OP Financial Group's Capital Adequacy and Risk Management Report 2020

OP Financial Group

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Introduction

OP Financial Group has published OP Financial Group's Capital Adequacy and Risk Management Report for 2020 as part of its annual report for 2020. The report puts together information on OP Financial Group's risk management and the capital adequacy of the consolidated group of the amalgamation of member cooperative banks, as specified in Part 8 of the Capital Requirements Regulation of the European Parliament and of the Council No. 575/2013 (CRR) in compliance with the guidelines issued by the European Banking Authority (EBA/GL)/2016/11), or Pillar III disclosures. In this report, OP Financial Group's Risk Appetite Framework has been added to the annual OP Amalgamation Capital Adequacy Report published previously.

The first part of the report deals with the qualitative information related to OP Financial Group, i.e. the Risk Appetite Statement and Risk Appetite Framework as well as Capital Adequacy Management Principles, Declaration on the adequacy of risk management arrangements approved by the Executive Management, and risk statement as well as key risk management indicators that describe OP Financial Group's risk-bearing capacity and risk appetite relative to OP Financial Group's operations and significant risks. The second part presents key information on OP Financial Group's capital adequacy. This part also presents the capital base of the financial conglomerate.

Parts 3–5 present the quantitative information disclosed on the capital adequacy of the OP amalgamation (Pillar III tabes). Given that this information is based on the consolidated credit institution capital adequacy of the amalgamation of member cooperative banks, it is not directly comparable with other information disclosed on OP Financial Group.

OP Financial Group annually publishes its Capital Adequacy and Risk Management Report. In addition, the quarterly OP Amalgamation Capital Adequacy Report contains such information that regulation requires to be disclosed more often than once a year.

In addition to this report, information on risk management is included in other reports related to OP Financial Group's annual reporting. OP Financial Group's Corporate Governance Statement 2020 includes a summary of OP Financial Group's Risk Appetite Statement and Risk Appetite Framework. OP Financial Group's Report by the Board of Directors and Financial Statements for 2020 contains sections of the Risk Appetite Framework required by regulation governing financial statements (Note 2. and Notes 46–83 to the financial statements) as well as a review of the risk exposure of business segments as part of the Report by the Board of Directors.

Information on OP Financial Group's Corporate Governance and steering systems is available on websites covering respective issues (op.fi > OP Financial Group > About us > Corporate Governance) and in OP Financial Group's Corporate Governance Statement. A description of the remuneration schemes and practices can be found in OP Financial Group's Remuneration Statement and OP Financial Group's Corporate Governance Statement, in Notes 9 and 86 to the financial statements, as well as OP Financial Group's website dealing with remuneration (op.fi > OP Financial Group > About us > Corporate governance > Remuneration).

Information may remain undisclosed in OP Financial Group's Capital Adequacy and Risk Management Report to the extent such information is irrelevant and its effect, if any, is insignificant on OP Financial Group's profitability, earnings power, balance sheet or capital adequacy. Irrelevant, undisclosed information is dealt with at the end of OP Financial Group's Capital Adequacy and Risk Management Report.

OP Financial Group's Capital Adequacy and Risk Management Report is unaudited.

1 OP Financial Group's Risk Management

1.1 OP Financial Group's Risk Appetite Framework

1.1.1 Overview of OP Financial Group's significant risks

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 earnings logic (by product and service). The bases for establishing earnings logics 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.

Because of the characteristics of OP Financial Group's business and industry, risks have two fundamental principles differing from each other: OP Financial Group may earn revenue through risks (earnings risks) or risks may be a consequence of something (consequential risks).

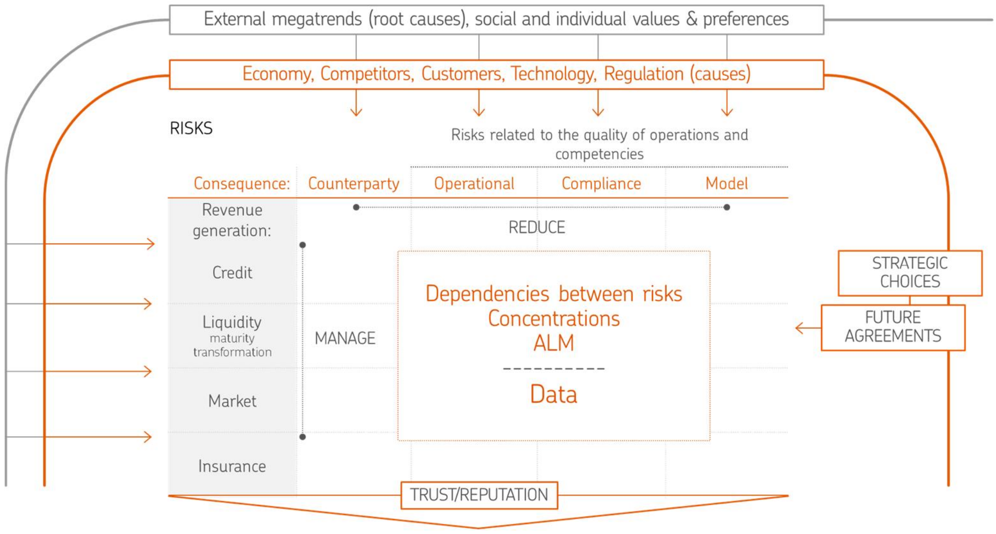
Because the review of earnings risks requires that OP Financial Group examine critical success factors from the perspective of business, the sources and management of earnings risk are grouped in more detailed descriptions of significant risks by earnings logic, except for Group-level risks that apply to all earnings 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 figure 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 figure's table:

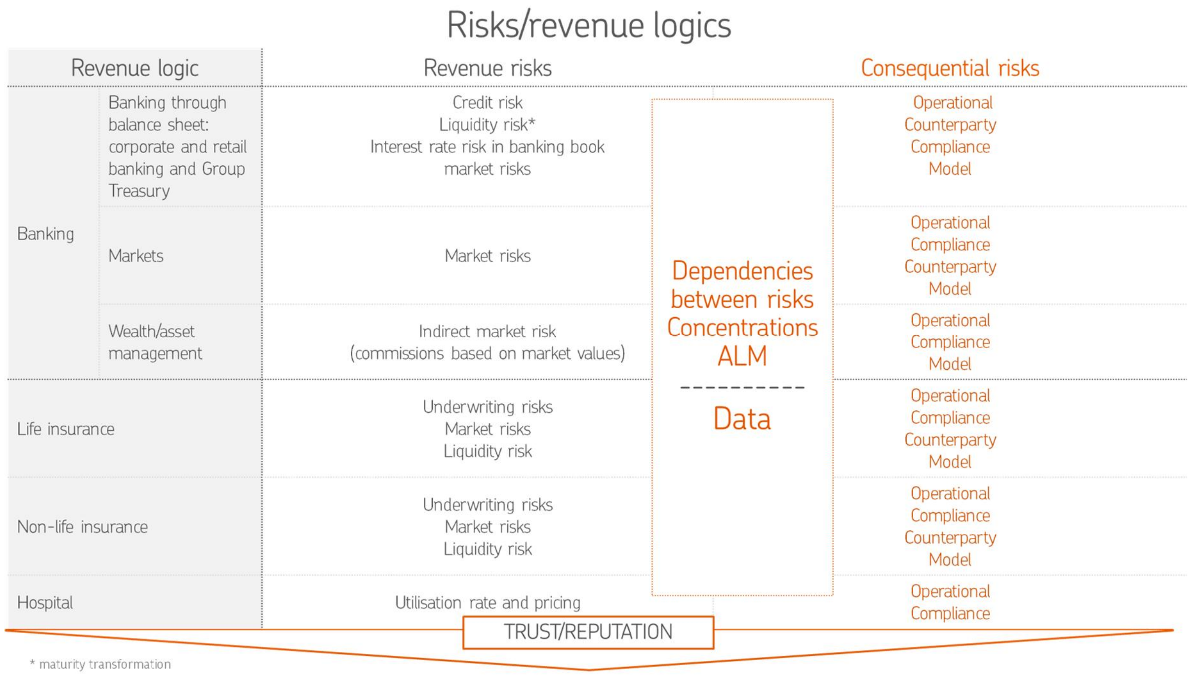
- Taking earnings risks may cause consequential risks in addition to the sources/causes of OP Financial Group's external risks.
- The combined effect of earnings and consequential risks may result in new Group-level, due, for example, to concentrations and interdependencies between risks.
- Due to the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



ALM = Asset and Liability Management

Data = Refers here to OP Financial Group's data capital risk.

The figure below presents a connection between OP Financial Group's business segments, earnings logics and OP Financial Group's significant risks. The Banking earnings logics contain both the Retail and Corporate Banking segment. The Banking earnings logics are grouped into three earnings logics in risk management: Banking through the balance sheet, Markets and Asset Management earnings logics. Life and Non-life Insurance earnings logics and Hospital earnings 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 risk management and compliance functions 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. 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 unit concerned makes business decisions and is responsible for the quality of its customer service, its business continuity as well as its earnings and risks.

- 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 daily business. The second line of defence supports the first line of defence by consulting them especially in matters that are part of their own expertise. The second line of defence also oversees compliance with the risk management framework and carries out an independent analysis related to the balance between earnings, risks and capital and liquidity acting as buffers as well as ensuring business continuity during incidents too.

- Internal Audit that is independent of other lines of defence acts as the third line of defence.

1.1.2 OP Financial Group's risk management

1.1.2.1 OP Financial Group's risk-taking and capital management

OP Financial Group mainly takes risks related to carrying out its mission. In all of its operations, OP Financial Group emphasises moderate risk-taking so that it could reasonably foresee the financial result and could serve its customers according to its mission in even exceptionally difficult circumstances.

Together with the strategy, OP Financial Group's Risk Appetite Statement (RAS) create bases for the target-setting of businesses, binding on all OP Financial Group companies. The RAS therefore also governs the guidelines issued by OP Financial Group's central cooperative to member credit institutions aimed at securing capital adequacy.

In OP Financial Group, the majority of profits come from customer business and the earnings risks taken and priced in this context that describe OP Financial Group's risk appetite. The quantitative limits set in risk policies guide the management of earnings risks together with other guidelines.

Consequential risks also arise from business that OP Financial Group seeks to reduce. Consequential risks generate no earnings, but may only lead to financial loss and/or loss of reputation if they materialise.

Earnings and consequential risks relate to the current business and the valid agreements that OP Financial Group companies have concluded with their customers and other counterparties. Risks of future business affect the success of the years to come. OP Financial Group manages risks associated with future business by means of strategic choices made by the management.

In order to be able to carry out operations in accordance with earnings risks and thereby risk appetite, OP Financial Group ensures that its companies have sufficient risk-bearing capacity, or risk capacity and risk-taking capacity. Risk capacity involves expertise and risk-taking capacity involves capital and liquidity. Risk capacity requires, for example, customer relationship skills, expertise in adjusting risk position quickly and the flexibility to change OP Financial Group's risk-taking. Within each business concerned and at Group level, OP Financial Group seeks to identify the interdependencies of various risks and the resulting risk concentrations, and to organise their management appropriately.

Strong risk-taking capacity secures the cost-effective implementation of the required market transactions (refinancing, reinsurance, derivatives). OP Financial Group aims to maintain a level of capital and liquid assets and a funding and investment portfolio structure with the aid of which it is highly likely to be able to implement its current business models. The Group defines the target level of risk-taking capacity by means of external credit rating.

The Risk Appetite Statement is condensed into a limited number of principles as well as limits for measuring risk-taking capacity and tolerances for measuring risk capacity with which OP Financial Group's management determines how much the Group can put its risk-taking capacity to use and how it is allocated to earnings logics and business segments in accordance with the Group's strategy and risk appetite.

Based on the limits and tolerances set in the Risk Appetite Statement, Risk Management together with the businesses prepares more detailed proposals for limits and OP cooperative banks' proposals for control limits in such a way that the quantitative risks defined as significant within OP Financial Group are limited appropriately in revenue logic-specific risk policies. Quantitative limits are supplemented with principles included in risk policies and other guidelines issued by Risk Management to ensure that also the risks that are more difficult to quantify are covered. This is how OP Financial Group ensures that the Group or any of its companies does not take excessive risks to endanger the Group's or the company's capital adequacy, profitability, liquidity and business continuity.

The first key task of capital management is to decide on how much of the risk-taking capacity OP Financial Group allocates to risk-taking and what the portion is that is to be left as a management buffer. This is expressed as a ratio of the actual capital in use, or internal capital and the need for capital specified internally. i.e. economic capital. This ratio in OP Financial Group is determined at least at Group level and by earnings logic. For this ratio, we set OP Financial Group sets risk-taking tolerances and/or limits that it uses to ensure solid capital base in exceptional circumstances too. The economic capital requirement represents OP Financial Group's own best estimate of the need for capital by risk and function. It arranges functions and their risks in order of size. The Group allocates quantitative risk-taking (economic capital requirement) in relation to OP Financial Group's internal capital to earnings logics and business segments in accordance with the Group's strategy and risk appetite.

The capital available and the capital requirements as well as their ratio are monitored and controlled also by concepts and calculation methods defined by the relevant authorities both at the Group and company level. With these indicators too, OP Financial Group wants to be among the strongest players among its peer group and keep the required total capital annually decided by the supervisor at the level of the best European banks.

A minimum or limit and target level are set for the capital adequacy indicators. The difference between the target level and the minimum serves as a buffer for the management, which ensures with sufficient certainty that the minimum is complied with, even if losses produced by earnings risks and consequential risks are higher than normal. The determination of the management buffer also assesses its consistency with strategic business targets and the qualitative risk capacity of the Group and its companies.

Another task of capital management is to define the capital structure. The majority of capital has to be available to the Group and its companies immediately and without restrictions to cover losses in such a way that its stability must not involve mitigating terms. This means that OP Financial Group's capital management is primarily based on a solid capital base (CET1). CET1 capital is supplemented with lower-priority amounts that do not fulfil the conditions for CET1 capital but these can be used to fulfil other regulatory requirements and which indisputably cover losses.

In addition to the measurement of the regulatory capital requirement and own funds based on capital adequacy measurement, OP Financial Group uses a measurement model for its own economic capital and internal capital. They help to assess the capital required to bear risks (economic capital requirement) and OP Financial Group's view of how much it has items that can be used to cover any losses (internal capital). The economic capital measurement takes account of risks on a more extensive basis than in capital adequacy measurement. Such risk types include banking interest rate risk, insurance market risks and other assessable risks, in particular. Furthermore, the measurement of capital requirement for large corporate exposures takes account of customer and industry concentrations and the differences in the riskiness of key industries, including the real values of collateral. There are also differences in terms of the parameters and estimates used.

1.1.2.2 Responsibility of OP Financial Group's management in risk management, and risk management arrangement

The bases for the arrangement of OP Financial Group's risk management prepared by OP Cooperative's senior management and set by the Board of Directors are as follows:

- Senior management prepares business unit strategic choices that are based on OP Financial Group's Risk Appetite Statement (RAS) document, confirmed by the central cooperative's Supervisory Council, in terms of risk-taking. The Risk Appetite Statement outlines and gives grounds for what risks each business unit is ready to take and to what extent. The business units are obliged to operate within the limits of these restrictions.
- Senior management decides on the division of responsibilities as regards risk-taking. The Group defines what risks different earnings logics can take and any potential elaborations on what risks legal entities and various functions can take within these earnings logics when serving customers.
- The governance structure provides the basis for the fact that the key principles guiding operations and the related policies and operating instructions have been prepared and resolved appropriately and that each activity is assessed and supervised in appropriate manner in view of quality, extent and complexity by expert parties that are independent of business in addition to monitoring performed by the business concerned.
- The central cooperative's Board of Directors is the most important decision-making body for risk management tasks. In addition, the central cooperative's Supervisory Council confirms the decisions by the Board of Directors that apply to OP Financial Group's risk appetite. The Risk Committee of the Board of Directors assists the Board of Directors in performing duties related to risk-taking and risk management. The Committee has no independent decision-making powers. Based on the decision by the President and Group Chief Executive Officer, the Executive Management Team has set up a Risk Management Committee, Steering and Compliance Committee and Banking ALM Committee that approve instructions and policy descriptions specifying the Risk Appetite Statement and the Risk Appetite Framework. Duties related to the risk management of management bodies are described in greater detail in the charters and the decision-making and management system of the central cooperative consolidated. OP Financial Group's Corporate Governance Statement provides more detailed information OP Financial Group's corporate governance.
- OP Financial Group's remuneration schemes are in line with the Group's mission, core values and targets. Remuneration may not encourage unnecessary risk-taking or actions that are against the customer's best interest. Compliance and Risk Management are involved in the preparation of the remuneration principles, remuneration policy and remuneration schemes and in the determination of the supervisory practices related to remuneration processes.
- The principles of corporate governance as required by joint and several liability define and determine the corporate governance of the central cooperative and its member cooperative banks, as required under joint and several liability.
- In addition, the principles of internal control, good corporate governance, good business practices and corporate security set preconditions for practices.

1.1.2.3 Objectives of OP Financial Group's risk management

The risk management process is a whole which involves all tasks that help OP Financial Group to ensure the achievement of the following risk management objectives:

- The processes of business units provide a solid foundation for high-quality customer service, but at the same time they are cost-efficient, reliable and, whenever necessary, can be quickly restored to working order. In addition, the operational processes generate all information needed in the performance of tasks in key functions (customer management, sales, risk management, finances, regulatory reporting), in functional analysis and management reporting. Furthermore, the management of this information has been duly organised.
- In the business units, there is balance between earnings, risks, capital and the liquidity buffer, and cumulative risks at OP Financial Group can be identified and they can be managed, for example, through principles of the division of responsibilities.
- The capital adequacy and liquidity of the business units of OP Financial Group and the entire Group are at a level that OP Financial Group can make all its business decisions completely independently. Nor has OP Financial Group or its companies have other commitments that would prevent from carrying out strategy-based measures, at least for a longer time. In addition, OP Financial Group has operational flexibility to quickly enough adjust its operational processes to achieve its strategic goals and targets.
- No internal or external party questions the validity of OP Financial Group's joint and several liability.

Once the above risk management objectives have been achieved, OP Financial Group's businesses can implement their strategy without the internal or external factors hindering business significantly. This is how OP Financial Group's risk management processes support for their part the implementation of OP Financial Group's strategy and related monitoring.

1.1.2.4 OP Financial Group's risk management methods and implementation

Risk Management prepares the RAS and RAF as well as risk policies in cooperation with the business concerned tailored by earnings logic that directs operations towards the strategy, including risk limits, control limits and decision-making powers to be submitted to the competent body for decision. Proposals for limits and control limits must contain grounds for the conclusion of how the proposed metrics and level have been reached. Limits and control limits set a maximum limit for risk-taking. Exceeding the limit or control limit or a threat of the exceeding the limit triggers an escalation procedure. If need be, Risk Management arranges other more detailed operating instructions for risk-taking and risk management.

As far as possible, the instructions framework must at the same time meet the following two conditions:

- The framework guides business towards the strategy, limits risk-taking according to risk appetite and fosters prudent and careful practices; and
- The framework makes it possible that business decisions deviating from the RAS and the risk policies that specify it can be made on justified grounds but to a limited extent. In such a case, the draft resolution must have been prepared with special care and reveal well-defined grounds for the deviations. The risk management guidelines must clearly reveal how such deviations are supervised by the appropriate body and what the responsibility of the supervisory body is.

In the extensive risk identification process, Risk Management together with the representatives of the businesses concerned and other stakeholders assesses risks that are or may be involved in OP Financial Group's business and/or OP Financial Group's business environment and in the operations and exposures of its companies in the short- and longer term. This also involves identifying and assessing concentration risks within individual types of risk and cumulative Group-level risks and risk concentrations. Based on the identification process, Risk Management maintains a list of identified risks and their underlying factors. Based on the results of the risk identification process, Risk Management annually presents OP Financial Group's most significant risks in its Risk Appetite Statement to Board of Directors for decision and to the Supervisory Council for confirmation. The results of the risk identification process are also used in the preparation of risk policies when specifying risk management principles, measures, objectives and limits based on risk-bearing capacity and risk appetite. The results are also used in the maintenance of economic capital requirement and stress testing framework.

Risk Management determines the risk scorecards suitable for each function and analysing, quantifying, limiting and monitoring each function's risk. The methods and models used in risk measurement and their data needs are described and documented extensively and are implemented in such a way that various risks can be make consistent within OP Financial Group to be comparable in terms of capital requirements and liquidity needs.

Key methods and models are also validated before their implementation. The functioning of the models is monitored after their implementation.

In general, the risk management methods and models must be in line with the methods used in the pricing of each business and with those used in performance measurement to make it possible to analyse the balance between the financial result, risks and capital.

OP Financial Group itself uses risk management measurement models (internal models) it has developed for risk measurement, capital requirement assessment, business price determination and the determination of values used in accounting. The models take account of their compatibility with OP Financial Group's business model, risk appetite and risk profile. The Group and its companies share the related key parameters and assumptions.

OP Financial Group uses stress tests to assess how various serious, albeit potential, situations and those differing from the assumptions of risk models may affect the liquidity, risk exposure, profitability and capital adequacy of the Group and/or its companies. Stress tests assess the effect of both individual risk factors and the joint effect of multiple variables acting simultaneously. In stress testing, the Group utilises reverse stress tests, in addition to various sensitivity and scenario analyses. Stress tests support and supplement the whole picture given by other risk measurement methods of OP Financial Group's overall risk exposure and challenge the sufficiency of economic and capital adequacy requirement. Stress tests are aimed covering all risk types identified as significant in the Risk Appetite Statement.

When the above infrastructure is in place, a basis has been provided for daily operational risk management for businesses (transaction-level risk identification, analysis and pricing and ongoing customer monitoring) and for internal operational control.

Customer transactions arising from service involve risks borne by OP Financial Group that are managed at portfolio level within earnings logics. Portfolio-level exposures are authorised clearly and they are described in risk policies or other instructions. If no person in charge can be found for risks arising from certain operations, such operations are not principally carried out. The starting point is that responsibility for risk can be assigned only to a function which can use various measures to affect the risk.

The liquidity strategy defines liquidity management tools, utilisation of various funding sources, ensuring liquidity and the responsibilities and roles of those involved in the liquidity management process. OP Financial Group manages its liquidity position through the proactive planning of the funding structure, the monitoring of the liquidity status and a well-balanced liquidity buffer, planning and management of daily liquidity, the contingency plan based on emergency preparedness, as well as the effective and ongoing control of the Group's liquidity status.

Capital management aims in all circumstances to proactively control and ensure that OP Financial Group's capital adequacy meets the set targets and official requirements and thus ensure OP Financial Group's business continuity. OP Financial Group's capital plan supports the assessment of the adequacy of the Group's capital and clarifies practices in case the capital base decreases. The capital plan is aimed at proactively ensuring an adequate capital base even in exceptional conditions.

1.1.2.5 OP Financial Group's internal control of risk management

Risk Management is responsible for supervision of compliance with the instructions it has issued and reports any significant deviations to the Board of Directors' Risk Committee of the central cooperative and Compliance.

Risk Management supervises OP Financial Group's and its companies' daily operational risk management and liquidity management, risk-taking, pricing of business units, risk management processes and their quality. It analyses the risk exposure of the Group and its companies and its developments, the maintenance of risk-taking within the set tolerances, limits and control limits and compliance with the risk policy. In addition, Risk Management secures business continuity by supervising the annual maintenance and testing of business continuity plans within the Group companies and the central cooperative consolidated.

Risk Management produces reports through which it is possible to monitor using methods applicable to earnings logic how each business remains within the set quantitative restrictions and how it complies with the qualitative requirements set for operations.

1.1.3 OP Financial Group's significant risks – sources and management

1.1.3.1 Definitions and sources of significant risks

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

Credit risks	Credit risk refers to the risk that a contracting party to a financial instrument is unable to fulfil their contractual repayment obligations and thereby causes a financial loss to the other party.

Liquidity risks	Liquidity risk arises from the imbalance between the cash flow timing and amounts of granting and obtaining financing, insufficient collateral needed to obtain financing and the temporal and counterparty- and instrument-specific concentration. This may lead to a company's weaker liquidity if it has not sufficiently prepared for liquidity. Liquidity risk also involves market liquidity risk, which means a risk of failing to execute market transactions within a desired time and/or at an estimated price.
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.
Non-life insurance risks	Non-life insurance risks comprise risk of loss or damage, and provision risk. Risk of loss or damage occurs when there are an above-average number of losses, or they are exceptionally large. Provision risk arises when the claims expenditure incurred for the losses that have already occurred is higher than expected or the timing of the payment of claims deviates from expectations.
Life insurance risks	Life insurance risks comprise biometric risks, cost risk and customer behaviour risks. Biometric risk arises when forecasts for the lifetime of those insured differ from those in insurance products that include endowment risk or forecasts for the mortality of those insured (e.g. unpredicted growth in mortality caused by a catastrophe) differ in the products with death risk. Biometric risk also arises when forecasts for when an insured person's incapacity for work begins differs in products including disability risk but that risk is very small in OP Life Assurance Company.
Counterparty risks	Counterparty risk refers to the risk of the contracting party not fulfilling its financial obligations. Counterparty risk may be related to a derivative contract, trading or a reinsurance contract.
Operational risks	Operational risk is caused by all business operations and it may result from insufficient or incorrect practices, processes, systems or external factors. OP Financial Group's operational risks also include ICT and security risks.
Compliance risks	Risks caused by non-compliance with external regulation, internal policies, appropriate procedures or ethical principles governing customer relationships.
Data capital risk	Data capital risk means potential losses, loss of reputation or deterioration of operations caused by uncertainty in decision-making, management and reporting related to data and information.
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 models. The model means a method used to translate the 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	Risk of the loss of reputation or trust caused by negative publicity or materialisation of a risk.
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.
Risks associated with future business	Risk associated with the conditions and volumes on which similar or entirely new agreements are based.

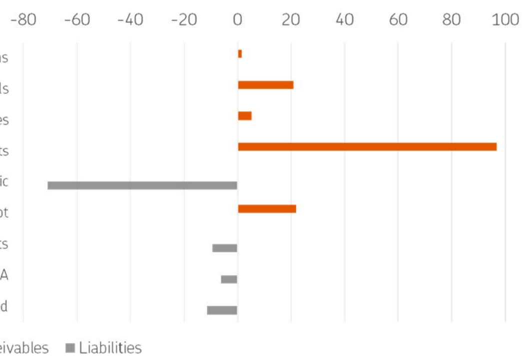
Counterparty risks and risks associated with future business are not dealt with as a specific whole because risks associated with future business may emerge in the form of various significant risks and counterparty risks emerge as part of various risk types.

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

Residual risk is the risk which cannot be eliminated or which the entity is unwilling to eliminate. 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.

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 2020).

Key instruments, associated risk types and volumes, € billion



	Credit	Market	Operatio nal	Under-writing	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
Central bank deposits/debt		X	X		X
Non-life insurance contracts		X	X	X	X
Life insurance contracts, with-profit, incl. EEA	X	X	X	X	X
Life insurance contracts, unit-linked		X	X	X	X

1.1.3.2 Banking risks

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 control limits, 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 control limits set a maximum for risk-taking. These help to ensure the sufficient diversification of the loan portfolio while avoiding the emergence of too 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. The Group also manages credit risk through the selection of the range of products and product terms and conditions. Risk associated with new lending is managed through well thought-out customer selections and the avoidance of risk concentrations. In addition, the Group makes use of techniques for reducing credit risks (collateral and guarantees). It also makes active use 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 provide 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 what lending to the group involves. Each business unit identifies the group of connected clients and their interdependencies and describes them in OP Financial Group's systems.

It is necessary to collect sufficient up-to-date information on customers that cause credit risk to assess their creditworthiness. Creditworthiness comes from the customer's willingness to pay and repayment capacity. They both affect the customer's borrower 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 borrower grade gives a true picture of the customer's creditworthiness risk. Each business unit ensures that its customers' borrower 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 fact that the collateral can be realised so that we can continuously maintain a realistic view of the hard collateral securities that secure receivables. The values of assets pledged in security of receivables must give a true and real-time picture of the collateral position related not only to an individual customer but also the entire loan portfolio. When valuing illiquid collateral securities, it is necessary to consider the financial standing of the collateral asset owner. The weaker the asset owner's financial standing is, the bigger should be the weight of the realisation value in estimating the collateral asset.

Financing decision-making is based on the principle of segregation under which the person preparing financing may not make the financing decision alone. Considering that financing decisions are about risk-taking decisions, those making the decisions must be aware of all information relevant to decision-making. 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 exposure specified in the risk policy. Decisions that deviate from the target risk status specified in the risk policy must be explained on a broader basis. The central cooperative's Risk Management assesses compliance of the most significant financing projects with the risk policy and reports to the management of OP Financial Group and the management of Group banking entities a situational picture of compliance with the risk policy.

The bank's senior management and management body monitor closely the bank's credit risk exposure. The bank's management is responsible for keeping the members of the management body informed in the event that the bank's operational risk-taking deviates from the risk policy approved by the management body, in order for the Board of Directors, as its role requires, to monitor the trend in the bank's risk exposure and, if necessary, issue instructions to the management at operational level concerning risk-taking.

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

Customers that are most significant to the bank and whose risk of default has increased clearly or another significant threat is related to their repayment capacity 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' situation from the bank's perspective and to minimise the risk the bank may be exposed if materialised. Monitoring and documenting potential customers in default or actual customers in default are more intensive and extensive than among less risky customers, so that the bank is actively aware of changes in the customer's situation and can immediately react to the changed situation.

