OP Corporate Bank plc's Report by the Board of Directors and Financial Statements 2022

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Report by the Board of Directors 2022

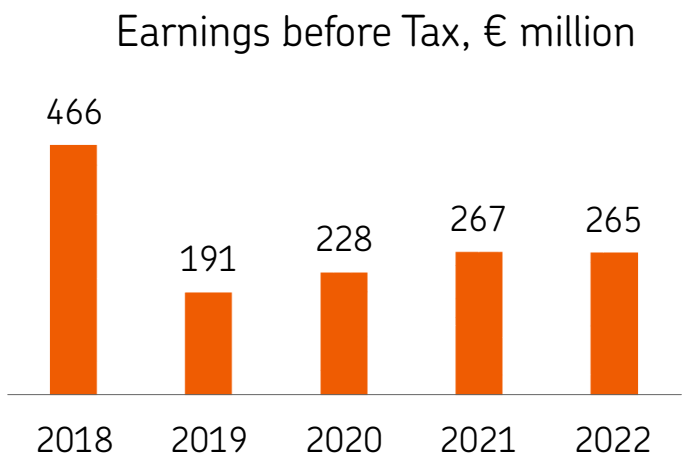
Earnings before tax Q1–4/2022	Total income Q1–4/2022	Loan portfolio growth in the year to December	CET1 ratio 31 Dec 2022
€265 million	–15%	+7%	11.9%

- **OP Corporate Bank plc's** earnings before tax were EUR 265 million (267).
- Total income decreased by 15% to EUR 564 million (661). Net investment income decreased by 30% to EUR 117 million (168). Net interest income decreased by 4% to EUR 396 million (412). A year ago, the increase was especially explained by the recognition in profit or loss of an additional benefit from the interest rate margin of the TLTRO III funding offered by the European Central Bank to banks. Other operating income decreased by EUR 17 million to EUR 32 million (49). Net commissions and fees fell by EUR 12 million to EUR 19 million (31).
- Total expenses decreased by 12% to EUR 281 million (320). A year ago, expenses were particularly increased by the transfer of the interest rate benefit from the interest rate margin received under TLTRO III funding to OP Financial Group companies.
- Impairment loss on receivables decreased by EUR 56 million to EUR 18 million (74).
- The loan portfolio grew in the year to December by 7% to EUR 28.2 billion (26.2). The deposit portfolio decreased by 9% to EUR 14.7 billion (16.1).
- The **Corporate Banking and Capital Markets** segment's earnings before tax decreased to EUR 186 million (261). Total income decreased by 25% to EUR 313 million (420). Net interest income increased by 6% to EUR 225 million (213). Net investment income decreased by 23% to EUR 130 million (167). Net commissions and fees totalled EUR –49 million (–31). Other operating income decreased to EUR 7 million (70). A year ago, other operating income was increased by capital gain on the sale of OP Custody Ltd and the transfer of the interest rate benefit of OP Corporate Bank's Group Treasury under TLTRO III funding to business units. Total expenses increased by 4% to EUR 126 million (121). Impairment loss on receivables totalled EUR 1 million (38).
- The **Asset and Sales Finance Services and Payment Transfers** segment's earnings before tax increased by EUR 48 million to EUR 138 million (90). Total income increased by 11% to EUR 256 million (231). Net interest income increased by 18% to EUR 183 million (155) and net commissions and fees by 8% to EUR 63 million (58). Total expenses increased by 2% to EUR 105 million (104). Impairment loss on receivables totalled EUR 12 million (37).
- The **Baltics** segment's earnings before tax rose to EUR 24 million (20). Total income increased to EUR 59 million (42). Net interest income increased by 48% to EUR 49 million (33). Net commissions and fees totalled EUR 10 million (9). Total expenses increased by EUR 7 million to EUR 29 million (22). Impairment loss on receivables totalled EUR 6 million (0).
- The **Group Functions** segment's earnings before tax amounted to EUR –83 million (–105). The financial position and liquidity remained strong.
- OP Corporate Bank plc's CET1 ratio was 11.9% (15.4), which exceeds the minimum regulatory requirement by 3.3 percentage points. OP Financial Group adopted a risk-weighted assets (RWA) floor, based on the Standardised Approach, in the second quarter. On the date of the adoption, this decreased OP Corporate Bank's CET1 ratio by 2.4 percentage points.
- On 30 September 2022, OP Financial Group filed an application with the European Central Bank (ECB) on the use of the Standardised Approach in capital adequacy calculation, instead of the internal models (IRBA) and the currently applied risk-weighted assets floor based on the Standardised Approach. Transfer to the Standardised Approach is estimated to have no essential effect on OP Corporate Bank's capital adequacy or risk exposure.

OP Corporate Bank plc's key indicators

Earnings before tax, € million	Q1–4/2022	Q1–4/2021	Change, %
Corporate Banking and Capital Markets	186	261	-28.7
Asset and Sales Finance Services and Payment Transfers	138	90	53.8
Baltics	24	20	18.9
Group Functions	-83	-105	-
Total	**265**	**267**	**-0.5**
Return on equity (ROE), %	4.9	5.2	-0.3*
Return on assets (ROA), %	0.22	0.25	-0.03*
	31 Dec 2022	31 Dec 2021	Change, %
CET1 ratio, %	11.9	15.4	-3.5*
Loan portfolio, € million	28,178	26,236	7.4
Guarantee portfolio, € million	3,412	3,475	-1.8
Other exposures, € million	6,354	5,731	-10.9
Deposits, € million	14,683	16,089	-8.7
Ratio of non-performing exposures to exposures, %	1.5	1.8	-0.3*
Ratio of impairment loss on receivables to loan and guarantee portfolio, %	0.06	0.25	-0.19*

*Change in ratio



OP Corporate Bank plc's earnings before tax calculated as pre-tax profit under national legislation are presented as figures for 2018–2019.

Business environment

World economic growth slowed down markedly in 2022. As a result of Russia's aggressive war in Ukraine, the European energy market was unstable throughout the year. Raw material prices that rose rapidly early in the year decreased after the middle of the year. In addition, the acceleration of inflation to its climax since the 1980s cast a shadow on economies in general. Strong growth in the euro area almost came to a standstill during the latter part of the year.

In the financial market, interest rates soared, as central banks began to tighten their policy. The European Central Bank (ECB) started to tighten its monetary policy in the summer and raised the deposit facility rate to two per cent in December. The most common reference interest rate for home loans in Finland, the 12-month Euribor, increased by 3.8 percentage points to 3.3 per cent during the year.

Stock prices fell considerably around the world. In the fourth quarter, stock prices rebounded, as fears of the energy crisis and higher interest rates abated.

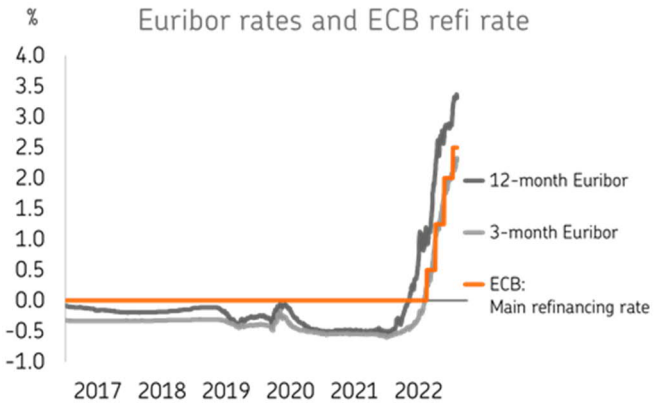
Brisk growth of the Finnish economy dwindled in 2022. Despite this slowdown, employment improved and the profitability of businesses remained good. Consumer spending decreased during the year, as inflation eroded purchasing power. A sharp rise in reference interest rates pushed prices down in the housing market after the favourable first half of the year, and home sales decreased during the rest of the year. The economic outlook is still exceptionally uncertain, and the economy is expected to continue to weaken during 2023. A rise in short-term interest rates is anticipated to dampen the housing market.

In December, the annual growth rate of total deposits slowed down to 0.7%, compared to 5.0% at the end of 2021. On an annual basis, corporate deposits increased by 2.4% and household deposits by 2.4%.

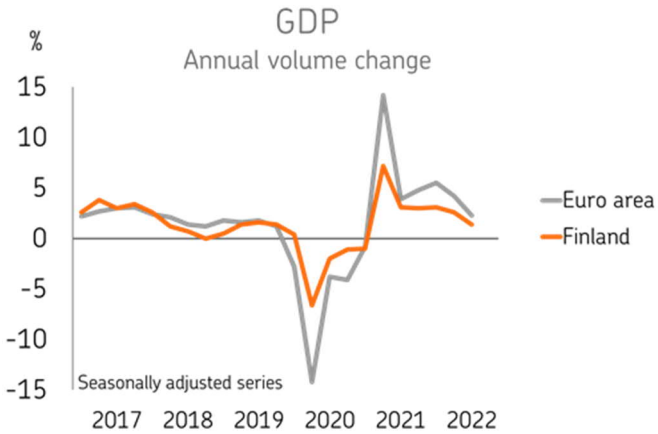
In December, total loans were 3.5% higher than a year earlier. The annual growth rate of corporate loans was 4.5%. The corresponding loan growth rate was 7.0% for housing companies and 0.8% for households. Growth in loans to households slowed down from its level of 4.0% at the end of 2021, while the annual growth rate of home loans slowed down to 0.5%. The annual growth rate of consumer loans was 3.1% in December as against 2.4% during the same period a year earlier.

The value of mutual funds registered in Finland decreased from the 2021 record of EUR 158.8 billion to EUR 134 billion. Assets redeemed in 2022 totalled EUR 4.4 billion.

Demand for insurance services remained stable. The end of the Covid-19 restrictions in Finland and the general rise in costs increased claims incurred. A decline in the capital market was partly reflected in the profitability of insurance companies.

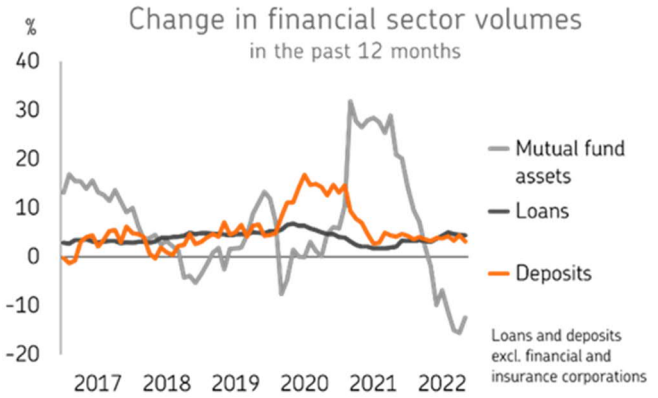


Source: Bank of Finland



Sources: Eurostat, Statistics Finland

Source: Statistics Finland



Sources: Bank of Finland, Investment Research Finland

OP Corporate Bank earnings

€ million	Q1–4/2022	Q1–4/2021	Change, %
Net interest income	396	412	-3.9
Net commissions and fees	19	31	-39.3
Net investment income	117	168	-30.3
Other operating income	32	49	-35.2
Total income	564	661	-14.6
Personnel costs	76	72	4.7
Depreciation/amortisation and impairment loss	9	12	-28.6
Other operating expenses	196	236	-16.7
Total expenses	281	320	-12.4
Impairment loss on receivables	-18	-74	-75.2
Total earnings before tax	**265**	**267**	**-0.5**

January–December

OP Corporate Bank plc's earnings before tax were EUR 265 million (267). Total income decreased by EUR 96 million to EUR 564 million. Net interest income decreased to EUR 396 million (412). A year ago, the increase was especially explained by the recognition in profit or loss of an additional benefit from the interest rate margin of the TLTRO III funding offered by the European Central Bank to banks.

Net commissions and fees fell by EUR 12 million to EUR 19 million. Net investment income, EUR 117 million, fell by EUR 51 million. Other operating income decreased by EUR 17 million to EUR 32 million. A year ago, other operating income included a capital gain on the sale of OP Custody Ltd shares. Total expenses of EUR 281 million decreased by EUR 40 million year on year. Other operating expenses, EUR 196 million, were EUR 39 million lower than the year before. Other operating expenses a year ago were especially increased by the interest benefit from TLTRO III funding that was transferred from OP Corporate Bank's Treasury to OP Financial Group companies. Impairment loss on receivables reduced earnings by EUR 18 million (74).

Net interest income decreased by EUR 16 million to EUR 396 million. A year ago, OP Corporate Bank recognised as income EUR 103 million in the additional benefit from the interest rate margin related to the TLTRO III funding. OP Corporate Bank repaid EUR 4.0 billion of TLTRO III loans during the financial year. TLTRO III loans totalled EUR 12.0 billion at the end of the financial year. The cost of the TLTRO loans lowered net interest income for the financial year by EUR 10 million. Interest income from receivables from customers increased by EUR 137 million to EUR 518 million, spurred by higher interest rates and growth in the loan portfolio. In the year to December, OP Corporate Bank's loan portfolio increased by 7.4% to EUR 28.2 billion (26.2). Interest income from receivables from credit institutions increased by EUR 122 million to EUR 159 million. Interest expenses of liabilities to credit institutions rose by EUR 105 million to EUR 162 million and interest expenses of liabilities to customers increased by EUR 45 million to EUR 34 million. The deposit portfolio decreased in the year to December by 8.7% to EUR 14.7 billion (16.1). Interest expenses of debt securities issued to the public increased by EUR 66 million to EUR 146 million, year on year. Debt securities issued to the public rose to EUR 25.2 billion (22.6). In the year to December, the amount of senior non-preferred bonds rose by EUR 0.4 billion to EUR 4.3 billion. Interest expenses of subordinated liabilities decreased by EUR 28 million to EUR 35 million from the previous year. During the financial year, subordinated liabilities decreased to EUR 1.4 billion (2.0).

Net commissions and fees decreased by EUR 12 million to EUR 19 million. Commission income decreased by EUR 7 million and commission expenses rose by EUR 6 million. Commission income from lending, payment transfers, issue of securities and securities brokerage decreased. Commission expenses were increased by fees paid to OP Financial Group member banks.

Net investment income decreased by EUR 51 million to EUR 117 million. Income from derivatives held for trading fell by EUR 46 million to EUR 120 million. The release of TLTRO III funding hedging weakened net investment income by EUR 9 million. The end of 2022 saw a change in the operating model applied to hedging interest rate risk associated with derivative contracts between OP Corporate Bank and OP Financial Group member cooperative banks. Following the change, the variation in the result of value changes due to market movements of derivative contracts between OP Corporate Bank and OP cooperative banks will decrease at

OP Corporate Bank. The related valuation adjustment was reversed in the fourth quarter. Value changes in Credit Valuation Adjustment (CVA) in derivatives owing to market changes improved earnings by EUR 4 million (15). Capital gains on notes and bonds, EUR 10 million, increased by EUR 6 million year on year.

Other operating income decreased by EUR 17 million to EUR 32 million. A year ago, other operating income was increased by capital gain on the sale of OP Custody Ltd shares.

Total expenses, EUR 281 million, decreased by EUR 40 million. Personnel costs increased by EUR 3 million to EUR 76 million. Depreciation/amortisation and impairment loss decreased by EUR 4 million to EUR 9 million. Other operating expenses totalling EUR 196 million decreased by EUR 39 million. A year ago, other operating expenses were increased by the transfer of the interest rate benefit, EUR 54 million, received under TLTRO III funding to OP Financial Group companies. Charges of financial authorities increased by EUR 8 million to EUR 36 million as a result of a rise in the stability contribution paid to the Single Resolution Fund financed by the euro-area banks. ICT costs of EUR 92 million remained at the previous year's level.

Impairment loss on receivables totalled EUR 18 million (74). The indirect effects of the war in Ukraine increased impairment loss on receivables in the first quarter, but no longer continued to do so after that. In the third quarter, impairment loss on receivables was significantly reduced by the repayments of certain non-performing exposures. In the fourth quarter, OP Corporate Bank recognised a 2.5-million-euro additional provision of impairment loss on receivables based on management judgement that applied to the construction industry. Final net loan losses recognised for the financial year totalled EUR 86 million (46). Loss allowance was EUR 272 million (339) at the end of the financial year. Non-performing exposures accounted for 1.5% (1.8) of total exposures. Impairment loss on loans and receivables accounted for 0.06% (0.25) of the loan and guarantee portfolio.

Comprehensive income for the financial year totalled EUR 148 million (238). Change in the fair value reserve, EUR –71 million, reduced comprehensive income for the financial year. Changes in the fair value of notes and bonds and cash flow hedges reduced the fair value reserve by EUR 70 million. Capital gains on notes and bonds transferred from the fair value reserve to the income statement totalled EUR 10 million. Cash flow hedges of EUR 9 million were transferred from the fair value reserve to net interest income in the income statement. A year ago, change in the fair value reserve improved comprehensive income by EUR 20 million.

2022 highlights

OP Corporate Bank plc issued a new green bond

OP Corporate Bank plc issued a green bond worth EUR 500 million in accordance with its updated Green Bond Framework. The green bond will support the green transition, and proceeds raised with it will be allocated to sustainable corporate finance. Targeted at international responsible institutional investors, the bond is OP Corporate Bank's first senior non-preferred, unsecured green bond. The bond amounts to EUR 500 million and has a maturity of 5.5 years. Eligible sectors to be funded include renewable energy, green buildings and environmentally sustainable management of living natural resources and land use. The green bond was priced on 20 January 2022 and issued on 27 January 2022.

OP Financial Group adopted a risk-weighted assets floor, based on the Standardised Approach, in the calculation of the capital adequacy ratio

On 1 March 2022, OP Financial Group decided to adopt a risk-weighted assets floor (SA floor) in the calculation of its capital adequacy ratio – based on the Standardised Approach – in the second quarter of 2022. This was due to enhanced regulatory requirements and discussions with the banking supervisor, the European Central Bank, on the application of the Internal Ratings Based Approach (IRBA). In the second quarter, the SA floor decreased OP Corporate Bank's CET1 ratio by 2.4 percentage points.

Application filed with the European Central Bank on the use of the Standardised Approach

On 30 September 2022, OP Financial Group filed an application with the European Central Bank (ECB) on the use of the Standardised Approach in capital adequacy calculation, instead of the internal models (IRBA) and the currently applied risk-weighted assets floor based on the Standardised Approach. Transfer to the Standardised Approach is estimated to have no essential effect on OP Corporate Bank's capital adequacy or risk exposure. This was due to enhanced regulatory requirements and discussions with the banking supervisor, the European Central Bank, related to the application of the Internal Ratings Based Approach (IRBA). The schedule for transferring to the Standardised Approach depends on the processing of the application at the ECB. According to OP Financial Group's assessment, the transfer will take place during the first quarter of 2023.

Corporate responsibility

Corporate responsibility is an integral part of OP Financial Group's and OP Corporate Bank's business and strategy. Responsible business is one of OP Financial Group's strategic priorities. OP Financial Group published its new sustainability programme in August 2022. The programme and its policy priorities implement OP Financial Group's strategy, guiding its sustainability and corporate responsibility actions. OP Financial Group's sustainability programme is built around three themes: Climate and the environment, People and communities and Corporate governance.

The programme is based on OP Financial Group's values, megatrends in the business environment and materiality assessment. The sustainability programme and its goals have been worked on together with different stakeholders. The Climate and environment section sets goals for the provision of sustainable financial and investment products,

the emission reductions of loan and investment portfolios as well as the promotion of biodiversity. The People and communities section focuses on the wellbeing of local communities and on supporting management of personal finances and financial literacy. Corporate governance involves integrating responsibility with all business and related risk-taking and a goal to enhance governance diversity.

OP Corporate Bank as part of OP Financial Group is committed to complying with the ten principles of the UN Global Compact initiative in the areas of human rights, labour rights, the environment and anti-corruption. OP has agreed to follow the UN Principles for Responsible Investment and the UN Principles of Sustainable Insurance. OP Financial Group is a Founding Signatory of the Principles for Responsible Banking under the United Nations Environment Programme Finance Initiative (UNEP FI).

OP Financial Group is committed to the international Partnership for Carbon Accounting Financials (PCAF), which aims to develop and implement a harmonised approach to assessing and disclosing greenhouse gas emissions associated with partners' loans and investments.

In its loan decisions, OP Corporate Bank considers the ESG themes and risks related to environmental, social and governance factors in accordance with the EBA (European Banking Authority) Guidelines on loan origination and monitoring. In the ESG analysis, customers are reviewed on a sector-specific basis in respect of the ESG themes.

OP Corporate Bank is committed to ensuring that its corporate loan portfolios are carbon neutral by 2050. OP Corporate Bank does not provide finance for new coal power plants or coal mines, or companies that plan to build them. Neither does OP Corporate Bank finance new corporate customers with financial dependence of over 5% on coal as an energy source, measured in net sales. The only exceptions are corporate customers committed to making the low-carbon economy transition, which present a concrete plan to withdraw from coal.

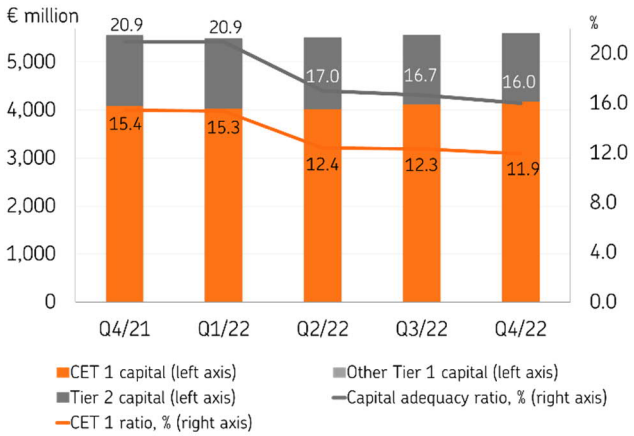
OP Corporate Bank has developed two products based on the international framework for sustainable finance: green loans and sustainability-linked loans. In green loans, corporate customers are committed to using the borrowed funds to promote specific projects. In sustainability-linked loans, corporate customers are committed to sustainability goals selected together when granting the loan. These targets affect the loan margin. At the end December, total exposures from these loans and facilities stood at EUR 5.2 billion (3.0).

In January 2022, OP Corporate Bank plc issued a green bond worth EUR 500 million in accordance with its updated Green Bond Framework. The green bond will support the green transition, and proceeds raised with it are allocated to sustainable corporate finance. Targeted at international institutional investors, the bond is OP Corporate Bank's second green bond and first senior non-preferred, unsecured green bond. The bond amounts to EUR 500 million and has a maturity of 5.5 years. Eligible sectors to be funded include renewable energy, green buildings and environmentally sustainable management of living natural resources and land use.

More detailed information on corporate responsibility at OP Corporate Bank is reported as part of OP Financial Group's sustainability reporting. A report of non-financial information for 2022 is published at Group level in OP Financial Group's Report by the Board of Directors, which will be published in week 10. Corporate responsibility reporting based on the GRI Standards is published at Group level in OP Financial Group's Annual Review 2022, which will be published in week 10. The reporting also includes a review based on the TCFD framework (Task-force on Climate related Financial Disclosures).

Capital adequacy

Capital base and capital adequacy



Capital adequacy for credit institutions

On 31 December 2022, OP Corporate Bank's CET1 ratio was 11.9% (15.4), which exceeds the minimum regulatory requirement by 3.3 percentage points. In the second quarter, the CET1 ratio decreased by 2.4 percentage points as a result of the adoption of the risk-weighted assets floor based on the Standardised Approach (SA floor).

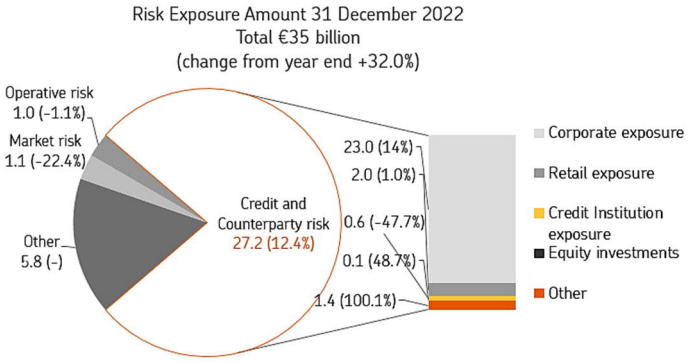
As a credit institution, the company's capital adequacy ratio is good compared to the statutory requirements and those set by the authorities. The statutory minimum for the capital adequacy ratio is 8% and for the CET1 ratio 4.5%; the AT1 minimum requirement of 1.5% increases the minimum CET1 ratio to 6%. The requirement for the capital conservation buffer of 2.5% under the Act on Credit Institutions increases the minimum capital adequacy ratio to 10.6% and the minimum CET1 ratio to 8.6%, including the shortfall of Additional Tier 1 (AT1) capital.

The CET1 capital totalled EUR 4.2 billion (4.1) on 31 December 2022. The financial performance for the financial year affected CET1 capital.
On 31 December 2022, the risk exposure amount (REA) totalled EUR 35.1 billion (26.6), or 32% higher than on 31 December 2021. The SA floor increased the total risk

exposure amount. OP Corporate Bank shifted to the Standardised Approach in its capital adequacy measurement for credit institution exposures and certain minor parts of corporate exposures during the third quarter. This change had no substantial effect on the CET1 ratio. OP Corporate Bank has previously applied the IRBA for such exposures.

OP Corporate Bank is part of OP Financial Group, whose capital adequacy is supervised in accordance with the Act on the Supervision of Financial and Insurance Conglomerates. As part of OP Financial Group, OP Corporate Bank plc is supervised by the ECB. OP Financial Group presents capital adequacy information in its financial statements bulletin and interim and half-year financial reports in accordance with the Act on the Amalgamation of Deposit Banks. OP Financial Group also publishes Pillar III disclosures.

The Finnish Financial Supervisory Authority (FIN-FSA) makes a macroprudential policy decision on a quarterly basis. In December 2022, the FIN-FSA reiterated its decision not to impose a countercyclical capital buffer requirement on banks. In its macroeconomic stability decision in December 2022, the FIN-FSA indicated imposing a systemic risk buffer in the first quarter of 2023. In June 2022, the FIN-FSA performed an annual review of banks' capital buffer requirements and decided to raise OP Financial Group's O-SII buffer by 0.5 percentage points to 1.5%, effective as of 1 January 2023. The O-SII buffer and the systemic risk buffer will not affect OP Corporate Bank's capital adequacy requirements.



On 30 September 2022, OP Financial Group filed an application with the European Central Bank (ECB) on the use of the Standardised Approach in capital adequacy calculation, instead of the internal models (IRBA) and the currently applied risk-weighted assets floor based on the Standardised Approach. Transfer to the Standardised Approach is estimated to have no essential effect on OP Corporate Bank's capital adequacy or risk exposure. According to OP Financial Group's assessment, the transfer will take place during the first quarter of 2023.

The changes in the EU Capital Requirements Regulation (CRR3), which implement the final elements of Basel III, are assessed to not have a substantial effect on the capital adequacy of OP Corporate Bank plc. The changes are expected to take effect in 2025.

Liabilities under the Resolution Act

Under regulation applied to crisis resolution of credit institutions and investment firms, the resolution authority is authorised to intervene in the terms and conditions of investment products issued by a bank in a way that affects an investor's position. The EU's Single Resolution Board (SRB) based in Brussels is OP Financial Group's resolution authority. The SRB has confirmed a resolution strategy for OP Financial Group whereby the resolution measures would focus on the OP amalgamation and on the new OP Corporate Bank that would be formed in the case of resolution.

On 21 February 2022, the resolution authority updated the Minimum Requirement for Own Funds and Eligible Liabilities (MREL) for OP Financial Group. The updated MREL is 25.8% of the risk-weighted assets (RWA) and 9.9% of the leverage ratio exposures (LRE).

As part of the MREL, the resolution authority has set a subordination requirement for OP Financial Group in accordance with the Single Resolution Mechanisms Regulation. The subordination requirement determines how much of the MREL must be met with own funds or with subordinated liabilities. From 2022, the subordination requirement supplementing the MREL is 22% of the total risk exposure amount and 9.9% of the leverage ratio exposures. From the beginning of 2024, the subordination requirement will be 24% of the total risk exposure amount and 9.9% of the leverage ratio exposures. The requirements include a combined buffer requirement (CBR) of 3.5%.

OP Financial Group's buffer for the MREL was EUR 9.0 billion and for the subordination requirement EUR 1.9 billion. The amount of senior non-preferred (SNP) bonds issued by OP Financial Group totalled EUR 4.4 billion. These bonds provide funds for the MREL subordination requirement.

Credit ratings

OP Corporate Bank plc's credit ratings on 31 December 2022

Rating agency	Short-term debt	Outlook	Long-term debt	Outlook
Standard & Poor's	A-1+	-	AA-	Stable
Moody's	P-1	Stable	Aa3	Stable

OP Corporate Bank plc has credit ratings affirmed by Standard & Poor's Global Ratings Europe Limited and Moody's Investors Service (Nordics) AB. When assessing the company's credit rating, credit rating agencies take account of the entire OP Financial Group's financial standing.

Risk profile

In its risk-taking, OP Corporate Bank emphasises moderation, responsibility and careful action. Risk-taking is directed and limited by means of principles and limits prepared by senior management and approved by OP Financial Group's management body.

OP Corporate Bank's success is based on the trust of customers and other stakeholders, on the adequacy of capital and liquidity, and on extensive data and knowledge of customers. Risk-taking is based on understanding matters affecting customers' future operations and success in the current business environment and in situations where the business environment is affected by an unexpected shock or change in trend.

OP Corporate Bank analyses the business environment as part of the ongoing strategy process. Megatrends and future visions behind the strategy reflect driving forces that affect the daily activities, conditions and future of OP Corporate Bank and its customers. Such factors currently shaping the business environment include sustainable development and responsibility (ESG), demographic change in the population, geopolitical factors, energy crisis in Europe, strongly accelerated inflation, exceptionally rapid increase in market interest rates and fast technological progress. For example, climate and environmental changes and other factors in the business environment are considered thoroughly so that their effects on the customers' future success are understood. By means of advice and business decisions, OP Corporate Bank encourages its customers in bolstering their sustainable and successful business of the future.

Unexpected external shocks from the economic environment may cause various direct and indirect effects on the prosperity of OP Corporate Bank's customers and on OP Corporate Bank's premises, IT infrastructure and personnel. If materialised, they may affect the risk profile, capitalisation, liquidity and the continuity of daily business in various ways. OP Corporate Bank assesses the effects of such potential shocks by means of scenario work.

Operational risks at Group level were well managed and no significant losses were caused by the materialised operational risks to OP Corporate Bank. For other risks, the risk profile is examined in greater detail for each business segment and the Group Functions segment. OP Corporate Bank's business segments include Corporate Banking and Capital Markets, Asset and Sales Finance Services and Payment Transfers as well as Baltics. Non-business segment operations are presented in the Group Functions segment.

Assessment of the effects of the war in Ukraine on OP Corporate Bank's risks

Russia's aggressive war in Ukraine may have an indirect effect on OP Corporate Bank's income and risks as a result of customers' changed business conditions, and a direct effect on the general situation in the financial market and obstruction of the technical infrastructure. The impacts may be realised, for example, in the following ways:

- higher impairment loss on receivables
- lower values of investment assets
- effects of extensive sanctions and counter sanctions on OP Corporate Bank or its customers' activities
- problems in the availability of wholesale funding and a rise in the wholesale funding price
- problems in business continuity as a result of cyber attacks towards OP Corporate Bank or its customers.

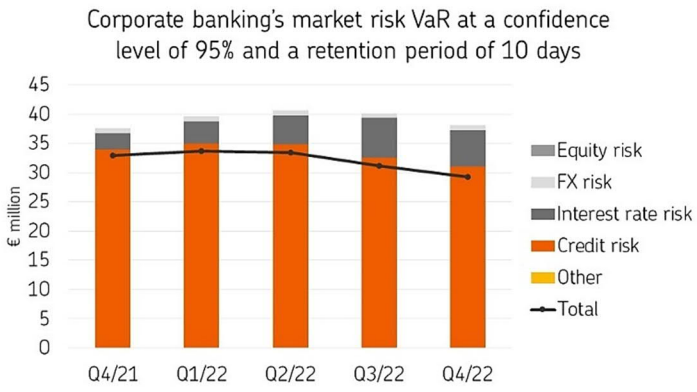
Business segments

Major risks in the business segments are associated with credit risk arising from customer business, and market risk.

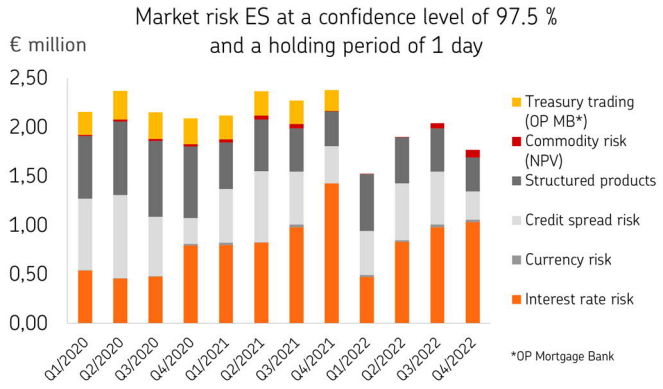
Credit risk exposure of the business segments remained stable, risk level remained moderate and the overall quality of the loan portfolio remained good, but there is a risk of negative developments. A rise in interest rates may have a negative effect on credit risk exposure.

OP Corporate Bank has no significant direct exposures to Russia. The impacts of the war in Ukraine on credit risk exposure mainly arise indirectly to corporate loans, especially due to changes in energy and raw material prices and individual customer relationships.

The market risk level of long-term investments decreased in the fourth quarter. No major changes were made to the asset class allocation during the financial year. The VaR, a measure of market risks, was EUR 29 million (33) on 31 December 2022. The VaR risk metric includes the liquidity buffer and long-term bond investments as well as derivatives that hedge their interest rate risks.



Market risks of the Markets function decreased slightly because changes were made to the open amount of credit spreads. This reflected in the decrease in Expected Shortfall (ES) and especially in the share of credit spread compared with the preceding quarter.



Interest rate risk in the banking book measured as the effect of a one-percentage-point increase on a 12-month net interest income was EUR 16 million (56) and as the effect of a one-percentage-point decrease EUR –16 million (59) on average in the year to December. Interest income risk is calculated for a one-year period by dividing the sum of the interest income risk for the next three years by three.

Non-performing and forborne exposures

	Performing forborne exposures (gross)		Non-performing exposures (gross)		Doubtful receivables (gross)		Loss allowance		Doubtful receivables (net)	
	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021	31 Dec 2022	31 Dec 2021
More than 90 days past due, € billion			69	178	69	178	44	92	25	86
Unlikely to be paid, € million			336	310	336	310	100	89	236	221
Forborne exposures, € million	144	186	163	139	308	324	59	85	249	239
Total, € million	144	186	568	627	713	812	203	266	510	546

Key ratios	31 Dec 2022	31 Dec 2021
Ratio of doubtful receivables to exposures, %	1.88	2.29
Ratio of non-performing exposures to exposures, %	1.50	1.77
Ratio of performing forborne exposures to exposures, %	0.38	0.52
Ratio of performing forborne exposures to doubtful receivables, %	20.3	22.9
Ratio of loss allowance (receivables from customers) to doubtful receivables, %	38.4	41.5

At the end of the fourth quarter, OP Corporate Bank plc had 7 (7) large customer exposures, totalling EUR 3.6 (3.5) billion. Large customer exposure refers to the amount of exposures of an individual group of connected clients which, after allowances and other techniques applied to mitigate credit risks, exceeds 10% of the capital base covering customer risk. Own funds covering customer exposure means Tier 1 capital under CRR II.

The Baltics segment exposures totalled EUR 4.2 billion (3.7), which accounted for 9.8% (9.3) of OP Corporate Bank's exposures.

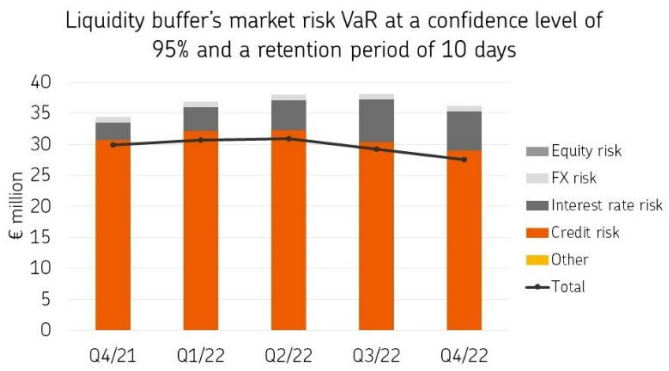
The distribution of loss allowance by sector is presented at Group level in OP Financial Group's financial statements bulletin and Report by the Board of Directors.

Group Functions

Major risks related to the Group Functions segment include credit and market risks associated with the liquidity buffer, and liquidity risks. The most significant market risk factor is the effect of credit spread changes on the value of notes and bonds included in the liquidity buffer.

OP Financial Group's and OP Corporate Bank plc's funding position and liquidity is strong.

The market risk of notes and bonds in the liquidity buffer (VaR with 95% confidence) decreased during the financial year. No major changes occurred in the asset class allocation. The VaR risk metric that measures market risk associated with the liquidity buffer was EUR 27 million (30) on 31 December 2022. The VaR risk metric includes the long-term bond investments within the liquidity buffer and the derivative contracts that hedge their interest rate risks.



OP Financial Group secures its liquidity through a liquidity buffer maintained by OP Corporate Bank and consisting mainly of deposits with central banks and receivables eligible

as collateral for central bank refinancing. The liquidity buffer is sufficient to cover the need for short-term funding for known and predictable payment flows and in a liquidity stress scenario.

OP Financial Group monitors its liquidity and the adequacy of its liquidity buffer using, for example, the LCR (Liquidity Coverage Ratio). According to regulation, the LCR must be at least 100%. OP Financial Group's LCR was 217% (212) at the end of the financial year.

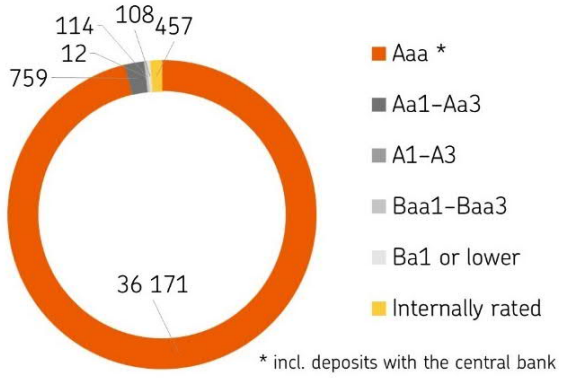
OP Financial Group monitors its long-term funding sufficiency, for example, by means of the Net Stable Funding Ratio (NSFR), which measures structural funding risk. According to regulation, the NSFR must be at least 100%. OP Financial Group's NSFR was 128% (130) at the end of the financial year.

Liquidity buffer

€ billion	31 Dec 2022	31 Dec 2021	Change, %
Deposits with central banks	34.8	32.6	6.7
Notes and bonds eligible as collateral	2.1	4.0	-48.2
Total	36.9	36.7	0.7
Receivables ineligible as collateral	0.7	1.0	-27.0
Liquidity buffer at market value	37.6	37.6	-0.1
Collateral haircut	-0.2	-0.3	
Liquidity buffer at collateral value	37.4	37.3	0.3

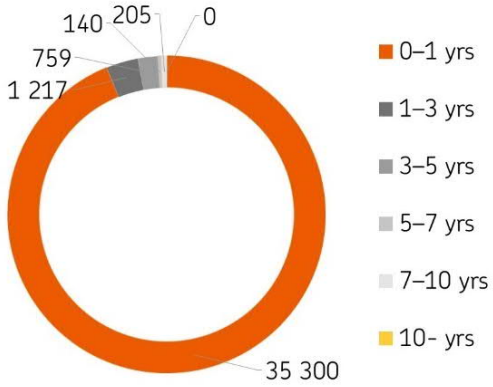
The liquidity buffer comprises notes, bonds and securitised assets issued by governments, municipalities, financial institutions and companies all showing good credit ratings. During the financial year, corporate loans became ineligible as collateral for central banks. This reduced the collateral value of the liquidity buffer by EUR 4.0 billion.

Financial assets included in the liquidity buffer by credit rating on 31 December 2022, € million



* incl. deposits with the central bank

Financial assets included in the liquidity buffer by maturity on 31 December 2022, € million



For OP Corporate Bank plc acting as OP Financial Group's central financial institution, OP cooperative banks and OP Cooperative with its subsidiaries form a significant customer group. Exposures of OP Financial Group entities represented 19.9% of OP Corporate Bank plc's exposures. These exposures increased by EUR 1,819 million during the financial year. All exposures of OP cooperative banks and OP Cooperative are investment-grade exposures.

Financial performance by segment

OP Corporate Bank's business segments include Corporate Banking and Capital Markets, Asset and Sales Finance Services and Payment Transfers as well as Baltics. Non-business segment operations are presented in the Group Functions segment (formerly the Other Operations segment). OP Corporate Bank plc prepares its segment reporting in compliance with its accounting policies.

Corporate Banking and Capital Markets

- Earnings before tax decreased to EUR 186 million (261).
- Total income decreased by 25.5% to EUR 313 million (420). Net interest income increased by 5.6% to EUR 225 million (213). Net investment income decreased to EUR 130 million (167). Value changes in Credit Valuation Adjustment (CVA) in derivatives owing to market changes improved earnings by EUR 4 million (15).
- Total expenses increased by 3.8% to EUR 126 million (121). The stability contribution increased by EUR 4 million.
- The loan portfolio grew in the financial year by 6.2% to EUR 16.2 billion (15.2).
- Impairment loss on receivables totalled EUR 1 million (38).

Key figures and ratios

€ million	Q1–4/2022	Q1–4/2021	Change, %
Net interest income	225	213	5.6
Net commissions and fees	-49	-31	-
Net investment income	130	167	-22.5
Other operating income	7	70	-90.0
Total income	313	420	-25.5
Personnel costs	36	36	2.1
Depreciation/amortisation and impairment loss	5	7	-33.9
Other operating expenses	85	78	8.2
Total expenses	126	121	3.8
Impairment loss on receivables	-1	-38	-
Earnings before tax	186	261	-28.7
Cost/income ratio, %	40.2	28.9	-11.4*
Return on assets (ROA), %	0.69	1.29	-0.60*
Return on assets, excluding OP bonuses, %	0.69	1.29	-0.60*
	31 Dec 2022	30 Sep 2021	Change, %
Loan portfolio, € billion	16.2	15.2	6.2

*Change in ratio

The Corporate Banking and Capital Markets business segment provides corporate and institutional customers with financing and liquidity management services. The services also range from the arrangement of debt issues, equity, foreign exchange, bond, money market and derivative products and structured investment products to investment research. In addition to its own clients, the segment provides capital market products and services to corporate and personal clients through OP cooperative banks.

Investments by Corporate Banking in promoting a sustainable economy increased the commitment portfolio of sustainable finance to EUR 5.1 billion (3.0). The number of sustainability-linked loans increased during the financial year, showing a major increase year on year. Corporate Banking has also strengthened its role as a sustainable finance advisor in the preparation work of sustainable finance frameworks for its customers.

The number of clients making currency hedges, and volumes on a per client basis have increased as a result of inflation that has remained high, geopolitical risks and the uncertain economic situation.

OP Corporate Bank has reacted to the changed market environment by offering capital-guaranteed and interest rate-linked structured products on a broad front. Demand for these products has increased significantly.

OP Corporate Bank's direct exposures to Russia are small. Russia's aggressive war in Ukraine indirectly increased impairment loss on receivables in the first quarter.

Financial performance for the financial year

The segment earnings before tax were EUR 186 million (261). Total income fell by 25.5%. Total expenses increased by 3.8%. The cost/income ratio weakened to 40.2% (28.9) year on year, due to reduced income.

Net interest income increased by 5.6% to EUR 225 million (213). The segment's loan portfolio increased by 6.2% during the financial year, amounting to EUR 16.2 billion (15.2). Net commissions and fees decreased to EUR –49 million (–31), as OP Financial Group's internal commission expenses increased.

A significant increase in interest rates and a greater market uncertainty lowered net investment income. Total income decreased to EUR 130 million (167). The end of 2022 saw a change in the operating model applied to hedging interest rate risk associated with derivative contracts between OP Corporate Bank and OP Financial Group member cooperative banks. Following the change, the variation in the result of value changes due to market movements of derivative contracts between OP Corporate Bank and OP cooperative banks will decrease at OP Corporate Bank.

Other operating income decreased to EUR 7 million (70). A year ago, other operating income was increased by the additional margin under TLTRO III funding and the capital gain on the sale of OP Custody Ltd.

Total expenses were EUR 126 million (121). Personnel costs rose by 2.1% to EUR 36 million. Other operating expenses increased by 8.2% to EUR 85 million (78) as a result of a higher stability contribution paid to the Single Resolution Fund financed by the euro-area banks. The stability contribution increased by EUR 4 million to EUR 18 million.

Impairment loss on receivables totalled EUR 1 million (38). The repayments of non-performing exposures reduced impairment loss during the financial year.

Asset and Sales Finance Services and Payment Transfers

- Earnings before tax increased to EUR 138 million (90).
- Total income increased by 10.8% to EUR 256 million (231). Net interest income increased by 17.9% to EUR 183 million (155).
- Total expenses increased to EUR 105 million (104).
- The loan portfolio grew by 8.2% in the financial year, to EUR 8.7 billion (8.0). The deposit portfolio decreased by 14.8% to EUR 12.7 billion (14.9).
- Impairment loss on receivables totalled EUR 12 million (37).
- The most significant development investments involved the development of payment systems.

