



Bank of Finland's Annual Report on Responsible Investment

2023



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1 Introduction

Foundations of the Bank of Finland’s sustainability are based 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.

Bank of Finland’s sustainability programme focuses 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 its ability to support the liquidity of the banking system and on its behalf, the preparedness of the country, whenever necessary.

The Bank of Finland invests and manages its financial assets in accordance with central bank objectives. In 2021, sustainability was added as a fourth main investment objective alongside security, liquidity and return objectives 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. Financial assets also include long-term investments for maintaining the real value of long-term capital items of the Bank of Finland’s balance sheet. The long-term portfolio consists of equity, real estate, fixed income, and cash investments.

Table 1. Bank of Finland's financial assets

The Bank of Finland's financial assets, EUR million		31 Dec 2023	31 Dec 2022
Gold		2 945	2 690
Foreign reserves		6 923	6 861
	SDR	986	933
	US dollar-denominated fixed-income	4 296	4 274
	Sterling-denominated fixed-income	763	718
	Yen-denominated fixed-income	621	684
	Fixed-income funds	257	252
Long-term investments		3 553	1 484
	Equity funds	1 281	1 328
	Real estate funds	172	156
	Long-term fixed-income	493	
	Cash	1 607	
Total		13 421	11 035

Source: Bank of Finland

The Bank of Finland is 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.

In recent years, climate change has become 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 appendix section presents the formulas for calculating climate disclosures for 2021–2023, based on the Eurosystem's reporting requirements.

2 Governance and approaches to responsible investment

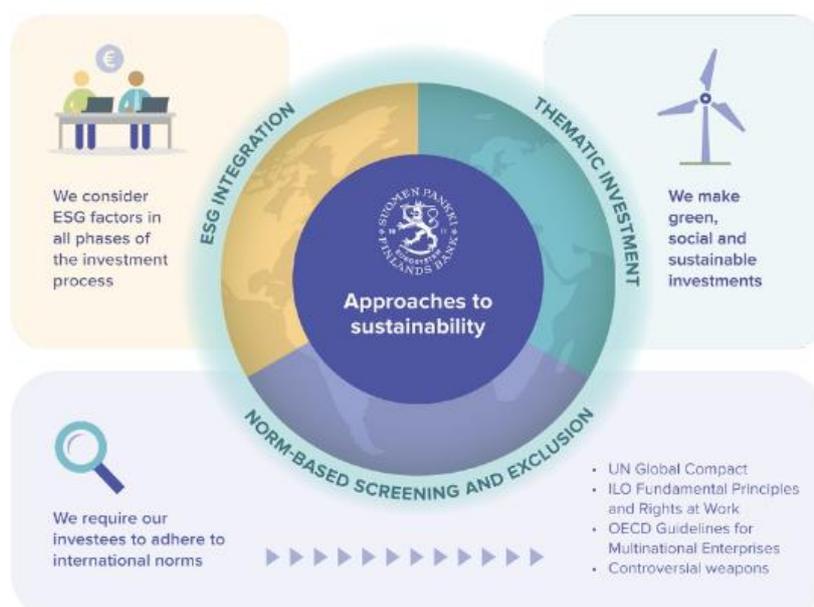
Sustainability was added as the fourth objective guiding the Bank of Finland's investment activities in 2021. Other objectives guiding investment decisions are the security, liquidity and return of investments.

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 2023 and published on the Bank of Finland's website. Asset Management division 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 the 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 and 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 and therefore active ownership, voting and engagement are emphasised particularly in the selection and monitoring of asset 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 to all investment decisions.

In indirect investments, the main focus is on assessing the responsibility of external asset managers. Only asset managers that are strongly committed to sustainability and promote their own practices from the perspective of corporate and fund responsibility will be selected as asset managers. Asset managers are expected to be active owners and influence the companies they invest in by taking sustainability aspects into account. Active ownership is assessed in the Bank of Finland's investment activities on a fund-by-fund basis. If necessary, individual investments can be highlighted in meetings with asset managers, and an ESG survey assessing responsibility of asset managers is sent to them by the Bank of Finland's Asset Management division annually. The survey is used to monitor the sustainability perspectives in funds and the general actions of asset managers in developing responsibility.

