustainability and most notably, climate change, due to its potential impact on our ability to comply with our missions of financial stability and price stability.

Therefore, the Bank has been following a mixed, albeit predominantly bottom-up approach. While the responsibility for individual initiatives and implementing them rests mainly with individual Departments, the Sub-Committee for Sustainability and Sustainable Finance (SCS), established in June 2020, provides a top-down layer to the governance framework.

The SCS is an interdepartmental forum, tasked with monitoring and promoting the consistency of the Bank's ESG sustainability-related work. Within its responsibilities, the SCS prepares regular reports to the Board of Directors on the Bank's planned sustainability initiatives and on the results achieved.

The Banco de Portugal manages its own investment asset portfolio, composed of assets denominated in euro, foreign currency and gold. Assets in the trading portfolio, mostly denominated in euro, are actively managed and valued at market prices. Assets in the medium-term investment portfolio, only denominated in euro, are held to maturity and valued at amortised cost subject to impairment. Gold assets are valued at market prices.

From a financial risk management perspective, the Banco de Portugal's governance model is based on internal investment guidelines that consider the Board's risk profile to define eligibility criteria and set limits for its own investment portfolio. The internal guidelines are revised on a regular basis, to incorporate the latest information on market developments and risk assessment.

The framework for financial risk management also incorporates the Banco de Portugal's financial independence as a key value to fulfilling its mission. It does so by establishing that its own investment portfolio should be managed with the objective of maximising return while preserving capital and keeping risk at a level matching the Board's risk profile. This framework is implemented through the annual review of strategic asset allocation, which has benefited from methodological and governance developments in recent years.

3 Strategy

The Banco de Portugal has been working more intensely on issues related to environmental sustainability and sustainable finance since the end of 2018. Joining the NGFS (Network for Greening the Financial System) in December 2018 was an important milestone, as it gave visibility to the Banco de Portugal's commitment to contributing within its mandate, to the global effort to promote environmental goals, and especially to tackle climate change.

In November 2021, the "Banco de Portugal's Pledge on Climate Action" published for the United Nations Conference on Climate Change (COP 26), set out our commitments and intended actions to meet the climate targets agreed upon by the European Union and the Portuguese government. More recently, in January 2022, a new framework document was published - "Acting for sustainability", which provides an integrated vision of the Bank's positioning and defines the guidelines and priorities that will guide its action in this matter over the next four years, in line with the Strategic Plan for 2021-25.

By 2025, the Banco de Portugal will pursue three priority areas of action to increase ESG sustainability within the scope of its mandate:

- Area 1 – Integrate climate risks into its missions;
- Area 2 – Reinforce ESG sustainability in internal management;
- Area 3 – Promote ESG awareness among employees and external stakeholders.

The initiatives to be implemented in each of the areas will be defined annually and monitored by the Subcommittee for Sustainability and Sustainable Financing, a structure that coordinates ESG sustainability-related work at the Banco de Portugal. To realise our ambition, we have also adopted the motto "Acting for Sustainability", reflecting the spirit that should encourage the daily action of employees across all areas of activity of the Banco de Portugal.

Figure 3.1 • Acting for Sustainability

Source: Published in January 2022 (available in https://www.bportugal.pt/en/page/approach-sustainability-0).

On 30 May 2022, the Banco de Portugal published its "Responsible Investment Charter" setting out the general guidelines for the Bank to promote environmental, social and governance sustainability in carrying out its mission. The Charter reinforces the Banco de Portugal's commitment to enhancing social responsibility and sustainability in terms of ESG, as set out in the Strategic Plan for 2021-25. The guiding principles followed by the Banco de Portugal are commitment to sustainability and promoting sustainable finance; adoption of responsible investment implementation strategies; environmental impact measurement and public disclosure; ongoing evolution. The Bank invests in green bonds, mainly through the subscription of two green bond funds launched by the Bank of International Settlements (BIS). These subscriptions are the result of the commitment made by the bank to act for environmental sustainability in the management of its own investment asset.

