

Climate-related financial disclosures by the Oesterreichische Nationalbank 2024

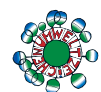
Part of the Eurosystem-wide climate-related financial disclosures on
non-monetary policy portfolios (NMPPs)
June 2025

Publisher and editor	Oesterreichische Nationalbank Otto-Wagner-Platz 3, 1090 Vienna, Austria PO Box 61, 1011 Vienna, Austria www.oenb.at oenb.info@oenb.at Phone: +43 1 404 20-6666 Fax: +43 1 404 20-04-6698
Contributions	Florian Glantschnig, Birgit Leichtfried, Sandra Schönberger, Philipp Thoma
Coordination	Florian Glantschnig
Translation and editing	Jani Sonnleitner
Layout and typesetting	Sonja Bagari, Birgit Jank, Andreas Kulleschitz, Robert Musil
Design	Information Management and Services Division
Cutoff date	April 30, 2025
Data protection information	www.oenb.at/en/dataprotection

© Oesterreichische Nationalbank, 2025. All rights reserved.

May be reproduced for noncommercial, educational and scientific purposes provided that the source is acknowledged.

EU Ecolabel: AT/028/024



Contents

1 Introduction	3
2 Governance	4
2.1 Compliance management system	4
2.2 Enterprise risk management system	4
2.3 IT governance and security	4
3 Strategy	6
3.1 The OeNB's corporate sustainability strategy	6
3.2 Sustainable and responsible investment strategy	7
4 Risk management	8
4.1 Addressing ESG risks in the non-monetary policy portfolio	8
4.2 Conducting forward-looking self-assessments to capture risks	8
4.3 Climate stress test on the non-monetary policy portfolio	8
4.4 Expanding internal ESG risk monitoring and reporting	8
4.5 Taking governance aspects into account	9
4.6 Assessing ESG risks independently based on reliable ESG data	9
5. Metrics and targets	10
5.1 Weighted average carbon intensity (WACI)	10
5.2 Total carbon emissions	11
5.3 Carbon footprint	11
5.4 Metrics for the OeNB's NMPPs in 2023 and 2024	11
6 The OeNB's target	17
Annex	18

Cutoff date: April 30, 2025.

1 Introduction

The transition to a climate-neutral economy requires comprehensive efforts from market participants. This means that governments and private sector companies are required to take measures supporting the transition, and central banks are also committed to doing their part. Transparent reporting by market participants, including central banks, is essential going forward.

Sustainability is relevant in a broad range of areas and thus interdisciplinary by nature. This is why sustainability is addressed by various functions at the OeNB. These functions implement environmental, social and governance (ESG) criteria and contribute to the work of both OeNB and international bodies.

Therefore, sustainability is becoming increasingly important for the OeNB's corporate and investment activities. For an overview of the OeNB's sustainability activities, see the [OeNB's Annual Report 2024](#) or visit the [Sustainability and ESG section](#) on the OeNB's website.

In February 2021, the Eurosystem announced that it aims to start making annual climate-related financial disclosures for its euro-denominated non-monetary policy portfolios (NMPPs) within two years.¹ To this end, the Eurosystem central banks defined a common stance for applying sustainable and responsible investment principles to the NMPPs that they each manage under their own responsibility. The common agreement, which followed extensive preparatory work within the Eurosystem, had also benefited from the analysis of the Network for Greening the Financial System (NGFS) and is aligned with its recommendations.

In recent years, the common Eurosystem approach has been further improved and expanded. For example, this report now includes the share of social, sustainability and sustainability-linked bonds, and scope 3 emissions for non-sovereign issuers.

This report presents the OeNB's third annual climate-related financial disclosures for its NMPPs and is structured around the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which rest on four pillars: (1) governance, (2) strategy, (3) risk management and (4) metrics and targets.

¹ ECB press release of February 4, 2021.

2 Governance

The OeNB's governance² is largely determined by the Federal Act on the Oesterreichische Nationalbank (Nationalbank Act), the Treaty on the Functioning of the European Union (TFEU), and the Statute of the ESCB and of the ECB. Within this framework and based on Austria's Federal Public Corporate Governance Code, the OeNB has developed its own corporate governance code to reinforce its statutory independence. This code was last revised in 2018. Moreover, the OeNB publishes [annual corporate governance reports](#) in German on its website.

2.1 Compliance management system

To ensure and strengthen good governance, the OeNB has set up a compliance management system (CMS) and a risk management system. The CMS reflects to a large extent ECB guidelines that lay down the principles of the ethics framework for the Eurosystem and for the Single Supervisory Mechanism. Among other things, the CMS includes a preventive system with anti-corruption measures and an electronic whistleblowing system.

