



Bank of Finland's Annual Report on Responsible Investment

2024

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1 Introduction

The Bank of Finland's sustainability is founded on its core activities. The Bank of Finland's primary objective is to maintain price stability as a member of the Eurosystem. To achieve this objective, the Bank of Finland contributes to the Eurosystem's monetary policy preparation, decision-making and communication, and is responsible for the implementation of monetary policy in Finland. In addition, the Bank of Finland monitors and contributes to the stability of the financial system and maintains secure and accessible payment systems. The Bank of Finland's sustainability goals focus on promoting sustainable growth and wellbeing, exercising research-based influence through information and cooperation, and managing climate risks.

Through its investment activities, the Bank of Finland secures the value of its financial assets and, where necessary, its ability to support society's foreign currency-denominated liquidity. The Bank of Finland invests and manages its financial assets in accordance with central bank objectives taking into account investment objectives and risks as well as responsibility aspects related to investment activities. Responsible investing refers to taking into account environmental, social responsibility and good governance aspects in investment activities.

In 2021, alongside security, liquidity and return objectives, sustainability was added as a fourth main investment objective guiding the Bank of Finland's investment decisions and activities.



Most of the Bank of Finland's financial assets are invested in fixed-income debt instruments issued by governments and government-related issuers. In addition, the Bank of Finland makes direct fixed-income investments in covered bonds and corporate bonds. Some of the financial assets are also invested in equity, real estate and fixed-income funds through external asset managers.

Table 1. Bank of Finland's financial assets

Bank of Finland's financial assets, EUR million		31 Dec 2024	31 Dec 2023
Gold		3 532	2 945
Foreign reserves		8 427	6 923
	SDR	1 046	986
	US dollar-denominated fixed-income	5 399	4 296
	Sterling-denominated fixed-income	844	763
	Yen-denominated fixed-income	859	621
	Fixed-income funds	279	257
Long-term investments		3 488	3 553
	Equity funds	1 330	1 281
	Real estate funds	162	172
	Long-term fixed-income	494	493
	Cash	1 503	1 607
Total		15 447	13 421

Source: Bank of Finland

The Bank of Finland publicly committed to integrating environmental, social and governance factors into its investment decision-making and ownership practices [by signing the UN-supported Principles for Responsible Investment \(PRI\) in December 2019](#). Signing the principles means that responsibility is integrated into financial asset management, responsible investment practices are actively developed, and progress is reported annually.

In addition to its own investment activities, the Bank of Finland promotes responsible investment by being active in various networks and participating in public discussion. This work is carried out, for example, in the Eurosystem expert working groups. The Bank of Finland is also a member of the global Network for Greening the Financial System ([NGFS](#)), in which the Bank of Finland contributes to the discussion on sustainable financing and cooperates with other authorities and the financial sector. In addition, the Bank of Finland is a member of [Finsif](#) (Finland's Sustainable Investment Forum), which aims to promote responsible investment in Finland.

Climate change is one of the key themes in responsible investment. The Annual Report on Responsible Investment highlights the climate impacts of the Bank of Finland's own investment assets in accordance with [the Eurosystem's jointly agreed reporting models](#), and utilising the reporting recommendations of the NGFS and the [Task Force on Climate-Related Financial Disclosures](#) (TCFD). The Annual Report on Responsible Investment includes the following sections: Governance (Chapter 2), Strategy (Chapter 3), Risk management (Chapter 4) and Metrics and targets (Chapter 5). The annex section presents the formulas for calculating climate disclosures as well as tables of climate metrics for 2021–2024, based on the Eurosystem's reporting requirements.

Chapter 5 also reports for the first time the Bank of Finland's calculated share of the climate indicators of the Eurosystem's monetary policy purchase programmes for corporate and covered bonds. Otherwise, the European Central Bank is responsible for the climate reporting of the Eurosystem's monetary policy purchase programmes.

2 Governance and approaches to responsible investment

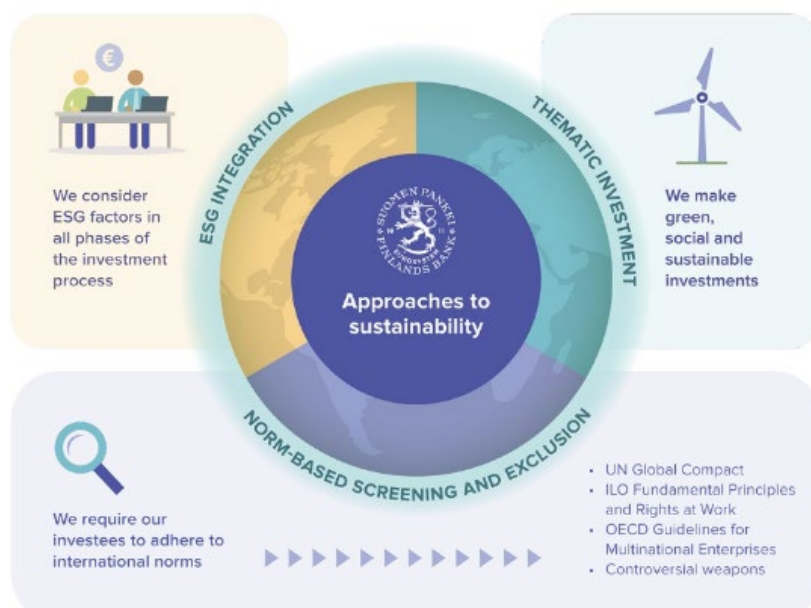
Sustainability was added as the fourth objective guiding the Bank of Finland's investment activities in 2021. Other objectives guiding investment decisions are the security, liquidity and return of investments.