Measuring credit risk

OP Financial Group measures credit risk using the ratio of economic capital requirement 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. What is also measured is the proportion of corporate exposures in different borrower grade baskets, and the average rating of corporate exposure. The risk policy sets limits for these metrics. In addition, loan portfolio concentrations are monitored by customer, industry and country. The Group also measures the growth differential of the loan portfolio and credit risk economic capital to ensure balance between growth and risk-taking. Limits deriving 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 that may be segment- or entity-specific. Targets may be set for the entire loan portfolio or separately to personal or corporate customer financing. Furthermore, it is possible set targets measuring the quality of the credit risk process.

In order to ensure sufficient diversification of the loan portfolio and efficient capital allocation, customer segmentation is used to manage the loan portfolio. Customer segments have been defined to ensure that receivables in each individual segment are homogenous in terms of credit risk to enable a coordinated risk policy. By utilising segmentation and the breakdown by borrower grade, the Group presents the loan portfolio target status 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

The credit rating system means all of the methods, processes, controls, data collection and IT systems that support the assessment of credit risk, 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 credit rating system applies to all Group entities.

The rating uses both expert rating and automated rating. In expert rating, the Group has seen it appropriate to separate business and risk management responsibilities in such a way that decisions are centralised in the rating decision-makers within the independent Risk Management. The banks in charge are responsible for continuously monitoring the credit rating process, and the ratings must always be kept up to date. Customer credit rating must give a true picture of the customer's status and repayment capacity, and the lending decision must be based on the existing and up-to-date borrower grades. Credit rating controls customer selection, consequences of insufficient collateral and exposure pricing.

OP Financial Group uses an internal 16-level scale of A–F to assess the probability of default for its **private customer** agreements, with F representing borrowers in default. The Group assesses monthly all private 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 borrower grade for a period of 12 months.

The rating based on the application stage for now 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.

OP Financial Group assesses the probability of default of its **corporate customers and credit institutions as counterparties** using a 20-level credit rating system on a scale of 1.0–12.0, with 11–12 borrower 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 what is 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 borrower 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 Asiakatieto'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. Risk scores provided by Rating Alfa have been described (calibrated) into OP Financial Group's internal borrower grades. Risk scores provided by the rating Alfa and OP Financial Group's internal payment behaviour data are used to generate OP Financial Group's borrower 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 borrower grade of A rated customers and they must assess customers with a low borrower grade and those on the watch list on a half-yearly basis. Responsibility for the assessment rests with the bank in charge. The borrower 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 that is created on the basis of the customer's basic data, transaction data and payment behaviour data.

A specific L rating model is used to assess the probability of default of credit institutions as counterparties, the structure of which corresponds to the R rating model. The statistical model as the basis of the credit rating is based on financial indicators in financial statements and on qualitative background data. Such rating can be revised by an expert with warning signs and, in many cases, rating is also affected by the parent company's support to the banking group and by the Sovereign Ceiling rule whereby the counterparty cannot be better than the country concerned in terms of creditworthiness. The Group decides on credit institution ratings at least once a year.

Risk Management maintains a more detailed description of the internal credit rating system and reports regularly on its effectiveness as part of OP Financial Group's risk analysis and separately to the Risk Management Committee of the Executive Management Team.

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 together with business representatives make 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.

OP Financial Group's key source of liquidity risk is banking where inflows and outflows of financing does not take place at the same time. In such a case, the bank is exposed to refinancing risk due mainly to lending with a long maturity and the differences between the maturity of deposit funding dependent on customer behaviour and the illiquidity of receivables. At the same time, the bank is exposed to funding concentration risk as regards the counterparties of deposit and wholesale funding, availability and maturity of finance. Lack of market liquidity may reduce liquid assets held by the bank.

OP Financial Group

Assessment and measurement

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

Structural funding risk is measured on the difference between cash inflows and cash outflows in different maturities. In addition, the Group 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 the maturing items on the balance sheet. Based on a financial perspective, the Group measures the sufficiency of the primary liquidity buffer, based on stress testing, and of the liquidity buffer.

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, the 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 Group 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

In its funding plan, OP Financial Group must take account of its member banks' estimate of the funding need for years to come. The funding plan defines guidelines for wholesale funding for the next few years. The Group updates the plan in the course of the year, if needed. 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 the most important wholesale funding sources in view of the depth of the market and sufficient diversification, as well as defines 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 of 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% of the amalgamation's balance sheet total. The Group monitors significant currencies every month when it produces its liquidity report to the supervisor. Although the Group hedges wholesale funding items, non-euro reserves may be needed for the most commonly used currencies in case of customers' use of currency credit limits.

Management of intraday liquidity

OP Financial Group's Treasury monitors intraday funding sources and anticipates and monitors the execution of intraday payments. The Group holds intraday funding sources to the amount that it can 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, OP Financial Group's liquidity buffer is divided into the primary and secondary liquidity buffer. The definition of the primary liquidity buffer is based on eligible collateral for central bank refinancing that is actively managed by Group Treasury from the basis of liquidity management. The primary liquidity buffer consists of a cheque account with the Bank of Finland and notes and bonds eligible as collateral for central bank refinancing held by Group Treasury. The secondary liquidity buffer consists of other notes and bonds held by Group Treasury that have not been primarily acquired for liquidity management, and of OP Corporate Bank's notes and bonds and corporate loans eligible as collateral for central bank refinancing. Notes and bonds included in the liquidity buffer must be unencumbered and available for sale or use as collateral at any time.

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).

Group Treasury draws up an investment plan at least once a year that includes liquidity buffer investments held by Group Treasury. 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. The investment plan establishes, to the appropriate extent, a framework for testing the liquidity of notes and bonds.

The Group 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

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

Home loans serving as collateral for covered bonds issued by OP Mortgage Bank constitute the largest source of asset encumbrance in the balance sheet. In addition, central bank operations and derivatives business are mainly other sources of asset encumbrance. From the perspective of preparing for liquidity needs, the Group restricts asset encumbrance through 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 during a liquidity crisis as well. The plan provides well-defined operational guidelines and operating models for identifying an increased liquidity risk while directing OP Financial Group to timely and appropriate actions to reduce liquidity risk by ensuring efficient organisation and activities in case a threat of crisis is imminent. 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

The Group reports liquidity risks to the central cooperative's management on a regular basis and, with a heightened threshold level of the liquidity status, will adopt weekly or daily progress reporting practices whenever necessary. OP Financial Group companies report liquidity risks to their boards of directors regularly, applying at least the level which has been set for control limits and 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 the implementation of the liquidity strategy and the Banking risk policy lines. The report involves primarily assessing funding changes at amalgamation level relative to the customer business funding need and changes in deposits and wholesale funding and related customer behaviour. Through stress tests, reporting also assesses the short-term and long-term sufficiency of internal liquidity buffers, the funding structure of banking and changes in regulatory requirements.

The functionality of the models utilised in liquidity risk management is ensured as specified in the principles of model risk management described as part of model risks.

Liquidity management and control within the amalgamation

Liquidity regulation as such is not applied to the amalgamation's companies but, with the ECB's permission, the central cooperative may give special permission to its member banks 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 which the liquidity requirements set for credit institutions mentioned in Part VI of the EU Capital Requirements Regulation are not applied to the member credit institutions. Liquidity based on the regulation is subject to supervision and reporting at the level of the cooperative banks' amalgamation. The prerequisite for the special permission is that the central cooperative gives the amalgamation's companies instructions on risk management needed to secure liquidity and 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 the liquidity strategy policy lines. It must ensure that the management and supervision of the amalgamation's liquidity is at all times in accordance with the extent and quality of business and fulfils regulatory requirements. 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 Corporate Bank's Board of Directors and OP Mortgage Bank's Board of Directors approve OP Financial Group's funding plan. 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 puts its entities' liquidity into 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 the measures related to the decision.

The primary funding sources of OP cooperative banks' lending include equity capital, deposit funding and funding for intermediary loans from OP Mortgage Bank. The use of intermediary loans reduces the need for OP Financial Group's senior funding.

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.

Allocation of liquidity risk costs within the amalgamation

The costs of external wholesale funding must be reflected in the pricing of customer business.

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 or by using another practice.

Market risks

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

Around a third of OP Financial Group's income is based on net interest income. Consequently, the strategy of the management of the interest rate risk in the banking book forms a key component in ensuring the Group's earnings stability. As part of market risk, the interest rate risk in the banking book has been defined as one of OP Financial Group's significant risks.

The banking book comprises on- and off-balance sheet items of OP Financial Group's banking that have not been determined to be included in items within the trading book. Interest rate risk in the banking book is a structural interest rate risk that is not taken but it emerges because of the nature of business.

The principles governing the management of the interest rate risk in the banking book establish the conditions for the fulfilment of the new regulatory requirements applying to IRRBB (Interest Rate Risk in the Banking Book). Accordingly:

- The senior management is responsible for arranging the management of interest rate risks in the banking book in OP Financial Group's banking in accordance with the principles of the IRRBB strategy.
- The interest rate risk management practices are justified, solid and documented.
- Each member bank in the amalgamation bears the interest rate risk in its banking book and is responsible for managing it.
- Optionalities included in assets and liabilities are taken into account in the models used to measure interest rate risk. The functionality of the models is ensured as specified in the principles of the model risk management described as part of model risks.
- Interest rate risk is measured against changes in the level of the yield curve and in stress tests against changes in the yield curve shape.
- The interest income risk metric is used to measure interest income risk, and the present value risk metric to measure interest risk of the on- and off-balance sheet items over their entire term to maturity.

- Economic capital is allocated for interest rate risk in the banking book in relation to interest rate risk.
- The Group carries out stress tests on the interest rate risk on a regular basis.

Each member bank manages 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. 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. The interest rate risk in the banking book is hedged using instruments offered by Group Treasury. Each member bank must demonstrate adequate knowledge of using derivatives for hedging purposes.

Using the risk assessment procedure applied to OP Financial Group’s new products, services, business models, processes and systems ensures that the characteristics of interest rate risk management have been understood and described appropriately.

Based on the loan terms and conditions, the minimum reference rate of zero is applied to a considerable number of loans. In technical terms, zero floors are assessed to remain with high probability because there has not been any discussion on abandoning it within the sector and in public. Implementing the removal of zero floors of the total interest rate requires a legislative amendment which defines how customers are compensated for the negative reference interest rate and how it is treated in taxation. Stress tests are used to assess the effects of the removal of zero floors.

Equity capital is considered an item that finances business. Interest on Profit Shares is taken into account in risk calculation, according to customer promise and the contract rate of subordinated loans. Share capital, cooperative capital and earnings all are free of interest.

The central cooperative ensures that the interest rate risk transfer reflects in the financial statements of the Group and its major companies in accordance with the nature of business through centralised hedge accounting.

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 the implementation of the strategy of the management of interest rate risk in the banking book and the Banking risk policy.

Managing other market risks in banking through the balance sheet

Other market risks associated with earnings 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. Most often, these securities have fixed interest rates, so their value varies depending on movements in market rates and credit spreads. The decision has been taken to recognise the securities in the portfolio at fair value through other comprehensive income, so changes in the value of these securities are recognised in the fair value reserve included in the capital base. Such changes, therefore, have an impact on capital adequacy.

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

- The earnings of the liquidity buffer portfolio are based on bearing credit spread risk. Derivatives are used to hedge interest rate risk.
- 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.

The Group 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.

In car dealer financing, OP 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 price is less than the estimate used in the pricing of the contract, the revenue will be lower than targeted or a loss is made. To manage risks, it is important to limit the financed assets so that their prices can be predicted and their realisation goes smoothly.

OP Financial Group uses derivatives for trading and hedging purposes. Derivatives may only be used for trading by the central cooperative consolidated's Group Treasury and Markets, which have specific trading limits. The other member banks use derivatives for hedging purposes only.

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. Risks taken include interest rate risk in various currencies, currency risk, currency risk, volatility risk of options, credit spread risk and counterparty 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 a part of OP Financial Group's risk analysis.

Markets' risks 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 in order to understand the risks of rare market movements that have a major impact. The market risks borne by Markets are included in the economic capital requirement. 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 strictly limited.

Counterparty risk arises from entry into derivative contracts, which is controlled by applying customer-specific limits. OP Corporate Bank's credit decision process decides on the limits. To take account of the risk, the Group 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.

Risks arising from derivative features linked to loans are transferred to Markets, which covers them on the market. 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 exposure is 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.

Risk management for the Asset Management business model

The most important risks associated with Asset Management are the operational and compliance risks related to the arrangement of operations. The sale of asset management products is subject to detailed regulation seeking to ensure that clients understand the risks and costs of their investment decisions. The sale of investment products carries a reputational risk. The effect of market developments on assets under management exposes to market risks involved in the revenue earned by business.

Risks are managed by improving the quality of processes and ensuring that the product offering corresponds to client demand and needs. A diverse product offering improves customer retention in a situation where clients want to switch or diverse their investment products. A capital requirement is reserved to cover the risks as part of the other assessable risks.

As part of OP Financial Group’s risk analysis, the Compliance organisation reports on compliance risks and Risk Management reports on other risks associated with the Asset Management earnings logics to the Risk Committee of the Board of Directors and the senior management.

1.1.3.3 Risks of insurance operations

Life insurance risks

Biometric risks associated with life insurance products occur when death or disability causes higher claim pay-outs than expected or longer periods of pension disbursements than expected. Mortality and life expectancy affect a life insurance company’s risk exposure in pure life insurance policies and pension policies. Longevity risk is particularly significant for group pension insurance policies under a defined benefit plan and in other portfolios of lifelong pensions, because these contracts do not contain any significant mortality risk to counterbalance the risk exposure.

The policyholders' customer behaviour may give rise to lapse risk and surrender risk. Policyholders have the right to stop paying their premiums, terminate the contract early, or change the contract if there is an option provided for this; this will result in higher risk for the company. One example of such options is the customer's right to change the profit type of their assets from unit-linked to one with technical interest, which increases interest expenses. Another example is the postponement of pension, which increases the longevity risk and lapse risk. Endowment policies and capital redemption contracts with the right of surrender as well as term life policies, which the policyholder can terminate anytime, are particularly susceptible to surrender risk related to customer behaviour. Surrender of pension insurance is possible only in exceptional circumstances.

Expense risk refers to a situation in which incurred insurance contract management, maintenance and claims management expenses differ from those estimated in rating. The early lapse of insurance policies may also jeopardise the accuracy of cost assumptions used for rating and thereby contribute to the materialisation of the cost risk.

The Group assesses the need for capital required by life insurance underwriting risks by applying the Solvency Capital Requirement (SCR) and the economic capital requirement. Stress tests are used to supplement the assessment.

The Group manages life insurance underwriting risks by means of strict risk selection and pricing and by ensuring that insurance liabilities are accurate and sufficient. The customer and risk selection policies are described in the customer and risk selection guidelines, which are updated frequently.

Risks related to mortality and longevity are priced in a secure way on the basis of the conditions and situation prevailing when the policy is issued. The company may change the prices of these long-term contracts to a very limited extent. This is why the risk for any later changes in the premium rating bases will be borne by the insurance company so that the premiums of new policies are increased and the company records an insurance liability supplement to sold policies. Offering insurance policies that have opposite risk exposures reduces the net risk of the entire insurance portfolio.

Early lapse risks related to customer behaviour and the risk of customers exercising their option to change the profit type of their assets to a guaranteed-interest model are managed through a competitive range of products, suitable product structures, and incentives and sanctions in the contract terms and conditions.

The Group manages expense risks through adequate cost control and prudent pricing. The Group monitors regularly the realisation of assumptions made with regard to rating and, if necessary, increases the premiums of new policies and records a supplement to insurance liabilities with regard to the sold policies.

The Group also uses reinsurance to mitigate the risk. The reinsurance level is determined in the reinsurance principles approved by OP Life Assurance Company's board of directors. The reinsurance principles set limits for the maximum retention and catastrophe protection capacity. The reinsurance principles also restrict the authority to take reinsurance counterparty risk because the document sets limits based on the counterparty's borrower grade and the reinsurance contract type (contract business, facultative).

The actuary in charge annually makes the company's board of directors a statement of continuous compliance with the insurance liability requirements, the requirements set by the nature of the underwriting business and the opinions given by the actuarial analysis function on the insurance policy and reinsurance arrangements.

The Group limits the economic capital requirement tied up in underwriting risks relative to OP Financial Group's internal capital. Underwriting risks are, for their part, also guided by a target set in the capital plan for own funds and the requirement for solvency capital.

Non-life insurance risks

The insurance business is based on taking and managing risks. The largest insurance risks pertain to risk selection and pricing, the acquisition of reinsurance cover and the adequacy of insurance liabilities. In non-life insurance, the risk inherent in insurance liabilities lies mainly in insurance lines characterised by a long claims settlement period. Biometric risks also arise from granting non-life policies where the non-life insurer pays annuities stemming from non-life obligations as a result of an insurance event.

The Group assesses non-life insurance underwriting risks by applying the Solvency Capital Requirement (SCR) and the economic capital requirement. Stress tests are used to supplement the assessment.

The Group manages non-life insurance underwriting risks by means of strict risk selection and pricing and by ensuring that insurance liabilities are accurate and sufficient.

Premium rating is based on risk correlation, i.e. the price of insurance corresponds to at least the claims incurred from the insurance. The insurance premium also includes components for operating expenses and capital cost.

The bases for risk selection (customer selection and related criteria, as well as decision-making limits by insurance line) are specified in the risk policy, which is updated annually, and the guidelines, which supplement the risk policy. The documents specify decision-making powers on a multistage basis according to the size of underwriting risk, as well as risks by insurance line underwritten only to a limited extent and at the discretion of the Insurance Customers Management Team.

The insurance periods within non-life insurance are mainly one year or less, and changes in the underwriting risk level can usually be passed onto insurance premiums quickly. In respect of long-term insurance lines where risk inter-independence does not perhaps materialise, risk is managed by setting underwriting limits.

The Group also uses reinsurance to mitigate the risk. The reinsurance level is determined in the reinsurance principles approved by the Boards of Directors. Reinsurance is implemented mainly through risk-specific (insured object) and loss-event-specific reinsurance cover. The Group eliminates potential gaps in the reinsurance cover by using detailed underwriting guidelines. The risk arising from reinsurance availability is subject to strict supervision. Irrespective of the insurance line, large individual risks, such as claim accumulations arising from natural catastrophes or human activity, are reinsured.

The reinsurance principles set limits for the maximum retention and catastrophe protection capacity. The reinsurance principles also restrict authorisations to take reinsurance counterparty risk because the document sets limits based on the counterparty's borrower grade and the reinsurance contract type (contract business, facultative, fronting). Local risk concentrations are included in the Estimated Maximum Loss (EML) for property and business interruption risks and through EML breakthrough cover included in reinsurance cover.

The amount of insurance liabilities is estimated securely in such a way that it would be sufficient to fulfil the obligations arising from insurance contracts. This is performed by first estimating the expected value for insurance liabilities, and then determining a safety loading based on the degree of uncertainty. The actuary in charge annually makes the company's board of directors a statement of continuous compliance with the insurance liability requirements, the requirements set by the nature of the underwriting business and the opinions given by the actuarial analysis function on the insurance policy and reinsurance arrangements.

The economic capital requirement tied up in underwriting risks is limited in relation to the Group's internal capital. Underwriting risks are, for their part, also restricted by a target set in the capital plan for own funds and the requirement for solvency capital.

Market and counterparty risk management in life and non-life insurance

Management of structural interest rate risk and other investment risks

The management of market risks in life and non-life insurance covers all of the market risks on the balance sheet, consisting of insurance liabilities, investments and derivatives. Investment operations aim to ensure client income, obtain assets covering insurance liabilities, and invest profitably to generate returns.

An analysis of structural interest rate risk – interest rate risk on the balance sheet – begins by assessing how well the cash flows from fixed income investments and insurance liability match each other (Asset and Liability Management, ALM). Interest rate movements affect the value of insurance liabilities as well as investments and hedging derivatives.

In the Solvency II framework and the economic capital requirement model, the insurance liability discounting curve includes a volatility adjustment, which also exposes to credit spread risk on the balance sheet in terms of structural interest rate risk. Decreases in interest rates and narrowing of credit spreads cause the present value of insurance liabilities to increase. In respect of the level of the credit spread related to interest rate risk on the balance sheet, the consistency of the risk profiles of assets and liabilities is essential. Insurance liabilities can be hedged against interest rate risks using direct fixed income investments and interest rate derivatives such that the net interest rate risk consists of the interest rate risk associated with insurance liabilities and the risk profiles of the fixed-income investments and hedging derivatives used to cover the insurance liabilities.

Investment operations take into consideration factors such as the structural interest rate risk arising from the (assumed) cash flow structure of insurance liabilities and the other requirements that insurance liabilities impose on investment assets and their liquidity. The application of the principle of equity also affects investment targets and the amount of risk taken.

The magnitude of market risks is measured and limited by the Value at Risk metric and various sensitivity indicators, as well as the amount of the economic capital requirement and the solvency capital requirement (SCR). Stress tests are used to supplement the assessment. Risk concentrations of insurance companies within asset classes are assessed by examining the asset class allocation distribution.

Market risks associated with interest rate risk on the balance sheet are managed using limits on issuers, fund investments, and interest rate risks as specified in the investment plans approved by the company's board of directors in line with the risk policies for each earnings logic. Asset class restrictions are set for risky fixed income investments, equities and real estate, as well as for illiquid investments. Separate investment plans will be prepared for the life insurance portfolio (ETA 1) and the pension insurance portfolio (ETA 2) transferred from Suomi Mutual Life Assurance Company to OP Life Assurance Company. The boards of directors of the insurance companies will also approve principles for the use of derivatives for inclusion in the investment plans. In addition to the Group's risk policy lines and limits, the investment portfolios are also restricted by the responsible investment principles confirmed by the companies' boards of directors.

The insurance companies' insurance liabilities do not, in principle, cause currency risks because their insurance liabilities are normally denominated in euros. For OP Life Assurance Company, all insurance liabilities are denominated in euros. For this reason, a substantial proportion of the investments covering insurance liabilities are allocated to euro-denominated securities.

Counterparty risk management

The counterparty risk of reinsurers is managed using limits for specific borrower grades and counterparties in accordance with the reinsurance principles confirmed by the Board of Directors and in the risk policy.

Counterparty risk in the investment portfolio is restricted by allocation limits for specified borrower grades.

Capital is reserved for counterparty risks in the economic capital requirement model and the SCR measurement.

1.1.3.4 Group-level risks

Operational risks

Management of operational risks
Operational risk means a risk of an adverse consequence caused by all business operations that may result from insufficient or incorrect practices, processes, systems or external factors. OP Financial Group's operational risks also include ICT and security risks. However, data capital, compliance and model risks, while being risks related to operations, are classified as separate risk types due their special features. This document describes them below. Operational risk may be shown in financial losses or other detrimental consequences, such as in terms of deterioration or loss of reputation or trust.

Operational risk management in business

Operational risk management aims to ensure the efficiency and quality of key business processes and functions, as well as their continuity in abnormal circumstances. Every OP Financial Group company's management and process owners 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 companies' management and process owners ensure that the risks do not cause unforeseen financial losses or other detrimental consequences. Due to the qualitative nature of operational risks, it is not possible to ever fully protect against them, and their adverse effects cannot be prevented in all cases. Operational risk management does not always aim to eliminate the risk altogether, but it does aim to bring risks down to an acceptable level.

OP Financial Group's management of security risks and security work seeks to foster a culture of security throughout the organisation, develop and maintain the desired security level by emphasising preventive measures and 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 at ensuring the security, availability and quick recovery of data communications and systems that support them in an incident. It is the responsibility of every system owner to see to it that the abovementioned goals are also achieved by external ICT service providers.

The key areas of business operations related to the arrangement of operational risks 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 must have the required competences and qualifications, and the responsibilities and targets that are set and described clearly and communicated appropriately.
- 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 work duties and that are limited to the data and ICT systems that the employee needs in performing their duties. The management of OP Financial Group's companies is responsible for access rights management and control. This also includes defining how to avoid any inadequate segregation of duties.
- Ensuring that information and cybersecurity are adequate and up to date. Each business unit 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 and process owners are 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 resources according their criticality, in view of confidentiality, integrity and availability. Responsibility for the categorisation and the required measures to protect the data rests with the data resource owner. Data resources include ICT systems, personnel, service providers and third parties.

Operational risk management is based on continuous risk identification and analyses. Risk identification also takes into account threats and external requirements directed at security and risk-based planning of the necessary security measures. The management and process owners within companies are responsible for identifying and evaluating the risks associated with business processes, services and products and ICT systems they involve and for implementing the required controls to achieve an acceptable risk level and ensure process functionality and efficiency. Efforts should be made to automate controls or support them by automation whenever possible.

Before any new or substantially modified products, services, business models, processes and systems are launched at OP Financial Group, they must undergo a risk assessment in accordance with the procedures approved by the central cooperative Risk Management. Outsourcing and new partnerships are also subject to the same assessment. Each business unit is responsible for conducting the risk assessment procedure. In their risk statement, functions in the 2nd line of defence can escalate decision-making related to the introduction of the product in high-risk projects that are important in principle and involve new risks. OP Financial Group offers only products, services and business models to customers if they have been approved at Group level.

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.

<u>Operational risk management frameworks</u>

OP Financial Group's operational risk management framework is divided into backward-looking (e.g. operational risk events), current situation based (risk and control self-assessment) and proactive procedures (business continuity management, risk assessment of 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. The central cooperative's Risk Management maintains a shared list for identifying operational risks and specifying control measures used in OP Financial Group, and it reviews the list regularly to ensure that it is comprehensive and up to date. OP Financial Group also manages, supervises and reports ICT risks according to the operational risk framework.

The central cooperative's Risk Management reports to the management and business segments on the management and level of OP Financial Group's operational risks in the monthly review, risk analysis and QBR reports. Company management reports regularly operational risk management and its level to the company's board of directors.

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 management model.

OP Financial Group uses a centralised cybersecurity framework to manage, supervise and report on cybersecurity. The Cyber Security organisation provides more detailed control descriptions and practical application guides on implementing and ensuring information security within the Group and managing any cases of deviation detected in information security and of misuse or fraud. 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.

Risk Management conducts a stress test on OP Financial Group's operational risks every year. The operational risk stress test includes a sensitivity analysis and scenarios. The sensitivity analysis makes use of the risk events that have materialised in OP Financial Group, as well as the risks identified in the risk assessment process and the estimated impacts. Scenarios (alternative possible outcomes) are used to identify risks and assess their impacts from a proactive perspective.

Data capital risk

Data capital risk management

Data capital risk is a risk related to operations and data capital risk management for its part specifies operational risk management.

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.

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 information are inseparable and multifaceted production factor in all financial services business, which is called 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, capital requirement that has been increased due to poor data quality may tie useful capital for other uses. Challenges in customer service or other processes at operational level do not lead to the best possible customer and employee satisfaction.

Benefits of data capital risk management

Management of risks associated with data capital brings a clear business benefit when OP Financial Group'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 Financial Group's regulatory compliance.

Shared practices of data capital risk management at OP Financial Group

For the management of data capital risks, OP Financial Group has in place a Group-level OP data management model and an OP data quality framework. These provide a framework according to which data must be management and processed. In addition to the data management model and the data quality framework, qualitative requirements used by the Group have been defined to implement and support good data management practices in service and system development.

All OP Financial Group actors must apply Group-level data management principles and participate in their development through their own activities.

In data capital management, the management is responsible for

- promoting the identification, assessment and management of data quality risks. This includes reviewing and accepting the frameworks. Compliance with the frameworks minimises data capital risk, or ensures good 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 IT infrastructure.
- seeing to it that financial and human resources are sufficient in the development of systems containing 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

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 receiving data 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.

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. Operational risk is also involved in the use of models that may be caused, for example, by insufficient or unclear responsibilities of model management in the different stages of the model lifecycle or by insufficient documentation. Operational risk management procedures are therefore applied in the management of model risks.

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

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

All these share sources of risk, such as shortcomings in data, weak knowledge of interdependencies between mathematical methods and models, and inadequate knowledge of the business, risk measurement and regulation.

The management of models and model risks seeks to ensure that models describe the event concerned sufficiently accurately and their use is appropriately organised. It is not possible to protect against all risks associated with using models. Risk management measures seek to ensure that the risks associated with using models are identified and the related risk level is acceptable. The Group manages model risks through well-defined roles and responsibilities as well as by ensuring adequate knowledge of quantitative methods and resource allocation.

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.

To implement the models and model risk management, the models are classified based on their business criticality considering for what purpose the model is used and how established the methodology of the model is. The most critical uses of the models are risk pricing, the valuation of agreements for the income statement and risk measurement to calculate regulatory capital requirement or internal economic capital requirement.

That the models are well-established where they are used reduces their criticality. Risks of 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 involve most risk vis-á-vis the modelling of the event and the model's susceptibility of 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. Model development aims to identify shortcomings in the model and the situations where the model performs poorly. Insofar as the models cannot be implemented as required by the nature of the event to be described, it is necessary to depict the shortcomings and the solutions that seek to correct in modelling. The development of the models are segregated from their validation. Regulation and risk management perspectives must be taken into account in the further development of the model.

The model is used only for the purpose for which it is developed and approved. 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.

OP Financial Group adopts only models that it has ensured in a sufficient manner in terms of functionality and implementation. The implementation decision is documented in the deciding body's protocol and communicated to Risk Management.

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.

Standardised and regular monitoring is used in the ongoing assessment of the use of the models. The extent, detail and frequency of monitoring must be proportionate to the significance of the model. 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 models 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. Risk Management is responsible for the development and maintenance of a consistent documentation structure.

The management reporting includes information about the functionality and significance of models, the needs for improvements in various areas, and the progress made in rectifying previously identified shortcomings and changes to models. Furthermore, the management must know if the models cannot help sufficiently well quantify business and what the reason is for shortcomings in quantification.