2.2 Enterprise risk management system

The OeNB moreover relies on an enterprise risk management system to capture and assess compliance and legal as well as financial and operational risks. In this respect, the OeNB puts great emphasis on limiting risks. Risks related to ESG factors, added explicitly to the risk catalog in 2022, are treated as a horizontal issue.

2.3 IT governance and security

In response to the rise in cyber threats, the OeNB has enhanced its IT policies and strengthened cyber security within its information security management system. The OeNB has been focusing on five areas: (1) raising staff awareness of current information security risks, (2) investing in technical innovations in IT security, (3) continuously modernizing its IT systems, (4) establishing the position of Enterprise Chief Information Security Officer (E-CISO) and (5) implementing the Eurosystem's cyber resilience requirements (CROE).

Hence, various OeNB functions are responsible for ESG matters and contribute to the work of both OeNB and international bodies. While fulfilling their mandate and tasks, they integrate ESG sustainability aspects in their daily work. Figure 1 gives an overview of coordinating groups to foster exchange and describes the work they do:

² Decision-making bodies – Oesterreichische Nationalbank (OeNB).

Figure 1

OeNB promotes sustainability across all business areas

Sustainability Office	Green finance platform	Climate-related financial disclosures	Operational ecology		
• Coordinates the OeNB's company-wide sustainability management and • applies broader ESG criteria with a special focus on environmental sustainability	Coordinates the in-house exchange of information on: • the economic effects of climate change and their measurement, • current EU regulatory initiatives, • climate-related aspects of monetary policy and • the OeNB's participation in the plenary and working groups of the Network for Greening the Financial System (NGFS)	• Meet the Eurosystem's climate-related reporting requirements for non-monetary policy portfolios	• Prepares in-house environmental programs and standards • coordinates measures for improving environmental protection within the OeNB, in particular in accordance with the EU's Eco-Management and Audit Scheme (EMAS) and in support of climate protection measures • does all this in line with the OeNB's mission statement and environmental policy		
	<th>Expert group on sustainable finance</th> <td><th>The statistics hub</th><td></td></td>	Expert group on sustainable finance	<th>The statistics hub</th> <td></td>	The statistics hub	
	Serves as an information hub for: • coordinating the work in external bodies (European Banking Authority, NGFS, Single Supervisory Mechanism) among OeNB business areas, the Financial Market Authority and relevant expert groups • ensuring a common basic understanding of positions from a supervisory perspective	Brings together the expertise of the OeNB's statistics divisions in green finance and climate data to expand the range of statistics available, for work on developments in international fora, and for creditworthiness analysis and data collection (including transition risk and physical risk)			

Source: OeNB.

3 Strategy

The OeNB keeps an eye on how its activities impact on society and the environment – with a view to promoting sustainable development in Austria and beyond. According to the United Nations' 1987 [Brundtland Report](#), "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Our definition of sustainability is based on the concept of ESG factors, with a focus on environmental policy. In addition, social and governance factors are among our mission statement principles: "Our endeavors are founded on technical expertise and social competence, transparency, ethical values and responsible corporate governance."

Box 1

The OeNB's mission and values³

- Our endeavors are founded on technical expertise and social competence, transparency, ethical values and responsible corporate governance.
- We welcome change and embrace forward thinking.
- Our staff and their knowledge, skills and commitment are our biggest asset.
- We are an equal opportunity employer, value diversity and assist our employees in combining a career with family life.
- Our social responsibility is also reflected in our support for science and research, humanitarian concerns, art, culture and environmental protection.

3.1 The OeNB's corporate sustainability strategy

Sustainability is an intrinsic part of what the OeNB does, and of how it seeks to deliver on its mandate, also taking into account economic considerations and risk adequacy.

Stability, security and trust guide the OeNB in fulfilling its responsibility toward society. These principles are reflected in the OeNB's corporate governance, which is geared toward sustainability. The OeNB is committed to protecting the environment and contributing to the fight against climate change. To this end, the OeNB implemented an environmental management system in accordance with the EU's Eco-Management and Audit Scheme (EMAS) in 1998. It was extended to all OeNB locations in 2001 and 2002. These measures help the OeNB improve its environmental performance by curbing its carbon footprint.

The effects of climate change are already clearly noticeable in Austria, but the main burden will be borne by future generations worldwide. For the future of Austria, Europe and the world, it is essential to address the issues of climate change, social responsibility and transparency.