The Board of the Bank of Finland approves and makes decisions on the responsible investment principles and objectives, including climate targets. The responsible investment principles were updated in November 2024 and published on the Bank of Finland's website. The Asset Management division of the Market Operations department is responsible for the practical implementation of the principles and reports regularly to the Board on responsible investment activities.

Responsibility issues related to the Bank of Finland's financial assets are regularly discussed in the Bank's internal working group on responsible investment. The working group is chaired by the Head of Market Operations and includes representatives from both the Market Operations department and the Risk Control office. All portfolio managers of the Bank of Finland's Asset Management division and a responsible investment expert are members of the working group. The tasks of the working group include, among other things, assessments of the adequacy of the issuers' responsibility and investment targets as well as possible decisions to remove issuers from the permitted investment universe.

2.1 Approaches to responsible investment

The Bank of Finland has chosen ESG integration, norm-based screening and exclusions, and thematic investments as part of the implementation framework for responsible investment. At present, the Bank of Finland's Asset Management division does not make direct equity investments; equity investments are made through funds and therefore active ownership, voting and engagement are particularly emphasised in the selection and monitoring of fund managers.



2.1.1 ESG integration

ESG integration means taking sustainability criteria into account alongside traditional financial factors when making investment decisions. The Bank of Finland's portfolio managers consider ESG factors and utilise external and internal resources when assessing the sustainability of investment targets and potential investments. The strategy for responsible investment is applied as comprehensively as possible in all investment decisions.

In indirect fund investments, the main focus is on assessing the responsibility of external asset managers. The Asset Management Office sends an ESG survey to asset managers annually to assess responsibility. The survey is used to monitor the consideration of responsibility aspects in funds, the active ownership of asset managers and the general actions of asset managers in developing responsibility. Active ownership is assessed in investment activities on a fund-by-fund basis. Individual investment targets can also be raised in asset manager meetings, if necessary.

ESG integration also includes identifying opportunities and risks related to climate change as well as analysing the climate impacts of investments. This work utilises data and analyses of the climate impacts of companies and public organisations available to the Bank of Finland through the Eurosystem's joint procurement process.

The Bank of Finland published climate targets for investment activities in September 2021, which were complemented during 2022 with investment limits for companies engaged in the production of

unconventional fossil fuels¹. The goal is to achieve carbon neutrality by 2050 at the latest for the entire investment portfolio, excluding gold investments, for which there are no international climate impact accounting standards.

2.1.2 Norm-based screening and exclusions

In addition to adherence to regulations, the minimum requirement for direct investments in the Bank of Finland is compliance with internationally accepted standards, or 'norms'. In this context, international norms include the UN Global Compact principles, the International Labour Organisation (ILO) principles and the OECD Guidelines for Multinational Enterprises. In addition, the Asset Management division does not make direct investments in companies that manufacture controversial weapons as defined in international treaties.

Portfolio managers in the Asset Management division have access to analyses from an external service provider to assess the ESG viewpoints of direct investments, asset managers and counterparties. The norm-based review does not extend to investments by external asset managers, but norm-based analysis is also carried out, where possible, on asset management companies and trading counterparties. In addition, norm-based screening is one element of the selection of external asset managers.

If direct investments include debt instruments from a company that does not meet the sustainability criteria of a norm-based screening, the Asset Management division will refrain from making new investments in the company. The divestment process will be initiated after the assessment of the responsible investment working group in the event that the company has not initiated corrective actions. If the company has initiated active corrective actions, the investments can be held. Additional investments can be made once confirmation of the end of the norm-based violations and the corrective actions have been received. Decisions on the exclusion of issuers are made by the Bank of Finland's internal working group for responsible investment.

2.1.3 Thematic investments

The Bank of Finland's Asset Management division also invests in green, social and sustainability bonds, and bonds issued by development banks. To be included in the category of thematic investments, the bonds must meet third-party evaluation criteria.

¹ Unconventional forms of fossil fuels production include Arctic drilling, deep-sea drilling, shale gas, shale oil and oil sands

3 Strategy

The Bank of Finland's sustainability is founded on its core activities. The Bank's task is to contribute to ensuring price stability, a reliable financial system, and secure and accessible payment systems. The Bank of Finland also plays a role in building a socially and ecologically sustainable society.