Key figures and ratios

€ million	Q1–4/2022	Q1–4/2021	Change, %
Net interest income	183	155	17.9
Net commissions and fees	63	58	7.9
Net investment income	0	0	-99.9
Other operating income	10	18	-43.3
Total income	256	231	10.8
Personnel costs	27	26	1.8
Depreciation/amortisation and impairment loss	1	2	-39.5
Other operating expenses	78	76	2.7
Total expenses	105	104	1.8
Impairment loss on receivables	-12	-37	-
Earnings before tax	138	90	53.8
Cost/income ratio, %	41.2	44.9	3.7*
Return on assets (ROA), %	1.23	1.10	0.13*
Return on assets, excluding OP bonuses, %	1.23	1.10	0.13*
	31 Dec 2022	31 Dec 2021	Change, %
Loan portfolio, € billion	8.7	8.0	8.2
Deposits, € billion	12.7	14.9	14.8

*Change in ratio

The Asset and Sales Finance Services and Payment Transfers business segment provides consumers and companies with customer financing services, payment and liquidity management services, financing services for foreign trade and leasing and factoring services.

The most significant development investments of the business segment involved the upgrades of core payment systems. In addition, digital transaction services were updated and improved.

The loan portfolio grew by 8.2% in the financial year, to EUR 8.7 billion. The deposit portfolio decreased by 14.8% to EUR 12.7 billion. The decrease is explained by a fall in deposits made by OP Financial Group companies with OP Corporate Bank and the general market developments. Demand for financing services has remained quite brisk, but challenges in supply chains have made customers postpone their fixed investments and the implementation of projects.

At the end of 2022, OP Corporate Bank was the market leader in finance for passenger cars and vans. Direct exposures of the Asset and Sales Finance and Payment Transfers segment to Russia are small and limited to the trade finance business.

Financial performance for the financial year

The segment earnings before tax were EUR 138 million (90). Total income increased by 10.8%. Total expenses increased by 1.8%. The cost/income ratio improved to 41.2% (44.9) year on year.

Net interest income grew by 17.9% to EUR 183 million. Net interest income was increased by growth not only in net interest income from the deposit business but also in the loan portfolio of the asset and sales finance solutions. Net commissions and fees increased to EUR 63 million (58). Other operating income of EUR 10 million (18) decreased on a year earlier. Impairment loss on receivables totalled EUR 12 million (37).

Total expenses were EUR 105 million (104). Personnel costs rose by 1.8% to EUR 27 million. Other operating expenses increased by 2.7% to EUR 78 million.

Baltics

- Earnings before tax increased to EUR 24 million (20).
- Total income increased to EUR 59 million (42). Net interest income rose to EUR 49 million (33).
- Total expenses increased to EUR 29 million (22). The stability contribution represented EUR 1 million of the increase.
- The loan portfolio grew in the financial year to EUR 2.9 billion (2.4).
- Impairment loss on receivables totalled EUR 6 million (0).
- The most significant development investments focused on the development of the payment transfer system.

Key figures and ratios

€ million	Q1–4/2022	Q1–4/2021	Change, %
Net interest income	49	33	48.4
Net commissions and fees	10	9	11.7
Net investment income	0	0	-
Other operating income	0	0	-
Total income	59	42	39.5
Personnel costs	8	6	30.6
Depreciation/amortisation and impairment loss	2	2	-3.3
Other operating expenses	19	14	35.1
Total expenses	29	22	30.5
Impairment loss on receivables	-6	0	-
Earnings before tax	24	20	18.9
Cost/income ratio, %	49.4	52.8	3.4*
Return on assets (ROA), %	0.74	0.71	0.03*
Return on assets, excluding OP bonuses, %	0.74	0.71	0.03*
	31 Dec 2022	31 Dec 2021	Change, %
Loan portfolio, € billion	2.9	2.4	22.2
Deposits, € billion	1.5	0.7	120.8

The Baltic subsidiaries of OP Corporate Bank merged into OP Corporate Bank in October 2021, which affects the comparability of the figures and ratios.
*Change in ratio

With its local expertise, the Baltics segment provides corporate and institutional customers with financing and liquidity management services and financing services for foreign trade. OP Corporate Bank plc has branches in Estonia, Latvia and Lithuania.

The segment's loan portfolio grew by 22.2% in the financial year, to EUR 2.9 billion (2.4). The deposit portfolio increased by 120.8% to EUR 1.5 billion (0.7).

The direct exposures of the Baltics segment to Russia are small. The segment has enhanced the monitoring of customers' credit risk exposure after Russia attacked on Ukraine.

The most significant development investments in 2022 especially focused on improving the payment transfer system and developing the related express transfers, in particular.

Financial performance for the financial year

The Baltic subsidiaries of OP Corporate Bank merged into OP Corporate Bank in October 2021, which affects the comparability of the figures and ratios.

The segment earnings before tax were EUR 24 million (20). Total income increased by 39.5%. Total expenses increased by 30.5%. The cost/income ratio improved to 49.4% (52.8) year on year.

Net interest income rose to EUR 49 million (33). The loan portfolio grew to EUR 2.9 billion (2.4) and the deposit portfolio to EUR 1.5 billion (0.7) in the year to December. Net commissions and fees increased to EUR 10 million (9).

Impairment loss on receivables reduced earnings by EUR 6 million (0).

Total expenses were EUR 29 million (22). Personnel costs rose by 30.6% to EUR 8 million. Other operating expenses increased by 35.1% to EUR 19 million (14). The stability contribution increased by EUR 1 million to EUR 4 million.

Group Functions

- Earnings before tax totalled EUR –83 million (–105).
- The financial position and liquidity remained strong.

Key figures and ratios

€ million	Q1–4/2022	Q1–4/2021	Change, %
Net interest income	-61	11	-
Net commissions and fees	-5	-5	-
Net investment income	-12	1	-
Other operating income	24	19	22.0
Total income	-54	27	-
Personnel costs	5	4	7.6
Other expenses	25	127	-80.7
Total expenses	29	132	-77.8
Impairment loss on receivables	0	0	0
Earnings before tax	-83	-105	-
Receivables and liabilities from/to the amalgamation's central cooperative and member credit institutions, net position, € billion	-16.1	-13.1	-

Functions supporting OP Financial Group, such as Group Treasury, are centralised within Group Functions. Group Treasury is responsible for the management of the funding and liquidity of member credit institutions and the central cooperative consolidated. It is also in charge of OP Financial Group's wholesale funding together with OP Mortgage Bank. Operating income derives mainly from net interest income and net investment income. The most significant risk categories are market risks and credit risk. In addition, income, expenses, investments and capital which have not been allocated to the business segments are reported under Group Functions.

Financial performance for the financial year

The Group Functions segment's earnings before tax amounted to EUR –83 million (–105). Earnings before tax at fair value were EUR –147 million (–86).

Net interest income was EUR –61 million (11). A year ago, the increase was especially explained by the recognition in profit or loss of an additional benefit from the interest rate margin of the TLTRO III funding offered by the European Central Bank to banks. The effect of items related to TLTRO III funding and its hedging amounted to EUR –10 million (103) during the financial year. The elimination of the costs of matured subordinated loans has a positive effect on net interest income.

Net investment income totalled EUR –12 million (1). Net investment income included EUR 9 million (3) in capital gains on notes and bonds. Net investment income was reduced especially by the result of derivatives used to hedge against interest rate risk. The release of TLTRO III funding hedging weakened net investment income by EUR 9 million.

Compared with the corresponding period a year ago, other expenses for the financial year were decreased by a reduction in the margin exceeding the ECB deposit facility rate in TLTRO funding that is transferred within OP Financial Group, to one million euro (106).

At the end of December, the average margin of senior and senior non-preferred wholesale funding was 36 basis points (34). In 2022, the price of wholesale funding rose, as credit spreads increased due to changes in the business environment.

OP Corporate Bank's TLTRO III funding totalled EUR 12.0 billion at the end of December. The interest rate for TLTRO III funding for each loan between 23 June 2022 and 22 November 2022 is the average of the ECB's deposit facility rate between the start date of the loan concerned and 22 November 2022 and after that the ECB's deposit facility rate.

In January, OP Corporate Bank issued a green senior non-preferred bond worth EUR 500 million with a maturity of 5.5 years. Between May and June, OP Corporate Bank issued a senior bond worth EUR 800 million with a maturity of two years when taking account of tap issues, and issued in June a senior bond worth GBP 350 million with a maturity of 3.5 years. OP Corporate Bank issued a senior bond of EUR 1.25 billion with a maturity of 3.25 years in September and a senior bond of EUR 500 million with a maturity of 4.5 years in October.

Between January and December, OP Corporate Bank issued long-term bonds worth EUR 4.8 billion (3.1).

On 31 December 2022, investments by the amalgamation's central cooperative and the member credit institutions in OP Corporate Bank were EUR 16.1 (13.1) billion higher than funding borrowed by them from Group Treasury. This amount was increased by growth in deposits made by member credit institutions with OP Corporate Bank.

OP Financial Group's and OP Corporate Bank plc's funding position and liquidity is strong.

ICT investments

OP Corporate Bank invests in developing its operations and improving customer experience on an ongoing basis. ICT investments make up a significant portion of the costs of developing these services.

ICT costs of OP Corporate Bank's development and production maintenance totalled EUR 92 million (92). The development costs include licence fees, purchased services, other external costs related to projects and inhouse work. Development costs totalled EUR 19 million (17). Development costs have not been capitalised.

More detailed information on OP Corporate Bank's investments can be found under each business segment's text section in this Report by the Board of Directors.

Personnel and remuneration

On 31 December 2022, OP Corporate Bank plc had 820 employees (767).

Personnel at period end

	31 Dec 2022	31 Dec 2021
Corporate Banking and Capital Markets	304	290
Asset and Sales Finance Services and Payment Transfers	342	312
Baltics	133	125
Group Functions	41	40
Total	820	767

Variable remuneration applied by OP Financial Group and OP Corporate Bank in 2022 consists of the performance-based bonus scheme covering all personnel, and the personnel fund. Company-specific targets based on the annual plan and the Group-level strategic targets are taken into account in the metrics used in the performance-based bonus scheme and the personnel fund. In drawing up the remuneration schemes, OP has taken account of the regulation regarding the financial sector's remuneration schemes.

Corporate governance and management

OP Corporate Bank plc's management system is based on business segments. Management of OP Corporate Bank is part of OP Financial Group's management system.

On 2 March 2022, the Annual General Meeting (AGM) of OP Corporate Bank plc elected OP Financial Group's President and Group Chief Executive Officer Timo Ritakallio as Chair of OP Corporate Bank's Board of Directors. As other Board members, the AGM elected OP Financial Group's Chief Financial Officer Mikko Timonen, OP Turun Seutu Managing Director Petri Rinne, OP Keski-Suomi Managing Director Pasi Sorri and Jarmo Viitanen who acted as Helsinki Area Cooperative Bank's Managing Director until 31 July 2022. Helsinki Area Cooperative Bank merged into Uudenmaan Osuuspankki on 31 July 2022. Jarmo Viitanen sat on the Board until 31 December 2022.

Upon decision by OP Cooperative, OP Corporate Bank's shareholder, the following persons were appointed to the Board of Directors of OP Corporate Bank plc as of 1 January 2023: Olli Lehtilä, Managing Director of Uudenmaan Osuuspankki (M.Sc. (Agr. & For.), eMBA), and Tiia Tuovinen, Chief Legal Officer (CLO) and Group General Counsel (LL.M., LL.M.Eur.).

The AGM re-elected KPMG Oy Ab, an audit firm, to act as OP Corporate Bank's auditor for the financial year 2022, with Juha-Pekka Mylén, APA, acting as the chief auditor, appointed by KPMG Oy Ab.

Katja Keitaanniemi, Lic.Sc. (Tech.), Executive Vice President of OP Financial Group's Banking Corporate and Institutional Customers, has acted as OP Corporate Bank plc's CEO since 6 August 2018. Jari Jaulimo, LL.M., Trained on the bench, MBA, Head of Transaction Banking, has acted as deputy to the CEO since 1 August 2020.

Joint and several liability

OP Corporate Bank plc is a member of the central cooperative (OP Cooperative) of an amalgamation, as referred to in the Act on the Amalgamation of Deposit Banks, and belongs to said amalgamation.

The amalgamation is formed by OP Corporate Bank, OP Cooperative as the central cooperative of the amalgamation, other companies belonging to the central cooperative's consolidation group, the central cooperative's member credit institutions and companies belonging to their consolidation groups, and credit institutions, financial institutions and service companies in which the abovementioned institutions jointly hold more than half of the voting rights.

The member credit institutions within the amalgamation (108 OP cooperative banks, OP Corporate Bank plc, OP Mortgage Bank and OP Retail Customers plc) and the central cooperative are jointly and severally liable for each other's debts. A creditor who has not received payment of an overdue amount (principal debt) from a member credit institution may demand payment from the central cooperative when the principal debt falls due. In such a case, the central cooperative must produce a statement referred to in said Act, showing the amount of liability apportioned to each member credit institution. This liability between the credit institutions is determined in proportion to the total assets shown in their most recently adopted balance sheets.

The member credit institutions, including OP Corporate Bank plc, are obliged to participate in any necessary support measures aimed at preventing another member credit institution from going into liquidation, and to pay a debt for

another member credit institution as referred to in section 5 of the Act on the Amalgamation of Deposit Banks.

Furthermore, upon default of the central cooperative, a member credit institution shall have unlimited refinancing liability for the central cooperative's debts as laid down in the Co-operatives Act.

The central cooperative supervises its member credit institutions as specified in the Act on the Amalgamation of Deposit Banks, confirms the operating principles referred to in section 5 of said Act with which it must comply, and issues instructions to the member credit institutions on capital adequacy and risk management, good corporate governance and internal control to secure liquidity and capital adequacy, as well as instructions on compliance with uniform accounting policies in the preparation of the amalgamation's consolidated financial statements.

Protection afforded by the Deposit Guarantee Fund and the Investors' Compensation Fund

OP Corporate Bank plc belongs to the Deposit Guarantee Fund and to the Investors' Compensation Fund.

Under the law governing the Deposit Guarantee Fund, deposit banks as members of the amalgamation of cooperative banks (including OP Corporate Bank plc) are regarded as a single bank with respect to deposit guarantee. The Deposit Guarantee Fund reimburses a maximum total of EUR 100,000 to an individual account holder who has receivables from deposit banks belonging to the amalgamation of cooperative banks.

Under the law governing the Investors' Compensation Fund, the amalgamation of cooperative banks is considered to constitute a single credit institution in respect of investors' compensation. An investor's receivables are compensated up to a total maximum of EUR 20,000. The Fund does not cover losses incurred due to changes in the prices of securities or to wrong investment decisions. The Fund safeguards only retail investors' claims.

Deposit guarantee is the responsibility of the Financial Stability Authority operating under the Ministry of Finance.

Proposal by the Board of Directors for profit distribution

As shown in the financial statements of 31 December 2022, the company's distributable funds, which include EUR 210,882,275.47 in profit for the financial year and taxation-based provisions of EUR 1,300,008,870.48 recognised in 2021 transition to IFRS-based financial statements, totalled EUR 2,943,922,131.76.
The company's distributable funds totalled EUR 3,275,302,968.82.

The Board of Directors proposes that no dividend be distributed and that the profit for the financial year 2022 is entered in the account of retained earnings/loss.

The company's financial position has not undergone any material changes since the end of the financial year 2022. The company has good liquidity.

Outlook for 2023

Economic growth slowed down in the course of 2022 and economic surveys suggest that economic development is still likely to deteriorate. Last year, business profitability remained good and the employment situation was strong. High inflation eroded the purchasing power among households and higher interest rates and greater uncertainty cut down on home sales.

The economy is expected to sink into a moderate recession, inflation to decrease slowly while short-term interest rates are predicted to rise further. The economic outlook remains surrounded by an exceptional degree of uncertainty. In addition to economic factors, the price and availability of energy and developments in global markets together with the geopolitical situation may abruptly affect the economic outlook.

Full-year earnings estimates for 2023 will only be provided at the OP Financial Group level, in its financial statements bulletin and interim and half-year financial reports.

The most significant uncertainties affecting earnings performance due to the war in Ukraine and inflation relate to changes in the interest rate and investment environment and to the developments in impairment loss on receivables. In addition, future earnings performance will be affected by the market growth rate and the change in the competitive situation.

All forward-looking statements in this Report by the Board of Directors expressing the management's expectations, beliefs, estimates, forecasts, projections and assumptions are based on the current view of the future development in the business environment and the future financial performance of OP Corporate Bank plc and its various functions, and actual results may differ materially from those expressed in the forward-looking statements.

Key income statement and balance sheet items

Key income statement items, € million	2020	2021	2022
Net interest income	322	412	396
Net commissions and fees	23	31	19
Net investment income	150	168	117
Other income	29	49	32
Personnel costs	62	72	76
Other expenses	177	248	205
Impairment loss on receivables	-53	-74	-18
OP bonuses to owner-customers	-2	-	-
Earnings before tax	**228**	**267**	**265**
Key balance sheet items – assets, € million			
Cash and cash equivalents	21,764	32,789	34,951
Receivables from credit institutions	11,248	13,419	12,978
Derivative contracts	5,352	3,712	5,782
Receivables from customers	24,461	26,236	28,178
Investment assets	15,834	17,373	16,404
Property, plant and equipment, and intangible assets	28	17	8
Other items	1,121	1,274	1,132
Total assets	**79,809**	**94,820**	**99,433**
Key balance sheet items – liabilities and equity, € million			
Liabilities to credit institutions	28,888	42,660	40,899
Derivative contracts	4,274	2,669	5,739
Liabilities to customers	16,403	18,357	19,014
Debt securities issued to the public	21,931	22,630	25,209
Other liabilities	4,293	4,208	4,208
Equity capital	4,020	4,296	4,364
Total liabilities and shareholders' equity	**79,809**	**94,820**	**99,433**

Earnings by quarter

€ million	Q1/ 2022	Q2/ 2022	Q3/ 2022	Q4/ 2022	Q1–4/ 2022	Q1–4/ 2021
Net interest income	94	87	135	81	396	412
Net commissions and fees	3	5	5	6	19	31
Net investment income	7	6	-1	105	117	168
Other operating income	12	7	7	7	32	49
Total income	**116**	**104**	**146**	**198**	**564**	**661**
Personnel costs	18	20	16	22	76	72
Depreciation/amortisation and impairment loss	3	3	2	2	9	12
Other operating expenses	70	39	39	48	196	236
Total expenses	**91**	**62**	**56**	**72**	**281**	**320**
Impairment loss on receivables	-42	2	24	-2	-18	-74
Earnings before tax	**-17**	**45**	**114**	**124**	**265**	**267**
Income tax	-3	8	23	27	54	52
Profit for the financial year	**-14**	**37**	**91**	**97**	**211**	**215**

Financial indicators

	2020	2021	2022
Return on equity (ROE), %	4.7	5.2	4.9
Return on equity at fair value (ROE), %	4.6	5.5	3.2
Return on assets (ROA), %	0.3	0.2	0.2
Equity ratio, %	5.0	4.5	4.4
Cost/income ratio, %	45.8	48.5	49.8
Average personnel	734	758	824
Share-related figures and ratios			
Equity per share, €	12.58	13.44	13.66
Dividend per share, €*	-	0.25	-
Dividend payout ratio, %*	-	37.23	-
Number of shares, financial year end	319 551 415	319 551 415	319 551 415

* Board proposal 2022
OP Cooperative holds all shares of OP Corporate Bank plc. The number of shares did not change during the financial year.

Formulas for key figures and ratios

The Alternative Performance Measures are presented to illustrate the financial performance of business operations and to improve comparability between financial years. The formulas for the used Alternative Performance Measures are presented below.

Alternative Performance Measures

Key figure or ratio	Formula	Description
Return on equity (ROE), %	Profit for the financial year / Equity (average at beginning and end of period) x 100	The ratio describes how much return is generated on equity capital as a percentage of equity during the financial year.
Return on equity (ROE) at fair value, %	Total comprehensive income for financial year / Equity (average at beginning and end of period) x 100	The ratio describes how much return (as shown in comprehensive income) is generated on equity capital as a percentage of equity during the financial year
Return on assets (ROA), %	Profit for the financial year / Average balance sheet total (average at beginning and end of financial year) x 100	The ratio describes how much return is generated on capital tied up on business during the financial year.
Equity ratio, %	Equity capital / Balance sheet total x 100	The ratio describes what proportion of the company's assets is equity capital.
Equity per share	Equity capital / Share-issue adjusted number of shares on the balance sheet date	The ratio describes shareholders' equity per share.
Dividend per share	Dividends paid for the financial year / Share-issue adjusted number of shares on the balance sheet date x 100	Dividend per share describes the ratio of dividend to each share.
Dividend payout ratio, %	Dividend per share / Earnings per share x 100	The dividend payout ratio describes the proportion of dividend to earnings for the financial year
Cost/income ratio, %	Total expenses / Total income x 100	The ratio describes the ratio of expenses to income. The lower that ratio, the better.
Loan portfolio	Balance sheet item Receivables from customers	The loan portfolio is presented under Receivables from customers in the balance sheet.
Ratio of impairment loss on receivables to loan and guarantee portfolio, %	Impairment loss on receivables / Loan and guarantee portfolio at end of financial year x 100	
Deposits	Deposits included in balance sheet item Liabilities to customers	Deposits are presented in Liabilities to customers in the balance sheet.
Coverage ratio, %	Loss allowance / Receivables from customers (on-balance-sheet and off-balance-sheet items) x 100	The ratio describes how much the amount of expected losses covers the amount of the liability.

Default capture rate, %	New defaulted contracts at Stage 2 a year ago / New defaulted contracts during the financial year x 100	The ratio describes the effectiveness of the SICR model (significant increase in credit risk), in other words how many contracts were in stage 2 before moving to stage 3.

Key indicators based on a separate calculation

Capital adequacy ratio, %	Total capital / Total risk exposure amount x 100	The ratio describes a credit institution's capital adequacy and shows the ratio of total capital to the total risk exposure amount.
Tier 1 ratio, %	Tier 1 capital / Total risk exposure amount x 100	The ratio describes a credit institution's capital adequacy and shows the ratio of Tier 1 capital to the total risk exposure amount.
CET1 ratio, %	CET1 capital / Total risk exposure amount x 100	The ratio describes a credit institution's capital adequacy and shows the ratio of CET1 capital to the total risk exposure amount.
Leverage ratio, %	Tier 1 capital (T1) / Exposure amount x 100	The ratio describes a credit institution's indebtedness and shows the ratio of Tier 1 capital to the total risk exposure amount.
Liquidity coverage requirement (LCR), %	Liquid assets / Liquidity outflows – liquidity inflows under stressed conditions x 100	The ratio describes short-term funding liquidity risk that requires the bank to have sufficient, high-quality liquid assets to get through an acute 30-day stress scenario.
Net stable funding ratio (NSFR), %	Available stable funding / Required stable funding x 100	The ratio describes a long-term liquidity risk that requires the bank to have a sufficient amount of stable funding sources in relation to items requiring stable funding sources. The objective is to secure the sustainable maturity structure of assets and liabilities applying a 12-month time horizon and to restrict excessive resort to short-term wholesale funding.
Ratio of non-performing exposures to exposures, %	Non-performing receivables (gross) / Exposures at end of financial year x 100	The ratio describes the ratio of customers with severe payment difficulties to the entire exposure portfolio. Non-performing exposures refer to receivables that are more than 90 days past due and other receivables classified as risky as well as forborne exposures related to such receivables due to the customer's financial difficulties. Forbearance measures consist of concessions agreed at the customers' initiative to the original repayment plan to make it easier for them to manage through temporary payment difficulties. Non-performing exposures are presented in gross terms; expected credit losses have not been deducted from them.

Ratio of doubtful receivables to exposures, %	Doubtful receivables (gross) / Exposures at end of financial year x 100	The ratio describes the ratio of customers with payment difficulties to the entire exposure portfolio. Doubtful receivables refer to receivables that are more than 90 days past due and other receivables classified as risky as well as forbearance related to such receivables or to performing receivables due to the customer's financial difficulties. Forbearance measures consist of concessions agreed at the customers' initiative to the original repayment plan to make it easier for them to manage through temporary payment difficulties. In addition to non-performing forborne exposures, doubtful receivables include non-performing exposures reclassified as performing ones during their probation period or forbearance measures made into a performing agreement. Loan modifications due to reasons other than the customer's financial difficulties are not classified as doubtful receivables. Doubtful receivables are presented in gross terms; expected credit losses have not been deducted from them.
Ratio of performing forborne exposures to exposures, %	Performing forborne exposures (gross) / Exposures at end of financial year x 100	The ratio describes the ratio of forborne exposures to the entire exposure portfolio. Performing forborne exposures include forborne exposures reclassified as performing ones during their probation period or forbearance measures made into a performing agreement. Loan modifications due to reasons other than the customer's financial difficulties are not classified as forborne exposures.
Ratio of performing forborne exposures to doubtful receivables, %	Performing forborne exposures (gross) / Doubtful receivables at end of financial year x 100	The ratio describes the ratio of performing forborne exposures to doubtful receivables that include not only performing forborne exposures but also non-performing exposures. Performing forborne exposures include forborne exposures reclassified as performing ones during their probation period or forbearance measures made into a performing agreement. Loan modifications due to reasons other than the customer's financial difficulties are not classified as forborne exposures.
Ratio of loss allowance (receivables from customers) to doubtful receivables, %	Loss allowance for receivables from customers in the balance sheet / Doubtful receivables at end of financial year x 100	The ratio describes the ratio of expected losses to all doubtful receivables. Doubtful receivables include non-performing exposures and performing forborne exposures.
Loan and guarantee portfolio	Loan portfolio + guarantee portfolio	The indicator describes the total amount of loans and guarantees given.
Exposures	Loan and guarantee portfolio + interest receivables + unused standby credit facilities	The sum of the loan and guarantee portfolio, interest receivables and unused standby credit facilities (undrawn loans and limits) is used as the basis for proportioning doubtful receivables and non-performing exposures.
Other exposures	Interest receivables + unused standby credit facilities	In addition to the loan and guarantee portfolio, exposures come from interest receivables and unused standby credit facilities (undrawn loans and limits).

Capital adequacy

Capital adequacy for credit institutions

Capital base, € million	31 Dec 2022	31 Dec 2021
OP Corporate Bank plc's equity	4,364	4,296
Fair value reserve, cash flow hedge	26	1
Common Equity Tier 1 (CET1) before deductions	4,390	4,297
Intangible assets	-3	-12
Excess funding of pension liability and valuation adjustments	-75	-35
Planned profit distribution		-80
Shortfall of ECL minus expected losses	-125	-72
Insufficient coverage for non-performing exposures	-3	-1
CET1 capital	4,184	4,098
Tier 1 capital (T1)	4,184	4 098
Debenture loans	1,308	1,308
Debentures to which transitional provision applies	91	141
Excess of ECL minus expected losses	25	16
Tier 2 capital (T2)	1,424	1,464
Total capital	5,608	5,562

Risk exposure amount, € million	31 Dec 2022	31 Dec 2021
Credit and counterparty risk	26,861	23,853
Standardised Approach (SA)	6,070	3,118
Central government and central banks exposure	91	40
Credit institution exposure	627	5
Corporate exposure	4,616	2,966
Retail exposure	45	52
Mortgage-backed exposure	99	
Defaulted exposure	16	16
Covered bonds	540	
Receivables to which a short-term credit rating can be applied	0	
Equity investments	0	
Other	34	39
Internal Ratings-based Approach (IRB)	20,791	20,735
Credit institution exposure		1,194
Corporate exposure	18,421	17,242
Retail exposure	1,967	1,940
Equity investments	93	63
Other	309	297
Risks of the CCP's default fund	0	
Securitisations	111	94
Market and settlement risk (Standardised Approach)	1,070	1,380
Operational risk (Standardised Approach)	1,028	1,040
Valuation adjustment (CVA)	179	204
Other risks*	5,824	
Total risk exposure amount	35,074	26,570

*Addition of risk-weighted assets based on the Standardised Approach

The presentation of the total risk exposure amount table has been changed. Comparatives for the changed items have been adjusted to correspond to the new presentation.

Key ratios, %	31 Dec 2022	31 Dec 2021
CET1 capital ratio	11.9	15.4
Tier 1 ratio	11.9	15.4
Capital adequacy ratio	16.0	20.9

Ratios, fully loaded, %	31 Dec 2022	31 Dec 2021
CET1 capital ratio	11.9	15.4
Tier 1 ratio	11.9	15.4
Capital adequacy ratio	15.7	20.4

Capital requirement, EUR million	31 Dec 2022	31 Dec 2021
Capital base	5,608	5,562
Capital requirement	3,720	2,792
Buffer for capital requirements	1,888	2,770

The capital requirement comprises the minimum requirement of 8%, the capital conservation buffer of 2.5% and the countercyclical capita buffers by country for foreign exposures.

Financial statements

Income statement

EUR million	Notes	2022	2021
Net interest income	5	396	412
Net commissions and fees	6	19	31
Net investment income	7	117	168
Other operating income	8	32	49
Total income		**564**	**661**
Personnel costs	9	76	72
Depreciation/amortisation	10	9	12
Other expenses	11	196	236
Total expenses		**281**	**320**
Impairments loss on receivables	12	-18	-74
Earnings before tax		**265**	**267**
Income tax expense	13	54	52
Profit for the financial year		**211**	**215**

Statement of comprehensive income

EUR million	Notes	2022	2021
Profit for the financial year		**211**	**215**
Items that will not be reclassified to profit or loss			
Gains/(losses) arising from remeasurement of defined benefit plans	27	11	4
Items that may be reclassified to profit or loss			
Change in fair value reserve			
Measurement at fair value	29	-58	28
Cash flow hedge	29	-31	-4
Income tax			
Items that will not be reclassified to profit or loss			
Gains/(losses) arising from remeasurement of defined benefit plans	23	-2	-1
Change in revaluation reserve			
Measurement at fair value	29	12	-6
Cash flow hedge	29	6	1
Other comprehensive income		**-63**	**23**
Total comprehensive income for the financial year		**148**	**238**

Balance sheet

EUR million	Notes	31 Dec 2022	31 Dec 2021
Cash and cash equivalents	14	34,951	32,789
Receivables from credit institutions	15	12,978	13,419
Derivative contracts	16	5,782	3,712
Receivables from customers	17	28,178	26,236
Investment assets	18	16,404	17,373
Intangible assets	19	3	12
Property, plant and equipment (PPE)	20	5	5
Other assets	22	1,132	1,274
Total assets		**99,433**	**94,820**
Liabilities to credit institutions	24	40,899	42,660
Derivative contracts	16	5,739	2,669
Liabilities to customers	25	19,014	18,357
Debt securities issued to the public	26	25,209	22,630
Provisions and other liabilities	27	2,509	1,874
Tax liabilities	23	316	339
Subordinated liabilities	28	1,384	1,994
Total liabilities		**95,069**	**90,524**
Equity capital	29		
Share capital		428	428
Fair value reserve		-29	42
Other reserves		1,019	1,019
Retained earnings		2,947	2,807
Total equity capital		**4,364**	**4,296**
Total liabilities and equity capital		**99,433**	**94,820**

Statement of changes in equity

EUR million	Share capital	Fair value reserve	Other reserves	Retained earnings	Total equity capital
Balance at 1 January 2021	**428**	**22**	**1,019**	**2,551**	**4,020**
Total comprehensive income for the period		20		218	**238**
Profit for the financial year				215	**215**
Other comprehensive income		20		4	**23**
OP Corporate Bank plc's partial demerger 29 Nov 2021				-13	**-13**
Other*				51	**51**
Balance at 31 December 2021	**428**	**42**	**1,019**	**2,807**	**4,296**

* The Baltic subsidiaries OP Finance AS (Estonia), OP Finance SIA (Latvia) and AB OP Finance (Lithuania) merged into their parent company OP Corporate Bank plc on 31 October 2021 through a cross-border merger. The merger difference of EUR 51 million was recognised in retained earnings.

EUR million	Share capital	Fair value reserve	Other reserves	Retained earnings	Total equity capital
Balance at 1 January 2022	**428**	**42**	**1,019**	**2,807**	**4,296**
Total comprehensive income for the period		-71		219	**148**
Profit for the financial year				211	**211**
Other comprehensive income		-71		9	**-63**
Profit distribution				-80	**-80**
Other				0	**0**
Balance at 31 December 2022	**428**	**-29**	**1,019**	**2,947**	**4,364**

Cash flow statement

EUR million	Notes	2022	2021
Cash flow from operating activities			
Profit for the period		211	215
Adjustments to profit for the period		286	497
Increase (-) or decrease (+) in operating assets		**-1,980**	**-5,453**
Receivables from credit institutions	15	782	-2,146
Derivative contracts	16	-362	-68
Receivables from customers	17	-2,013	-1,088
Investment assets	18	-530	-1,977
Other assets	22	142	-173
Increase (+) or decrease (-) in operating liabilities		**556**	**15,441**
Liabilities to credit institutions	24	-752	13,275
Derivative contracts	16	519	225
Liabilities to customers	25	657	1,954
Provisions and other liabilities	27	132	-13
Income tax paid		-62	-23
Dividends received		0	3
A. Net cash from operating activities		**-988**	**10,680**
Cash flow from investing activities			
Purchase of PPP and intangible assets	19, 20	0	1
Proceeds from sale of PPE and intangible assets	19, 20	0	
B. Net cash used in investing activities		**0**	**1**
Cash flow from financing activities			
Subordinated liabilities, change	28	-529	-290
Debt securities issued to the public, change	26	3,809	833
Dividends paid		-80	
Lease liabilities	21	-1	-1
C. Net cash used in financing activities		**3,200**	**541**
Net change in cash and cash equivalents (A+B+C)		**2,211**	**11,222**
Cash and cash equivalents at period-start		**32,891**	**21,842**
Effect of foreign exchange rate changes		292	-173
Cash and cash equivalents at period-end		**35,395**	**32,891**

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Note 1. OP Corporate Bank plc's accounting policies

General

OP Corporate Bank is one of the leading corporate banks in Finland. OP Corporate Bank has a well-established and broad customer base consisting of companies and institutions to which it provides an extensive range of banking services. In addition, OP Corporate Bank acts as the central bank for OP Financial Group's cooperative banks.

OP Corporate Bank plc belongs to OP Financial Group, which consists of 108 cooperative banks and their central cooperative, OP Cooperative, with its subsidiaries. OP Financial Group's member credit institutions comprise OP Corporate Bank plc, OP Retail Customers plc and OP Cooperative's member cooperative banks.

In accordance with the Act on the Amalgamation of Deposit Banks, the member credit institutions, OP Corporate Bank included, and OP Cooperative are ultimately jointly and severally liable for each other's debts and commitments. If a member credit institution's own capital is depleted to such a low level owing to losses that the criteria, specified in the Act, for being placed in liquidation are fulfilled, OP Cooperative has the right to collect from its member credit institutions extra contributions on the basis of the combined balance sheets previously adopted.

OP Corporate Bank is domiciled in Helsinki and the address of its registered office is Gebhardinaukio 1, FI-00510 Helsinki. The postal address of its registered office is P.O. Box 308, FI-00013 OP. A copy of OP Corporate Bank plc's financial statements is available at www.op.fi or the company's registered office.

OP Corporate Bank's parent company is OP Cooperative and OP Corporate Bank's accounts are included in its consolidated financial statements.

Copies of the financial statements of OP Cooperative are available at the following address: Gebhardinaukio 1, FI-00510 Helsinki. OP Financial Group's financial statements are available at www.op.fi or the company's registered office at Gebhardinaukio 1, FI-00510 Helsinki.

The Board of Directors of OP Corporate Bank approved the financial statements bulletin for issue on 8 February 2023 and the Board of Directors approved the financial statements on 8 February 2023.

1 Basis of preparation

These financial statements were prepared in accordance with the International Financial Reporting Standards (IFRS), applying IASs, IFRSs and SIC and IFRIC interpretations effective on 31 December 2022. The International Financial Reporting Standards refer to standards and their interpretations adopted in accordance with Regulation (EU) No. 1606/2002 of the European Parliament and of the Council. OP Corporate Bank's notes also conform to the requirements of Finnish accounting and company legislation that complement IFRS regulations.

In 2022, OP Corporate Bank adopted the following standards and interpretations:

- Amendments to IAS 37, IAS 16 and IFRS 9 took effect on 1 January 2022. The amendments did not have any major effect on OP Corporate Bank's financial statements.

OP Corporate Bank plc's financial statements were prepared at historical cost, with the exception of financial assets and liabilities at fair value through profit or loss, financial assets at fair value through other comprehensive income, hedged items in fair value hedging (for hedged risk) and derivative contracts measured at fair value. In addition, defined benefit pension plans are accounted for according to IAS 19.

The financial statements are presented in millions of euros. Number zero in the tables in Notes means that the item contains some balance but it is rounded off to zero. If nothing (blank) is presented in the item, the balance of the item is zero.

OP Financial Group presents Pillar III disclosures in compliance with EU Regulation No. 575/2013 of the European Parliament and of the Council in a separate OP Financial Group Risk and Capital Adequacy Report and the OP Amalgamation Pillar III tables. A summary of OP Corporate Bank's capital adequacy is presented in OP Corporate Bank's Report by the Board of Directors.

1.1 2022 highlights

In January 2022, OP Corporate Bank plc issued a green bond worth EUR 500 million in accordance with its updated Green Bond Framework. The green bond will support the green transition, and proceeds raised with it are allocated to sustainable corporate finance. Targeted at international institutional investors, the bond is OP Corporate Bank's second green bond and first senior non-preferred, unsecured green bond. The bond amounts to EUR 500 million and has a maturity of 5.5 years. Eligible sectors to be funded include renewable energy, green buildings and environmentally sustainable management of living natural resources and land use.

1.2 Merger result

The Baltic subsidiaries OP Finance AS (Estonia), OP Finance SIA (Latvia) and AB OP Finance (Lithuania) merged into their parent company OP Corporate Bank plc a year ago through a cross-border merger. The merger difference of EUR 51 million was recognised in retained earnings in 2021. The merger was about the amalgamation of entities under the same control with the parent company, in which case control does not change and thus the merger gain was recognised in retained earnings under equity.

2 Critical accounting estimates and judgements

The preparation of the financial statements in conformity with IFRS requires the management to make judgements, estimates and assumptions in the application of the accounting policies. The preparation of the financial statements requires making estimates and assumptions about the future and the actual results may differ from these estimates and assumptions. It also requires the management to exercise its judgement in the process of applying the accounting policies.

2.1. Sustainability and corporate responsibility

Sustainability and corporate responsibility form an integral part of OP Corporate Bank's and OP Financial Group's business and strategy and responsible business is one of OP Financial Group's strategic priorities. OP Financial Group published its new sustainability programme in August 2022. The new sustainability programme and its policy priorities implement OP Financial Group's strategy, guiding the sustainability actions taken by the business units and OP cooperative banks. OP Financial Group's sustainability programme is built around three themes: Climate and the environment, People and communities and Corporate governance.

The management has assessed that the sustainability themes affect the following sub-areas in OP Corporate Bank's financial statements:

- Expected credit losses (Note 34. Loss allowance regarding receivables and notes and bonds)
- Green bonds (Note 26. Debt securities issued to the public)
- Green loans and sustainability-linked loans (Note 17. Receivables from customers)

2.2 Expected credit losses

The determination of the measurement models for expected credit losses (ECL) involves several factors requiring management judgement, such as:

- Selection of appropriate ECL models so that they describe the expected credit losses on the contract portfolio as well as possible.
- Different assumptions and expert judgements made in the models.
- Selection of the estimation methods of the parameters for the ECL models.
- Determination of the contract's maturity for non-maturing loans (revolving credit facilities).
- Determination of model risk associated with the quality of the available modelling data and other data.
- Proper grouping of contracts into different segments so that their ECL can be measured using the appropriate model.
- Selection of macroeconomic factors in such a way that their changes correlate with the contracts' probability of default.
- Forecasting future macroeconomic scenarios and their probabilities.
- Extra provisions based on management judgement concerning a certain industry due to abrupt crises such as the Covid-19 pandemic or Russia's war of aggression in Ukraine.
- Reductions in collateral value made on the basis of the geographical location of collateral based on management judgement.

Management judgement has also been used in the assessment of a significant increase in credit risk, such as in:

- The expert judgement used in the assessment of change in relative credit risk associated with personal customers to ensure a true number of contracts that move to stage 2 before moving to stage 3 (so-called default capture rate).
- The selection of the absolute threshold that is based on historical default behaviour and OP Financial Group's credit risk process.

- The determination of the length of a period during which the customer must prove proper payment behaviour so that the impairment stage 3 can improve to stage 2 or 1.

The actual measurement of ECL figures is performed using the ECL models, except if it is mainly the question of a large corporate exposure in stage 2 or 3 and on the watch list, in which case the ECL is calculated using the cash flow based ECL method based on expert judgement. Management judgement is involved in expert judgements.

Management overlays directly to the ECL figures (post-model adjustments) are intended only for temporary use until an unpredictable event caused by the overlay provision or circumstance could have been taken into account in the ECL models.

The existing ECL models take account of Environmental, Social and Governance (ESG) risks of sustainable development. An assessment of economic impacts has been included in their measurement in the macro scenario where the use of fossil energy is reduced, so that carbon neutrality will be achieved by 2035.

Calculations of loss allowance regarding receivables and the related key uncertainties are presented in Note 34. Loss allowance regarding receivables and notes and bonds. The Note also describes choices made in the calculation of expected credit losses related to the war in Ukraine, energy crisis and a rapid change in the general economic situation. Section 6.4 includes a description of the accounting policies used in expected credit losses.

2.3 Fair values of financial instruments

The management must assess when the market for financial instruments is not active. The management must also assess whether an individual financial instrument is actively traded and whether the price obtained from the market is a reliable indication of the instrument's fair value. When the fair value of financial instruments is determined using a valuation technique, management judgement is required to select the applicable valuation technique. Whenever market observable input data is not available for outputs produced by valuation techniques, the management must evaluate how much other information will be used (Note 33.Recurring fair value measurements by valuation technique).. The accounting policies used in the fair value of financial instruments are described in section 6.

2.4 Russia's aggressive war in Ukraine

The management has assessed that Russia's aggressive war in Ukraine may have an indirect effect on OP Corporate Bank's income and risks as a result of customers' changed business conditions, and a direct effect on the general situation in the financial market and because of obstruction of the technical infrastructure. The impacts may be realised, for example, in the following ways:

- higher impairment loss on receivables
- lower values of investment assets
- effects of extensive sanctions and counter sanctions on OP Corporate Bank or its customers' activities
- problems in the availability of wholesale funding and a rise in the wholesale funding price
- problems in business continuity as a result of cyber attacks on OP Corporate Bank or its customers.

Note 34. Loss allowance regarding receivables and notes and bonds includes information on choices related to the war in Ukraine made in calculating expected credit losses.

3 Foreign currency translation

OP Corporate Bank's financial statements are presented in euros, which is the company's functional and presentation currency. Non-euro transactions are recognised in euros at the exchange rate quoted on the transaction date or at the average exchange rate of the month of recognition. On the balance sheet date, non-euro monetary balance sheet items are translated into euros at the exchange rate quoted on the balance sheet date. Non-monetary balance sheet items measured at cost are presented at the exchange rate quoted on the transaction date.

The exchange rate differences arising from the translation of non-euro transactions and monetary balance sheet items into euros are recognised as foreign exchange gains or losses under Net investment income in the income statement (Note 7. Net investment income).

4 Summary of presentation of income statement items:

Net interest income	Received and paid interest on fixed income instruments, the recognised difference between the nominal value and acquisition value, interest on interest-rate derivatives and fair value change in fair value hedging. Fees that are regarded as compensation for the risk taken by the bank associated with the financial instrument and as being an integral part of the financial instrument's effective interest rate.
Net commissions and fees	Commission income from lending, deposits, payment transactions, securities brokerage, securities issuance, mutual funds, asset management, legal services and guarantees. Commission expenses for lending, payment transactions, securities brokerage, securities issuance, asset management, guarantees and derivatives.
Net investment income	Realised capital gains and losses on financial assets recognised at fair value through other comprehensive income, interest income, currency valuations as well as impairment losses and their reversals. Fair value changes in financial instruments at fair value through profit or loss and dividends and holdings. In addition, interest income and expenses related to financial assets held for trading.
Other operating income	Central banking service fees and other operating income.
Personnel costs	Wages and salaries, pension costs, social expenses.
Other operating expenses	ICT production and development costs, charges of financial authorities, charges of auditors, service charges to OP Cooperative, telecommunications costs, purchased services, marketing costs, corporate responsibility expenses, insurance and security costs and other expenses.
Impairment loss on receivables	Expected credit losses from customers, off-balance-sheet items and notes and bonds as well as final credit losses and their reversals.

5 Revenue recognition

5.1 Interest income

Interest income and expenses for interest-bearing assets and liabilities are recognised using the effective interest method. More detailed information on the effective interest method can be found in 6.2.1 Amortised cost herein. Interest on receivables with non-settled, due payments is also recognised as revenue. The difference between the receivable's acquisition cost and its nominal value is recognised as interest income and that between the amount received and nominal value of the liability in interest expenses. The difference between the nominal value and the acquisition cost of fixed-rate bonds is recognised as interest income or expenses over the residual term to maturity.