Recognizing these key challenges of our time, the OeNB supports the goals of both the Paris Agreement to limit global warming to 1.5°C and the European Green Deal.⁴

³ The OeNB's Mission Statement – Oesterreichische Nationalbank (OeNB).

⁴ Sustainability and ESG – Oesterreichische Nationalbank (OeNB).

3.2 Sustainable and responsible investment strategy

When managing its reserves, the OeNB has been taking specific sustainability criteria into account for many years. Since 2011, external asset managers making investments on behalf of the OeNB have been required to sign the Principles for Responsible Investment endorsed by the United Nations. In addition to addressing ESG factors, these principles also provide for responsible disclosure practices and ownership policies.

In light of the experience gained so far and of best practices, the OeNB seeks to act in accordance with the Eurosystem's common stance for climate change-related sustainable investments.

Finally, the OeNB supports the Eurosystem's common stance on increasing awareness and understanding of ESG risks while promoting climate-related disclosures for NMPPs.

4 Risk management

4.1 Addressing ESG risks in the non-monetary policy portfolio

In 2024, the OeNB continued integrating ESG risks into its risk management processes to adequately address their financial consequences. The value of OeNB investments may decrease if ESG risks impair the financial soundness of issuers of assets that the OeNB holds in its portfolio. Such an impairment could be due to an increase in natural disasters, a gradual rise in global temperatures and policy measures aimed at curbing climate change. In 2024, the OeNB used various methods to assess the impact that ESG risks could have on the value of its investment portfolio.

The OeNB conducts comprehensive risk analyses to understand complex interactions. Based on its risk taxonomy, the OeNB captures ESG risks systematically as drivers of financial risk categories, such as market and credit risk as well as operational risks. As climate-related risks are considered to be material, the OeNB pays particular attention to such risks.

4.2 Conducting forward-looking self-assessments to capture risks

The NMPP is managed under the OeNB's own responsibility, while the management of monetary policy operations and portfolios is governed by common Eurosystem guidelines. For the NMPP, the OeNB regularly conducts forward-looking self-assessments. Here, it aims to capture the financial risks and potential triggers of reputational, legal and/or liability risks.

Specifically, OeNB experts analyze in a qualitative manner multiple scenarios and transmission channels that could negatively affect the OeNB's risk profile or cause financial losses. The scenarios reflect technological advances and tightening regulatory requirements for energy efficiency and carbon emissions. They also consider increases in natural disasters and biodiversity loss. Transmission channels include profitability, asset valuations and the cost of compliance. The qualitative self-assessment has a longer-term horizon that exceeds that of traditional risk models.

4.3 Climate stress test on the non-monetary policy portfolio

The climate stress test is a key tool for identifying and assessing climate-related risks. The goal is to simulate the evolution of important risk parameters and potential losses. Two adverse scenarios were compared with a baseline scenario to estimate the direct economic consequences for the OeNB over the next three years. The stress test was based on the following three scenarios developed by the NGFS: Net Zero 2050, Nationally Determined Contributions and Delayed Transition. The scenarios capture both physical and transition risks. In 2024, the OeNB expanded the scope of its climate stress test by including additional asset classes. Going forward, the OeNB will continue to enhance its climate stress test, in particular by extending the observation horizon.

4.4 Expanding internal ESG risk monitoring and reporting

The OeNB has established regular internal reporting on selected forward- and backward-looking indicators for both transition and physical risks for corporate and sovereign debtors. Physical risks result from climate-related changes and natural disasters, while transition risks arise from the transition to a carbon-neutral economy. The selected indicators regularly report, for example, on targets for greenhouse gas reduction and the financial impact of physical risks.

In 2024, the OeNB expanded its internal monitoring and reporting to include ecosystem services. It set up an analysis to investigate direct and indirect dependencies of its NMPP on ecosystem services. While

the current analyses result in a simple scoring, the OeNB will further work on estimating the definite financial impact of dependencies on ecosystem services.

4.5 Taking governance aspects into account

When calibrating specific limits, the OeNB systematically considers governance aspects. This helps reduce the risk of the OeNB investing in debtors that do not adhere to internationally recognized rules and standards of good conduct. It also mitigates reputational risks for the OeNB.

4.6 Assessing ESG risks independently based on reliable ESG data

The OeNB uses ESG data to capture risks in a transparent and consistent manner. In 2022, the Euro-system agreed that climate-related reporting will be based on harmonized data. The OeNB started using data from two ESG data providers in 2022 – for drawing up analyses and compiling metrics as well as for reporting purposes. In terms of data reliability, both providers comply with high methodological requirements that also cover quality control and validation routines. Missing data are estimated via models.