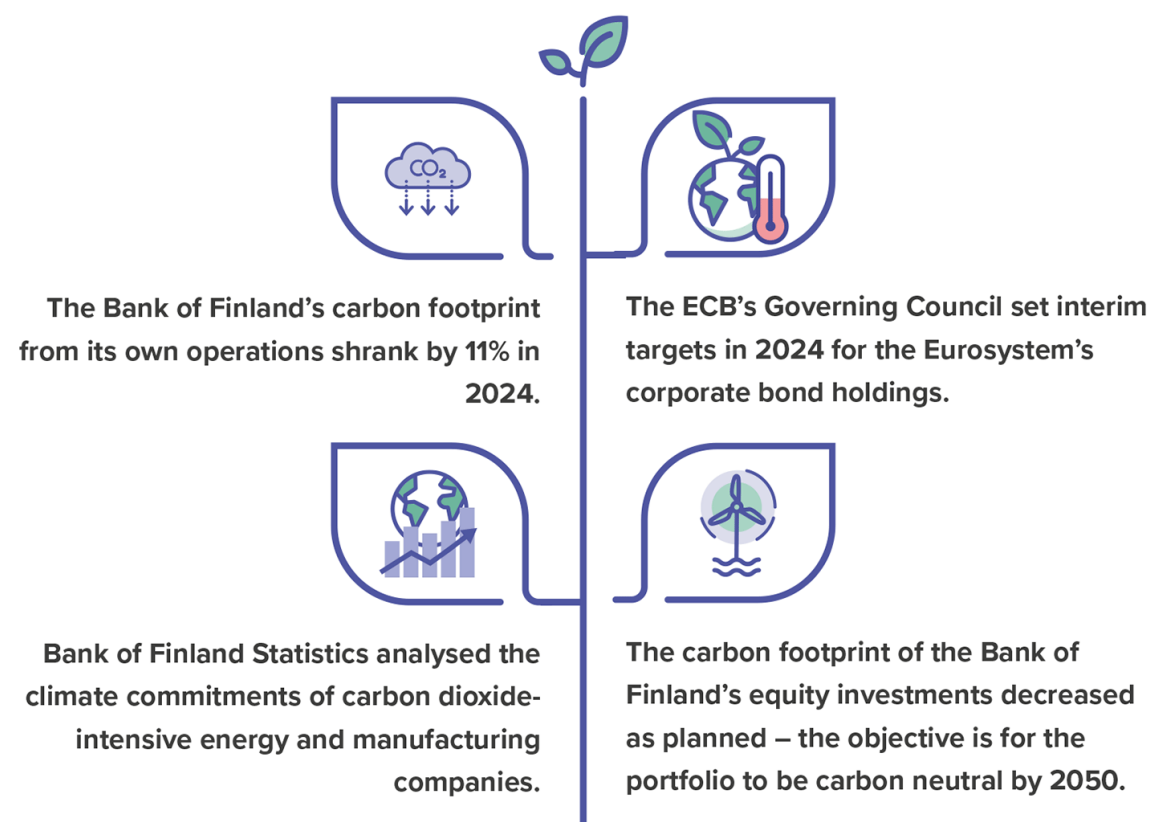
The Bank's sustainability programme focuses on promoting sustainable growth and wellbeing, exercising influence through information and cooperation, and managing climate risks. Responsibility work is guided by ethical rules, principles of good governance, and transparency.

The core objectives of the Bank of Finland's investment activities are to meet the requirements set for financial assets in terms of security, liquidity, return and responsibility. The weighting of these four objectives varies between asset classes but overall responsibility is an integral part of everyday investment activities.

In 2021, the Bank of Finland published [a longer-term carbon neutrality target](#) for its financial assets, which must be achieved by 2050 at the latest. At the same time, [the first interim targets were published](#) to support and monitor the achievement of the long-term carbon neutrality target. The interim targets are reviewed at regular intervals and were updated during 2022 by adding investment restrictions for bonds issued by companies engaged in the production of unconventional fossil fuels.

The Bank of Finland has also publicly committed to integrating environmental, social and governance factors into investment decision-making, having signed the UN-supported Principles for Responsible Investment (PRI) in December 2019.

Sustainability work at the Bank of Finland in 2024



Source: Bank of Finland

4 Risk management

At the end of 2024, the Bank of Finland's financial assets amounted to approximately EUR 15.4 billion, consisting of foreign exchange and gold reserves and long-term investments. Foreign reserves include liquid fixed-income investments while long-term investments contain fixed-income investments, equity and real estate fund investments and cash investments. The size of foreign reserves has been scaled to the level required by central bank tasks. Investment portfolios do not include assets related to the implementation of monetary policy, such as monetary policy loans to banks or securities purchased in monetary policy programmes.

The risks of the Bank of Finland's financial assets consist of market, credit and liquidity risks. Market risks refer to the possibility of loss due to, for example, fluctuations in exchange rates, interest rates and share prices.

Exchange rate risk is the source of the most significant fluctuation in the value of financial assets. The Bank of Finland diversifies its exchange rate risk by investing foreign reserves not only in US dollars, but also in the British pound sterling and the Japanese yen.

The strategic allocation of investments is determined by means of a benchmark index. This, together with a highly detailed limits framework, acts as a guide to taking on interest rate and credit risks. In this way, the Bank ensures that its investments are highly liquid and are adequately diversified across various asset classes, countries, maturities and issuers. The Bank's investment focus is on debt securities with high credit ratings.

The Bank of Finland invests part of its financial assets on a long-term investment horizon in the international equity, bond and real estate markets. Investments are made through funds and ETFs, and they contribute to diversifying the aggregate financial risk of financial assets.