Compliance risks

Compliance risk is part of risk associated with operational risk, and compliance risk management is part of internal control. Compliance activities are aimed at ensuring that all OP Financial Group entities comply with laws, official instructions and regulations, self-regulation of markets, and internal guidelines, policies and instructions of OP Financial Group and the entities. Compliance also ensures that customer relationship management complies with appropriate and ethically sound principles and practices.

Compliance risk management tools include monitoring legislative developments, providing the organisation with guidelines, training and consultation related to observing practices based on regulation, as well as supervising regulatory compliance with procedures applied within the organisation. The objective of compliance support is to ensure that the business unit concerned has advance awareness of the regulatory requirements and OP Financial Group's interpretations that it must take into consideration when developing products and services. The business unit concerned is responsible for implementing internal control duties related to processes. Compliance monitoring ensures that the controls acting as the first line of defence are functional and that operations comply with regulations and guidelines.

Materialisation of compliance risk may result not only in financial loss but also other adverse consequences, such as sanctions. Such sanctions may include a corporate fine and separate administrative fines for violation of obligations, and public warnings and reprimands. 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 the senior management and all supervisors and managers. Everyone employed by OP Financial Group entities is responsible for playing a part in compliance with regulations.

The Compliance organisation regularly reports to the Board of Directors' Risk Committee, the companies' 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.

Other Group-level risks

Concentration risks

Variation in the values of income statement and balance sheet items caused by concentrations is not a such a risk type of its own. The reason lying behind concentration risk is either a 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 can happen especially 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 organising the identification of concentration risks and their management in OP Financial Group:

1. The identification and management of the accumulation of an individual risk is organised **by earnings logic.** The structure of the risk policy must promote the accumulation of the identification and limits are used to restrict their size. Examples of earnings logic 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. through the geography
    - maturity or repricing concentrations of balance sheet items over time or by counterparty group.

2. **Individual** risks **accumulated over** various **earnings logics**, for the management of which it is necessary to create efficient management procedures that take account of any conflicts of interest. Examples of such accumulated exposures include:
    - the accumulation of individual debtors or industry-specific receivables over OP Financial Group companies

- dependence of OP Financial Group companies on an individual service provider (e.g. securities clearing, information technology).

3. Earnings fluctuation concurrently caused by various risk factors and accumulated beyond earnings logics must be managed by means of management procedures that take account of any conflicts of interest. Examples of such accumulations are shown below:
   - OP Financial Group may have a concentration in a single counterparty beyond several product areas and companies. Banking may be a creditor in a company in which the Group's insurance companies hold shares. Meanwhile, Pohjola Insurance may be the company's main insurer and 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 a sovereign country (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 earnings logic and the risk policies that elaborate on these concentration risk management must be an integral part of risk management practices and operational limitation.

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 earnings logic. When setting limits, the Group takes account, for example, of the country's creditworthiness and susceptibility to natural disasters.

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. In addition, the business concerned plays an important role in identifying and preventing reputational risks. OP Financial Group adheres to international financial, social and environmental responsibility principles and international commitments.

The Group minimises reputational risks proactively by building a strong corporate image through active and transparent communications. The central cooperative's Corporate Communications and Corporate Responsibility unit actively monitors the media coverage and social media publicity of the Group and the financial sector, as well as other topical subjects. The public image of the Group and the financial sector is also analysed regularly as part of the contingency plan for liquidity management. In case that reputational risks materialise and crises occur, the Group must have created communication models and plans to deal with such cases as well as possible.

In addition to systematic communications, the Group attempts to minimise reputational risks by proactively implementing its Corporate Responsibility Programme. The Group has a Code of Business Ethics in place. The Group also adheres to international economic, social and environmental responsibility principles and international commitments.

1.2 Declaration on the adequacy of risk management arrangements, and risk statement

In accordance with Article 435, paragraph 1 of Regulation (EU) No 575/2013 (CRR) of the European Parliament and of the Council, OP Financial Group must disclose a declaration approved by the management body, i.e. the Board of Directors of OP Cooperative, on the adequacy of risk management arrangements, as well as a risk statement succinctly describing the institution's overall risk profile associated with the business strategy.

Declaration by OP Cooperative's Board of Directors on 9 February 2021

OP Cooperative's Board of Directors regularly assesses OP Financial Group's risks and risk exposure on the basis of risk reporting it has received. Based on the information it has received, the Board of Directors states that the risk management systems used by OP Financial Group are adequate in respect of OP Financial Group's risk profile and strategy.

Risk statement by OP Cooperative's Board of Directors on 9 February 2021

The Risk Appetite Statement (RAS) resolved by the central cooperative's Board of Directors and confirmed by the Supervisory Council describes OP Financial Group's risk-taking bases and key principles. Together with the strategy, the RAS provides the bases for a more detailed goal-setting of the businesses. OP Financial Group's mission is to provide banking, investment and insurance services that its owner-customers and operating region need. The starting point for the RAS is that OP Financial Group mainly takes risks associated with fulfilling its mission. In its risk taking, OP Financial Group emphasises moderation, responsibility and careful practices. The RAS is condensed into a limited number of qualitative principles as well as quantitative tolerances and limits. Through the tolerances and limits, the risk-taking capacity is allocated to OP Financial Group's businesses in line with the Group strategy and risk appetite.

OP Cooperative's Supervisory Council confirmed a number of limits for OP Financial Group for 2020, including the limits for capital adequacy, liquidity and risk appetite as well as the tolerances for the risk appetite related to earnings logics. The table below shows OP Financial Group's key limits and tolerances on 31 December 2020. OP Financial Group meets the level of risk-taking allowed by the Supervisory Council as measured by the limits and tolerances on 31 December 2020. The limits set a maximum limit for risk-taking, under which OP Financial Group remained in 2020.

OP Financial Group

Limits and tolerances in accordance with OP Financial Group's Risk Appetite Statement (RAS)	31 Dec 2020	31 Dec 2019	Limit
Risk-taking capacity			
Common Equity Tier 1 (CET1) ratio, %	18.9%	19.5%	13,0 %
Capital adequacy ratio under the Act on the Supervision of Financial and Insurance Conglomerates (Fi	150 %	138 %	105 %
Largest single customer risk / FiCo capital covering customer risks, %	4.04%	5.9%	10 %
Liquidity coverage ratio (LCR), %	196 %	141 %	120 %
Net stable funding ratio (NSFR), %	123 %	112.4%	100 %
Risk appetite: economic capital requirement / OP Financial Group internal capital, %			
OP Financial Group	45.54%	48.6%	100 %

	31 Dec 2020	31 Dec 2019	Tolerance
OP Financial Group			
Materialised operational risks (net), € million	6.58	14.06	50
Risk appetite and its allocation: economic capital requirement / OP Financial Group internal capital, %			
OP Financial Group	45.54%	48.6%	75 %
Banking in total, of which*	39.11%	42.2%	61 %
Retail Banking	17.66%	20,00 %	27 %
Corporate Banking	18.19%	18.3%	27 %
Group Treasury	3.03%	3.9%	4 %
Wealth/asset management	0.23%		1 %
Non-life insurance	10.87%	9.1%	12 %
Life insurance	6.27%	6.5%	9 %
Other	1.03%		2 %

*Since the beginning of 2020, capital has been allocated to earnings logics, instead of business segments, so the figures and ratios a year ago are not fully comparable.

The qualitative principles and quantitative limits set by the Supervisory Council have been supplemented and specified through other risk management instructions and more detailed, business line-specific risk policies. The purpose of these is to ensure that risk-taking at OP Financial Group is based on each business line's strategy, and that the company does not take excessive risks to endanger the Group's or the Group companies' capital adequacy, profitability, liquidity or business continuity.

2 OP Financial Group's capital adequacy

2.1 OP amalgamation's capital base and capital adequacy

The amalgamation of cooperative banks consists of the amalgamation's central cooperative (OP Cooperative), the central cooperative's member credit institutions and the companies belonging to their consolidation groups. Although OP Financial Group's insurance companies do not belong to the amalgamation of cooperative banks, investments made in them have a major impact on capital adequacy calculated in accordance with the capital adequacy regulations for credit institutions. More detailed information on companies within the consolidation group can be found in Notes 22 and 84 to the financial statements 2020. Changes in Group structure are presented in OP Financial Group's financial statements bulletin for 1 January–31 December 2020.

2.1.1 Capital base

EUR million	31 Dec 2020	31 Dec 2019
OP Financial Group's equity capital	13,112	12,570
The effect of insurance companies on the Group's shareholders' equity is excluded	-498	-237
Fair value reserve, cash flow hedge	-203	-141
Common Equity Tier 1 (CET1) before deductions	**12,410**	**12,192**
Intangible assets	-391	-630
Excess funding of pension liability and valuation adjustments	-93	-76
Items deducted from cooperative capital	-126	-142
Expected profit distribution	-95	-97
Shortfall of ECL minus expected losses	-413	-428
Common Equity Tier 1 (CET1)	**11,293**	**10,819**
Hybrid capital to which transitional provision is applied	40	60
Additional Tier 1 capital (AT1)	**40**	**60**
Tier 1 capital (T1)	**11,333**	**10,879**
Debenture loans	1,599	806
Tier 2 capital (T2)	**1,599**	**806**
Total capital base	**12,933**	**11,685**

The table presents how OP Amalgamation's CET1 capital derives from OP Financial Group's equity capital. The CET1 capital was increased by banking earnings and decreased by an increase in the expected loss (EL) caused by growth in risk parameters. The amount of Profit Shares in CET1 capital was EUR 2.8 billion (2.9). The amount of Tier 2 (T2) loans issued during the second quarter totalled EUR 1.3 billion. The amount of T2 loans redeemed during the third quarter totalled EUR 0.4 billion.

OP Financial Group has applied transitional provisions regarding old capital instruments to subordinated loans.

2.1.2 Overview of RWAs (EU OV1)

		RWAs		Minimum capital requirements
	EUR million	31 Dec 2020	30 Sep 2020	31 Dec 2020
1	**Credit risk (excluding CCR)**	**53,316**	**52,354**	**4,265**
2	Of which the standardised approach	5,276	5,253	422
3	Of which the foundation IRB (FIRB) approach	26,709	26,877	2,137
4	Of which the advanced IRB (AIRB) approach	14,295	13,176	1,144
5	Of which equity IRB under the simple risk-weighted approach	266	277	21
5a	Of which equity investments under PD/LGD method	6,770	6,770	542
6	**CCR**	**928**	**878**	**74**
7	Of which mark to market	790	708	63
12	Of which CVA	**138**	**171**	**11**
14	**Securitisation exposures in the banking book (after the cap)**	**110**	**100**	**9**
15	Of which IRB approach	110	100	9
19	**Market risk**	**1,096**	**1,686**	**88**
20	Of which the standardised approach	1,096	1,686	88
23	**Operational risk**	**3,964**	**3,964**	**317**
25	Of which standardised approach	3,964	3,964	317
27	**Amounts below the thresholds for deduction (subject to 250% risk weight)**	**306**	**345**	**24**
27a	**Other risks**		**787**	
29	**Total**	**59,720**	**60,114**	**4,778**
30	**Risk weight floors based on ECB's decision**		**359**	
31	**Total risk exposure amount including risk weight floors**	**59,720**	**60,473**	**4,778**

The risk exposure amount (REA) totalled EUR 59.7 billion (55.5), or 8% higher than on 31 December 2019. The risk weight floor for retail exposures set by the ECB was discontinued and was replaced by a risk-weighting factor that is directly applied to retail exposures. Because of the adoption of the new definition of default, the average retail and corporate exposure risk weights rose as a result of the risk-weighting factors set by the ECB and due to the risk-weighting factor applied to the retail exposures mentioned above. Growth in the loan portfolio also increased the total risk exposure amount.

On 25 April 2019, OP Financial Group received the ECB's decision on increases in the risk weights of mortgage-backed retail exposures as part of the targeted review of internal models (TRIM). On 19 February 2020, OP Financial Group received the ECB's decision concerning the change in the definition of default, in which the ECB set risk weighting factors for corporate and retail exposures. On 11 December 2020, OP Financial Group received the ECB's decision concerning increases in the risk weights of retail exposures. The decision overruled the ECB's earlier decision issued on 2 February 2017. These risk weight increases will be valid until further notice, until the qualitative requirements set out in the decision have been met.

2.1.3 Minimum capital requirement

OP Financial Group received IRBA permission in stages between 2008–2011. OP Financial Group has used the Foundation Internal Ratings Based Approach (FIRB) to measure capital requirement for corporate and credit institution exposures. This approach uses internal credit ratings to determine a customer's probability of default (PD), whereas loss given default (LGD) and credit conversion factor (CCF) are regulatory standard estimates. The Group has used the Internal Ratings Based Approach (IRBA) to measure capital requirement for retail exposures. This approach uses internal credit ratings to determine a customer's PD. Also LGD and CCF are estimated internally. The Standardised Approach is used for OP Card Company's exposures. OP Card Company aims to adopt IRBA for its exposures. OP Financial Group has begun discussions with the ECB on reassessing the extent of the IRBA application.

It is possible to use various methods to measure capital adequacy requirement for equity investments. In the PD/LGD method, investments' risk-weighted exposure is calculated using PD, based on internal credit rating, and a regulatory standard LGD. According to the Simple Risk Weight Approach, investments' risk-weighted exposure amount derives from multiplying each investment by the risk-weight determined by the type of investment.

OP Financial Group has used the Standardised Approach to measure capital requirement for operational risks and market risks.
In the calculation of capital adequacy and the leverage ratio, the Group has not applied the IFRS 9 transitional provision.

	31 Dec 2020		31 Dec 2019	
EUR million	Capital requirement*	Risk weighted assets	Capital requirement*	Risk weighted assets
Credit and counterparty credit risk	**4,362**	**54,522**	**3,937**	**49,216**
Standardised Approach	**365**	**4,562**	**328**	**4,101**
Exposures to central government and central banks	24	306	22	279
Exposures to public sector entities	3	41	2	25
Exposures to multilateral development banks	0	0		
Exposures to institutions	1	9	1	8
Exposures to corporates	244	3,046	212	2,645
Retail exposures	82	1,026	86	1,069
Exposures secured by mortgages on immovable property	2	21	0	1
Exposures in default	3	39	2	23
Exposures in the form of units or shares in collective investment undertakings (CIU)	0	0	0	0
Equity exposures	3	32	2	22
Other items	3	41	2	30
Internal Ratings-based Approach (IRB)	**3,997**	**49,960**	**3,609**	**45,115**
Exposures to institutions	82	1,029	82	1,023
Exposures to corporates	2,117	26,461	2,046	25,580
Retail exposures	1,144	14,295	826	10,320
Exposures secured by mortgages on immovable property	855	10,693	636	7,946
Other retail exposures	288	3,602	190	2,374
Equity investments	563	7,036	552	6,898
PD/LGD method	542	6,770	516	6,447
Simple Risk Weight Approach	21	266	36	451
Private equity investments	4	54	3	39
Other	17	212	33	412
Securitisation exposures	9	110	4	46
Other non-credit obligations	82	1,029	100	1,247
Clearing/settlement risk			**0**	**0**
Market risk (Standardised Approach)	**88**	**1,096**	**105**	**1,309**
Position risk	85	1,059	105	1,308
Commodity risk	3	37	0	1
Operational risk	**317**	**3,964**	**339**	**4,232**
Risk associated with exposure value adjustment	**11**	**138**	**15**	**191**
Other risks			**1**	**11**
Risk exposure amount	**4,778**	**59,720**	**4,397**	**54,959**
Risk weight floors based on ECB's decision			**40**	**505**
Total risk exposure amount including risk weight floors	**4,778**	**59,720**	**4,437**	**55,464**

* Capital requirement = Risk-weighted assets x 0.08

2.1.4 Capital Ratios

Ratios, %	31 Dec 2020	31 Dec 2019
CET1 capital ratio	18.9	19.5
Tier 1 ratio	19.0	19.6
Capital adequacy ratio	21.7	21.1

Ratios, fully loaded, %	31 Dec 2020	31 Dec 2019
CET1 capital ratio	18.9	19.5
Tier 1 ratio	19.0	19.5
Capital adequacy ratio	21.6	21.0

The lower ratio was affected by the increase in the loan portfolio and the rise in risk weights caused by the new definition of default.

Capital requirement, EUR million	31 Dec 2020	31 Dec 2019
Capital base	12,933	11,685
Capital requirement	8,213	8,068
Buffer for capital requirements	4,719	3,617

As a credit institution, OP Financial Group's capital adequacy is on a solid basis compared to the statutory requirements and those set by the authorities. The capital requirement of 13.8% comprises the minimum requirement of 8%, the capital conservation buffer of 2.5%, the O-SII buffer requirement of 1.0% (previously 2.0%), the minimum requirement (P2R) of 2.25% (2.0% a year ago) set by the ECB and the changing capital conservation buffers by country for foreign exposures.

In the first quarter, OP Financial Group adopted the European Banking Authority's (EBA) Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013. The Guidelines harmonise the definition of default applied by European banks on their customers. The new process in accordance with the Guidelines recognises defaulted customers earlier, for example, based on information in external credit registers. As regards retail customers, the new process extends the default to cover all exposures of an individual obligor. This change increased the number of observations of default and weakened the parameters of credit risk.

OP Financial Group will apply a so-called two-step approach. The first step involved the change of the definition of default during the first quarter of 2020. The second step to be taken later involves the calibration of credit risk parameters. The supervisory obligation related to the adoption of the new definition of default increased the average risk weights of OP Financial Group's loan portfolio at the first step.

In OP Financial Group's view, the most significant open changes in the regulatory and supervisory environment affecting capital adequacy for credit institutions include obligations, if any, imposed by the supervisor due to the ECB's Targeted Review of Internal Models (TRIM), and changes resulting from the update of the EU capital requirements regulation (CRR2). The ECB review of the internal models for corporate exposures is expected to reduce OP Financial Group's CET1 ratio by around 0.8 percentage points in the first half of 2021. The CRR2 changes are expected to reduce the CET1 ratio by around 0.5 percentage points during the second quarter of 2021.

OP Financial Group has begun discussions with the ECB on reassessing the extent of application of internal models (IRBA, Internal Ratings-Based Approach). Based on the current estimate, the change in the scope of IRBA would decrease OP Financial Group's CET1 ratio by around 0.8 percentage points during 2021. The final effect and its schedule will be specified after discussions with the supervisor and the approval process related to the scope of IRBA.

2.2 Capital base of the financial conglomerate

EUR million	31 Dec 2020	31 Dec 2019
OP Financial Group's equity capital	13,112	12,570
Hybrid instruments and debenture bonds	1,640	866
Other sector-specific items excluded from capital base	-331	-349
Goodwill and intangible assets	-1,147	-1,393
Insurance business valuation differences	623	720
Proposed profit distribution	-95	-97
Items under IFRS deducted from capital base*	-184	-150
Shortfall of ECL minus expected losses	-387	-402
Conglomerate's capital base, total	**13,231**	**11,766**
Regulatory capital requirement for credit institutions**	7,284	7,132
Regulatory capital requirement for insurance operations***	1,508	1,386
Conglomerate's total minimum capital requirement	**8,791**	**8,518**
Conglomerate's capital adequacy	**4,439**	**3,248**
Conglomerate's capital adequacy ratio (capital base/minimum of capital base) (%)	**150**	**138**

*Excess funding of pension liability, portion of cash flow hedge of fair value reserve.
** Total risk exposure amount x 13.8%, a year ago 14.5%.
*** Estimate of aggregate SCR under Solvency II

OP Financial Group's capital base, calculated according to the Act on the Supervision of Financial and Insurance Conglomerates (FiCo), exceeded the minimum amount specified in the Act by EUR 4.4 billion (3.2). Banking capital requirement fell to 13.8% (14.5), calculated on risk-weighted assets. The amount of Tier 2 (T2) loans issued during the second quarter totalled EUR 1.3 billion. The amount of T2 loans redeemed during the third quarter totalled EUR 0.4 billion. The ratio of the Group capital base to the minimum capital requirement was 150% (138). As a result of the buffer requirements for banking and the solvency requirements for insurance companies, the minimum FiCo solvency of 100% reflects the level within which the conglomerate can operate without regulatory obligations resulting from buffers below the required level.

A report describing the solvency and financial position of OP Financial Group's insurance conglomerate for 2020 will be published in May 2021.

3 Other OP amalgamation's capital adequacy disclosures

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3.1 Credit Risk

The figures presented in the credit risk section excludes items treated within the scope of counterparty credit risk.

3.1.1 Total and average net amount of exposures (EU CRB-B)

		a	b
		Net value of exposures at the end of the period	Average net exposures over the period
EUR million		31 Dec 2020	
	IRB approach		
2	Institutions	7,712	7,911
3	Corporates	50,858	51,107
5	Of which: SMEs	19,811	19,641
6	Retail	58,448	58,002
7	Secured by real estate property	48,377	48,048
8	SMEs	1,039	1,066
9	Non-SMES	47,338	46,982
11	Other retail	10,070	9,954
12	SMEs	911	918
13	Non-SMEs	9,160	9,036
14	Equity	2,397	2,416
14a	Other non-credit obligations	1,029	979
15	**Total IRB approach**	**120,444**	**120,416**
	Standardised approach		
16	Central government and central banks	24,815	21,765
17	Regional government or local authorities	4,150	4,392
18	Public sector entities	460	421
19	Multilateral development banks	723	686
20	International organisations	768	656
21	Institutions	30	55
22	Corporates	3,472	3,309
23	Of which: SMEs	2,050	2,182
24	Retail	4,102	4,028
25	Of which: SMEs	14	8
26	Secured by mortgages on immovable property	43	33
27	Of which: SMEs	42	33
28	Exposures in default	39	40
32	Collective investments undertakings	0	0
33	Equity exposures	32	28
34	Other exposures	44	40
35	**Total standardised approach**	**38,677**	**35,453**
36	**Total**	**159,121**	**155,868**

The loan portfolio continued to grow in corporate and retail exposures. 88% of sovereign exposures are deposits with the central bank.

3.1.2 Geographical breakdown of exposures (EU CRB-C)

	a	b	c	d	e	f	g	h	i
Net value, 31 Dec 2020, EUR million	Finland	Other Nordic countries	Baltic States	Rest of EU	Rest of Europe	USA	Asia	Other	Total
IRB approach									
2 Institutions	728	1,779		3,760	23	12	192	1,218	7,712
3 Corporates	47,643	1,541	578	754	98	33	145	65	50,858
4 Retail	58,116	98	19	116	28	29	29	13	58,448
5 Equity	2,316	8		18	2	52			2,397
5a Other non-credit obligations	1,029		0						1,029
6 Total IRB approach	**109,833**	**3,426**	**598**	**4,648**	**150**	**126**	**366**	**1,297**	**120,444**
Standardised approach									
7 Central government and central banks	23,087	6	261	1,461					24,815
8 Regional government or local authorities	2,544	93	86	1,395				32	4,150
9 Public sector entities	202			257					460
10 Multilateral development banks	55			513		154			723
11 International organisations				768					768
12 Institutions	24	0		6					30
13 Corporates	715	0	2,757		0				3,472
14 Retail	4,079	5	2	9	1	2	2	1	4,102
15 Secured by mortgages on immovable property	43								43
16 Exposures in default	32	0	7	0	0	0	0	0	39
20 Collective investments undertakings	0								0
21 Equity exposures	32		0						32
22 Other exposures	44								44
23 Total standardised approach	**30,857**	**105**	**3,112**	**4,410**	**1**	**156**	**2**	**33**	**38,677**
24 Total	**140,690**	**3,531**	**3,710**	**9,058**	**152**	**282**	**368**	**1,330**	**159,121**

	a	b	c	d	e	f	g	h	i
Net value, 31 Dec 2019, EUR million	Finland	Other Nordic countries	Baltic States	Rest of EU	Rest of Europe	USA	Asia	Other	Total
IRB approach									
2 Institutions	628	1,778		3,901	33	39	242	1,201	7,822
3 Corporates	46,819	1,344	530	858	101	25	45	87	49,808
4 Retail	56,733	95	14	108	28	23	35	17	57,052
5 Equity	2,377	8		4	3	49			2,441
5a Other non-credit obligations	1,246	0							1,247
6 Total IRB approach	**107,803**	**3,225**	**543**	**4,870**	**164**	**137**	**322**	**1,305**	**118,369**
Standardised approach									
7 Central government and central banks	12,873	6	324	1,087					14,290
8 Regional government or local authorities	3,347	92	115	1,231				32	4,816
9 Public sector entities	117			148					266
10 Multilateral development banks	59			228					287
11 International organisations				525					525
12 Institutions	28	0		6					34
13 Corporates	950	0	2,103		0				3,053
14 Retail	3,863	5	1	9	1	2	2	1	3,886
15 Secured by mortgages on immovable property	1								1
16 Exposures in default	10		9						20
21 Equity exposures	22								22
22 Other exposures	30								30
23 Total standardised approach	**21,302**	**103**	**2,552**	**3,235**	**1**	**2**	**2**	**33**	**27,231**
24 Total	**129,105**	**3,328**	**3,095**	**8,105**	**165**	**139**	**324**	**1,338**	**145,600**

A total of 89% of total exposures are in Finland. A total of 91% of exposures within the scope of IRBA are in Finland. No substantial changes have taken place in the geographical breakdown of exposures.

3.1.3 Concentration of exposures by industry or counterparty types (EU CRB-D)

	Net value, 31 Dec 2020, EUR million	IRB Corporates	Of which SME exposures	IRB Retail	Of which SME exposures	IRB Institutions	SA Central government and central banks	Other	Total
a	Renting and operation of residential real estate	9,650	7,561	449	436			21	10,120
b	Operating of other real estate	4,769	2,310	88	73		59	691	5,607
c	Trade	5,126	1,035	426	230			500	6,052
d	Energy	4,466	1,005	4	2			334	4,804
e	Services	5,320	1,412	1,030	338	0	554	251	7,156
f	Construction	3,595	1,753	636	288		1	102	4,335
g	Other manufacturing	1,904	347	58	30			201	2,163
h	Manufacture of machinery and equipment (incl. maintenance)	2,477	128	57	23			6	2,541
i	Transportation and storage	1,394	445	408	250			302	2,105
j	Financial and insurance activities	3,756	1,146	28	13	1,370	1,673	3,400	10,227
k	Central bank deposits						21,609		21,609
l	Covered bonds					6,342			6,342
m	Agriculture, forestry and fishing	1,614	1,310	3,008	148		4	88	4,714
n	Forest industry	1,563	72	22	10			44	1,629
o	Metal industry	1,071	365	54	30			22	1,146
p	Food industry	840	78	19	11			84	942
q	Buying and selling of own real estate	524	62	23	3			22	568
r	Information and communication	1,430	364	63	22			42	1,535
s	Other sectors	337	203	17	14	0		902	1,256
t	Water supply and waste management	310	108	17	13		22	62	410
u	Mining and quarrying	223	38	22	14			4	249
v	Manufacture of chemicals and chemical products	280	21	2	1			7	290
x	Activities of households as employers; undifferentiated goods and services producing activities of households for own use	0	0	300	0			168	469
y	Public administration and defence (incl. compulsory social security)	208	47	1	1		5,502	84	5,794
z	Activities of extraterritorial organisations and bodies	0	0	0	0		1,491		1,491
å	Households			51,716				3,850	55,567
ä	**Total**	**50,858**	**19,811**	**58,448**	**1,950**	**7,712**	**30,915**	**11,187**	**159,121**

	Net value, 31 Dec 2019, EUR million	IRB Corporates	Of which SME exposures	IRB Retail	Of which SME exposures	IRB Institutions	SA Central government and central banks	Other	Total
a	Renting and operation of residential real estate	8,973	7,266	445	431			3	9,420
b	Operating of other real estate	4,983	2,496	118	73		72	724	5,898
c	Trade	5,028	1,025	496	255			487	6,011
d	Energy	4,015	431	4	2		3	304	4,326
e	Services	4,983	1,504	1,110	343		599	234	6,926
f	Construction	4,325	1,917	687	290		1	124	5,137
g	Other manufacturing	1,963	360	64	32			750	2,778
h	Manufacture of machinery and equipment (incl. maintenance)	2,464	159	64	25			17	2,545
i	Transportation and storage	1,446	417	448	260			313	2,207
j	Financial and insurance activities	2,953	960	34	15	1,335	2,519	2,568	9,410
k	Central bank deposits						11,909		11,909
l	Covered bonds					6,486			6,486
m	Agriculture, forestry and fishing	1,963	1,140	3,299	166		5	108	5,374
n	Forest industry	1,389	76	24	12			55	1,468
o	Metal industry	1,208	306	59	31			11	1,278
p	Food industry	748	80	21	12			82	851
q	Buying and selling of own real estate	631	111	14	3			18	662
r	Information and communication	1,319	291	69	23			39	1,427
s	Other sectors	288	227	27	18	0		1,220	1,535
t	Water supply and waste management	345	101	20	14		24	64	452
u	Mining and quarrying	219	49	27	16			5	251
v	Manufacture of chemicals and chemical products	322	26	2	1			2	326
x	Activities of households as employers; undifferentiated goods and services producing activities of households for own use	1	0	411	0			165	576
y	Public administration and defence (incl. compulsory social security)	242	109	1	1		5,054	80	5,377
z	Activities of extraterritorial organisations and bodies	0	0	0	0				0
å	Households			49,607				3,362	52,968
ä	**Total**	**49,808**	**19,051**	**57,052**	**2,024**	**7,822**	**20,184**	**10,734**	**145,600**

The table presents the breakdown by industry concerning material exposure classes while immaterial exposure classes are presented under other sectors. Central government exposures include exposures from central banks, local governments, public-sector entities, international development banks and international organisations.
Central bank deposits included in the liquidity buffer increased over the previous year.