The customer margin of the interest rate cap and interest rate corridor loans would accrue net interest income as the customer pays the additional margin related to the derivative clause. (Note 5. Net interest income)

5.2 Net commissions and fees

Fees that are not an integral part of the effective interest rate of a financial instrument are accounted for in accordance with IFRS 15 Revenue from Contracts with Customers. Fees and commissions under IFRS 15 are recognised as revenue when a service's agreed performance obligations are transferred to the customer and the key criterion is transfer of control. Commissions and fees are recognised to the amount to which an entity expects to be entitled in exchange of transferring promised services to a customer. Commission expenses are recognised in net commissions and fees on an accrual basis.

In the Corporate Banking and Capital Markets segment, commissions and fees are charged from corporate, institutional and personal customers as well as OP Financial Group's internal actors. Commission income consists of that from lending, securities brokerage and issues, investment research and guarantees. In the Asset and Sales Finance Services and Payment Transfers segment, commissions are charged from personal customers and corporate customers. Commission income consists of that from lending, payment transactions and guarantees. In the Baltics segment, commissions are charged from personal and corporate customers in Estonia, Latvia and Lithuania. Commission income consists of that from lending, payment transactions and guarantees. The abovementioned commission items consist of several fee types whose performance obligations are fulfilled over time or at a point in time, according to the type of the fee. The performance obligations of lending, investment research and guarantee fees are mainly fulfilled over time while other fees at a point in time. The amount of consideration for the services is the list price or a contractually stated price. Revenue from contracts with customers by segment is presented in Note 6. Net commissions and fees.

Dividends are primarily recognised when they are approved by the General Meeting of the distributing company. Dividend income is shown in net investment income.

6 Financial instruments

6.1 Fair value determination

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date (Note 33. Recurring fair value measurements by valuation technique).

The fair value of financial instruments is determined using either prices quoted in an active market or the company's own valuation techniques where no active market exists. The market is deemed to be active if price quotes are easily and regularly available and reflect real and regularly occurring market transactions on an arm's length basis. The current bid price is used as the quoted market price of financial assets.

If the market has a commonly used valuation technique applied to a financial instrument to which the fair value is not directly available (e.g. OTC derivatives), the fair value is based on a commonly used valuation technique and market quotations of the inputs used by the technique.

If the valuation technique is not a commonly used technique in the market, a valuation model created for the instrument in question will be used to determine the fair value. Valuation models are based on widely used measurement techniques, incorporating all factors that market participants would consider in setting a price, and are consistent with accepted economic methodologies for pricing financial instruments.

The valuation techniques used include prices of market transactions, the discounted cash flow method and reference to the current fair value of another instrument that is substantially the same on the balance sheet date. The valuation techniques take account of estimated credit risk, applicable discount rates, the possibility of early repayment and other factors affecting the reliable measurement of the fair value of financial instruments.

The fair values of financial instruments are categorised into three hierarchy levels, depending on the inputs used in valuation techniques:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1)
- Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices) (Level 2)
- Inputs for the asset or liability that are not based on observable market data (Level 3).

If the inputs used to measure fair value are categorised into different levels of the fair value hierarchy, the fair value measurement is categorised in its entirety at the same level as the lowest level input that is significant to the entire measurement. The significance of inputs has been assessed on the basis of the fair value measurement in its entirety.

It is typical of illiquid instruments that their price calculated using a pricing model differs from the actual transaction price. However, the actual transaction price is the best evidence of the instrument's fair value. The Day 1 profit/loss, based on the difference between the actual transaction price and the price deriving from the pricing model that uses market prices, is recognised in the income statement over the term of the agreement or a shorter period taking account of the product's structure and counterparty. However, the non-recognised amount will be recognised as soon as there is a genuine market price for the instrument or a well-established pricing practice is created in the market. The amount of illiquid financial assets is insignificant in OP Corporate Bank's balance sheet.

6.2 Financial assets and liabilities

OP Corporate Bank's financial assets are shown in Notes 14. Cash and cash equivalents, 15. Receivables from credit institutions, 16. Derivative contracts, 17. Receivables from customers, 18. Investment assets and 22. Other assets. Financial liabilities are shown in Notes 24. Liabilities to credit institutions, 25. Liabilities to customers, 26. Debt securities issued to the public, 27. Provisions and other liabilities and 28. Subordinated liabilities.

6.2.1. Amortised cost

Amortised cost is the amount at which the financial asset or financial liability is measured at initial recognition minus the principal repayments, plus or minus the cumulative amortisation using the effective interest method of any difference between that initial amount and the maturity amount and, for financial assets, adjusted for any loss allowance.

The effective interest method uses the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset or financial liability to the gross carrying amount of a financial asset or to the amortised cost of a financial

liability. When calculating the effective interest rate, OP MB estimates the expected cash flows by considering all the contractual terms of the financial instrument excluding the expected credit losses (ECL). The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs, and all other premiums or discounts. Fees that are an integral part of the rate of a financial instrument include office and origination fees related to loan drawdown and they are amortised over the expected life of the financial instrument or a shorter period if that is appropriate. Fees that are not an integral part of the effective interest rate of a financial instrument and are accounted for in accordance with IFRS 15 include fees charged for servicing a loan, for example.

The central cooperative consolidated incorporates the impact of expected credit losses in the estimated future cash flows when calculating the credit-adjusted effective interest rate for financial assets that are considered to be purchased or originated credit-impaired at initial recognition (POCI).

Interest revenue

Interest revenue has been calculated by applying the effective interest rate to the gross carrying amount of a financial asset except for:

a) purchased or originated credit-impaired financial assets. For those financial assets, OP Corporate Bank applies the credit-adjusted effective interest rate to the amortised cost of the financial asset from initial recognition
b) financial assets that are not purchased or originated credit-impaired financial assets but subsequently have become credit-impaired financial assets (or that are in stage 3). For those financial assets, OP Corporate Bank applies the effective interest rate to the amortised cost of the financial asset (i.e. to the net carrying amount after the deduction of the expected credit loss).

6.2.2. Initial recognition and measurement

At initial recognition, OP Corporate Bank measures a financial asset or financial liability at its fair value plus or minus, in the case of a financial asset or financial liability not at fair value through profit or loss, transaction costs that are incremental and directly attributable to the acquisition or issue of the financial asset or financial liability. Immediately after initial recognition, an expected credit loss allowance of a financial asset will be recognised if the financial asset is measured at amortised cost or at fair value through other comprehensive income. This results in accounting loss recognition for newly originated or newly purchased financial assets in the income statement.

6.3 Classification and subsequent measurement of financial assets

OP Corporate Bank classifies financial assets into the following categories:

- Fair value through profit or loss (FVTPL)
- Fair value through other comprehensive income (FVOCI)
- Carried at amortised cost.

6.3.1 Loans and notes and bonds

The classification and subsequent measurement of loans and notes and bonds depend on the following factors:

- OP Corporate Bank's business model for managing the financial assets
- The contractual cash flow characteristics of the financial asset.

On the basis of these factors, OP Corporate Bank classifies loans and notes and bonds into the following three measurement categories:

1) Financial assets measured at amortised cost are held within a business model whose objective is to hold financial assets in order to collect contractual cash flows that are solely payments of principal and interest on the principal amount outstanding. The financial asset's carrying amount is adjusted by any allowance for expected credit losses and interest revenue is recognised in interest revenue using the effective interest method.

2) Financial assets recognised at fair value through other comprehensive income are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. In addition, the contractual terms of the financial asset specify cash flows occurring on specific dates which are solely payments of principal and interest on the principal amount outstanding. Changes in the fair value are recognised in the fair value reserve. Impairment gains or losses and foreign exchange gains or losses are recognised in profit or loss. When a financial asset is derecognised, the

cumulative profit or loss in the fair value reserve is reclassified from equity to profit or loss in net investment income as a reclassification adjustment. Interest calculated using the effective interest method is recognised in interest income.

3) Financial assets measured at fair value through profit or loss are held for trading or if the financial asset does not meet the criteria for amortised cost or FVOCI. Gains and losses are recognised in net investment income. Interest income and expenses of held-for-trading notes and bonds and derivatives are presented in net investment income since.

Business model

A business model refers to how OP Corporate Bank manages its financial assets in order to generate cash flows. OP Corporate Bank's business model determines whether cash flows will result solely from collecting contractual cash flows or from collecting contractual cash flows and cash flows and by selling a financial asset, or whether the purpose is held for trading. Financial assets within the trading business model are measured through profit or loss. When assessing the business model, OP Corporate Bank takes account of future measures to achieve the objective of the business model. The assessment includes previous experience in collecting cash flows, how the performance of the business model and the financial assets held within that business model are evaluated and reported to the entity's key management personnel, how risks are managed and how managers of the business are compensated. For example, OP Corporate Bank holds corporate loans it has granted to collect contractual cash flows. For example, the objective of the business model of OP Corporate Bank's liquidity buffer is to collect contractual cash flows and to sell financial assets.

Change in the business model

Changes in the business model are expected rarely as a result of internal or external changes and they must be significant in terms of OP Corporate Bank's operations. OP Cooperative's Board of Directors decides on changes in the business model. The business model changes in case OP Corporate Bank acquires or transfers a business area or closes down it. The business model change is appropriately documented by the business unit concerned and is handled by Finance and Risk Management to determine the related accounting effects (incl. the effects on the ECL). The change of the objective of the entity's business model must be executed before the date of the reclassification.

The reclassification is applied prospectively from the reclassification date onwards. The reclassification date is the first date of the following reporting period, before which a decision on the reclassification has been made. Prior reporting periods are not adjusted retrospectively.

OP Corporate Bank's business model did not see any changes during 2021–2022.

The table below shows the effects of various reclassifications on accounting:

Initial measurement category	New measurement category	Accounting effect
Amortised cost	FVTPL	Fair value is determined on the reclassification date. Any gain or loss on the difference that may arise between a financial asset previously measured at amortised cost and the fair value is recognised through profit or loss.
FVTPL	Amortised cost	The fair value on the reclassification date becomes a new gross carrying amount. The effective interest rate is determined based on the fair value on the reclassification date.
Amortised cost	FVOCI	Any gain or loss on the difference that may arise between a financial asset previously measured at amortised cost and the fair value is recognised in other comprehensive income. The effective interest rate and the amount of expected credit losses are not adjusted as a result of the reclassification.
FVOCI	Amortised cost	The fair value on the reclassification date becomes a new amortised cost. A gain or loss previously recognised in other comprehensive income is, however, derecognised from equity and recognised to adjust the fair value of a financial asset on the reclassification date. The effective interest rate and the amount of expected credit losses are not adjusted as a result of the reclassification.
FVTPL	FVOCI	The fair value on the reclassification date becomes a new carrying amount. The effective interest rate is determined based on the fair value on the reclassification date.
FVOCI	FVTPL	The fair value on the reclassification date becomes a new carrying amount. A gain or loss previously recognised in other comprehensive income is transferred as an adjustment due to the reclassification from equity through profit or loss on the reclassification date.

Cash flow characteristics

When OP Corporate Bank's business model is other than trading, OP Corporate Bank assesses whether contractual cash flows are consistent with a basic lending arrangement. In the basic lending arrangement, contractual cash flows are solely payments or principal and interest on the principal amount outstanding (SPPI) where consideration for the time value of money, credit risk, lending risks and profit margin are typically the most significant elements of interest. The majority of OP Corporate Bank's financial assets are basic lending arrangements.

All loans to personal customers and some corporate loans granted by OP Corporate Bank contain the option for early repayment. The terms and conditions are, however, consistent with the basic lending arrangement because the prepayment amount substantially represents the contractual nominal amount and accrued (but unpaid) contractual interest, which may include reasonable additional compensation for the early termination of the contract.

OP Corporate Bank uses the SPPI Test solution to test the cash flow characteristics of notes and bonds. On the basis of its test result (pass/fail), the SPPI test is either passed or failed with no further reviews or OP Corporate Bank reviews the cash flow characteristics using OP Financial Group's internal guidelines before the decision on classification (further review required as the result). The solution identifies various elements in contract terms that affect whether the SPPI definition is satisfied.

When contractual cash flows are exposed, for example, to change in stock prices or a borrower's financial result, this is no basic lending arrangement and such financial assets are measured at fair value through profit or loss. These are typically various mutual fund investments which do not fulfil the definition of equity in the issuer's financial statements under IAS 32.

Embedded derivatives included in financial assets are not separated from the host contract but they are considered in the overall assessment of contractual cash flows.

If OP Corporate Bank has to change its business model for managing financial assets, it may have to reclassify financial assets. The reclassification must be applied prospectively from the reclassification date. Such changes are expected to be very infrequent.

6.3.2 Equity instruments

Equity instruments are instruments that evidence a residual interest in the assets of a company after deducting all of its liabilities. These are typically stock investments.

Equity instruments are subsequently measured at fair value through profit or loss.

6.3.3 Modification of contractual cash flows

Modifications in the contractual payment terms are made as a normal measure related to the management of customer relationship but also in situations where the customer's repayment capacity has deteriorated. The modification to the loan due to the customer's deteriorated repayment capacity is recognised as forbearance which typically, for example, means a moratorium for a limited time. Generally, in these cases, the contractual cash flows of a loan are renegotiated or otherwise modified and the renegotiation or modification does not result in the derecognition of that loan. In such a case, OP Corporate Bank recalculates the gross carrying amount of the loan and recognises a profit or loss on the modification in net interest income in the income statement. In addition, the loan's categorisation as forbearance transfers the loan to at least impairment stage 2 and falls within expected credit loss calculated for the entire period of validity for at least two years until the customer's repayment capacity has recovered.

Another precondition for the recovery is that after a probation period of at least two years:

- The customer has made regular and timely payments during at least half of the probation period, leading to the payment of a substantial aggregate amount of the principal or interest.
- None of the customer's exposures has been more than 30 days past due during the previous three months.

Payment modifications are subject to regular monitoring and reporting to the management as an indicator describing customers' solvency.

If modifications to the loan terms are significant or the loan is renegotiated, OP Corporate Bank derecognises the original loan and recognises the modified new loan in the balance sheet. The date of renegotiation is consequently considered to be the date of initial recognition for the impairment calculation purposes. This typically means measuring the loss allowance at an amount equal to 12-month expected credit losses. OP Corporate Bank uses internal rating to classify reasons for modifications and severity classes to monitor whether there has been evidence that the new loan recognised has deemed to be credit-impaired at initial recognition. Accordingly, it is recognised as an originated credit-impaired financial asset. This might occur, for example, in a situation in which there was a substantial modification of a distressed asset.

Otherwise, OP Corporate Bank derecognises financial assets when the contractual rights to the cash flows from the financial asset expire or it transfers the financial asset to another party and the transfer qualifies for derecognition.

6.4 Impairment

Expected credit losses are calculated on all balance sheet items amortised at cost and those recognised at fair value through other comprehensive income (FVOCI) (instruments other than equity instruments) and on off-balance-sheet loan commitments and financial guarantee contracts (Note 34. Loss allowance regarding receivables and notes and bonds). Expected credit losses are recognised at each reporting date, reflecting:

1. an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes
2. the time value of money and
3. reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions.

6.4.1 Classification of contracts into three impairment stages

Contracts are classified into three stages. The different stages reflect credit deterioration since initial recognition.

- Stage 1: contracts whose credit risk has not increased significantly since initial recognition and for which a 12-month ECL is calculated.
- Stage 2: contracts whose credit risk has increased significantly since initial recognition and for which a lifetime ECL is calculated.
- Stage 3: non-performing contracts in 2021 (defaulted contracts in 2020) for which a lifetime ECL is also calculated.

Definition of default

In the IFRS 9 based calculation, OP Corporate Bank applies the same definition of default as in internal credit risk models (IRB). OP Corporate Bank assesses default using its internal rating system based on payment behaviour. For personal customers, the definition of default is applied on a contract-by-contract basis whereas corporate customers are reviewed in terms of a group of connected clients. The customer is classified as a customer in default when the customer's repayment is considered unlikely, for example when the customer has registered payment default or it has been granted a forbearance in which the present value of the loan decreases by more than 1 per cent. Default extends to all credit obligations of an obligor in default among personal customers when a significant proportion (20 per cent) of personal customer exposures are defaulted. In addition, the contract is in default when a payment related to a financial asset is over 90 days past due, at the latest.

The customer's default ends when it no longer meets the criteria for the definition of default and the subsequent probation period of 6–12 months has ended.

The definition of default is based on Article 178 of Regulation (EU) No 575/2013 (CRR) of the European Parliament and of the Council and on the European Banking Authority's (EBA) guidelines on the application of the definition of default (EBA/GL/2016/07 and EBA/RTS/2016/06).

Definition of non-performing exposure

The definition of non-performing exposure includes the probation periods of non-performing forborne exposures, in addition to the exposures based on the definition of default used previously before they can be reclassified as performing. Non-performing exposure is defined in accordance with Article 47a of the Capital Requirements Regulation (EU) No. 575/2013. OP Corporate Bank uses non-performing exposures as the classification criterion for impairment stage 3.

In addition, originated credit-impaired contracts are always within the scope of the lifetime expected credit loss (POCI).

Significant increase in credit risk

The expected credit losses will be calculated for each contract for 12 months or lifetime, depending on whether the instrument's credit risk on the reporting date has increased significantly since initial recognition. Both qualitative and quantitative criteria are used to assess for each contract whether the credit risk has increased significantly. Forbearance and a comparable breach of covenant are regarded as a qualitative criterion for a significant increase in credit risk and thereby give rise to transfers to impairment stage 2.

OP Corporate Bank has included relative and absolute thresholds for the determination of significant quantitative increases in credit risk considering all relevant and supportable information.

A quantitative change is assessed based on the relative change in lifetime PD figures (PD curve). The original lifetime PD curve is calculated on the origination date of the loan taking account of macroeconomic factors. Next, the acceptable natural range of variation is determined for the limits within which the credit risk is not considered to increase significantly during the remaining maturity of the loan. The acceptable range has been modelled separately for personal and corporate customers. This yields a so-called threshold value curve. On each reporting date, the current lifetime PD curve is compared to the threshold value curve. If the threshold value is exceeded, the credit risk has increased significantly and a credit loss (calculated for the entire remaining maturity of the loan) is recognised. In addition to this limit of the relative change, a further requirement is that a rating grade has deteriorated since initial recognition so that shifting to the lifetime ECL calculation does not occur only on the basis of the passage of time. In addition, an absolute threshold is used for the weakest rating grades (E+, E, E-, 9.0, 9.5 and 10.0).

In addition to the aforementioned criteria, credit risk on a financial asset has increased significantly since initial recognition when contractual payments are more than 30 days past due.

In the assessment of a significant increase in credit risk, OP Corporate Bank has not applied a transitional rule on the assumption of low credit risk permitted by IFRS 9 to contracts, for which it is not possible without undue cost or effort, to calculate the original lifetime PDs.

OP Corporate Bank monitors regularly how effectively the abovementioned criteria perceive a significant increase in credit risk before contractual payments have been over 30 days past due and that the contracts do not generally move from impairment stage 1 directly to impairment stage 3 and performs the required calibrations to the calculation method of the relative change.

6.4.2 Measurement methods

Expected credit losses are mainly measured on a system basis using the PD/LGD method on a contract-specific basis for all personal and corporate customer exposures.
Additionally, the cash flow based ECL measurement method based on expert judgement is used for the largest corporate exposures in stage 3.

6.4.2.1 PD/LGD method

Expected credit losses are measured using modelled risk parameters with the formula probability of default (PD) x loss given default (LGD) x exposure at default (EAD) for majority of portfolios per contract and they reflect expectations of future credit losses at the reporting date. PD describes probability of default according to the definition of default described above. LGD describes the share of an asset if a borrower defaults. It is affected, for example, by the quantity and type of collateral securities and various financial guarantees. EAD describes the exposure amount at default, including exposure in the balance sheet (capital and accrued interest) and expected use of off-balance-sheet items at default.

The ECL calculation is based on three different scenarios. Risk parameters PD, LGD and EAD are calculated for yearly time buckets in each scenario. Yearly ECL figures are discounted to the reporting date and a probability-weighted ECL is calculated from the figures of different scenarios. The contract's effective interest or its estimate is used as the discount factor. The contract's maximum residual term to maturity is limited to 30 years in the calculation.

The lifetime probability of default (lifetime PD) models for a contract have been prepared separately for personal customers and corporate customers. The PD models are substantially affected by the contract's credit rating, loan age (personal customers) as well as the model's sub-segment, which is determined for corporate customers on the basis the rating model and for personal customers on the basis of the product type. In addition, PD estimates are dependent on macroeconomic factors and their forecasts in each scenario. Change in GDP and real interest rates are used as macroeconomic explanatory factors in the lifetime PD model for corporate exposures. In the lifetime PD model for personal customers, the macroeconomic factors have been divided by segment and a GDP change and the 12-month Euribor are used, for example, in home loans, where the effects of GDP and inflation have been deducted. The variables in revolving credit facilities include change in GDP and the real 3-month Euribor.

The lifetime LGD consists of the following three components:

1. cure rate
2. collateral return
3. non-collateral return

The values of the components depend fundamentally on a product type, industry (companies), collateral type and the time how long the contract has been in default.

The cure rate in personal customer exposures has been estimated at a product category level, whereas estimates concerning corporate customer exposures are industry-specific. The collateral return describes how much of the cash flows received from collateral securities covers the remaining amount of exposure. The collateral return is calculated by means of a lower-than-market value of collateral (haircut). The lower-than-market values have been estimated by comparing the realisation values of collateral by type of collateral in relation to the fair value of collateral, also considering the direct expenses incurred due to collateral repossession and sale. Finally, a margin of conservatism has been added to the lower-than-market-value estimates because of uncertainties associated with collateral data and estimation. The non-collateral return describes cash flows that have been estimated for the remaining exposure amount at product category level, which the collateral return does not cover.

The estimates for the non-collateral return and the cure rate for impairment stage 3 are time-dependent so that they will decrease if the period of default or debt collection increases.

The macroeconomic factors and their forecasts affect the first two components.

The lifetime exposure at default (lifetime EAD) for a contract is based on contractual cash flows, utilisation rate, prepayment rate and maturity model, depending on the product type.

Determining the period of a contract

The period of a contract for promissory notes is a contractual maturity that takes account of repayments under the payment terms. The prepayment model applies to secured promissory notes (excl. default). It does not reduce the contractual maturity but is taken into account as part of the contract's EAD.

Revolving credit facilities (such as credit cards) are contracts valid until further notice and an expected maturity has been modelled for them. The modelled maturity depends on the product type and rating grade, averaging some 13 years.

Forward-looking information

The calculation model includes forward-looking information and macroeconomic scenarios. OP Corporate Bank's economists update macroeconomic scenarios on a quarterly basis and the scenarios are the same that OP Corporate Bank uses otherwise in its financial planning. Macroeconomic scenarios span 2–3 years of the baseline economic scenarios. After that, the scenario converges towards an economic balance in the long term. In the long-term balance, GDP and some of other variables are calculated using production function methodology. Alternative scenarios around the baseline are defined using the autoregressive model where the paths of each variable with desired probabilities are solved from the joint probability distribution of variables. The probability distribution of the variables is based on economic shocks observed in history and on correlations between the variables. The forecast errors in OP Corporate Bank's economic forecast are also taken into account in defining alternative scenarios. Three scenarios are used: baseline, upside and downside. The macroeconomic factors used are GDP growth rate, unemployment rate, investment growth rate, inflation rate, change in income level, 12-month Euribor and real 3-month Euribor. In addition, the house price index is used in LGD models.

Preparing macroeconomic forecasts and projecting them into the future up to 30 years involves a large amount of uncertainty, which is why actual results may differ significantly from the forecasts. OP Corporate Bank has analysed that the relationship of the change in the components of risk parameters and macroeconomic factors used in the ECL calculation is not linear. Accordingly, the macroeconomic forecasts represent OP Corporate Bank's best view of potential scenarios and outcomes.

Macroeconomic forecasts and ESG

Macroeconomic scenarios take account of impacts from climate change, the related change in the economy and adjustment on the economy. An assessment of economic impacts has been made in calculating macroeconomic scenarios where the use of fossil energy is reduced, so that carbon neutrality will be achieved by 2035. In this scenario, the Finnish GDP growth rate is an average of 0.3 percentage points slower for many years than in the baseline scenario. However, the calculation may overestimate the slowing down of the economy if the economic adjustment capacity proves to be better than usual. For this reason, the negative effect is included in a weaker scenario.

Estimates of the economic impacts resulting from climate change will be specified as new research data on the impacts becomes available that can be applied to the scenario calculations for the period they cover.

6.4.2.2 Cash flow based ECL method based on customer-specific expert judgement

The target group of customers subject to the expert ECL testing method are R-rated corporate counterparties on the watch list, whose exposures have, in general, been moved to Stage 2 or 3 of ECL calculation. Such expert judgement is performed in connection with a rating or credit decision.

The forward-looking information used in the calculation is part of the credit rating assessment and rating proposal by a credit analyst that cover developments in business, markets, competitive situation and the forecast cash flow. The calculation also takes account of the scenarios describing the effect of macroeconomic variables (upside, baseline and downside), on the basis of which the customer's weighted expected credit loss is calculated. The scenarios used in the PD/LGD model are utilised in the determination of the scenarios.

When the customer included in the ECL measurement based on the customer-specific expert judgement does no longer meet the criteria for default and has been identified and classified as a 'performing' obligor, it is excluded from this method and returns to be included in the ECL measurement based on the normal PD/LGD model.

6.4.3 Impairment of notes and bonds

The expected loss on notes and bonds recognised through other comprehensive income is recognised through profit or loss and to adjust the fair value reserve.

OP Corporate Bank uses a model in the calculation of the expected credit loss on notes and bonds that is based on credit rating information.

In the model, credit ratings are sought for purchase lots on the purchase date and the reporting date, and they are converted into PD figures. The central cooperative consolidated primarily uses the averages of external credit ratings and secondarily internal credit ratings, in case no external credit ratings exist.

The PDs correspond to the actual historical default rates by credit rating for each period from the date of issuing the credit rating. The historical data, for which the determined equivalence is based on, is comprehensive and on a long-term basis. The LGDs also correspond to the studied historical actuals by investment class/collateral type (seniority, covered bond status) and these are not separately assessed on an issuer- or investment-specific basis. Because external credit ratings measure total credit risk (ECL), not PD, the LDG in these cases affect only the division of the ECL between PD and LGD components.

6.4.3.1 Classification of notes and bonds into impairment stages

Investments whose 12-month PD has doubled in such a way that the change is at least 0.2 percentage points, an investment is subject to forbearance measures or its payments are over 30 days past due are transferred to stage 2. Investments related to an issuer in default are classified into stage 3 if its payments are over 90 days past due or if the customer is a customer in potential default.

6.4.4 Impairment of off-balance-sheet items

Several products provided by OP Corporate Bank include a limit, credit facility or another off-balance-sheet loan commitment as a standard feature or a feature in some stage of the product lifecycle. For example, revolving credit facilities, such as credit cards and accounts with credit facility, include both a loan and an undrawn commitment component. Moreover, OP Corporate Bank is an issuer in various guarantee contracts, such as financial guarantees and other commercial guarantees or guarantees given to authorities, to all of which IFRS 9 impairment rules apply. For loan commitments and financial guarantee contracts, the date that OP Corporate Bank becomes a party to the irrevocable commitment shall be considered to be the date of initial recognition for the purposes of applying the impairment requirements. Accordingly, only OP Corporate Bank's binding items are taken into account in the calculation of expected credit losses.

The expected credit loss is calculated for these items using the same principles as for loans. Likewise, increases in significant credit risk are assessed on the same grounds. OP Corporate Bank models EAD for such products that forecasts exposure at default. It includes both the utilisation rate and credit conversion factor. In addition, a maturity model is applied to contracts valid until further notice. The model takes account of cases where OP Corporate Bank has a contractual ability to demand repayment and cancel the undrawn commitment but it does not limit OP Corporate Bank's exposure to credit losses during the contractual notice period.

6.4.5 Recognition of expected credit losses

OP Corporate Bank mainly recognises a loss allowance for expected credit losses on a loan at carrying amount in a separate account. For loan commitments and financial guarantee contracts, the loss allowance is recognised as a provision. For products that include both a loan receivable (i.e. financial asset) and an undrawn commitment (i.e. loan commitment) component and OP Corporate Bank cannot separately identify the expected credit losses on the loan commitment component from those on the financial asset component, the expected credit losses on the loan commitment are recognised together with the loss allowance for the financial asset.

6.4.6 Extra impairment provisions based on management judgement (management overlay)

In unusual situations (for example, rapidly escalated global crises, such as a pandemic or war), OP Corporate Bank may make an ECL provision based on management judgement. The provision is temporary and remains valid as long as risk parameters used in ECL calculation have been updated to describe the changed situation. Strict monitoring criteria are applied to the extra impairment provisions made based on management judgement and they are quarterly reported to Group Executive Management.

6.4.7 Write-off

A write-off constitutes a derecognition event. When OP Corporate Bank has no reasonable expectations of recovering a financial asset in its entirety or a portion thereof, the final credit loss is recognised to directly reduces the gross carrying amount of the financial asset.

A loan is derecognised when collateral securities have been realised or when the final meeting of a bankruptcy estate has been held, debt rescheduling or financial restructuring has come to an end or when collection measures have ended. Since 2022, OP Corporate Bank has partially written off the amount not received already when the payment plan of the debt rescheduling or financial restructuring has been confirmed and the loan has no other parties or realisable assets. Payments received after the derecognition are recognised as an adjustment to impairment losses on receivables.

6.5 Cash and cash equivalents

Cash and cash equivalents consist of cash and receivables from credit institutions repayable on demand (Note 14. Cash and cash equivalents).

6.6 Classification and subsequent measurement of financial liabilities

Financial liabilities comprise deposits and other liabilities to credit institutions and customers, debt securities issued to the public and other financial liabilities.

Financial liabilities are classified at amortised cost using the effective interest method, except for derivative liabilities measured at fair value through profit or loss. Liabilities held for trading also include an obligation to deliver securities to the counterparty which have been sold but which are not owned at the time of selling (short selling).

Upon initial recognition, OP Corporate Bank has not designated financial liabilities as measured at fair value through profit or loss.

OP Corporate Bank derecognises a financial liability (or a part of a financial liability) when it is extinguished – i.e. when the obligation specified in the contract is discharged or cancelled or expires.

An exchange between OP Corporate Bank and original lenders of financial liabilities with substantially different terms must be accounted for as an extinguishment of the original financial liability. In such a case, any costs or fees incurred are recognised as part of the gain or loss on the extinguishment. If the exchange or modification is not accounted for as an extinguishment, the amortised cost of the modified financial liability will be recalculated by discounting the modified contractual cash flows using the original effective interest rate. Changes in the amortised cost of the financial liability is recognised through profit or loss. Costs or fees incurred adjust the carrying amount of the liability and are amortised over the remaining term of the modified liability. OP Corporate Bank has not made any exchanges of financial liabilities for the existing financial liabilities.

6.7 Netting

Financial assets and liabilities are offset in the balance sheet if OP Corporate Bank currently has a legally enforceable right of set-off in the normal course of business and in the event of default, insolvency or bankruptcy, and intends to settle the asset and liability on a net basis (Note 36. Financial assets and liabilities offset in the balance sheet or subject to enforceable master netting arrangements or similar agreements).

6.8 Derivative contracts

Derivative contracts are classified as hedging derivative contracts and derivative contracts held for trading. They include interest rate, currency, equity, commodity and credit derivatives. Derivatives are measured at fair value at all times (Note 16. Derivative contracts).

Standardised OTC derivative transactions entered into with financial counterparties are cleared in London Clearing House, in accordance with the EMIR regulation (EU 648/2012). In the model used, the central counterparty (CCP) will become the derivatives counterparty at the end of the daily clearing process. Depending on the clearing broker, the settled-to-market (STM) or collateralised-to-market (CTM) practice is used as the settlement model. In both models, daily payments of derivatives are offset with the central counterparty. In addition, the fair value change of derivatives (variation margin) is either paid or received in cash. In the STM model, the daily payment is determined on a contractual basis as final payment and part of the derivative contract's cash flows. The daily payment is recognised as a fair value change through profit or loss. In such a case, the derivative contract involves no fair value change other than the valuation difference between OP and the CCP. The difference is recognised in derivative assets or derivative liabilities (Sum of net liability positions) in the balance sheet. The CTM model differs from the STM model in such way that the daily payment has not on a contractual basis defined as the final payment but as collateral. It is, however, offset with the fair value of the derivative in the balance sheet. Other derivatives are presented in the balance sheet on a gross basis, in which case positive value changes are presented as derivative contracts under assets and negative value changes as derivative contracts under liabilities.

6.8.1 Hedging derivatives

OP Corporate Bank has prepared methods and internal principles used for hedge accounting, whereby a financial instrument can be defined as a hedging instrument. In accordance with the hedging principles, OP Corporate Bank can hedge against interest rate risk, currency risk and price risk by applying fair value hedge or cash flow hedge. Fair value hedging refers to hedging against changes in the fair value of the hedged asset, and cash flow hedging to hedging against changes in future cash flows. In OP Corporate Bank, the hedgeable risk categories are fair value and cash flow interest rate risks as well as currency risk.

Contracts are not accounted for according to the rules of hedge accounting if the hedging relationship between the hedging instrument and the related hedged item, as required by IAS 39, does not meet the criteria of the standard. OP Corporate Bank also enters into derivative contracts which are in fact used to hedge against financial risks but which do not fulfil these criteria.

Hedge accounting will be discontinued prospectively if the hedging instrument expires, is sold, terminated or exercised or hedging no longer fulfils the criteria set for the application of hedge accounting or its designation as a hedge is revoked. For this purpose, the

replacement or rollover of a hedging instrument into another hedging instrument is not an expiration or termination if such a replacement or rollover is part of the entity's documented hedging strategy. Additionally, for this purpose there is not an expiration or termination of the hedging instrument if as a consequence of laws or regulations or the introduction of laws or regulations, the parties to the hedging instrument agree that one or more clearing counterparties replace their original counterparty to become the new counterparty to each of the parties. For this purpose, a clearing counterparty is an entity that acts as a counterparty in order to effect clearing by a central counterparty.

6.8.2 Derivatives held for trading

The difference between interest received and paid on interest rate swaps held for trading is recorded in Net investment income in the income statement and the corresponding interest carried forward is recognised in Derivative contracts in the balance sheet. Changes in the fair value of derivatives held for trading are recorded under Net investment income in the income statement. Derivatives are carried as assets under Derivative contracts when their fair value is positive and as liabilities under Derivative contracts when their fair value is negative.

6.9 Hedge accounting

Hedge accounting is used to verify that changes in the fair value of a hedging instrument or cash flows fully or partially offset the corresponding changes of a hedged item.

The relationship between hedging and hedged instruments is formally documented. The documentation contains information on risk management principles, hedging strategy and the methods used to demonstrate hedge effectiveness. Hedge effectiveness is tested at the inception of the hedge and in subsequent periods by comparing respective changes in the fair value or cash flows of the hedging instrument and the hedged item. The hedge is considered highly effective if the change in the fair value of the hedging instrument or in cash flows offsets the change in the fair value of the hedged contract or portfolio or in cash flows within a range of 80–125%. Due, however, to the Interest Rate Benchmark Reform, if the real result of the retrospective effectiveness test is outside of the limits concerned, the central cooperative consolidated assesses whether hedge accounting can continue or be discontinued. This includes that hedging is still expected to be prospectively effective and the hedging relationship effectiveness can be calculated reliably. When assessing proactive effectiveness testing whether hedge is still highly probable, the reference rate will not be changed due to the Interest Rate Benchmark Reform. The effectiveness test also involves assessing any potential effects of market participants following the Reform on OP Corporate Bank's hedging relationship. OP Corporate Bank will stop applying the changes to hedging relationship effectiveness tests when uncertainty due to the Interest Rate Benchmark Reform ceases to affect cash flows based on reference rate of a hedged item or hedging derivative or when the hedging relationship ceases to exist. OP Corporate Bank applies hedge accounting based on IAS 39 and the related changes caused by the Interest Rate Benchmark Reform.

OP Financial Group has a Reference Interest Rate Committee tasked with monitoring the progress of the Interest rate Benchmark Reform and its effects on OP Financial Group and reporting the progress to the management on a regular basis. OP Financial Group has made a business continuity plan required by the Benchmarks Regulation that determines a substitute rate for contracts if the reference rates now used were no longer available and where the existing contract terms by product are identified and the effects on different parts of business are assessed. OP Corporate Bank will adopt new reference rates in new contracts, based on market practice. When it comes to the old portfolio of contracts, the changes will be implemented by adopting practices applied in the market to replace IBORs.

6.9.1 Fair value hedges

Fair value hedging against interest rate risk involves long-term fixed-rate debt instruments (such as central bank debt, own issues and certain term deposit issues), individual bond and loan portfolios, as well as individual loans. OP Corporate Bank applies a fair-value portfolio hedging model based on the EU carve-out version to hedging against interest rate risk involved in the derivative clause of certain loans, demand deposit current and savings accounts with an interest rate cap or a fixed interest rate. For these hedging relationships, the prepayment option related to the hedged item causes ineffectiveness only rarely. OP Corporate Bank plc uses interest rate options, forward exchange contracts and interest rate and currency swaps (OTC swaps) as hedging instruments.

For derivative contracts which are documented as fair value hedges and which provide effective hedges, the changes in the fair value are recognised in the income statement. Hedged assets and liabilities are also measured at fair value during the period for which the hedge is designated, and any fair value changes are recognised through profit or loss.

In fair value hedge accounting, changes in the fair value of the hedging instrument and the hedged item are recorded in the income statement under net interest income and net investment income. Any ineffectiveness that may arise from a hedge relationship may be caused by the timing differences between the cash flows of the hedging instrument and the hedged item, and it is correspondingly recognised in the abovementioned items.

When discontinuing hedge accounting, the carrying amount adjustment to fair value of the hedged financial instrument due to the risk to be hedged, to which the effective interest method applies, must be amortised to profit or loss by the financial instrument's maturity date. The adjustment is amortised based on a recalculated effective interest rate or using the straight-line method in portfolio hedges. However, if the hedged item during the discontinuance of hedging is derecognised, the fair value adjustment will also immediately be recognised in profit or loss.

The calculation principles of the Euribor changed during 2019. In July 2019, the Financial Services and Markets Authority (FSMA) of Belgium granted authorisation related to the Euribor by virtue of the European Union Benchmark Regulation. This made it possible for the market participants to continue using the Euribor after 1 January 2020, covering both the existing and new contracts. OP Financial Group expects that the Euribor will remain the reference interest rate in the future too because the Euribor panel could have been reinforced. The European Money Market Institute (EMMI), the administrator of the Euribor rate, began to publish the forward-looking €STR derivative market EFTERM rate (Euro Forward-looking term rate) during Q4/2022 for use as a replacement rate. The EONIA rate (Euro Over Night Index Average) ceased to exist on 3 January 2022, replaced by the €STR published by the ECB.

6.9.2 Cash flow hedges

A cash flow hedge is a hedge of the exposure to the variability attributable to a particular risk associated with variable-rate debt or other variable-rate assets and liabilities. In addition, cash flow hedges are used to hedge the future interest flows of the loan portfolio defined on the basis of reference interest rate linkage. Interest rate swaps are used as hedging instruments, for example.

Derivative contracts which are documented as cash flow hedges and provide effective hedges are measured at fair value. The effective portion of changes in the fair value of the hedging instrument is recognised in other comprehensive income. Any ineffectiveness that may arise from a hedge relationship may be caused by the timing differences between the cash flows of the hedging instrument and the hedged item, and it is recognised in net interest income in the income statement. Fair value changes recognised in equity are included in the income statement in the period when hedged items affect net income.

If the hedged cash flows are no longer expected to occur, the fair value changes from the hedging instrument are transferred from equity as an adjustment due to reclassification to profit or loss. In respect of revoked hedge designations, if the hedged cash flows are still expected to occur, accrued fair value changes will remain in equity as a separate item until the hedged cash flows affect the income statement if cash flows are expected to affect several reporting periods, the accrued amount will be amortised using the straight-line method.

OP Corporate Bank has assessed to what extent cash flow hedges are dependent on the uncertainty associated with the Interest rate Benchmark Reform on the reporting date. Hedged items and hedging derivatives continue indexing in respect of the reference interest rate that is not changed and whose quotations continue on a daily basis and whose cash flows are changed between counterparties as before. Using the USD LIBOR rate will cease in June 2023 and will be replaced with a new reference interest rate. The transition still involves uncertainty that may later affect the hedging relationship effectiveness or the assessment of the highly probable term. In respect of cash flow hedges, OP Corporate Bank does not see that the Reform would cause any uncertainty with timing or Euribor cash flows on the reporting date of 31 December 2022. OP Corporate Bank is prepared for the cessation of the USD LIBOR rate so that new USD LIBOR-linked contracts will not be entered into. OP Corporate Bank has a minor amount of USD LIBOR-linked balance sheet items and will replace the USD LIBOR contracts with new reference interest rates. Operating in the derivatives market after the end of use of the USD LIBOR will be based on market practice.

7 Intangible assets

Information systems are presented in the intangible assets group on the balance sheet. (Note 19. Intangible assets).

7.1 Information systems

Information systems are measured at cost less amortisation and any impairment losses. In general, computer software and licences are amortised over 4 years and other intangible assets over 5 years.

The development costs of internally generated intangible assets (software) are capitalised from the time when they can be determined reliably, completing the asset is technically feasible and the asset can be used or sold and it has been demonstrated that the software will generate future economic benefit. The capitalised expenditure includes, for example, licence fees, purchased services, other external costs related to projects and inhouse work. The asset will be amortised from the time it is ready for use. An asset that is not yet ready for use is assessed annually for impairment. Research costs are recognised as expenses for the financial year.

7.2 Cloud computing arrangements

In cloud computing arrangements, in other words Software as a Service (SaaS) or Infrastructure as a Service (IaaS), the software vendor has partial or full control over the software or service concerned, and OP Corporate Bank does not capitalise fees for software or services controlled by the vendor as intangible assets.

The development costs of a cloud computing arrangement, before its implementation, are recognised in prepayments under other assets. The amount capitalised in prepayments constitutes costs related to the implementation project and customisation that are performed by the service provider before the service provider is able to produce the service for OP Corporate Bank. Costs capitalised in prepayments are an integral part of the service and they are not separable from the service itself. Prepayment costs are spread over the contract period from the date when the service is ready for use.

8 Property, plant and equipment

Property, plant and equipment (PPE) assets are carried at cost less depreciation and any impairment losses. These assets are depreciated on a straight-line basis over their estimated useful lives. Land is not subject to depreciation. Subsequent expenditures are capitalised at the asset's carrying amount only if it is probable that the asset will generate greater economic benefits than initially estimated (Note 20. Property, plant and equipment).

The estimated useful lives are mainly as follows:

Buildings	20–50 years
Machinery and equipment	3–10 years
ICT hardware	3–5 years
Cars	5–6 years
Other PPE assets	3–10 years

The assets' residual value and useful lives are reviewed on each balance sheet date and adjusted as appropriate if expectations differ from previous estimates with respect to economic benefits. PPE assets are written off from accounting when they have gone out of use

8.1 Impairment of PPE and intangible assets

On each balance sheet date, OP Corporate Bank assesses whether there is any indication of an asset's impairment. If such indication exists, the amount recoverable from the asset will be estimated. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its future recoverable amount.

The recoverable amount is the higher of an asset's fair value less costs to sell (net selling price) or value in use. The recoverable amount is primarily determined on the basis of the asset's net selling price, but if this is not possible, the asset's value in use must be determined. The asset's value in use equals the present value of future cash flows expected to be recoverable from the asset.

If the asset's net selling price cannot be determined and the asset does not generate cash flows independent of other assets, the need for impairment will be determined through the cash-generating unit, or the business segment or its company, to which the asset belongs. In such a case, the carrying amounts of the unit's assets are compared with the entire unit's recoverable amounts.

An impairment loss is reversed if there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. The increased carrying amount of the asset may not exceed the carrying amount of the asset that would have been determined had no impairment loss been previously recognised.

9 Leases

At the inception of the lease, OP Corporate Bank assesses whether the contract concerned is a lease or contains a lease. It is the question of a lease treated under IFRS 16 if the following conditions are fulfilled in all respects:

- The contract is based on control over an identified asset in such a way that OP Corporate Bank or its employees have the right to decide on the use of the asset throughout the lease period when OP Corporate Bank is the lessee and the customer and its Group companies have decision-making powers related to the use of the asset when OP Corporate Bank is the lessor.
- The contract includes rights and obligations and related payments.
- The asset identified in the contract is used only by OP Corporate Bank or its employees when OP Corporate Bank is the lessee, and by the customer or its Group companies when OP Corporate Bank is the lessor.

9.1 Recognition of assets leased out

On the date of inception, OP Corporate Bank classifies leased out assets as finance leases or operating leases depending on the substance of the transaction. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incident to ownership to the lessee. All other leases are classified as operating leases. Lease classification is performed at the inception of the lease.

Assets leased out under finance lease are recorded as receivables from customers in the balance sheet. to the amount equal to the net investment in the lease. Finance income from the lease is recognised in interest income based on a pattern reflecting a constant periodic rate of return on the lessor's net investment outstanding in respect of the finance lease.

Assets leased out under operating lease are shown under property, plant and equipment and are depreciated on a straight-line basis over the lease term. Lease income is presented under other operating income and is recognised on straight-line basis over the lease term. The fixed duration specified in the contract is determined as the lease term in the leased contracts that may not be extended or terminated without a good reason or sanction.

9.2 Recognition of leased right-of-use assets

Leased right-of-use assets are presented in PPE assets and are mainly derecognised during the lease term. The corresponding lease liability is presented in other liabilities and the related interest expenses are presented in net interest income. Service charges related to leases, which are separated from the lease amount, are presented in other operating expenses. Separating the service charge is performed by right-of-use asset class.