By setting climate targets and restrictions, the Bank aims to reduce climate risks to investment assets. Issuers excluded due to climate targets are also excluded from the benchmark index.

During 2024, the Bank of Finland continued its study on the effects of climate change on the financial system. Climate change and extreme weather events pose risks to banks and other financial actors. Climate change creates two types of financial stability risks: material losses caused by extreme weather events and transition risks resulting from the shift away from high-emission business models.

Financial stability risks arising from climate change may be significant if economic losses increase, for example due to the increasing frequency and intensity of extreme weather events. Insurance companies, banks and investors assume responsibility for their share of this damage. If, on the other hand, climate policy, technological development or changes in consumer behaviour make high-emission business models economically unprofitable, investors may have to recognise losses on their holdings. This is called transition risk. The transition risk is significant when looking at the financial sector as a whole, and not all actors are likely to move away from investments with transition risks without losses.

5 Metrics and targets

The Board of the Bank of Finland approved carbon neutrality as the climate target for the Bank's financial assets by 2050 at the latest. In this context, carbon neutrality refers to greenhouse gas emissions defined in the Kyoto Protocol. The target applies to all asset classes, except gold, for which no international calculation standard exists.

To support the carbon neutrality objective, asset class-specific interim targets and milestones have been set to monitor the trend of the overall target and increase the credibility of operations by regular reporting of results.

Climate indicators are reported in accordance with [the Eurosystem's requirements](#). In addition, some indicators exceeding the Eurosystem's requirements are reported.

In addition, climate indicators are reported for the Eurosystem's monetary policy purchase programmes for corporate bonds and covered bonds.

5.1 Interim climate targets and their evolution by asset class

The role of the interim targets is to serve as a roadmap towards the more extensive carbon neutrality target. The Bank of Finland's investment activities comprise several asset classes, for each of which the Bank has developed a qualitative or quantitative first phase interim target. The interim targets will be reviewed in 2025 at the latest, at which time interim targets will be set for the next phase.

Only a few countries globally have committed to a carbon neutrality target that is faster than the Paris Agreement. As a significant part of the Bank of Finland's financial assets are invested in government bonds, it is not possible to set a more ambitious carbon neutrality target for entire financial assets than the Paris Agreement. In equity and corporate bond portfolios, the carbon neutrality target can be achieved faster than government bonds.

Achieving the carbon neutrality target in the Bank of Finland's investment activities by 2050 requires governments to take active measures to comply with the commitments under the Paris Agreement. The Bank of Finland will continue to contribute to public discussion in order to increase the coverage and comparability of the information required to combat climate change and support decision-making.

In addition to public sector bonds, the Bank of Finland also invests its financial assets in corporate bonds, covered bank bonds, and equity and real estate funds. Achieving the carbon neutrality target will therefore require successful climate measures not only from governments, but also from the corporate and banking sectors. For this reason, regular monitoring of investment activities is essential to ensure the direction and sufficient speed of progression towards the overall carbon neutrality target.

Table 2: Interim climate targets by asset class

Asset class	Qualitative target	Quantitative target
Government bonds	The Bank of Finland contributes to public discussion on climate change and thus encourages governments to set adequate national targets in line with the Paris Agreement	No quantitative target
Government-related bonds	Encourages government-related issuers to set climate targets for their own investment activities	No quantitative target at this stage, possibility to add a quantitative target when there is more information about the results of the first phase
Corporate bonds	No qualitative target	Sector-specific limits for corporate bond issuers: <ul style="list-style-type: none"> • A maximum of 2% of revenue from thermal coal • A maximum of 5% of revenue from coal energy use • A maximum of 10% revenue from oil drilling • A maximum of 40% of revenue from gas production • Investments in Arctic drilling, oil sands, deep-sea drilling, shale gas and oil are, as a rule, prohibited (unconventional forms of oil and gas production)
Equities	The asset manager or investment product has a sufficiently broad and ambitious climate target / impact (applies to existing and new asset managers)	50% emission intensity reduction target for the entire equity portfolio by the end of 2025 compared with the baseline level of Q1 2021
Real estate funds	The asset manager or investment product has a sufficiently broad and ambitious climate target / impact (applies to existing and new asset managers)	No quantitative target at this stage, possibility to add a quantitative target later
Other investments managed by external asset managers	The asset manager or investment product has a sufficiently broad and ambitious climate target / impact (applies to existing and new asset managers)	No quantitative target at this stage, possibility to add a quantitative target later

The Bank of Finland has set a qualitative target for its holdings of public sector bonds. The Bank of Finland's objective is to maintain public debate on climate change and thus encourage governments to set adequate national targets in line with the Paris Agreement. In this regard, the Bank of Finland publishes multiple articles and speeches on climate change on its website annually.

The Bank of Finland also encourages multinational and government-related public sector issuers to set climate targets for their own investment activities. In connection with this, the Bank of Finland's Asset Management division continued the issuer meetings started in 2022 also during 2023.