5. Metrics and targets

In calculating the metrics presented below, the OeNB follows recommendations of the TCFD and the Partnership for Carbon Accounting Financials (PCAF). The reporting scope comprises investments in fixed income securities and equities, including externally managed assets denominated in euro and in other currencies. Gold, real estate investment and cash are excluded. Three metrics form the basis of the Eurosystem's common minimum disclosures of NMPPs: (1) the weighted average carbon intensity (WACI), (2) total carbon emissions and (3) the carbon footprint.

As supporting metrics, the OeNB reports the green bond share⁵ and the share of social, sustainability and sustainability-linked bonds⁶ in fixed income portfolios in line with the International Capital Market Association's (ICMA) Green Bond Principles.

5.1 Weighted average carbon intensity (WACI)

The WACI measures a portfolio's exposure to carbon-intensive issuers and is expressed in tonnes of CO₂ equivalent (tCO₂e) per unit of economic activity.⁷ Formula 1 below shows how the WACI is calculated.

$$WACI = \sum_i^n \left(\frac{\text{current value of investment}_i}{\text{current portfolio value}} \right) \times \left(\frac{\text{issuer's GHG emissions}_i}{\text{issuer's €M revenue or PPP adj GDP, population, total consumption expenditure}_i} \right)$$

Choosing the suitable measure of economic activity depends on the type of issuer and, additionally for (sub-)sovereign issuers, on the type of emission measure used in the numerator. The carbon intensity of corporate issuers is computed by normalizing their GHG scope 1 and 2 emissions by EUR million (€M) revenue (see table A1 "GHG emissions" in the annex). For (sub-)sovereign issuers, a distinction is made between three types of emissions, namely production, consumption and government emissions, which are defined in table 1.

Table 1

Types of emissions for (sub-)sovereign issuers

Type of emissions	Definition
Production emissions	Emissions produced domestically within a country's physical borders, including domestic consumption and exports. This definition follows the territorial emissions approach adopted by the United Nations Framework Convention on Climate Change (UNFCCC) for annual national inventories. Production emissions are reported excluding and including the effects of land use, land-use change and forestry (LULUCF). ¹
Consumption emissions	Emissions related to domestic demand, accounting for trade effects. This metric provides a broader view of a sovereign's emissions and tackles the issue of carbon leakage that arises due to production shifts from countries where goods are consumed later.
Government emissions	Direct emissions (e.g. from buildings, vehicles) and indirect emissions (e.g. emissions related to energy consumption, but also expenditures, subsidies and investments) of the central government.

¹ See UNFCCC: "The rate of build-up of carbon dioxide (CO₂) in the atmosphere can be reduced by taking advantage of the fact that atmospheric CO₂ can accumulate as carbon in vegetation and soils in terrestrial ecosystems. Under the United Nations Framework Convention on Climate Change any process, activity or mechanism which removes a greenhouse gas (GHG) from the atmosphere is referred to as a "sink." Human activities impact terrestrial sinks, through land use, land-use change and forestry (LULUCF), consequently, the exchange of CO₂ (carbon cycle) between the terrestrial biosphere and the atmosphere is altered."

Source: ECB.

⁵ Indicates if the net proceeds of the fixed income instrument are used for green projects or activities that promote climate change mitigation or adaptation, or other environmental sustainability purposes.

⁶ Indicates if the net proceeds of the fixed income instrument are used for social projects (such as helping communities in need) or sustainability projects (combination of both green and social projects).

⁷ A carbon dioxide equivalent (or CO₂ equivalent) is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global warming potential by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

Production emissions are normalized by purchasing power parity (PPP)-adjusted GDP (in EUR million), consumption emissions are normalized by population (persons), and government emissions by general government consumption (in EUR million). This ensures that each of the three types of emissions is scaled by a suitable indicator of economic activity. The WACI for each asset class portfolio is then calculated by weighting the issuers' carbon intensity by their respective share of holdings in the portfolio. Equities are measured at market value, and bond holdings at nominal value. This treatment of fixed income securities represents the best proxy available for their contribution to bond issuers' capital structures.