4 Risk Management

The Banco de Portugal follows an Integrated Risk Management Policy that aims to ensure the strength and sustainability of the institution, ultimately contributing to pursuing its strategic objectives. The Integrated Risk Management Policy is embodied in a risk acceptance statement, detailing the risk profile and tolerance defined by the Board of Directors. The Policy follows a prudent risk management approach, with an integrated and predominantly forward-looking vision of the risks, in their various domains.

Accordingly, the Banco de Portugal is focused on integrating climate-related risks into its mission and internal risk framework. In early 2020 the Bank published its Commitment to Sustainability and Sustainable Finance, a document guiding its position and intervention in the field of ESG sustainability. Its focus is on the environmental pillar and therein, the climate change dimension, the most relevant to the mission of safeguarding the stability of the financial system and that whose effects are the most felt. The 'Commitment' established four focus areas: (i) risk identification and assessment; (ii) internal sustainability practices; (iii) national and international intervention; (iv) communication and cooperation.

In July 2021, the Banco de Portugal published its first Sustainability Report, covering the period from 1 January 2019 to 31 December 2020. The report describes the Bank's performance in promoting sustainable development, based on the material topics identified by its stakeholders. The report was prepared in accordance with the Global Reporting Initiative (GRI) standards for sustainability reporting.

Over the years, the Bank has incorporated ESG principles into the guidelines for managing its own investment asset portfolio and guidelines. Additionally, an internal project for the strategic review of the management of own investment assets was finalised, covering, inter alia, the incorporation of ESG principles.

5 Metrics and Targets

This chapter presents, for the first time, the climate-related financial disclosures of its own financial assets of the Banco de Portugal for financial assets held in euro and foreign currency. The results presented follow the recommendation of the Task Force on Climate-related Financial Disclosures (TCFD) and of the Partnership for Carbon Accounting Financials (PCAF).

5.1 Conceptual Framework

Greenhouse gas emissions are measured and expressed as tonnes of CO_2 equivalent (tCO_2e) and can be reported under three scopes:

- Scope 1: Direct emissions from owned or controlled sources (namely emissions in the manufacturing process of goods, use of company vehicles);
- Scope 2: Indirect emissions from the generation of purchased and consumed energy (e.g. electricity, steam, heating);
- Scope 3: All other indirect emissions not included in Scope 2 that occur in the value chain of the reporting company, including both upstream and downstream emissions (e.g. business travel, waste disposal, con-sumption of goods, investments).

In this report, the indicators presented cover carbon emissions from scopes 1 and 2.

The main metrics presented are Weighted Average Carbon Intensity (WACI), Total Carbon Emissions and Carbon footprint.

Weighted Average Carbon Intensity (WACI) measures a portfolio's exposure to carbon-intensive issuers, expressed in tons of CO_2 equivalent per EUR million revenue,[1] for the non-sovereign. In the case of sovereigns, by millions of euro of gross national product, population or final consumption expenditure, in the case of production, consumption or government respectively. The WACI is a central element of the Eurosystem's climate-related financial disclosures, owning high data availability, data normalisation and the widespread application of the metrics across the financial industry ensure comparability across portfolios and time. The WACI delivers an "outside-in-perspective" (financial materiality) which serves as proxy for a portfolio's exposure to climate change-related transition risks.

Total Carbon Emissions quantifies the emissions associated with a portfolio, expressed in tons of CO_2 equivalent. GHG emissions are weighted by the investor's contribution to the issuer's total capital structure (namely equity and debt) and summed up to determine the portfolio's total absolute emissions. The metric serves as a foundation of related normalised metrics such as "Carbon footprint" and "Carbon intensity". It provides an "inside-out-perspective" (i.e., environmental materiality) which serves as proxy for a portfolio's environmental footprint. Due to its non-normalised nature, the metric's comparability across portfolios and time is limited, with portfolio size being a main driver. To overcome this shortcoming and provide a more holistic view of a portfolio's associated emissions, complementary disclosure of the Carbon footprint is essential.