In corporate bond investments, the achievement of the carbon neutrality target is supported by sector-specific interim targets and investment restrictions. Exceptions to the sector-specific limits can be applied only on justified reasons. These may include, for example, a credible and sufficiently ambitious plans for issuers to achieve their climate target. The interim targets are monitored regularly, and the Bank of Finland's internal working group for responsible investment may refuse applying exceptions if the issuers do not develop as expected.

It is possible for the Bank of Finland's portfolio managers to invest in a green bond of an issuer excluded due to climate objectives if the bond meets the ICMA or EU Green Bond standard, for example, and the investment can be found to contribute to the green transition. A concrete example

of this could be a wind farm or solar power plant, but increasing energy efficiency alone is not in itself sufficient grounds for investment.

For external fund investments, it is required that the asset manager or investment product has a sufficiently broad and ambitious climate target. With the help of the annual asset manager survey, the Bank of Finland's Asset Management division monitors not only the asset managers' climate targets, but also the realisation of active ownership through general meeting votes and engagement processes. The information obtained from the survey will be reviewed by the internal working group for responsible investment.

All of the Bank of Finland's real estate funds have a climate target and some of the equity investments are invested in ESG and climate funds. The Bank of Finland has also invested in the BIS Green Bond Fund. The fund has a positive climate impact as it invests only in green bonds.

A 50% emission intensity reduction target has been set for equity investments by the end of 2025 compared to the level of the first quarter of 2021. At the end of 2024, the weighted-average carbon intensity (WACI) of equity investments had decreased by 49% compared to the baseline level. At the end of 2024, the emission intensity value was improved by sales of index funds tracking developed market global indices to adjust the overall allocation of the long-term investment portfolio.

Table 3. Emission reduction of equity investments (calculated with USD revenue)

	2024	2023	2022	2021	Q1/2021
WACI (Scope 1 & 2 tCO₂e)					
	77	87	107	135	151
Reduction compared to baseline					
	-49%	-43%	-29%	-11%	-

Source: Equity funds' own reports, own calculations

5.2 Climate metrics of investment portfolios

5.2.1 Climate metrics according to the Eurosystem's reporting requirements

Climate data and key figure calculations continue to face challenges related to data coverage, quality, and methodologies. Additionally, there is a delay in the availability of emissions data. In future reports, the Bank of Finland will retrospectively update metrics that were based on data from different reference years than those of the portfolio holdings. Some calculation errors have also been corrected for sovereign indicators, leading to some differences in the time series compared to the previous year's report.

The indicators for government issuers are derived from their scope 1 and scope 2 emissions. The production and consumption indicators for 2022-2024 utilize 2022 emission data, whereas the government indicators are based on 2021 emission data.² (Table 4)

The impact of land use, land use change and forestry sector (LULUCF) on greenhouse gas emissions is also being reported for sovereign issuers. [The EU's LULUCF Regulation](#) defines how carbon sinks and greenhouse gas emissions from forests and land use are taken into account in the EU's climate objectives.

Some calculation errors have been corrected for sovereign issuers, which is why, for example, the WACI figures for previous years for sovereign issuers are lower compared to figures reported in the last year's report.

The climate indicators for non-sovereign issuers are derived from their scope 1 and scope 2 emissions (see Table 5). The climate indicators for 2023 and 2024 utilize 2023 emission data, whereas the climate indicators for 2022 are based on 2022 emission data.

For the first time, the scope 3 emissions of these issuers are also reported and analyzed in the main text of this report, using the most recent data available. Additionally, Annex includes a table with absolute and relative metrics based on scope 3 emissions for 2023 and 2024.

Scope 1, 2 and 3 emissions are either self-reported by issuers or modelled by the 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 (i) considerable estimation uncertainty, (ii) diverging estimates across different data providers, and (iii) 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.

Time series on climate metrics for previous years (2022-2024) can be found in the Annex.

The most significant emissions in the Bank of Finland's investment portfolio concern the sovereign bond portfolio, as the foreign exchange reserves of financial assets must include bonds issued by certain governments, so that security and liquidity objectives are met. In addition to government-related emissions, significant emissions also concern corporate bond portfolios and equity investments. In direct corporate bond investments, fossil fuel entities have been significantly excluded from the permitted investment universe, which is expected to reduce the absolute emissions of the portfolio. In connection with this, some companies focusing on renewable forms of energy and the

² Government emissions data are no longer updated by the data provider following a revision to the guidance from the Partnership for Carbon Accounting Financials.

chemical industry may have high emissions, and the companies' emission reductions arise in the value chain, which are not visible in scope 1 and scope 2 calculations.

The most significant total scope 3 emissions from non-sovereign issuers are found in the corporate bond and equity portfolios. Notably, the total scope 3 emissions from multinational issuers and covered bonds are significantly higher than their scope 1 and scope 2 emissions, primarily due to emissions related to financed projects.