3.1.4 Maturity of exposures (EU CRB-E)

	a	b	c	d	e	f
	Net exposure value					
Net value, 31 Dec 2020, EUR million	On demand	≤ 1 year	> 1 year ≤ 5 years	> 5 years	No stated maturity	Total
IRB approach						
2 Institutions	220	917	3,966	2,598	11	7,712
3 Corporates		6,695	19,711	18,390	6,062	50,858
4 Retail		809	6,058	47,913	3,668	58,448
5 Equity				380	2,016	2,397
5a Other non-credit obligations		137	208	22	662	1,029
6 Total IRB approach	**220**	**8,558**	**29,942**	**69,304**	**12,419**	**120,444**
Standardised approach						
7 Central government and central banks	21,827	108	884	1,119	878	24,815
8 Regional government or local authorities		28	1,296	2,166	659	4,150
9 Public sector entities		2	150	306	1	460
10 Multilateral development banks		0	284	439		723
11 International organisations			509	259		768
12 Institutions		0	0	0	30	30
13 Corporates		103	1,419	679	1,271	3,472
14 Retail		0	1		4,101	4,102
15 Secured by mortgages on immovable property		0	42	1	0	43
16 Exposures in default		1	0	18	20	39
20 Collective investments undertakings					0	0
21 Equity exposures				26	6	32
22 Other exposures		13	25	7	0	44
23 Total standardised approach	**21,827**	**255**	**4,610**	**5,018**	**6,968**	**38,677**
24 Total	**22,047**	**8,813**	**34,552**	**74,322**	**19,387**	**159,121**

	a	b	c	d	e	f
	Net exposure value					
Net value, 31 Dec 2019, EUR million	On demand	≤ 1 year	> 1 year ≤ 5 years	> 5 years	No stated maturity	Total
IRB approach						
2 Institutions	173	1,161	3,555	2,920	13	7,822
3 Corporates		7,026	17,743	18,657	6,382	49,808
4 Retail		894	6,026	46,969	3,163	57,052
5 Equity		1	53	1,301	1,086	2,441
5a Other non-credit obligations		119	223	34	870	1,247
6 Total IRB approach	**173**	**9,202**	**27,600**	**69,881**	**11,514**	**118,369**
Standardised approach						
7 Central government and central banks	11,981	64	626	1,322	298	14,290
8 Regional government or local authorities		1,100	651	2,334	732	4,816
9 Public sector entities		102	0	162	1	266
10 Multilateral development banks		70	156	62		287
11 International organisations		30	107	388		525
12 Institutions				0	34	34
13 Corporates		235	1,115	621	1,083	3,053
14 Retail			186	367	3,333	3,886
15 Secured by mortgages on immovable property				1		1
16 Exposures in default		7	1	6	7	20
20 Collective investments undertakings					0	0
21 Equity exposures				12	10	22
22 Other exposures		9	18	3	0	30
23 Total standardised approach	**11,981**	**1,616**	**2,860**	**5,277**	**5,497**	**27,231**
24 Total	**12,154**	**10,818**	**30,460**	**75,158**	**17,011**	**145,600**

Due to growth in the loan portfolio and loan modifications, the maturity distribution showed a slight shift to longer maturities. The maturity is presented according to the contractual maturity.

3.1.5 Credit quality of exposures by exposure class and instrument (EU CR1-A)

		a	b	c	e	f	g
		Gross carrying values of					
Net value, 31 Dec 2020, EUR million		Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustments	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c)
	IRB approach						
2	Institutions	20	7,692	0		0	7,712
3	Corporates	1,077	50,224	443	53	15	50,858
5	Of which: SMEs	384	19,565	138	19	18	19,811
6	Retail	1,526	57,122	201	47	87	58,448
7	Secured by real estate property	1,228	47,244	95	11	43	48,377
8	SMEs	33	1,009	3	3	0	1,039
9	Non-SMES	1,195	46,235	92	8	43	47,338
11	Other retail	298	9,878	106	36	44	10,070
12	SMEs	40	884	13	24	2	911
13	Non-SMEs	258	8,995	93	12	42	9,160
14	Equity		2,397				2,397
14a	Other non-credit obligations	3	1,026				1,029
15	**Total IRB approach**	**2,626**	**118,462**	**644**	**100**	**102**	**120,444**
	Standardised approach						
16	Central government and central banks		24,815	0		0	24,815
17	Regional government or local authorities		4,150	0		0	4,150
18	Public sector entities		460	0		0	460
19	Multilateral development banks		723				723
20	International organisations		768				768
21	Institutions		30				30
22	Corporates		3,480	8		-1	3,472
23	Of which: SMEs		2,057	7		3	2,050
24	Retail		4,124	23	0	8	4,102
25	Of which: SMEs		14	0		0	14
26	Secured by mortgages on immovable property		43	0		0	43
27	Of which: SMEs		42	0		0	42
28	Exposures in default	57		18	16	8	39
32	Collective investments undertakings		0				0
33	Equity exposures		32				32
34	Other exposures		44				44
35	**Total standardised approach**	**57**	**38,669**	**49**	**17**	**15**	**38,677**
36	**Total**	**2,683**	**157,131**	**694**	**117**	**117**	**159,121**
37	Of which: Loans	2,456	96,201	596		59	98,061
38	Of which: Debt securities		12,564				12,564
39	Of which: Off-balance-sheet exposures	212	26,050			-2	26,262

	a	b	c	e	f	g
	Gross carrying values of					
Net value, 31 Dec 2019, EUR million	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustments	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c)
IRB approach						
2 Institutions	0	7,822	1		-1	7,822
3 Corporates	887	49,349	428	31	25	49,808
5 Of which: SMEs	314	18,854	120	17	-12	19,047
6 Retail	489	56,677	114	18	8	57,052
7 Secured by real estate property	371	47,573	52	2	1	47,891
8 SMEs	29	1,080	3	0	-1	1,106
9 Non-SMES	342	46,492	49	2	2	46,785
11 Other retail	118	9,104	62	16	7	9,161
12 SMEs	28	900	11	3	-2	917
13 Non-SMEs	90	8,205	51	13	8	8,244
14 Equity		2,441			-5	2,441
14a Other non-credit obligations	2	1,245			-1	1,247
15 Total IRB approach	**1,378**	**117,534**	**542**	**48**	**27**	**118,369**
Standardised approach						
16 Central government and central banks		14,291	0		0	14,290
17 Regional government or local authorities		4,817	1		0	4,816
18 Public sector entities		266	0		0	266
19 Multilateral development banks		287				287
20 International organisations		525				525
21 Institutions		34				34
22 Corporates		3,062	9		2	3,053
23 Of which: SMEs		2,106	4		-2	2,102
24 Retail		3,901	15	3	0	3,886
25 Of which: SMEs		16	0	0	0	16
26 Secured by mortgages on immovable property		1			0	1
27 Of which: SMEs		1	0		0	
28 Exposures in default	30		10	17	4	20
32 Collective investments undertakings		0				0
33 Equity exposures		22			0	22
34 Other exposures		30				30
35 Total standardised approach	**30**	**27,236**	**34**	**20**	**5**	**27,231**
36 Total	**1,407**	**144,770**	**577**	**68**	**32**	**145,600**
37 Of which: Loans	1,256	95,666	537	68	45	96,385
38 Of which: Debt securities		11,958		0		11,958
39 Of which: Off-balance-sheet exposures	133	25,462	2		-3	25,592

The adoption of the new definition of default increased exposures in default, especially in retail exposures. Home loans with default also increased as a result of forborne loans due to Covid-19. The loan portfolio quality is still assessed good. Credit risk adjustment charges for the period are presented in net terms for the whole year. Credit risk adjustment charges refer to expected credit losses (ECL). Credit losses are presented in gross terms.

Defaulted exposures are exposures belonging to rating categories 11–12 or F. In the Standardised Approach exposures are defaulted in case interest or capital are over 90 days overdue.

3.1.6 Credit quality of exposures by industry or counterparty types (EU CR1-B)

		a	b	c	e	f	g
		Gross carrying values of					
Net value, 31 Dec 2020, EUR million		Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustments	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c)
1	Renting and operation of residential real estate	128	10,024	32	1	0	10,120
2	Operating of other real estate	66	5,565	24	1	6	5,607
3	Trade	141	5,945	34	4	14	6,052
4	Energy	20	4,793	9	0	-27	4,804
5	Services	226	7,001	71	49	31	7,156
6	Construction	194	4,192	52	3	-7	4,335
7	Other manufacturing	41	2,157	34	1	-2	2,163
8	Manufacture of machinery and equipment (incl. maintenance)	33	2,521	13	0	-2	2,541
9	Transportation and storage	69	2,051	16	1	3	2,105
10	Financial and insurance activities	26	10,205	4	0	0	10,227
11	Central bank deposits	0	21,609		0	0	21,609
12	Covered bonds	0	6,342	0	0	0	6,342
13	Agriculture, forestry and fishing	355	4,421	62	5	28	4,714
14	Forest industry	143	1,585	99	0	3	1,629
15	Metal industry	38	1,132	23	0	8	1,146
16	Food industry	11	938	7	0	-5	942
17	Buying and selling of own real estate	4	567	2	1	0	568
18	Information and communication	21	1,518	3	0	-7	1,535
19	Other sectors	2	1,258	4	12	-8	1,256
20	Water supply and waste management	1	409	0	0	0	410
21	Mining and quarrying	34	238	23	0	1	249
22	Manufacture of chemicals and chemical products	2	288	0	0	0	290
23	Activities of households as employers; undifferentiated goods and services producing activities of households for own use	8	463	2	1	1	469
24	Public administration and defence (incl. compulsory social security)	0	5,795	1	0	0	5,794
25	Activities of extraterritorial organisations and bodies	0	1,491	0	0	0	1,491
26	Households	1,119	54,624	177	37	84	55,567
24	**Total**	**2,683**	**157,131**	**694**	**117**	**117**	**159,121**

		a	b	c	e	f	g
		Gross carrying values of					
Net value, 31 Dec 2019, EUR million		Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustments	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c)
1	Renting and operation of residential real estate	112	9,340	32	1	6	9,420
2	Operating of other real estate	61	5,854	18	5	-5	5,898
3	Trade	49	5,981	19	7	-4	6,011
4	Energy	46	4,316	36		1	4,326
5	Services	108	6,859	41	3	7	6,926
6	Construction	192	5,004	59	2	29	5,137
7	Other manufacturing	36	2,778	37	1	20	2,778
8	Manufacture of machinery and equipment (incl. maintenance)	32	2,529	15	1	-2	2,545
9	Transportation and storage	44	2,176	13	5	-8	2,207
10	Financial and insurance activities	7	9,407	4		-9	9,410
11	Central bank deposits		11,909				11,909
12	Covered bonds		6,486				6,486
13	Agriculture, forestry and fishing	120	5,289	34	5	-2	5,374
14	Forest industry	142	1,423	97	1	-3	1,468
15	Metal industry	39	1,254	15	0	-8	1,278
16	Food industry	18	845	12	5	-4	851
17	Buying and selling of own real estate	4	661	2	0	0	662
18	Information and communication	19	1,420	11	0	3	1,427
19	Other sectors	7	1,541	12	0	2	1,535
20	Water supply and waste management	1	452	1	0	0	452
21	Mining and quarrying	30	244	22	0	0	251
22	Manufacture of chemicals and chemical products	1	325	0		0	326
23	Activities of households as employers; undifferentiated goods and services producing activities of households for own use	2	576	2	1	0	576
24	Public administration and defence (incl. compulsory social security)		5,378	1		0	5,377
25	Activities of extraterritorial organisations and bodies	0	0	0		0	0
26	Households	338	52,723	93	31	9	52,968
24	**Total**	**1,407**	**144,770**	**577**	**68**	**32**	**145,600**

In 2020, the most significant expected credit losses (ECL) were recognised on exposures related to services, agriculture, forestry and fishing as well as exposures related to companies in the trade sector. The effects of Covid-19 on these sectors lie behind this increase. In the trade sector, the weakening of the situation of individual companies too shows in higher ECL. When it comes to households, the adoption of the new definition of default and the effects of Covid-19 increased defaulted exposures and the amount of ECL.

The ECLs in the real estate sector are low due to comprehensive collateral securities. The high amount of defaulted exposures and ECLs in forest, mining and quarrying sectors relative to exposures is due to individual cases where the exposure amount is highlighted in comparison with the total exposure amount in the sector. Higher credit losses in the services sector are due to an individual bankruptcy.

3.1.7 Credit quality of exposures by geography (EU CR1-C)

	a	b	c	e	f	g
	Gross carrying values of					
Net value, 31 Dec 2020, EUR million	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustments	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c)
1 Finland	2,651	138,722	683	112	118	140,690
2 Other Nordic countries	3	3,529	2	0	0	3,531
3 Baltic States	20	3,697	7	4	-2	3,710
4 Rest of EU	4	9,055	1	0	0	9,058
5 Rest of Europe	1	152	0	0	0	152
6 USA	2	281	0	0	0	282
7 Asia	0	368	0	0	0	368
8 Other	3	1,328	1	0	0	1,330
11 Total	**2,683**	**157,131**	**694**	**117**	**117**	**159,121**

	a	b	c	e	f	g
	Gross carrying values of					
Net value, 31 Dec 2019, EUR million	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustments	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c)
1 Finland	1,384	128,286	565	68	30	129,105
2 Other Nordic countries	1	3,328	1	0	0	3,328
3 Baltic States	15	3,089	8	0	2	3,096
4 Rest of EU	4	8,102	1	0	-1	8,105
5 Rest of Europe	0	165	0	0	0	165
6 USA	0	139	0	0	0	139
7 Asia	0	324	0	0	0	324
8 Other	2	1,337	1	0	0	1,338
11 Total	**1,407**	**144,770**	**577**	**68**	**32**	**145,600**

A total of 88% of total exposures are in Finland and other distribution is presented applying the materiality principle. A total of 99% of defaulted exposures and 98% credit risk adjustments are in Finland.

3.1.8 Changes in the stock of general and specific credit risk adjustments (EU CR2-A)

	a
Net value, 31 Dec 2020, EUR million	Accumulated specific credit risk adjustment
1 Opening balance 30 June 2020	**716**
2 Increases due to amounts set aside for estimated loan losses during the period	76
3 Decreases due to amounts reversed for estimated loan losses during the period	-38
4 Decreases due to amounts taken against accumulated credit risk adjustments	-47
8 Other adjustments	-13
9 Closing balance 31 Dec 2020	**694**

3.1.9 Changes in the stock of defaulted and impaired loans and debt securities (EU CR2-B)

	a
Net value, 31 Dec 2020, EUR million	Gross carrying value defaulted exposures
1 Opening balance 30 June 2020	**2,432**
2 Loans and debt securities that have defaulted or impaired since the last reporting period	558
3 Returned to non-defaulted status	-220
4 Amounts written off	-87
6 Closing balance 31 Dec 2020	**2,683**

In March 2020, OP Financial Group adopted a new definition of default, which increased the number of defaulted contracts. As a result of the Covid-19 crisis, customers have actively applied for loan modifications, and the amount of forborne exposures grew during the reporting period.

3.1.10 CRM techniques – Overview (EU CR3)

	31 Dec 2020				31 Dec 2019			
	a	b	c	d	a	b	c	d
Net value, EUR million	Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees
1 Total loans	37,180	60,881	55,141	5,740	36,071	60,314	54,844	5,469
2 Total debt securities	5,630	6,934	6,342	592	4,975	6,983	6,486	497
3 Total exposures	**89,579**	**69,542**	**62,844**	**6,699**	**76,594**	**69,006**	**62,672**	**6,334**
4 Of which defaulted	621	1,435	1,298	137	488	440	395	45

In the IRBA applied to retail exposures, it is possible to use collateral securities on a more extensive basis than in the SA applied to credit institution and corporate exposures. Guarantees and collateral related to retail exposures are treated as part of LGD. Several collateral securities or guarantees may apply to the same exposure in the table.

In the SA and IRBA applied to credit institution and corporate exposures, OP Financial Group utilises the following real collateral securities specified in the capital adequacy regulations: residential buildings and shares entitling their holders to the possession of an apartment, deposits and securities (equities). Deposits and securities are financial collateral, as referred to in the regulatory framework, and alternative methods are available for their accounting treatment. OP Financial Group has treated financial collateral in the above approaches using the so-called comprehensive method and volatility adjustments given by the relevant regulator.

In the SA and IRBA applied to credit institution and corporate exposures, only approved guarantors specified in the capital adequacy regulations may be used, such as guarantees granted by the Finnish State and other states, and those granted by municipalities and banks. Credit derivatives have not been used in the calculation. Offsetting balance-sheet or off-balance-sheet items was not applied in credit risk.

Residential buildings and shares entitling their holders to the possession of an apartment in Finland lodged as collateral constitute the largest collateral type used in capital adequacy. The effect of other physical securities on the capital adequacy of credit risks is much less significant. Guarantees have been given by a number of sources, the largest single one being the State of Finland.

3.1.11 Collateral used in capital adequacy calculation

	31 Dec 2020				31 Dec 2019			
EUR million	Exposure	Guarantees	Financial collateral	Other collateral	Exposure	Guarantees	Financial collateral	Other collateral
Standardised Approach	**40,470**	**171**		**43**	**28,559**	**109**		**1**
Exposures to central government and central banks	25,172				14,574			
Exposures to regional government or local authorities	4,896				5,193			
Exposures to public sector entities	461	171			267	109		
Exposures to multilateral development banks	983				596			
Exposures to international organisations	768				525			
Exposures to institutions	410				360			
Exposures to corporates	3,480				3,062			
Retail exposures	4,124				3,901			
Exposures secured by mortgages on immovable property	43			43	1			1
Exposures in default	57				30			
Exposures in the form of units or shares in collective investment undertakings (CIU)	0				0			
Equity exposures	32				22			
Other items	44				30			
Internal Ratings-based Approach	**123,589**	**6,876**	**1,062**	**76,956**	**121,137**	**6,843**	**1,025**	**75,879**
Exposures to institutions	8,484	230	362	0	8,557	210	453	0
Exposures to corporates	52,480	2,993	439	4,949	51,102	3,065	341	5,518
Retail exposures	58,649	3,653	261	72,006	57,166	3,568	231	70,361
Exposures secured by mortgages on immovable property	48,472	982	161	70,403	47,943	1,097	144	69,133
Other retail exposures	10,176	2,671	100	1,603	9,223	2,471	87	1,228
Equity investments	2,397				2,441			
PD/LGD method	2,311				2,309			
Simple Risk Weight Approach	86				132			
Items representing securitisation positions	551				624			
Other non-credit obligations	1,029				1,247			
Total	**164,059**	**7,047**	**1,062**	**76,998**	**149,696**	**6,953**	**1,025**	**75,880**

Immovable property collateral is included in other collateral securities. The amount of guarantees has increased from the end of 2019. The table contains information on both credit risk and counterparty risk, i.e. the information does not match with the amounts of net exposures presented in other tables.

3.1.12 Standardised approach – Credit risk exposure and CRM effects (EU CR4)

31 Dec 2020. Exposure classes, EUR million	a	b	c	d	e	f
	Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density (%)	
	On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density (%)
1 Central governments or central banks	24,546	269	26,545	109	306	1.1
2 Regional government or local authorities	3,095	1,055	3,908	300		
3 Public sector entities	303	157	122	75	40	20.2
4 Multilateral development banks	723		857	3		
5 International organisations	768		768			
6 Institutions	30	0	55	5	1	2.0
7 Corporates	2,714	758	2,709	370	3,046	98.9
8 Retail	1,370	2,732	1,370	0	1,026	74.9
9 Secured by mortgages on immovable property	43		43		21	49.7
10 Exposures in default	34	5	34	0	39	113.8
14 Collective investment undertakings	0		0		0	100.0
15 Equity	32		32		32	100.0
16 Other items	44		44		41	92.5
17 Total	**33,701**	**4,976**	**36,486**	**863**	**4,553**	**12.2**

31 Dec 2019, Exposure classes, EUR million	a	b	c	d	e	f
	Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density (%)	
	On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density (%)
1 Central governments or central banks	13,797	493	15,624	162	279	1.8
2 Regional government or local authorities	3,542	1,274	4,397	352		
3 Public sector entities	159	107	54	51	23	22.3
4 Multilateral development banks	287		431	5		
5 International organisations	525		525			
6 Institutions	34	0	40	0	1	3.5
7 Corporates	2,326	727	2,327	347	2,645	98.9
8 Retail	1,429	2,457	1,429	0	1,069	74.8
9 Secured by mortgages on immovable property	1		1		1	50.0
10 Exposures in default	19	1	19		23	118.2
14 Collective investment undertakings	0		0		0	100.0
15 Equity	22		22		22	100.0
16 Other items	30		30		30	98.9
17 Total	**22,172**	**5,059**	**24,899**	**918**	**4,094**	**15.9**

The exposure amount under the Standardised Approach increased during the first half. Central government exposures include deferred tax assets which have not been deducted from the Group's own assets; these are treated with a risk weight of 250%.

3.1.13 Standardised approach (EU CR5)

31 Dec 2020, Exposure classes, EUR million	Risk weight									Total	Of which unrated
	0 %	20 %	35 %	50 %	75 %	100 %	150 %	250 %	Others		
1 Central governments or central banks	26,532							122		26,654	22,920
2 Regional government or local authorities	4,208									4,208	2,699
3 Public sector entities		197				0				198	0
4 Multilateral development banks	860									860	137
5 International organisations	768									768	
6 Institutions	54	6								60	60
7 Corporates						2,941			138	3,079	2,972
8 Retail					1,365				4	1,370	1,370
9 Secured by mortgages on immovable property				42					1	43	43
10 Exposures in default						24	9		2	34	34
14 Collective investment undertakings						0				0	0
15 Equity						32				32	32
16 Other items	3					41				44	44
17 Total	**32,424**	**203**		**42**	**1,365**	**3,038**	**9**	**122**	**145**	**37,349**	**30,311**

31 Dec 2019, Exposure classes, EUR million	Risk weight									Total	Of which unrated
	0 %	20 %	35 %	50 %	75 %	100 %	150 %	250 %	Others		
1 Central governments or central banks	15,674							112		15,786	12,827
2 Regional government or local authorities	4,749									4,749	3,405
3 Public sector entities	10	89				6				105	16
4 Multilateral development banks	436									436	149
5 International organisations	525									525	
6 Institutions	33	7							0	40	40
7 Corporates	0	1				2,556			117	2,674	2,566
8 Retail	0				1,414				15	1,429	1,429
9 Secured by mortgages on immovable property				1						1	1
10 Exposures in default						12	7		0	19	19
14 Collective investment undertakings						0				0	0
15 Equity						22				22	22
16 Other items	0					30				30	30
17 Total	**21,428**	**97**		**1**	**1,414**	**2,627**	**7**	**112**	**132**	**25,817**	**20,505**

In its capital adequacy measurement for credit risk under the Standardised Approach to determine the exposure's risk weight, OP Financial Group applies credit ratings by Moody's Investors Service, Fitch Ratings or Standard & Poor's Financial Services to receivables from central governments and central banks (and comparable items, above lines 2–5) and corporations. External credit assessment determines the receivable's credit rating category. In the capital adequacy requirement for receivables, the risk weight is determined by the credit rating category. If two credit rating applies to the counterparty or receivable, the lowest rating category is used to determine the rating category.

The risk weight of international development banks' receivables may also be determined on the basis of other than credit rating based on external credit assessment. If the risk weight is affected by external credit assessment, credit ratings issued by the aforementioned rating agencies will also apply to the risk weighting of international development banks' receivables in capital adequacy measurement.

For a receivable in capital adequacy measurement, the security-specific credit rating of the issue programme or arrangement to which the receivable belongs must be used. If such a rating is not available, the issuer's general credit rating will be used, provided that it is available. Items under the Standardised approach do not include items deducted from the capital base.

3.1.14 IRB approach – Credit risk exposures by exposure class and PD range (EU CR6)

The table below presents the PD class breakdown of credit exposures within the scope of the IRB approach, specification of risk parameters and other information. The defaults, or PD 100, are not included in the average PD and risk weight. The minimum PD is 0.03%. CCF stands for a credit conversion factor. Off-balance-sheet exposures include loans not drawn down and unused commitments. Exposure amounts do not include counterparty credit risk.

31 Dec 2020	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Retail												
0,00 - < 0,15	37,241	4,054	53.3 %	39,374	0.1 %	571,636	26.4 %	15	2,467	6.3 %	5	
0,15 - < 0,25	3,890	139	63.0 %	3,973	0.2 %	89,792	25.4 %	15	742	18.7 %	2	
0,25 - < 0,50	2,601	192	63.6 %	2,714	0.4 %	122,856	28.7 %	11	790	29.1 %	3	
0,50 - < 0,75	1,670	62	55.6 %	1,702	0.6 %	69,204	32.3 %	12	771	45.3 %	3	
0,75 - < 2,50	4,129	180	63.0 %	4,233	1.3 %	112,008	32.1 %	12	2,865	67.7 %	17	
2,50 - < 10,00	2,038	77	67.0 %	2,081	4.9 %	74,417	35.9 %	11	2,765	132.9 %	38	
10,00 - < 100,00	832	17	72.6 %	844	27.7 %	28,731	33.4 %	10	1,832	217.1 %	75	
100.00	1,511	15	0.0 %	1,511	100.0 %	34,567	27.6 %	13	2,063	136.5 %	253	
Total	**53,913**	**4,735**	**54.4 %**	**56,433**	**0.8 %**	**1,103,211**	**27.5 %**	**14**	**14,295**	**22.3 %**	**397**	**201**

31 Dec 2019	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Retail												
0,00 - < 0,15	37,010	3,448	53.2 %	38,821	0.1 %	572,927	26.5 %	15	1,758	4.5 %	5	
0,15 - < 0,25	4,010	129	63.3 %	4,087	0.2 %	92,444	26.2 %	15	560	13.7 %	2	
0,25 - < 0,50	2,493	175	63.7 %	2,598	0.4 %	121,465	30.7 %	10	540	20.8 %	3	
0,50 - < 0,75	1,562	62	55.0 %	1,594	0.6 %	68,659	35.4 %	11	534	33.5 %	3	
0,75 - < 2,50	4,028	181	62.9 %	4,134	1.3 %	111,623	33.3 %	12	1,990	48.1 %	18	
2,50 - < 10,00	2,116	82	67.2 %	2,162	5.1 %	75,939	36.9 %	10	2,037	94.2 %	42	
10,00 - < 100,00	1,359	21	73.8 %	1,373	30.5 %	40,646	34.1 %	11	2,223	161.9 %	137	
100.00	484	5	0.3 %	484	100.0 %	13,320	35.6 %	17	677	139.9 %	124	
Total	**53,062**	**4,104**	**54.6 %**	**55,254**	**1.2 %**	**1,097,023**	**28.1 %**	**14**	**10,320**	**17.6 %**	**335**	**114**

The average risk weights increased from the 2019-end level, in particular as a result of the risk weighting factors set by the ECB. The distribution of PD showed some transition from the best borrower grades to weaker ones and to default ones. The definition of default and the effects of Covid-19 crisis lie behind this. The decrease in the average PD was especially affected by the transition of exposures to defaulted ones. In the fourth quarter, credit ratings weakened slightly compared with the third quarter. The most significant effect of the Covid-19 crisis arises from repayment holidays granted on loans.

In setting PD values given by rating models assessing solvency of personal customers' retail exposures, OP Financial Group has used its own default data and external data. As external data, OP Financial Group has made use of the unemployment rate since 1989. The Group has taken account of uncertainty associated with the data using a statistical margin of conservatism.

In setting PD values given by rating models assessing corporate customers in retail exposures, OP Financial Group has used its own default data and external data. As external data, the Group has used bankruptcy statistics since 1987. The Group has taken account of uncertainty associated with the data using a statistical margin of conservatism. The current corporate customer PDs in use were adopted in the first quarter of 2015.

In determining LGD estimates for retail exposures, the Group has used contract, customer, default, collateral and debt-collection data from 2008 until 2014. The Group applies the definition of default as in the PD models. In addition, the model uses product level cash flow data on uncollateralised returns and the recovery rate of default probabilities as well as recession valuation adjustments for collateral values based on the recession of the early 1990s. The Group has taken account of uncertainty associated with the data using a margin of conservatism.

In the risk weight calculation, the Group applies the regulatory LGD minimum of 10% and 15% to residential mortgage-backed exposures and commercial mortgage-backed exposures, respectively.