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 prohibited or 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

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

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

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.

3 Strategy

The foundations of the Bank's sustainability lie the Bank of Finland's 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.

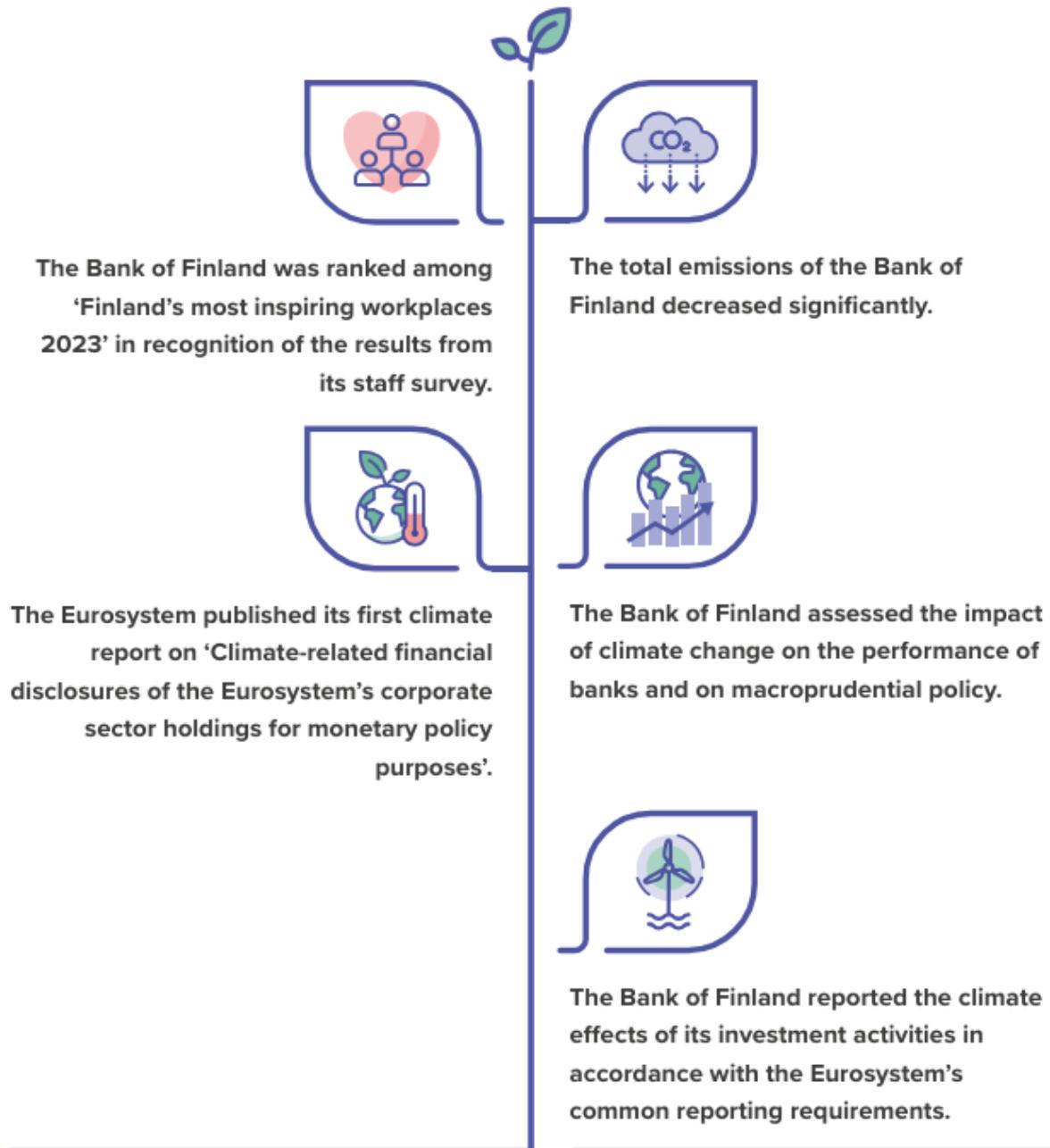
The Bank's sustainability programme focuses on promoting sustainable growth and wellbeing, exercising influence through information and cooperation, and managing climate risks. Responsibility work is guided by ethical rules, principles of good governance and transparency.