[1] Carbon dioxide equivalent (or CO_2 equivalent) is a metric measure used to compare the emissions from various greenhouse gases based on their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential. For more information, see Eurostat.

The **Carbon footprint** normalises total carbon emissions associated with a portfolio by its market value, expressed in tons of CO_2 equivalent per EUR million invested. Allowing comparability across differently sized portfolios and time.

Beyond the disclosures of these common metrics defined by the Eurosystem, the Banco de Portugal has decided to include two additional metrics in the report:

Carbon intensity, which measures the portfolio's GHG emissions relative to revenue (portfolio carbon efficiency), economic activity stemming from financed issuers, expressed in tons of CO_2 equivalent per EUR million revenue for the non-sovereign or by millions of euro of gross national product, population or final consumption expenditure in the case of production, consumption or government respectively. The metric reflects the carbon efficiency of the financed issuers.

Finally, the proportion of **green bonds** held in the portfolio of its own financial assets, which reflects the commitment of the Banco de Portugal to contributing to the global effort to promote environmental objectives and especially combat climate change through environmentally responsible investment practices.

The metrics are calculated for own financial assets held on 31 December of each year, based on carbon emissions data, financial data, and other data provided by specialised data providers Institutional Shareholder Services Germany AG (ISS) and Carbon4 Finance (C4F). For economic data, World Bank data is used.

The indicators are calculated using best practices to ensure that all data (portfolio, carbon emissions data, financial data, and others) use the same reference year. However, since a large amount of data is only available with temporal lag, especially carbon emissions data, the data used for metric calculations often have different reference years. The values of the key environmental impact indicators reported for each year are updated in subsequent reports to reflect the update of the data used.

5.2 Climate-related financial disclosures in 2022

Table 5.1, presents the key climate-related financial disclosures of the Banco de Portugal's own financial assets denominated in euro and foreign currency for 2022. The difference in methodologies for calculating carbon emissions, for different issuer categories led to the segregation of assets into two major groups: sovereign and non-sovereign.

In the sovereign, which includes sovereign and comparable issuer obligations, such as regions and provinces, results are presented for three different perspectives: production, consumption, and government. According to the production perspective, the WACI is 201 tons of CO_2 equivalent per million euro of GDP, with total emissions of 1,530,988 tons of CO_2 equivalent, resulting in a carbon footprint of 201 tons of CO_2 equivalent per million euro invested in sovereigns. The carbon intensity is 201 tons of CO_2e per million euro of gross domestic product. From the consumption perspective, the WACI of the portfolio indicates 12 tons of CO_2e per capita, with total carbon emissions of 2,021,286 tCO_2e. The carbon footprint is 270 tCO_2e per million euro invested. The carbon intensity is 12 tCO_2e per capita. From the government's perspective, the WACI is 114 tCO_2 per million government expenses. The total carbon is 168,146 tCO_2e, giving a carbon footprint of 22 tCO_2e per million euro invested. The carbon intensity is 103 tCO_2e per million euro in government expenses.

For sovereigns, the data coverage, i.e., the percentage of bonds for which there is information on carbon and/or financial emissions, is quite significant, always above 98%.

For a total of 847 million euro in non-sovereign assets, the Banco de Portugal presents a WACI of 31 tCO_2e per million euro of revenue. The total carbon emissions are 9,348 tCO_2e, with corporate bonds contributing the most to the value. The carbon footprint is 9 tCO_2 per million euro invested, benefiting from a low carbon footprint, practically zero, in supranational and agency bonds, which represent 87% of non-sovereigns. Carbon intensity is 199 tCO_2e per million euro of revenue, standing out with a value of 252 tCO_2e per million euro of revenue in corporate bonds.

The data coverage for non-sovereign issuers is lower in supranational and agency bonds, but overall is above 60%

In the Banco de Portugal's bond portfolio, 3.37% of the bonds correspond to green bonds.