31 Dec 2020	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Retail - Secured by real estate property												
0,00 - < 0,15	35,164	726	55.5 %	35,567	0.1 %	415,316	25.1 %	15.5	2,093	5.9 %	5	
0,15 - < 0,25	3,358	50	53.5 %	3,384	0.2 %	39,279	26.7 %	15.2	666	19.7 %	2	
0,25 - < 0,50	1,520	63	62.5 %	1,559	0.4 %	26,893	23.7 %	12.8	374	24.0 %	1	
0,50 - < 0,75	1,090	12	54.7 %	1,096	0.5 %	14,041	28.0 %	15.1	412	37.5 %	2	
0,75 - < 2,50	3,143	84	63.2 %	3,196	1.2 %	40,960	27.3 %	14.1	2,042	63.9 %	11	
2,50 - < 10,00	1,401	26	68.8 %	1,419	4.6 %	18,563	27.7 %	13.5	1,971	138.9 %	18	
10,00 - < 100,00	599	9	72.2 %	606	29.9 %	8,260	26.8 %	12.4	1,421	234.7 %	49	
100.00	1,223	5	0.0 %	1,223	100.0 %	14,118	19.2 %	13.3	1,714	140.2 %	98	
subtotal	**47,497**	**975**	**56.7 %**	**48,050**	**0.7 %**	**577,430**	**25.3 %**	**15.1**	**10,693**	**19.2 %**	**185**	**95**
Retail - Other												
0,00 - < 0,15	2,077	3,329	1	3,807	0	215,120	0	10	374	0	1	
0,15 - < 0,25	532	90	1	588	0	52,277	0	13	76	0	0	
0,25 - < 0,50	1,081	128	1	1,155	0	97,750	0	8	416	0	2	
0,50 - < 0,75	580	50	1	606	0	55,843	0	6	359	1	2	
0,75 - < 2,50	986	95	1	1,037	0	76,124	0	5	823	1	7	
2,50 - < 10,00	638	51	1	663	0	58,815	1	5	794	1	20	
10,00 - < 100,00	233	8	1	238	0	21,574	1	4	410	2	26	
100.00	288	9	0	288	1	24,691	1	12	348	1	155	
subtotal	**6,416**	**3,760**	**53.8 %**	**8,383**	**1.5 %**	**602,194**	**40.0 %**	**8.4**	**3,602**	**40.2 %**	**212**	**106**
Total	**53,913**	**4,735**	**54.4 %**	**56,433**	**0.8 %**	**1,179,624**	**27.5 %**	**14.1**	**14,295**	**22.3 %**	**397**	**201**

31 Dec 2019	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Retail - Secured by real estate property												
0,00 - < 0,15	34,962	724	54.7 %	35,358	0.1 %	422,888	25.2 %	15.0	1,529	4.3 %	5	
0,15 - < 0,25	3,504	45	52.3 %	3,527	0.2 %	40,887	27.1 %	15.0	508	14.4 %	2	
0,25 - < 0,50	1,492	65	61.6 %	1,532	0.4 %	27,092	23.4 %	12.5	258	16.8 %	1	
0,50 - < 0,75	1,020	12	54.2 %	1,027	0.5 %	14,029	28.0 %	14.6	278	27.1 %	1	
0,75 - < 2,50	3,127	86	62.8 %	3,181	1.2 %	42,347	27.6 %	13.7	1,460	45.9 %	11	
2,50 - < 10,00	1,454	30	67.4 %	1,474	4.7 %	20,606	27.8 %	12.8	1,482	100.6 %	19	
10,00 - < 100,00	1,041	11	71.5 %	1,049	32.8 %	13,666	28.0 %	12.3	1,835	174.9 %	98	
100.00	369	2	0.6 %	369	100.0 %	4,728	21.5 %	16.0	595	161.4 %	38	
subtotal	**46,969**	**975**	**56.2 %**	**47,516**	**1.0 %**	**586,243**	**25.6 %**	**14.7**	**7,946**	**15.6 %**	**175**	**52**
Retail - Other												
0,00 - < 0,15	2,048	2,725	1	3,463	0	207,710	0	10	229	0	1	
0,15 - < 0,25	506	85	1	560	0	53,494	0	14	52	0	0	
0,25 - < 0,50	1,001	110	1	1,067	0	96,046	0	7	282	0	2	
0,50 - < 0,75	541	50	1	567	0	55,252	0	6	256	0	2	
0,75 - < 2,50	901	96	1	953	0	74,155	1	6	530	1	7	
2,50 - < 10,00	662	52	1	688	0	58,477	1	5	555	1	22	
10,00 - < 100,00	317	10	1	324	0	29,125	1	5	387	1	40	
100.00	115	3	0	115	1	9,370	1	19	82	1	86	
subtotal	**6,093**	**3,130**	**54.1 %**	**7,737**	**1.8 %**	**583,629**	**43.5 %**	**8.7**	**2,374**	**30.1 %**	**160**	**62**
Total	**53,062**	**4,104**	**54.6 %**	**55,254**	**1.2 %**	**1,169,872**	**28.1 %**	**13.9**	**10,320**	**17.6 %**	**335**	**114**

The ECB's risk parameter and risk-weighting factors affect the average PD and LGD parameters and the average risk weights of mortgage-backed retail exposures. Considering that one and the same customer may be included in several sub-exposure classes, the sums of the number of obligors differ between the tables.

31 Dec 2020	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Corporates												
0,00 - < 0,15	7,215	4,371	67.3 %	8,919	0.1 %	446	44.3 %	4.9	2,321	26.0 %	3	
0,15 - < 0,25	2,349	1,678	66.1 %	3,005	0.2 %	663	43.7 %	7.0	1,304	43.4 %	2	
0,25 - < 0,50	8,666	3,270	61.6 %	10,022	0.4 %	9,598	43.9 %	9.7	5,444	54.3 %	16	
0,50 - < 0,75												
0,75 - < 2,50	8,479	3,834	59.9 %	10,102	1.2 %	10,287	42.8 %	8.3	8,766	86.8 %	53	
2,50 - < 10,00	7,493	2,291	59.4 %	5,520	4.5 %	10,195	42.6 %	7.8	6,892	124.9 %	107	
10,00 - < 100,00	577	120	37.1 %	611	22.9 %	1,246	42.2 %	6.1	1,153	188.7 %	59	
100.00	786	172	61.1 %	876	100.0 %	1,023	43.7 %	11.7			383	
Total	**35,565**	**15,736**	**62.4 %**	**39,054**	**1.5 %**	**33,458**	**43.4 %**	**7.8**	**25,880**	**67.8 %**	**623**	**443**

31 Dec 2019	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Corporates												
0,00 - < 0,15	6,522	4,573	67.8 %	8,456	0.1 %	586	44.2 %	4.7	2,080	24.6 %	3	
0,15 - < 0,25	3,037	1,899	69.5 %	3,859	0.2 %	615	44.3 %	4.1	1,657	42.9 %	3	
0,25 - < 0,50	7,542	2,885	59.5 %	8,757	0.4 %	9,440	43.3 %	10.2	4,510	51.5 %	15	
0,50 - < 0,75	0											
0,75 - < 2,50	8,310	3,791	61.5 %	10,074	1.2 %	9,987	42.8 %	8.4	8,525	84.6 %	53	
2,50 - < 10,00	7,790	2,232	62.1 %	5,814	4.4 %	9,495	43.4 %	7.9	7,045	121.2 %	109	
10,00 - < 100,00	672	157	54.4 %	739	24.3 %	1,520	42.2 %	6.2	1,377	186.3 %	75	
100.00	703	124	59.0 %	766	100.0 %	844	44.0 %	16.4			337	
Total	**34,576**	**15,660**	**63.6 %**	**38,465**	**1.6 %**	**32,487**	**43.5 %**	**7.6**	**25,192**	**66.8 %**	**594**	**428**

The average risk weight of corporate exposures increased slightly from the 2019-end level. Higher defaulted exposures are especially explained by the weaker situation of individual companies. In this respect, the effects of the Covid-19 crisis assessed minor.

In setting PD values given by rating models assessing solvency of corporate customers' corporate exposures, OP Financial Group has used its own default data and external data. As external data, the Group has used bankruptcy statistics since 1987. The Group has taken account of uncertainty associated with the data using a statistical margin of conservatism. The current corporate customer PDs in use were adopted in the first quarter of 2015.

31 Dec 2020	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Corporates - Other												
0,00 - < 0,15	5,991	3,661	68.0 %	7,460	0.1 %	342	44.3 %	4.8	2,006	26.9 %	2	
0,15 - < 0,25	1,631	1,494	66.3 %	2,171	0.2 %	169	44.3 %	5.4	1,001	46.1 %	2	
0,25 - < 0,50	3,611	2,727	68.6 %	4,800	0.3 %	1,389	43.9 %	4.5	3,037	63.3 %	7	
0,50 - < 0,75												
0,75 - < 2,50	3,927	2,416	60.5 %	4,942	1.2 %	1,766	42.5 %	5.7	4,987	100.9 %	25	
2,50 - < 10,00	3,603	1,336	57.5 %	2,550	4.5 %	1,939	42.3 %	7.7	3,838	150.5 %	49	
10,00 - < 100,00	253	83	34.3 %	274	21.9 %	204	42.2 %	3.5	641	234.2 %	25	
100.00	479	140	60.1 %	549	100.0 %	199	43.7 %	11.2	0	0.0 %	240	
subtotal	**19,495**	**11,857**	**64.7 %**	**22,745**	**1.2 %**	**6,008**	**43.5 %**	**5.4**	**15,510**	**69.9 %**	**350**	**305**
Corporates - SMEs												
0,00 - < 0,15	1,224	710	63.3 %	1,458	0.1 %	104	44.3 %	5.7	314	21.6 %	0	
0,15 - < 0,25	718	183	64.8 %	834	0.2 %	494	42.0 %	11.0	303	36.3 %	1	
0,25 - < 0,50	5,055	543	34.8 %	5,222	0.4 %	8,209	43.8 %	14.5	2,407	46.1 %	9	
0,50 - < 0,75												
0,75 - < 2,50	4,551	1,418	59.1 %	5,160	1.3 %	8,521	43.1 %	10.9	3,779	73.2 %	28	
2,50 - < 10,00	3,890	955	61.7 %	2,970	4.6 %	8,256	42.9 %	7.9	3,054	102.9 %	58	
10 - < 100	324	36	41.5 %	337	23.8 %	1,042	42.3 %	8.1	512	151.8 %	34	
100	307	33	64.7 %	327	100.0 %	824	43.7 %	12.5			143	
subtotal	**16,070**	**3,879**	**56.4 %**	**16,309**	**1.9 %**	**27,450**	**43.3 %**	**11.0**	**10,369**	**64.9 %**	**273**	**138**
Total	**35,565**	**15,736**	**62.4 %**	**39,054**	**1.5 %**	**33,458**	**43.4 %**	**7.8**	**25,880**	**67.8 %**	**623**	**443**

31 Dec 2019	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Corporates - Other												
0,00 - < 0,15	5,649	3,756	68.2 %	7,300	0.1 %	348	44.2 %	4.3	1,810	24.8 %	2	
0,15 - < 0,25	2,712	1,735	69.3 %	3,447	0.2 %	166	44.3 %	3.5	1,509	43.8 %	3	
0,25 - < 0,50	2,746	2,063	68.7 %	3,706	0.4 %	1,337	43.8 %	5.3	2,286	61.7 %	6	
0,50 - < 0,75	0											
0,75 - < 2,50	3,840	2,587	62.9 %	5,004	1.2 %	1,798	42.7 %	6.2	4,928	98.5 %	26	
2,50 - < 10,00	3,676	1,361	62.4 %	2,716	4.2 %	1,810	44.2 %	7.3	3,885	143.0 %	49	
10,00 - < 100,00	287	109	55.5 %	328	25.1 %	211	41.8 %	5.2	746	227.4 %	34	
100.00	436	113	59.9 %	496	100.0 %	186	44.1 %	15.4			219	
subtotal	**19,345**	**11,723**	**66.3 %**	**22,998**	**1.3 %**	**5,856**	**43.8 %**	**5.4**	**15,165**	**67.4 %**	**339**	**308**
Corporates - SMEs												
0,00 - < 0,15	873	817	65.5 %	1,157	0.1 %	238	44.6 %	7.1	270	23.3 %	0	
0,15 - < 0,25	326	164	71.4 %	412	0.2 %	449	44.0 %	8.5	147	35.8 %	0	
0,25 - < 0,50	4,795	822	39.0 %	5,050	0.4 %	8,105	43.0 %	13.8	2,224	44.0 %	9	
0,50 - < 0,75	0											
0,75 - < 2,50	4,470	1,204	59.1 %	5,071	1.2 %	8,201	42.9 %	10.7	3,597	70.9 %	26	
2,50 - < 10,00	4,115	871	61.7 %	3,097	4.5 %	7,691	42.6 %	8.5	3,159	102.0 %	60	
10 - < 100	385	48	52.5 %	411	23.5 %	1,313	42.5 %	7.0	630	153.4 %	41	
100	267	11	47.0 %	270	100.0 %	658	43.8 %	18.2			118	
subtotal	**15,230**	**3,937**	**56.4 %**	**15,468**	**2.1 %**	**26,655**	**43.0 %**	**11.0**	**10,028**	**66.0 %**	**255**	**120**
Total	**34,576**	**15,660**	**63.6 %**	**38,465**	**1.6 %**	**32,511**	**43.5 %**	**7.6**	**25,192**	**66.8 %**	**594**	**428**

31 Dec 2020	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Institutions												
0,00 - < 0,15	5,988	465	69.4 %	6,322	0.0 %	144	14.5 %	4.8	520	8.2 %	0	
0,15 - < 0,25	406	195	75.1 %	496	0.2 %	23	17.4 %	3.5	100	20.3 %	0	
0,25 - < 0,50	213	44	48.9 %	238	0.4 %	43	17.3 %	5.1	80	33.6 %	0	
0,50 - < 0,75	261	14	37.2 %	35	0.7 %	33	20.5 %	8.1	18	49.7 %	0	
0,75 - < 2,50	8	17	51.4 %	17	1.2 %	21	45.0 %	5.4	23	132.6 %	0	
2,50 - < 10,00	21	54	43.0 %	44	4.6 %	47	45.0 %	1.2	81	183.8 %	1	
10,00 - < 100,00	1	8	28.9 %	3	12.2 %	14	45.0 %	0.0	7	253.6 %	0	
Total	**6,897**	**815**	**65.6 %**	**7,156**	**0.1 %**	**326**	**15.1 %**	**4.8**	**829**	**11.6 %**	**2**	**0**

31 Dec 2019	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Impairments and value adjustments
Institutions												
0,00 - < 0,15	6,104	434	69.9 %	6,431	0.0 %	172	14.5 %	5.4	514	8.0 %	0	
0,15 - < 0,25	474	90	75.3 %	548	0.2 %	22	15.9 %	2.7	101	18.4 %	0	
0,25 - < 0,50	25	59	57.9 %	62	0.4 %	43	45.0 %	4.7	49	79.5 %	0	
0,50 - < 0,75	414	27	40.7 %	220	0.7 %	48	13.1 %	5.2	70	31.7 %	0	
0,75 - < 2,50	5	7	64.9 %	13	1.3 %	22	45.0 %	15.0	18	134.9 %	0	
2,50 - < 10,00	28	150	48.3 %	91	3.5 %	52	45.0 %	1.5	154	169.1 %	1	
10,00 - < 100,00	1	4	42.1 %	3	11.8 %	13	45.0 %	0.0	6	246.7 %	0	
Total	**7,051**	**771**	**65.2 %**	**7,368**	**0.1 %**	**373**	**15.3 %**	**5.2**	**913**	**12.4 %**	**3**	**1**

The average risk weights of credit institution exposures decreased slightly. Some 82% of the credit institution exposures are covered bonds.

For setting PD values given by the credit institution exposure rating model, OP Financial Group has used rating scores for credit institution exposure and external credit ratings and the corresponding default data. PD values have been adjusted with a margin of conservatism in order to take account of uncertainties associated with the data.

3.1.15 Equities (EU CR10, EU CR6)

Equities under the simple risk-weighted approach

31 Dec 2020, Categories	On-balance-sheet amount	Off-balance-sheet amount	Risk weight	Exposure amount	RWAs	Capital require-ments
Private equity exposures	29		190 %	29	54	4
Other equity exposures	57		370 %	57	212	17
Total	**86**			**86**	**266**	**21**

31 Dec 2019, Categories	On-balance-sheet amount	Off-balance-sheet amount	Risk weight	Exposure amount	RWAs	Capital require-ments
Private equity exposures	21		190 %	21	39	3
Other equity exposures	111		370 %	111	412	33
Total	**132**			**132**	**451**	**36**

Equity investments decreased slightly during the year. Listed investments are measured at market value.

PD/LGD method

31 Dec 2020	a	b	c	d	e	f	g	h	i	j	k	l
PD Scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Value adjust-ments and provisions
0,75 - < 2,50	2,311			2,311	1.3	3	90.0		6,770	293.0	26	

31 Dec 2019	a	b	c	d	e	f	g	h	i	j	k	l
PD Scale	Original on-balance-sheet gross exposures	Off-balance-sheet exposures pre-CCF	Average CCF	EAD post CRM and post CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Value adjust-ments and provisions
0,75 - < 2,50	2,309			2,309	1.3	4	90.0		6,447	279.2	26	

The PD/LGD method for equity investments has been used to treat the consolidation group's strategic investments, of which the most significant ones (EAD EUR 2,306 million) include investments in the Group's insurance companies. In these exposures, EAD is the same as gross exposures, and the exposures do not include off-balance-sheet items. PD for unlisted investments is 1.25 which is determined by regulation. No major changes have occurred in the amount of exposures. The average risk weight increased due to the ECB's risk weighting factors. The investments have no maturity date.

3.1.16 Non-deducted participations in insurance undertakings (EU INS1)

EUR million	31 Dec 2020	31 Dec 2019
Holdings of own funds instruments of a financial sector entity where the institution has a significant investment not deducted from own funds (before risk-weighting)	2,306	2,306
Total RWAs	6,759	6,438

The consolidation group treats insurance holdings in equity investments based on the supervisor's permission. In October 2015, OP Financial Group received permission from the ECB to treat insurance holdings within the conglomerate as risk-weighted assets according to the previous practice. Because of the adoption of the new definition of default, the risk-weighted assets of insurance holdings rose as result of the risk weighting factors set by the ECB.

3.1.17 RWA flow statements of credit risk exposures under the IRB approach (EU CR8)

		a	b
EUR million		RWA amounts	Capital require-ments
1	RWAs as at the end of the previous reporting period 30 Sep 2020	40,053	3,204
2	Asset size	-325	-26
3	Asset quality	376	30
8	Other	900	72
9	RWAs as at the end of the reporting period 31 Dec 2020	40,104	3,208

Changes occurred in retail exposures, corporate exposures and credit institution exposures during the fourth quarter are presented using the flow statements. In the Asset quality row, higher risk-weighted assets were explained by the effects of loan modifications. The effect of the adoption of the ECB's risk weighting factor is shown in the Other row.

3.1.18 IRB approach – Backtesting of PD per exposure class (EU CR9)

The following tables compare the probability of default (PD) applied in capital adequacy measurement with the actual historical average default. The calculation of the weighted average PD has not taken account of defaulted exposures (PD = 100%).

a	b	d	e	f		g	h	i
				Number of obligors				
Exposure class	PD Range	Weighted average PD	Arithmetic average PD by obligors	End of previous year	End of the year	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Retail	0,00 -< 0,15	0.1 %	0.1 %	572,927	695,700			
	0,15 -< 0,25	0.2 %	0.2 %	92,444	91,520			
	0,25 -< 0,50	0.4 %	0.4 %	121,465	125,085			
	0,50 -< 0,75	0.6 %	0.7 %	68,659	69,882			
	0,75 -< 2,50	1.3 %	1.3 %	111,623	120,135			
	2,50 -< 10,00	4.9 %	5.6 %	75,939	79,681			
	10,00 -< 100,00	27.7 %	23.7 %	40,646	30,690			
	100.00	100.0 %	100.0 %	13,320	34,567	50,085	902	
	Total	**0.8 %**	**1.2 %**	**1,097,023**	**1,247,260**	**50,085**	**902**	**1.0 %**

a	b	d	e	f		g	h	i
				Number of obligors				
Exposure class	PD Range	Weighted average PD	Arithmetic average PD by obligors	End of previous year	End of the year	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Retail - Secured by real estate property	0,00 -< 0,15	0.1 %	0.1 %	422,888	477,006			
	0,15 -< 0,25	0.2 %	0.2 %	40,887	39,293			
	0,25 -< 0,50	0.4 %	0.4 %	27,092	26,908			
	0,50 -< 0,75	0.5 %	0.5 %	14,029	14,047			
	0,75 -< 2,50	1.2 %	1.2 %	42,347	43,863			
	2,50 -< 10,00	4.6 %	4.7 %	20,606	19,757			
	10,00 -< 100,00	29.9 %	28.2 %	13,666	8,914			
	100.00	100.0 %	100.0 %	4,728	14,118	20,540	49	
	Total	**0.7 %**	**0.7 %**	**586,243**	**643,906**	**20,540**	**49**	**1.0 %**
Retail - Other - Non-SMEs	0,00 -< 0,15	0.1 %	0.1 %	207,710	227,064			
	0,15 -< 0,25	0.2 %	0.2 %	53,494	52,277			
	0,25 -< 0,50	0.4 %	0.4 %	96,046	98,749			
	0,50 -< 0,75	0.7 %	0.7 %	55,252	55,843			
	0,75 -< 2,50	1.4 %	1.4 %	74,155	77,548			
	2,50 -< 10,00	5.7 %	5.9 %	58,477	60,587			
	10,00 -< 100,00	22.0 %	21.9 %	29,125	22,055			
	100.00	100.0 %	100.0 %	9,370	24,691	29,545		
	Total	**1.5 %**	**1.7 %**	**583,629**	**618,814**	**29,545**	**853**	**1.5 %**

In calculating the historical default rate, the Group has used eight years as the average in other exposure classes but six years in exposures secured by real estate property. The new definition of default caused a one-time jump in the number of borrowers in default. The classification scale of retail exposures has not been linked to external credit ratings.

a	b	c	d	e	f		g	h	i
					Number of obligors				
Exposure class	PD Range		Weighted average PD	Arithmetic average PD by obligors	End of previous year	End of the year	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Corporates	0,00 -< 0,15	AAA...BBB+	0.1 %	0.1 %	586	446			
	0,15 -< 0,25	BBB	0.2 %	0.2 %	615	663			
	0,25 -< 0,50	BBB-...BB+	0.4 %	0.4 %	9,440	9,598			
	0,50 -< 0,75	BB+							
	0,75 -< 2,50	BB...BB-	1.2 %	1.3 %	9,987	10,287			
	2,50 -< 10,00	B+...B	4.5 %	3.1 %	9,495	11,718			
	10,00 -< 100,00	B-...C	22.9 %	22.9 %	1,520	1,246			
	100.00	D	100.0 %	100.0 %	844	1,023	616	25	
	Total		**1.5 %**	**2.4 %**	**32,487**	**34,981**	**616**	**25**	**0.9 %**

a	b	c	d	e	f		g	h	i
					Number of obligors				
Exposure class	PD Range		Weighted average PD	Arithmetic average PD by obligors	End of previous year	End of the year	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Corporates - Other	0,00 -< 0,15	AAA...BBB+	0.1 %	0.1 %	348	342			
	0,15 -< 0,25	BBB+...BBB	0.2 %	0.2 %	166	169			
	0,25 -< 0,50	BBB...BB+	0.3 %	0.4 %	1,337	1,389			
	0,50 -< 0,75	BB+...BB							
	0,75 -< 2,50	BB...BB-	1.2 %	1.4 %	1,798	1,766			
	2,50 -< 10,00	BB-...B	4.5 %	3.1 %	1,810	2,189			
	10,00 -< 100,00	B...C	21.9 %	20.1 %	211	204			
	100.00	D	100.0 %	100.0 %	186	199	81	16	
	Total		**1.2 %**	**2.2 %**	**5,856**	**6,258**	**81**	**16**	**0.7 %**
Corporates - SMEs	0,00 -< 0,15	AAA...BBB+	0.1 %	0.1 %	238	104			
	0,15 -< 0,25	BBB+...BBB	0.2 %	0.2 %	449	494			
	0,25 -< 0,50	BBB...BB+	0.4 %	0.4 %	8,105	8,209			
	0,50 -< 0,75	BB+...BB							
	0,75 -< 2,50	BB...BB-	1.3 %	1.3 %	8,201	8,521			
	2,50 -< 10,00	BB-...B	4.6 %	3.1 %	7,691	9,529			
	10,00 -< 100,00	B...C	23.8 %	23.5 %	1,313	1,042			
	100.00	D	100.0 %	100.0 %	658	824	535	9	
	Total		**1.9 %**	**2.4 %**	**26,655**	**28,723**	**535**	**9**	**1.4 %**

In the calculation of the historical default rate, the Group has used eight years as the average. In corporate exposures, the average PD is around 50% higher than the average historical default rate. The external credit rating equivalent is presented according to the credit rating by Standard & Poor's.

a	b	c	d	e	f		g	h	i
					Number of obligors				
Exposure class	PD Range		Weighted average PD	Arithmetic average PD by obligors	End of previous year	End of the year	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Institutions	0,00 -< 0,15	AAA...A	0.0 %	0.1 %	172	144			
	0,15 -< 0,25	A-	0.2 %	0.2 %	22	23			
	0,25 -< 0,50	BBB+...BBB-	0.4 %	0.4 %	43	43			
	0,50 -< 0,75	BB+	0.7 %	0.7 %	48	33			
	0,75 -< 2,50	BB+...BB	1.2 %	1.4 %	22	21			
	2,50 -< 10,00	BB-...B-	4.6 %	5.6 %	52	47			
	10,00 -< 100,00	CCC+...CC	12.2 %	13.1 %	13	14			
	100.00	D	100.0 %	100.0 %	1	1	1		
	Total		**0.1 %**	**1.6 %**	**373**	**326**	**1**		**0.0 %**

In the calculation of the historical default rate, the Group has used eight years as the average. In credit institution exposures, the average PD is considerably higher than the average historical default rate. The Group applies the definition of default on a customer-specific basis to credit institution exposures. The external credit rating equivalent is presented according to the credit rating by Standard & Poor's.

3.1.19 Credit quality of forborne exposures (Template 1, EU CQ1)

	a	b	c	d	e	f	g	h
	Gross carrying amount/nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collateral received and financial guarantees received on forborne exposures	
		Non-performing forborne			On performing forborne exposures	On non-performing forborne exposures		Of which collateral and financial guarantees received on non-performing exposures with forbearance measures
31 Dec 2020. EUR million	Performing forborne		Of which defaulted	Of which impaired				
005 Cash balances at central banks and other demand deposits								
010 Loans and advances	3,281	1,222	1,124	802	22	146	4,145	1,020
050 Other financial corporations	1	0	0	0	0	0	1	0
060 Non-financial corporations	806	332	308	213	16	84	969	227
070 Households	2,474	890	815	589	6	63	3,175	792
090 Loan commitments given	4	16	16	15		2	17	15
100 Total	**3,285**	**1,238**	**1,139**	**817**	**22**	**149**	**4,162**	**1,035**

	a	b	c	d	e	f	g	h
	Gross carrying amount/nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collateral received and financial guarantees received on forborne exposures	
		Non-performing forborne			On performing forborne exposures	On non-performing forborne exposures		Of which collateral and financial guarantees received on non-performing exposures with forbearance measures
31 Dec 2019. EUR million	Performing forborne		Of which defaulted	Of which impaired				
1 Loans and advances	2,044	428	330	225	10	57	2,327	386
5 Other financial corporations		0	0	0			0	0
6 Non-financial corporations	289	161	143	91	6	34	381	133
7 Households	1,755	267	187	134	4	23	1,946	253
9 Loan commitments given	25	0	0	0	0		25	0
10 Total	**2,070**	**429**	**331**	**225**	**10**	**57**	**2,352**	**386**

The amount of forbearance measures – in practice, the amount of repayment holidays – has increased as a result of the COVID-19 crisis.