Table 4. Climate metrics according to the Eurosystem's reporting requirements and classification (sovereign issuers, scope 1 & 2)

Sovereign issuers: scope 1 & 2				
Sovereign and sub-sovereign				
	Production (excl. LULUCF)	Production (incl. LULUCF)	Consumption	Government
Portfolio value (EUR million)				
2024		4 484		
Amount of green, sustainability and social bonds (EUR million)				
		36		
Amount of sustainability, sustainability-linked and social bonds (EUR million)				
		0		
WACI (tCO ₂ e / purchasing power parity adjusted GDP, population or final consumption expenditure)				
2024	210	240	20	230
climate data coverage	99 %	99 %	99 %	99 %
Absolute carbon emissions (tCO ₂ e)				
2024	790 000	896 000	1 008 000	127 000
climate data coverage	99 %	99 %	99 %	99 %
Carbon footprint (tCO ₂ e per EUR million invested)				
2024	210	240	270	30
climate data coverage	99 %	99 %	99 %	99 %

Source: ISS, C4F, World Bank and own calculations

Table 5. Climate metrics according to the Eurosystem's reporting requirements and classification (non-sovereign issuers, scope 1 & 2)

Non-sovereign issuers: scope 1 & 2					
	Total	Supranational issuers	Covered bonds	Corporate bonds	Equities
Portfolio value (EUR million)					
2024	4 218	1 939	323	603	1 353
Amount of green bonds (EUR million)					
	314	306	3	5	
Amount of sustainability, sustainability-linked and social bonds (EUR million)					
	404	403	0	1	
WACI (tCO₂e per EUR million revenue)					
2024	40	<10	<10	60	70
Climate data coverage	84 %	67 %	100 %	98 %	99 %
Absolute carbon emissions (tCO₂e)					
2024	63 000	3 000	<100	22 000	38 000
Climate data coverage	84 %	67 %	100 %	98 %	99 %
Carbon footprint (tCO₂e per EUR million invested)					
2024	20	<10	<1	40	30
Climate data coverage	84 %	67 %	100 %	98 %	99 %

Source: ISS, own calculations

5.2.2. Additional climate metrics requirements

Table 6 provides additional information on the portfolio holdings' alignment with climate scenarios and the proportion of companies with science-based targets.

The majority (76%) of issuers in the Bank of Finland's corporate bond portfolio have already set or committed to science-based climate targets. Additionally, 14% have established other ambitious climate targets. The projected temperature change for the corporate bond portfolio is 1.5°C, indicating it will remain within the calculated carbon budget until 2050.

In equity investments, 72% of companies have science-based targets, commitments or other ambitious targets. However, the carbon budget will be significantly exceeded, with a projected temperature change is 2.4°C, unchanged from last year. The goal is to reduce emissions related to the equity portfolio by 50% by the end of 2025 compared to level of Q1 2021, measured by the average carbon intensity (WACI). The emission intensity has already decreased by 49% (Table 3), and a new interim target will be set for equity investments after 2025.

Only 4% of supranational issuers and 8% of covered bond issuers have set a climate target, while 63% of supranational issuers have not yet set any target. Nevertheless, the projected temperature change for for both portfolios is 1.5°C.

Table 6. Additional climate metrics

Bank of Finland's securities investments excluding government-issued bonds				
-	Supranational issuers	Covered bonds	Corporate bonds	Equities
Confirmaty with climate scenarios*				
Estimated temperature, increase by 2050	1,5°C	1,5°C	1,5°C	2,4°C
Alignment with SDS budgeting	Remains within the calculated SDS budget until 2050 (end of the time period analysed)	Remains within the calculated SDS budget until 2050 (end of the time period analysed)	Remains within the calculated SDS budget until 2050 (end of the time period analysed)	Exceeds the calculated SDS budget in 2032.
Assessment of climate targets (% of portfolio size)				
Targets committed to or adopted in the SBT model	3 %	8 %	76 %	61 %
Ambitious targets	3 %	25 %	14 %	11 %
Modest targets	32 %	67 %	10 %	23 %
No targets	63 %	0 %	1 %	6 %

Source: ISS, own calculations

*Based on the data of those issuers who report climate metrics. The government-related issuers portfolio has low data coverage, about 38%.

SBT: Science-based Target

SDS: Sustainable Development Scenario

5.3 Climate indicators of the Bank of Finland's monetary policy purchase programmes

In the monetary policy asset purchase programmes, the Eurosystem has purchased public sector debt, bank covered bonds, asset-backed securities and corporate debt. All purchase programmes have entered a passive phase and no new purchases will be made. The portfolios will be reduced in line with the maturities of the holdings. At the end of 2024, the last reinvestment of the maturities of the PEPP programme (Pandemic Emergency Purchase Programme) was discontinued.

Table 7 shows Bank of Finland's calculated share of the total emissions of the Eurosystem's monetary policy purchase programmes for corporate and covered bonds. In these private sector purchase programme holdings, the risks are shared among the Eurosystem central banks and the reporting is based on Bank of Finland's capital key share (1.82%) of the entire Eurosystem holdings. At the end of 2024, the Bank of Finland's capital key share of the Eurosystem's covered bond holdings was EUR 4.7 billion and the share of corporate bond holdings was EUR 6.1 billion. The Bank of Finland is publishing climate indicators for private sector purchasing programmes for the first time. The full climate indicators for the monetary policy purchase programmes can be found in the [ECB Climate Report](#).