Table 5.1 • Climate-related financial disclosures of Banco de Portugal's Own Financial Assets | 31 december 2022

	Sovereign			Non-sovereign			
	Sovereign and sub-sovereign bonds			Total	Supra and Agency Bonds	Corporate Bonds	Covered Bonds
	Production	Consumption	Government				
Portfolio Size (€ milion)	7 601			847	735	110	2
WACI (in tons of CO2 equivalent per € million revenue, GDP, consumption exp., or per capita)	201 100%	12 98%	114 98%	31 76%	3 73%	169 95%	1 100%
Total Carbon Emissions (tons of CO2 equivalent)	1 530 988 100%	2 021 286 98%	168 146 100%	9 348 60%	34 57%	9 314 79%	0 100%
Carbon Footprint (tons of CO2 equivalent per € million invested)	201 100%	270 98%	22 100%	9 60%	0 57%	102 79%	0 100%
Carbon Intensity (tons of CO2 equivalent per € million revenue, GDP, consumption exp., or per capita)	201 100%	12 98%	103 100%	199 60%	2 57%	252 79%	1 100%
Green Bonds (%)	3.37% 100.0%						

Source: C4F, ISS, World Bank, Banco de Portugal's own calculations. | Note: The percentages below the metrics represent data availability, calculated as the percentage of investments for which all required data (emissions data and financial data) are available Cash balances, deposits and derivative instruments are excluded from the exercise.

5.3 Evolution of Climate-related financial disclosures (2021/2022)

The total amount of the Banco de Portugal's own financial assets included in the calculation of indicators had the following allocation in 2021: 77% in sovereign and sub-sovereign bonds, and the remaining 21% in supranational and agency bonds, corporate bonds (1.4%), and covered bonds (0.03%). In 2022, the weight of sovereign and sub-sovereign bonds increased to 90%, while the weight of supranational and agency bonds decreased to 9%, with the remaining categories maintaining a similar weight. The amount of financial assets included in the calculation of indicators decreased by 2.4%, from 8,655 million euro in 2021 to 8,448 million euro in 2022.

The comparison of climate-related financial disclosures for the Banco de Portugal's own financial assets for 2021 and 2022 is presented in Table 5.2 for sovereign and sub-sovereign bonds, and Table 5.3 for non-sovereign bonds. For investments in sovereign and sub-sovereign bonds, the increase in total carbon emissions is the result of an increase in exposure to these issuers. In the remaining metrics, slight changes result from different allocations to issuers.

Table 5.2 • Evolution of Climate-related financial disclosures in sovereign and sub-sovereign bonds

	Sovereign					
	Sovereign and sub-sovereign bonds					
	Production		Consumption		Government	
	2021	2022	2021	2022	2021	2022
Portfolio Size (€ milion)	6 691	7 601	6 691	7 601	6 691	7 601
WACI (in tons of CO2 equivalent per € million GDP, consumption exp., or per capita)	207 100%	201 100%	11 100%	12 98%	107 100%	114 98%
Total Carbon Emissions (tons of CO2 equivalent)	1 362 761 100%	1 530 988 100%	1 790 259 100%	2 021 286 98%	142 250 100%	168 146 100%
Carbon Footprint (tons of CO2 equivalent per € million invested)	207 100%	201 100%	271 100%	270 98%	22 100%	22 100%
Carbon Intensity (in tons of CO2 equivalent per € million GDP, consumption exp., or per capita)	207 100%	201 100%	11 100%	12 98%	98 100%	103 100%

Sources: C4F, ISS, World Bank, Banco de Portugal's own calculations. | Note: The percentages below the metrics, represent data availability, calculated as the percentage of investments for which all required data (emissions data and financial data) are available Cash balances, deposits and derivative instruments are excluded from the exercise.