5.2 Total carbon emissions

The total carbon emissions metric represents the total absolute emissions associated with a portfolio and is expressed in tonnes of CO₂ equivalent. Formula 2 below shows how total carbon emissions are calculated.

$$\text{Total carbon emissions} = \sum_i^n \left(\frac{\text{current value of investment}_i}{\text{EVIC or PPP adj GDP}_i} \times \text{issuer's GHG emissions}_i \right)$$

As with the WACI, the method used for calculating total carbon emissions differs by issuer type and considers the three abovementioned types of GHG emissions for sovereigns. For corporate issuers, the GHG emissions are weighted by the investor's contribution to the issuer's enterprise value including cash (EVIC), i.e. the investor's share in the total capital structure. In contrast, the three types of (sub-)sovereign carbon emissions are uniformly scaled by PPP-adjusted GDP. The current value of investment in the numerator equals the nominal value for bonds and the market value for equities.

Each portfolio's total carbon emissions are then calculated by summing up the individual weighted emission contributions.

As an absolute measure of carbon emissions, the metric's comparability across portfolios and time is limited due to the dependency on portfolio size. However, the total carbon emissions metric serves as an input in calculating the normalized carbon footprint. This additional measure overcomes the noncomparability of total carbon emissions and contributes to a more holistic picture of a portfolio's emissions.

5.3 Carbon footprint

The carbon footprint normalizes the total carbon emissions of a portfolio by the value of its holdings in EUR million. The metric is expressed in tonnes of CO₂ equivalent per EUR million invested, which allows comparisons across differently sized portfolios and time. As above, the holding value of an investment equals the nominal value for bonds and the market value for equities. Formula 3 below shows how the carbon footprint is calculated.

$$\text{Carbon footprint} = \frac{\sum_i^n \left(\frac{\text{current value of investment}_i}{\text{EVIC or PPP adj GDP}_i} \right) \times \text{issuer's GHG emissions}_i}{\text{current portfolio value (€M)}}$$

5.4 Metrics for the OeNB's NMPPs in 2023 and 2024

The metrics shown below cover euro-denominated and non-euro-denominated sovereign and corporate bonds, covered bonds, supranational and agency bonds, and equities for non-monetary policy purposes. A strategic realignment of NMPP investments took place in 2024, which explains the year-on-year change in portfolio size. The portfolio size decreased from EUR 25.8 billion (2023) to EUR 14.3 billion

(2024). The share of investments in sovereign bonds decreased from 61.4% (2023) to 50.7% (2024), whereas the shares in corporate bonds and in equities increased. At about 12.8% (2023) and 21.2% (2024), corporate bonds were the second-largest asset class, followed by equities, whose share increased from 14.2% in 2023 to 20.7% in 2024.

Tables 2 and 3 present the abovementioned climate-related metrics – the WACI, total carbon emissions and the carbon footprint – for 2022, 2023 and 2024. Each metric is broken down by asset class. The data basis for YE 2023 and YE 2024 is as follows: holdings as at year-end, GHG emissions for sovereigns (2022) as well as for corporates and supranationals (both 2023). Both the financial and public sector data used for calculating the metrics date from 2023. The data for YE 2022 are exclusively based on 2022

Table 2.1

Climate-related TCFD metrics for the OeNB's sovereign NMPPs as at year-end 2024

	Sovereign and sub-sovereign bonds			
	Production		Consumption	Government
	Excl. LULUCF	Incl. LULUCF		
	EUR billion			
Portfolio size	7.3			
	tCO ₂ e per EUR million GDP, population or consumption expenditure			
WACI	189	180	14	123
	%			
	(100)	(100)	(100)	(100)
	tCO ₂ e			
Total carbon emissions	1,370,952	1,301,940	1,554,693	157,235
	%			
	(100)	(100)	(100)	(100)
	tCO ₂ e per EUR million invested			
Carbon footprint	189	180	214	22
	%			
	(100)	(100)	(100)	(100)
Green bond share	% of fixed income portfolios based on ICMA's Green Bond Principles			
	3.9			
Share of social, sustainability and sustainability-linked bonds	% of fixed income portfolios based on ICMA's Principles			
	0.2			

Note: The percentages given in parentheses below each figure indicate data availability, calculated as the percentage of investments (i.e. holding value of investments / holding value of portfolio) for which all required data (i.e. both emissions and financial data) are available. The "Total" column sums up all non-sovereign assets.

Source: ISS ESG, Carbon 4 Finance, World Bank, OeNB calculations.