For leased contracts, OP Corporate Bank defines the lease term as follows:

- a fixed term that cannot be extended or terminated without any good reason or sanction or
- based on management judgement, for a maximum of three years when it is the question of a property lease until further notice to which a mutual notice period applies. If the lease is fixed at first and is renewed to be valid until further notice as described above, the lease term is a combination of these. When such a lease has been terminated, the notice period is defined as the lease term. When determining the lease term, OP Corporate Bank assesses that it is reasonably certain that the lessee stays on the premises longer because the property based on the lease has a central location and no substitutive property is necessarily available.
- the lessor's notice period if it is the question of a lease other than a property lease until further notice to which a mutual notice period applies. The lease term will always be renewed with a new notice period after the end of the notice period unless the lease has been terminated. When determining the lease term, OP Corporate Bank assesses that it is reasonably certain that leases have been concluded for a longer time because terminating and renewing such leases would not be profitable or
- the useful life of the leased property if it is shorter than the lease terms defined in a matter mentioned above.

In calculating lease liability, OP Corporate Bank usually uses the incremental borrowing rate of the lessor. The interest rate quoted by the OP Corporate Bank Treasury is used as the incremental borrowing rate that Treasury uses to lend OP cooperative banks and OP Financial Group's subsidiaries.

OP Corporate Bank applies entry concessions allowed for lessors. Expenses of low-value and short-term leases for the financial year are recognised in other operating expenses. These leases include laptops, mobile phones and smaller devices and devices and machines leased on a one-time basis.

OP Corporate Bank applies IAS 36 Impairment of assets to determine whether the asset concerned has impaired. On every day at the end of the reporting period, OP Corporate Bank assesses whether there is any indication of impairment of an asset. If there is such indication, OP Corporate Bank will assess the asset's recoverable amount. An asset has impaired when its carrying amount exceeds its recoverable amount.

OP Corporate Bank's leased contracts are mainly those related to premises, company cars and safety devices (Note 21. Leases).

10 Employee benefits

10.1 Pension benefits

Statutory pension cover for OP Corporate Bank employees is arranged by Ilmarinen Mutual Pension Insurance Company. OP Corporate Bank provides its employees with supplementary pension cover through OP Bank Group Pension Foundation or an insurance company.

Pension plans managed by Ilmarinen Mutual Pension Insurance Company are defined contribution plans. Supplementary pension plans managed by insurance companies may be either defined benefit or defined contribution plans. All of the plans managed by OP Bank Group Pension Foundation are defined benefit plans.

Expenses arising from pension plans are recognised under personnel costs in the income statement. Contributions under defined contribution plans are paid to the insurance company and charged to expenses for the financial year to which they relate. No other payment obligations are included in defined contribution plans. Curtailing the defined benefit pension plan or fulfilling or changing the related obligation is recognised through profit or loss at the time of occurrence.

Defined benefit plans managed by insurance companies and OP Bank Group Pension Foundation are funded through payments based on actuarial calculations.

The liability recognised in the balance sheet in respect of the defined benefit plan is the present value of the defined benefit obligation on the balance sheet date less the fair value of the plan assets of OP Bank Group Pension Foundation and acceptable insurance.

Defined benefit obligations are calculated separately for each plan using the Projected Unit Credit method. Pension costs are charged to expenses over the employees' expected working lives on the basis of calculations performed by authorised actuaries. The discount rate for the present value of the defined benefit obligation is determined on the basis of the market return on high-grade corporate bonds on the closing date of the reporting period.

Items resulting from remeasurements of the net defined benefit liability are recognised in other comprehensive income in the period they occur. Remeasurements of the net defined benefit liability recognised in other comprehensive income will not be reclassified to income statement in later financial periods.

10.2 Short-term employee benefits

OP Corporate Bank has a short-term and long-term remuneration scheme in place. Those included in the scheme may receive bonuses either in cash only or as a combination of cash and a reference instrument decided by OP Cooperative's Board of Directors. Bonuses will be paid for work performed during the performance year. The maximum estimated amount under the remuneration scheme is calculated on the grant date and the amount charged to expenses is recognised in personnel costs and deferred expenses over the vesting period.

The amount of compensation corresponding to the objectives reached is reviewed quarterly. Any effects resulting from reviewing the original estimates are recognised in personnel costs in the income statement and the corresponding adjustment is made in accrued expenses and deferred income.

OP Financial Group has a personnel fund into which bonuses are paid on the basis of pre-agreed principles, depending on the achievement of OP Financial Group's targets. Bonuses transferred to the Fund are recognised under 'Wages and salaries' in the profit and loss account and the counterpart as 'Deferred expenses' in the balance sheet until they are disbursed to their beneficiaries (Note 9. Personnel costs).

11 Provisions and contingent liabilities

A provision is recognised for an obligation if the obligation is based on a past event and it is probable that an outflow of resources will be required to settle the obligation, but there is uncertainty about the timing or amount required in settlement. In addition, an entity must have a present legal or constructive obligation towards a third party as a result of past events. If it is possible to receive compensation for part of the obligation from a third party, the compensation is recognised as a separate asset, but only at the time when receipt of the compensation is actually certain. (Note 27. Provisions and other liabilities).

A contingent liability is a possible obligation arising from past events, whose existence will be confirmed only by the realisation of an uncertain future event beyond OP Corporate Bank's control. A present obligation which probably does not require fulfilment of payment obligation or the amount of which cannot be defined reliably is also considered as contingent liability.

12 Income taxes

Income taxes shown in the income statement include current tax, based on the taxable income of OP Corporate Bank, income tax for prior financial years and deferred tax expense or income. Taxes are recognised in the profit and loss except when they are directly linked to items entered into equity or other items in other comprehensive income. In such a case, the tax is recognised in the items in question. The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the companies operate and generates taxable income.

Deferred tax liabilities are recognised for all temporary differences between the carrying amount and tax base of assets and liabilities. Deferred tax assets are calculated on tax-deductible temporary differences between the carrying amount and taxable value included in the financial statements, and on losses confirmed for tax purposes. Deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Deferred tax assets are not recognised insofar as taxable profits are not likely to be generated against which taxable losses or refunds can be utilised. Deferred tax assets and liabilities are measured at the tax rate that is expected to apply to the period when the asset is realised or the liability is settled, based on tax rates enacted or substantively enacted by the balance sheet date (Note 23. Tax assets and liabilities).

13 Charges of financial authorities

OP Corporate Bank pays charges to various authorities. Responsibility for banking supervision rests with the European Central Bank. The Finnish Financial Supervisory Authority is responsible for macroprudential supervision and supervision of conduct of business. The EU's Single Resolution Board (SRB) is responsible for bank resolution. The financial authority charges and fees are in full recognised under other operating expenses at the beginning of the year (Note 11. Other operating expenses).

13.1 Stability contribution

Stability contributions will be paid to the euro-area Single Resolution Fund (SRF) until 2023 in such a way that the target of at least 1% of the amount of covered deposits will be reached. The SRF is managed by the Single Resolution Board which also determines the amount of stability contributions. The SRF ensures that the financial industry, as a whole, finances the stabilisation of the financial system. The stability contribution is determined based on the bank's importance and risk profile.

13.2 Deposit guarantee contribution

Amounts contributed to the former Deposit Guarantee Fund currently exceed the EU requirements governing the deposit guarantee level. By virtue of its rules, the former Deposit Guarantee Fund takes charge of the deposit guarantee contributions payable by its member banks to the new Deposit Guarantee Fund in proportion to which each member bank has made contributions to the former Deposit Guarantee Fund over the years. The Financial Stability Fund determines the contribution for each member bank but charges the amount directly from the former Deposit Guarantee Fund. The deposit guarantee contribution had no effect on OP Corporate Bank in 2021 and 2022 in terms of expenses.

13.3 Financial Stability Authority's administrative fee

The administrative fee charged by the Financial Stability Authority is based on the same calculation method as the supervision fee charged by the Financial Supervisory Authority.

13.4 Financial Supervisory Authority's supervision fee

The supervision fee charged by the Financial Supervisory Authority comprises a relative supervision fee, which is based on an entity's balance sheet total, and a fixed basic fee.

13.5 European Central Bank's supervisory fee

OP Corporate Bank is supervised by the European Central Bank (ECB).

14 Government grants

Government grants mean support by which resources are transferred to an entity that has followed or will follow certain conditions related to its business in consideration of the support. Benefit that is received at an interest rate lower than that for the market interest rate of the public authority for the loan is treated as a government grant. The benefit lower than the market interest rate for the loan must be determined based on the difference between the loan's original carrying amount and received payments. However, government grant will be recognised only when it is reasonably certain that the entity fulfils the related terms and condition and that the grant will be given. Grants related to income are reduced from respective expenses in the financial statements and are recognised through profit for the periods when the expenses are recognised as expenditure that the grant is meant to cover.

15 Upcoming amendments to standards

Amendments to IAS 1, IAS 8 and IAS 12 took effect on 1 January 2023. The amendments will not have any significant effect on OP Corporate Bank's financial statements.

Note 2. OP Corporate Bank plc's Risk Appetite Framework

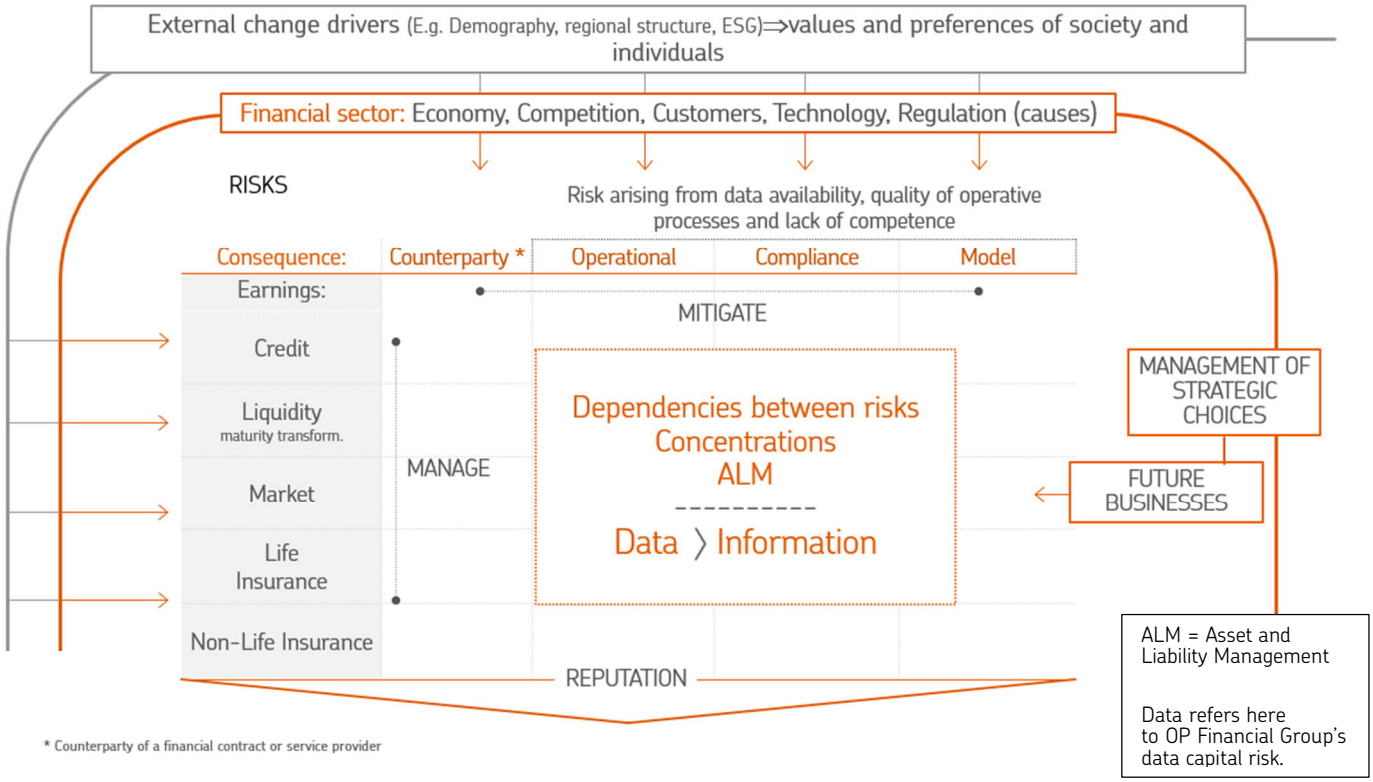
1 Overview of OP Corporate Bank's significant risks

OP Corporate Bank's independent Risk Management function forms part of OP Financial Group's centralised Risk Management in organisational terms. OP Financial Group prepares its Risk Appetite Statement and Risk Appetite Framework to cover all operations and these general risk management principles are further specified for each revenue logic (by product and service). The bases for establishing revenue generation models include services provided to customers, processes needed in the production of services, analyses reporting of operations and what risks will be caused to OP Financial Group by providing these services.

Due to the characteristics of OP Financial Group's business and industry, risks have two distinct fundamental principles: OP Financial Group may earn revenue through risks (earnings risks) or risks may be a consequence of something (consequential risks). Reviewing earnings risks involves the examination of OP Financial Group's critical success factors from the business perspective. For this reason, OP presents the sources and management of earnings risk in detailed descriptions of significant risks by revenue logic, except for Group-level risks that apply to all revenue logics. Because the majority of consequential risks are Group-level ones and because the review of consequential risks focuses on reducing the negative effects of potential risk materialisation, these risks are grouped in the more detailed descriptions of significant risks at Group level. The graph below shows a summary of OP Financial Group's significant risks and their sources. The sources and root causes of significant risks are presented in shaded grey and orange in the periphery of the figure's table. Similarly, the negative effect of the potential materialisation of risks on OP Financial Group's trust and reputation is also described outside the table.

It is highly important to note the following in the graph's table:

- Taking earnings risks may cause consequential risks in addition to the sources and causes of OP Financial Group's external risks.
- The combined effect of earnings and consequential risks may result in new Group-level risks, due, for example, to concentrations and interdependencies between risks.
- Due to the different functions of earnings and consequential risks, OP Corporate Bank primarily aims to manage earnings risks, whereas it primarily aims to reduce consequential risks.



Banking's revenue generation models are used at OP Financial Group level in both the Retail Banking business segment and the Corporate Banking business segment. They are grouped into three revenue logics within risk management: Banking through the balance sheet, Markets and Asset Management. Under OP Financial Group's segment division, the revenue logic, Banking through the balance sheet, is further divided between Banking, Retail Banking, and Group Treasury (included in other operations according to OP Financial Group's segment division). Life and Non-life Insurance revenue logics belong to the Insurance business segment.

OP Financial Group's risk management and compliance are based on the principle of three lines of defence. The first line of defence comprises business lines, the second line of defence comprises the Risk Management function and Compliance independent of the business lines/divisions and the third line of defence comprises Internal Audit. Each line of defence has its own role in performing the risk management process efficiently.

At OP Financial Group, the first line and the second line of defence in risk management cooperate on an ongoing basis. This is to ensure that all expertise needed to develop and manage operations is in use in advance. The lines of defence build the risk management process together where the special features of OP Financial Group's business are taken into consideration. Responsibilities of the first and second lines of defence have been clearly divided.

- The business units fulfil OP Financial Group's strategy, are responsible for planning their own operations and their efficient and effective implementation and for their internal control. Only the business concerned makes business decisions and is responsible for the quality of its customer service, its business continuity as well as its earnings and risks.
- For consideration by OP Financial Group's management, the second line of defence prepares a risk management framework within the limits of which the first line of defence implements risk-taking and risk management related to its daily business. The second line of defence supports the first line of defence by consulting it and constructively challenging especially in matters that are part of its own expertise. The second line of defence also oversees compliance with regulation and OP Financial Group's guidance framework; independently analyses the balance between earnings, risks and capital and liquidity acting as buffers; and ensures business continuity during incidents.
- Internal Audit that is independent of other lines of defence acts as the third line of defence.

2 OP Corporate Bank's significant risks – sources and management

2.1 Definitions and sources of significant risks

Below is a summarised description of the definitions and sources of OP Corporate Bank's significant risks.

Credit risks	Credit risk refers to the risk of a contracting party to a financial instrument being unable to fulfil its contractual repayment obligations, and thereby causing a financial loss to the other party.
Liquidity risks	A liquidity risk is the risk of liquidity or capital availability being insufficient to realise business goals as laid down in the strategy. It is caused by the timing of incoming or outgoing cashflows (payments) and/or imbalances between them. Liquidity risks include concentration risk, market liquidity risk and refinancing risk. Concentration risk is caused by the concentration of financing across time, or between certain counterparties or instruments. Market liquidity risk is the risk of failure to execute market transactions within a desired time and/or at an estimated price, or of a contraction in the liquid assets owned by a bank. Refinancing risk involves the risk that a debt cannot be refinanced on the market.
Market risks	Market risk refers to an unfavourable change related to the value of a contract or contract revenue due to price changes observed in the financial market. Market risks include interest rate, currency, volatility, credit spread, equity and property risks associated with on- and off-balance sheet items as well as other potential price risks.
Counterparty risks	Counterparty risk refers to the risk that a party to a derivative contract, repurchase agreement (Repo), trade or reinsurance contract will fail to fulfil its financial obligations, accompanied by a risk of growing costs due to obtaining a corresponding, replacement contract. A special feature of counterparty risk is a change in the risk level alongside the agreement's market value, due to which contractual risk can grow after an agreement is made.
Operational risks	Operational risk is caused by all business operations and may result from insufficient or incorrect practices, processes, systems or external factors. OP Financial Group's operational risks also include ICT and security risks. Operational risk related to data capital means potential losses, loss of reputation or deterioration of operations caused by uncertainty in decision-making, management and reporting related to data and the information derived from it.
Compliance risks	Risks caused by non-compliance with external regulation, internal policies, appropriate procedures or ethical principles governing customer relationships.
Model risks	Model risk refers to potential losses or loss of reputation caused by decisions made on the basis of the results of models, due to errors made in the development, implementation or use of such models. In this context, a model is a method used to translate source data based on mathematics, statistics and expert assessments into data guiding business decisions or quantitative data related to financial position or risk exposure.
Reputational risks	This is the risk of a weakening in reputation or trust, primarily due to the simultaneous realisation of an individual risk or several risks, or to some other kind of negative publicity.

Concentration risks	Risks that may arise due to a business having an excess concentration of risk in individual customers, products, lines of business, maturity periods or geographical areas. Concentration risk can also arise due to a concentration of service providers or processes.
Risks associated with future business	Risk associated with the conditions and volumes on which similar or entirely new agreements are based. This also includes a risk that arises from inadequate internal reaction and inflexibility in the business and competitive environment, or changes in the values of customers or in technology.

Risks associated with future business are not dealt with as a specific whole because risks associated with future business may emerge in the form of various significant risks and counterparty risks emerge as part of various risk types.

Customer behaviour risk may materialise in several risk types (the impact of a change in customer behaviour affecting matters such as the volume of deposits or early repayments of contracts).

Residual risk is a lingering risk which a party cannot or does not want to eliminate, or that remains after possible risk reduction measures. Residual risk can be considered synonymous with risk. As such, residual risk is not an equivalent concept to the significant risks described above. Instead, residual risk can be considered to apply to any of the significant risks described above.

Integration of ESG factors as part of risk management

Change factors in the business environment, such as climate change and other sustainability (ESG) factors, have an impact on the needs and preferences of customers and other social actors. ESG factors are external megatrends, that is to say examples of root causes on OP Financial Group's risk map. They are defined as change factors affecting different risk types, not as separate risks, in risk identification processes.

Within OP Financial Group, such external risk factors are analysed to identify their impacts on OP's and its customer's operations, and future short and long-term success. Drivers of change in the business environment are channelled into financial risks in the Group's banking and insurance business through various impact chains. Impacts can be direct – or indirect as in credit, market, operational and reputational risk.

Like other changes and risk factors in the business environment, ESG factors include risk evaluation. The possible environmental and reputational impacts of risks must be evaluated in addition to financial impacts.

Reputational risk could affect OP Financial Group or the entire financial sector, for example as a result of changes in public opinion or customer preferences. Good governance and compliance with guidelines affect the reputational impact of OP Financial Group's operations. OP Financial Group's responsible approach to business fosters a positive public image.

For the time being, risk evaluation of ESG factors is focused on assessing events and impacts caused by climate and environmental factors. Worsening climate change and environmental damage create physical risk factors:

- Acute risk factors include extreme weather conditions such as events related to drought, floods and storms or, for example, an individual environmental catastrophe.
- Longer-term changes emerge more slowly: examples include global warming, rising sea levels, reduction in biodiversity, land and water pollution, and the destruction of living environments.

The transition towards a low-carbon and more environmentally sustainable economy will have direct and indirect impacts: climate or environmental policy decisions, technological development, market confidence, and changes in consumer choices.

Physical and transition risks will impact on OP Financial Group's business and financial success through stakeholders, in particular. If they materialise, such risks may affect the risk profile, capitalisation, liquidity and continuity of daily business in various ways. The Group draws up scenarios to reveal the effects of such potential shocks.

The integration of ESG factors in all risk taking, risk management and processes for evaluating the adequacy of capital and liquidity (ICAAP, ORSA and ILAAP) require extensive development work within business functions and assurance functions. ESG factors are being embedded in the management's risk reporting in stages, while seeking synergies with external sustainability reporting. As with other risks and risk factors affecting OP Financial Group, the inclusion of ESG factors in the limit system is evaluated at least annually during the updating of OP Financial Group's Risk Appetite Statement and risk policies. In addition to the Risk Taking and Risk Appetite Framework, this fulfils the risk-taking and risk-management goals of OP Financial Group's sustainability programme.

Because keeping up with rapidly developing ESG regulation can be challenging, there is a greater risk of failure to comply with regulations on time. Development takes the most forward-looking account possible of regulatory adjustments and supervisory expectations. The rapid pace of research and keeping up to speed with the latest knowledge are additional challenges.

Management of operational risks

All companies in OP Financial Group must comply with shared operational risk management methods, which include the application of approaches to compliance and model risk management. ESG factors are a fixed element of operational risk identification and assessment, which enables monitoring of the risk profile in relation to OP Financial Group's operational risks, including a breakdown between ESG factors and the resulting risks.

ESG factors and the resulting operational risks are identified and evaluated through operational risk management methods: risk events, risk and control self-assessments, risk assessments of new and modified products, and management of continuity and outsourcing. Identification of the causes and effects of risks lies at the heart of risk identification and assessment. Possible environmental and reputational impacts are identified in addition to the financial impacts of risks.

In their continuity management, OP Financial Group's businesses must also prepare for the materialisation of physical risks caused by climate and environmental factors, in order to secure their services for customers if such circumstances materialise. Securing business continuity covers matters such as the efficiency and systematic nature of operational processes, which also include outsourcing management and knowledge of service providers.

Stress testing and scenarios related to operational risks complement the overall risk analysis and fulfil the economic capital requirement. Scenarios are used to forecast and prepare for different situations. They supplement overall operational risk management, particularly in cases, such as climate change, where the available historical data cannot be used for forecasting purposes.

Economic impacts caused by ESG factors are covered by existing operational risk limits.

Means such as training investments are used to provide business functions with more advanced skills to ensure the identification of ESG factors, and their causes and effects, as part of operational risk management. It is also critically important to identify transition risks and react to them proactively.

Data governance and management

Requirements derived from the ESG factor for data governance and data are implemented as part of OP Financial Group's current models and practices. Such requirements are integrated with practices, and customer service and operational processes, in such a way that they form a natural part of the Group's activities. They are recognised in relation to data governance and acquisition, and the resulting changes are integrated with existing operating models and services.

Credit risk management

In credit risk management, the key issue is to assess the impact of climate, environmental and other ESG factors on customers' operations and success, and their repayment capacity.

In addition to making it difficult to operate in some sectors, external change drivers may provide opportunities. For example, climate change could weaken profitability in one sector due to changes in customer behaviour, lower collateral values in some areas, and cause higher than predicted growth in regulation-related costs. On the other hand, it could also create more favourable conditions for, and boost the competitiveness of, some customers' businesses.

At customer level, risks are managed by providing customers with advice and monitoring how the customer relationship develops. Pricing is based on risks. The ESG projects and/or investments to be financed must be financially sustainable. Fostering customers' success ensures that the Group's business remains profitable in both the short and long term, and that operational risk buffers are sufficient for capital and liquidity. By providing customers with advice, the Group seeks added value that improves customers' financial standing and wellbeing.

Corporate customers are classified into ESG classes based on industry exposure to ESG categories. If an ESG category and the total exposures of a group of connected customers are significant, an ESG analysis will be performed. The need for an ESG analysis is assessed whenever new credit is granted to a customer, a proposal is being prepared to change a current exposure, or another, equivalent proposal related to a financial decision is being drawn up. The ESG score is used in loan decisions. We document it and prepare to report the ESG exposure of our customer base and decisions.

Credit risk stress testing methods should be developed in such a manner that impact analyses of macro shocks lead to concrete conclusions about developments in the financial situation of customer companies (including EBITDA and equity ratio), while taking account of climate and environmental factors such as energy consumption. In addition, customer-specific sensitivity analyses are performed based on the customer's income statement and the location of collateral property. This enables recalculation of customer companies' credit rating and reporting – based on a customer-specific analysis – on how stress impacts on the Group's corporate loan portfolio. It also complements assessment of the economic capital need and the collateral eligibility of receivables, while account for the impact of climate and environmental change.

Management of interest rate risk in the banking book and liquidity risks

ESG factors can impact on market interest rates and credit spreads. Risk management reviews primarily focus on the liquidity buffer with regard to managing the interest rate risk in the banking book and liquidity risk. Financial impacts are assessed using regular scenarios that take account of climate and environmental factors. The impacts are not thought to be significant in the case of notes and bonds acquired for the portfolio.

Investment of the liquidity buffer is guided by the investment plan, based on which an own allocation target for responsible investments was set for the portfolio up to the end of 2022. From then on, no separate allocation target for responsible investments will be set but responsible investments will be made in such a way that tools, methods and practices adopted in OP Asset Management are integrated as part of the investment process of the liquidity buffer. Responsible investments are made by acquiring bonds classified as green (sustainability bonds, social bonds and green bonds). Investment of this kind could be investing in assets with positive social impacts, such as an energy-efficient hospital that takes account of environmental aspects (sustainability bonds). Taking account of climate and environmental factors involves, say, investing in the green residential buildings sector. Investments of this kind must also fulfil all other requirements set for liquidity buffer investments.

Corporate Banking's bond portfolio is based on ESG analyses by Corporate Banking. The portfolio primarily involves investment in companies that are important to OP Corporate Bank – credit and ESG analyses are performed on such companies. Investment decisions for the portfolio comply with OP Corporate Bank's corporate responsibility principles.

Markets

Markets aims for fast turnover in its management of the bond portfolio; the portfolio's structure reflects the demand present from time to time. The portfolio tends to be heavily weighted towards bonds issued by Nordic companies. ESG factors can have an impact on the credit spreads of bonds, even if this impact is regarded as minor.

Markets engages in FX trades and may hold uncovered risk positions on these, accounting for a small proportion of such trades. ESG factors seem to have no significant impacts on currency risk.

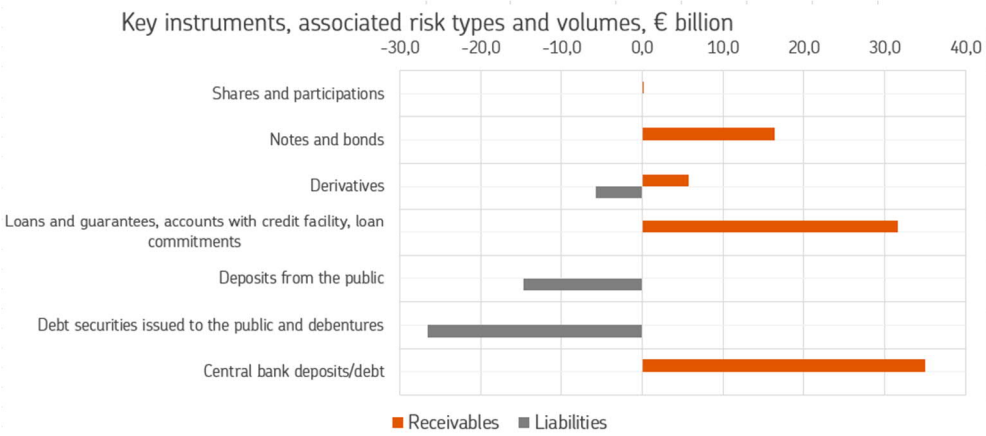
Markets produces structured investment products that are offered through the Group's sales channels. Selection of the underlying asset is a key element of such products. Asset Management's list of exclusions is applied to underlying assets – companies on the list are not selected for such investments.

Markets' clients mainly agree on derivatives for hedging purposes, in which the key risk is market interest rates. Based on underlying assets, the derivative service concerns brokerage, which does not normally lead to market risk and involves little counterparty risk. Risks associated with trading in commodity derivatives are covered on the market. ESG factors have no identified impact on market risk associated with derivatives.

In the case of Markets' activities, the economic capital need covering ESG factors must be assessed through stress tests, primarily regarding interest rate movements and, if necessary, credit spreads.

Key instruments and risk types

The graph below describes risk types associated with key financial instruments and illustrates the significance of risk types by means of the balance sheet values of each financial instrument (31 December 2022).



	Credit	Market	Operational	Liquidity
Shares and participations		x	x	x
Notes and bonds	x	x	x	x
Derivatives	x	x	x	x
Loans and guarantees, accounts with credit facility, loan commitments	x	x	x	x
Deposits from the public		x	x	x
Debt securities issued to the public and debentures		x	x	x
Central bank deposits/debt		x	x	x

2.2 Credit risks

OP Financial Group manages its credit risk through the Group-level guidelines and principles, and quantitative risk limits. These are specified in Banking risk-taking policy lines, limits and threshold values, qualitative and quantitative targets, as well principles governing customer selection, collateral and covenants. Quantitative and qualitative target levels balance out the business targets and moderate risk appetite. Limits and threshold values set maximum limits for risk-taking. These help to ensure sufficient diversification of the loan portfolio, while avoiding the emergence of overly large risk concentrations.

Credit risk management is based on careful customer selection, active customer relationship management, good knowledge of customers, strong professional skills and comprehensive documentation. The day-to-day credit process and its effectiveness play a key role in the management of credit risks. Credit risk is also managed through selection of the range of products and product terms and conditions. Risk associated with new lending is managed through well thought-out customer selection and the avoidance of risk concentrations. In addition, techniques are used to reduce credit risks (collateral and guarantees) and active use is made of covenants. Managing risk associated with the loan portfolio is based on good customer relationship management and the proactive and consistent management of problem situations.

The customer's sufficient repayment capacity is a prerequisite for all lending. Creating a group of connected clients properly provides a foundation for credit risk management. Without a clear picture of which parties constitute the group, what the structure of the group is like and what its repayment capacity comprises, it is not possible to get a true picture of the group and understand the risk involved in lending to it. Each business identifies the group of connected clients and their interdependencies and describes them in OP Financial Group's systems.

Sufficient up-to-date information must be collected for assessing the creditworthiness of customers that pose a credit risk. Creditworthiness comes from the customer's willingness to pay and repayment capacity. They both affect the customer's rating grade. Sufficient and correct basic information is used to ensure that the customer can be rated with a correct credit rating model, and that the rating grade gives a true picture of the customer's creditworthiness risk. Each business ensures that its customers' rating grades are constantly valid and up to date and, if necessary, updates the grade if the customer's situation changes. This is how the loan portfolio of the bank concerned and the entire OP Financial Group can be monitored on a real-time basis.

Collateral management is based on an independent collateral assessment, the validity of pledges and the realisability of collateral, enabling us to continuously maintain a realistic view of hard collateral securities used to secure receivables. The values of assets pledged in security of receivables must give a true and real-time picture of the collateral position related to the loan portfolio as well as individual customers. The financial standing of the collateral asset owner must be considered when valuing collateral securities. The weaker the asset owner's financial standing, the greater the weight of the realisation value must be when estimating the collateral asset.

Financing decision-making is based on the principle of segregation, based on which the person preparing financing may not make the financing decision alone. Because financing decisions are risk-taking decisions, those making such decisions must have all the relevant information. All credit risk decisions are made on a business-specific basis. Decision-making is guided by OP Financial Group's Risk Appetite Statement (RAS) and the target risk profile specified in the risk policy. Decisions that deviate from the target risk profile specified in the risk policy must be explained on a broader basis. The central cooperative's Risk Management function assesses key financing projects' compliance with the risk policy and provides the managements of OP Financial Group and Group banking entities with a situational picture of such compliance.

OP Corporate Bank's senior management and management body closely monitor OP Corporate Bank's credit risk exposure. OP Corporate Bank's management is responsible for keeping the members of the management body informed if the bank's operational risk-taking deviates from the risk policy approved by the management body. This allows the Board of Directors, as its role requires, to monitor the trend in the bank's risk exposure and, if necessary, issue instructions to senior management on risk-taking.

From OP Corporate Bank's perspective, credit risk materialises in a situation where the customer becomes insolvent and cannot fulfil its credit obligations without the bank taking measures, such as realising collateral. It is therefore important that customers whose repayment capacity has weakened, or become subject to a significant threat, are promptly identified in both the financing process and the customer relationship management process.

Customers that are most significant to OP Corporate Bank and whose risk of default has clearly increased, or whose repayment capacity is subject to another significant threat, must be placed under special control. For these customers, the bank must prepare an action plan on what measures should be taken to resolve the customer's situation from the bank's perspective, and to minimise the possibly materialised risk to the bank. The monitoring and documenting of customers in potential or actual default is more intensive and extensive than the documentation of less risky customers, to ensure that the bank is actively aware of changes in the customer's situation and can react immediately if necessary.

Measuring credit risk

OP Financial Group measures credit risk using the ratio of economic capital need for credit risk to exposures at default, the ratio of non-performing receivables to the loan and guarantee portfolio, and the ratio of expected credit losses to the loan and guarantee portfolio. The proportion of corporate exposures in different rating grade baskets, and the average rating of corporate exposure, are also measured. The risk policy sets limits for these metrics. In addition, loan portfolio concentrations are monitored by customer, industry and country. OP Corporate Bank also measures the growth differential of the loan portfolio and credit risk economic capital, to ensure a balance between growth and risk-taking. Limits derived from Group-level limits have been set for the business segments engaged in banking.

Limits set in the risk policy can be supplemented with qualitative targets set in the operating instructions of each segment. These targets may be segment or entity-specific. Targets may be set for the entire loan portfolio or separately in relation to personal or corporate customer financing. It is also possible to set targets measuring the quality of the credit risk process.

Customer segmentation is used to manage the loan portfolio, in order to ensure sufficient diversification of the loan portfolio and efficient capital allocation. To enable a coordinated risk policy, customer segments have been defined so as to ensure that each segment's receivables are homogenous in terms of credit risk. By utilising segmentation and the breakdown by rating grade, the loan portfolio target status is presented in the risk policy, which is not binding on the business unit concerned but the business unit should control credit risk-taking in such a way that the target state will be achieved.

OP Financial Group utilises internal credit risk models in risk assessment. In addition to the models used for assessing probability of default (PD), the Group uses models for predicting loss given default (LGD) and exposure at default (EAD) to measure credit risk. Exposure at Default (EAD) refers to the estimated amount of the bank's receivable from the customer at default. Off-balance-sheet exposures at default are determined on the basis of the conversion factor (CF). Loss Given Default (LGD) is an estimate of a financial loss incurred by the bank, as a share of EAD, if the customer defaults. Procedures based on model risk management are applied to the models used in credit risk assessment.

OP Financial Group's internal credit rating system

Rating means models, methods, processes, supervision, data collection and IT systems that support credit risk management, credit risk assessment, the assignment of exposures to rating grades or pools, and the quantification of default and loss estimates that have been developed for certain types of exposures. OP Financial Group's internal rating system applies to all Group entities. The Board of Directors of OP Cooperative considers and approves the credit rating principles as part of the Risk Appetite Framework document.

OP Financial Group uses an internal 16-level scale of A–F to assess the probability of default for its **personal customer** agreements, with F representing borrowers in default. The Group assesses monthly all personal customer agreements' PD using a loan portfolio rating model. The loan portfolio rating is based on a customer's basic data, payment behaviour and other transaction history data. Average PDs have been calculated for each rating grade for a period of 12 months.

For now, an application stage rating model supports the loan approval process, credit risk assessment and the pricing of new loans. OP cooperative banks and the Group's asset and sales finance solutions and unsecured consumer loans have their own application stage models.

The probability of default of **corporate customers** is assessed using the 20-level credit rating system on a scale of 1.0–12.0, with 11–12 rating grades representing customers in default.

The R rating for mid-size and large corporate customers is based on the company's financial indicators and qualitative background data on the basis of which a statistical model generates a proposal for rating. An expert familiar with the customer makes a rating proposal on the basis of the rating suggested by the model and of any other information available. Any changes and uncertainties relating to the future outlook will be regarded as warning signs and exceptions to the rating provided by the model. The rating grade is determined by the central cooperative's independent Risk Management, based on the rating proposal, at least once a year and, in respect of weak customers, on a half yearly basis.

Suomen Asiakastieto's automated rating model, Rating Alfa, forms the basis of small corporate customers' A rating. The rating Alfa variables include information on payment default and payment practices of the company and its persons in charge, key indicators based on financial statements and the customer's basic data. The rating Alfa risk scores and OP Financial Group's internal payment behaviour data resulting in default are used to generate OP Financial Group's rating grades that will be changed based on expert assessments, if need be. The banks must at least once a year assess the validity of the rating grade of A rated customers and they must assess customers with a low rating grade and those on the watch list on a half-yearly basis. Responsibility for the assessment rests with the bank in charge. The rating grade for the most significant A-rated customers is approved by the central cooperative's Risk Management.

Low exposure corporate customers are rated using a rating model for low exposures (P). The rating model is an automated rating model calculated on a monthly basis and derived from the customer's basic data, transaction data and payment behaviour data.

2.3 Liquidity risks

Identifying liquidity risks

OP Financial Group's Treasury and other business units plus Risk Management continuously identify and assess risks associated with funding and business and other business environment. In the risk assessment of new products, services, business models, processes and systems, every business unit must take account of liquidity risks, too. At least once a year, Risk Management and business representatives perform a comprehensive liquidity risk assessment to ensure that the capital adequacy assessment process (ILAAP) is appropriate and adequate in relation to the Group's liquidity risks.

Assessment and measurement

OP Corporate Bank assesses the future cash flows of receivables, liabilities and off-balance-sheet commitments based on the contract maturity date, repayment programme, expert assessments or statistical models based on customer behaviour history.

Structural funding risk is measured as the difference between cash inflows and cash outflows in different maturities. In addition, OP Corporate Bank calculates the regulatory Net Stable Funding Ratio (NSFR), which determines the amount of stable funding sources expected to span over one year in proportion to assets requiring stable funding.

From the perspective of the relevant authority, funding liquidity risk is measured using the Liquidity Coverage Ratio (LCR). The sufficiency of the liquidity requirement in terms of time is assessed though maturing items on the balance sheet, wherein agreements are not renewed but ended at maturity. Based on the economic perspective, OP Financial Group measures the sufficiency of the liquidity buffer through stress testing.

The Group measures funding concentration risk by calculating the amount of bond funding with a maturity of rolling 12 months and 3 months. In the time horizon of less than 12 months, OP Financial Group measures the total wholesale funding amount, comprising short- and long-term wholesale funding, for 3 months. When it comes to deposit funding, the Group monitors the concentration of the largest deposit volumes. Concentrations by counterparty and instrument are also subject to monitoring.

The central cooperative consolidated measures its asset encumbrance by proportioning encumbered assets to the aggregate amount of balance sheet assets and collateral securities.

Risk assessment and measurement methods related to liquidity buffer investments are described as part of market risks.

Liquidity stress testing

The adequacy of OP Financial Group's liquidity buffer and buffer items is assessed through various scenarios. OP Financial Group-specific and market-specific scenarios, as well as their combination, are used as stress scenarios. The scenarios must cover both short- and long-term stress conditions. When measuring member bank-specific structural funding risk, the liquidity requirement based on the regulatory stress scenario is counted as a deposit in Treasury on a bank-specific basis. A reverse stress test is used in connection with the Group's Recovery Plan. Senior management confirms the scenarios to be used, use and reporting of stress test results.

Funding plan

OP Financial Group's funding plan defines guidelines for wholesale funding for the next few years. In its funding plan, OP Financial Group must take account of its member banks' estimate of the funding need for years to come. Implementation of the plan is monitored regularly and the plan is updated, where needed, during the year. Deposit funding is primarily based on the business strategy and plan. The funding plan specifies the sources of wholesale

funding and presents how the Group covers its need for key wholesale funding sources in view of market depth and sufficient diversification. It also defines the related decision-making powers. The funding plan must also take account of unfavourable scenarios lasting several years and of abrupt changes in key funding items.

Non-euro liquidity management

OP Financial Group carries out non-euro funding due to the diversification of funding sources. Since almost all the Group's receivables are in euros, the Group mainly converts its non-euro funding into euros through derivative transactions in connection with an issue.

According to liquidity regulation, a non-euro currency is significant if non-euro liabilities account for over 5 per cent of the amalgamation's balance sheet total. The Group monitors significant currencies every month when it produces its liquidity report for the supervisor. Foreign currencies account for only a small proportion of the balance sheet and the liquidity risk due to currency availability has been minimised by the operating model.

Management of intraday liquidity

OP Financial Group's Treasury monitors intraday funding sources and anticipates and monitors the execution of intraday payments. It holds intraday funding sources at an amount that allows it to make payments due on the banking day.

Based on the liquidity contingency plan, the Group can raise its level of preparedness even if intraday liquidity is disturbed in order to ensure efficient operations in the case of an increased threat of a crisis.

Liquidity buffer

From the financial perspective, the liquidity buffer consists of deposits in the Bank of Finland and unencumbered notes and bonds eligible as collateral for central bank refinancing held by OP Corporate Bank. It also includes other notes and bonds marketable on the secondary market and unencumbered corporate loans eligible as collateral for central bank refinancing.

From the regulatory perspective, OP Financial Group's liquidity buffer consists of the liquidity buffer that fulfils the criteria for liquidity buffer requirement provisions (LCR buffer).

The Group's Treasury is responsible for preparing the investment plan at least once a year. The bond investments in the liquidity buffer held by the Treasury are included in it. OP Corporate Bank's Board of Directors approves the plan. The investment plan applies the restrictions and objectives set in OP Financial Group's Risk Appetite Statement (RAS) and Risk Policy for market risk, credit risk and funding liquidity risk. To the appropriate extent, the investment plan establishes a framework for testing the liquidity of notes and bonds.

OP Corporate Bank diversifies investments, for example, by product, counterparty and country, in view of both internal risk appetite and external regulatory requirements.

Collateral management and asset encumbrance

In this context, collateral securities mean OP Financial Group's assets used as collateral to fulfil liquidity needs, either in normal or stress conditions. Group Treasury monitors collateral on a centralised basis, and is responsible for its use and transfer.

Central bank operations and the derivatives business are the other main sources of asset encumbrance at OP Cooperative Bank. From the perspective of preparing for liquidity needs, OP Corporate Bank restricts asset encumbrance through the quantitative limits specified in its Risk Policy.

To increase liquidity potential, it is necessary to identify the eligibility of the balance sheet receivables as collateral and create readiness to use receivables as collateral.

Securing liquidity in stress conditions

OP Financial Group's liquidity contingency plan establishes a framework that safeguards the Group's ability to meet its payment obligations, even during a liquidity crisis. The plan provides well-defined operational guidelines and operating models for identifying an increased liquidity risk. It also steers OP Financial Group towards timely and appropriate measures for reducing liquidity risk, by ensuring efficient organisation and actions if the threat of a crisis grows. The contingency plan specifies control and monitoring practices for each liquidity level, which become more rigorous when moving up to the next level.

Furthermore, OP Financial Group's Recovery Plan includes liquidity management recovery measures.

Liquidity risk reporting

OP Corporate Bank reports liquidity risks to the management of OP Financial Group's central cooperative on a regular basis, switching to weekly or daily reporting if the liquidity preparedness level is raised. OP Financial Group companies report liquidity risks to their boards of directors regularly, applying at least the level which has been set for limits. As part of OP Financial Group's risk analysis, Risk Management reports quarterly to the Risk Committee, which operates under the central cooperative's Board of Directors, on liquidity risks.

Liquidity management and control within the amalgamation

Liquidity regulation as such is not applied to the amalgamation's companies. However, with the ECB's permission, OP Financial Group's central cooperative may give member banks special permission to deviate from the liquidity regulation. As the central institution of the amalgamation of cooperative banks, OP Cooperative has granted its member credit institutions special permission, under the Act on the Amalgamation of Deposit Banks. Pursuant to the Act, the liquidity requirements set for credit institutions mentioned in Part VI of the EU Capital Requirements Regulation are not applied to OP Cooperative's member credit institutions. Liquidity based on the regulation is subject to supervision and reporting at the level of the cooperative banks' amalgamation. To fulfil the prerequisite for granting special permission, the central cooperative gives the amalgamation's companies instructions on the risk management needed to secure liquidity and meet other qualitative requirements, and supervises compliance with these instructions.

The central cooperative senior management is responsible for organising OP Financial Group's centralised liquidity risk management according to liquidity strategy policy lines. It must ensure that management and supervision of the amalgamation's liquidity accord with the scope and quality of business, and fulfil regulatory requirements, at all times. In the sales control of borrowing and lending, the management pays attention not only to growth and profitability targets but also to liquidity features. Product development related to customer service must also aim to reduce risks associated with the liquidity and funding structure.