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 2023



4 Risk management

At the end of 2023, the Bank of Finland's financial assets amounted to approximately EUR 13 billion, consisting of gold and foreign exchange 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. Climate reporting for the monetary policy purchase programmes is the responsibility of the European Central Bank.

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 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.

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

During 2023, 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 take 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 Bank of Finland's Board 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 minimum requirements](#). In addition, some indicators and key figures exceeding the Eurosystem's requirements are reported.

5.1 Interim climate targets and their evolution by asset class

The role of the intermediate 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 intermediate target. The interim targets will be reviewed in 2025 at the latest, at which time intermediate targets will be set for the next phase.

Only a few countries globally have committed to the 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 ² : <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

² Restrictions were introduced in the Bank of Finland's investment activities during 2022. The excluded issuers have also been removed from the benchmark indices for direct investments.

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 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 current equity and real estate fund asset managers have an existing long-term climate target, and each real estate fund also has a climate target. In addition, some equity investments are invested in ESG and climate funds. The Bank of Finland also invests its financial assets in the BIS bond fund, and although BIS does not have a separate climate target, the fund has a positive climate impact, as it only invests 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 2023, the weighted-average carbon intensity (WACI) of equity investments had decreased by 43% compared to the baseline level. In 2023, the intensity value improved at the end of the year following the sales of funds tracking developed market indices without climate target to adjust the overall allocation of the long-term investment portfolio.

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

	31 Dec 2023	31 Dec 2022	31 Dec 2021	Q1/2021 (baseline date)
WACI (Scope 1+2, tCO2e)				
	87	107	135	151
Reduction compared to baseline				
	-43 %	-29 %	-11 %	-

Source: ISS

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 still bear challenges in terms of data coverage, quality and methodologies. Compared with the previous year's annual report on responsible investment, the coverage of the data on Bank of Finland's investment assets has improved and some bonds have also been reclassified, resulting in slight differences in time series from the previous year's report.

Tables 4 and 5 contain climate metrics in line with the Eurosystem’s reporting requirements using jointly agreed calculation methods and asset classifications.

Key figures in accordance with the Eurosystem reporting requirements are calculated using direct Scope 1 and indirect Scope 2 emission figures, i.e. emissions directly related to the operations and energy use of a company or organisation. The calculation of indirect emissions related to the value chain of a company or organisation (Scope 3) still involves challenges, due to which emissions from individual emission units may be included in the calculation several times.

For the first time, the impact of the land use, land use change and forestry sector (LULUCF) on greenhouse gas emissions will also be 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.

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. In addition to emissions to governments, corporate bond portfolios and equity investments are also subject to significant emissions. 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 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.

Time series on climate metrics for previous years (2021-2023) can be found in the Annex.

Table 4. Climate metrics according to the Eurosystem’s reporting requirements and classification (sovereign issuers)

Sovereign issuers				
Sovereign and sub-sovereign				
	Production (excl. LULUCF)	Production (incl. LULUCF)	Consumption	Government
Portfolio value (EUR million)				
2023			3 661	
Share of green bonds (EUR million)			39	
WACI (tCO₂e / purchasing power parity adjusted GDP, population or final consumption expenditure)				
2023	340	300	20	330
Climate data coverage	99 %	99 %	99 %	99 %
Absolute carbon emissions (tCO₂e)				
2023	997 000	892 000	1 124 000	143 000
Climate data coverage	99 %	99 %	99 %	99 %
Carbon footprint (tCO₂e per EUR million invested)				
2023	340	300	380	50
Climate data coverage	99 %	99 %	99 %	99 %