Table 2.2

Climate-related TCFD metrics for the OeNB's sovereign NMPPs as at year-end 2023

	Sovereign and sub-sovereign bonds			
	Production		Consumption	Government
	Excl. LULUCF	Incl. LULUCF		
	EUR billion			
Portfolio size	15.9			
	tCO ₂ e per EUR million GDP, population or consumption expenditure			
WACI	157	149	12	90
	%			
	(100)	(100)	(100)	(100)
	tCO ₂ e			
Total carbon emissions	2,492,421	2,371,705	3,001,200	266,557
	%			
	(100)	(100)	(100)	(100)
	tCO ₂ e per EUR million invested			
Carbon footprint	157	149	189	17
	%			
	(100)	(100)	(100)	(100)
Green bond share	% of fixed income portfolios based on ICMA's Green Bond Principles			
	5.8			
Share of social, sustainability and sustainability-linked bonds	% of fixed income portfolios based on ICMA's Principles			
	0.1			

Note: The percentages given in parentheses below each figure indicate data availability, calculated as the percentage of investments (i.e. holding value of investments / holding value of portfolio) for which all required data (i.e. both emissions and financial data) are available. The "Total" column sums up all non-sovereign assets.

Source: ISS ESG, Carbon 4 Finance, World Bank, OeNB calculations.

Table 2.3

Climate-related TCFD metrics for the OeNB's sovereign NMPPs as at year-end 2022

Sovereign and sub-sovereign bonds				
	Production		Consumption	Government
	Excl. LULUCF	Incl. LULUCF		
	EUR billion			
Portfolio size	15.7			
WACI	tCO ₂ e per EUR million GDP, population or consumption expenditure			
	193	179	13	128
	%			
	(100)	(100)	(100)	(100)
Total carbon emissions	tCO ₂ e			
	3,026,569	2,806,486	3,536,097	342,500
	%			
	(100)	(100)	(100)	(100)
Carbon footprint	tCO ₂ e per EUR million invested			
	193	179	225	22
	%			
	(100)	(100)	(100)	(100)
Green bond share	% of fixed income portfolios based on ICMA's Green Bond Principles			
	2.3			
Share of social, sustainability and sustainability-linked bonds	% of fixed income portfolios based on ICMA's Principles			
	0.0			

Note: The percentages given in parentheses below each figure indicate data availability, calculated as the percentage of investments (i.e. holding value of investments / holding value of portfolio) for which all required data (i.e. both emissions and financial data) are available. The "Total" column sums up all non-sovereign assets.

Source: ISS ESG, Carbon 4 Finance, World Bank, OeNB calculations.

data. Data availability across asset classes is close to 100%, except for supranational and agency bonds, where coverage is at least around 60%.

Compared to 2023, total carbon emissions for sovereign assets significantly decreased in 2024 due to the significant reduction in the volume of the sovereign portfolio (2023 holdings: EUR 15.9 billion, 2024 holdings: EUR 7.3 billion). However, the relative metrics (WACI and carbon footprint), which are normalized to the size of the portfolio, increased. This is due to the fact that the EUR sovereign portfolio in particular was reduced year on year, while the USD sovereign portfolio, which tends to be more carbon intensive, remained roughly the same in absolute terms. For the same reason, the green bond share decreased from 5.8% to 3.9%.

For non-sovereign assets, total carbon emissions decreased due to the reduced holdings in the non-sovereign portfolios (2023 holdings: EUR 10.0 billion, 2024 holdings: EUR 7.1 billion). While the relative metrics for the asset classes equities, covered bonds and supranational and agency bonds remained almost the same year on year, the WACI and carbon footprint for corporate bonds deteriorated slightly. This was driven by a relative shift from EUR- to USD-denominated positions. Total carbon emissions for non-sovereign NMPPs decreased by around 39,000 tCO₂e (scope 1 and 2 emissions) and by around 1,224,000 tCO₂e (scope 3 emissions), respectively, from 2023 to 2024. The WACI and the carbon footprint, both of which account

for portfolio size, increased on the total non-sovereign asset level – by 35% and 26%, respectively. The green bond share slightly decreased from 9.4% to 8.6%⁸.

⁸ On a total portfolio level (sovereign and non-sovereign portfolio) the green bond share decreased from 6.81% (2023) to 5.61% (2024).