OP Financial Group's liquidity and wholesale funding plan and authorisations to raise capital on the financial markets are subject to approval by the Boards of Directors of OP Corporate Bank and OP Mortgage Bank. The central cooperative's senior management approves the Liquidity Contingency Plan which contains the control and supervision procedures of the liquidity status based on various threshold levels as well as funding sources.

As OP Financial Group's treasury, OP Corporate Bank plc is tasked with securing the liquidity of the entire Group and each OP cooperative bank or Group company. The Group places its entities' liquidity in its Treasury's cheque account with the Bank of Finland. This means that the Group always manages its overall liquidity position through the account on a centralised basis. OP Financial Group's Treasury is in charge of the Group's wholesale funding, manages the Group's short-term liquidity, maintains the liquidity buffer, manages the Group's minimum reserve on a centralised basis and is responsible for managing intraday liquidity risk. OP Corporate Bank manages on a centralised basis the Group's wholesale funding in the form of debt capital and equity capital, while OP Mortgage Bank manages wholesale funding based on covered bonds.

Based on the decision by the Board of Directors or a body it has authorised, Group Treasury may use the collateral securities in the entire OP Financial Group in a normal circumstance. In a severe liquidity crisis caused by money and capital market disruptions or by other reasons or in preparing for it the central cooperative's Board of Directors, or a body it has authorised, obliges the amalgamation's member banks to either sell loans to OP Mortgage Bank or to place part of their loan portfolio as collateral for the covered bond issued by OP Mortgage Bank through an intermediary loan. The amounts of the loans to be needed are based on the Group-level need and are determined for each bank. The decision may be put into practice based on a decision made by the central cooperative's Board of Directors or a body it has authorised. Member banks are committed to immediately executing any measures related to the decision.

Allocation of liquidity risk costs within the amalgamation

The costs of wholesale funding and liquidity buffer maintenance are allocated among member banks based on the matching principle adopted by the central cooperative senior management. The costs of liquidity maintenance are allocated through liquidity deposits and the costs of wholesale funding are allocated through the margin added to the base rate of OP Financial Group's loans/deposits, or through some other practice.

2.4 Market risks

Interest Rate Risk in the Banking Book (IRRBB) management strategy

The interest rate risk in the banking book is posed by retail banking transactions and the size of risk is affected by developments in customer credit and deposits. The interest rate risk in the banking book has been defined as one of OP Financial Group's significant risks.

The general principles for managing interest rate risk in the banking book are as follows:

- Senior management is responsible for arranging the management of interest rate risks in the banking book as part of OP Financial Group's banking activities, in line with the interest rate risk management strategy and grounded, stable and documented practices. Such methods must ensure that realisation of interest rate risk in the banking book (IRRBB) remains at Group level and within the limits set for each bank, and that the IRRBB is compliant with regulations.
- IRRBB limits set the size of interest rate risk at a level matching each member bank's risk-bearing capacity, taking account of each bank's deposit funding structure. This is particularly necessary if an attempt is made to increase net interest income using spreads between long-term and short-term interest rates.
- Member banks of the amalgamation manage interest rate risk in the banking book within the scope of the risk policy and limits, other guidelines and targets issued by the central cooperative, and the terms and conditions of accounts, deposits and loans. Member banks must understand how interest rate movements and customer behaviour affect net interest income and have sufficient expertise in the use of derivatives in order to manage interest rate risks related to products provided by the Group Treasury. As part of their annual planning, member banks prepare an ALM plan that includes a management plan for their interest rate risk in the banking book.
- Overall interest rate risk in the banking book (IRRBB) is monitored by the Group Treasury, and the Banking ALM Committee can provide member banks with recommendations on how to manage interest risk. Such recommendations can be binding.
- The central cooperative must ensure that, through centralised hedge accounting, the financial statements of the Group and its major companies take account of interest rate risk transfer, in accordance with the nature of businesses in question.
- Interest income risk metrics are used to assess changes in net interest income and present value risk metrics to measure changes in the value of on-balance sheet and off-balance sheet items over the entire term to maturity assumed for the contracts. The interest rate outlook must include an assessment of how changes in the general interest rate and the shape of the rate curve will impact on net interest income and the present value of balance sheet items.
- When measuring interest rate risk, account must be taken of optionalities included in assets and liabilities, so as to make their impact visible in future cash flows. The models' functionality is ensured in accordance with the model risk management principles.
- When measuring interest rate risk, equity capital items – equity capital, cooperative capital and retained earnings – are non-interest-bearing items which are placed on a timeline in accordance with the term structure set for them. In risk calculation, subordinated loans in own funds are treated in accordance with their contractual terms and conditions. In the case of Profit Shares, cash flows must be set in accordance with the customer promise in each case.
- Regular stress tests must be performed regarding interest rate risk. In particular, this involves testing any change in customer behaviour in relation to how credit, deposits and Profit Shares have performed historically as portfolios. Other changes in key business assumptions, such as the removal of zero floors for reference interest rates, must also be tested.
- The risk assessment procedure applied to OP Financial Group's new products, services, operating models, processes and systems must ensure that the requirements of interest rate risk management are appropriately described and taken into account when developing customer business.
- Economic capital is allocated for interest rate risk in the banking book in relation to interest rate risk.

Management of other market risks in Banking through the balance sheet

Other market risks associated with revenue logic arising from banking through the balance sheet are chiefly due to the management of OP Financial Group's liquidity buffer and OP Corporate Bank's portfolio of bonds.

OP Corporate Bank's Group Treasury manages OP Financial Group's banking liquidity buffer. The regulatory liquidity coverage ratio (LCR) determines the constraints on the size and allocation of the liquidity buffer. Alongside Group Treasury deposits, the liquidity buffer contains the liquidity buffer portfolio, and items in the liquidity buffer portfolio must conform to the regulatory creditworthiness and liquidity requirements. For this reason, the portfolio includes securities carrying a very low likelihood of credit losses materialising. Because these securities most often have fixed interest rates, their value varies depending on movements in market rates and credit spreads.

The liquidity buffer portfolio is monitored and managed using market risk management methods:

- The Banking risk policy determines the risk measurement methods and risk-taking limits, as well as other restrictions.
- An investment plan is prepared for the investment portfolio, describing the goals of investment activities and the principles of portfolio management. OP Corporate Bank's Board of Directors approves the investment plan.
- The Group ensures sufficient portfolio diversification by means of restrictions by issuer.

In addition, OP Corporate Bank invests in corporate bonds. OP Corporate Bank's bond portfolio is OP Corporate Bank's equivalent to lending. An investment plan is prepared for each portfolio, describing the goals of investment activities and the principles of portfolio management.

OP Corporate Bank manages equity and real estate risk in Banking primarily through instructions which strictly limit risk-taking. Real estate risk chiefly involves real property units used by OP cooperative banks. The current Banking business models do not call for an increase in equity or real estate risk.

If surplus liquidity emerges in an OP cooperative bank's customer business, it will be channelled to investment products provided by the Group's Treasury to support the implementation of the entire OP Financial Group's mission. Investment is not counted among the basic tasks of OP cooperative banks. In their social role, OP cooperative banks may invest in local private equity funds in their operating region. With their investments, the banks, according to their cooperative values, support prosperity in their region and economic activity in their region and among the bank's customer base.

In car dealer financing, OP Financial Group can offer products where the risk of the car's resale value at the end of the contract period is borne by OP Corporate Bank. If the actual selling prices are less than the estimate used in the pricing of the contract, revenue will be lower than targeted or a loss will be made. To manage risks, it is important to limit the financed assets so that their prices can be predicted and their realisation goes smoothly.

Risk management in Markets

OP Financial Group's trading in capital market products has been centralised in OP Corporate Bank's Markets function. This includes the price setting and market hedging of interest rate hedging products for loans granted by OP cooperative banks and OP Corporate Bank, separate interest rate hedges, foreign exchange trading, structured investment products, trading in bonds and commodity derivatives. The risks taken include market risks such as interest rate risk in different currencies, currency risk, volatility risk related to options, credit spread risks, and credit risks such as counterparty and issuer risks. Repurchases of structured investment products also generate a degree of equity risk. Markets is responsible for managing the Group's currency exposure and does foreign exchange transactions on the market according to needs. Markets manages risk exposures by actively trading on the market. Markets monitors risks and earnings on a daily basis. In addition, Risk Management reports Markets' risks to the Board of Directors' Risk Committee and the senior management, as part of OP Financial Group's risk analysis.

The Markets function is exposed to risks associated with liquidity and market liquidity. The risk associated with liquidity is due to secured derivative contracts' collateral requirements dependent on market values. This is managed as part of other liquidity management conducted by Treasury. The low market liquidity of some markets and products, general market liquidity weakening or technical malfunction on the part of the central counterparty may lead to a situation where the needed transactions cannot be executed at the expected price or following the selected hedging strategy is not possible. Regarding risks associated with the liquidity of markets, it is necessary to ensure that customers have been proactively informed of the consequences of any possible differing market situations. Furthermore, it is necessary to create preparedness to use, if needed, an alternative central counterparty to ensure the continuity of customer business.

Market risks taken by the Markets function are measured using the expected shortfall measure, as well as various sensitivity and nominal value metrics for specific products and positions. The impacts of market movements that are significant to the business are assessed via stress tests. This is important in order to understand the risks of rare market movements and those with a major impact. Economic capital need is calculated in relation to market risks taken by the Markets function. The risk policy sets limits and frameworks for business models. The risk policy is prepared in such a way that the risks are visible for each business model and any risk-taking that goes beyond the business model is tightly constrained.

Entering into derivative contracts gives rise to counterparty credit risk, which is managed by applying customer-specific limits. OP Corporate Bank's credit decision process decides on the limits. The counterparty risk posed by derivatives is included in the economic capital requirement related to credit risk. To take account of the risk, OP Corporate Bank adjusts the valuations of derivatives using Credit Valuation Adjustment (CVA and DVA). The size of the valuation adjustment is affected by the credit-risk-free valuation of derivatives, interest rates, volatility of interest rate options, exchange rates, and credit risk market price. Fluctuations in adjustments to the value of credit risk due to the valuation adjustment are mitigated by entering into derivative contracts.

Ownership of bonds and money market instruments causes issuer risks, which are limited using issuer-specific limits, or allocation limits on the corresponding limits used by the Markets function.

Some risks arising from interest-rate hedges for loans are transferred to Markets, which trades on the market to cover them. Risks associated with operations include interest rate and volatility risk. In some products, the forecast client behaviour has a significant effect on the pricing of the product and risk hedging. If, on the whole, the client's behaviour differs significantly from the predicted one, the realised client return may be lower or higher than expected and the risk position over-hedged or under-hedged. Client behaviour risk differs from market risks in that the risk cannot be hedged on inter-bank markets. Risk management is based on OP cooperative banks' client relationship management, real-time monitoring of client behaviour and the use of accumulated data in the development of forecast models.

2.5 Operational risks

Operational risk is a consequential risk caused by all business operations that may result from insufficient or incorrect practices, processes, systems or external factors. Operational risk may be shown in financial losses or other detrimental consequences, such as in terms of deterioration or loss of reputation or trust.

OP Corporate Bank's operational risks also include ICT and security risks, and risks related to data capital. Operational risks also include compliance and model risks, which have been categorised in separate, significant risk types due to their special features.

Operational risk management aims to ensure the efficiency and quality of key business processes and functions, as well as their continuity in abnormal circumstances. OP Corporate Bank's management is responsible for organising operational risk management according to the abovementioned goals and in view of the special features of each business.

Through operational risk management, the company's management ensures that the risks do not cause unforeseen financial losses or other harmful consequences. Due to the qualitative nature of operational risks, it is never possible to gain full protection against them, or to prevent their adverse effects in all cases. Operational risk management does not aim to eliminate risk in every case, but to mitigate risks, holding them at an acceptable level.

The key areas of business operations in terms of operational risk mitigation include:

- Clear organisational structures and well-defined responsibilities.
- Processes with designated owners who are responsible for the efficiency and quality of the processes, as well as regulatory compliance in accordance with the process owner's duties and responsibilities.
- Personnel who have the required competences and qualifications, and responsibilities and targets that are set and described clearly and communicated appropriately. The trustworthiness of staff (including external workforce) is ensured and assessed by internal control.
- Systematic fulfilment of internal and external requirements to manage security risks (prevent, observe, react)
- Permissions and authorisations to access data and ICT systems that are based on duties and limited to the data and ICT systems that the employee needs in their work. OP Corporate Bank's management is responsible for access rights management and control. This includes the definition and avoidance of toxic combinations of access rights.
- Ensuring that information and cybersecurity are adequate and up to date. Each business implements this, for example, through monitoring, systematic technical arrangements, daily monitoring measures and targeted information security audits.
- Verifying the accuracy of all data. The company's management is responsible for the usability, integrity, confidentiality and availability of data with the aid of technical and administrative measures, as well as for protecting data from unauthorised access and illegal or accidental information processing.
- Identification and categorisation of data repositories according to their criticality, in view of the confidentiality, integrity and availability of data. Responsibility for the categorisation and the required measures to protect the data rests with the data repository owner. A data repository is a set of data created for a certain purpose, such as an application with databases or a data set or table created for analytical purposes.

Operational risk management is based on continuous risk identification and assessments. Risk identification also takes account of forthcoming and emerging business risks, climate and environmental impacts, security threats and external requirements, and the required risk management methods are planned in a risk-based manner. Identification of operational risk also involves assessing the financial and other harmful consequences of risks, such as reputational impacts. OP Corporate Bank's management is responsible for identifying and assessing the risks associated with business processes, services and products and the ICT systems they involve, and for implementing the controls required to achieve an acceptable risk level and ensure process functionality and efficiency. The aim is to automate the controls to be implemented.

Continuous monitoring of realised risk events and near-miss events, and of operational risks and their causes and impacts, is an important part of operational risk mitigation. Stress testing and scenarios related to operational risks are used to supplement operational risk management and the assessment of capital adequacy.

Before any new or significantly modified products, services, business models, processes systems or outsourcings are launched at OP Corporate Bank, they must undergo risk assessment in accordance with procedures approved by OP Financial Group's central cooperative Risk Management. Each business is responsible for conducting the risk assessment procedure. Functions in the second line of defence can escalate decision-making on the introduction of new products if the related project is high-risk, important in principle, and the risks involved are new. OP Corporate Bank offers only products, services and business models to customers if they have been approved at Group level.

Because vital financial sector functions must continue to operate, even when the critical functions of society are under threat, OP Corporate Bank's primary business continuity management goal involves ensuring the continuity of functions vital to security of supply in various incidents. Such functions are important to OP Corporate Bank's operations as well as to society. Each party in charge of vital functions is also responsible for ensuring that the related continuity management is sufficient and up to date.

The outsourcing of functions is aimed at improving the achievement of OP Financial Group's strategic and operational goals and competitiveness. An external service provider must have practices consistent with OP Financial Group's values and ethical principles. To secure OP Financial Group's key success factors, management decisions, the planning and development of key processes, requirements specification and the performance of functions performed inhouse as required by regulation will not be outsourced to outside of OP Financial Group. When it comes to the outsourcing of significant functions, the outsourcing company must retain key competencies so that the outsourced function can be transferred to the other service provider within an appropriate time, transfer back within OP Financial Group or discontinue the outsourcing arrangement.

Responsibility for an outsourced function always remains with the outsourcing company. The outsourcing company at OP Financial Group is also responsible for compliance with legal requirements and the requirements of the supervisory authority, as well as for the Group's practices and for management and supervision of the outsourced function. OP Financial Group's Outsourcing Management Policy and the related guidelines provide further details on the management of outsourcing.

In addition to the standardised procedures for managing operational risks and the means of managing individual risks, companies within OP Financial Group can transfer the impacts of materialised operational risks outside of the company and OP Financial Group by taking out insurance.

OP Financial Group's operational risk management framework is divided into backward-looking (e.g. operational risk events), current situation based and proactive procedures (risk and control self-assessment, business continuity management, and RCSA regarding new products). The central cooperative's Risk Management is responsible for OP Financial Group's operational risk management framework, its maintenance and development, and issues more detailed instructions on operational risk management procedures followed in OP Financial Group. Risk Management maintains a shared risk library system for identifying operational risks at OP Financial Group, which it reviews regularly to ensure that it is comprehensive and up to date.

OP Financial Group manages the control, responsibilities, supervision and development of security by means of the Corporate Security Principles, which are approved by the Board of Directors of OP Cooperative and which enable coherent Group-wide security work. The principles and derived guidelines constitute the corporate security governance model.

OP Financial Group's management of security risks and security work seeks to foster a culture of security throughout the organisation, and to develop and maintain the desired security level by focusing on preventive measures and the effective management of threats and incidents. In threatening situations, ensuring personal security is always the primary goal, while protecting property and data remains a secondary goal.

The management of ICT risks aims to ensure the security, availability and quick recovery of ICT infra and vital data communications and systems that form part of and support business processes, during incidents. Each function is responsible for ensuring that the aforementioned goals are also realised in relation to outsourced ICT services.

OP Financial Group uses a centralised cybersecurity governance model to manage, supervise and report on cyber security. The Cyber Security organisation provides more detailed procedures and operating instructions on implementing and ensuring information security within the Group and managing any data security breach situations The cybersecurity operating instructions are policies which guide the Group's activities and which must be complied with in all our work, whether the Group is developing or procuring new systems and solutions. OP Financial Group's Cyber Security function is in charge of managing any deviations from these instructions, and of the related guidelines. The central cooperative consolidated's Cyber Security organisation provides OP Financial Group's Group Executive Management with regular reports on situations that have threatened the Group's information security and data protection.

Data capital risk

OP Financial Group's data capital consists of all data in its various forms as held by the Group. The value of data capital is based on its business usability, efficient risk management and, ultimately, its productivity in financial business. Risks related to data capital are identified and assessed as part of operational risk management and the related procedures.

The reliability of risk management processes is dependent on data produced by business processes because risk analyses, indicators and scenarios are in part or in full produced based on this data. Consequently, data and the information derived from it are an inseparable and multifaceted production factor in all financial services business, known as data capital. Risk associated with data capital applies equally every risk area.

Data capital risk materialises when business has to be managed based on information that involves uncertainty. Then preparing for business risk may be excessive, which may lead to financial loss. For example, a capital requirement increased due to poor data quality could tie down capital that might have been used for other purposes. Problems in customer service or other operational processes can reduce customer and employee satisfaction.

Management of risks associated with data capital brings a clear business benefit when OP Corporate Bank's decision-making, management and reporting are based on correct and comprehensive information. In addition, as part of efficient risk management processes, data capital risk management ensures the adequacy of OP Corporate Bank's regulatory compliance.

OP Financial Group has a Group-level OP data governance model and OP data quality framework in place for the management of data capital risks. These provide a framework according to which data must be managed and processed. In addition to the data governance model and the data quality framework, qualitative requirements have been defined for the Group in implementing and supporting compliance with good data governance and quality practices at Group level.

OP Corporate Bank must apply OP Financial Group level data management principles and participate in their development through its own activities.

In data capital management, management is responsible, for example, for:

- promoting the identification, assessment and management of data quality risks. This includes reviewing and accepting frameworks for minimising data capital risk (ensuring high data quality).
- ensuring that practices required by the frameworks are observed. Observance requires a clear picture of the status of data specification, collection and processing manageability as well as related technical and legal requirements.
- incorporating the promotion of the capabilities related to data and especially the correction of shortcomings into the strategic components related to the ICT infrastructure.

- seeing to it that financial and human resources are sufficient in the development of systems containing critical data capital.
- ensuring that risk reporting is sufficiently defined, and understanding the limitations that the status of data quality causes to risk reporting. The management must set objectives for the validity and accuracy of risk reports in both normal and crisis situations. These requirements must reflect the criticality of decisions made based on the reporting.
- being aware of the status of OP Financial Group's regulatory compliance as regards data management and data quality. The management must have an understanding of the measures taken in this respect or which are needed to take in the future to improve regulatory compliance.

Model risks

Risk associated with the use of models, or model risk, refers to potential losses or loss of reputation caused by decisions made on the basis of the results of the models. Model risk is therefore a consequential risk related to the quality of operations and capabilities. The risk involved in using models is operational and may be caused by insufficient or unclear responsibilities for model management at different stages of the model lifecycle, or by insufficient documentation.

According to the definition by OP Financial Group, models involve various types of quantitative methods such as:

- statistical and mathematical models based on data in the Group's own possession that enable the reception of information derived from historical data in the base data.
- input data derived from modelling and based on internal or external data that are utilised in formulae, calculation, categorisation or a set of rules
- well-established mathematical formulae in the financial services business, whose parameter values are available from the market.

OP Financial Group needs to have a firm grip on model management because models are critical success factors in terms of revenue logic. Models must be used appropriately – to ensure this, Group policies and the related guidelines are applied. To ensure the appropriate model environments, Risk Management maintains a Group register of models (model inventory).

The sources of model risks can be divided into the following three categories:

- shortcomings in the development stage of models
- shortcomings in the implementation of models and
- shortcomings in the use of models.

All these share common sources of risk, such as shortcomings in data or its quality, poor knowledge of interdependencies between mathematical methods and models, and inadequate knowledge of business, risk measurement and regulation.

Management of models and model risks ensures that models describe the event concerned sufficiently well and their use is appropriately organised. It is not possible to protect against all risks associated with using models. Risk management seeks to ensure that the risks associated with using models are identified and the related risk level is acceptable.

Senior management is responsible for arranging model risk management, taking account of the following requirements:

- Model risks are managed on the basis of clear roles and defined responsibilities. All models have an owner.
- Model risks are identified and assessed as part of operational risk management and the related methods.

- Development and maintenance of models is ensured on the basis of sufficient expertise in and resourcing of quantitative methods.
- The model is used only for the purpose for which it is developed and approved. OP Financial Group adopts only models that it has ensured in a sufficient manner in terms of functionality and implementation.
- Models are assessed independently of their development and implementation.
- Effective practical monitoring is arranged for models.
- Risk management is performed in accordance with models' lifecycles, while taking account of documentation requirements.

OP Financial Group's model risk management framework defines the roles and responsibilities of the management of the models and model risk management and the practices followed during the model lifecycle. The model lifecycle includes the development, production implementation and use of the model, as well as the maintenance and abandonment of the model.

Model ownership involves a clear responsibility to understand all individual matters or variables that affect the profitability of the business concerned and to understand the interdependencies of these variables. It is also the responsibility of the model owner to follow how these variables and their interdependencies change over time. The task of the model owner is to ensure that the models used are up to date and fit for purpose.

The models are classified in view of how critical they are to business, data needed in model development and maintenance as well as how established the used method is. Uniform model management procedures are applied to the models for each class. Models are used to support the businesses' pricing and assessment of contracts for accounting purposes, when the price/value is not directly obtainable from the market. The aim of measurement of risks by means of quantitative models and methods is as an accurate as possible estimate of risk in calculation of economic capital requirement and of the total minimum capital requirement.

That the models are well-established in their applications reduces their criticality. Risks arising from the use of models based on well-established market practices are mainly associated with how correctly they are implemented. Self-developed models based on internal data capital involve most risk vis-á-vis modelling of the event and the model's susceptibility to error.

The development of models primarily requires internal historical data found to be of high quality from the needed data, correctly quantified amount of risk position and market information applicable to the valuation of assets and liabilities. The model should be applied when examining the modelled event. The Group uses generally used and proven modelling methods and models whenever they are available. In model development, the aim is to identify shortcomings in the model and situations in which the model performs poorly. If models cannot be implemented according to the nature of the event they are supposed to model, the related shortcomings and solutions for correcting the models must be identified. Regulation and risk management perspectives must be taken into account in the further development of the model.

If it is necessary to use parameter values defined differently for various uses, choices must be accurately justified and documented. Extending the use of the model to a new application will always require a new decision. Updates that are made to the model's parameters on the basis of new data and that affect the results of the model are identified separately from actual model changes. The decision on the model's use is documented in the minutes of the relevant decision-making body and reported to the Risk Management unit in charge of model risk management.

Standardised and regular monitoring is used in ongoing assessment of model utilisation. The extent, detail and frequency of monitoring must be proportionate to the model's significance. In monitoring, the Group takes account of regulatory requirements. If the monitoring proves that the model functions more poorly or the annual risk identification process reveals trend-like or structural changes in the business environment, it is necessary to perform validation especially if the model assesses risks that are significant.

The performance of the models is subject to a quantitative and qualitative review, or validation, carried out on a regular basis. The validation requirement also applies to models implemented by the business concerned, not only those implemented by a function independent of the business. Validation complies with predetermined procedures, reviews and tests. The evaluation takes account of the purpose of use of the model and its significance.

Every stage of the model lifecycle also pays attention to adequate documentation and the fulfilment of regulatory requirements set for documentation. The Risk Management function is responsible for developing and maintaining a consistent documentation structure.

The management reporting includes information about the functionality and significance of models, needs for improvement in various areas, and progress made in rectifying previously identified shortcomings and changes to models. Furthermore, the management must know if business cannot be quantified sufficiently well on the basis of the models, and of the reason for this.

Compliance risks

Compliance risk is part of risk associated with operational risk, and compliance risk management is part of internal control. Compliance activities at OP Financial Group level are aimed at ensuring that all OP Financial Group entities comply with laws and official regulations, commitments signed by OP Financial Group and its entities, and internal operating principles and instructions. Compliance also ensures that customer relationship management complies with appropriate and ethically sound principles and practices as required by regulation.

Compliance risk management tools include monitoring of legislative developments, providing the organisation with guidelines, training and support related to observing practices based on regulation, as well as supervising regulatory compliance with procedures applied within the organisation. The goal of support provided by Compliance is to forecast changes in regulation, participate in discussions (within Compliance's remit) on the interpretation of regulatory requirements considered key to OP Financial Group's compliance, and to monitor and support regulation implementation projects. Risk-based compliance supervision ensures that controls serving as the first line of defence are functional and that operations comply with regulations and guidelines. The business concerned is responsible for implementing internal control duties related to processes.

Materialisation of compliance risk may result not only in financial loss but also other adverse consequences, such as sanctions. Such sanctions may include separate administrative fines for violation of obligations, penalty payments, payments for negligence, public warnings and reprimands from the authorities, and (in extreme cases) a corporate fine. Compliance risk may materialise in terms of loss or deterioration of reputation or trust.

Responsibility for regulatory compliance and its supervision within OP Financial Group entities rests with the Group Executive Management and senior management, and all supervisors and managers. Everyone employed by OP Financial Group is responsible for regulatory compliance and following internal guidelines.

The Compliance organisation regularly reports to the Board of Directors' Risk Committee, the entities' boards of directors and the Executive Management Team's Steering and Compliance Committee on compliance risks and internal control observations in the central cooperative and OP cooperative banks. The Risk Committee supervises the adequacy of the business's internal control, independent Risk Management and Compliance, operational efficiency and reliability, and compliance with the principles governing them.

Concentration risks

Variation in the values of income statement and balance sheet items caused by concentrations is not a risk type as such. The reason behind concentration risk is cumulative exposure to a change in an individual risk factor or to a future scenario, whose materialisation may cause higher-than-expected earnings fluctuations. This is particularly likely to happen if identifying concentrations or restricting them has failed.

Identifying and controlling concentrations is therefore important at all operational levels. The following perspectives must be considered when arranging the identification of concentration risks and their management at OP Financial Group:

1. The identification and management of an individual risk's accumulation is organised **by revenue logic.** The structure of the risk policy must promote the identification of accumulations, whereas limits are used to restrict their size. Examples of revenue logics accumulation include:
    - an individual debtor's accumulation or receivables accumulation (e.g. effective industry or geographical area)
    - risk associated with an individual object of insurance or insured person or accumulation of objects exposed to the same event e.g. due to geographical location
    - maturity or repricing concentrations of balance sheet items over time or by counterparty group.
2. **Individual** risks **accumulated across** various **revenue logics**, where the management of such risks requires efficient management procedures that take account of conflicts of interest. Examples of such accumulated exposures include:
    - the accumulation of individual debtors or industry-specific receivables across OP Financial Group companies
    - dependence of OP Financial Group companies on an individual service provider (e.g. securities clearing and information technology).
3. Earnings fluctuation concurrently caused by various risk factors and accumulated beyond revenue logics must be managed using procedures that take account of conflicts of interest. Examples of such accumulations are shown below:
    - OP Financial Group may have a concentration in a single counterparty across several product areas and companies. Banking may have provided financing for a company in which the Group's insurance companies hold shares. Meanwhile, Pohjola Insurance may be the company's main insurer, whereas OP Life Assurance Company manages the company's group life insurance. In addition, the same company can provide OP Financial Group with technology services.
    - Risks associated with an independent state (e.g. risk of political decisions and local catastrophes, also known collectively as a country risk) may have a similar effect on the operating conditions of actors operating in the country concerned and the results arising from the agreements concluded with the actors in the country are strongly correlated.

The Group-wide risk management process should create mechanisms that prevent the emergence of excessively large direct and indirect risk concentrations at OP Financial Group level by means of decisions on the division of duties. Risk Management should create mechanisms to identify, assess and manage direct and indirect Group-level accumulations.

The risk management principles stated in the risk management process guidelines for each revenue logic, and the concentration risk management instructions in the risk policies elaborating on such principles, must be integral to risk management practices and the limitation of risk taking.

The Group manages country risks by determining country limits for different countries that it uses to monitor, control and prevent its country risk concentrations by revenue logic. When setting limits, the Group takes account, for example, of the country's creditworthiness and susceptibility to natural disasters.

Major benefits can be gained by concentrating service purchases. However, senior management must exercise extreme caution when concentrating an activity with an identified service provider, doing so in accordance with the situation in question and creating an action plan to ensure business continuity in case of problems with the service provider.

Reputational risks

Reputational risk is managed proactively over the long term by complying with regulation, good practices in the financial sector and OP Financial Group's Code of Business Ethics, and by emphasising the transparency of operations and

communications. Because reputation and trust are the foundations of financing, they must be taken into account in all activities. Each business plays an important role in recognising the positive and negative impacts of its operations on OP Financial Group's reputation and takes, where necessary, corrective measures.

Active and transparent communications build a strong corporate image and strengthen a company's reputation and trust. The central cooperative's Corporate Communications unit actively monitors media coverage and social media publicity of the Group and the financial sector, and other topical subjects. The public image of the Group and the financial sector is also analysed on a weekly basis as part of the contingency plan for liquidity management. The Group must have communications procedures and plans in case of crises, and to prevent the realisation of reputational risk.

In addition to systematic communications, OP Financial Group proactively strengthens its reputation by implementing its Corporate Responsibility Programme. The Group has a Code of Business Ethics in place. The Group adheres to international financial, social and environmental responsibility principles and international commitments.

Note 3. Changes in accounting policies and presentation

1. Effective interest rate of TLTRO III loans

OP Corporate Bank's TLTRO III funding amounted to a total of EUR 12 billion (16) at the end of December. The interest rate for TLTRO III funding for each loan between 23 June 2022 and 22 November 2022 is the average of the ECB's deposit facility rate between the start date of the loan concerned and 22 November 2022, and after that the ECB's deposit facility rate. The effect of items related to TLTRO III funding and its hedging amounted to EUR –10 million (103) during the reporting period.

The effective interest rate for TLTRO funding has been calculated by taking account of all the loan's contractual terms and management judgement of expected payments. If changes occur later in the loan's contractual terms or management judgement, they will be treated as changes in the loan's carrying amount. The gross carrying amount of the loan is recalculated in such a way that it corresponds to the present value of the reassessed cash flows that is discounted at the loan's original effective interest rate. The resulting adjustment is recognised through profit or loss.

2. Changes in the 2023 income statement format

OP Corporate Bank changed its income statement format as of 1 January 2023. The key changes in presentation are as follows:

a) The rows Total income and Total expenses were removed.
b) The sub-rows of Net interest income and Net commissions and fees (interest income, interest expenses, commission income and commission expenses) have been broken down in presentation.
c) Impairment loss on receivables has been transferred from the end of the income statement next to net interest income to operating items.
d) Net income from financial assets held for trading is presented on a specific row separate from Net investment income. Net investment income includes net income from financial assets at fair value through comprehensive income.
e) Operating expense items Personnel costs, Depreciation/amortisation and impairment loss and Other operating expenses are presented the same way as at present, showing OP Corporate Bank's expenses.
f) A new row, Operating profit, has been added to the income statement.

€ million	Explanation of the format change:
Interest income	b) New row
Interest expenses	b) New row
Net interest income	No change
Impairment loss on receivables	c) Moved to another place in the format
Commission income	b) New row
Commission expenses	b) New row
Net commissions and fees	No change
Net interest income from financial assets held for trading	d) New row
Net investment income	d) Item content has changed
Other operating income	No change
Personnel costs	No change
Depreciation/amortisation and impairment loss	No change
Other operating expenses	No change
Operating expenses	e) New row
Operating profit (loss)	**g) New row**
Earnings before tax	**No change**
Income tax	No change
Profit for the period	**No change**

Note 4. Segment reporting

OP Corporate Bank's business segments include Corporate Banking and Capital Markets, Asset and Sales Finance Services and Payment Transfers as well as Baltics. Non-business segment operations are presented in the Group Functions segment (formerly the Other Operations segment). OP Corporate Bank plc prepares its segment reporting in compliance with its accounting policies. OP Corporate Bank plc's segment reporting is based on accounting policies applied in its financial statements. Defining segments and presentation are based on management reporting. The segments' earnings and profitability are assessed in terms of EBT.

Corporate Banking and Capital Markets

The Corporate Banking and Capital Markets business segment provides corporate and institutional customers with financing and capital market services. The services also range from the arrangement of debt issues, equity, foreign exchange, bond, money market, derivative and structured investment products to investment research. In addition to its own clients, the segment provides capital market products and services to corporate and retail clients through OP cooperative banks. The segment's net income derives mainly from net interest income, net investment income and net commissions and fees. Expenses mainly come from personnel and ICT costs. The most significant risk categories of the segment are credit risk and market risk.

Asset and Sales Finance Services and Payment Transfers

The Asset and Sales Finance Services and Payment Transfers business segment provides consumers and companies with customer financing services, payment and liquidity management services, financing services for foreign trade and leasing and factoring services. Net income generated by the segment derives mainly from net interest income and commissions and fees. Expenses mainly come from personnel and ICT costs. Credit risk is the most significant risk type for the segment.

Baltics

The Baltic business segment provides corporate and institutional customers with financing and liquidity management services and financing services for foreign trade. OP Corporate Bank plc has branches in Estonia, Latvia and Lithuania.

Net income generated by the segment derives mainly from net interest income and commissions and fees. Expenses mainly come from personnel and ICT costs. Credit risk is the most significant risk type for the segment.

Group Functions

Functions supporting OP Financial Group and its business, such as Group Treasury and the liquidity buffer, have been centralised within the Group Functions segment. The Group Functions segment is also responsible for the management of the funding and liquidity of member credit institutions and the central cooperative consolidated. It is also in charge of OP Financial Group's wholesale funding together with OP Mortgage Bank. Net income generated by Other Operations derives mainly from net interest income and net investment income. The most significant risk categories are market risks and credit risk. In addition, income, expenses, investments and capital which have not been allocated to the business segments are reported under Group Functions.

Segment accounting policies

Segment reporting conforms to the accounting policies. Income, expenses, assets and liabilities which have been considered to relate directly to and be reasonably attributable to the segments are allocated to the segments. Items between segments are reported in column 'Inter-segment items'.

Segment information

Q1–4 earnings 2022, EUR million	Corporate Banking and Capital Markets	Asset and Sales Finance Services and Payment Transfers	Baltics	Group Functions	Inter-segment items	Total
Net interest income	225	183	49	-61		396
of which internal net income before tax	-48	14	-1	35		
Net commissions and fees	-49	63	10	-5		19
Net investment income	130	0	0	-12		117
Other operating income	7	10	0	24	-9	32
Total income	**313**	**256**	**59**	**-54**	**-9**	**564**
Personnel costs	36	27	8	5		76
Depreciation/amortisation	5	1	2	1		9
Other operating expenses	85	78	19	23	-9	196
Total expenses	**126**	**105**	**29**	**29**	**-9**	**281**
Impairments loss on receivables	-1	-12	-6	0		-18
Earnings before tax	**186**	**138**	**24**	**-83**		**265**

Q1–4 earnings 2021, EUR million	Corporate Banking and Capital Markets	Asset and Sales Finance Services and Payment Transfers	Baltics	Group Functions	Inter-segment items	Total
Net interest income	213	155	33	11		412
of which internal net income before tax	21	-30	1	9		
Net commissions and fees	-31	58	9	-5		31
Net investment income	167	0	0	1		168
Other operating income	70	18	0	19	-58	49
Total income	**420**	**231**	**42**	**27**	**-58**	**661**
Personnel costs	36	26	6	4		72
Depreciation/amortisation	7	2	2	1		12
Other operating expenses	78	76	14	126	-58	236
Total expenses	**121**	**104**	**22**	**132**	**-58**	**320**
Impairments loss on receivables	-38	-37	0	0		-74
Earnings before tax	**261**	**90**	**20**	**-105**		**267**

Balance sheet 31 December 2022, EUR million	Corporate Banking and Capital Markets	Asset and Sales Finance Services and Payment Transfers	Baltics	Group Functions	Inter-segment items	Total
Cash and cash equivalents	11	131	12	34,797		34,951
Receivables from credit institutions	22	298	0	12,658		12,978
Derivative contracts	5,612			169		5,782
Receivables from customers	16,189	8,699	2,914	375		28,178
Investment assets	299	0	0	16,105		16,404
Intangible assets	1	2	0	0		3
Property, plant and equipment (PPE)	0	1	2	1		5
Other assets	309	263	11	549		1,132
Tax assets	0	0	0	0		
Total assets	**22,444**	**9,393**	**2,940**	**64,656**		**99,433**
Liabilities to credit institutions	3	4	0	40,892		40,899
Derivative contracts	5,295			443		5,739
Liabilities to customers	0	12,694	1,464	4,856		19,014
Debt securities issued to the public	1,672			23,537		25,209
Provisions and other liabilities	5	0	854	1,649		2,509
Tax liabilities	1	0	1	314		316
Subordinated liabilities	9			1,375		1,384
Total liabilities	**6,986**	**12,696**	**2,321**	**73,067**		**95,069**
Equity						**4,364**

Balance sheet 31 December 2021, EUR million	Corporate Banking and Capital Markets	Asset and Sales Finance Services and Payment Transfers	Baltics	Group Functions	Inter-segment items	Total
Cash and cash equivalents	11	124	48	32,606		32,789
Receivables from credit institutions	-2	133	-3	13,291		13,419
Derivative contracts	3,441			271		3,712
Receivables from customers	15,240	8,041	2,385	570		26,236
Investment assets	487	0	0	16,886		17,373
Intangible assets	5	3	2	1		12
Property, plant and equipment (PPE)	1	1	3	1		5
Other assets	307	321	-97	743		1,274
Tax assets	0	0	0	0		
Total assets	**19,490**	**8,622**	**2,338**	**64,370**		**94,820**
Liabilities to credit institutions	-40	151	0	42,549		42,660
Derivative contracts	2,553			117		2,669
Liabilities to customers	-1	14,894	663	2,801		18,357
Debt securities issued to the public	1,406			21,225		22,630
Provisions and other liabilities	747	0	-4	1,131		1,874
Tax liabilities	1	0	2	336		339
Subordinated liabilities	0			1,994		1,994
Total liabilities	**4,665**	**15,045**	**661**	**70,153**		**90,524**
Equity						**4,296**

Notes to the income statement

Note 5. Net interest income

EUR million	2022	2021
Interest income		
Receivables from credit institutions	159	36
Receivables from customers		
Loans	476	356
Finance lease receivables	42	24
Impaired loans and other commitments	0	0
Total	518	381
Notes and bonds		
Measured at fair value through profit or loss	0	0
At fair value through other comprehensive income	66	52
Amortised cost	3	-12
Total	69	40
Derivative contracts		
Fair value hedge	-41	-109
Cash flow hedge	9	0
Ineffective portion of cash flow hedge		0
Other	3	5
Total	-28	-105
Liabilities to credit institutions		
Negative interest	-2	203
Liabilities to customers		
Negative interest	25	41
Other	12	7
Total	**752**	**604**
Interest expenses		
Liabilities to credit institutions	162	57
Liabilities to customers	34	-11
Notes and bonds issued to the public	146	80
Subordinated liabilities		
Subordinated loans		0
Other	35	62
Total	35	63
Derivative contracts		
Held for trading		
Cash flow hedge	-103	-152
Other	-39	-35
Total	-142	-187
Receivables from credit institutions		
Negative interest	90	181
Other	14	5
Total	**339**	**187**
Net interest income before fair value adjustment under hedge accounting	**413**	**417**
Hedging derivatives	-565	-72
Value changes of hedged items	549	68
Total	**396**	**412**

Interest income calculated using the effective interest method totalled EUR 699 (661) million.

The effect of items related to TLTRO III funding and its hedging on net interest income amounted to EUR –10 million during the reporting period. A year ago, the additional margin of –0.5% exceeding the ECB's deposit facility rate under TLTRO III funding increased net interest income by EUR 103 million.

Note 6. Net commissions and fees

Q1–4 2022, EUR million	Corporate Banking and Capital Markets	Asset and Sales Finance Services and Payment Transfers	Baltics	Group Functions	Inter-segment items	Total
Commission income						
Lending	27	17	4	0		48
Deposits	0	0	3	0		3
Payment transfers	0	32	1	0		33
Securities brokerage	22					22
Securities issuance	5			0		6
Fund fees	0	0		0		0
Asset management	2	0				2
Legal services	0					0
Guarantees	1	9	3	0		13
Other	0	7	0			8
Total	**57**	**66**	**10**	**0**		**134**
Commission expenses						
Lending	0	1		0		2
Payment transfers	1	2	0	0		3
Securities brokerage	3			0		3
Securities issuance	4			0		4
Mutual funds						
Asset management	0			4		4
Guarantees			0			0
Other*	99	0		1		99
Total	**106**	**3**	**0**	**5**		**115**
Total net commissions and fees	**-49**	**63**	**10**	**-5**		**19**

Q1–4 2021, EUR million	Corporate Banking and Capital Markets	Asset and Sales Finance Services and Payment Transfers	Baltics	Group Functions	Inter-segment items	Total
Commission income						
Lending	31	17	3	0		50
Deposits	0	0	3	0		3
Payment transfers	0	35	0	0		35
Securities brokerage	28					28
Securities issuance	6					6
Fund fees	0	0		0		0
Asset management	2	0				2
Legal services	0	0				0
Guarantees	2	9	2	0		13
Other	0	1	0	0		2
Total	**69**	**62**	**9**	**0**		**140**
Commission expenses						
Lending	0	1		0	0	1
Payment transfers	1	3	0	0		3
Securities brokerage	4			0		4
Securities issuance	2			1		3
Mutual funds						
Asset management	0			4		4
Guarantees			0			0
Other*	93	0	0	1		94
Total	**100**	**4**	**0**	**5**		**109**
Total net commissions and fees	**-31**	**58**	**9**	**-5**		**31**

* In 2022, the item includes EUR 96 million (89) in commission expenses paid to member banks arising from derivative trading.

Note 7. Net investment income

EUR million	2022	2021
Net income from assets at fair value through other comprehensive income		
Notes and bonds		
Other income and expenses	0	0
Capital gains and losses	10	4
Total	10	4
Shares and participations		
Total	**10**	**4**
Net income recognised at fair value through profit or loss		
Financial assets held for trading		
Notes and bonds		
Fair value gains and losses	-24	-5
Interest income and expenses	4	3
Total	-20	-2
Shares and participations		
Fair value gains and losses	7	-3
Dividend income and share of profits	0	3
Total	7	0
Derivatives		
Fair value gains and losses*	126	151
Interest income and expenses	-6	15
Total	120	166
Total	**107**	**164**
Total net income from financial assets recognised at fair value through profit or loss	**107**	**164**

* Net income from hedging derivatives amounted to 11.0 million euros (-22.0).

Total net investment income	**117**	**168**

Note 8. Other operating income

EUR million	2022	2021
Leasing agreements	0	0
ICT income	2	1
OP Financial Group's internal income	29	29
Other*	1	18
Total	**32**	**49**

* A year ago, other income includes the capital gain of EUR 18 million on the sale of OP Custody Ltd shares.

Note 9. Personnel costs

EUR million	2022	2021
Wages and salaries	52	48
Variable remuneration	11	13
Defined contribution plans	9	8
Defined benefit plans*	0	0
Other personnel related costs	3	4
Total	**76**	**72**

* Note 27.

Personnel fund

All personnel of OP Corporate Bank, excluding directors and the Baltic personnel, belongs to OP Financial Group's Personnel Fund.

Payment of profit-based bonuses to OP Financial Group's Personnel Fund in 2022 was based on the achievement of the following targets: growth differential between OP Financial Group's income and expenses with a weight of 50% and net growth in customers using OP as their main bank and insurer with a weight of 50%. Profit-based bonuses for 2022 transferred to the Fund account for some 1.5% (2.8 %) of the combined salaries and wages earned by the Fund's members. The bonuses recognised in 2022 totalled EUR 0.7 million (1.3).

Performance-based bonus scheme in

The performance period of the performance-based bonus scheme is 12 months. Short-term remuneration schemes are based on targets set for each company, team and person derived from the annual plan, covering all personnel of OP Corporate Bank.

The bonus is determined by the job grade and the maximum bonuses correspond to a 1–10-month annual salary. Thus, the proportion of fixed remuneration to variable remuneration is 8–83%, depending on the maximum bonuses.