3.1.20 Credit quality of performing and non-performing exposures by past due days (Template 3, EU CQ3)

	a	b	c
	Gross carrying amount/nominal amount		
	Performing exposures		
31 Dec 2020. EUR million		Not past due or past due ≤ 30 days	Past due > 30 days ≤ 90 days
005 Cash balances at central banks and other demand deposits	21,829	21,829	
010 Loans and advances	92,094	92,042	52
020 Central banks	484	484	
030 General governments	1,950	1,950	
040 Credit institutions	75	75	
050 Other financial corporations	1,110	1,110	
060 Non-financial corporations	35,235	35,228	7
070 Of which SMEs	17,347	17,340	7
080 Households	53,239	53,195	45
090 Debt securities	14,003	13,674	
100 Central banks			
110 General governments	4,637	4,628	
120 Credit institutions	7,516	7,504	
130 Other financial corporations	126	117	
140 Non-financial corporations	1,725	1,425	
150 Off-balance-sheet exposures	26,204	26,075	1
160 Central banks			
170 General governments	1,716	1,716	
180 Credit institutions	810	810	
190 Other financial corporations	345	345	
200 Non-financial corporations	15,955	15,827	0
210 Households	7,379	7,377	1
220 Total	**154,131**	**153,944**	**54**

	d	e	f	g	h		j	k	l
	Gross carrying amount/nominal amount								
	Non-performing exposures								
31 Dec 2020. EUR million		Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 year	Past due > 5 years ≤ 7 years	Past due > 7 years	Of which defaulted
005 Cash balances at central banks and other demand deposits									
010 Loans and advances	2,654	1,862	71	102	134	202	75	74	2,475
030 General governments	0	0							
050 Other financial corporations	0	0				0			0
060 Non-financial corporations	1,094	654	13	37	42	99	57	58	1,020
070 Of which SMEs	598	399	11	27	37	89	29	7	543
080 Households	1,559	1,208	58	65	91	103	18	16	1,454
090 Debt securities	0	0							
150 Off-balance-sheet exposures	213	213	0	0	0	0	0		208
200 Non-financial corporations	199	199							194
210 Households	14	14	0	0	0	0	0		14
220 Total	**2,867**	**2,075**	**71**	**102**	**134**	**202**	**75**	**74**	**2,683**

31 Dec 2019. EUR million	a	b	c
	Gross carrying amount/nominal amount		
	Performing exposures		
		Not past due or past due ≤ 30 days	Past due > 30 days ≤ 90 days
1 Loans and advances	102,842	102,688	154
2 Central banks	11,993	11,993	
3 General governments	2,012	2,012	
4 Credit institutions	243	243	
5 Other financial corporations	911	911	
6 Non-financial corporations	34,501	34,471	30
7 Of which SMEs	13,687	13,669	18
8 Households	53,182	53,058	124
9 Debt securities	13,707	13,707	
11 General governments	4,213	4,213	
12 Credit institutions	7,264	7,264	
13 Other financial corporations	132	132	
14 Non-financial corporations	2,099	2,099	
15 Off-balance-sheet exposures	25,659		
17 General governments	2,060		
18 Credit institutions	751		
19 Other financial corporations	449		
20 Non-financial corporations	15,957		
21 Households	6,440		
22 Total	**142,208**	**116,396**	**154**

31 Dec 2019. EUR million	d	e	f	g	h		j	k	l
	Gross carrying amount/nominal amount								
	Non-performing exposures								
		Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 year	Past due > 5 years ≤ 7 years	Past due > 7 years	Of which defaulted
1 Loans and advances	1,510	842	134	100	130	170	91	44	1,275
5 Other financial corporations	0				0				0
6 Non-financial corporations	851	497	62	35	65	88	74	30	763
7 Of which SMEs	527	305	33	21	32	80	45	9	461
8 Households	659	345	71	65	65	81	18	13	512
9 Debt securities	1	1							1
14 Non-financial corporations	1	1							1
15 Off-balance-sheet exposures	139								131
20 Non-financial corporations	134								129
21 Households	5								2
22 Total	**1,648**	**843**	**134**	**100**	**130**	**170**	**91**	**44**	**1,407**

3.1.21 Performing and non-performing exposures and related provisions (Template 4, EU CR1)

	a	b	c	d	e	f
	Gross carrying amount/nominal amount					
	Performing exposures			Non-performing exposures		
31 Dec 2020. EUR million		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3
005 Cash balances at central banks and other demand deposits	21,829	21,829				
010 Loans and advances	92,094	84,401	7,692	2,519	151	2,349
020 Central banks	484	484				
030 General governments	1,950	1,947	4	0		0
040 Credit institutions	75	75				
050 Other financial corporations	1,110	1,107	4	0	0	0
060 Non-financial corporations	35,235	32,617	2,617	959	72	869
070 Of which SMEs	17,347	15,511	1,835	598	46	551
080 Households	53,239	48,172	5,067	1,559	79	1,480
090 Debt securities	14,003	13,642	32	0		
110 General governments	4,637	4,628				
120 Credit institutions	7,516	7,504				
130 Other financial corporations	126	117				
140 Non-financial corporations	1,725	1,393	32	0		
150 Off-balance-sheet exposures	26,204	25,329	876	213	54	159
170 General governments	1,716	1,704	11			
180 Credit institutions	810	810				
190 Other financial corporations	345	343	2			
200 Non-financial corporations	15,955	15,188	767	199	54	144
210 Households	7,379	7,283	96	14	0	14
220 Total	**154,131**	**145,201**	**8,600**	**2,732**	**205**	**2,508**

	g	h	i	j	k	l	m	n	o
	Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Accumulated partial write-off	Collateral and financial guarantees received	
	Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions				On performing exposures	On non-performing exposures
31 Dec 2020. EUR million		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3			
005 Cash balances at central banks and other demand deposits									
010 Loans and advances	140	57	83	522	6	517		74,823	1,780
030 General governments	1	1	0	0	0	0		281	0
040 Credit institutions	0	0						0	
050 Other financial corporations	1	0	0	0	0	0		735	1
060 Non-financial corporations	80	38	42	350	4	345		25,260	508
070 Of which SMEs	43	12	31	181	1	180		15,959	382
080 Households	58	18	40	172	1	171		48,545	1,271
090 Debt securities	2	2	1					3	
110 General governments	0	0						3	
120 Credit institutions	0	0						0	
130 Other financial corporations	0	0							
140 Non-financial corporations	2	1	1					0	
150 Off-balance-sheet exposures	7	5	2	22	10	13		4,795	85
170 General governments	0	0						307	
180 Credit institutions	0	0						0	
190 Other financial corporations	0	0	0					40	
200 Non-financial corporations	6	4	2	22	10	13		3,641	81
210 Households	1	1	0	0	0			806	4
220 Total	**149**	**64**	**85**	**544**	**15**	**529**		**79,621**	**1,865**

31 Dec 2019. EUR million	a	b	c	d	e	f
	Gross carrying amount/nominal amount					
	Performing exposures			Non-performing exposures		
		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3
1 Loans and advances	102,842	94,756	8,086	1,510	184	1,272
2 Central banks	11,993	11,993				
3 General governments	2,012	2,001	11			
4 Credit institutions	243	243				
5 Other financial corporations	911	909	3	0		0
6 Non-financial corporations	34,501	31,350	3,151	851	39	784
7 Of which SMEs	13,687	12,107	1,580	527	32	482
8 Households	53,182	48,260	4,922	659	145	488
9 Debt securities	13,707	13,613	94	1		1
11 General governments	4,213	4,213				
12 Credit institutions	7,264	7,264				
13 Other financial corporations	132	132				
14 Non-financial corporations	2,099	2,005	94	1	0	1
15 Off-balance-sheet exposures	25,659	24,732	926	139	3	104
17 General governments	2,060	2,058	2			
18 Credit institutions	751	751				
19 Other financial corporations	449	446	3			
20 Non-financial corporations	15,957	15,107	851	134	2	103
21 Households	6,440	6,370	70	5	1	1
22 Total	**142,208**	**133,101**	**9,107**	**1,649**	**187**	**1,376**

31 Dec 2019. EUR million	g	h	i	j	k	l	m	n	o
	Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Accumulated partial write-off	Collateral and financial guarantees received	
	Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions				On performing exposures	On non-performing exposures
		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3			
1 Loans and advances	114	40	74	441	4	437		75,694	1,043
3 General governments	1	1	0					298	
4 Credit institutions	0	0						4	
5 Other financial corporations	1	1	0	0		0		635	0
6 Non-financial corporations	75	31	43	348		349		25,837	486
7 Of which SMEs	29	9	20	196		191		12,739	326
8 Households	36	6	30	93	4	88		48,919	557
9 Debt securities	3	2	1					1,073	
11 General governments	0	0						685	
12 Credit institutions	1	1						197	
13 Other financial corporations	0	0						1	
14 Non-financial corporations	1	1	1					191	
15 Off-balance-sheet exposures	8	3	5	10	0	10		5,408	80
17 General governments	0	0						156	
18 Credit institutions	0	0						12	
19 Other financial corporations	0	0	0					33	
20 Non-financial corporations	8	3	5	10	0	10		4,384	79
21 Households	0	0	0	0	0			824	1
22 Total	**125**	**45**	**80**	**451**	**4**	**447**		**82,175**	**1,123**

3.1.22 Collateral obtained by taking possession and execution processes (Template 9, EU CQ7)

	31 Dec 2020		31 Dec 2019	
	a	b	a	b
	Collateral obtained by taking possession		Collateral obtained by taking possession	
EUR million	Value at initial recognition	Accumulated negative changes	Value at initial recognition	Accumulated negative changes
2 Other than PP&E	7	-4	5	-1
4 Commercial Immovable property	7	-4	5	-1
8 Total	**7**	**-4**	**5**	**-1**

3.1.23 Information on newly originated loans and advances provided under newly applicable public guarantee schemes introduced in response to COVID-19 crisis (template 3)

		31 Dec 2020			
		a	b	c	d
		Gross carrying amount		Maximum amount of the guarantee that can be considered	Gross carrying amount
	EUR million		of which: forborne	Public guarantees received	Inflows to non-performing exposures
1	**Newly originated loans and advances subject to public guarantee schemes 1 July 2020 - 31 Dec 2020**	20	1	7	1
2	of which: Households	0			
3	of which: Collateralised by residential immovable property	0			
4	of which: Non-financial corporations	20	1	7	1
5	of which: Small and Medium-sized Enterprises	14	0	6	1
6	of which: Collateralised by commercial immovable property	6			

3.2 CCR and Market Risk

3.2.1 Analysis of CCR exposure by approach (EU CCR1)

Counterparty credit risk arising from derivative contracts is based on the daily market valuation of derivative contracts.

The size of customer limits are defined on the basis of assets included in derivative contracts and the estimated validity of the contracts.

Counterparty credit risk associated with derivative contracts arises from receivables which OP Financial Group may have from its counterparties in case they default. OP Financial Group measures counterparty risk using a fair value model, whereby the value of exposure comprises the contract market value and the expected potential future exposure. The exposure amount based on the fair value model is used in the calculation of regulatory capital requirement and of economic capital.

The Group confirms corporate counterparty exposure limits once a year and in this connection also checks the status of collateral applying to the limits for derivative transactions.

Credit risk arising from bank counterparties is reduced 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 cash or securities in security for the receivable. Collateral matching between counterparties are performed on a daily basis. In respect of guarantees and collateral securities, the Group applies the same practice as in credit risks. The Group ensures sufficient collateral as part of its daily liquidity management through stress tests.

If S&P had downgraded OP Financial Group's credit rating from AA– to A on 31 December 2020, an additional collateral worth EUR 50 million would have been required. If the credit rating had been downgraded in 2019, additional collateral of EUR 55 million would have been required.

Capital adequacy requirement due to counterparty credit risk may arise from items related to banking book and the trading book. Capital adequacy requirement due to counterparty credit risk is calculated, for example, on OTC derivatives and sale and repurchase agreements.

OP Financial Group's portfolio of derivatives consists mainly of interest rate derivatives in which no parallel correlation exists between the creditworthiness of the counterparty to the derivative contract and interest rates (so-called wrong-way risk).

	31 Dec 2020				31 Dec 2019			
	b	c	f	g	b	c	f	g
EUR million	Replacement cost/current market value	Potential future credit exposure	EAD post CRM	RWAs	Replacement cost/current market value	Potential future credit exposure	EAD post CRM	RWAs
1 Mark to market	2,403	1,290	3,694	790	2,067	828	2,896	506

Counterparty credit risk exposures increased from their level at the end of 2019. This increase came from an increase in the portfolio of derivatives and a rise in market values arising from lower interest rates.

3.2.2 CVA capital charge (EU CCR2)

	31 Dec 2020		31 Dec 2019	
	a	b	a	b
EUR million	Exposure value	RWAs	Exposure value	RWAs
4 All portfolios subject to the standardised method	448	138	291	191
5 Total subject to the CVA capital charge	448	138	291	191

No major changes took place in the CVA capital requirement.

3.2.3 Standardised approach – CCR exposures by regulatory portfolio and risk (EU CCR3)

31 Dec 2020, Exposure classes, EUR million	Risk Weight						Of which unrated
	0 %	2 %	50 %	100 %	Others	Total	
1 Central governments or central banks	357					357	
2 Regional government or local authorities	746					746	
3 Public sector entities				1		1	1
4 Multilateral development banks	260					260	
6 Institutions		379				379	379
11 Total	**1,363**	**379**		**1**		**1,744**	**381**

31 Dec 2019, Exposure classes, EUR million	Risk Weight						Of which unrated
	0 %	2 %	50 %	100 %	Others	Total	
1 Central governments or central banks	283					283	
2 Regional government or local authorities	376					376	
3 Public sector entities				1		1	1
4 Multilateral development banks	309					309	
5 International organisations						0	
6 Institutions		326				326	326
11 Total	**968**	**326**		**1**		**1,295**	**327**

Exposures for central counterparty clearing are shown in column 2%. This increase in exposures came from an increase in the portfolio of derivatives and a rise in market values arising from lower interest rates.

3.2.4 IRB approach – CCR exposures by portfolio and PD scale (EU CCR4)

	a	b	c	d	e	f	g
31 Dec 2020, PD scale	EAD post CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density
Corporates							
0,00 - < 0,15	619	0.1 %	107	44.8 %	15.2	158	25.5 %
0,15 - < 0,25	155	0.2 %	47	45.0 %	12.9	72	46.6 %
0,25 - < 0,50	139	0.3 %	66	44.7 %	8.0	85	61.1 %
0,75 - < 2,50	204	1.0 %	121	44.9 %	8.2	193	94.6 %
2,50 - < 10,00	48	5.2 %	73	45.0 %	2.8	69	144.6 %
10,00 - < 100,00	1	21.8 %	6	45.0 %	5.0	3	242.3 %
100.00	11	100.0 %	3	45.0 %	5.2		
Total	**1,178**	**1.4 %**	**423**	**44.9 %**	**12.4**	**581**	**49.3 %**

	a	b	c	d	e	f	g
31 Dec 2019, PD scale	EAD post CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density
Corporates							
0,00 - < 0,15	434	0.1 %	98	45.0 %	13.8	103	23.6 %
0,15 - < 0,25	146	0.2 %	35	45.0 %	14.9	65	44.5 %
0,25 - < 0,50	89	0.3 %	60	44.7 %	9.5	53	59.6 %
0,50 - < 0,75							
0,75 - < 2,50	152	1.2 %	113	39.0 %	11.9	124	82.1 %
2,50 - < 10,00	33	3.8 %	71	45.0 %	6.0	40	122.5 %
10,00 - < 100,00	1	37.2 %	6	45.0 %	6.0	3	243.7 %
100.00	12	100.0 %	2	45.0 %	9.1		
Total	**866**	**0.5 %**	**385**	**43.9 %**	**12.8**	**388**	**44.8 %**

	a	b	c	d	e	f	g
31 Dec 2020, PD scale	EAD post CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density
Institutions							
0,00 - < 0,15	418	0.1 %	28	24.6 %	8.8	71	17.0 %
0,15 - < 0,25	95	0.2 %	13	15.1 %	8.7	16	17.0 %
0,25 - < 0,50	258	0.3 %	8	26.0 %	8.5	113	43.6 %
Total	**771**	**0.2 %**	**49**	**23.9 %**	**8.8**	**200**	**25.9 %**

	a	b	c	d	e	f	g
31 Dec 2019, PD scale	EAD post CRM	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density
Institutions							
0,00 - < 0,15	585	0.1 %	27	17.6 %	8.7	71	12.1 %
0,15 - < 0,25	33	0.2 %	12	12.8 %	6.6	5	14.1 %
0,25 - < 0,50	117	0.3 %	7	16.9 %	12.7	35	30.0 %
Total	**735**	**0.1 %**	**46**	**17.3 %**	**9.7**	**111**	**15.1 %**

The average risk weights of corporate exposures and credit institution exposures increased from their 2019-end level. This increase in corporate exposures came from an increase in the portfolio of derivatives and a rise in market values arising from lower interest rates. No information has been presented on retail exposures; the amount of counterparty risk exposures under retail exposures is not material.

3.2.5 Impact of netting and collateral held on exposure values (EU CCR5-A)

	31 Dec 2020					31 Dec 2019				
	a	b	c	d	e	a	b	c	d	e
EUR million	Gross positive fair value	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure	Gross positive fair value	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
1 Derivatives	7,118	3,005	4,113	420	3,694	5,506	1,903	3,603	707	2,896
4 Total	**7,118**	**3,005**	**4,113**	**420**	**3,694**	**5,506**	**1,903**	**3,603**	**707**	**2,896**

The amount of net exposures on derivatives increased from the end of 2019. This increase came from an increase in the portfolio of derivatives and a rise in market values arising from lower interest rates.

3.2.6 Composition of collateral for exposures to CCR (EU CCR5-B)

	a	b	c	d
	Collateral used in derivative transactions			
	Fair value of collateral received		Fair value of posted collateral	
31 Dec 2020, EUR million	Segregated	Unsegregated	Segregated	Unsegregated
1 Cash		420	13	503
2 Sovereign debt		0	437	84

	a	b	c	d
	Collateral used in derivative transactions			
	Fair value of collateral received		Fair value of posted collateral	
31 Dec 2019, EUR million	Segregated	Unsegregated	Segregated	Unsegregated
1 Cash		707	0	432
2 Sovereign debt			375	222
4				

Collateral given to the central counterparty is segregated. Collateral with other counterparties is unsegregated. The majority of the collateral is cash.

3.2.7 Credit derivatives exposures (EU CCR6)

	31 Dec 2020			31 Dec 2019		
	a	b	c	a	b	c
	Credit derivative hedges			Credit derivative hedges		
EUR million	Protection bought	Protection sold	Other credit derivatives	Protection bought	Protection sold	Other credit derivatives
Notionals						
Index credit default swaps		172			153	
Other credit derivatives					80	
Total notionals		**172**			**233**	
Fair values		**1**			**0**	
Positive fair value (asset)		1			4	
Negative fair value (liability)		0			-4	

Credit derivatives relate to structured notes. The amount of credit derivatives was slightly lower than at the end of 2019, due to the structured notes arriving at maturity.

3.2.8 Exposures to CCPs (EU CCR8)

	31 Dec 2020		31 Dec 2019	
	a	b	a	b
EUR million	EAD post CRM	RWAs	EAD post CRM	RWAs
1 Exposures to QCCPs (total)	379	8	326	7
2 Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	379	8	326	7
3 (i) OTC derivatives	379	8	326	7
7 Segregated initial margin	450		375	

The amount of exposures related to the central counterparty rose as a result of an increase in the portfolio. The initial margin depends on the risk level of the position; the margin amount increased during the year.

3.2.9 Market risk under the standardised approach (EU MR1)

		31 Dec 2020		31 Dec 2019	
		a	b	a	b
	EUR million	RWAs	Capital requirements	RWAs	Capital requirements
	Outright products				
1	Interest rate risk (general and specific)	959	77	1,159	93
2	Equity risk (general and specific)	0	0	0	0
4	Commodity risk	37	3	1	0
	Options				
6	Delta-plus method			148	12
7	Scenario approach	99	8		
9	**Total**	**1,096**	**88**	**1,309**	**105**

The amount of general and specific risk decreased as a result of reduced position. The Group adopted the scenario approach in calculating non-delta risks. This change decreased the amount of capital requirement.

3.3 Securitisation positions

3.3.1 Securitisation positions

	31 Dec 2020		31 Dec 2019	
Securitisation positions by rating category, Moody's equivalent, EUR million	Exposure	Risk-weighted assets	Exposure	Risk-weighted assets
Non-trading book positions				
Securitisation positions				
Aaa	551	110	624	46
Total	**551**	**110**	**624**	**46**

OP Financial Group acts only as an investor in the securitisation process and it has no resecuritised positions. Securitised positions did not include past due or impaired receivables.

The IRBA has been applied to securitisation positions. OP Financial Group pays special attention to bonds' structural and collateral-related features in its investment in securitised assets.

OP Financial Group follows regularly changes related to the credit and market risk of securitised loans.

3.4 Scope of application, capital base and countercyclical capital buffer

3.4.1 Differences between accounting and regulatory scopes of consolidation and the mapping of financial statement categories with regulatory risk categoi

	a	b	c	d	e	f	g
			Carrying values of items				
31 Dec 2020, EUR million	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital require ments or subject to deduction from capital
Assets							
Cash and cash equivalents	21,827	21,827	21,827				
Receivables from credit institutions	306	297	297				
Derivative contracts	5,215	4,941		4,941		4,137	
Receivables from customers	93,644	93,711	93,711				
Investment assets	23,423	16,558	15,686		551	321	
Investments in associates	139	28	15				
of which goodwill in associates	13	13					13
Assets covering unit-linked contracts	11,285						
Intangible assets	1,311	531					391
Property, plant and equipment (PPE)	633	582	582				
Other assets	2,236	1,373	1,349	23			
of which pension assets	31	31					25
Tax assets	188	147	147				
Total assets	**160,207**	**139,994**	**133,615**	**4,964**	**551**	**4,458**	**391**
Liabilities							
Liabilities to credit institutions	8,086	8,085					8,085
Derivative contracts	3,424	3,490					3,490
of which DVA	-15	-15					-12
Liabilities to customers	73,422	75,100					75,100
Insurance liabilities	9,374						
Liabilities from unit-linked insurance and investment contracts	11,323						
Debt securities issued to the public	34,706	34,779					34,779
Provisions and other liabilities	3,431	2,807					2,807
Tax liabilities	1,069	832					832
Subordinated liabilities	2,261	2,288					2,288
Total liabilities	**147,095**	**127,381**					**127,381**
Equity capital							
Share of OP Financial Group's owners							
Cooperative capital							
Cooperative share	212	212					212
Profit share (Non-voting cooperative share)	2,962	2,962					2,962
Fair value reserve	382	203					203
of which cash flow hedge reserve	203	203					203
Other reserves	2,172	2,123					2,123
Retained earnings	7,248	7,114					7,114
Profit for previous financial years	7,048	7,167					7,167
Actuarial gains and losses	-441	-417					-417
Profit for the financial year	641	364					364
Non-controlling interests	**137**						
Total equity capital	**13,112**	**12,614**					**12,614**
Total liabilities and equity capital	**160,207**	**139,994**					**139,994**

The differences between the balance sheets of OP Financial Group and the consolidation group are due to differences in the content and extent of consolidation. Within the consolidation group, insurance companies have not been consolidated but are shown in investments made by the consolidation group and the insurance companies' equity capital is not included in the equity capital of the consolidation group. The consolidation group has applied the materiality threshold specified in Article 19 of CRR in the consolidation of its companies. Points 2.1.1 and 3.4.4 present items deducted from the capital base.

3.4.2 Main sources of differences between regulatory exposure amounts and carrying values in financial statements (EU LI2)

	a	b	c	d	e
		Items subject to			
31 Dec 2020, EUR million	Total	Credit risk framework	CCR framework	Securitisation framework	Market risk
1 Assets carrying value amount under the scope of regulatory consolidation (as per template EU LI1)	**143,588**	**133,615**	**4,964**	**551**	**4,458**
4 Off-balance-sheet amounts	26,262	9,930			
6 Differences due to different netting rules, other than those already included in row 2	-1,271		-1,271		
7 Differences due to consideration of provisions	644	644			
9 Other adjustments	-220	-220			
10 Exposure amounts considered for regulatory purposes	**169,004**	**143,969**	**3,694**	**551**	**4,458**

In capital adequacy regulation, it is possible to take account of netting on a more extensive basis than in accounting. Given that certain accounting items cannot be unambiguously divided into risk types, these items have been removed from calculation to avoid their overlapping treatment. Of off-balance-sheet items, contractual exposure amount has been presented in column a and in column b exposure amount after applying the credit conversion factor.

3.4.3 Outline of the differences in the scopes of consolidation (entity by entity) (EU LI3)

	a	b	c	d	e	f
		Method of regulatory consolidation				
Name of the entity	Method of accounting consolidation	Full consolidation	Proportional consolidation	Neither consolidated nor deducted	Supervisor's permission to risk weighting	Description of the entity
OP Cooperative	Full consolidation	x				Entity assisting in financial intermediation
OP-Services Ltd	Full consolidation	x				Activities serving financing
OP Mortgage Bank	Full consolidation	x				Banking
OP Custody Ltd	Full consolidation	x				Asset management
OP-Card Company Plc	Full consolidation	x				Banking
OP Fund Management Company Ltd	Full consolidation	x				Fund management company
Helsinki Area Cooperative Bank	Full consolidation	x				Banking
Checkout Finland Oy	Full consolidation	x				Activities serving financing
OP Asset Management Ltd	Full consolidation	x				Asset management
Pivo Wallet Oy	Full consolidation	x				Activities serving financing
OP Life Assurance Company Ltd	Full consolidation			x	x	Insurance business
OP Koti Helsinki Oy	Full consolidation			x		Real estate agent services
OP Asset Management Execution Services Oy	Full consolidation			x		Activities serving financing and investment
PAM USA Funds Oy	Full consolidation			x		Activities serving financing and investment
OP Property Management Ltd	Full consolidation	x				Real-estate investment operations
Real Estate Fund Finland Oy	Full consolidation			x		Real-estate investment operations
Real Estate Fund of Funds Finland Oy	Full consolidation			x		Real-estate investment operations
Real Estate Fund Finland III GP Oy	Full consolidation			x		Real-estate investment operations
Real Estate Debt And Secondaries GP Oy	Full consolidation			x		Real-estate investment operations
OP Asuntorahasto I GP Oy	Full consolidation			x		Real-estate investment operations
OP Toimitilakiinteistö GP Oy	Full consolidation			x		Real-estate investment operations
OP Rent Oy	Full consolidation			x		Real-estate investment operations
OP Tonttirahasto GP Oy	Full consolidation			x		Real-estate investment operations
Access Capital Partners Group S.A.	Equity method		x			Activities serving financing and investment
PAM USA Fund I Ky				x		Mutual fund business
Kiint. Oy Ansatie 5	IFRS11			x		Ownership and possession of real estate
Kiint. Oy Uusi Paino	IFRS11			x		Ownership and possession of real estate
Tampereen Areenahotelli Ky	Equity method			x		Ownership and possession of real estate
Tampereen Monitoimiareena Ky	Equity method			x		Ownership and possession of real estate
Tampereen Tornit Ky	Equity method			x		Ownership and possession of real estate
Tampereen Asunnot Ky	Equity method					Ownership and possession of real estate
OP Helsinki property (less than MEUR 10)	IFRS11			x		Ownership and possession of real estate
OP Life Assurance Company's property (less than MEUR 10)	IFRS11			x		Ownership and possession of real estate
Finanssi-Kontio Oy	Equity method		x			IT hardware and software consulting
Paja Finanssipalvelut Oy	Equity method		x			Business and other management consultancy activities
Opset Oy				x		Other mail delivery and courier services
Real Estate Fund of Funds II Ky	Full consolidation			x		Property investment
Real Estate Fund Finland III Ky	Full consolidation			x		Property investment
OP-Vallila Rahasto VYM Oy	Full consolidation			x		Property investment
Aino Holdingyhtiö Ky	Equity method			x		Mutual fund business
Joukahainen Oy	Equity method			x		Asset management
Otso Infrastruktuuri I Ky	Full consolidation			x		Asset management
Real Estate Fund of Funds V Gp Oy	Full consolidation			x		Financial services unclassified elsewhere
Real Estate Fund of Funds V Ky	Equity method			x		Financial services unclassified elsewhere
European Real Estate Senior Debt 1	Full consolidation			x		Financial services unclassified elsewhere
European Real Estate Senior Debt 2	Full consolidation			x		Financial services unclassified elsewhere
European Real Estate Senior Debt 3	Full consolidation			x		Financial services unclassified elsewhere
HRJ Global Buy-Out III (Asia) L.P.	Equity method			x		Mutual fund business
Certior Credit Opportunities Fund Ky	Equity method			x		Mutual fund business
Certior Credit Investments I Ky	Equity method			x		Mutual fund business
Access Capital Private Debt Fund II Ky	Equity method			x		Mutual fund business
OP Corporate Bank plc	Full consolidation	x				Banking
OP Finance Estonia AS	Full consolidation	x				Other lending/Leasing company
OP Finance SIA	Full consolidation	x				Other lending/Leasing company
OP Finance UAB	Full consolidation	x				Other lending/Leasing company
Pohjola Insurance Ltd	Full consolidation			x	x	Non-life insurance
Pohjola Hospital Ltd.	Full consolidation			x		Medical centres, private doctors and comparable specialist physician services
Tikkurilan Kauppatalo Oy	IFRS11			x		Property company
Kiint. Oy Helsingin Puutarhurinkuja 2	IFRS11			x		Property company
Kiinteistö Oy Vantaan Kisällintie 13	IFRS11			x		Property company
Kiint. Oy STC Viinikkala	IFRS11			x		Property company
Kiint. Oy Aleksis Kiven katu 21-23	IFRS11			x		Ownership and possession of real estate
Kiint. Oy Kouvolan Karhut	IFRS11			x		Ownership and possession of real estate
OP Corporate Bank property (less than MEUR 10)	IFRS11			x		Property company
Pohjola Insurance property (less than MEUR 10)	IFRS11			x		Property company
Kiint. Oy Grand Cargo Terminal 1	IFRS11			x		Property company
Kiint. Oy Grand Cargo Terminal 2	IFRS11			x		Property company
Kiint. Oy Tampereen Ratinankaari	IFRS11			x		Property company
Kiinteistö Oy Vuosaaren Pohjoinen Ostoskeskus	IFRS11			x		Property company
Kiinteistö Oy Kanta-sarvis I	IFRS11			x		Property company
Kiinteistö Oy Koskitammi	IFRS11			x		Property company
Kiinteistö Oy Helsingin Topeliuksenkatu 41b	IFRS11			x		Property company
Kiinteistö Oy Helsingin Franzéninkatu 13	IFRS11			x		Property company
Kiinteistö Oy Turun Joukahaisenkadun Pysäköinti	IFRS11			x		Property company