In non-sovereign investments, the decrease in total carbon emissions is a result of reducing exposure to these issuers. The weighted average carbon intensity increased from 2021 to 2022, penalised by a lower portfolio allocation to supranational bonds and agencies. Carbon intensity fell due to changes in corporate issuers in the portfolio. The carbon footprint remained relatively stable. It is worth noting that there was greater data coverage in 2022 compared to 2021.

Table 5.3 • Evolution of Climate-related financial disclosures in non-sovereign bonds

	Non-sovereign							
	Total		Supra and Agency Bonds		Corporate Bonds		Covered Bonds	
	2021	2022	2021	2022	2021	2022	2021	2022
Portfolio Size (€ milion)	1 964	847	1 839	735	123	110	3	2
WACI (in tons of CO2 equivalent per € million revenue)	23 49%	31 76%	3 45%	3 73%	163 97%	169 95%	1 100%	1 100%
Total Carbon Emissions (tons of CO2 equivalent)	11 157 40%	9 348 60%	62 38%	34 57%	11 095 75%	9 314 79%	0 100%	0 100%
Carbon Footprint (tons of CO2 equivalent per € million invested)	8 40%	9 60%	0 38%	0 57%	124 75%	102 79%	0 100%	0 100%
Carbon Intensity (tons of CO2 equivalent per € million revenue)	221 40%	199 60%	3 38%	2 57%	307 75%	252 79%	1 100%	1 100%

Sources: C4F, ISS, World Bank, Banco de Portugal's own calculations. | Note: The percentages below the metrics represent data availability, calculated as the percentage of investments for which all required data (emissions data and financial data) are available. Cash balances, deposits and derivative instruments are excluded from the exercise.

5.4 Targets

During the United Nations Climate Change Conference (COP26), the Banco de Portugal pledged to contribute, within the Eurosystem and in close cooperation with the NGFS, to decisive action aimed at implementing the Paris Agreement on climate change, including in terms of its own financial assets.

As a public organisation committed to environmental sustainability, the Bank aims to align its own activities with the Paris Agreement in its 1.5°C trajectory and with the EU goals for climate neutrality. Therefore, the Bank is preparing a roadmap in 2023, which includes its own financial assets.

Analysing and monitoring key environmental impact indicators will enable the Banco de Portugal to set appropriate targets for its own financial asset portfolios, taking into consideration the long-term objectives referred to above.

6 Attachments

Metrics	Details
Weighted Average Carbon Intensity (in tons of CO_2 equivalent per € million revenue, GDP, consumption exp., or per capita)	$= \sum_n^i \left(\frac{current\ value\ of\ investment_i}{current\ portfolio\ value} \right) x \left(\frac{issuer's\ GHG\ emissions_i}{issuer's\ €M\ revenue\ or\ PPP\ adj\ GDP,\ population,\ total\ consumption\ expenditure} \right)_i$
Total Carbon Emissions (tons of CO_2 equivalent)	$= \sum_n^i \left(\frac{current\ value\ of\ investment_i}{EVIC\ or\ PPP\ adj\ GDP_i} x\ issuer's\ GHG\ emissions_i \right)$
Carbon Footprint (tons of CO_2 equivalent per € million invested)	$= \frac{\sum_n^i \left(\frac{current\ value\ of\ investment_i}{EVIC\ or\ PPP\ adj\ GDP_i} \right) x\ issuer's\ GHG\ emissions_i}{current\ portfolio\ value\ (€M)}$
Carbon Intensity (tons of CO_2 equivalent per € million revenue, GDP, consumption exp., or per capita)	$= \frac{\sum_n^i \left(\frac{current\ value\ of\ investment_i}{EVIC\ or\ PPP\ adj\ GDP_i} \right) x\ issuer's\ GHG\ emissions_i}{\sum_n^i \left(\frac{current\ value\ of\ investment_i}{EVIC\ or\ PPP\ adj\ GDP_i} \right) x\ \frac{issuer's\ €M\ revenue\ or\ PPP\ adj\ GDP, population,}{total\ consumption\ expenditure}_i}$