The Eurosystem aims to gradually decarbonise its corporate bond holdings on a path aligned with the Paris Agreement. Climate risks have been taken into account in the implementation of the Eurosystem's monetary policy purchase programmes since October 2022. At that time, a climate indicator was introduced in monetary policy corporate bond purchases, which was used to emphasise the reduction of corporate emissions in monetary policy corporate bond purchases. In addition, in June 2024, the Governing Council of the ECB decided to set interim emission reduction targets for corporate bonds under the APP and PEPP programmes. With the interim targets³, the Eurosystem can monitor the progress of emission reductions in corporate bond holdings .

Table 7. Bank of Finland's share (based on capital key 1.82%) of total carbon emissions for the risk-shared monetary policy programmes

Bank of Finland's share (based on capital key 1.82%) of total emissions

	Covered bonds	Corporate bonds
Total carbon emissions (Scope 1 & 2, tCO₂e)		
2024	840,54	596 739,53
Total carbon emissions (Scope 3, tCO₂e)		
2024	1 617 613,52	4 454 264,91

Source: ECB

³ Details on the interim targets can be found on [ECB website](#)

6 Annex

Table 8. Climate metrics for 2022-2024 (Eurosysteem's reporting requirements, sovereign issuers, scope 1 & 2)

Sovereign issuers: scope 1 & 2				
Sovereign and sub-sovereign				
	Production (excl. LULUCF)	Production (incl. LULUCF)	Consumption	Government
Portfolio value (EUR million)				
2024			4 649	
2023			3 661	
2022			3 597	
Amount of green, sustainability, sustainability-linked and social bonds (EUR million)				
	Green bonds	Sustainability, sustainability-linked and social bonds		
2024	36		0	
2023	39		0	
2022	26		0	
WACI (tCO ₂ e / purchasing power parity adjusted GDP, population or final consumption expenditure)				
2024	210	240	20	230
2023	210	240	20	240
2022	210	240	20	250
WACI (climate data coverage)				
2024	99 %	99 %	99 %	99 %
2023	99 %	99 %	99 %	99 %
2022	99 %	99 %	99 %	99 %
Absolute carbon emissions (tCO ₂ e)				
2024	790 000	896 000	1 008 000	127 000
2023	616 000	698 000	788 000	101 000
2022	498 000	565 000	630 000	81 000
Absolute carbon emissions (climate data coverage)				
2024	99 %	99 %	99 %	99 %
2023	99 %	99 %	99 %	99 %
2022	99 %	99 %	99 %	99 %
Carbon footprint (tCO ₂ e per EUR million invested)				
2024	210	240	270	30
2023	210	240	270	30
2022	210	240	270	30
Carbon footprint (climate data coverage)				
2024	99 %	99 %	99 %	99 %
2023	99 %	99 %	99 %	99 %
2022	99 %	99 %	99 %	99 %

Source: ISS, C4F, World Bank and own calculations

Table 9. Climate metrics for 2022-2024 (Eurosysteem's reporting requirements, non-sovereign issuers, scope 1 & 2)

Non-sovereign issuers: scope 1 & 2					
	Total	Supranational issuers	Covered bonds	Corporate bonds	Equities
Portfolio value (EUR million)					
2024	4 218	1 939	323	603	1 353
2023	3 642	1 483	273	617	1 269
2022	3 911	1 659	239	686	1 327
Amount of green bonds (EUR million)					
2024	314	306	3	5	
2023	359	336	0	24	
2022	291	378	0	4	
Amount of sustainability, sustainability-linked and social bonds (EUR million)					
2024	404	403	0	1	
2023	315	312	0	3	
2022	282	279	0	3	
WACI (tCO ₂ e per EUR million revenue)					
2024	40	<10	<10	60	70
2023	40	<10	<10	60	80
2022	50	<10	<10	60	100
WACI (tCO ₂ e per EUR million revenue)					
2024	84 %	67 %	100 %	98 %	99 %
2023	90 %	76 %	100 %	100 %	99 %
2022	83 %	61 %	100 %	99 %	99 %
Absolute carbon emissions (tCO ₂ e)					
2024	63 000	3 000	<100	22 000	38 000
2023	77 000	3 000	<100	29 000	45 000
2022	108 000	<100	<100	39 000	70 000
Absolute carbon emissions (climate data coverage)					
2024	84 %	67 %	100 %	98 %	99 %
2023	90 %	76 %	100 %	100 %	99 %
2022	83 %	61 %	100 %	99 %	99 %
Carbon footprint (tCO ₂ e per EUR million invested)					
2024	20	<10	<1	40	30
2023	20	<10	<1	50	40
2022	30	<1	<1	60	50
Carbon footprint (climate data coverage)					
2024	84 %	67 %	100 %	98 %	99 %
2023	90 %	76 %	100 %	100 %	99 %
2022	83 %	61 %	100 %	99 %	99 %

Source: ISS, own calculations

Table 10. Climate metrics for 2023-2024 (Eurosysteem's reporting requirements, non-sovereign issuers, scope 3)