Kiinteistö Oy Turun Joukahaisenkatu 9	IFRS11		x	Property company
Kiinteistö Oy Oulun Kiilakivi	IFRS11		x	Property company
Kiinteistö Oy Kuopion Isabella	IFRS11		x	Property company
Kiinteistö Oy Espoon Siuntiontie 3	IFRS11		x	Property company
Kiinteistö Oy Kanta-Sarvis II	IFRS11		x	Property company
Kiinteistö Oy Asiakkaankatu 3	IFRS11		x	Property company
Kiinteistö Oy Hatanpäänkatu 1	IFRS11		x	Property company
Kiinteistö Oy Tuusulan Jatke	IFRS11		x	Property company
Keskinäinen kiinteistö Oy Marikko	IFRS11		x	Property company
Kiinteistö Oy Koivuhaan Yrityskeskus	IFRS11		x	Property company
Kiinteistö Oy Kaarlenkadun Fenno	IFRS11		x	Property company
Prime Property Oy	Full consolidation		x	Buying and selling of own real estate
Alajärven Op	Full consolidation	x		Banking
Ala-Satakunnan Op	Full consolidation	x		Banking
Alastaron Op	Full consolidation	x		Banking
Alavieskan Op	Full consolidation	x		Banking
Alavuden seudun Op	Full consolidation	x		Banking
Andelsbanken för Åland	Full consolidation	x		Banking
Andelsbanken Raseborg	Full consolidation	x		Banking
Artjärven Op	Full consolidation	x		Banking
Askolan Op	Full consolidation	x		Banking
Auranmaan Op	Full consolidation	x		Banking
Etelä-Hämeen Op	Full consolidation	x		Banking
Etelä-Karjalan Op	Full consolidation	x		Banking
Etelä-Pirkanmaan Op	Full consolidation	x		Banking
Etelä-Pohjanmaan Op	Full consolidation	x		Banking
Euran Op	Full consolidation	x		Banking
Haapamäen Seudun Op	Full consolidation	x		Banking
Hailuodon Op	Full consolidation	x		Banking
Halsuan-Ylipään Op	Full consolidation	x		Banking
Himangan Op	Full consolidation	x		Banking
Humppilan-Metsämään Op	Full consolidation	x		Banking
Itä-Uudenmaan Op	Full consolidation	x		Banking
Janakkalan Op	Full consolidation	x		Banking
Jokioisten Op	Full consolidation	x		Banking
Jämsän Seudun Op	Full consolidation	x		Banking
Järvi-Hämeen Op	Full consolidation	x		Banking
Kainuun Op	Full consolidation	x		Banking
Kangasalan Seudun Op	Full consolidation	x		Banking
Kangasniemen Op	Full consolidation	x		Banking
Kemin Seudun Op	Full consolidation	x		Banking
Kerimäen Op	Full consolidation	x		Banking
Keski-Pohjanmaan Op	Full consolidation	x		Banking
Keski-Suomen Op	Full consolidation	x		Banking
Kiikoisten Op	Full consolidation	x		Banking
Kiteen Seudun Op	Full consolidation	x		Banking
Koitin-Pertunmaan Op	Full consolidation	x		Banking
Korpilahden Op	Full consolidation	x		Banking
Korsnäs Andelsbank	Full consolidation	x		Banking
Kronoby Andelsbank	Full consolidation	x		Banking
Kuhmon Op	Full consolidation	x		Banking
Kuortaneen Op	Full consolidation	x		Banking
Kurun Op	Full consolidation	x		Banking
Kuusamon Op	Full consolidation	x		Banking
Kymenlaakson Op	Full consolidation	x		Banking
Kärkölän Op	Full consolidation	x		Banking
Laihian Op	Full consolidation	x		Banking
Lapin Op	Full consolidation	x		Banking
Lehtimäen Op	Full consolidation	x		Banking
Lemin Op	Full consolidation	x		Banking
Limingan Op	Full consolidation	x		Banking
Liperin Op	Full consolidation	x		Banking
Loimaan Seudun Op	Full consolidation	x		Banking
Lokalahden Op	Full consolidation	x		Banking
Lounaismaan OP	Full consolidation	x		Banking
Lounaisrannikon Op	Full consolidation	x		Banking
Lounais-Suomen Op	Full consolidation	x		Banking
Luhangan Op	Full consolidation	x		Banking
Luopioisten Op	Full consolidation	x		Banking
Luumäen Op	Full consolidation	x		Banking
Länsi-Kymen Op	Full consolidation	x		Banking
Länsi-Suomen Op	Full consolidation	x		Banking
Maaningan Op	Full consolidation	x		Banking
Miehikkälän Op	Full consolidation	x		Banking
Mouhijärven Op	Full consolidation	x		Banking
Multian Op	Full consolidation	x		Banking
Mynämäen-Nousiaisten Op	Full consolidation	x		Banking
Mäntsälän Op	Full consolidation	x		Banking
Nagu Andelsbank	Full consolidation	x		Banking
Nakkila-Luvian Op	Full consolidation	x		Banking
Niinijoen Op	Full consolidation	x		Banking
Nilakan Seudun Op	Full consolidation	x		Banking
Nivalan Op	Full consolidation	x		Banking

Op Kantrisalo	Full consolidation	x			Banking
Orimattilan Op	Full consolidation	x			Banking
Oripään Op	Full consolidation	x			Banking
Oulaisten Op	Full consolidation	x			Banking
Oulun Op	Full consolidation	x			Banking
Outokummun Op	Full consolidation	x			Banking
Paltamon Op	Full consolidation	x			Banking
Pedersörenejdens Andelsbank	Full consolidation	x			Banking
Perhon Op	Full consolidation	x			Banking
Perhonjokilaakson Op	Full consolidation	x			Banking
Peräseinäjoen Op	Full consolidation	x			Banking
Petäjäveden Op	Full consolidation	x			Banking
Pohjois-Hämeen Op	Full consolidation	x			Banking
Pohjois-Karjalan Op	Full consolidation	x			Banking
Pohjois-Savon Op	Full consolidation	x			Banking
Pohjolan Op	Full consolidation	x			Banking
Polvijärven Op	Full consolidation	x			Banking
Posion Op	Full consolidation	x			Banking
Pudasjärven Op	Full consolidation	x			Banking
Pukkilan Op	Full consolidation	x			Banking
Pulkkilan Op	Full consolidation	x			Banking
Punkalaitumen Op	Full consolidation	x			Banking
Purmo Andelsbank	Full consolidation	x			Banking
Päijät-Hämeen Op	Full consolidation	x			Banking
Raahen seudun Op	Full consolidation	x			Banking
Rantasalmen Op	Full consolidation	x			Banking
Rautalammin Op	Full consolidation	x			Banking
Riistaveden Op	Full consolidation	x			Banking
Ruukin Op	Full consolidation	x			Banking
Rymättylän Op	Full consolidation	x			Banking
Rääkkylän Op	Full consolidation	x			Banking
Sallan Op	Full consolidation	x			Banking
Sastamalan Op	Full consolidation	x			Banking
Satakunnan Op	Full consolidation	x			Banking
Satapirkan Op	Full consolidation	x			Banking
Savitaipaleen Op	Full consolidation	x			Banking
Siikajoen Op	Full consolidation	x			Banking
Siikalatvan Op	Full consolidation	x			Banking
Suomenselän Op	Full consolidation	x			Banking
Suur-Savon Op	Full consolidation	x			Banking
Taivalkosken Op	Full consolidation	x			Banking
Taivassalon Op	Full consolidation	x			Banking
Tampereen Seudun Op	Full consolidation	x			Banking
Tervolan Op	Full consolidation	x			Banking
Tervon Op	Full consolidation	x			Banking
Toholammin Op	Full consolidation	x			Banking
Tornion Op	Full consolidation	x			Banking
Turun Seudun Op	Full consolidation	x			Banking
Tuusniemen Op	Full consolidation	x			Banking
Tyrnävän Op	Full consolidation	x			Banking
Ullavan Op	Full consolidation	x			Banking
Utajärven Op	Full consolidation	x			Banking
Uudenmaan Op	Full consolidation	x			Banking
Vaara-Karjalan Op	Full consolidation	x			Banking
Vaasan Op	Full consolidation	x			Banking
Vehmersalmen Op	Full consolidation	x			Banking
Vesannon Op	Full consolidation	x			Banking
Vihannin Op	Full consolidation	x			Banking
Vimpelin Op	Full consolidation	x			Banking
Ylitornion Op	Full consolidation	x			Banking
Ylä-Kainuun Op	Full consolidation	x			Banking
Yläneen Op	Full consolidation	x			Banking
Ylä-Pirkanmaan Op	Full consolidation	x			Banking
Ylä-Savon Op	Full consolidation	x			Banking
Ypäjän Op	Full consolidation	x			Banking
OP-Kiinteistökeskus real estate agencies around 60 (excl. Helsinki OPKK)	Full consolidation			x	Real estate agent services
Saimaa Capital Oy	Fair value		x		Financial services unclassified elsewhere
Länsi-Suomen Pääomarahasto Oy	Fair value			x	Financial services unclassified elsewhere
Uudenmaan Pääomarahasto Oy	Fair value		x		Financial services unclassified elsewhere
Pohjois-Karjalan Kiinteistöt Oy	IFRS11			x	Renting of residential real estate
TOP Rahastosijoitukset Oy	IFRS11			x	Activities of holding companies in the financial sector
Jyväskylän Kassatalo Oy	IFRS11		x		Ownership and possession of real estate
Kiinteistö Oy Vammalan Torikeskus	IFRS11		x		Ownership and possession of real estate
Mikkelin Forum Oy	IFRS11		x		Ownership and possession of real estate
Kiinteistö Oy Tampereen Hämeenkatu 12	IFRS11		x		Ownership and possession of real estate
Kiinteistö Oy Hämeenkivi	IFRS11		x		Ownership and possession of real estate
Kiinteistö Oy Joensuun Koskikatu 9	IFRS11		x		Ownership and possession of real estate
Asunto Oy Oulun Kalevankulma	IFRS11		x		Ownership and possession of real estate
Oy Lappeenrannan Mariankulma	IFRS11		x		Ownership and possession of real estate
OP Turun seudun kiinteistöt Oy	IFRS11			x	Business and other management consultancy
Pikespo Invest Oy Ltd	Equity method		x		Financial services unclassified elsewhere

OP cooperative banks' real estate management companies (less than MEUR 10)	IFRS11	x	Property company

According to the definition of the consolidation group, insurance companies have not been consolidated into capital adequacy but are treated as investments. Other non-consolidated entities are less than EUR 10 million in terms of their balance sheet. There are no investments that are deducted from own funds.

3.4.4 Capital base using formula by the European Banking Authority

According to the European Commission implementing regulation, a credit institution must present its own funds using the model for disclosure for own funds determined by the European Banking Authority.

31 Dec 2020, EUR million			Regulation (EU) No 575/2013 Article Reference
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and related share premium accounts	3,047	26 (1), 27, 28, 29
	of which: cooperative shares	212	EBA list, 26 (3)
	of which: profit shares (Non-voting cooperative share)	2,962	EBA list, 26 (3)
	of which: cooperative capital deducted from own funds	-126	
2	Retained earnings	7,167	26 (1) c
3	Accumulated other comprehensive income (and other reserves)	1,910	26 (1)
5a	Independently reviewed interim profits net of any foreseeable charge or dividend	269	26 (2)
6	**CET1 before regulatory adjustments:**	**12,393**	
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments	-56	34, 105
8	Intangible assets	-391	36 (1) b, 37
11	Fair value reserves related to gains or losses on cash flow hedges	-203	33 (1) a
12	Negative amounts resulting from the calculation of expected loss amounts	-413	36 (1) d, 40, 159
14	Gains or losses on liabilities valued at fair value resulting from changesin own credit standing	-12	33 (1) b
15	Defined benefit pension fund assets	-25	36 (1) e, 41
28	**Total regulatory adjustments to CET1**	-1,100	
29	**Common Equity Tier 1 (CET1) capital**	**11,293**	
Additional Tier 1 (AT1) capital: instruments			
33	Amount of qualifying items referred to in Article 484 (4)and the related share premium accounts subject to phase out from AT1.	40	486 (3)
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	40	
Additional Tier 1 (AT1) capital: regulatory adjustments			
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**		
44	**Additional Tier 1 (AT1) capital**	40	
45	**Tier 1 capital (T1 = CET1 + AT1)**	11,333	
Tier 2 (T2) capital: Instruments and provisions			
46	Capital instruments and the related share premium accounts	1,599	62, 63
51	**T2 before regulatory adjustments**	1,599	
Tier 2 (T2): regulatory adjustments			
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)		63 b (i), 66 a, 67
57	**Total regulatory adjustments to Tier 2 (T2) capital**		
58	**Tier 2 (T2) capital**	1,599	
59	**Total capital (TC = T1 + T2)**	12,933	
60	**Total risk weighted assets**	55,464	
Capital ratios and buffers			
61	Common Equity Tier 1 (CET1) (as a percentage of total risk exposure amount)	18.9	92 (2) a
62	Tier 1 (T1) (as a percentage of total risk exposure amount)	19.0	92 (2) b
63	Total capital (as a percentage of total risk exposure amount)	21.7	92 (2) c
64	Institution specific buffer requirement expressed as a percentage of risk exposure amount	9.0	CRD 128, 129, 130, 131, 133
65	of which: capital conservation buffer requirement	2.5	
66	of which: countercyclical buffer requirement	0.0	
67a	of which: Global Systemically Important Institution (G-SII) of Other Systemically Important Institution (O-SII) buffer	1.0	CRD 131
68	Common Equity Tier 1 (CET1) available to meet buffers (as a percentage of risk exposure amount)	18.9	CRD 128
Applicable caps on the inclusion of provisions in Tier 2			
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	49,850	62
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)			
82	Current cap on AT1 instruments subject to phase out arrangements	40	484 (4), 486 (3),(5)
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	41	484 (4), 486 (3),(5)

3.4.5 Institution-specific countercyclical capital buffer

Table 1: Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer, EUR million

Row		General credit exposures		Trading book exposure		Securitisation exposure	
		Exposure value for SA	Exposure value IRB	Sum of long and short position of trading book	Value of trading book exposure for internal models	Exposure value for SA	Exposure value for IRB
		010	020	030	040	050	060
010	**Breakdown by country***						
	Finland	2,204	100,100	369			56
	Norway	0	373	12			
	Czech	0	10				
	Slovakia	0	1				
	Bulgaria	0	0				
	Luxembourg	0	57	0			
	Other	2,397	2,208	64			495
020	**Total**	**4,601**	**102,748**	**446**			**551**

Row		Own funds requirements					
		Of which: General credit exposures	Of which: Trading book exposures	Of which: Securitisation exposures	Total	Own funds requirement weights	Counter-cyclical capital buffer rate
		070	080	090	100	110	120
010	**Breakdown by country***						
	Finland	3,840	18	1	3,941	0.92	
	Norway	10	1		11	0.00	1.00 %
	Czech	1			1	0.00	0.50 %
	Slovakia	0			0	0.00	1.00 %
	Bulgaria	0			0	0.00	0.50 %
	Luxembourg	10	1		11	0.00	0.25 %
	Other	308	5	8	321	0.07	
020	**Total**	**4,168**	**24**	**9**	**4,284**	**1.00**	

Table 2: Amount of institution-specific countercyclical capital buffer

Row		Column 010
010	**Total risk exposure amount**	**59,720**
020	**Institution specific countercyclical buffer rate**	**0.00 %**
030	**Institution specific countercyclical buffer requirement**	**2**

* Exposures calculated based on Article 140.4 of the Capital Requirements Directive exclude government exposures, exposures comparable to them and credit institution exposures.

4 Leverage

4.1 Leverage

Leverage ratio, EUR million	31 Dec 2020	31 Dec 2019
Tier 1 capital (T1)	11,333	10,879
Total exposure	144,799	131,504
Leverage ratio, %	**7.8**	**8.3**

Leverage ratio decreased particularly as a result of the increase in exposures caused by central bank deposits. The leverage ratio that describes a company's degree of indebtedness is presented in accordance with Commission Delegated Regulation. According to these rules, the minimum ratio is three per cent. The leverage ratio is based on period-end figures.

Table LRSum: Summary reconciliation of accounting assets and leverage ratio exposures		Applicable amount 31 Dec 2020
1	Total assets as per published financial statements	160,207
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-20,213
4	Adjustments for derivative financial instruments	1,269
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	8,214
7	Other adjustments	-4,678
8	**Leverage ratio total exposure measure**	**144,799**

Table LRCom: Leverage ratio common disclosure CRR		CRR leverage ratio exposures
On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	133,719
2	Asset amounts deducted in determining Tier 1 capital	-828
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)**	**132,891**
Derivative exposures		
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	2,567
5	Add-on amounts for PFE associated with all derivatives transactions (mark- to-market method)	1,127
9	Adjusted effective notional amount of written credit derivatives	1
11	**Total derivatives exposures**	**3,695**
Other off-balance sheet exposures		
17	Off-balance sheet exposures at gross notional amount	26,262
18	Adjustments for conversion to credit equivalent amounts	-18,048
19	**Other off-balance sheet exposures**	**8,214**
Capital and total exposure mesure		
20	**Tier 1 capital**	**11,333**
21	**Leverage ratio total exposure measure**	**144,799**
Leverage ratio		
22	**Leverage ratio**	**7.8**
Choice on transitional arrangements and amount of derecognised fiduciary items		
EU-23	Choice on transitional arrangements for the definition of the capital measure	Transitional
EU-24	Amount of derecognised fiduciary items in accordance with Article 429(11) of Regulation (EU) No 575/2013	

Table LRSpl: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)		CRR leverage ratio exposures
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	133,719
EU-2	Trading book exposures	326
EU-3	Banking book exposures, of which:	133,393
EU-4	Covered bonds	6,342
EU-5	Exposures treated as sovereigns	29,132
EU-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	303
EU-7	Institutions	560
EU-8	Secured by mortgages of immovable properties	46,993
EU-9	Retail exposures	9,976
EU-10	Corporate	34,092
EU-11	Exposures in default	1,951
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	4,044

Table LRQua: Free format text boxes for disclosure on qualitative items

1 Description of the processes used to manage the risk of excessive leverage

By means of ALM and capital management, the Group ensures that leverage will remain controlled in view of maturity transformation and that adequate tools will remain available for leverage management. OP Financial Group has set its capital adequacy target sufficiently high, in which case leverage will not be high or the minimum leverage ratio will not decrease close to the minimum level. The Group monitors leverage by means of its internal target levels for the leverage ratio and of capital adequacy; in addition, the Group monitors, for example, the net stable funding ratio (NSFR) and the asset encumbrance (AE).

2 Description of the factors that had an impact on the leverage Ratio during the period to which the disclosed leverage Ratio refers

Exposures increased more than the capital base. As a result, the leverage ratio decreased. Central bank deposits increased exposures. The balance sheet grew in line with the growth targets set for the loan portfolio and the liquidity buffer. The Report by the Board of Directors describes changes in the business environment.

5 Liquidity Coverage Ratio (LCR) and Asset Encumbrance (AE)

5.1 LCR disclosure template (EU LIQ1)

Scope of consolidation
Consolidated

EUR million	Total unweighted value (average)				Total weighted value (average)			
Quarter ending on (31, Dec 2020)	31 Dec 2020	30 Sep 2020	30 June 2020	31 March 2020	31 Dec 2020	30 Sep 2020	30 June 2020	31 March 2020
Number of data points used in the calculation of averages: 12								
HIGH-QUALITY LIQUID ASSETS								
1 Total high-quality liquid assets (HQLA)					26,739	24,459	21,847	20,064
CASH - OUTFLOWS								
2 Retail deposits ande deposits from small business customers, of which:	49,013	47,855	46,740	45,685	2,990	2,917	2,848	2,786
3 stable deposits	37,770	37,045	36,370	35,721	1,889	1,852	1,818	1,786
4 Less stable deposits	10,980	10,618	10,266	9,964	1,101	1,065	1,030	1,000
5 Unsecured wholesale funding	19,793	20,595	20,894	21,642	8,152	8,884	9,386	9,726
6 Operational deposits (all counterparties) and deposits in networks of cooperative banks	10,218	9,449	8,615	8,353	2,537	2,345	2,137	2,072
7 Non-operational deposits (all counterparties)	7,852	9,255	10,231	11,444	3,892	4,648	5,200	5,809
8 Unsecured debt	1,723	1,891	2,048	1,844	1,723	1,891	2,048	1,844
9 Secured wholesale funding					0	0	0	0
10 Additional requirements	13,192	12,928	13,029	13,423	2,403	2,159	2,044	1,978
11 Outflows related to derivative exposures and other collateral requirements	1,160	1,012	858	662	1,160	1,012	858	662
12 Outflows related to loss of funding on debt	104			83	104			83
13 Credit and liquidity facilities	11,928	11,915	12,170	12,678	1,139	1,147	1,185	1,233
14 Other contractual funding obligations	227	225	162	160	90	89	27	27
15 Other contingent funding obligations	14,006	13,883	13,616	13,297	929	858	775	692
16 TOTAL CASH OUTFLOWS					14,564	14,907	15,081	15,209
CASH - INFLOWS								
17 Secured lending (e.g. reverse repos)								
18 Inflows from fully performing exposures	2,117	2,136	2,130	2,144	1,189	1,193	1,195	1,205
19 Other cash inflows	2,191	2,263	2,359	2,166	852	904	1,060	933
EU-19b (Excess inflows from a related specialised credit institution)								
20 TOTAL CASH INFLOWS	4,308	4,399	4,489	4,311	2,040	2,097	2,255	2,138
EU-20c Inflows subject to 75% cap	4,308	4,399	4,489	4,311	2,040	2,097	2,255	2,138
					TOTAL ADJUSTED VALUE			
21 LIQUIDITY BUFFER					26,739	24,459	21,847	20,064
22 TOTAL NET CASH OUTFLOWS					14,346	14,035	13,484	13,071
23 LIQUIDITY COVERAGE RATIO (%)					186 %	174 %	162 %	153 %

The liquidity coverage ratio figures are presented as month-end averages for each quarter.

5.2 Disclosure on asset encumbrance (AE)

The tables below provide information on asset encumbrance and liabilities related to encumbered assets. The figures are presented as the quarterly median for 2020. An asset is considered encumbered if it has been pledged or given as collateral or they secure transactions recognised in the balance sheet (e.g. to secure debt). Other assets that are not freely available within the Group are also classified as encumbered. Encumbered assets mainly relate to collateral pertaining to OP Corporate Bank plc's derivatives, loans with collateral of central bank refinancing and collateral with respect to covered bonds issued by OP Mortgage Bank. Of the collateral related to covered bonds, EUR 1 746 (2 809) million is overcollateralised. EUR 9 262 (8 922) million of unencumbered assets is not eligible as collateral (e.g. intangible assets, and property, plant and equipment, adjusting entries for assets and tax assets).

	31 Dec 2020, EUR million	Carrying amount of encumbered assets	of which notionally eligible EHQLA and HQLA	Fair value of encumbered assets	of which notionally eligible EHQLA and HQLA	Carrying amount of unen-cumbered assets	of which EHQLA and HQLA	Fair value of unen-cumbered assets	of which EHQLA and HQLA
		010	030	040	050	060	080	090	100
010	**Assets of the reporting institution**	**24,402**	**4,476**			**115,620**	**8,221**		
030	Equity instruments	0	0			73			
040	Debt securities	5,393	4,476	5,402	4,476	8,852	8,221	8,827	8,221
050	of which: covered bonds	4,675	3,860	4,684	3,860	1,746	1,746	1,737	1,737
060	of which: asset-backed securities	0	0	0	0	525	517	525	517
070	of which: issued by general governments	741	639	739	637	3,881	3,807	3,881	3,806
080	of which: issued by financial corporations	4,675	3,860	4,684	3,860	3,168	3,168	3,159	3,160
090	of which: issued by non-financial corporations	0	0	0	0	1,751	758	1,746	758
120	Other assets	18,811				106,879			
121	of which: Loans and advances other than loans on demand	18,181				76,132			

The table below presents collateral received by asset type

	31 Dec 2020, Collateral received, EUR million	Fair value of encumbered collateral received or own debt securities issued	of which notionally eligible EHQLA and HQLA	Fair value of collateral received or own debt securities issued available for encumbrance	of which EHQLA and HQLA
		010	030	040	060
130	**Collateral received by the reporting institution**			**440**	
140	Loans on demand			440	
150	Equity instruments				
160	Debt securities				
220	Loans and advances other than loans on demand				
230	Other collateral received				
240	**Own debt securities issued other than own covered bonds or asset-backed securities**				
241	**Own covered bonds and asset-backed securities issued and not yet pledged**			817	
250	**Total assets, collateral received and own debt securities issued**	**24,402**	**4,476**		

Encumbered assets and collateral received accounted for 17.4 % of the assets of the amalgamation of the Group's member cooperative bank.

	31 Dec 2020, Encumbered assets and associated liabilities, EUR million	010	030
		Liabilities associated with encumbered assets	Encumbered assets
010	**Carrying amount of selected financial liabilities**	**24,453**	**24,402**
011	Covered bonds	12,824	14,570
012	Other secured debt	11,630	9,833

6 Signatures

The Board of Directors confirms that information in this report has been provided in compliance with Part 8 of the CRR and the related EBA guidelines and the report has been prepared applying the principles of capital adequacy disclosure adopted by OP Cooperative's Board of Directors in 2020. The principles define methods used to verify the accuracy of information to be disclosed and the assessment of the materiality of the information.

Helsinki, 23 February 2021

Jaakko Pehkonen
Chair of the Board of Directors

Timo Ritakallio
CEO

Jarna Heinonen

Leif Enberg

Jari Himanen

Kati Levoranta

Pekka Loikkanen

Tero Ojanperä

Riitta Palomäki

Olli Tarkkanen

Mervi Väisänen

7 Requirements

7.1 Compliance with disclosure requirements

CRR Article	Reference
431 Scope of disclosure requirements	
1	This report, OP Financial Group's financial statements 2020 and information disclosed at www.op.fi
2	Points 1.1. and 2.1.3
3	Disclosure principles of capital adequacy information approved by OP Financial Group's management
4	To be delivered on request
432 Non-material, proprietary or confidential information	
1–4	Point 7.2
433 Frequency of disclosure	Information is disclosed on the date of publication of the financial statements. Information disclosed quarterly and half-yearly is presented in connection with interim reports. The frequency of disclosure will be assessed according to the disclosure principles of capital adequacy information.
434 Means of disclosures	**www.op.fi**
435 Risk management objectives and policies	
1 a)	Point 1 OP Financial Group risk management (EU OVA, EU CRA, EU CCRA, EU MRA, LIQA)
1 b)	Point 1 OP Financial Group risk management (EU OVA, EU CRA, EU CCRA, EU MRA, LIQA)
1 c)	Point 1 OP Financial Group risk management (EU OVA, EU CRA, EU CCRA, EU MRA, LIQA) and www.op.fi > OP Financial Group > Reports > OP's reports > Year 2020 > Corporate Governance Statement
1 d)	Point 1 OP Financial Group risk management (EU OVA, EU CRA, EU CCRA, EU MRA, LIQA), points 3.1.10 (EU CR3) and 3.1.11 of this report
1 e)	Point 1.2 Declaration on the adequacy of risk management arrangements approved by the Executive Management, and risk statement (EU OVA, EU CRA, EU CCRA, EU MRA, LIQA)
1 f)	Point 1.2
The EBA's guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 (EBA/GL/2017/1)	Points 5 (LIQ1) and 1.1 (LIQA)
2 a)-e)	www.op.fi: OP Financial Group > About us > Corporate governance and www.op.fi > OP Financial Group > To the media > Reports > OP's reports > year 2020 > Corporate Governance Statement
436 Scope of application	
a)	Introduction
b)	Point 2.1
c)	Not applicable.
d)	Not applicable.
e)	Not applicable.
437 Own funds	
1a)	Points 2.1.1 and 3.4.1 (EU LI1)
1b)	Annex 1. Capital instruments' main features
1c)	The terms and conditions of instruments can be found on the websites of issuers. The terms and conditions of CET1 instruments can be found in the bylaws of each Group member cooperative bank on their websites: op.fi > OP Financial Group > About us > Group member cooperative banks The terms and conditions of AT1 and T2 capital instruments can be found on OP Corporate Bank's website: op.fi > OP Financial Group > Debt Investors
1d)	Points 2.1.1 and 3.4.4
1e)	Points 2.1.1 and 3.4.4
1f)	Not applicable.
2) Commission Implementing Regulation (EU) No 1423/2013 laying down implementing technical standards with regard to disclosure of own funds requirements for institutions according to Regulation (EU) No 575/2013 of the European Parliament and of the Council	Points 2.1.1, 3.4.1 (EU LI1), 3.4.4 and annex 1. Main features of capital instruments
438 Capital requirements	
a)	Points 1.1 and 1.2
b)	Point 2.1.4
c)	Points 2.1.2 (EU OV1) and 2.1.3
c)	Points 2.1.2 (EU OV1) and 2.1.3
i)	Points 2.1.2 (EU OV1) and 2.1.3
ii)	Points 2.1.2 (EU OV1) and 2.1.3
iii)	Not applicable.
iv)	Not applicable.
e)	Points 2.1.2 (EU OV1), 2.1.3 and 3.2.9 (EU MR1)
f)	Points 2.1.2 (EU OV1) and 2.1.3
Exposures related to financing for special objects and equity exposures, basic method – risk weights	Point 3.1.15 (EU CR10)
439 Exposure to counterparty credit risk	
a)	Point 3.2.1 (EU CCR1), (EU CCRA) and point 1.1
b)	Point 3.2.1 (EU CCR1), (EU CCRA) and point 1.1
c)	Point 3.2.1
d)	Point 3.2.1 (EU CCR1), (EU CCRA)
e)	Point 3.2.5 (EU CCR5-A)
f)	Point 3.2.4 (EU CCR4)
g)	Point 3.2.7 (EU CCR6)
h)	Point 3.2.7 (EU CCR6)
i)	Not applicable.
440 Capital buffers	
1a)	Point 3.4.5
1b)	Point 3.4.5
441 Indicators of global systemic importance	Not applicable
442 Credit risk adjustments	
a)	Note 1. to the 2020 financial statements Accounting policies
b)	Note 1. to the 2020 financial statements Accounting policies

c)	Point 3.1.1 (EU CRB-B)
d)	Points 3.1.2 (EU CRB-C) and 3.1.7 (EU CR1-C)
e)	Points 3.1.3 (EU CRB-D) and 3.1.6 (EU CR1-B) Specified material exposure classes.
f)	Point 3.1.4 (EU CRB-E)
g)	Points 3.1.15 (EU CR1-A) and 3.1.16 (EU CR1-B)
a.	Points 3.1.15 (EU CR1-A) and 3.1.16 (EU CR1-B)
b.	Points 3.1.15 (EU CR1-A) and 3.1.16 (EU CR1-B)
c.	Points 3.1.15 (EU CR1-A) and 3.1.16 (EU CR1-B)
h)	Point 3.1.7 (EU CR1-C)
i)	Point 3.1.8 (EU CR2-A)
i.	Point 3.1.8 (EU CR2-A)
ii.	Point 3.1.8 (EU CR2-A)
iii.	Point 3.1.8 (EU CR2-A)
iv.	Point 3.1.8 (EU CR2-A)
v.	Point 3.1.8 (EU CR2-A)
Specific credit risk adjustments and recoveries recorded directly to the income statement shall be disclosed separately.	Not applicable.
443 Unencumbered assets	
EBA/GL/2014/03 Guidelines on disclosure of encumbered and unencumbered assets	Point 5.2
444 Use of ECAIs	
a)	Point 3.1.13 (EU CRD)
b)	Point 3.1.13 (EU CRD)
c)	Point 3.1.13 (EU CRD)
d)	Not applicable.
e)	Points 3.1.12 (EU CR4) and 3.1.13 (EU CR5)
445 Exposure to market risk	**Points 2.1.3 and 3.2.9 (EU MR1)**
446 Operational risk	**Points 1.1 and 2.1.3**
447 Exposures in equities not included in the trading book	
a)	Note 1. to the 2020 financial statements Accounting policies
b)	Point 3.1.15 (EU CR10)
c)	Point 3.1.15 (EU CR10)
d)	Note 7. to the 2020 financial statements Net investment income
e)	Note 36. to the 2020 financial statements Equity and Note 20. Investment assets
448 Exposures in equities not included in the trading book	
a)	Note 51. to the 2020 financial statements Sensitivity analysis of interest rate and market risk and point 1.1
b)	Note 51. to the 2020 financial statements Sensitivity analysis of interest rate and market risk
449 Exposure to securitisation positions	
a)	Point 3.3
b)	Point 3.3
c)	OP Financial Group has no re-securitised items.
d)	Point 3.3. OP Financial Group acts only as an investor.
e)	Point 3.3. OP Financial Group acts only as an investor.
f)	Point 3.3.
g)	Not applicable.
h)	Point 3.3.
i)	OP Financial Group does not act as an arranger
j)	OP Financial Group does not act as an arranger
i)	OP Financial Group does not act as an arranger
ii)	OP Financial Group does not act as an arranger
iii)	OP Financial Group does not act as an arranger
iv)	OP Financial Group does not act as an arranger
v)	OP Financial Group does not act as an arranger
vi)	OP Financial Group does not act as an arranger
k)	OP Financial Group does not act as a securitiser
l)	Not applicable.
m)	OP Financial Group does not act as a securitiser
n)	OP Financial Group does not act as a securitiser
i)	OP Financial Group does not act as a securitiser
ii)	OP Financial Group does not act as a securitiser
iii)	OP Financial Group does not act as a securitiser
iv)	OP Financial Group does not act as a securitiser
v)	OP Financial Group does not act as a securitiser
vi)	OP Financial Group does not act as a securitiser
o)	Point 3.3
i)	Point 3.3
ii)	Point 3.3
p)	Point 3.3
q)	Not applicable.
r)	Not applicable.
450 Remuneration policy	
1a)	www.op.fi: OP Financial Group > About us > Corporate governance > Remuneration and www.op.fi > OP Financial Group > To the media > Publications > OP's reports > Year 2020 > OP Financial Group's Remuneration Statement and Corporate Governance Statement and Note 9. to the financial statements Personnel costs
1b)	www.op.fi: OP Financial Group > About us > Corporate governance > Remuneration > EBA-report and www.op.fi > OP Financial Group > To the media > Reports > OP's reports > year 2020 > OP Financial Group's Remuneration Statement and Corporate Governance Statement and Note 9. to the financial statements Personnel costs
1c)	www.op.fi: OP Financial Group > About us > Corporate governance > Remuneration and www.op.fi > OP Financial Group > To the media > Reports > OP's reports > year 2020 > OP Financial Group's Remuneration Statement and Corporate Governance Statement and Note 9. to the financial statements Personnel costs
1d)	www.op.fi: OP Financial Group > About us > Corporate governance > Remuneration and www.op.fi > OP Financial Group > To the media > Reports > OP's reports > year 2020 > OP Financial Group's Remuneration Statement and Corporate Governance Statement and Note 9. to the financial statements Personnel Costs