Table 3.1

Climate-related TCFD metrics for the OeNB's non-sovereign NMPPs as at year-end 2024

	Total	Supranational and agency bonds	Corporate bonds	Covered bonds	Equities
Portfolio size	EUR billion				
	7.1	0.9	3.0	0.2	3.0
	tCO ₂ e per EUR million revenue, scope 1-2 emissions				
WACI	101	0.6	150	0.5	83
	%				
	(96)	(83)	(96)	(100)	(100)
	tCO ₂ e, scope 1-2 emissions				
Total carbon emissions	551,852	69	417,917	25.0	133,841
	%				
	(93)	(61)	(95)	1,0	(100)
	tCO ₂ e, scope 3 emissions				
Total carbon emissions	5,206,781	51,656	3,199,322	35,162	1,920,641
	%				
	(93)	(61)	(95)	(100)	(100)
	tCO ₂ e per EUR million invested, scope 1-2 emissions				
Carbon footprint	84	0.1	144	0.1	45
	%				
	(93)	(61)	(95)	(100)	(100)
Green bond share	% of fixed income portfolios based on ICMA's Green Bond Principles				
	8.6	3.4	10.3	4.6	-
Share of social, sustainability and sustainability-linked bonds	% of fixed income portfolios based on ICMA's Principles				
	6.0	22.7	1.4	0.0	-

Note: The percentages given in parentheses below each figure indicate data availability, calculated as the percentage of investments (i.e. holding value of investments / holding value of portfolio) for which all required data (i.e. both emissions and financial data) are available. The "Total" column sums up all non-sovereign assets.

Source: ISS ESG, Carbon 4 Finance, World Bank, OeNB calculations.

Table 3.2

Climate-related TCFD metrics for the OeNB's non-sovereign NMPPs as at year-end 2023

	Total	Supranational and agency bonds	Corporate bonds	Covered bonds	Equities
Portfolio size	EUR billion				
	10.0	2.4	3.3	0.6	3.7
	tCO ₂ e per EUR million revenue, scope 1-2 emissions				
WACI	75	0.5	128	0.4	88
	%				
	(98)	(100)	(95)	(93)	(100)
	tCO ₂ e, scope 1-2 emissions				
Total carbon emissions	591,202	109	396,078	74.4	194,940
	%				
	(89)	(65)	(94)	0.9	(100)
	tCO ₂ e, scope 3 emissions				
Total carbon emissions	6,430,602	127,478	3,617,408	119,542	2,566,174
	%				
	(89)	(65)	(94)	(93)	(100)
	tCO ₂ e per EUR million invested, scope 1-2 emissions				
Carbon footprint	67	0.1	127	0.1	53
	%				
	(89)	(65)	(94)	(93)	(100)
Green bond share	% of fixed income portfolios based on ICMA's Green Bond Principles				
	9.4	7.7	11.0	7.6	-
Share of social, sustainability and sustainability-linked bonds	% of fixed income portfolios based on ICMA's Principles				
	11.3	27.6	1.4	0.0	-

Note: The percentages given in parentheses below each figure indicate data availability, calculated as the percentage of investments (i.e. holding value of investments / holding value of portfolio) for which all required data (i.e. both emissions and financial data) are available. The "Total" column sums up all non-sovereign assets.

Source: ISS ESG, Carbon 4 Finance, World Bank, OeNB calculations.

Table 3.3

Climate-related TCFD metrics for the OeNB's non-sovereign NMPPs as at year-end 2022

	Total	Supranational and agency bonds	Corporate bonds	Covered bonds	Equities
Portfolio size	EUR billion				
	8.9	2.5	2.7	0.6	3.1
WACI	tCO ₂ e per EUR million revenue, scope 1-2 emissions				
	70	1.5	134	0.8	86
	%				
	(96)	(95)	(93)	(99)	(100)
Total carbon emissions	tCO ₂ e, scope 1-2 emissions				
	571,603	1,047	419,311	66.4	151,178
	%				
	(96)	(95)	(92)	1.0	(100)
Total carbon emissions	tCO ₂ e, scope 3 emissions				
	5,006,323	191,961	3,009,802	87,509	1,717,051
	%				
	(95)	(94)	(91)	(95)	(100)
Carbon footprint	tCO ₂ e per EUR million invested, scope 1-2 emissions				
	67	0.4	171	0.1	49
	%				
	(96)	(95)	(92)	(96)	(100)
Green bond share	% of fixed income portfolios based on ICMA's Green Bond Principles				
	6.1	3.6	8.1	7.4	-
Share of social, sustainability and sustainability-linked bonds	% of fixed income portfolios based on ICMA's Principles				
	9.1	19.2	1.4	0.0	-

Note: The percentages given in parentheses below each figure indicate data availability, calculated as the percentage of investments (i.e. holding value of investments / holding value of portfolio) for which all required data (i.e. both emissions and financial data) are available. The "Total" column sums up all non-sovereign assets.

Source: ISS ESG, Carbon 4 Finance, World Bank, OeNB calculations.