Non-sovereign issuers: scope 3					
	Total	Supranational issuers	Covered bonds	Corporate bonds	Equities
Portfolio value (EUR million)					
2024	4 218	1 939	323	603	1 353
2023	3 642	1 483	273	617	1 269
WACI (tCO ₂ e per EUR million revenue)					
2024	1 480	2 110	1 060	1 500	980
2023	1 660	2 420	1 060	1 830	1 030
WACI (tCO ₂ e per EUR million revenue)					
2024	91 %	67 %	100 %	98 %	99 %
2023	90 %	76 %	100 %	100 %	100 %
Absolute carbon emissions (tCO ₂ e)					
2024	1 501 730	178 970	104 580	679 930	538 250
2023	1 659 860	148 580	80 120	849 740	581 420
Absolute carbon emissions (climate data coverage)					
2024	91 %	67 %	100 %	98 %	99 %
2023	90 %	76 %	100 %	100 %	100 %
Carbon footprint (tCO ₂ e per EUR million invested)					
2024	420	140	320	1 140	400
2023	510	130	290	1 380	460
Carbon footprint (climate data coverage)					
2024	91 %	67 %	100 %	98 %	99 %
2023	90 %	76 %	100 %	100 %	100 %

Source: ISS, own calculations

General concepts and clarifications related to the Eurosystem's reporting requirements

Investment assets: Investment assets consist of fixed-income and equity investments denominated in foreign currency (USD, GBP and JPY) (including the BIS fund). Excludes gold or real estate investments.

Portfolio size: The size of the portfolio is reported in nominal values in fixed-income investments and market capitalisation in equity investments. For sovereign issuers, the reported portfolio size also includes cash. However, cash is not included in the calculation of climate metrics.

Sovereign issuers: Includes governments, states and government-related issuers. Also, some government-related financial institutions are also classified as sovereign issuers. Government-related issuers (including local governments) have used total government emissions as their emissions. In this way, the data coverage has been high but, on the other hand, emissions to the portfolio have also been partially calculated multiple times over.

BIS fund: The fund's holdings are broken down by issuer, with some issuers belonging to sovereign and some to non-sovereign issuers.

Data coverage: Calculated by dividing the market value of the investments for which all necessary financial and emissions-related information is available by the market value of the entire portfolio.

tCO₂e: Tons of carbon dioxide equivalent.

LULUCF: Land use, Land use change and Forestry.

Emissions data: Production and consumption indicators for sovereign issuers for the years 2022-2024 use 2022 emission data, while government indicators are based on 2021 emission data. Climate metrics for non-sovereign issuers for the years 2023-2024 are based on 2023 emission data, while the climate metrics for 2022 are based on 2022 emission data.

Exchange rate: The exchange rates used are the official exchange rates of both the reporting year and the last day of the last available emission year.

Calculation method: The calculation has been carried out partly manually by combining data from different data sources. The Eurosystem's issuer classification partly deviates from the Bank of Finland's own issuer breakdown.

Data sources: ISS ESG, C4F (Carbon for Finance), World Bank and ECB (exchange rates)

Formulas for calculating climate metrics

Equities

WACI (weighted average carbon intensity):

$$WACI = \sum_n^i \left(\frac{\text{current value of investment}_i}{\text{current portfolio value}} \right) \times \left(\frac{\text{issuer's GHG emissions}_i}{\text{issuer's revenue (EUR million)}_i} \right)$$

Absolute emissions:

$$TCE = \sum_n^i \left(\frac{\text{current value of investment}_i}{\text{Enterprise Value Including Cash (EVIC)}_i} \right) \times \text{issuer's GHG emissions}_i$$

Carbon footprint:

$$CF = \frac{\sum_n^i \left(\frac{\text{current value of investment}_i}{EVIC_i} \right) \times \text{issuer's GHG emissions}_i}{\text{current portfolio value (EUR million)}}$$

Fixed-income investments issued by sovereigns

WACI (weighted average carbon intensity):

$$WACI = \sum_n^i \left(\frac{\text{current value of investment}_i}{\text{current portfolio value}} \right) \times \left(\frac{\text{issuer's GHG emissions}_i}{\text{GDP, population, total consumption expenditure}_i} \right)$$

Absolute emissions:

$$TCE = \sum_n^i \left(\frac{\text{current value of investment}_i}{\text{PPP adjusted GDP}_i} \right) \times \text{issuer's GHG emissions}_i$$

Carbon footprint:

$$CF = \frac{\sum_n^i \left(\frac{\text{current value of investment}_i}{\text{PPP adjusted GDP}_i} \right) \times \text{issuer's GHG emissions}_i}{\text{current portfolio value (EUR million)}}$$

Other fixed-income investments

WACI (weighted average carbon intensity):

$$WACI = \sum_n^i \left(\frac{\text{current value of investment}_i}{\text{current portfolio value}} \right) \times \left(\frac{\text{issuer's GHG emissions}_i}{\text{issuer's revenue (EUR million)}_i} \right)$$

Absolute emissions:

$$TCE = \sum_n^i \left(\frac{\text{current value of investment}_i}{\text{Enterprise Value Including Cash (EVIC)}_i} \times \text{issuer's GHG emissions}_i \right)$$

Carbon footprint:

$$CF = \frac{\sum_n^i \left(\frac{\text{current value of investment}_i}{\text{EVIC}_i} \right) \times \text{issuer's GHG emissions}_i}{\text{current portfolio value (EUR million)}}$$