1e)	www.op.fi: OP Financial Group > About us > Corporate governance > Remuneration and www.op.fi > OP Financial Group > To the media > Reports > OP's reports > year 2020 > OP Financial Group's Remuneration Statement and Corporate Governance Statement and Note 9. to the financial statements Personnel costs
1f)	> OP Financial Group > To the media > Reports > OP's reports > year 2020 > OP Financial Group's
1g)	www.op.fi: OP Financial Group > About us > Corporate governance > Remuneration > EBA-report
1h)	www.op.fi: OP Financial Group > About us > Corporate governance > Remuneration > EBA-report and www.op.fi > OP Financial Group > To the media > Reports > OP's reports > year 2020 > OP Financial Group's Remuneration Statement and Corporate Governance Statement and Note 9. to the financial statements Personnel costs
1i)	www.op.fi: OP Financial Group > About us > Corporate governance > Remuneration > EBA-report and www.op.fi > OP Financial Group > To the media > Reports > OP's reports > year 2020 > OP Financial Group's Remuneration Statement and Corporate Governance Statement and Note 9. to the financial statements Personnel costs
1j)	www.op.fi > OP Financial Group > To the media > Reports > OP's reports > year 2020 > OP Financial Group's Remuneration Statement and Corporate Governance Statement and Financial Statement's Note 86. Related-party transactions and Note 9. Personnel costs
2)	www.op.fi > OP Financial Group > To the media > Reports > OP's reports > year 2020 > OP Financial Group's Remuneration Statement and Corporate Governance Statement and Financial Statement's Note 86. Related-party transactions and Note 9. Personnel costs
451 Leverage	
a)	Point 4
b)	Point 4
c)	Point 4
d)	Point 4
e)	Point 4
452 Use of the IRB Approach to credit risk	
a)	Points 1.1. and 2.1.3 (EU CRE)
b)	Points 1.1. and 2.1.3 (EU CRE)
i)	Points 1.1. and 2.1.3 (EU CRE)
ii)	Points 1.1. and 2.1.3 (EU CRE)
iii)	Point 1.1 (EU CRE)
iv)	Point 1.1 (EU CRE)
c)	Point 1.1 (EU CRE)
i)	Point 1.1 (EU CRE)
ii)	Point 1.1 (EU CRE)
iii)	Point 1.1 (EU CRE)
iv)	Point 1.1 (EU CRE)
v)	Point 1.1 (EU CRE)
d)	Points 3.1.14 (EU CR6) and 3.1.15 (EU CR6), (EU CR10)
	Points 3.1.14 (EU CR6) and 3.1.15 (EU CR6), (EU CR10)
e)	Points 3.1.14 (EU CR6) and 3.1.15 (EU CR6), (EU CR10)
i)	Points 3.1.14 (EU CR6) and 3.1.15 (EU CR6), (EU CR10)
ii)	Points 3.1.14 (EU CR6) and 3.1.15 (EU CR6), (EU CR10)
iii)	Points 3.1.14 (EU CR6) and 3.1.15 (EU CR6), (EU CR10)
f)	Points 3.1.14 (EU CR6) and 3.1.15 (EU CR6), (EU CR10)
g)	Point 3.1.5 (EU CR1-A)
h)	Point 3.1.15 (EU CR6)
i)	Point 3.1.18 (EU CR9)
j)	
i)	Point 7.2
ii)	Point 7.2
When applying the c) above, the description must incorporate the types of exposure included in the exposure class; definitions, techniques and information used in the estimation and validation of PD figures (and, if need be, LGD figures and credit conversion factors) including the assumptions used in the calculation of the variables concerned; description of material deviations from the definition of default under Article 178, including general segments which the deviations concerned affect.	Points 1.1 and 3.1.14 (EU CR6)
453 Use of credit risk mitigation techniques	
a)	Point 3.1.10 (EU CRC)
b)	Point 3.1.10 (EU CRC)
c)	Point 3.1.10 (EU CRC)
d)	Point 3.1.10 (EU CRC)
e)	Point 3.1.10 (EU CRC)
f)	Points 3.1.10 (EU CR3) and 3.1.11
g)	Points 3.1.10 (EU CR3) and 3.1.11
454 Use of the Advanced Measurement Approaches to operational risk	Not applicable.
455 Use of Internal Market Risk Models	Not applicable.

7.2 Immaterial items not disclosed

Disclosure requirement	
CRR Article 452 j)	A total of over 90% of OP Financial Group's IRBA exposures are in Finland. The average PD and LGD is not presented according to the split by geographic region.
Template EU CR6 based on the EBA's guidelines (EBA/GL/2016/11)	The exposure classes Retail exposures - Mortgage-backed exposures and Other exposures are not presented under division between SMEs and non-SMEs because the SME EAD accounts for about 3% of retail exposures.
Template EU CCR4 based on the EBA's guidelines (EBA/GL/2016/11)	Retail exposures are not presented in the table concerned because the amount of counterparty risk exposures under retail exposures is not material.
Template EU CRB-D based on the EBA's guidelines (EBA/GL/2016/11)	Material exposure classes are broken down in the table.
Information required on a half-yearly basis by Commission Implementing Regulation (EU) No 1423/2013	No material change
Blank templates and zero lines based on the EBA's guidelines (EBA/GL/2016/11) are not presented.	

Annex 1. Capital instruments' main features

	Capital instruments' main features template	Cooperative share	Profit share (Non-voting cooperative share)
1	Issuer	Group member cooperative banks	Group member cooperative banks
2	Unique identifier (e.g. CUSIP, ISIN or Bloomberg identifier for private placement)	Not applicable	Not applicable
3	Governing law(s) of the instrument	Finnish law, especially the Co-operatives Act and the Act on the Amalgamation of Deposit Banks, the EU Capital Requirements Regulation (575/2013 (CRR)	Finnish law, especially the Co-operatives Act and the Act on the Amalgamation of Deposit Banks, CRR
3a	Contractual recognition of write down and conversion powers of resolution authorities	Not applicable	Not applicable
	Regulatory treatment		
4	Transitional CRR rules	Common Equity Tier 1 (CET1)	Common Equity Tier 1 (CET1)
5	Post-transitional CRR rules	Common Equity Tier 1 (CET1)	Common Equity Tier 1 (CET1)
6	Eligible at solo/(sub-)consolidated/ solo & (sub-)consolidated	Solo and consolidated	Solo and consolidated
7	Instrument type (types to be specified by each jurisdiction)	CET1 as published in the EBA list	CET1 as published in the EBA list
8	Amount recognised in regulatory capital (currency as of most recent reporting date) EUR mln	212	2 962
9	Nominal amount of instrument (in millions)	EUR 212	EUR 2 962
9a	Issue price	100 %	100 %
9b	Redemption price	100 %	100 %
10	Accounting classification	Central cooperative's share, cooperative capital	Central cooperative's share, cooperative capital
11	Original date of issuance	Not applicable	Not applicable
12	Perpetual or dated	Perpetual	Perpetual
13	Original maturity date	No maturity	No maturity
14	Issuer call subject to prior supervisory approval	Yes	Yes
15	Optional call date, contingent call dates and redemption amount	Cooperative banks refund shareholders their cooperative contributions upon termination of membership. However, cooperative banks have the right to refuse to refund the contributions while the bank is operating. If a cooperative bank has not refused to refund the contribution, this may take place within 12 months after the end of the financial year when membership terminated. If the refund cannot be made in full in any given year, the balance will be refunded from disposable cooperative capital based on subsequent financial statements. However, this entitlement to the refund for the balance will terminate after the fifth financial statements.	Cooperative banks refund shareholders the subscription price of their Profit shares upon termination of membership. A Profit share's subscription price is also refunded to the shareholder when the shareholder has cancelled the Profit share. However, cooperative banks have the right to refuse to refund the Profit share contributions while the bank is operating. If a cooperative bank has not refused to refund the Profit share contribution, this may take place within 12 months after the end of the financial year when membership terminated or the Profit share has been cancelled. If the refund cannot be made in full in any given year, the balance will be refunded from disposable cooperative capital based on subsequent financial statements. However, this entitlement to the refund for the balance will terminate after the fifth financial statements.
16	Subsequent call dates, if applicable	See item 15	See item 15
	Coupons/dividends		
17	Fixed or floating dividend/coupon	Floating	Floating
18	Coupon rate and any related index	Not applicable	Not applicable
19	Existence of dividend stopper	No	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully discretionary	Fully discretionary
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary	Fully discretionary
21	Existence of step up or other incentive to redeem	Not applicable	Not applicable
22	Noncumulative or cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible	Non-convertible
24	If convertible, conversion triggers	Not applicable	Not applicable
25	If convertible, fully or partially	Not applicable	Not applicable
26	If convertible, conversion rate	Not applicable	Not applicable
27	If convertible, mandatory or optional conversion	Not applicable	Not applicable
28	If convertible, specify instrument type convertible into	Not applicable	Not applicable
29	If convertible, specify issuer of instrument it converts into	Not applicable	Not applicable
30	Write-down features	Yes	Yes
31	If write-down, write-down triggers	Accumulation of losses	Accumulation of losses
32	If write-down, full or partial	Full or partial	Full or partial
33	If write-down, permanent or temporary	Temporary	Temporary
34	If temporary write-down, description of write-up mechanism	Through increase of cooperative capital	Through increase of cooperative capital
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	If a cooperative bank is dissolved either through liquidation or bankruptcy, any supplementary cooperative capital is refunded before other cooperative capital or, if the funds are insufficient, that part of supplementary cooperative capital that is proportional to the supplementary cooperative capital paid.	If a cooperative bank is dissolved either through liquidation or bankruptcy, any supplementary cooperative capital is refunded before other cooperative capital or, if the funds are insufficient, that part of supplementary cooperative capital that is proportional to the supplementary cooperative capital paid.
36	Non-compliant transitioned features	No	No
37	If yes, specify non-compliant features	Not applicable	Not applicable
37a	Link to the full term and conditions of the instrument	https://www.op.fi/op-financial-group/about-us/group-member-cooperative-banks	https://www.op.fi/op-financial-group/about-us/group-member-cooperative-banks

Annex 1. Capital instruments' main features

	Capital instruments' main features template	EUR 50,000,000 Non-cumulative Perpetual Capital Securities	EUR 40,000,000 Perpetual Non-Step-Up Hybrid Tier 1	EUR 500,000,000 Subordinated Instruments due 2022
1	Issuer	OP Corporate Bank plc	OP Corporate Bank plc	OP Corporate Bank plc
2	Unique identifier (e.g. CUSIP, ISIN or Bloomberg identifier for private placement)	ISIN: XS0213603177	ISIN: XS0237073498	ISIN: XS0750702507 [(EMTN Series 130)]
3	Governing law(s) of the instrument	English law, except for conditions relating to creditor order of priority and distributable assets, Dividend Stopper, permission for early redemption, and to capital adequacy, to which Finnish law is applied	English law, except for conditions relating to creditor order of priority and distributable assets, Dividend Stopper, permission for early redemption, and to capital adequacy, to which Finnish law is applied	English law, except for conditions relating to creditor order of priority, to which Finnish law is applied
3a	Contractual recognition of write down and conversion powers of resolution authorities	No	No	No
	Regulatory treatment			
4	Transitional CRR rules	Additional Tier 1 capital (AT1)	Additional Tier 1 capital (AT1)	Tier 2 Capital (T2)
5	Post-transitional CRR rules	Not applicable	Not applicable	Tier 2 Capital (T2)
6	Eligible at solo/(sub-)consolidated/ solo & (sub-)consolidated	Solo and consolidated	Solo and consolidated	Solo and consolidated
7	Instrument type (types to be specified by each jurisdiction)	Not applicable	Not applicable	Not applicable
8	Amount recognised in regulatory capital (currency as of most recent reporting date) EUR mln	20	20	109
9	Nominal amount of instrument (in millions)	EUR 50	EUR 40	EUR 500
9a	Issue price	100 %	100 %	99.977%
9b	Redemption price	100 %	100 %	100 %
10	Accounting classification	Liability - carried at amortised cost	Liability - carried at amortised cost	Liability - carried at amortised cost
11	Original date of issuance	31.3.2005	30.11.2005	28.2.2012
12	Perpetual or dated	Perpetual	Perpetual	Dated
13	Original maturity date	No maturity	No maturity	28.2.2022
14	Issuer call subject to prior supervisory approval	Yes	Yes	Yes
15	Optional call date, contingent call dates and redemption amount	Right to redeem on 11 April 2010 or subsequent interest payment dates on 11 April on an annual basis. The issuer has the right to capital payment. Right to redeem an instrument if, owing to, (i) change in law, (ii) official interpretation or (iii) decision by the Financial Supervisory Authority, the issuer cannot include the instrument under its Tier 1 capital. The issuer also has right to early redemption on the basis of such tax laws and interpretations that would result in the issuer having to pay extra or not being able to deduct interest. Redemption price 100%.	1) Right to redeem on 30 November 2010 or the following interest payment dates: 28 February, 30 May, 30 August or 30 November; 2) Right to redeem if, owing to (i) change in law, (ii) official interpretation or (iii) Financial Supervisory Authority decision, the issuer cannot include the instrument under its Tier 1 capital; 3) Right to early redemption on the basis of such tax laws and interpretations that would result in the issuer having to pay extra or not being able to deduct interest. Redemption price 100%	The issuer has the right of redemption, which begins on the date of issuance and ends 90 calendar days after CRD IV entered into force and the directive was adopted in Finland, provided the Financial Supervisory Authority decides that the issuer may no longer include the instrument under its Tier 2 capital, in part or in full. Redemption price 101%. Also the right to early redemption on the basis of such tax laws and interpretations that would result in the issuer having to pay extra. Redemption price 100%
16	Subsequent call dates, if applicable	See item 15	See item 15	See item 15
	Coupons/dividends			
17	Fixed or floating dividend/coupon	From fixed to floating	Floating	Fixed
18	Coupon rate and any related index	6.5% per annum until 11 April 2006, after which 10-year Swap interest + 0.1% per annum, maximum interest 8% per annum	3-month EURIBOR + 1.25% per annum	5.75% per annum
19	Existence of dividend stopper	Yes	Yes	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Partially discretionary	Partially discretionary	Mandatory
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Partially discretionary:[if the issuer's distributable funds were not be enough for the payment of interest on (i) the instrument, (ii) other subordinated loans or (iii) subordinated loans guaranteed by the issuer.]	Partially discretionary:[if the issuer's distributable funds were not be enough for the payment of interest on (i) the instrument, (ii) other subordinated loans or (iii) subordinated loans guaranteed by the issuer.]	Mandatory
21	Existence of step up or other incentive to redeem	No	No	No
22	Noncumulative or cumulative	Non-cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible	Non-convertible	Non-convertible
24	If convertible, conversion triggers	Not applicable	Not applicable	Not applicable
25	If convertible, fully or partially	Not applicable	Not applicable	Not applicable
26	If convertible, conversion rate	Not applicable	Not applicable	Not applicable
27	If convertible, mandatory or optional conversion	Not applicable	Not applicable	Not applicable
28	If convertible, specify instrument type convertible into	Not applicable	Not applicable	Not applicable
29	If convertible, specify issuer of instrument it converts into	Not applicable	Not applicable	Not applicable
30	Write-down features	Not applicable	Not applicable	Not applicable
31	If write-down, write-down triggers	Not applicable	Not applicable	Not applicable
32	If write-down, full or partial	Not applicable	Not applicable	Not applicable
33	If write-down, permanent or temporary	Not applicable	Not applicable	Not applicable
34	If temporary write-down, description of write-up mechanism	Not applicable	Not applicable	Not applicable
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	The issuer's Tier 2 instruments and other subordinated debt with a higher priority than the instrument	The issuer's Tier 2 instruments and other subordinated debt with a higher priority than the instrument	Issuer's senior non preferred -instruments
36	Non-compliant transitioned features	Yes	Yes	No
37	If yes, specify non-compliant features	No loss cover mechanism and dividend stopper	No loss cover mechanism and dividend stopper	Not applicable
37a	Link to the full term and conditions of the instrument	https://www.op.fi/documents/20556/62165/EMTN+46+final+terms/9d6d5c84-1e9d-4c93-a7a8-682400ddae3e	https://www.op.fi/documents/20556/62165/OKO+perpetual+T1+non+step+up/75b775f5-047f-450f-94e7-232a6042de49	https://www.op.fi/documents/20556/62165/130+drawdown+prospectus.pdf/e0777e1b-eeed-4e0d-a1a5-34b987171977

Annex 1. Capital instruments' main features

Capital instruments' main features template		EUR 100,000,000 5.25 per cent. Subordinated Instruments due 14 September 2021	CHF 100,000,000 3.375 Subordinated Instruments	JPY 10,000,000,000 Subordinated Floating Rate Instruments due 3 July 2025
1	Issuer	OP Corporate Bank plc	OP Corporate Bank plc	OP Corporate Bank plc
2	Unique identifier (e.g. CUSIP, ISIN or Bloomberg identifier for private placement)	ISIN: XS0677081993 [(EMTN Series 127])	ISIN: CH0132112993 [(EMTN Series 125)]	ISIN: XS1255402288 [(EMTN Series 192)]
3	Governing law(s) of the instrument	English law, except for conditions relating to creditor order of priority, to which Finnish law is applied	English law, except for conditions relating to creditor order of priority, to which Finnish law is applied	English law, except for the subordination provisions which are governed by Finnish law
3a	Contractual recognition of write down and conversion powers of resolution authorities	No	No	No
	Regulatory treatment			
4	Transitional CRR rules	Tier 2 Capital (T2)	Tier 2 Capital (T2)	Tier 2 Capital (T2)
5	Post-transitional CRR rules	Tier 2 Capital (T2)	Tier 2 Capital (T2)	Tier 2 Capital (T2)
6	Eligible at solo/(sub-)consolidated/ solo & (sub-)consolidated	Solo and consolidated	Solo and consolidated	Solo and consolidated
7	Instrument type (types to be specified by each jurisdiction)	Not applicable	Not applicable	Not applicable
8	Amount recognised in regulatory capital (currency as of most recent reporting date) EUR mln	14	9	65
9	Nominal amount of instrument (in millions)	EUR 100	CHF 100	JPY 10 000
9a	Issue price	99.612%	100.208%	100 %
9b	Redemption price	100 %	100 %	100 %
10	Accounting classification	Liability - carried at amortised cost	Liability - carried at amortised cost	Liability - carried at amortised cost
11	Original date of issuance	14.9.2011	14.7.2011	3.7.2015
12	Perpetual or dated	Dated	Dated	Dated
13	Original maturity date	14.9.2021	14.7.2021	3.7.2025
14	Issuer call subject to prior supervisory approval	Yes	Yes	Yes
15	Optional call date, contingent call dates and redemption amount	Right to early redemption on the basis of such changes in tax laws and interpretations that would result in the issuer having to pay extra. Redemption price 100%	Right to early redemption on the basis of such changes in tax laws and interpretations that would result in the issuer having to pay extra. Redemption price 100%	Right to early redemption on the basis of such changes in tax laws and interpretations that would result in the issuer having to pay extra. Redemption price 100%.
16	Subsequent call dates, if applicable	See item 15	See item 15	See item 15
	Coupons/dividends			
17	Fixed or floating dividend/coupon	Fixed	Fixed	Floating
18	Coupon rate and any related index	5.25% per annum	3.375% per annum	3-month JPY Libor + 0.735% per annum
19	Existence of dividend stopper	No	No	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Mandatory	Mandatory	Mandatory
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Mandatory	Mandatory	Mandatory
21	Existence of step up or other incentive to redeem	No	No	No
22	Noncumulative or cumulative	Non-cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible	Non-convertible	Non-convertible
24	If convertible, conversion triggers	Not applicable	Not applicable	Not applicable
25	If convertible, fully or partially	Not applicable	Not applicable	Not applicable
26	If convertible, conversion rate	Not applicable	Not applicable	Not applicable
27	If convertible, mandatory or optional conversion	Not applicable	Not applicable	Not applicable
28	If convertible, specify instrument type convertible into	Not applicable	Not applicable	Not applicable
29	If convertible, specify issuer of instrument it converts into	Not applicable	Not applicable	Not applicable
30	Write-down features	Not applicable	Not applicable	Not applicable
31	If write-down, write-down triggers	Not applicable	Not applicable	Not applicable
32	If write-down, full or partial	Not applicable	Not applicable	Not applicable
33	If write-down, permanent or temporary	Not applicable	Not applicable	Not applicable
34	If temporary write-down, description of write-up mechanism	Not applicable	Not applicable	Not applicable
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Issuer's senior non preferred -instruments	Issuer's senior non preferred -instruments	Issuer's senior non preferred -instruments
36	Non-compliant transitioned features	No	No	No
37	If yes, specify non-compliant features	Not applicable	Not applicable	Not applicable
37a	Link to the full term and conditions of the instrument	https://www.op.fi/documents/20556/62165/127+final+terms.pdf/50c0d68c-2391-45fb-8621-3c3998f027cb	https://www.op.fi/documents/20556/62165/125+final+terms.pdf/f294d9ad-e9c5-439d-8084-4fba8b32fce7	https://www.op.fi/documents/20556/62165/192+EMTN+JPY/99d42d07-0105-4827-a48b-750bc6a4f90a

Annex 1. Capital instruments' main features

	Capital instruments' main features template	EUR 100,000,000 2.405 per cent Dated Tier 2 Instruments due 2025	SEK 3,250,000,000 FRN Tier 2 subordinated instruments due 3 June 2030	EUR 1,000,000,000 1.625% Tier 2 subordinated instruments due 9 June 2030
1	Issuer	OP Corporate Bank plc	OP Corporate Bank plc	OP Corporate Bank plc
2	Unique identifier (e.g. CUSIP, ISIN or Bloomberg identifier for private placement)	ISIN: XS1296897579 [(EMTN Series 197)]	ISIN: XS2182066543 [(EMTN Series 248)]	ISIN: XS2185867673 [(EMTN Series 250)]
3	Governing law(s) of the instrument	English law, except for the subordination provisions which are governed by Finnish law	Finnish law	Finnish law
3a	Contractual recognition of write down and conversion powers of resolution authorities	No	Yes	Yes
	Regulatory treatment			
4	Transitional CRR rules	Tier 2 Capital (T2)	Tier 2 Capital (T2)	Tier 2 Capital (T2)
5	Post-transitional CRR rules	Tier 2 Capital (T2)	Tier 2 Capital (T2)	Tier 2 Capital (T2)
6	Eligible at solo/(sub-)consolidated/ solo & (sub-)consolidated	Solo and consolidated	Solo and consolidated	Solo and consolidated
7	Instrument type (types to be specified by each jurisdiction)	Not applicable	Not applicable	Not applicable
8	Amount recognised in regulatory capital (currency as of most recent reporting date) EUR mln	95	308	1000
9	Nominal amount of instrument (in millions)	EUR 100	SEK 3 250	EUR 1 000
9a	Issue price	100 %	100 %	100 %
9b	Redemption price	100 %	100 %	100 %
10	Accounting classification	Liability - carried at amortised cost	Liability - carried at amortised cost	Liability - carried at amortised cost
11	Original date of issuance	25.9.2015	3.6.2020	9.6.2020
12	Perpetual or dated	Dated	Dated	Dated
13	Original maturity date	25.9.2025	3.6.2030	9.6.2030
14	Issuer call subject to prior supervisory approval	Yes	Yes	Yes
15	Optional call date, contingent call dates and redemption amount	The right of redemption at nominal value at any time due during the loan term due to a capital transaction or taxable event. Right to early redemption on the basis of such changes in tax laws and interpretations that would result in the issuer having to pay extra. Redemption price 100%.	Right to redeem on 3 June 2025 or subsequent interest payment dates. Right to redeem at nominal value at any time during the loan term due to a capital transaction or taxable event. Right to redeem early on the basis of such tax laws and interpretations that would result in the issuer having to pay extra. Redemption price 100%.	Right to redeem only on 9 June 2025. Right to redeem at nominal value at any time during the loan term due to a capital transaction or taxable event. Right to redeem early on the basis of such tax laws and interpretations that would result in the issuer having to pay extra. Redemption price 100%.
16	Subsequent call dates, if applicable	See item 15	See item 15	See item 15
	Coupons/dividends			
17	Fixed or floating dividend/coupon	Fixed	Fixed	Floating
18	Coupon rate and any related index	2.405% per annum	3-kk Stibor + 2.3%	1.625% per annum until the redemption data. Subsequently the prevailing 5-year € Mid-Swap Rate + 2.0%
19	Existence of dividend stopper	No	No	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Mandatory	Mandatory	Mandatory
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Mandatory	Mandatory	Mandatory
21	Existence of step up or other incentive to redeem	No	No	No
22	Noncumulative or cumulative	Non-cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible	Non-convertible	Non-convertible
24	If convertible, conversion triggers	Not applicable	Not applicable	Not applicable
25	If convertible, fully or partially	Not applicable	Not applicable	Not applicable
26	If convertible, conversion rate	Not applicable	Not applicable	Not applicable
27	If convertible, mandatory or optional conversion	Not applicable	Not applicable	Not applicable
28	If convertible, specify instrument type convertible into	Not applicable	Not applicable	Not applicable
29	If convertible, specify issuer of instrument it converts into	Not applicable	Not applicable	Not applicable
30	Write-down features	Not applicable	Not applicable	Not applicable
31	If write-down, write-down triggers	Not applicable	Not applicable	Not applicable
32	If write-down, full or partial	Not applicable	Not applicable	Not applicable
33	If write-down, permanent or temporary	Not applicable	Not applicable	Not applicable
34	If temporary write-down, description of write-up mechanism	Not applicable	Not applicable	Not applicable
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Issuer's senior non preferred -instruments	Issuer's senior non preferred -instruments	Issuer's senior non preferred -instruments
36	Non-compliant transitioned features	No	No	No
37	If yes, specify non-compliant features	Not applicable	Not applicable	Not applicable
37a	Link to the full term and conditions of the instrument	https://www.op.fi/documents/20556/62165/197+Final+Terms/57248a66-27b7-4bf1-9586-6999d13dc677	https://www.op.fi/documents/20556/62165/248+Final+Terms/2fb889d3-accd-26cd-a369-a1e2f41c71e3	https://www.op.fi/documents/20556/62165/250+Final+Terms/9df2e465-125f-14e7-35f1-c3bbded35590