Disclaimer

Metrics for supranational, agency and corporate issuers are based on issuers' scope 1 and scope 2 emissions. For the first time, total scope 3 carbon emissions for these underlying issuers are also reported and analyzed in the main text of this report for the most recent data. Scope 1, 2 and 3 emissions are either self-reported by issuers or modeled by data providers, with self-reported emissions preferred whenever available. Quality issues affecting scope 3 emissions data continue to limit their reliability and comparability over time. These issues include (1) considerable estimation uncertainty, (2) diverging estimates across different data providers, and (3) methodological refinements. Despite these shortcomings, the Eurosystem decided to start reporting scope 3 total carbon emissions in the main text of the report as of 2025 and notes a steady expansion of issuers' reporting of types of activities, which will enhance comparability over time.

6 The OeNB's target

Going forward, the OeNB aims to align its NMPPs with the EU's long-term decarbonization objective in support of the Paris Agreement.⁹

⁹ The EU's objectives are laid down in its 2050 long-term strategy, according to which the EU aims to be climate neutral by 2050 in line with the Paris Agreement objective to keep the global temperature increase to well below 2°C and pursue efforts to keep it to 1.5°C.

Annex

Table A1

GHG emissions

Type	Definition
Scope 1	Direct GHG emissions that occur from sources owned or controlled by the reporting company, i.e. emissions from combustion in owned or controlled boilers, furnaces, vehicles etc.
Scope 2	Indirect GHG emissions from the generation of purchased or acquired electricity, steam, heating or cooling consumed by the reporting company. Scope 2 emissions physically occur at the facility where the electricity, steam, heating or cooling is generated.
Scope 3	All other indirect GHG emissions (not included in scope 2) that occur in the value chain of the reporting company. Scope 3 can be broken down into upstream emissions and downstream emissions. Upstream emissions include all emissions that occur in the life cycle of a material/product/service up to the point of sale by the producer, such as from the production or extraction of purchased materials. Downstream emissions include all emissions that occur as a consequence of the distribution, storage, use and end-of-life treatment of the organization's products or services.

Source: PCAF.

Table A2

Disclosure framework

Issuer type	Factor	Definition	Unit
Allocation			
Corporate bonds	Scope 1, 2 and 3 emissions	Scope 1 comprises direct carbon emissions that occur from sources that are controlled or owned by an organization (e.g. emissions associated with fuel combustion in boilers, furnaces, vehicles). Scope 2 comprises indirect carbon emissions associated with the purchase of electricity, steam, heat or cooling. Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.	tCO ₂ e
Supranational and agency bonds			
Sovereign bonds	Production emissions	Emissions produced domestically within a country's physical borders, including domestic consumption and exports. This definition follows the territorial emissions approach adopted by the United Nations Framework Convention on Climate Change (UNFCCC) for annual national inventories. Production emissions are reported excluding and including the effects of land use, land-use change and forestry (LULUCF).	tCO ₂ e
	Consumption emissions	Emissions related to domestic demand, accounting for trade effects. This metric provides a broader view of a sovereign's emissions and tackles the issue of carbon leakage that arises due to production shifts from countries where goods are consumed later.	
	Government emissions	Direct emissions (e.g. from buildings, vehicles) and indirect emissions (e.g. emissions related to energy consumption, but also expenditures, subsidies and investments) of the central government.	
Normalization			
Corporate bonds	Revenue	The total amount of income generated by the sale of goods and services related to the primary operations of the business. Commercial revenue may also be referred to as sales or as turnover.	EUR million
Supranational and agency bonds			
Sovereign bonds	Production: PPP-adjusted GDP	GDP is the sum of gross value added by all resident producers plus any product taxes and minus any subsidies not included in the value of the products. The PPP conversion factor is a spatial price deflator and currency converter that eliminates effects of differences in countries' price levels.	EUR million
	Consumption: population	Total population of a country.	Persons
	Government: final consumption expenditure	General government final consumption expenditure (formerly general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security but excludes government military expenditures that are part of government capital formation.	EUR million
Attribution			
Sovereign bonds	PPP-adjusted GDP	GDP is the sum of gross value added by all resident producers plus any product taxes and minus any subsidies not included in the value of the products. The PPP conversion factor is a spatial price deflator and currency converter that eliminates effects of differences in countries' price levels.	EUR million
Equities			
Supranational and agency bonds	EVIC	The sum of the market capitalization of ordinary shares at fiscal year-end, the market capitalization of preferred shares at fiscal year-end, and the book values of total debt and minority interests.	EUR million
Corporate bonds			
Covered bonds			

Source: ECB.