Source: ISS, C4F and World Bank

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

Non-sovereign issuers					
	Total	Supranational issuers	Covered bonds	Corporate bonds	Equities
Portfolio value (EUR million)					
2023	3 676	1 497	273	636	1 270
Share of green bonds (EUR million)	359	336	0	24	
WACI (tCO₂e per EUR million revenue)					
2023	40	<10	<10	60	80
Climate data coverage	87 %	70 %	100 %	97 %	100 %
Absolute carbon emissions (tCO₂e)					
2023	81 000	<100	<100	36 000	45 000
Climate data coverage	87 %	70 %	100 %	97 %	100 %
Carbon footprint (tCO₂e per EUR million invested)					
2023	30	<1	<1	60	40
Climate data coverage	87 %	70 %	100 %	97 %	100 %

Source: ISS, C4F and World Bank

5.2.2. Climate metrics calculated in addition to the Eurosystem's reporting requirements

Table 6 contains key figures calculated in addition to the Eurosystem's reporting requirements. The table contains Scope 3 emissions data and other additional indicators.

The majority (72%) of issuers in the Bank of Finland's corporate bond portfolio have already set or committed to science-based climate targets. In addition, 18% have set other ambitious climate targets. The projected temperature change of the corporate bond portfolio is 1.5°C, i.e. it will remain within the calculated carbon budget until 2050. Last year, the projected temperature change for the corporate bond portfolio was 1.7%, exceeding the allocated carbon budget.

In equity investments, based on total portfolio value, 62% of companies have science-based targets, commitments or other ambitious targets. However, the carbon budget will be significantly exceeded, as the projected temperature change is 2.4 °C (compared to 2.6 °C last year). The target is to reduce emissions 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 43% (Table 3), and after 2025 a new interim target will be set for equity investments.

Only 4% of supranational (public sector) issuers have set a climate target and 29% have not yet set any target. Nevertheless, the projected temperature change for supranational issuers is 1.5°C.

Table 6. Climate metrics calculated in addition to the Eurosystem's reporting requirements

Bank of Finland's securities investments excluding government-issued bonds					
	Total	Government-related issuers	Covered bonds	Corporate bonds	Equities
Portfolio value (EUR million)					
2023	3 676	1 516	273	617	1 270
2022	3 913	1 659	238	686	1 329
2021	4 107	1 626	257	717	1 506
Data coverage					
2023	83 %	57 %	100 %	97 %	100 %
2022	84 %	60 %	100 %	96 %	100 %
2021	86 %	67 %	93 %	97 %	99 %
Reported figures' share of total					
2023	86 %	67 %	100 %	96 %	90 %
2022	91 %	72 %	100 %	100 %	97 %
2021	85 %	63 %	100 %	100 %	91 %
Carbon intensity					
2023	80	1	<1	68	127
2022	104	3	2	87	159
2021	117	3	2	78	195
Absolute carbon emissions (Scope 1-3: tCO₂e)					
2023	1 827 495	30 733	74 073	1 073 313	966 803
2022	1 847 857	4 391	25 443	1 132 464	1 034 213
2021	1 188 072	7 236	12 583	580 786	883 075
Conformity with climate scenarios					
Estimated temperature, increase by 2050	1,7°C	1,5°C	1,5°C	1,5°C	2,4°C
Alignment with SDS budgeting	Exceeds the calculated SDS budget in 2044	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	44 %	4 %	9 %	72 %	62 %
Ambitious targets	13 %	6 %	23 %	18 %	12 %
Modest targets	33 %	60 %	68 %	9 %	20 %
No targets	11 %	29 %	1 %	0 %	7 %

Source: ISS

Note:

Portfolio size: reported in nominal value in fixed income investments, market capitalisation in equities.