Performance metrics of the performance-based bonus scheme in 2022

A factor applies to the bonus created through the achievement of the targets achieved in OP Corporate Bank that is based on the central cooperative consolidated's EBT. The total bonus amount in separately defined positions is based on OP Corporate Bank's EBT. Targets shown in the balanced scorecards and derived from annual planning are decided by the business lines/functions. The Group-level metrics common to all OP Corporate Bank's executives were 'Growth differential between OP Financial Group's income and expenses' with a 20% weight and 'Net growth in customers using OP as their main bank and insurer' with a 20% weight.

In addition to the achievement of the performance metrics related to the performance-based bonus, qualitative assessment affects bonus payout, where the supervisor assesses a person's performance in view of compliance with regulation and instructions. The assessment also takes account of sustainability risks regarding the roles of persons for whom consideration of sustainability risks is an integral part of their duties. The performance-based bonus will be cut on the basis of the severity and number of offences using a factor of 0–1.

Conditions for payment of variable remuneration in 2022

Bonuses will be paid to their beneficiaries provided that OP Financial Group's CET1 ratio exceeds the CET1 ratio on the payout date which, if exceeded, no restrictions on profit distribution occur +2% and the LCR exceeds 110% in the financial statements preceding the year of the bonus payout date. and that the person within the scheme has not resigned from OP Financial Group before the payout date and OP Corporate Bank shows a profit.

If it is noted in retrospect that an employee has been paid a bonus in violation of the performance-based bonus scheme, the company's Board of Directors has the right to decide on the non-payment of all or part of the variable remuneration, or on the clawback of paid bonuses, if the bonus payout is in violation of regulation or OP Financial Group's internal guidelines.

Expenses for the scheme are recognised from the beginning of the performance period up to the date of payout (vesting period) as personnel costs, and the equivalent liability is recognised under deferred expenses.

OP Cooperative's Board of Directors decides on the terms and conditions of OP Financial Group's performance-based bonus scheme, maximum bonuses based on job grades and a structural framework within which companies belonging to the Group can select the scheme metrics and set related targets.

Deferred payment of variable remuneration

Acts such as the Act on Credit Institutions (233/2021) and the Act on Investment Services (213/2012) and the Commission Delegated Regulation on the taking-up and pursuit of the business of Insurance and Reinsurance (2015/35) prescribe payment of variable remuneration to persons whose action may cause significant risk to the company ('identified staff'). OP Corporate Bank's identified staff includes the CEO and other key management personnel as well as those involved in internal

If the bonus of a member of identified staff for the performance year exceeds €50,000 or accounts for at least a third (in credit institutions and insurance companies) or a quarter (in investment firms, real estate asset management and fund management company) of the combined annual bonuses, 60% of the bonus will be paid during the year following the performance year. The remaining part 40% of the bonus will be paid in four equal instalments over the course of four years in such a way that the time between the payments is at least one year. If an identified staff member's variable remuneration for the performance year is exceptionally large, in other words is equivalent to at least 8 months' salary and equals at least 200,000 euros, 40% of the bonus will be paid in the year after the performance year and the remainder (60%) in four instalments over the course of four years (five instalments over the course of five years for members of OP Cooperative's Executive Management Team), with at least one year between each payment.

Half of the variable remuneration is paid in cash and half is tied to the value of the reference instrument decided by OP Cooperative's Board of Directors. The bonus tied to the reference instrument will be paid to its beneficiary after a one-year retention period. A synthetic financial instrument tied to the Profit Share is used as the reference instrument in credit institutions and insurance companies and investment firms, real estate asset management and the fund management company use the return of OP Private Strategy 50 as a synthetic financial instrument.

Remuneration for persons in charge of control duties

The remuneration objectives of persons in charge of control duties independent of business lines, such as risk management, internal audit, compliance and actuarial duties, may not jeopardise the independence of the duties. Variable remuneration must be independent of the business line under control and the Chief Risk Officer's metrics may not include any direct sales-based targets. It is also recommended that the balanced scorecard also include a qualitative metric that measures the performance of control duties.

Monitoring of OP Financial Group's remuneration

OP Financial Group monitors the market consistency of its total remuneration on a regular basis using various salary surveys.

OP Cooperative' Board of Directors annually monitors how paid bonuses are in proportion to OP Financial Group's success vis-à-vis benchmark companies and refunds paid to customers. OP Financial Group also makes internal, Group-level comparisons of remuneration and structures on a regular basis.

Expenses recognised for variable remuneration*

EUR million	2022	2021
Personnel fund	0	1
Performance-based bonuses	12	12
Total	**12**	**14**

* Excl. social expenses.

More information on the remuneration schemes is available at www.op.fi.

Note 10. Depreciation/amortisation and impairment loss

EUR million	2022	2021
Depreciation and amortisation		
Buildings		0
Machinery and equipment	0	0
Information systems and other	9	13
Right-of-use assets	1	1
Leased out assets	-1	-1
Other	0	0
Total	9	12
Total	**9**	**12**

Note 11. Other operating expenses

EUR million	2022	2021
ICT costs		
Production	72	75
Development	19	17
Buildings	0	0
Government charges and audit fees*	37	29
Service charges to OP Cooperative	18	22
Purchased services	21	13
Data communications	2	2
Marketing	2	2
Corporate social responsibility	0	0
Insurance and security costs	11	3
Other**	15	72
Total	**196**	**236**

* In 2022, audit fees paid by OP Corporate Bank plc to auditors totalled EUR 264,000 million (283,000), whereas fees for assignments as referred to in chapter 1, section 1, sub-section 2, paragraph 1 of the Auditing Act were EUR 2,000 (0), those for tax counselling EURf127,000 (139,000) and for other services EUR 81,000 (62,000). Non-audit services rendered by KPMG Oy Ab totalled EUR 183,000 (201,000) (excl. VAT). The corresponding figures for 2021 are shown in brackets.

** A year ago, other operating expenses increased by EUR 54 million due to the transmission within OP Financial Group of the margin exceeding the ECB's deposit facility rate based on the TLTRO III programme launched in 2021.

Development costs

€ million	2022	2021
ICT development costs	19	17
Share of own work	0	0
Total development costs	**19**	**17**
Depreciation/amortisation and impairment loss	8	11

The development investments ensure the competitiveness and continuity of the present-day business and regulatory compliance and create conditions for new customer-driven business models.

Note 12. Impairment losses on receivables

EUR million	2022	2021
Receivables written down as loan and guarantee losses	-86	-46
Recoveries of receivables written down	1	1
Expected credit losses* (ECL) on receivables from customers and off-balance-sheet items	68	-28
Expected credit losses* (ECL) on notes and bonds	0	0
Total	**-18**	**-74**

* Loss allowance is itemised in Note 34. Loss allowance regarding receivables and notes and bonds.

Note 13. Income tax

EUR million	2022	2021
Current tax	55	52
Tax for previous financial years	-1	-1
Deferred tax	0	1
Income tax expense	**54**	**52**
Corporate income tax rate	20.0	20.0
Reconciliation between tax expense in the income statement and tax expense		
Earnings before tax	265	267
Tax calculated at a tax rate of 20%	53	53
Tax for previous financial years	-1	-1
Tax-exempt income	0	-4
Non-deductible expenses and income portions of limited partnerships	0	0
Tax adjustments	2	4
Other items	0	0
Tax expense	**54**	**52**

Notes to assets

Note 14. Liquid assets

EUR million	31 Dec 2022	31 Dec 2021
Cash	131	124
Deposits with central banks repayable on demand		
OP Corporate Bank plc's minimum reserve deposit	882	863
Cheque account*	33,938	31,802
Total liquid assets	**34,951**	**32,789**

* The cheque account includes EUR –471 million (–11) in cash resulting from central counterparty clearing.

In accordance with the minimum reserve system under the euro system, credit institutions are obligated to have a minimum reserve deposit with their national central bank. The reserve deposit equals the required percentage of the reserve base, as specified by the European Central Bank. The reserve base includes deposits (extensive) and debt securities with a maximum maturity of two years. The reserve base does not include deposits from other parties subject to the minimum reserve obligation. The reserve deposit is currently 1% of the reserve base. Credit institutions within OP Financial Group place a reserve deposit with OP Corporate Bank plc, which acts as an intermediary authorised by OP Financial Group credit institutions and is responsible for OP Financial Group's obligation to place a deposit with the Bank of Finland.

Note 15. Receivables from credit institutions

EUR million	31 Dec 2022	31 Dec 2021
Deposits		
Repayable on demand	443	102
Other	0	2
Total	443	104
Loans and receivables		
Repayable on demand		
From other credit institutions	0	0
Other		
From OP Financial Group institutions	12,458	13,127
From other credit institutions	79	189
Total	12,537	13,316
Loss allowance*		
From other credit institutions	-2	-1
Total	-2	-1
Total receivables from credit institutions	**12,978**	**13,419**

* Loss allowance is itemised in Note 34. Loss allowance regarding receivables and notes and bonds.

Note 16. Derivative contracts

Assets

EUR million	31 Dec 2021	31 Dec 2020
Held for trading		
Interest rate derivatives	4,939	3,036
Currency derivatives	704	400
Equity and index derivatives	0	0
Credit derivatives	0	0
Commodity derivatives	42	7
Total	5,685	3,444
Hedging derivative contracts*		
Fair value hedging		
Interest rate derivatives	36	29
Currency derivatives	61	239
Total	97	268
Total derivative contracts	**5,782**	**3,712**

* The balance sheet item includes positive changes in fair value of derivative contracts as well as premiums paid.

Liabilities

EUR million	31 Dec 2021	31 Dec 2020
Held for trading		
Interest rate derivatives	4,647	2,154
Currency derivatives	694	396
Credit derivatives		0
Other	39	29
Total	5,379	2,579
Hedging derivative contracts*		
Fair value hedging		
Interest rate derivatives	220	90
Currency derivatives	135	0
Cash flow hedge		
Interest rate derivatives	4	0
Total	359	91
Total derivative contracts	**5,739**	**2,669**

* The balance sheet item includes negative changes in value of derivative contracts as well as premiums received.

Derivatives held for trading 31 December 2022

	Nominal values/residual maturity				Fair values*	
EUR million	<1 year	1–5 years	>5 years	Total	Assets	Liabilities
Interest rate derivatives						
Interest rate swaps	18,883	55,239	69,635	143,756	2,566	2,108
Cleared by the central counterparty	14,541	35,327	44,533	94,400	155	141
Settled-to-market (STM)	10,085	27,030	38,669	75,783	123	123
Collateralised-to-market (CTM)	4,456	8,298	5,864	18,617	31	19
Forward rate agreements						
OTC interest rate options						
Call and caps						
Purchased	2,389	10,231	6,625	19,245	1,396	37
Written	660	5,563	17,724	23,947	50	1,449
Put and floors						
Purchased	1,018	8,546	6,494	16,058	495	295
Written	1,082	7,120	2,097	10,299	22	393
Total OTC interest rate derivatives	24,031	86,699	102,575	213,305	4,529	4,281
Interest rate futures	838	1,050		1,888	0	0
Total exchange traded derivatives	838	1,050		1,888	0	0
Total interest rate derivatives	24,869	87,749	102,575	215,193	4,529	4,281
Currency derivatives						
Forward exchange agreements	51,465	604	4	52,072	697	686
Interest rate and currency swaps	91	2,826	401	3,318	185	175
Currency options						
Call						
Purchased	192	1		193	3	0
Written	190	1		191	0	3
Put						
Purchased	187			187	2	2
Written	208			208	1	2
Total OTC currency derivatives	52,332	3,431	405	56,169	889	868
Total currency derivatives	52,332	3,431	405	56,169	889	868
Credit derivatives						
Credit default swaps	34	63	13	110	1	34
Total credit derivatives	34	63	13	110	1	34
Other						
Other forward contracts	102	57		159	10	5
Other swaps	286	816	26	1,128	79	75
Total other OTC derivatives	387	873	26	1,287	89	80
Other futures contracts	52	16		68	1	2
Total other derivatives	439	889	26	1,355	91	82
Total derivatives held for trading	**77,675**	**92,131**	**103,020**	**272,826**	**5,509**	**5,264**

Derivatives held for trading 31 December 2021

	Nominal values/residual maturity				Fair values*	
EUR million	<1 year	1–5 years	>5 years	Total	Assets	Liabilities
Interest rate derivatives						
Interest rate swaps	24,352	40,399	63,172	127,923	1,761	1,169
Cleared by the central counterparty	6,606	23,805	38,098	68,509	9	11
Settled-to-market (STM)	5,774	21,888	35,745	63,407	8	10
Collateralised-to-market (CTM)	832	1,916	2,353	5,101	0	1
OTC interest rate options						
Call and caps						
Purchased	3,591	10,651	7,769	22,012	511	173
Written	2,333	6,158	4,868	13,359	59	224
Put and floors						
Purchased	903	7,853	5,181	13,937	296	50
Written	1,235	8,500	2,057	11,793	46	156
Total OTC interest rate derivatives	32,414	73,561	83,048	189,023	2,673	1,772
Interest rate futures	517	950		1,467	0	0
Total exchange traded derivatives	517	950		1,467	0	0
Total interest rate derivatives	32,931	74,511	83,048	190,490	2,673	1,772
Currency derivatives						
Forward exchange agreements	38,930	1,354	3	40,288	397	394
Interest rate and currency swaps	568	2,937	403	3,908	151	182
Currency options						
Call						
Purchased	111			111	1	0
Written	138			138	0	2
Put						
Purchased	132			132	1	0
Written	101			101	0	1
Total OTC currency derivatives	39,982	4,291	406	44,679	551	579
Total currency derivatives	39,982	4,291	406	44,679	551	579
Equity and index derivatives						
Equity index options						
Call						
Purchased	2			2	0	
Total OTC equity and index derivatives	2			2	0	
Total equity and index derivatives	2			2	0	
Credit derivatives						
Credit default swaps	34	62		95	2	35
Total credit derivatives	34	62		95	2	35
Other						
Other forward contracts	36	44		81	3	24
Other swaps	196	500	28	724	101	19
Total other OTC derivatives	233	544	28	805	104	43
Total other derivatives	260	544	28	832	104	43
Total derivatives held for trading	**73,208**	**79,408**	**83,481**	**236,098**	**3,329**	**2,430**

Derivative contracts for hedging purposes - fair value hedging 31 December 2022

	Nominal values/residual maturity				Fair values*	
EUR million	<1 year	1–5 years	>5 years	Total	Assets	Liabilities
Interest rate derivatives						
Interest rate swaps	7,104	22,838	11,166	41,107	36	54
Cleared by the central counterparty	7,104	22,788	11,068	40,960	35	46
Settled-to-market (STM)	1,450	8,165	544	10,158	3	11
Collateralised-to-market (CTM)	5,654	14,624	10,524	30,801	32	35
Forward rate agreements						
OTC interest rate options						
Put and floors						
Purchased		43	150	193	3	2
Written		5,703	994	6,697	67	74
Total interest rate derivatives	7,104	28,585	12,309	47,998	105	130
Currency derivatives						
Interest rate and currency swaps		1,872	681	2,553	11	166
Total OTC currency derivatives		1,872	681	2,553	49	176
Total currency derivatives		1,872	681	2,553	49	176
Total derivative contracts, fair value hedge	**7,104**	**30,456**	**12,991**	**50,550**	**154**	**306**

Derivative contracts for hedging purposes – cash flow hedge 31 December 2022

	Nominal values/residual term to maturity				Fair values*	
EUR million	<1 year	1–5 years	>5 years	Total	Assets	Liabilities
Interest rate derivatives						
Interest rate swaps	500	2,600		3,100	3	4
Cleared by the central counterparty		2,600		2,600		4
Collateralised-to-market (CTM)	500	2,600		3,100	0	4
Total OTC interest rate derivatives	500	2,600		3,100	3	4
Total interest rate derivatives	**500**	**2,600**		**3,100**	**3**	**4**
Currency derivatives						
Forward exchange agreements	3,735			3,735	12	125
Interest rate and currency swaps						
Total OTC currency derivatives	3,735			3,735	12	125
Total currency derivatives	3,735			3,735	12	125
Total derivative contracts, cash flow hedge	**4,235**	**2,600**		**6,835**	**16**	**129**
Total derivative contracts held for hedging	**11,338**	**33,056**	**12,991**	**57,385**	**170**	**435**

Derivative contracts for hedging purposes – fair value hedging 31 December 2021

	Nominal values/residual maturity				Fair values*	
EUR million	<1 year	1–5 years	>5 years	Total	Assets	Liabilities
Interest rate derivatives						
Interest rate swaps	3,800	13,990	13,916	31,706	29	7
Cleared by the central counterparty	3,720	13,990	13,768	31,478	2	2
Settled-to-market (STM)	381	2,714	1,566	4,662	0	0
Collateralised-to-market (CTM)	3,339	11,276	12,202	26,817	2	2
Total OTC interest rate derivatives	3,800	15,348	14,229	33,378	33	35
Total interest rate derivatives	3,800	15,348	14,229	33,378	33	35
Currency derivatives						
Interest rate and currency swaps	730	1,217	351	2,297	63	83
Total OTC currency derivatives	730	1,217	351	2,297	81	84
Total currency derivatives	730	1,217	351	2,297	81	84
Total derivative contracts, fair value hedge	**4,530**	**16,565**	**14,580**	**35,675**	**114**	**119**

Derivative contracts for hedging purposes – cash flow hedge 31 December 2021

	Nominal values/residual maturity				Fair values*	
EUR million	<1 year	1–5 years	>5 years	Total	Assets	Liabilities
Interest rate derivatives						
Interest rate swaps		500		500	0	0
Cleared by the central counterparty		500		500		0
Collateralised-to-market (CTM)		500		500		0
Total OTC interest rate derivatives		500		500	0	0
Total interest rate derivatives		**500**		**500**	**0**	**0**
Currency derivatives						
Forward exchange agreements	3,978			3,978	158	0
Total OTC currency derivatives	3,978			3,978	158	0
Total currency derivatives	3,978			3,978	158	0
Total derivative contracts, cash flow he	**3,978**	**500**		**4,478**	**158**	**0**
Total derivative contracts held for hedging	**8,508**	**17,065**	**14,580**	**40,153**	**272**	**119**

Total derivatives 31 December 2022

	Nominal values/residual maturity				Fair values*	
EUR million	<1 year	1–5 years	>5 years	Total	Assets	Liabilities
Interest rate derivatives	32,473	118,934	114,884	266,291	4,638	4,416
Cleared by the central counterparty	22,144	60,716	55,600	138,460	190	191
Settled-to-market (STM)	11,535	35,194	39,212	85,941	126	134
Collateralised-to-market (CTM)	10,609	25,521	16,388	52,519	64	58
Currency derivatives	56,067	5,303	1,086	62,456	950	1,169
Credit derivatives	34	63	13	110	1	34
Other derivatives	439	889	26	1,355	91	82
Total derivatives	**89,014**	**125,188**	**116,010**	**330,211**	**5,679**	**5,700**

Total derivatives 31 December 2021

	Nominal values/residual maturity				Fair values*	
EUR million	<1 year	1–5 years	>5 years	Total	Assets	Liabilities
Interest rate derivatives	36,731	90,360	97,277	224,368	2,706	1,808
Cleared by the central counterparty	10,327	38,295	51,866	100,487	11	13
Settled-to-market (STM)	6,155	24,603	37,311	68,069	9	11
Collateralised-to-market (CTM)	4,171	13,692	14,554	32,418	2	3
Currency derivatives	44,689	5,508	757	50,954	790	662
Equity and index-linked derivatives	2			2	0	
Credit derivatives	34	62		95	2	35
Other derivatives	260	544	28	832	104	43
Total derivatives	**81,716**	**96,473**	**98,061**	**276,251**	**3,602**	**2,549**

*Fair values include accrued interest which is shown under other assets or provisions and other liabilities in the balance sheet.

Interest rate derivatives for central counterparty clearing are offset in the balance sheet. Note 36 below presents the effects of netting. Other derivative contracts are presented on a gross basis in the balance sheet.

Average interest rates of interest rate derivative contracts in hedge accounting – fair value 31 December 2022

	<1 year	1–5 years	>5 years	Total
Interest rate derivatives				
Cleared by the central counterparty	0.862	0.510	0.461	0.557
OTC interest rate derivatives		3.086	3.006	3.040
Total interest rate derivatives	0.862	0.516	0.477	0.565

Average interest rates of interest rate derivative contracts in hedge accounting – fair value 31 December 2021

	<1 year	1–5 years	>5 years	Total
Interest rate derivatives				
Cleared by the central counterparty	1.243	0.249	0.167	0.325
OTC interest rate derivatives	3.362		3.040	3.169
Total interest rate derivatives	1.291	0.249	0.192	0.343

Average interest rates of interest rate swaps and currency swaps in hedge accounting related to significant currencies 31 December 2022

	<1 year	1–5 years	>5 years	Total
AUD			2.440	2.440
GBP		2.151		2.151
HKD		2.959		2.959
JPY		0.700	1.300	1.000
SEK			4.432	4.432
NOK		4.454		4.454
USD	2.328	1.675	3.611	2.538

Average interest rates of interest rate swaps and currency swaps in hedge accounting related to significant currencies 31 December 2021

	<1 year	1–5 years	>5 years	Total
AUD			2.440	2.440
GBP	2.500	1.326	0.880	1.569
HKD		2.959		2.959
JPY			1.300	1.300
NOK			3.800	3.800
USD	1.943	1.954	3.611	2.783

Average prices of currency derivatives in hedge accounting concerning significant currencies 31 December 2022

	<1 year	1–5 years	>5 years	Total
Currency derivatives				
Forward exchange agreements				
Average EUR:AUD	1.4896			1.4896
Average EUR:CHF	0.970			0.970
Average EUR:GBP	0.862			0.862
Average EUR:USD	1.064			1.064

Average prices of currency derivatives in hedge accounting concerning significant currencies 31 December 2021

	<1 year	1–5 years	>5 years	Total
Currency derivatives				
Forward exchange agreements				
Average EUR:CHF	1.077			1.077
Average EUR:GBP	0.893			0.893
Average EUR:SGD	1.625			1.625
Average EUR:USD	1.200			1.200

Effects of hedge accounting on financial position and result

EUR million	Interest rate risk hedge 31 Dec 2021	31 Dec 2020
Fair value hedges		
Carrying amount of hedged receivables*	19,190	15,967
- of which the accrued amount of hedge adjustments**	-1,540	93
Carrying amount of hedged liabilities***	24,915	14,331
- of which the accrued amount of hedge adjustments	1,962	140
Remaining hedge adjustment amount of discontinued hedges	3	53

* Presented under Receivables from customers and Investment assets in the balance sheet.

** The figures also take account of adjustments between the fair value reserve and the income statement related to hedge accounting.

*** Presented in the balance sheet under Liabilities to customers, Debt securities issued to the public and Subordinated liabilities.

EUR million	Interest rate risk hedge 31 Dec 2021	31 Dec 2020
Fair value hedges		
Changes in fair value of hedging derivatives	-565	-72
Change in value of hedged item that is used as basis for recognition of ineffective hedge during period	549	68
Hedge ineffectiveness presented in income statement	-16	-4

EUR million	Interest rate risk hedge 31 Dec 2021	31 Dec 2020
Cash flow hedges		
Changes in fair value of hedging derivatives	-37	2
Change in value of hedged item that is used as basis for recognition of ineffective hedge during period	36	-2
Hedge ineffectiveness presented in income statement	0	0
Change in cash flow hedge reserve concerning continuous hedges	-38	2

Note 17. Receivables from customers

EUR million	31 Dec 2022	31 Dec 2021
Loans to the public and public sector entities	26,185	24,426
Finance lease receivables*	2,228	2,124
Guarantee receivables	1	2
Total	28,414	26,552
Loss allowance**	-236	-316
Total receivables from customers	**28,178**	**26,236**

* Finance lease receivables are itemised in Note 21.

** Loss allowance is itemised in Note 34. Loss allowance regarding receivables and notes and bonds.

OP Corporate Bank has developed two products based on the international framework for sustainable finance: green loans and sustainability-linked loans. In green loans, corporate customers are committed to using the borrowed funds to promote specific projects. In sustainability-linked loans, corporate customers are committed to sustainability goals selected together when granting the loan. These targets affect the loan margin. At the end December, total exposures from these loans and facilities stood at EUR 5.2 billion (3.0).

Note 18. Investment assets

EUR million	31 Dec 2022	31 Dec 2021
Financial assets held for trading		
Notes and bonds	295	331
Shares and participations	26	18
Total	322	349
Financial assets at fair value through other comprehensive income		
Notes and bonds	11,755	13,171
Shares and participations	0	0
Total	11,755	13,171
Amortised cost		
Notes and bonds	4,328	3,853
Total	4,328	3,853
Total investment assets	**16,404**	**17,373**

Note 34 describes expected credit losses of items measured at fair value through other comprehensive income and at amortised cost.

Note 19. Intangible assets

Changes in intangible assets, EUR million	Information systems	Information systems under development	Other	Total
Acquisition cost 1 January 2022	61	0	0	61
Increases	0		0	0
Decreases	-23			-23
Transfers between items	0	-0		
Acquisition cost 31 December 2022	38	-0	0	39
Acc. amortisation and impairments 1 January 2022	-49		0	-49
Amortisation during the financial year	-9		-0	-9
Decreases	22			22
31 December 2022	-35		0	-36
Carrying amount 31 December 2022	**3**	**-0**	**0**	**3**

Changes in intangible assets, EUR million	Information systems	Information systems under development	Other	Total
Acquisition cost 1 January 2021	99	2	0	101
Increases	0		0	0
Decreases	-40		-0	-41
Transfers between items	2	-2		
Acquisition cost 31 December 2021	61	0	0	61
Acc. amortisation and impairments 1 January 2021	-77		0	-77
Amortisation for the period	-13		0	-13
Decreases	40		0	41
Accumulated amortisation and impairments 31 December 2021	-49		0	-49
Carrying amount 31 December 2021	**11**	**0**	**0**	**12**

Note 20. Property, plant and equipment

EUR million	31 Dec 2022	31 Dec 2021
Property in Group use		
Land and water areas	0	0
Machinery and equipment	0	0
Other tangible assets	2	2
Right-of-use assets	2	3
Total property, plant and equipment	**5**	**5**

Changes in property, plant and equipment (PPE), and investment property, EUR million	Property in Group use	Machinery and equipment	Other tangible assets	Total PPE
Acquisition cost 1 January 2022	1	1	2	4
Increases		0		0
Decreases		0	0	0
Acquisition cost 31 December 2022	1	0	2	4
Accumulated depreciation and impairments 1 January 2022	-1	0	0	-1
Depreciation for the financial year		0		0
Decreases		0		0
Accumulated depreciation and impairments 31 December 2022	-1	0	0	-1
Right-of-use assets*				2
Carrying amount 31 December 2022	**0**	**0**	**2**	**5**

Changes in property, plant and equipment (PPE), and investment property, EUR million	Property in Group use	Machinery and equipment	Other tangible assets	Total PPE
Acquisition cost 1 January 2021	1	0	1	3
Increases		0	0	1
Decreases		0	0	0
Acquisition cost 31 December 2021	1	1	2	4
Accumulated depreciations and impairments 1 January 2021	-1	0	0	-1
Depreciation for the financial year		0	0	0
Decreases		0		0
Accumulated depreciations and impairments31 December 2021	-1	0	0	-1
Right-of-use assets*				3
Carrying amount 31 December 2021	**0**	**0**	**2**	**5**

* Note 21. Leases

Note 21. Leases

Right-of-use assets, EUR million	Buildings	Other	Total
Carrying amount 1 January 2022	2	1	3
Increases	0	0	0
Decreases		0	0
Depreciation for the financial year	0	0	-1
Value changes for the financial year	0	0	0
Carrying amount 31 December 2022	**2**	**0**	**2**

Right-of-use assets, EUR million	Buildings	Other	Total
Carrying amount 1 January 2021	3	1	4
Increases		0	0
Decreases		0	0
Depreciation for the financial year	0	0	-1
Value changes for the financial year	0	0	0
Carrying amount 31 December 2021	**2**	**1**	**3**

Lease liabilities, EUR million	31 Dec 2022	31 Dec 2021
* Carrying amount	2	3
Contractual maturities		
< 1 year	1	1
1–2 years	0	1
2–3 years	0	0
3–4 years	0	0
4–5 years	0	0
Over 5 years	0	1

* Note 27. Provisions and other liabilities

Items entered in the income statement, EUR million	31 Dec 2022	31 Dec 2021
Interest expenses	0	0
Depreciation on right-of-use assets	-1	-1
Gains or losses arising from sale and leaseback transactions;	0	0
Expenses of short-term and low-value leases	-1	-1
Total cash flow from leases	-1	-1

Finance lease receivables

OP Corporate Bank plc uses finance leases to finance moveable capital assets, real property units and other premises in Finland. In addition, OP Corporate Bank's branches in Estonia, Latvia and Lithuania use finance leases to finance moveable capital assets.

EUR million	31 Dec 2022	31 Dec 2021
Maturity of finance lease receivables		
< 1 year	763	666
1–2 years	590	569
2–3 years	390	380
3–4 years	294	220
4–5 years	138	170
Over 5 years	216	202
Gross investment in finance leases	2,391	2,207
Unearned finance income (–)	-162	-83
Present value of minimum lease payments	**2,229**	**2,124**
Present value of minimum lease payment receivables		
< 1 year	707	637
1–2 years	552	550
2–3 years	366	369
3–4 years	280	213
4–5 years	131	167
Over 5 years	192	189
Total	**2,229**	**2,124**

Items entered in the income statement, € million	31 Dec 2022	31 Dec 2021
Interest income from finance lease receivables	35	19
Capital gain/loss accrued from finance leases	1	1

Note 22. Other assets

EUR million	31 Dec 2022	31 Dec 2021
Payment transfer receivables	159	249
Pension assets	17	8
Accrued income and prepaid expenses		
Interest	317	305
Interest on derivatives receivables	26	21
Other	27	22
Derivatives receivables, central counterparty clearing	47	5
CSA receivables from derivative contracts	353	488
Securities receivables	0	4
Other receivables	185	172
Total	**1,132**	**1,274**

Note 23. Tax assets and liabilities

EUR million	31 Dec 2022	31 Dec 2021
Income tax liabilities	10	17
Deferred tax liabilities	306	322
Total tax liabilities	**316**	**339**

Deferred tax assets	31 Dec 2022	31 Dec 2021
Due to financial assets at fair value through other comprehensive income	1	
Cash flow hedge	6	0
Due to defined-benefit pension plans	12	13
Due to other temporary differences	6	6
Set-off against deferred tax liabilities	-26	-19
Total	**0**	**0**

Deferred tax liabilities	31 Dec 2022	31 Dec 2021
Due to appropriations	326	325
Due to financial assets at fair value through other comprehensive income	0	11
Defined benefit pension plans	5	4
Due to other temporary differences		1
Set-off against deferred tax assets	-26	-19
Total	**306**	**322**
Net deferred tax asset (+)/liability (-)	**-306**	**-322**

Changes in deferred taxes	31 Dec 2022	31 Dec 2021
Deferred tax assets /liabilities 1 January	-322	-315
Recognised in the income statement		
Defined benefit pension plans		0
Other	0	-1
Recognised in statement of comprehensive income		
Available-for-sale financial assets		
Fair value measurement	12	-6
Cash flow hedges	6	1
Actuarial gains/losses on post-employment benefit obligations	-2	-1
Total deferred tax assets 31 December, asset (+)/liability (-)	**-306**	**-322**
Income tax assets, asset (+)/liability (-)	**-10**	**-17**
Total tax assets, asset (+)/liability (-)	**-316**	**-339**

Notes to liabilities and equity capital

Note 24. Liabilities to credit institutions

EUR Million	31 Dec 2022	31 Dec 2021
Liabilities to central banks	11,977	16,000
Liabilities to credit institutions		
Repayable on demand		
Deposits		
With OP Financial Group entities	1,817	1,420
With other credit institutions	219	550
Other liabilities		
With OP Financial Group entities	0	-0
Total	2,037	1,971
Other than repayable on demand		
Deposits		
With OP Financial Group entities*	26,818	24,621
With other credit institutions	69	68
Total	26,886	24,689
Total liabilities to credit institutions and central banks	**40,899**	**42,660**

* The item includes LCR deposits by member credit institutions.

In 2020, the Governing Council of the European Central Bank modified the terms and conditions of TLTRO III to stimulate bank lending to those hardest hit by the Covid-19 pandemic. According to the modified conditions, the interest rate between 24 June 2020 and 23 June 2022 can be the ECB's deposit facility rate (–0.50% on the reporting date) minus 0.50%. For the subsequent loan maturity, the interest rate can be, at its best, the ECB's deposit facility rate. The reduced interest rate is conditional on fulfilling the criteria for net lending performance. The interest rate for 24 June 2020–23 June 2021 was determined by the net lending performance period expired on 31 March 2021 and the interest rate for 24 June 2021–23 June 2022 was determined by the net lending performance period expired on 31 December 2021. The Bank of Finland has confirmed that OP Corporate Bank has fulfilled the criteria for net lending performance for interest period 24 June 2020–23 June 2021 and for interest period 24 June 2021–23 June 2022. The interest rate for TLTRO III funding for each loan between 23 June 2022 and 22 November 2022 is the average of the ECB's deposit facility rate between the start date of the loan concerned and 21 November 2022, and after that the ECB's deposit facility rate. OP Corporate Bank's TLTRO III funding amounted to a total of EUR 12 billion (16) at the end of December.

Note 25. Liabilities to customers

EUR million	31 Dec 2022	31 Dec 2021
Deposits		
Repayable on demand		
Private	17	18
Companies and public-sector entities	13,816	15,701
Total	13,834	15,719
Other		
Private	0	0
Companies and public-sector entities	850	370
Total	850	370
Total deposits	14,683	16,089
Other financial liabilities		
Repayable on demand		
Companies and public-sector entities	7	1
Total	7	1
Other		
Companies and public-sector entities	4,323	2,267
Total	4,323	2,267
Total other financial liabilities	4,330	2,268
Total liabilities to customers	**19,014**	**18,357**

Note 26. Debt securities issued to the public

EUR million	31 Dec 2022	31 Dec 2021
Bonds	10,595	10,927
Other		
Certificates of deposit	1,083	297
Commercial paper	9,287	7,539
Subordinated bonds (SNP)	4,306	3,926
Included in own portfolio in trading (–)*	-63	-58
Total debt securities issued to the public	**25,209**	**22,630**

*Own bonds held by OP Corporate Bank plc have been set off against liabilities.

OP Corporate Bank has issued two green bonds under the Green Bond Framework to responsible institutional investors: a green non-preferred unsecured green bond of EUR 500 million with a maturity of 5.5 years issued on 27 December 2022 and a senior green unsecured bond or EUR 500 million with a maturity of five years issued in 2019. The green bonds will support the green transition, and proceeds raised with them are allocated to sustainable corporate finance. Eligible sectors to be funded through the bonds include renewable energy, green buildings and environmentally sustainable management of living natural resources and land use.

Reconciliation of changes in liabilities in cash flows from financing activities against balance sheet items

EUR million	Debt securities issued to the public	Subordinated liabilities
Balance sheet value 1 Jan 2022	**22,630**	**1,994**
Changes in cash flows from financing activities		
Increases in bonds	5,090	
Increases in certificates of deposit	1,194	
Increases in commercial papers	12,443	
Increases in debentures		6
Increases total	**18,727**	**6**
Decreases in bonds	-3,816	
Decreases in certificates of deposit	-407	
Decreases in commercial papers	-10,695	
Decreases in debentures		-534
Decreases total	**-14,918**	**-534**
Total changes in cash flows from financing activities	**3,809**	**-529**
Valuations	-1,231	-82
Balance sheet value 31 Dec 2022	**25,209**	**1,384**

EUR million	Debt securities issued to the public	Subordinated liabilities
Balance sheet value 1 Jan 2021	**21,931**	**2,309**
Changes in cash flows from financing activities		
Increases in bonds	3,144	
Increases in certificates of deposit	371	
Increases in commercial papers	8,145	
Increases in debentures		21
Increases total	**11,660**	**21**
Decreases in bonds	-2,526	
Decreases in certificates of deposit	-348	
Decreases in commercial papers	-7,953	
Decreases in debentures		-311
Decreases total	**-10,827**	**-311**
Total changes in cash flows from financing activities	**833**	**-290**
Valuations	-133	-24
Balance sheet value 31 Dec 2021	**22,630**	**1,994**

Long-term loans and interest rate bases	Book value	Fair value	Interest rate
OP Corporate Bank plc Issue of EUR 500,000,000 0.375 per cent. Instruments due 29 Aug 2023 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	492.3	Fixed 0.375%
OP Corporate Bank plc Issue of EUR 10,000,000 0.55 per cent. Instruments due 5 Oct 2023 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	10.0	9.8	Fixed 0.550%
OP Corporate Bank plc Issue of EUR 500 Million Floating Rate Senior Unsecured Notes Due January 2024 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	506.8	EUB3 + 1.000%
OP Corporate Bank plc Issue of EUR 20,000,000 1.097 per cent. Instruments due 16 February 2024 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	20.0	19.5	Fixed 1.097%
OP Corporate Bank plc Issue of EUR 500,000,000 0.375 per cent. Instruments due 26 February 2024 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	483.1	Fixed 0.375%
OP Corporate Bank plc Issue of EUR 800,000,000 Floating Rate Note due 17 May 2024 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	800.0	807.6	EUB3 + 1.000%
OP Corporate Bank plc Issue of EUR 15,000,000 Fixed Rate Notes due 14 June 2024 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments.	15.0	14.4	Fixed 0.780%
OP Corporate Bank plc Issue of EUR 500,000,000 0.375 per cent. Senior Non-Preffered Instruments due 19 June 2024 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	475.9	Fixed 0.375%
OP Corporate Bank plc Issue of EUR 10,000,000 0,725 per cent. Instruments due 20 June 2024 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments.	10.0	9.6	Fixed 0.725%
OP Corporate Bank plc Issue of EUR 1,000,000,000 0.125 per cent. Unsubordinated Instruments due 1 July 2024 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	1000.0	953.1	Fixed 0.125%
OP Corporate Bank plc Issue of EUR 20,000,000 0,55 per cent. Instruments due 30 Aug 2024 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments.	20.0	19.0	Fixed 0.550%
OP Corporate Bank plc Issue of AUD 200,000,000 Floating Rate Senio Non-Preffered Instruments due 25 November 2024 under the AUD 3 000,000,000 Programme for the Issuance of Debt Instruments	127.4	127.4	BBSW +1.150%
OP Corporate Bank plc Issue of EUR 57,000,000 1.07 per cent. Notes due 2025 under the EUR 15,000,000,000 Programme for the Issuance of Debt Instruments.	57.0	57.0	Fixed 1.070%
OP Corporate Bank plc Issue of EUR 500,000,000 1.00 per cent. Instruments due 22 May 2025 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments.	500.0	470.5	Fixed 1.000%
OP Corporate Bank plc Issue of EUR 1,000,000,000 0.500 per cent. Unsubordinated Instruments due 12 August 2025 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	1000.0	923.0	Fixed 0.500%
OP Corporate Bank plc Issue of HKD 1,270,000,000 3.001 per cent Fixed Rate Notes due 4 September 2025 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	152.7	145.0	Fixed 3.001%
OP Corporate Bank plc Issue of JPY 10 000 000 000,00 due 17 Nov 2025 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	71.1	70.7	Fixed 0.700%
OP Corporate Bank plc Issue of GBP 50,000,000 Floating Rate Notes due 2025 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	56.4	56.4	SONIA +1.020%
OP Corporate Bank plc Issue of EUR 1,250,000,000 due 15 Dec 2025 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	1250.0	1222.5	Fixed 2.875%
OP Corporate Bank plc Issue of SEK 1,000,000,000 New Senior Preferred FRN issue in SEK due 2025 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	89.9	89.1	EUB3 + 0.640%
OP Corporate Bank plc Issue of EUR 20,000,000 0.91 per cent. Fixed Rate Notes due 14 January 2026 under the EUR 20,000,000 Programme for the Issuance of Debt Instruments	20.0	18.3	Fixed 0.910%
OP Corporate Bank plc Issue of GBP 350,000,000 Fixed Rate Senior Preferred Instruments due 14 Jan 2026 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	394.6	373.7	Fixed 3.375%
OP Corporate Bank plc Issue of HKD 663,000,000 2.88 per cent. Instrumenst due 21 January 2026 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	79.7	75.0	Fixed 2.880%

OP Corporate Bank plc Issue of SEK 500,000,00 FRN due 16 Feb 2026 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	45.0	44.9	Fixed 0.000%
OP Corporate Bank plc Issue of 5yr EUR 500 000 000 Fixed Rate Senior Non-Preferred Instruments due 24 March 2026 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	442.1	Fixed 0.250%
OP Corporate Bank plc Issue of EUR 50,000,000 0.25 per cent. Fixed Rate Notes due 1 July 2026 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	50.0	44.1	Fixed 0.250%
OP Corporate Bank plc Issue of Short 5yr GBP 400,000,000 Fixed Rate Senior Non-Preferred Instruments due 4 September 2026 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	451.0	387.2	Fixed 1.375%
OP Corporate Bank plc Issue of SEK 700,000,00 due 23 Oct 2026 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	62.9	62.9	Fixed 4.454%
OP Corporate Bank plc Issue of EUR 500,000,000 0.600 per cent. Senior Non-Preferred Instruments due 18 January 2027 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	434.0	Fixed 0.600%
OP Corporate Bank plc Issue of EUR 500,000,000 Fixed Rate Senior Preferred Instruments due 18 April 2027 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	507.9	Fixed 4.125%
OP Corporate Bank plc Issue of EUR 10,000,000 1.058 per cent. Instruments due 18 May 2027 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	10.0	8.9	Fixed 1.058%
OP Corporate Bank plc Issue of EUR 35,000,000 Senior Preferred Fixed Rate Notes due 25 May 2027 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	35.0	32.4	Fixed 1.873%
OP Corporate Bank plc Issue of EUR 500 000 000 Fixed Rate Green Senior Non-Preferred Instruments due 27 July 2027 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	424.2	Fixed 0.625%
OP Corporate Bank plc Issue of SEK 750 000 000,00 New senior preferred FRN issue in SEK due 19 Aug 2027 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	67.4	66.7	SES3 +0.920%
OP Corporate Bank plc Issue of EUR 50,000,000 3.086 per cent. Instruments due 23 August 2027 under the EUR 15,000,000,000 Programme for the Issuance of Debt Instruments	50.0	48.3	Fixed 3.086%
OP Corporate Bank plc Issue of EUR 25,000,000 1.00 per cent. Notes due 2027 under the EUR 15,000,000,000 Programme for the Issuance of Debt Instruments	25.0	25.0	Fixed 1.000%
OP Corporate Bank plc Issue of EUR 1,000,000,000 0.100 per cent. Instruments due 16 November 2027 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	1000.0	839.6	Fixed 0.100%
OP Corporate Bank plc Issue of USD 60,000,000 3.692 per cent. Instruments due 15 Jun 2028 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	56.3	52.5	Fixed 3.692%
OP Corporate Bank plc Issue of 7yr EUR 500 000 000 Fixed Rate Senior Non-Preferred Instruments due 16 June 2028 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	404.7	Fixed 0.375%
OP Corporate Bank plc Issue of EUR 10,000,000 1.30 per cent. Instruments due 23 Oct 2028 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	10.0	8.6	Fixed 1.300%
OP Corporate Bank plc Issue of USD 100,000,000 3.901 per cent. Instruments due 7 Dec 2028 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	93.8	88.0	Fixed 3.901%
OP Corporate Bank plc Issue of 7.25yr EUR 500 000 000 Fixed Rate Senior Non-Preferred Instruments due 8 December 2028 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	396.3	Fixed 0.375%
OP Corporate Bank plc Issue of EUR 10,000,000 1.310 per cent. Fixed Rate Instruments due 24 January 2029 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	10.0	8.5	Fixed 1.310%
OP Corporate Bank plc Issue of EUR 19,000,000 1.005 per cent. Fixed Rate Instruments due 6 March 2029 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	19.0	19.0	Fixed 1.005%
OP Corporate Bank plc Issue of NOK 900,000,000 FXD Senior Preferred Note, due 25 May 2029 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	85.6	84.0	Fixed 3.755%
OP Corporate Bank plc Issue of AUD 65,000,000 Floating Rate Note Due 25 May 2029 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	41.4	40.4	BBSW +1.300%

OP Corporate Bank plc Issue of NOK 200,000,000 3.80 per cent. Instruments due 27 May 2029 under the EUR 15,000,000,000 Programme for Debt Instruments	19.0	18.6	Fixed 3.800%
OP Corporate Bank plc Issue of AUD 197,000,000 2.440% per cent.	125.5	125.5	Fixed 2.440%
OP Corporate Bank plc Issue of USD 50,000,000 Fixed Rate Senior Non-Preferred Instruments due 17 July 2029 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	46.9	41.0	Fixed 2.933%
OP Corporate Bank plc Issue of EUR 500,000,000 0.625 per cent. Senior Non-Preferred Instruments due 12 November 2029 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	500.0	386.5	Fixed 0.625%
OP Corporate Bank plc Issue of EUR 10,000,000 0.53 per cent. Fixed Rate Instruments due 15 November 2029 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	10.0	7.9	Fixed 0.530%
OP Corporate Bank plc Issue of NOK 1,000,000,000 FXD Senior Preferred Note, due 5 December 2029 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	114.1	114.1	Fixed 4.400%
OP Corporate Bank plc Issue of EUR 30,000,000 1.70 per cent. Notes due 2030 under the EUR 15,000,000,000 Programme for the Issuance of Debt Instruments	30.0	30.0	Fixed 1.700%
OP Corporate Bank plc Issue of EUR 50,000,000 2.045 per cent. Instruments due 18 November 2030 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	50.0	43.1	Fixed 2.045%
OP Corporate Bank plc Issue of EUR 10,000,000 1.865 per cent. Instruments due 27 January 2031 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	10.0	8.4	Fixed 1.865%
OP Corporate Bank plc Issue of 10yr EUR 300 000 000 Fixed Rate Senior Non-Preferred Instruments due 24 March 2031 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	300.0	221.6	Fixed 0.750%
OP Corporate Bank plc Issue of NOK 850,000,000 FXD Senior Preferred Note, due 11 November 2032 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	80.8	83.4	Fixed 5.010%
OP Corporate Bank plc Issue of EUR 50,000,000 Fixed Rate Note Due 23 Nov 2032 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	50.0	50.0	Fixed 4.148%
OP Corporate Bank plc Issue of EUR 50,000,000 1.706 per cent. Unsubordinated Instruments due 12 December 2033 (the "Instruments") under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments.	50.0	38.9	Fixed 1.706%
OP Corporate Bank plc Issue of EUR 30,000,000 3.068 per cent. Instruments due 21 March 2034 under the EUR 15,000,000,000 Programme for the Issuance of Debt Instruments	30.0	26.8	Fixed 3.068%
OP Corporate Bank plc Issue of EUR 30,000,000 Fixed Rate Notes due 2034 under the EUR 15,000,000,000 Programme for the Issuance of Debt Instruments	30.0	27.3	Fixed 3.015%
OP Corporate Bank plc Issue of EUR 40,000,000 Fixed Rate Notes due 2034 under the EUR 15,000,000,000 Programme for the Issuance of Debt Instruments	40.0	35.5	Fixed 3.000%
Pohjola Bank plc Issue of EUR 40,000,000 1.40 per cent. Instruments due 16 March 2035 under the EUR 15,000,000,000 Programme for the Issuance of Debt Instruments	40.0	29.2	Fixed 1.400%
OP Corporate Bank plc Issue of EUR 30,000,000 2.155 per cent. Instruments due 20 November 2035 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	30.0	23.8	Fixed 2.155%
OP Corporate Bank plc Issue of JPY 2,500,000,000 1.30 per cent. Instruments due 27 November 2035 under the EUR 20,000,000,000 Programme for the Issuance of Debt Instruments	17.8	17.8	Fixed 1.300%

The interest rate is the rate according to the issue currency. The euro equivalents are calculated using the average rate of the European Central Bank on the balance sheet date. The nominal amount of structured bonds issued by OP Corporate Bank plc was EUR 1,621 million (1,138). The bonds' interest rate is determined on the basis of interest, equity, equity index or similar underlying instruments. Any possible additional return on the bonds to the investor is hedged using a corresponding derivative structure.

Note 27. Provisions and other liabilities

EUR million	31 Dec 2022	31 Dec 2021
Provisions		
Loss allowance	29	20
Reorganisation provision	1	
Other liabilities		
Payment transfer liabilities	868	779
Accrued expenses		
Interest payable	174	135
Interest payable on derivatives	20	-2
Other accrued expenses	46	84
CSA liabilities from derivatives	1,290	807
Pension liabilities	5	6
Lease liabilities	2	3
Accounts payable on securities	6	4
Payables based on purchase invoices	3	2
Other	66	36
Total provisions and other liabilities	**2,509**	**1,874**

Changes in provisions

EUR million	Loss allowance	Re-organisation	Other provisions	Total
1 Jan 2022	20			20
Increase in provisions	9	1		10
Provisions used	0	0		0
31 Dec 2022	29	1		30

EUR million	Loss allowance	Re-organisation	Other provisions	Total
1 Jan 2021	27	0		27
Increase in provisions	0			0
Provisions used	-8	0		-8
31 Dec 2021	20			20

Defined benefit pension plans

OP Corporate Bank plc has funded assets of its pension schemes through insurance companies and OP Bank Group Pension Foundation. Schemes related to supplementary pensions in OP Bank Group Pension Foundation are treated as defined benefit plans. Statutory pension cover managed by Ilmarinen Mutual Pension Insurance Company is treated as a defined contribution plan.

Supplementary pension at OP Bank Group Pension Foundation and insurance companies

OP Bank Group Pension Foundation manages supplementary pension cover provided by OP Corporate Bank for its employees. The purpose of the Pension Foundation is to grant old-age and disability pension benefits and sickness benefits to employees covered by the Pension Foundation activities, and survivors' pension benefits to their beneficiaries, and burial grant. In addition, the Pension Foundation may grant said employees benefits related to rehabilitation. Arranging supplementary pension is voluntary. Supplementary pension cover provided by the Pension Foundation is fully funded.

The Pension Foundation covers every employee who has reached the age of 20 years and who has been employed, as specified by TyEL, for two consecutive years by the employer within the Pension Foundation and whose employment has begun before 1 July 1991. The employment term entitling to pension begins from the day the employee turned 23 years in the employment of the employer. The salary/wage serving as the basis for the calculation of pension refers to pensionable pay based on one and the same employment and calculated under the Finnish Employees' Pensions Act, TEL, in force until 31 December 2006. The retirement age of those covered by the Pension Foundation varies from 60 to 65 years, depending on the personnel group to which the employee belongs under the Pension Foundation rules.

The most significant associated risk relates to the possibility of the actual return on investment assets being lower than the target set for the minimum return. If such a risk materialises in several consecutive years, this would result in charging contributions.

The most significant actuarial risks of OP Bank Group Pension Foundation are associated with interest rate and market risks, systematically increasing life expectancy and inflation risk. A change in the discount rate for pension liabilities has a substantial effect on the amount of pension liabilities.

Responsible for investment, the Board of Trustees of the Pension Foundation approves the pension institution's investment plan related to its assets. A pension institution's chief actuary prepares annually a forecast for developments in insurance liabilities and pension costs. On this basis, investment asset allocation takes account of the requirements set by the nature of insurance liabilities for investment operations with respect to the level of security, productivity and liquidity, as well as the Pension Foundation's risk-bearing capacity.

Supplementary pension has also been arranged in life insurance companies. In general, the insured persons are entitled to retire on an old-age pension at the age of 63. In addition, the insured is entitled to disability pension and, after the insured person's death, beneficiaries are entitled to burial grant and survivors' pension. Insurance contributions are collected based on the retirement age of 65. The employer pays the uncovered portion of the pension on a lump-sum basis when the person retires at the promised retirement age of 63. Payable benefits are tied to the TyEL index. The employer will annually be charged an additional payment if the insurance company's own index compensation is smaller than the index given to benefits.

When reporting promised benefits under IAS 19, the key risks are associated with inflationary expectation, wage inflation and interest rates on the balance sheet date. The most significant risk in these plans is inflation assumption that affects the pension obligation through assumption for an increase in benefits. The used interest rate affects not only the pension obligation but also the value of assets corresponding to the obligation, reducing the effect of any change on net benefit liability to be recognised.

	Defined benefit obligations		Fair value of pension assets		Net liabilities (assets)	
Balance sheet value of defined benefit plans, EUR million	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Opening balance 1 Jan	56	56	-58	-53	-2	3
Defined benefit pension costs recognised in income statement						
Current service cost	0	0			0	0
Interest expense (income)	1	0	-1	0	0	0
Effect of plan curtailment, change and fulfilment of obligation or previous service					0	
Administrative expenses			0	0	0	0
Total	**1**	**1**	**0**	**0**	**0**	**0**
Losses (gains) recognised in other comprehensive income arising from remeasurement						
Actuarial losses (gains) arising from changes in economic expectations	-14	2			-14	2
Actuarial losses (gains) arising from changes in demographic expectations		0			0	0
Experience adjustments	0	0			0	0
Return on plan assets, excluding amount (–) of net defined benefit liability (asset)			3	-7	3	-7
Total	**-14**	**2**	**3**	**-7**	**-11**	**-4**
Other						
Employer contributions			0	0	0	0
Benefits paid	-2	-2	2	2		0
Total	**-2**	**-2**	**2**	**2**	**0**	**0**
Closing balance 31 Dec	**41**	**56**	**-53**	**-58**	**-12**	**-2**

Liabilities and assets recognised in the balance sheet, EUR million	**31 Dec 2022**	**31 Dec 2021**
Net liabilities/assets (Pension Foundation)	-17	-8
Net liabilities (Supplementary pension schemes of insurance companies)	5	6
Total net liabilities	**5**	**6**
Total net assets	**-17**	**-8**

Pension Foundation assets, 31 Dec 2022, EUR million	Total
Shares and participations	9
Notes and bonds	10
Real property	1
Mutual funds	26
Derivatives	0
Other assets	3
Total	**49**

Pension Foundation assets, 31 Dec 2021, EUR million	Total
Shares and participations	9
Notes and bonds	16
Real property	1
Mutual funds	24
Derivatives	0
Other assets	3
Total	**53**

Pension plan assets include, EUR million,	31 Dec 2022	31 Dec 2021
Other receivables from OP Financial Group companies	3	3
Total	**3**	**3**

Contributions payable under the defined benefit pension plan in 2023 are estimated at EUR 0.4 million.

The duration of the defined benefit pension obligation in the Pension Foundation on 31 December 2022 was 12.3 years, and in other plans 12.3 years.

Key actuarial assumptions used, 31 Dec 2022, EUR million	Pension Foundation	Insurance companies
Discount rate, %	3.6	3.4
Future pay increase assumption, %	3.3	3.3
Future pension increases, %	2.7	2.7
Turnover rate, %	0.0	0.0
Inflation rate, %	2.5	2.5
Estimated remaining service life of employees in years	6.0	5.0
Life expectancy for 65-year old people		
Men	21.4	21.4
Women	25.4	25.4
Life expectancy for 45-year old people after 20 years		
Men	23.7	23.7
Women	28.1	28.1

Key actuarial assumptions used, 31 Dec 2021, EUR million	Pension Foundation	Insurance companies
Discount rate, %	0.9	1.0
Future pay increase assumption, %	2.9	3.0
Future pension increases, %	2.3	2.3
Turnover rate, %	0.0	0.0
Inflation rate, %	2.1	2.2
Estimated remaining service life of employees in years	6.0	6.0
Life expectancy for 65-year old people		
Men	21.4	21.4
Women	25.4	25.4
Life expectancy for 45-year old people after 20 years		
Men	23.7	23.7
Women	28.1	28.1

Sensitivity analysis of key actuarial assumptions, 31 Dec 2022	Pension Foundation Change in defined benefit pension obligation		Supplementary pension schemes of insurance companies change in defined benefit net pension liability	
	EUR million	%	EUR million	%
Discount rate				
0.5 pp increase	-2	-5.5	0	-6.9
0.5 pp decrease	2	6.1	0	7.7
Pension increases				
0.5 pp increase	2	5.8	0	34.1
0.5 pp decrease	-2	-5.5	0	-32.0
Mortality				
1-year increase in life expectancy	1	3.2	0	3.3
1-year decrease in life expectancy	-1	-3.1	0	-3.2

Sensitivity analysis of key actuarial assumptions, 31 Dec 2021	Pension Foundation Change in defined benefit pension obligation		Supplementary pension schemes of insurance companies change in defined benefit net pension liability	
	EUR million	%	EUR million	%
Discount rate				
0.5 pp increase	-3	-7.0	0	-8.3
0.5 pp decrease	4	7.9	0	9.4
Pension increases				
0.5 pp increase	3	7.2	0	29.1
0.5 pp decrease	-3	-6.7	0	-27.1
Mortality				
1-year increase in life expectancy	2	3.9	0	4.1
1-year decrease in life expectancy	-2	-3.7	0	-4.0

Note 28. Subordinated liabilities

EUR million	31 Dec 2022	31 Dec 2021
Other		
Debentures	1,384	1,994
Total subordinated liabilities	**1,384**	**1,994**

Debentures

1. Debenture loan of JPY 10 billion (euro equivalent 77 million), which is a ten-year bullet loan, will mature on 3 July 2025. Under the terms and conditions of the loan, the issuer will have the opportunity for early redemption in case the principal cannot be counted as part of the bank's Tier 2 capital. The loan carries a floating rate linked to the JPY Libor + 0.735%.
2. Debenture loan of 100 million euros, which is a 10-year bullet loan, will mature on 25 September 2025. Under the terms and conditions of the loan, the issuer will have the opportunity for early redemption in case the principal cannot be counted as part of the bank's Tier 2 capital. The loan carries a fixed interest rate of 2.405% p.a.
3. Debenture loan of SEK 3,250 million (euro equivalent 317 million), which is a ten-year bullet loan, will mature on 3 June 2030. Under the terms and conditions of the loan, the issuer will have the opportunity for early redemption in case the principal cannot be counted as part of the bank's Tier 2 capital. The loan carries a floating rate linked to a 3-month Stibor + 2.300%.
4. Debenture loan of 1,000 million euros, which is a 10-year bullet loan, will mature on 9 June 2030. Under the terms and conditions of the loan, the issuer will have the opportunity for early redemption in case the principal cannot be counted as part of the bank's Tier 2 capital. The loan carries a fixed interest rate of 1.625% p.a.

Loans 1–4 were issued in international capital markets.

OP Corporate Bank plc has no breaches of the terms and conditions of the loan contracts with respect to principal, interest and other conditions. The difference between the nominal value and carrying amount is due to the fair value hedge related to interest rate risk measurement.

Note 29. Equity capital

EUR million	31 Dec 2022	31 Dec 2021
Liabilities to central banks	428	428
Reserves		
Restricted reserves		
Share premium account	524	524
Reserve fund	164	164
Fair value reserve		
Cash flow hedge	-26	-1
Measurement at fair value		
Notes and bonds	-5	41
Loss allowance regarding notes and bonds	2	1
Other restricted reserves		
Non-restricted reserves		
Reserve for invested non-restricted equity	308	308
Other non-restricted reserves	23	23
Retained earnings		
Profit (loss) for previous financial years	2,736	2,593
Profit (loss) for the financial year	211	215
Total equity capital	**4,364**	**4,296**

Share capital and shares

The number of shares remained unchanged, 319,551,415. The shares have no nominal value and their stated value (not an exact figure) is 1.34 euros per share. All of the shares issued have been paid in full.

Proposed distribution of dividend

The Board of Directors proposes that no dividend be distributed and that the profit for the financial year 2022 is entered in the account of retained earnings/loss. Dividends distributed a year ago amounted to EUR 0.25 per share, totalling EUR 80 million.

Reserves

Share premium account

The share premium account was formed during the validity of regulations in force before 1 September 2006. Items entered in the share premium account include amounts exceeding the stated value paid for shares in a rights issue and amounts exceeding the stated value of a share and paid for share subscription based on stock options.

The share premium account may be lowered in compliance with the regulations governing the reduction of share capital and may be used to increase the share capital. The amount of the subscription price exceeding the stated value of shares subscribed in September and November 2006, based on stock options, was entered in the share premium account, because the General Meeting had made the decision on issuing stock options before the entry into force of the new Companies Act. Otherwise, it has no longer been possible to increase the share premium account since 1 September 2006.

Reserve fund

The reserve fund consists of profits transferred to it during previous periods and the loan loss provisions transferred to it in 1990. The reserve fund may be used to cover losses for which the non-restricted equity is not sufficient. The reserve fund may also be used to increase the share capital and it may be reduced in the same way as the share capital. Since 1 September 2006, it has no longer been possible to increase the reserve fund.

Fair value reserve

The reserve includes the change in the fair value of financial assets recognised through the statement of comprehensive income. Items included in this reserve are derecognised and recorded in the income statement when the financial asset is disposed of or is subject to impairment. The expected loss on notes and bonds recognised through other comprehensive income is recognised to add the fair value reserve. The reserve also includes the net fair value change of interest rate derivatives as cash flow hedges verified as effective and adjusted for deferred tax. Fair value changes are included in the income statement in the period when hedged cash flows affect net income.

Fair value reserve after income tax

EUR million	Fair value through other comprehensive income Notes and bonds	Cash flow hedging	Total
Opening balance 1 Jan 2021	**20**	**2**	**22**
Fair value changes	30	-4	27
Capital gains transferred to income statement	-2		-2
Deferred tax	-6	1	-5
Closing balance 31 Dec 2021	**43**	**-1**	**42**

EUR million	Fair value through other comprehensive income Notes and bonds	Cash flow hedging	Total
Opening balance 1 Jan 2022	**43**	**-1**	**42**
Fair value changes	-48	-22	-70
Capital gains transferred to income statement	-10		-10
Transfers to net interest income		-9	-9
Deferred tax	12	6	18
Closing balance 31 Dec 2022	**-3**	**-26**	**-29**

The fair value reserve before tax amounted to EUR –37 million (52) at the end of the financial year and the related deferred tax asset/liability was EUR 7 million (–10). The loss allowance on notes and bonds recognised at fair value through other comprehensive income totalled EUR 0 million (0) in the fair value reserve during the financial year.
The negative fair value reserve may recover by means of asset appreciation, capital losses and recognised impairments.

Other restricted reserves

These reserves consist of retained earnings based on the Articles of Association or other rules describing their purpose.

Reserve for Invested non-restricted equity

Capital raised through the rights offering in 2009 was entered in the reserve for invested non-restricted equity.

Other non-restricted reserves

These reserves consist of retained earnings based on decisions by the General Meeting.

Retained earnings

Retained earnings contain tax-based provisions transferred in the IFRS transition and gains/losses due to the redefinition of defined benefit pension plans less deferred tax.

Restricted and non-restricted equity and distributable funds

EUR million	31 Dec 2022	31 Dec 2021
Shareholders' equity		
Restricted equity	1,086	1,157
Non-restricted equity	3,278	3,139
Total shareholders' equity	**4,364**	**4,296**

EUR million	31 Dec 2022	31 Dec 2021
Distributable funds		
Reserve for Invested non-restricted equity	308	308
Other non-restricted reserves	23	23
Retained earnings, defined benefit plans	-64	-73
Retained earnings for previous financial years	1,500	1,366
Tax-based provisions transferred in transition to IFRS	1,300	1,300
Profit for the financial year	211	215
	3,278	3,139
Capitalised development expenditure	-3	-11
Total distributable funds	**3,275**	**3,127**

Other notes to on-balance and off-balance sheet items

Note 30. Collateral given

EUR million	31 Dec 2022	31 Dec 2021
Given on behalf of own liabilities and commitments		
Others	13,908	18,320
Total collateral given*	**13,908**	**18,320**
Secured derivative liabilities	701	744
Other secured liabilities	12,000	16,004
Total	**12,701**	**16,748**

* In addition, bonds with a book value of EUR 1.5 billion have been pledged in the central bank, of which EUR 1.0 billion in intraday settlement collateral. Given that the bonds are available for withdrawal without the central bank's advance permission, they are not presented in the table above.

Note 31. Financial collateral held

OP Corporate Bank has received collateral, in accordance with the Financial Collateral Act, which it may resell or repledge.

EUR million	31 Dec 2022	31 Dec 2021
Fair value of collateral received		
Other	1,228	678
Total	**1,228**	**678**

The credit risk arising from derivatives is mitigated through collateral, which means the use of ISDA Credit Support Annex (CSA) contract associated with the ISDA general agreement. In the collateral system, the counterparty provides securities or cash in security for the receivable. The amount of CSA-related collateral received in cash totalled EUR 1 228 million on the balance sheet date (678). The Group had no securities received as collateral on the balance sheet date.

Note 32. Classification of financial assets and liabilities

Assets, EUR million	Amortised cost	Fair value through other comprehen-sive income	Fair value through profit or loss: Financial assets held for trading	Fair value through profit or loss: Must be measured at fair value through profit or loss	Hedging derivatives	Carrying amount total
Cash and cash equivalents	34,951					34,951
Receivables from credit institutions	12,978					12,978
Derivative contracts			5,685		97	5,782
Receivables from customers	28,178					28,178
Notes and bonds	4,328	11,755	295			16,378
Equity instruments		0	26			26
Other financial assets	1,132					1,132
Financial assets						**99,425**
Other than financial instruments						8
Total 31 December 2022	**81,567**	**11,755**	**6,006**		**97**	**99,433**

Assets, EUR million	Amortised cost	Fair value through other comprehen-sive income	Fair value through profit or loss: Financial assets held for trading	Fair value through profit or loss: Must be measured at fair value through profit or loss	Hedging derivatives	Carrying amount total
Cash and cash equivalents	32,789					32,789
Receivables from credit institutions	13,419					13,419
Derivative contracts			3,444		268	3,712
Receivables from customers	26,236					26,236
Notes and bonds	3,853	13,171	331			17,355
Equity instruments	0	0	18			18
Other financial assets	1,274					1,274
Financial assets						**94,803**
Other than financial instruments						17
Total 31 December 2021	**77,571**	**13,171**	**3,792**		**268**	**94,820**

Liabilities, EUR million	Financial liabilities at fair value through profit or loss	Other liabilities	Hedging derivatives	Carrying amount total
Liabilities to credit institutions		40,899		40,899
Derivative contracts	5,379		359	5,739
Liabilities to customers		19,014		19,014
Debt securities issued to the public		25,209		25,209
Subordinated loans		1,384		1,384
Other financial liabilities		2,393		2,393
Financial liabilities				**94,637**
Other than financial liabilities				431
Total 31 December 2022	**5,379**	**88,899**	**359**	**95,069**

Liabilities, EUR million	Financial liabilities at fair value through profit or loss	Other liabilities	Hedging derivatives	Carrying amount total
Liabilities to credit institutions		42,660		42,660
Derivative contracts	2,579		91	2,669
Liabilities to customers		18,357		18,357
Debt securities issued to the public		22,630		22,630
Subordinated loans		1,994		1,994
Other financial liabilities		1,748		1,748
Financial liabilities				**90,059**
Other than financial liabilities				465
Total 31 December 2021	**2,579**	**87,389**	**91**	**90,524**

Bonds included in debt securities issued to the public are carried at amortised cost. On 31 December 2022, the fair value of these debt instruments was approximately EURf1 164 million (190) lower (higher) than their carrying amount, based on information available from markets and employing commonly used valuation techniques. Subordinated liabilities are carried at amortised cost. Their fair values are lower than their amortised costs, but determining reliable fair values involves uncertainty.

Note 33. Recurring fair value measurements by valuation technique

Fair value of assets on 31 December 2022, EUR million	Level 1	Level 2	Level 3	Total
Recognised at fair value through profit or loss				
Equity instruments		21	5	26
Debt instruments	38	206	51	295
Derivative financial instruments	5	5,699	77	5,782
Fair value through other comprehensive income				
Equity instruments		0		0
Debt instruments	9,193	1,769	793	11,755
Total financial instruments	**9,237**	**7,695**	**926**	**17,858**
Investment property			0	0
Total	**9,237**	**7,695**	**926**	**17,858**

Fair value of assets on 31 December 2021, EUR million	Level 1	Level 2	Level 3	Total
Recognised at fair value through profit or loss				
Equity instruments		13	5	18
Debt instruments	77	60	193	331
Derivative financial instruments	1	3,604	106	3,712
Fair value through other comprehensive income				
Equity instruments		0		0
Debt instruments	10,269	2,376	527	13,171
Total financial instruments	**10,347**	**6,053**	**832**	**17,232**
Investment property			0	0
Total	**10,347**	**6,053**	**832**	**17,232**

Fair value of liabilities on 31 December 2022, EUR million	Level 1	Level 2	Level 3	Total
Recognised at fair value through profit or loss				
Other		0		0
Derivative financial instruments	7	5,638	94	5,739
Total	**7**	**5,638**	**94**	**5,739**

Fair value of liabilities on 31 December 2021, EUR million	Level 1	Level 2	Level 3	Total
Recognised at fair value through profit or loss				
Other		0		0
Derivative financial instruments	2	2,637	30	2,669
Total	**2**	**2,637**	**30**	**2,669**

Fair value measurement

Derivatives

OP Corporate Bank obtains the price of listed derivatives directly from markets. In the fair value measurement of OTC derivatives, OP Corporate Bank uses models and techniques commonly used in markets that best suits financial instrument measurement. These are needed, for instance, to create yield curves and currency conversion charts and volatility surfaces as well as for option valuation. The input data of these models can generally be derived from markets. However, in the fair value measurement of some contracts, OP Corporate Bank has to used models where input data cannot be observed in the market and therefore they must be assessed. Such contracts are included in Level 3.

Middle Office is responsible for the fair value measurement of Banking derivatives, incl. level 3 hierarchy, and the quality and reliability of market data, valuation curves and volatility surfaces used in them, as part of its daily fair value measurement process. Middle Office compares regularly at contract level valuation prices with valuations supplied by CSA counterparties and central counterparties and, whenever necessary, determines any possible significant valuation differences.

Risk Management Control is responsible for approval of new fair value measurement models and techniques and supervision of the fair value measurement process. Verifying fair values is based, for example, on valuation using alternative sources for market prices and other input data. In this verification process, valuation prices can be compared with prices supplied by CSA counterparties and central counterparties. In addition, it is possible to use valuation services provided by third parties.

The fair value measurement of OTC derivative contracts related to banking takes account of credit risk of the parties to the transaction and credit spreads exceeding the financing costs. Credit risk is adjusted with a Credit Valuation Adjustment (CVA) and with a Debt Valuation Adjustment (DVA). CVAs and DVAs are calculated for each counterparty. CVA and DVA adjustments are calculated for each counterparty by simulating the market values of derivatives and events of default based primarily on data obtained from markets. In assessing probabilities of default, OP Corporate Bank utilises counterparty rating information, liquid credit risk indices and the CDS sector curves of market data providers. OP Corporate Bank assesses the effect of the financing costs of OTC derivatives on fair value measurement by editing discount curves used in the measurement by means of the statistical differences of credit spreads between credit risk instruments with and without capital.

Fair value hierarchy

Level 1: Quoted prices in active markets

This level includes equities listed on major stock exchanges, quoted debt instruments issued by companies, governments and financial institutions as well as and exchange-traded derivatives. The fair value of these instruments is determined on the basis of the quotes in active markets.

Level 2: Valuation techniques using observable inputs

Valuation techniques based on observable input parameters. The fair value of the instruments included within this level means value derived from the market price of a financial instrument's components or similar financial instruments; or value which can be determined using commonly used valuation models and techniques if the inputs significant to the fair value measurement are based on observable market data. This hierarchy level includes the majority of OP Corporate Bank plc's OTC derivatives and quoted debt instruments issued by companies, governments and financial institutions which have not been included in Level 1.

Level 3: Valuation techniques using unobservable inputs

Valuation techniques whose input parameters involve uncertainty. The fair value determination of the instruments included within this level contains inputs not based on observable market data (unobservable inputs). Level 3 also includes bonds for which there is little, if any, market activity on the valuation date. This level includes the most complex OTC derivatives and derivatives with a long maturity for which the Group had to extrapolate the market data used in their value measurement, as well as certain private equity investments, and illiquid bonds, structured bonds, including securitised bonds and structured debt securities, and hedge funds. Level 3 fair value is based on pricing information from a third party.

Transfers between the levels of the fair value hierarchy are considered to take place on the date when an event causes such transfer or when circumstances change. Transfers between the levels are mainly due to the number of available market quotes.

Derivatives relevant to OP Corporate Bank's business are interest rate swaps and interest rate options. Interest rate swaps are measured by deriving valuation curves from the prices of interest rate swaps and other interest rate derivatives observed in the market. Valuation curves are used to forecast future cash flows and determine the present values of cash flows also through interest rate swaps whose price is not directly observable in the market. The same method applies to the fair value measurement of interest rate options. Volatilities describing the price of interest rate options observed in the market are also used in comparison with interest rate swaps.

In the fair value measurement of complex derivatives, such as structured equity product, OP Corporte Bank uses a model where the development of market prices is simulated and the actual value of the derivative is calculated in each simulation. The price of the derivate is derived from calculating the average of the simulations.

Level 2 input data includes: quoted prices of similar items in active markets and quoted prices of similar items in inactive markets, market interest rates, implied volatilities and credit spreads.

Level 3 input data are input data that are not observable for an item subject to valuation. Level 3 input data include, for example: use of historical volatility in the fair value measurement of an option, such long-term interest rate with no corresponding contracts are not observable in the market.

Reconciliation of Level 3 items

Specification of financial assets and liabilities

Financial assets, EUR million	Financial assets at fair value through profit or loss	Derivative contracts	Fair value through other comprehen-sive income	Total assets
Opening balance 1 January 2022	**198**	**106**	**527**	**832**
Total gains/losses in profit or loss	-188	-30		-218
Transfers into Level 3	46		473	519
Transfers out of Level 3			-207	-207
Closing balance 31 December 2022	**56**	**77**	**793**	**926**

Financial assets, EUR million	Financial assets at fair value through profit or loss	Derivative contracts	Fair value through other comprehen-sive income	Total assets
Opening balance 1 January 2021	**239**	**61**	**283**	**583**
Total gains/losses in profit or loss	-233	45		-188
Transfers into Level 3	193		376	569
Transfers out of Level 3			-132	-132
Closing balance 31 December 2021	**198**	**106**	**527**	**832**

Financial liabilities, EUR million	Derivative contracts	Total liabilities
Opening balance 1 January 2022	**30**	**30**
Total gains/losses in profit or loss	63	63
Closing balance 31 December 2022	**94**	**94**

Financial liabilities, EUR million	Derivative contracts	Total liabilities
Opening balance 1 January 2021	**42**	**42**
Total gains/losses in profit or loss	-11	-11
Closing balance 31 December 2021	**30**	**30**

Total gains/losses included in profit or loss by item for the financial year on 31 December 2022

EUR Million	Net interest income	Net investment income	Statement of comprehensive income/ Change in fair value reserve	Total gains/ losses for the financial year included in profit or loss for assets/ liabilities held at year-end
Realised net gains (losses)	-188			-188
Unrealised net gains (losses)	-93			-93
Total net gains (losses)	**-281**			**-281**

Total gains/losses included in profit or loss by item for the financial year on 31 December 2021

EUR Million	Net interest income	Net investment income	Statement of comprehensive income/ Change in fair value reserve	Total gains/ losses for the financial year included in profit or loss for assets/ liabilities held at year-end
Realised net gains (losses)	-233			-233
Unrealised net gains (losses)	57			57
Total net gains (losses)	**-177**			**-177**

Derivatives included in Level 3 comprise structured derivatives for customer needs, whose market risk is covered by a corresponding derivatives contract. The uncovered market risk does not have any effect on earnings. Level 3 derivatives relate to structured bonds issued by OP Corporate Bank, whose return is determined by the value performance of an embedded derivative instrument. The fair value change of these embedded derivatives is not presented in the above table. In addition, long-maturity derivatives have been included in Level 3 for which the Group had to extrapolate the market data used in their value measurement.

Changes in the levels of hierarchy

No major changes occurred in valuation techniques in 2022.

Sensitivity analysis of input parameters involving uncertainty on 31 December 2022

Type of instrument, EUR million	Receivables	Liabilities	Net balance	Sensitivity analysis	Reasonably possible change in fair value
Recognised at fair value through profit or loss:					
Private equity funds*	51		51	5.1	10 %
Real estate funds***	5		5	1.0	20 %
Derivatives:					
Index-linked bond hedges and structured derivatives, and derivatives with a long-term maturity**	77	-94	-17	-1.9	11 %
Fair value through profit or loss					
Bond investments	793		793	79.3	10 %

Sensitivity analysis of input parameters involving uncertainty on 31 December 2021

Type of instrument, EUR million	Receivables	Liabilities	Net balance	Sensitivity analysis	Reasonably possible change in fair value
Recognised at fair value through profit or loss:					
Private equity funds*	193		193	19.3	10 %
Real estate funds***	5		5	1.0	20 %
Derivatives:					
Index-linked bond hedges and structured derivatives, and derivatives with a long-term maturity**	106	-30	76	8.4	11 %
Fair value through profit or loss					
Bond investments	527		527	52.7	10 %

* The value of private equity funds depends mainly on the profit performance of portfolio companies and the PE ratios of similar listed companies. The Total Value to Paid-in (TVPI) multiple, which has changed an average of 10%, is used to monitor the progress of the fair value of private equity funds.

** Following stress scenarios: the combined value change of volatility of shares (30%), dividends of shares (30%), credit risk premiums (30%) and significant correlation changes.

*** In the valuation of real estate funds, OP mainly uses the income approach whose main components are yield requirement and net rent. A +/– 1 percentage point change in the yield requirement leads on average to around 20% change in the fair value.

Note 34. Loss allowance regarding receivables and notes and bonds

Credit risk exposures and related loss allowance

A description of OP Corporate Bank´s credit risk formation and management can be found in section 2 of Note 2. The measurement principles of expected credit losses are described in section 6.4 Impairment of Note 1.

Expected credit losses are calculated on receivables measured at amortised cost and notes and bonds recognised at fair value through other comprehensive income (investments in bonds). OP Corporate Bank receivables include loans, standby credit facilities (e.g. credit cards and accounts with credit facility and lease and factoring receivables). In addition, expected credit losses are calculated on off-balance-sheet items, such as loan commitments, credit facilities and bank guarantees. However, notes and bonds are investments in bonds. For expected credit losses, loss allowance is recognised in the balance sheet or in the case of notes and bonds in other comprehensive income.

The following factors, for example, affect the amount of expected credit losses: exposure amount, exposure validity, customer borrower grade and collateral value as well as forward-looking information.

The following table shows the receivables which are exposed to credit risk and on which expected credit loss is calculated. Here the on-balance-sheet and off-balance sheet exposures also describe the maximum exposure amount exposed to credit risk, excluding collateral securities or other arrangements that improve credit quality. The off-balance sheet exposure represents the exposure amount binding on the bank or the guarantee amount.

Exposures within the scope of accounting for expected credit losses by impairment stage 31 December 2022

Exposures EUR million	Stage 1	Stage 2 Not more than 30	Stage 2 More than 30 DPD	Stage 2 Total	Stage 3	Total exposure
Receivables from customers (gross)						
Corporate Banking	26,588	2,518	109	2,627	451	29,666
Total	**26,588**	**2,518**	**109**	**2,627**	**451**	**29,666**
Off-balance-sheet limits						
Corporate Banking	8,351	493	29	521	71	8,944
Total	**8,351**	**493**	**29**	**521**	**71**	**8,944**
Other off-balance-sheetcommitments						
Corporate Banking	6,943	448		448	72	7,462
Total	**6,943**	**448**		**448**	**72**	**7,462**
Notes and bonds						
Group Functions	12,982	73		73		13,055
Total	**12,982**	**73**		**73**		**13,055**
Total exposures within the scope of accounting for expected credit losses	**54,864**	**3,531**	**137**	**3,669**	**595**	**59,127**

Loss allowance by stage 31 December 2022

On-balance-sheet exposures and related off-balance-sheet limits* EUR million	Stage 1	Stage 2 Not more than 30	Stage 2 More than 30 DPD	Stage 2 Total	Stage 3	Total loss allowance
Receivables from customers						
Corporate Banking	-30	-23	-5	-28	-182	-240
Total	**-30**	**-23**	**-5**	**-28**	**-182**	**-240**
Off-balance-sheet commitments**						
Corporate Banking	-3	-2		-2	-24	-29
Total	**-3**	**-2**		**-2**	**-24**	**-29**
Notes and bonds***						
Group Functions	-1	-1		-1		-2
Total	**-1**	**-1**		**-1**		**-2**
Total	**-35**	**-25**	**-5**	**-31**	**-206**	**-272**

* Loss allowance is recognised as one component to deduct the balance sheet item.

** Loss allowance is recognised in provisions and other liabilities in the balance sheet.

*** Loss allowance is recognised in the fair value reserve in other comprehensive income.

The table below shows a summary of loss allowance relative to the exposure amount by impairment stage. The coverage ratio describes the ratio of loss allowance to exposure amount.

Summary and key indicators 31 December 2022	Stage 1	Stage 2			Stage 3	
		Not more than 30	More than 30 DPD	Total		Total
Receivables from customers; on-balance-sheet and off-balance-sheet items						
Corporate Banking	41,882	3,459	137	3,596	595	46,072
Loss allowance						
Corporate Banking	-33	-25	-5	-30	-206	-269
Coverage ratio, %						
Corporate Banking	-0.08 %	-0.71 %	-3.81 %	-0.83 %	-34.69 %	-0.58 %
Receivables from customers; total on-balance-sheet and off-balance-sheet items	**41,882**	**3,459**	**137**	**3,596**	**595**	**46,072**
Total loss allowance	**-33**	**-25**	**-5**	**-30**	**-206**	**-269**
Total coverage ratio, %	**-0.08 %**	**-0.71 %**	**-3.81 %**	**-0.83 %**	**-34.69 %**	**-0.58 %**
Carrying amount, notes and bonds						
Group Functions	12,982	73		73		13,055
Loss allowance						
Group Functions	-1	-1		-1		-2
Coverage ratio, %						
Group Functions	-0.01 %	-1.18 %		-1.18 %		-0.02 %
Total notes and bonds	**12,982**	**73**		**73**		**13,055**
Total loss allowance	**-1**	**-1**		**-1**		**-2**
Total coverage ratio, %	**-0.01 %**	**-1.18 %**		**-1.18 %**		**-0.02 %**

Exposures within the scope of accounting for expected credit losses by impairment stage 31 December 2021

Exposures EUR million	Stage 1	Stage 2 Not more than 30	More than 30 DPD	Total	Stage 3	Total exposure
Receivables from customers (gross)						
Corporate Banking	24,673	1,058	247	1,304	508	26,486
Total	**24,673**	**1,058**	**247**	**1,304**	**508**	**26,486**
Off-balance-sheet limits						
Corporate Banking	4,279	190	88	278	75	4,631
Total	**4,279**	**190**	**88**	**278**	**75**	**4,631**
Other off-balance-sheetcommitments						
Corporate Banking	7,196	121		121	78	7,396
Total	**7,196**	**121**		**121**	**78**	**7,396**
Notes and bonds						
Group Functions	13,160	31		31		13,191
Total	**13,160**	**31**		**31**		**13,191**
Total exposures within the scope of accounting for expected credit losses	**49,309**	**1,399**	**335**	**1,733**	**661**	**51,704**

Loss allowance by stage 31 December 2021

On-balance-sheet exposures and related off-balance-sheet limits* EUR million	Stage 1	Stage 2 Not more than 30	Stage 2 More than 30 DPD	Stage 2 Total	Stage 3	Total loss allowance
Receivables from customers						
Corporate Banking	-23	-23	-2	-25	-269	-317
Total	**-23**	**-23**	**-2**	**-25**	**-269**	**-317**
Off-balance-sheet commitments**						
Corporate Banking	-3	-3		-3	-14	-20
Total	**-3**	**-3**		**-3**	**-14**	**-20**
Notes and bonds***						
Group Functions	-2	-1		-1		-2
Total	**-2**	**-1**		**-1**		**-2**
Total	**-28**	**-26**	**-2**	**-28**	**-283**	**-339**

* Loss allowance is recognised as one component to deduct the balance sheet item.

** Loss allowance is recognised in provisions and other liabilities in the balance sheet.

*** Loss allowance is recognised in the fair value reserve in other comprehensive income.

The table below shows a summary of loss allowance relative to the exposure amount by impairment stage. The coverage ratio describes the ratio of loss allowance to exposure amount.

Summary and key indicators 31 December 2021	Stage 1	Stage 2 Not more than 30	Stage 2 More than 30 DPD	Stage 2 Total	Stage 3	Total
Receivables from customers; on-balance-sheet and off-balance-sheet items						
Corporate Banking	36,149	1,368	335	1,703	661	38,513
Loss allowance						
Corporate Banking	-26	-25	-2	-27	-283	-337
Coverage ratio, %						
Corporate Banking	-0.07 %	-1.85 %	-0.63 %	-1.61 %	-42.84 %	-0.88 %
Receivables from customers; total on-balance-sheet and off-balance-sheet items	**36,149**	**1,368**	**335**	**1,703**	**661**	**38,513**
Total loss allowance	**-26**	**-25**	**-2**	**-27**	**-283**	**-337**
Total coverage ratio, %	**-0.07 %**	**-1.85 %**	**-0.63 %**	**-1.61 %**	**-42.84 %**	**-0.88 %**
Carrying amount, notes and bonds						
Group Functions	13,160	31		31		13,191
Loss allowance						
Group Functions	-2	-1		-1		-2
Coverage ratio, %						
Group Functions	-0.01 %	-2.00 %		-2.00 %		-0.02 %
Total notes and bonds	**13,160**	**31**		**31**		**13,191**
Total loss allowance	**-2**	**-1**		**-1**		**-2**
Total coverage ratio, %	**-0.01 %**	**-2.00 %**		**-2.00 %**		**-0.02 %**

The table below shows a change in exposures within the scope of the calculation of expected credit losses by impairment Stage for 2022 resulting from the effect of the following factors:

Receivables from customers and off-balance-sheet items, EUR million	Stage 1	Stage 2	Stage 3	Total
Receivables from customers; on-balance-sheet and off-balance-sheet items 1 January 2022	**36,149**	**1,703**	**661**	**38,513**
Transfers from Stage 1 to Stage 2, incl. repayments	-2,493	2,358		-135
Transfers from Stage 1 to Stage 3, incl. repayments	-186		155	-31
Transfers from Stage 2 to Stage 1, incl. repayments	399	-466		-67
Transfers from Stage 2 to Stage 3, incl. repayments		-102	92	-10
Transfers from Stage 3 to Stage 1, incl. repayments	26		-32	-6
Transfers from Stage 3 to Stage 2, incl. repayments		18	-27	-9
Unchanged Stage, incl repayments	9,684	300	37	10,021
Increases due to origination and acquisition	-6,615	-278	-181	-7,073
Decreases due to derecognition	4 916 *	63 *	-33	4,954
Recognised as final credit loss			-85	-85
Receivables from customers; on-balance-sheet and off-balance-sheet items 31 December 2022	**41,882**	**3,596**	**588**	**46,072**

* Positive net changes in stage 1 and 2 are due to increases in off-balance-sheet limits.

Changes in loss allowance during financial year

The table below shows the change in loss allowance by impairment stage during 2022 in respect of the effect of the following factors:

Note 1, section 6.4.1 describes impairment stages.

Receivables from customers and off-balance-sheet items, EUR million	Stage 1	Stage 2	Stage 3	
	12 months	Lifetime	Lifetime	Total
Loss allowance 1 January 2022	**26**	**27**	**283**	**337**
Transfers from Stage 1 to Stage 2	-2	15		13
Transfers from Stage 1 to Stage 3	-3		50	47
Transfers from Stage 2 to Stage 1	0	-5		-4
Transfers from Stage 2 to Stage 3		-5	21	16
Transfers from Stage 3 to Stage 2	0		-4	-4
Transfers from Stage 3 to Stage 1		0	-5	-5
Increases due to origination and acquisition	13	6	12	30
Decreases due to derecognition	-6	-8	-60	-74
Changes in risk parameters (net)	5	-1	-6	-3
Changes due to update in the methodology for estimation (net)	0	0	1	1
Decrease in allowance account due to write-offs			-85	-85
Net change in expected credit losses	**7**	**2**	**-77**	**-68**
Loss allowance 31 December 2022	**33**	**30**	**206**	**269**

Transfers from Stage 1 to Stage 3 compare the current year-end Stage 3 of a financial asset to the situation at the beginning of the year. Of these, some 76% (see the default capture rate below) have been reported in Stage 2 during 2022, so the agreements have, as a rule, transferred to Stage 3 through Stage 2. The agreement may transfer directly to Stage 3 due to external payment default.

Transfers from Stage 3 to Stages 2 or 1 compare the year-start Stage 3 with the year-end Stage 2 or 1. As the main rule, the transfers, however, took place within 2022 with a delay of one month.

The majority of the loans have transferred to stage 2 in all ratings based on OP's relative SICR model. Payments past due over 30 days causes a transfer to stage 2 in most cases in the middle and lower level ratings. Forbearance measures cause a transfer to stage 2 in corporate customers more often in middle and lower level ratings whereas they affect transfers to stage 2 in all ratings in private customers.. The lowest ratings are classified into stage 2 based on an absolute rating limit. In the lowest ratings, in particular, there are several reasons for transfers to stage 2. Default is identified on a real-time basis, immediately causing a transfer to stage 3.

Non-performing exposures are classified into Stage 3, i.e. its definition is the same as credit impaired financial assets due to credit risk under IFRS 9.

In June 2022, OP Corporate Bank updated lifetime EAD models and the maturity model. Changes in the models increased OP Corporate Bank's expected credit losses by 1 million euros, which is reported in the table above on row "changes in model assumptions and methodology". Lifetime EAD models are used in the ECL measurement under IFRS 9 to estimate a contract's on-balance-sheet exposures at default for the contract's lifetime. The maturity model is used in the ECL measurement under IFRS 9 to estimate a contract's lifetime for standby credit facilities of personal and corporate customer exposures whose credit risk has increased significantly, meaning that their ECL is measured for the contract's lifetime (stage 2). The maturity model is used for the standby credit facilities of personal and corporate customer exposures because they have no contractual maturity.

OP Corporate Bank has updated its assessments of how Russia's attack on Ukraine has financially impacted on customers' credit risk. Impacts were expected due to factors such as business closures and a rise in the costs of energy, raw materials and other production. Such impacts have been milder than expected because higher production costs have been passed onto prices and government support has been provided, particularly for the energy sector. An ECL provision of EUR 7 million was recognised in Q1/2022, based on a management overlay, to cover the impacts of the war in Ukraine on the riskiest sectors – construction, energy and transport. The overlay has been reversed for the abovementioned reasons.