Data coverage: percentages indicate the data coverage for each asset class. The coverage is 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.

Share of reported figures as a whole: The proportion of the issuer's self-reported figures in the portfolio weight for which the necessary data is available.

SBT: Science-based Target

SDS: Sustainable Development Scenario

6 Annex

Table 7. Climate metrics for 2021-2023 (Eurosystem's reporting requirements, sovereign issuers)

Sovereign issuers				
Sovereign and sub-sovereign				
	Production (excl. LULUCF)	Production (incl. LULUCF)	Consumption	Government
Portfolio value (EUR million)				
2023		3 661		
2022		3 601		
2021		3 410		
Share of green bonds (EUR million)				
2023		39		
2022		33		
2021		37		
WACI (tCO₂e / purchasing power parity adjusted GDP, population or final consumption expenditure)				
2023	340	300	20	330
2022	350	310	20	340
2021	360	320	20	330
WACI (climate data coverage)				
2023	99 %	99 %	99 %	99 %
2022	99 %	99 %	99 %	99 %
2021	99 %	99 %	99 %	99 %
Absolute carbon emissions (tCO₂e)				
2023	997 000	892 000	1 124 000	143 000
2022	807 000	721 000	900 000	115 000
2021	842 000	753 000	928 000	115 000
Absolute carbon emissions (climate data coverage)				
2023	99 %	99 %	99 %	99 %
2022	99 %	99 %	99 %	99 %
2021	99 %	99 %	99 %	99 %
Carbon footprint (tCO₂e per EUR million invested)				
2023	340	300	380	50
2022	350	310	390	50
2021	360	320	390	50
Carbon footprint (climate data coverage)				
2023	99 %	99 %	99 %	99 %
2022	99 %	99 %	99 %	99 %
2021	99 %	99 %	99 %	99 %

Source: ISS, C4F and World Bank

Table 8. Climate metrics for 2021-2023 (Eurosystem's reporting requirements, non-sovereign issuers)

Non-sovereign issuers					
	Total	Supranational issuers	Covered bonds	Corporate bonds	Equities
Portfolio value (EUR million)					
2023	3 676	1 516	260	630	1 270
2022	3 913	1 659	238	686	1 329
2021	4 107	1 626	257	718	1 506
Share of green bonds (EUR million)					
2023	359	336	0	24	
2022	291	287	0	5	
2021	382	378	0	4	
WACI (tCO₂e per EUR million revenue)					
2023	40	<10	<10	60	80
2022	50	<10	<10	60	90
2021	50	<10	<10	30	100
WACI (climate data coverage)					
2023	87 %	70 %	100 %	97 %	100 %
2022	83 %	61 %	100 %	99 %	99 %
2021	90 %	78 %	100 %	99 %	99 %
Absolute carbon emissions (tCO₂e)					
2023	81 000	<100	<100	36 000	45 000
2022	112 000	<100	<100	42 000	70 000
2021	103 000	<100	<100	24 000	79 000
Absolute carbon emissions (climate data coverage)					
2023	87 %	70 %	100 %	97 %	100 %
2022	83 %	61 %	100 %	99 %	99 %
2021	90 %	78 %	100 %	99 %	99 %
Carbon footprint (tCO₂e per EUR million invested)					
2023	30	<1	<1	60	40
2022	30	<1	<1	60	50
2021	30	<1	<1	30	50
Carbon footprint (climate data coverage)					
2023	87 %	70 %	100 %	97 %	100 %
2022	83 %	61 %	100 %	99 %	99 %
2021	90 %	78 %	100 %	99 %	99 %

Source: ISS, C4F and World Bank

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.

LULUCF: Land use, land use change and forestry.

BIS fund: The fund's holdings are broken down by issuer, with some issuers belonging to the 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.

Emission data: The 2023 climate metrics are mainly reported using 2022 emissions data (climate data is updated with a delay). The climate metrics for 2022 and 2021 are mainly reported using emissions data from those years.

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:

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