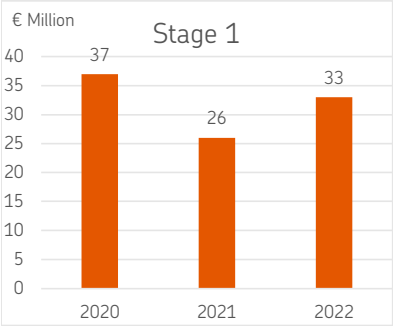
At the end of 2021, OP Corporate Bank recognised an additional ECL provision of EUR 6 million concerning CRE backed loans nearest to stage 3. The provision was made to anticipate growth in the ECL due to updates in collateral assessments of riskier collateral real estate holdings and probable default statutes. The provision was completely reversed in 2022, due to updates made in the collateral values of the agreements concerned and the default statutes.

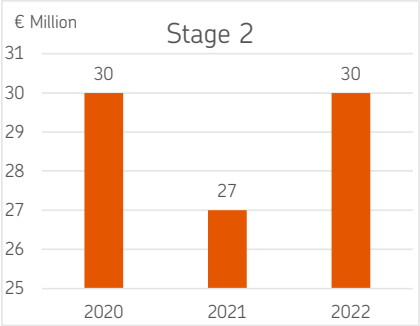
In the last quarter, a management overlay was used to increase the ECL provision for the construction sector by EUR 2.5 million, based on OP Corporate Bank's Q4 analysis. The analysis was considered necessary due to the weakened outlook of the sector. It was done as a stress test, assuming a decrease in the sector's turnover of 10%, a cost inflation increase of 8% and an interest rate rise of 3%.

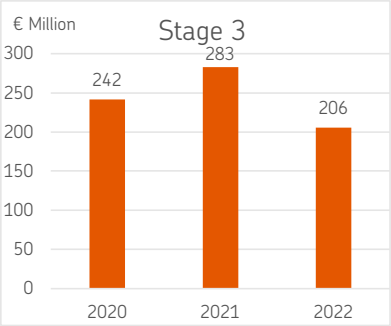
The table below shows the ECL before the discretionary provisions made using management overlays, the provisions themselves, and the total ECL amount on 31 December 2022.

Loss allowance 31 December 2022	OP Corporata Bank
ECL before discretionary provisions	**267**
Discretionary provisions under management overlay	
Construction industry	3
Total discretionary provisions	3
Total reported ECL	**269**

The following graphs illustrate the trend in the expected credit losses of customer receivables by impairment stage during the last few years, showing their growth during the Covid-19 pandemic and how the growth has levelled off.







In ECL measurement, macroeconomic factors are updated on a quarterly basis. The ECL is measured as the weighted average under three scenarios. Scenario weights have been at normal level, or downside 20%, baseline 60% and upside 20%. Macroeconomic forecast updates in 2022 have increased expected credit losses by EUR 7 million.

Notes and bonds, EUR million	Stage 1 12 months	Stage 2 Lifetime	Stage 3 Lifetime	Total
Loss allowance 1 January 2022	**2**	**1**		**2**
Transfers from Stage 2 to Stage 1	0	0		0
Increases due to origination and acquisition	0			0
Decreases due to derecognition	0			0
Changes in risk parameters (net)	0	0		0
Net change in expected credit losses	**0**	**0**		**0**
Loss allowance 31 December 2022	**2**	**0**		**2**

Changes in loss allowance during 2021

The table below shows a change in exposures within the scope of the measurement of expected credit losses by impairment Stage for 2021 resulting from the effect of the following factors:

Receivables from customers and off-balance-sheet items, EUR million	Stage 1	Stage 2	Stage 3	Total
Receivables from customers; on-balance-sheet and off-balance-sheet items 1 January 2021	**33,197**	**2,021**	**682**	**35,900**
Transfers from Stage 1 to Stage 2, incl. repayments	-913	857		-57
Transfers from Stage 1 to Stage 3, incl. repayments	-92		73	-19
Transfers from Stage 2 to Stage 1, incl. repayments	549	-613		-64
Transfers from Stage 2 to Stage 3, incl. repayments		-134	115	-20
Transfers from Stage 3 to Stage 1, incl. repayments	11		-14	-3
Transfers from Stage 3 to Stage 2, incl. repayments		25	-28	-2
Unchanged Stage, incl repayments	-1,097	-47	-95	-1,240
Increases due to origination and acquisition	11,579	231	50	11,861
Decreases due to derecognition	-7,085	-634	-81	-7,800
Recognised as final credit loss		-3	-40	-43
Receivables from customers; on-balance-sheet and off-balance-sheet items 31 December 2021	**36,149**	**1,703**	**661**	**38,513**

The table below shows the change in loss allowance by impairment stage during 2021 in respect of the effect of the following factors:

Receivables from customers and off-balance-sheet items, EUR million	Stage 1 12 months	Stage 2 Lifetime	Stage 3 Lifetime	Total
Loss allowance 1 January 2021	**36**	**29**	**243**	**308**
Transfers from Stage 1 to Stage 2	-1	6		5
Transfers from Stage 1 to Stage 3	0		13	13
Transfers from Stage 2 to Stage 1	1	-4		-4
Transfers from Stage 2 to Stage 3		-7	32	25
Transfers from Stage 3 to Stage 2		2	-3	-1
Transfers from Stage 3 to Stage 1	0		-2	-2
Increases due to origination and acquisition	10	5	8	25
Decreases due to derecognition	-17	-6	-25	-48
Changes in risk parameters (net)	-3	1	46	44
Changes due to update in the methodology for estimation (net)	1	1		2
Decrease in allowance account due to write-offs		0	-30	-30
Net change in expected credit losses	**-10**	**-2**	**40**	**28**
Loss allowance 31 December 2021	**26**	**27**	**283**	**337**

Transfers from Stage 1 to Stage 3 compare the current reporting-date Stage 3 of a financial asset at the beginning of the year. However, around 81% of these transfers to Stage 3 through Stage 2. The agreement may transfer directly to Stage 3 due to external payment default.

Transfers from Stage 3 to Stages 2 or 1 compare the year-start Stage 3 with the year-end Stage 2 or 1. As the main rule, the transfers, however, took place within 2021 with a delay of one month and through Stage 2.

The majority of the loans have transferred to stage 2 in all ratings based on OP's relative SICR model. Payments past due over 30 days causes a transfer to stage 2 in most cases in the middle and lower level ratings. Forbearance measures cause a transfer to stage 2 in corporate customers more often in middle and lower level ratings whereas they affect transfers to stage 2 in all ratings in private customers.. The lowest ratings are classified into stage 2 based on an absolute rating limit. In the lowest ratings, in particular, there are several reasons for transfers to stage 2. Default is identified on a real-time basis, immediately causing a transfer to stage 3.

Non-performing exposures are classified into Stage 3, i.e. its definition is the same as credit impaired financial assets due to credit risk under IFRS 9.

In Q1/2021, OP Corporate Bank calibrated its internal rating model for retail customers to correspond to the new 2020 definition of default. This had an effect in April on the PD model under IFRS 9 and on the quantitative SICR model that is used to decide on transferring the agreement from impairment Stage 1 to Stage 2. OP Corporate Bank calibrated the original PD curves used in the SICR model to be comparable, in which case the calibration had no significant effect on the amount of the ECL. As part of its normal model update, OP Corporate Bank updated the actual PD model for retail customers under IFRS 9 and the quantitative SICR model during Q4/2021.

The PD model for retail customers under IFRS 9 was updated based on data complying with the new definition of default, among other things. In addition, we further specified segmentation for the model and the 12-month Euribor, with the effect of inflation and change in GDP deducted, the real 3-month Euribor, with the effect of inflation deducted and change in the unemployment rate deducted (previously GDP change, 12-month Euribor and change in the unemployment rate). ECL increased by 2 million euros; it is presented as a change in model assumptions and methodology.

OP Corporate Bank has exercised management discretion and made an additional 6-million euro ECL provision, concerning mainly CRE-backed loans in stage 3. The provision is aimed at anticipating growth in the ECL caused by the update of the collateral assessment of riskier collateral real estate holdings and probable default statutes. The provision will be reversed after the collateral assessment probably ends during 2022.

The table below shows the ECL before the discretionary provisions made using management overlays, the provisions themselves, and the total ECL amount on 31 December 2021.

Loss allowance 31 December 2022	OP Corporate Bank
ECL before discretionary bookings	**331**
Harkinnanvaraiset management overlay -varaukset	
Defaults and collateral valuation of CRE backed loans	6
Total discretionary management reserves	**6**
Total reported ECL	337

Notes and bonds, EUR million	Stage 1 12 months	Stage 2 Lifetime	Stage 3 Lifetime	Total
Loss allowance 1 January 2021	**2**	**1**		**2**
Transfers from Stage 2 to Stage 1	0	0		0
Increases due to origination and acquisition	0			0
Decreases due to derecognition	0			0
Changes in risk parameters (net)	0	0		0
Net change in expected credit losses	**0**	**0**		**0**
Loss allowance 31 December 2021	**2**	**0**		**2**

The table below presents exposures of receivables in the balance sheet by rating and off-balance-sheet exposures, exposure amount after deducting collateral as well as loss allowance. Internal grades 1–12 are used in the internal rating of corporations and public-sector entities and grades A–F in the internal rating of households. The ratings have been combined into the table in such a way that the corporate customer rating 1 comprises ratings 1 and 1.5 etc. The private customer rating A comprises A+, A and A- etc. Note 2, section 2.2.1 describes OP Financial Group's ratings. Net exposure has been calculated for each contract and it excludes overcollateralisation.

31.12.2022

EUR millior	Balance sheet exposures			Off-balance-sheet exposure, gross			Net exposure after collateral			Loss allowance		
Rating	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
1	1,264			4,258			3,168			0		
2	1,133	5		1,136	4		1,012	5		0	0	
3	3,799	9		1,944	2		2,937	3		0	0	
4	4,636	195		3,172	66		3,368	204		-2	0	
5	4,998	392		2,103	218		2,331	424		-3	-1	
6	4,700	796		1,520	206		1,750	747		-6	-2	
7	3,190	266		846	160		969	96		-9	-2	
8	482	455		168	267		89	302		-9	-8	-160
9		102		0	24			12			-3	-26
10		19			6			3			-5	
11			338			137			179			
12			28			2			25			
A	110			37	0		27	0		0		
B	680	0		55	0		127	0		0	0	
C	1,140	11		37	2		203	5		-1	0	
D	455	68		18	4		126	13		-2	0	
E	1	310		0	9	5	0	82		0	-9	
F			85						36			-21
Total	**26,588**	**2,627**	**451**	**15,294**	**969**	**143**	**16,107**	**1,898**	**241**	**-33**	**-30**	**-206**

31.12.2021

EUR millior	Balance sheet exposures			Off-balance-sheet exposure, gross			Net exposure after collateral			Loss allowance		
Rating	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
1	98			149			126			0		
2	1,308	6		1,461	14		1,174	8		0	0	
3	5,263	113		2,401	36		4,169	113		-1	0	
4	3,864	75		2,004	44		2,101	75		-1	0	
5	4,741	21		2,347	15		2,379	16		-2	0	
6	4,330	87		1,822	16		1,659	10		-5	0	
7	2,400	246		889	49		846	62		-8	-1	
8	514	281		282	183		118	124		-6	-12	
9	5	73			23			7			-2	
10		29			4			7			-3	
11			383			147			180			-217
12			53			2			49			-50
A	98	0		25	0		22	0		0	0	
B	604	1		46	0		114	0		0	0	
C	1,019	22		31	1		184	6		-1	0	
D	431	61		18	4		137	20		-1	0	
E		289	1		9			88	0		-8	0
F			71			4			29			-16
Total	**24,673**	**1,304**	**508**	**11,475**	**399**	**153**	**13,029**	**536**	**258**	**-26**	**-27**	**-283**

The majority of the loans have transferred to stage 2 in all ratings based on OP's relative SICR model. Payments past due over 30 days causes a transfer to stage 2 in most cases in the middle and lower level ratings. Forbearance measures cause a transfer to stage 2 in corporate customers more often in middle and lower level ratings whereas they affect transfers to stage 2 in all ratings in private customers.. The lowest ratings are classified into stage 2 based on an absolute rating limit. In the lowest ratings, in particular, there are several reasons for transfers to stage 2. Default is identified on a real-time basis, immediately causing a transfer to stage 3.

OP Corporate Bank may write off credit loss from financial assets in full or in part, but thereafter these will still be subject to collection measures. The amount of such financial assets were EUR 17 million (17) on 31 December 2022.

Significant increase in credit risk (SICR)

A significant increase in credit risk is discovered on a technical basis as presented in the accounting policies (Note 1 section 6.4.1).

The classification of contracts under SICR into similar groups in terms of credit risk is identical with lifetime PD (probability at default) models. Credit ratings are the most significant input data of the PD models. Both the current PDs and threshold PDs include forward-looking information (below).

The effectiveness of SICR is assessed on every reporting date using the following indicators:
The default capture rate measures how many contracts were in Stage 2 before it transferred to Stage 3. The rate was 76% (81) on 31 December 2022. The higher the rate is, the better the SICR model can capture a significant increase in credit risk. Contracts in Stage 2 accounted for 8% (4) of the entire non-default loan portfolio.

A specific model has been developed for the SICR criterion for a relative increase in PD, whose parameters are calculated from historical data. In addition to these parameters, the SICR model is affected, for example, by the contract rating grade, segment and macroeconomic variables which together determine the PD of the contract lifetime. In addition, the comparison of the relative increase is affected by the contract's passed and remaining lifetime. For these reasons, no general threshold has been determined for an increase in the PD. It can, however, stated that, on average, a doubling or trebling of the PD causes the quantitative SICR criterion to trigger.

Forward-looking information included in the ECL measurement models

The assessment of SICR and the measurement of expected credit loss incorporate forward-looking information; OP Financial Group has analysed what macroeconomic variables have an explanatory significance to the credit risk amount.

The table below shows a summary of the values of the five most important macroeconomic variables for 2022–2027 used in the models (average, minimum and maximum) for three scenarios that have been used in the measurement of the expected credit loss. The macroeconomic forecasts extend to 30 years but the next 5 years are the most relevant ones in respect of ECL measurement. These values were used for all product groups on 31 December 2022.

Economic variable	Scenario	Average (%)	Minimum (%)	Maksimum (%)
GDP growth	Downside	-3.6	-3.6	-2.0
	Baseline	-0.5	-0.5	2.0
	Upside	2.7	2.0	3.2
Unemployment rate	Downside	8.1	6.8	8.6
	Baseline	7.0	6.7	7.4
	Upside	6.1	5.2	6.8
House price index	Downside	-0.9	-6.6	0.9
	Baseline	0.8	-5.1	3.0
	Upside	2.3	-3.5	4.5
12-month Euribor where the effect of GDP growth and inflation has been deducted	Downside	-0.6	-4.1	0.6
	Baseline	0.3	-0.4	1.6
	Upside	1.2	-0.4	0.7
3-month real interest rate	Downside	-0.2	-0.6	
	Baseline	-0.1	-0.6	0.1
	Upside		-0.6	0.2

On 31 December 2022, the probability weights of the scenarios were Downside 20%, Baseline 60% and Upside 20%.

The table below shows a summary of the values of the five most important macroeconomic variables for 2021–2026 used in the models (average, minimum and maximum) for three scenarios that have been used in the measurement of expected credit losses. The macroeconomic forecasts extend to 30 years but the next 5 years are the most relevant ones in respect of ECL measurement. These values were used for all product groups on 31 December 2021.

Economic variable	Scenario	Average (%)	Minimum (%)	Maksimum (%)
GDP growth	Downside	0.6	-0.6	2.8
	Baseline	1.5	1.1	3.5
	Upside	2.3	2.0	5.1
Unemployment rate	Downside	8.4	7.5	9.1
	Baseline	6.6	6.5	7.8
	Upside	4.7	4.1	7.7
House price index	Downside	1.2	-0.8	2.9
	Baseline	2.8	2.0	4.0
	Upside	3.8	3.0	4.9
12-month Euribor where the effect of GDP growth and inflation has been deducted	Downside		-2.0	0.6
	Baseline	0.4	-2.1	1.2
	Upside	0.9	-2.4	-1.8
3-month real interest rate	Downside	-0.6	-2.6	-0.1
	Baseline	-0.4	-2.8	0.4
	Upside	-0.1	-3.2	0.9

On 31 December 2021, the probability weights of the scenarios were Downside 20%, Baseline 60% and Upside 20%.

The scenarios are based on the forecasts performed by OP Financial Group economists. The forecast process also takes account of comparable forecasts by external organisations, such as the OECD, International Monetary Fund, Bank of Finland, Ministry of Finance etc., as well as academic research.

The rationality of the used macroeconomic variables is assessed when reviewing the functionality of the models for PD, LGD, EAD and prepayment.

The table below shows loss allowance regarding significant receivables under various scenarios by impairment stage on 31 December 2022.

Total private customer and corporate customer exposures	Weighted loss allowance	Loss allowance under downside scenario	Loss allowance under baseline scenario	Loss allowance under upside scenario
Stage 1	33	33	30	27
Stage 2	30	32	29	22
Stage 3	206	206	206	206
Total	**269**	**271**	**265**	**255**

The table below shows loss allowance regarding significant receivables under various scenarios by impairment stage on 31 December 2021.

Total private customer and corporate customer exposures	Weighted loss allowance	Loss allowance under downside scenario	Loss allowance under baseline scenario	Loss allowance under upside scenario
Stage 1	25	27	24	22
Stage 2	27	29	27	25
Stage 3	256	256	256	256
Total	**308**	**312**	**307**	**303**

All personal and corporate customer risk parameters affect in a parallel way in such a way that loss allowance is the largest under the downside scenario. The LGD model for Stage 3 is independent of macroeconomic factors, but a significant proportion of Stage 3 exposures is assessed by means of a cash flow based expert assessment that also takes account of forward-looking information.

Sensitivity analysis

The sensitivity analysis describes the sensitivity of loss allowance to changes in macroeconomic factors. The analysis below only describes somewhat potential economic deterioration and not an economic upswing at all. In addition, all different components of the sensitivity analysis do not necessarily develop together during a recession in the way presented in the sensitivity analysis.

The most significant macroeconomic variables in risk parameters and exposure classes include the 12-month Euribor rate, real 3-month Euribor where the effect of inflation and GDP growth have been deducted. Changes used in sensitivity analyses include a 1 percentage point increase in the 12-month Euribor rate, a 1 percentage point increase the 3-month Euribor rate, a 1 percentage point increase in the inflation rate and a 3.5 percentage point decrease in the GDP growth rate. So the figures reflect an economic situation that is poorer than now and all of them increase loss allowance and are based on the following facts. The levels used in the sensitivity analysis are based on the behaviour of variables in the historic period, and the changes roughly correspond to the change in standard deviation.

The sensitivity analysis covers only Stage 1 and 2 contracts. The sensitivity analysis takes account of transfers between Stage 1 and 2 taking place due to a significant increase in credit risk (SICR), which is shown as a decrease in Stage 1 and an increase in Stage 2. The sensitivity analysis takes account of changes in the lifetime PD stressed scenarios and in PD estimates based on the loss allowance formula.

The table below show the sensitivity of change in the loss allowance of the groups of household and corporate customers on 31 December 2022, when the economic situation weakens due to the combined effect of changes in interest rates, the real interest rate, inflation rate and GDP:

Group Stage	Loss allowance	Loss allowance sensitivity analysis*	Proportional change
Households			
Stage 1	-2	-2	-5%**
Stage 2	-9	-10	5 %
Corporate customers			
Stage 1	-27	-30	11 %
Stage 2	-34	-41	19 %
Total	**-73**	**-83**	**13 %**

* 1 percentage point increase in the 12-month Euribor rate, 1 percentage point increase in the real 3-month Euribor rate. 1 percentage point increase in the inflation rate and a 3.5 percentage point decrease in the GDP growth rate under all scenarios.

** The negative change is due to the transfer from Stage 1 to Stage 2.

The table below show the sensitivity of change in the loss allowance of the groups household and corporate customers on 31 December 2021, when the economic situation weakens due to changes in the combined effects of interest rates, investment growth rate and GDP:

Group Stage	Loss allowance	Loss allowance sensitivity analysis*	Proportional change
Households			
Stage 1	2	2	4.0 %
Stage 2	9	10	11.0 %
Corporate customers			
Stage 1	22	24	9.9 %
Stage 2	18	23	27.4 %
Total	**51**	**60**	**16.0 %**

* 1 percentage point increase in the 12-month Euribor rate, 1 percentage point increase in the real interest rate and a 3.5 percentage point decrease in the GDP rate under all scenarios.

Loss allowances are largely determined based on the first couple of years when the first years of the simulated scenario years are essential in terms of the results.

A 1 percentage point increase in interest rates increases the amount of loss allowance in both personal customers and corporate customers. GDP growth has a negative relation to the amount of loss allowance through all model components. Slower GDP growth increases PD values for both personal customers and corporate customers. It also affects through the LGD in such a way that a GDP decrease weakens developments in the fair value of residential property collateral, which has an effect on Stage 2 contracts.

The analysis shows that the most significant proportional and absolute changes apply to the corporate customers where the amounts of loss allowance regarding Stage 1 and 2 contracts increase significantly. Changes are considerably smaller in personal customers than in corporate customers because the estimates of their risk parameters are not so sensitive to economic conditions.

Note 35. Off-balance-sheet commitments

EUR million	31 Dec 2022	31 Dec 2021
Guarantees	335	406
Other guarantee liabilities	2,356	2,413
Loan commitments	6,247	5,678
Commitments related to short-term trade transactions	722	656
Other	479	495
Total off-balance-sheet commitments	**10,138**	**9,649**

Note 36. Financial assets and liabilities offset in the balance sheet or subject to enforceable master netting arrangements or similar agreements

Financial assets

				Financial assets not set off in the balance sheet		
31 December 2022, EUR million	Gross amount of financial assets	Gross amount of financial liabilities deducted from financial assets	Net amount presented in the balance sheet	Master agreements*	Collateral received	Net amount
Derivatives	7,818	-2,037	5,782	-3,744	-1,228	810

				Financial assets not set off in the balance sheet		
31 December 2021, EUR million	Gross amount of financial assets	Gross amount of financial liabilities deducted from financial assets	Net amount presented in the balance sheet	Master agreements*	Collateral received	Net amount
Derivatives	4,073	-361	3,712	-2,190	-678	844

Financial liabilities

				Financial liabilities not set off in the balance sheet		
31 December 2022, EUR million	Gross amount of financial liabilities	Gross amount of financial assets deducted from financial liabilities	Net amount presented in the balance sheet	Master agreements*	Collateral given	Net amount
Derivatives	7,301	-1,562	5,739	-3,744	-263	1,732

				Financial liabilities not set off in the balance sheet		
31 December 2021, EUR million	Gross amount of financial liabilities	Gross amount of financial assets deducted from financial liabilities	Net amount presented in the balance sheet	Master agreements*	Collateral given	Net amount
Derivatives	3,015	-345	2,669	-2,190	-488	-9

* It is OP Corporate Bank plc's practice to enter into master agreements for derivative transactions with all derivative counterparties.

Central counterparty clearing for OTC derivatives

Standardised OTC derivative transactions entered into with financial counterparties are cleared in London Clearing House, accordance with EMIR (EU 648/2012). Based on this model, the central counterparty will become the derivatives counterparty at the end of the daily clearing process, with whom daily payments for derivatives are netted. In addition, collateral is paid or received daily, which corresponds to the change in the fair value of open positions (variation margin), which is treated as collateral or final payment, depending on the clearing method. Interest rate derivatives cleared by the central counterparty are presented on a net basis in the balance sheet.

Other bilaterally cleared OTC derivatives

The ISDA Master Agreement or the Master Agreement of Finance Finland or the OP Corporate Bank will apply to derivative transactions between the OP Corporate Bank and other clients and to derivative transactions to which central counterparty clearing in accordance with the Regulation does not pertain. On the basis of these agreements, derivative payments may be netted per transaction on each payment date and in the event of counterparty default and bankruptcy. It is also possible to agree on collateral on a counterparty-specific basis in the terms and conditions of the agreement. Such derivatives are presented on a gross basis in the balance sheet.

Note 37. Notes to the cash flow statement

EUR million	2022	2021
Interest received	**1,283**	**694**
Interest paid	**-946**	**-509**
Non-cash items and other adjustments		
Impairment losses on receivables	19	74
Changes in value of financial instruments	203	304
Defined benefit pension plans	0	0
Planned amortisation and depreciation	9	12
Income tax paid	54	52
Other	0	54
Total adjustments	**286**	**497**
Cash and cash equivalents		
Liquid assets	34,951	32,789
Receivables from credit institutions payable on demand	443	102
Total	**35,395**	**32,891**

Notes to risk management

Note 2 describes the Risk Appetite Framework.

Note 38. Credit losses and impairments

Credit losses and impairments

EUR million	2016	2017	2018*	2019	2020	2021	2022
Gross credit losses and impairments	-83	-48	-24	-50	-54	-74	-19
Reversals	46	36	0	1	1	1	1
Net credit losses and impairments	-37	-12	-23	-50	-53	-74	-18

* IFRS 9 was adopted on 1 January 2018.

Note 39. Collateral received by type of collateral

EUR million	31 Dec 2022	%	31 Dec 2021	%
Object of financing as collateral	4,464	31.0	4,846	35.0
Property or lease mortgage on office or industrial property	3,438	23.9	2,996	21.6
Public-sector guarantees	2,222	15.4	2,387	17.2
Shares and participations, other	1,431	9.9	1,345	9.7
Shares in housing corporations, and housing associations and property companies in residential use	1,156	8.0	821	5.9
Property or lease mortgage on residential property	488	3.4	502	3.6
Business mortgage	313	2.2	297	2.1
Other collateral	439	3.0	290	2.1
Factoring	286	2.0	201	1.5
Bank guarantee	176	1.2	172	1.2
Total	**14,412**	**100.0**	**13,858**	**100.0**

Received collateral by type of collateral has been calculated on the basis of the values of collateral held by the bank allocated to liabilities. The collateral's fair value is used as the basis for calculating the collateral value which is derived from the fair value on the basis of valuation percentages, based on conservative estimates, by type of collateral.

Note 40. Funding structure

EUR million	31 Dec 2022	%	31 Dec 2021	%
Liabilities to credit institutions	40,899	47.3	42,660	49.8
Liabilities to customers				
Deposits	14,683	17.0	16,089	18.8
Other	4,330	5.0	2,268	2.6
Debt securities issued to the public				
Certificates of deposit and ECPs (Euro Commercial Paper)	10,370	12.0	7,835	9.1
Bonds	10,532	12.2	10,869	12.7
Subordinated bonds (SNP)	4,306	5.0	3,926	4.6
Subordinated liabilities	1,384	1.6	1,994	2.3
Total	**86,506**	**100.0**	**85,641**	**100.0**

Note 41. Maturity of financial assets and liabilities by residual term to maturity

31 December 2022	Less than 3 months	3–12 months	1–5 years	5–10 years	More than 10 years	Total
Liquid assets	34,951					34,951
Receivables from credit institutions	2,850	2,417	6,668	754	289	12,978
Receivables from customers	4,029	3,844	16,886	1,974	1,446	28,178
Investment assets						
Financial assets held for trading	150	49	82	14	0	295
Financial assets at fair value through other comprehensive income	452	634	6,357	4,312		11,755
Financial assets at amortised cost	0	4,020		308		4,328
Total assets	**42,432**	**10,964**	**29,993**	**7,363**	**1,735**	**92,486**
Liabilities to credit institutions	23,203	5,146	7,728	4,822		40,899
Liabilities to customers	17,651	927	436			19,014
Debt securities issued to the public	4,739	6,091	11,585	2,566	228	25,209
Subordinated liabilities			1,384			1,384
Total liabilities	**45,594**	**12,163**	**21,133**	**7,387**	**228**	**86,506**
Guarantees	24	96	177	7	31	335
Other guarantee liabilities	209	615	662	851	20	2,356
Loan commitments	6,247					6,247
Commitments related to short-term trade transactions	115	491	115			722
Other	477	1	0	0		479
Total off-balance-sheet commitments	**7,072**	**1,202**	**955**	**858**	**51**	**10,138**

31 December 2021	Less than 3 months	3–12 months	1–5 years	5–10 years	More than 10 years	Total
Liquid assets	32,789					32,789
Receivables from credit institutions	992	3,304	7,656	981	487	13,419
Receivables from customers	4,245	3,355	15,091	2,253	1,293	26,236
Investment assets						
Financial assets held for trading	132	68	71	59	0	331
Financial assets at fair value through other comprehensive income	264	740	7,273	4,894		13,171
Financial assets at amortised cost		501	3,043	310		3,853
Total assets	**38,421**	**7,967**	**33,134**	**8,496**	**1,780**	**89,799**
Liabilities to credit institutions	10,772	2,703	22,387	6,798		42,660
Liabilities to customers	17,718	194	411	32		18,357
Debt securities issued to the public	4,901	6,723	6,918	3,849	239	22,630
Subordinated liabilities	507		1,487			1,994
Total liabilities	**33,898**	**9,620**	**31,204**	**10,679**	**239**	**85,641**
Guarantees	112	67	193	0	34	406
Other guarantee liabilities	251	614	632	886	30	2,413
Loan commitments	5,678					5,678
Commitments related to short-term trade transactions	115	389	153			656
Other	492	2	0	1		495
Total off-balance-sheet commitments	**6,647**	**1,072**	**978**	**887**	**64**	**9,649**

Note 42. Liquidity buffer

The liquidity buffer is presented under the Other Operations segment.

Liquidity buffer by maturity and credit rating on 31 December 2022, EUR million

Year(s)	0–1	1–3	3–5	5–7	7–10	10–	Total	Proportion, %
Aaa*	34,979	526	388	108	170		36,171	96.1
Aa1fiAa3	119	391	214		35	0	759	2.0
A1fiA3	6	0	2	3			12	0.0
Baa1fiBaa3	37	42	33	3	0	0	114	0.3
Ba1 or lower	0	42	41	25			108	0.3
Internally rated	158	216	81	2			457	1.2
Total	**35,300**	**1,217**	**759**	**140**	**205**	**0**	**37,621**	**100.0**

* incl. deposits with the central bank

The liquidity buffer's (excl. deposits with the central bank) residual term to maturity averages 4.0 years.

Liquidity buffer by maturity and credit rating on 31 December 2021, EUR million

Year(s)	0–1	1–3	3–5	5–7	7–10	10–	Total	Proportion, %
Aaa*	32,837	603	604	226	254		34,524	91.7
Aa1fiAa3	106	346	439	391	329	0	1,609	4.3
A1fiA3	2	2	0	8	2		15	0.0
Baa1fiBaa3	1	112	101	41	11	0	267	0.7
Ba1 or lower		66	30	39			134	0.4
Internally rated	305	213	115	267	196		1,095	2.9
Total	**33,250**	**1,342**	**1,289**	**971**	**792**	**0**	**37,645**	**100.0**

* incl. deposits with the central bank

The liquidity buffer's (excl. deposits with the central bank) residual term to maturity averages 4.0 years.

Note 43. Maturities of financial assets and liabilities by maturity or repricing

31 December 2022	1 month or less	>1–3 months	>3–12 months	>1–2 years	>2–5 years	>5 years	Total
Cash and cash equivalents	34,951						34,951
Receivables from credit institutions	3,812	4,849	2,784	1,140	322	71	12,978
Receivables from customers	5,274	9,756	8,522	494	2,654	1,479	28,178
Investment assets							
Financial assets held for trading	23	103	48	9	94	18	295
Financial assets at fair value through other	647	372	562	959	4,919	4,296	11,755
Financial assets at amortised cost	308	4,020					4,328
Total assets	**45,015**	**19,099**	**11,916**	**2,603**	**7,989**	**5,863**	**92,486**
Liabilities to credit institutions	22,588	7,833	2,456	945	3,620	3,458	40,899
Liabilities recognised at fair value through profit or loss	-0						0
Liabilities to customers	15,505	2,212	1,297				19,014
Debt securities issued to the public	2,824	3,836	6,336	2,109	7,356	2,748	25,209
Subordinated liabilities	67	277			1,040		1,384
Total liabilities	**40,984**	**14,157**	**10,088**	**3,054**	**12,016**	**6,207**	**86,506**

Debt repayable on demand totalled EUR 15.9 billion, consisting mainly of public deposits.

31 December 2021	1 month or less	>1–3 months	>3–12 months	>1–2 years	>2–5 years	>5 years	Total
Cash and cash equivalents	32,789						32,789
Receivables from credit institutions	2,550	4,909	3,016	1,329	1,438	177	13,419
Receivables from customers	5,828	8,438	7,651	368	2,558	1,393	26,236
Investment assets							
Financial assets held for trading	22	78	85	9	67	70	331
Financial assets at fair value through other	593	138	714	1,596	5,235	4,894	13,171
Financial assets at amortised cost	810	3,043					3,853
Total assets	**42,593**	**16,606**	**11,465**	**3,303**	**9,298**	**6,534**	**89,799**
Liabilities to credit institutions	26,577	7,430	1,519	777	2,056	4,301	42,660
Liabilities to customers	16,348	1,451	558				18,357
Debt securities issued to the public	2,807	4,272	5,494	604	5,350	4,105	22,630
Subordinated liabilities	77	816	7		1,094		1,994
Total liabilities	**45,809**	**13,969**	**7,578**	**1,380**	**8,500**	**8,405**	**85,641**

Debt repayable on demand totalled EUR 17.7 billion, consisting mainly of public deposits.

Note 44. Sensitivity analysis of interest rate and market risk

Interest rate risk associated with balance sheet

	2022		2021	
Currency EUR million	-200bp	+200bp	-200bp	+200bp
EUR	266	-194	426	-69

The risk is reported in euros for all currencies. The non-euro currency amounts are small and the associated currency and interest rate risks are mainly hedged. Interest rate risk is calculated monthly as the volatility of the present value of balance sheet cash flows to the parallel 2 percentage point change of the yield curve.

Sensitivity analysis of market risk

EUR million		2022	2021
Interest rate volatility*	10bp	-0.1	-2
Currency volatility*	10 pps	0	0
Credit risk premium**	10bp	-52	-55

* Trading portfolio

** Long-term investment assets

Other notes

Note 45. Information by country

OP Corporate Bank plc operates mainly in Finland. OP Corporate Bank plc has branches engaged in banking and asset and sales finance operations in Estonia, Latvia and Lithuania.

2022

Name		Domicile
OP Corporate Bank plc Estonian Branch	Branch	Estonia
OP Corporate Bank plc Latvian Branch	Branch	Latvia
OP Corporate Bank plc Lithuanian Branch	Branch	Lithuania

Financial information on 31 December 2022, EUR million	Estonia	Latvia	Lithuania	Total
Total operating income	19	18	30	**67**
Total EBIT	6	5	14	**25**
Total current tax	1	-0	3	**4**
Total personnel in man-years	39	37	44	**120**

2021

Name		Domicile
OP Corporate Bank plc Estonian Branch	Branch	Estonia
OP Corporate Bank plc Latvian Branch	Branch	Latvia
OP Corporate Bank plc Lithuanian Branch	Branch	Lithuania

Financial information on 31 December 2022, EUR million	Estonia	Latvia	Lithuania	Total
Total operating income	16	19	21	**56**
Total EBIT	4	10	9	**23**
Total current tax	2	1	2	**5**
Total personnel in man-years	38	35	43	**115**

Note 46. Related-party transactions

OP Corporate Bank plc's related parties comprise subsidiaries consolidated into OP Cooperative Consolidated, associates, key management personnel and their close family members, and other related-party entities. The company's key management personnel comprises the President and CEO, Deputy President and CEO and other members of senior management as well as members of the Board of Directors. Related parties also include companies over which key management persons or their close family member, either alone or together with another person, exercises significant influence. Other entities regarded as related parties include OP Bank Group Pension Foundation and OP Financial Group's Personnel Fund.

Standard terms and conditions for credit are applied to loans granted to the related parties. Loans are tied to generally used reference rates.

Related-party transactions 2022

EUR 1,000	Parent company	Key management personnel	Others*
Loans	854,575	190	3,749,301
Other receivables	1,910	0	5,597,345
Deposits	514,661		2,364,097
Other liabilities	4,533		112,022
Interest income	9,483	5	33,452
Interest expenses	1,895		22,098
Commission income	363	2	5,202
Commission expenses	1,242	1	15,792
Net investment income	0		-72,986
Other operating income	2,382		6,940
Operating expenses	89,832		9,802
Contingent liabilities and derivatives			
Derivative contracts			
Nominal values			3,340,676
Credit equivalents			40,359
Salaries, other short-term benefits and performance-based pay			
Salaries, other short-term benefits and performance-based pay		607	
Related-party holdings			
Number of shares	319,551,415		

Related-party transactions 2021

EUR 1,000	Parent company	Key management personnel	Others*
Loans	997,004	4,505	6,834,997
Other receivables	431	0	3,976,402
Deposits	659,645	3,120	7,521,581
Other liabilities	141,203	0	320,704
Interest income	1,667	19	36,464
Interest expenses	-955	4	43,039
Commission income	199	1	6,273
Commission expenses	456	0	21,557
Net investment income			-51,267
Other operating income	198	0	10,028
Operating expenses	45,161		60,069
Contingent liabilities and derivatives			
Off-balance-sheet commitments			
Other guarantee liabilities	0		12,500
Loan commitments	0		1,393
Derivative contracts			
Nominal values			6,213,935
Credit equivalents			53,634
Salaries, other short-term benefits and performance-based pay			
Salaries, other short-term benefits and performance-based pay		475	
Related-party holdings			
Number of shares	319,551,415		

* Other related-party entities include OP Bank Group Pension Foundation, OP Financial Group's Personnel Fund and their sister companies within OP Cooperative Consolidated.

Board member fees 2022

In financial year 2022, the members of the Board of Directors did not receive from OP Corporate Bank any monthly fees or share-based bonuses. No separate meeting allowances were paid in 2021 to the members of the Board of Directors employed by OP Cooperative or its subsidiaries. The meeting allowance paid to the Board members employed by OP Financial Group's cooperative banks amounted to 600 euros per meeting in 2022.

Salaries and bonuses paid to the President and CEO Katja Keitaanniemi in the financial year ending 31 December 2022
EUR 606.644.

The period of notice applicable under the President and CEO's executive contract is six months. According to this contract, the company must pay the President and CEO severance pay equalling his 6-month total salary, in addition to compensation for loss of office, if the company dismisses him or he has to resign or terminate the contract due to a reason attributable to the company. In case the executive contract terminates due to reasons attributable to the company, the President and CEO will also be entitled to bonuses under the performance-based bonus scheme for the year of contract termination and any possible deferred bonuses under regulation, provided that the scheme's performance criteria and the criteria for payment under the scheme's terms and conditions are fulfilled.

Pension obligations of key management persons

The President and CEO is covered by TyEL (the Finnish Employees Pensions Act) which provides pension benefits based on the years of employment and earnings as prescribed in the Act. The retirement age of the President and CEO is the age equivalent to the lowest pensionable age under the Employees Pensions Act (TyEL). The supplementary pension plan for the President and CEO has been arranged through OP Life Assurance Company Ltd. The costs of the supplementary pension plan for the President and CEO totalled EUR 88,200 (85,560). No pension obligations apply to Board members. This also applies to former Board members. More detailed information on OP Corporate Bank plc's pension plans can be found in Note 27. Provisions and other liabilities.

Pension costs of key management persons, thousands of euros	2022	2021
Pension costs of defined contribution plans under TyEL	528	419
IFRS expense of voluntary supplementary pension	26	23
Pension obligation of voluntary supplementary pension	564	845
Pension costs of supplementary defined contribution plans	88	86

Pension costs of defined contribution plans under TyEL include employee and employer shares.

Note 47. Events after the balance sheet date

No significant events took place after the balance sheet date.

Signatures for the Financial Statements and Report by the Board of Directors

Helsinki, 8 February 2023

Timo Ritakallio
Chair of the Board of Directors

Olli Lehtilä

Petteri Rinne

Pasi Sorri

Mikko Timonen

Tiia Tuovinen

Katja Keitaanniemi
CEO

Auditors' note

We have today issued an auditor's report on the audit performed.

Helsinki, 15 February 2023

KPMG Oy Ab
Audit firm

Juha-Pekka Mylén
Authorised Public Accountant

This document is an English translation of the Finnish auditor's report. Only the Finnish version of the report is legally binding.

Auditor's Report

To the Annual General Meeting of OP Corporate Bank plc

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of OP Corporate Bank Plc (business identity code 0199920-7) for the year ended on 31 December 2022. The financial statements comprise the balance sheet, income statement, statement of comprehensive income, statement of changes in equity, cash flow statement and notes, including a summary of significant accounting policies.

In our opinion, the financial statements give a true and fair view of the company's financial position, financial performance and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU and comply with statutory requirements.

Our opinion is consistent with the additional report submitted to the Board of Directors.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report.

We are independent of the company in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

In our best knowledge and understanding, the non-audit services that we have provided to the company are in compliance with laws and regulations applicable in Finland regarding these services, and we have not provided any prohibited non-audit services referred to in Article 5(1) of regulation (EU) 537/2014. The non-audit services that we have provided have been disclosed in note 11 to the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Materiality

The scope of our audit was influenced by our application of materiality. The materiality is determined based on our professional judgement and is used to determine the nature, timing and extent of our audit procedures and to evaluate the effect of identified misstatements on the financial statements as a whole. The level of materiality we set is based on our assessment of the magnitude of misstatements that, individually or in aggregate, could reasonably be expected to have influence on the economic decisions of the users of the financial statements. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for qualitative reasons for the users of the financial statements.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. The significant risks of material misstatement referred to in the EU Regulation No 537/2014 point (c) of Article 10(2) are included in the description of key audit matters below.

We have also addressed the risk of management override of internal controls. This includes consideration of whether there was evidence of management bias that represented a risk of material misstatement due to fraud.

THE KEY AUDIT MATTER	HOW THE MATTER WAS ADDRESSED IN THE AUDIT

Measurement of receivables from customers (notes 1, 12, 17 and 34 to the financial statements)

Receivables from customers, totalling EUR 28.2 billion, are the most significant item on OP Corporate Bank's balance sheet representing 28 percent of the total assets.

Calculation of expected credit losses (ECL) in accordance with IFRS 9 Financial Instruments involves assumptions, estimates and management judgement, for example, in respect of determining the probability and amount of expected credit losses as well as the significant increases in credit risk.

The indirect effects of the war in Ukraine, rising interest rates and a weaker economic outlook could increase credit risk, which could materialise in higher impairment losses on receivables.

The elements of accounting for expected credit losses are updated and defined, based on materialised credit risk developments, validation and improvement of the accounting process as well as on regulations and changes therein.

Due to the significance of the carrying amount involved, complexity of the accounting methods used for measurement purposes and management judgement involved, measurement of receivables is addressed as a key audit matter.

We evaluated compliance with the lending instructions and assessed principles and controls over recognition and monitoring of loan receivables.

We assessed the methods and the key assumptions for calculating expected credit losses as well as tested the controls related to the calculation process and credit risk models for the expected credit losses.

The main focus areas in our audit of ECL were the most significant factors requiring management judgement in the calculation of ECL, cash flow based ECL calculation based on expert assessment as well as recalculation of the most significant ECL models and sensitivity analysis.

Our IFRS and financial instruments specialists were involved in the audit.

Furthermore, we considered the appropriateness of the notes provided by OP Corporate Bank in respect of receivables and expected credit losses.

Measurement of investment assets and derivative contracts (notes 1, 7, 16, 18 and 34 to the financial statements)

The carrying value of investment assets totals EUR 16.4 billion mainly consisting of investments measured at fair value. The aggregate derivative assets are EUR 5.8 billion and derivative liabilities EUR 5.7 billion comprising contracts held for trading and hedging purposes. Derivatives are measured at fair value in preparing financial statements.

The fair value of financial instruments is determined using either prices quoted in an active market or OP Corporate Bank's own valuation techniques where no active market exists. Determining fair values for investments and derivatives involves management judgements, especially in respect of those instruments for which market-based data is not available.

The operating model between OP Corporate Bank and cooperative banks for derivative contracts hedging interest rate risk was changed at the end of 2022. This change will reduce variation in the profit or loss caused by the valuation of derivative contracts. The valuation adjustment related to the previous operating model was dissolved in the last quarter.

Due to the significant balances associated with investment assets and derivative positions involved, and management judgement related to the measurement of illiquid investments, valuation of these assets is addressed as a key audit matter.

We evaluated the appropriateness of the accounting principles applied and the valuation techniques used by OP Corporate Bank, and tested accounting for and valuation of investment assets and derivative contracts.

In respect of derivative contracts, including the change in the operating model between OP Corporate Bank and cooperative banks for derivative contracts hedging interest rate risk, we considered the accounting treatment and the valuation process in relation to the requirements set under IFRS.

As part of our year-end audit procedures, we compared the fair values used in measurement of investment assets and derivatives with market quotations and other external price references. We assessed the accuracy of the input data used in valuations as well as the reasonableness of the assumptions and estimates applied.

We also assessed the impairment principles applied and techniques used by OP Corporate Bank in respect of investments.

Our IFRS and financial instruments specialists were involved in the audit.

Finally, we considered the appropriateness of the notes on investment assets and derivative contracts.

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EUand comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the company's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the company or cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Reporting Requirements

Information on our audit engagement

We were first appointed as auditors by the Annual General Meeting in 2002, and our appointment represents a total period of uninterrupted engagement of 21 years.

Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. Our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed, we conclude that there is a material misstatement of the report of the Board of Directors, we are required to report that fact. We have nothing to report in this regard.

Helsinki, 15 February 2023

KPMG OY AB

JUHA-PEKKA MYLÉN
Authorised Public Accountant, KHT