OP Financial Group's Risk Management Report 2023

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Introduction

OP Financial Group presents its risk management and capital adequacy information for 2023 in this Risk Management Report and the separate OP Amalgamation Pillar 3 disclosures.

The Risk Management Report presents qualitative information on OP Financial Group – the Risk Appetite Statement and Risk Appetite Framework – and the Capital Adequacy Management Principles, the Declaration on the adequacy of risk management arrangements approved by the Executive Management, and the risk statement and key risk management indicators describing OP Financial Group's risk-bearing capacity and risk appetite relative to its operations and significant risks.

The OP Amalgamation Pillar 3 disclosures contain information on OP Financial Group's risk management and the capital adequacy of the consolidated group of the amalgamation of 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. The Pillar 3 disclosures are subject to approval by OP Cooperative's Board of Directors.

The English version of the OP Amalgamation Pillar 3 disclosures is published in Excel format. Being based on the consolidated credit institution capital adequacy of the amalgamation of cooperative banks, this information is not directly comparable with other information disclosed on OP Financial Group.

As well as this report, risk management information is included in other reports in which OP Financial Group annually reviews its activities. OP Financial Group's Corporate Governance Statement 2023 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 2023 contains the sections of the Risk Appetite Framework required by regulation governing financial statements. A review of business segments' risk exposure is included in 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 remuneration schemes and practices can be found in OP Financial Group's Remuneration Policy for Governing Bodies, its Remuneration Report for Governing Bodies, and on its remuneration web pages (op.fi – OP Financial Group – About us – Corporate governance – Remuneration).

Information may remain undisclosed in OP Financial Group's Risk Management Report and OP Amalgamation Pillar 3 tables if such information is irrelevant and has an insignificant or zero impact on OP Financial Group's profitability, earnings power, balance sheet or capital adequacy. Irrelevant, undisclosed information is presented at the end of the OP Amalgamation Pillar 3 disclosures.

OP Financial Group's Risk Management Report and the OP Amalgamation Pillar 3 disclosures are unaudited.

1 OP Financial Group's risk management

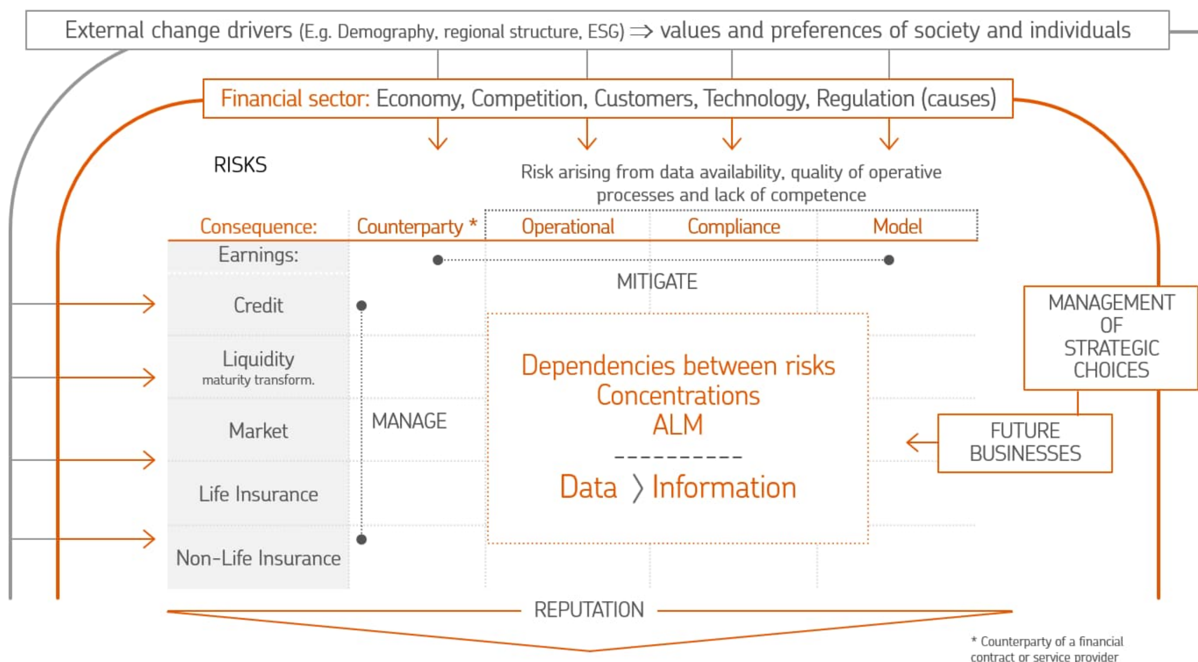
1.1 OP Financial Group's Risk Appetite Framework

1.1.2 Overview of OP Financial Group's significant risks

OP Financial Group's Risk Appetite Statement and Risk Appetite Framework cover all operations. Its general risk management principles are further specified by revenue logic (by product and service). The bases for establishing revenue logics include services provided to customers; processes needed in service production, operational analyses and reporting; and understanding of the risks involved for OP Financial Group in providing the services.

Due to the characteristics of OP Financial Group's business and industry, risks have two distinct fundamental principles: OP Financial Group may earn revenue through risks (earnings risks) or risks may be a consequence of something (consequential risks). Reviewing earnings risks involves the examination of OP Financial Group's critical success factors from the business perspective. For this reason, OP presents the sources and management of earnings risk in detailed descriptions of significant risks by revenue logic, except for Group-level risks that apply to all revenue logics. Most consequential risks are Group-level. Reducing potential negative impacts is the key focus of consequential risk reviews.

The graph below shows a summary of OP Financial Group's significant risks and their sources. The sources and root causes of significant risks are presented in shaded grey and orange in the periphery of the figure's table. The negative effect of potential materialisation of risks on OP Financial Group's trust and reputation is also described outside the table.



OP Financial Group's revenue logics are: Banking through the balance sheet, Banking – Markets, Banking – Asset Management, Non-life Insurance and Life Insurance. The revenue logic, Banking through the balance sheet, is further divided by business segment between Corporate Banking, Retail Banking, and Group Treasury (included in other operations according to OP Financial Group's segment division). Banking's revenue logics include both the Retail Banking segment and the Corporate Banking segment. The Life and non-life Insurance revenue logics belong to the Insurance segment.

OP Financial Group's risk management and compliance are based on the three lines of defence principle. The first line of defence comprises businesses, the second line of defence comprises the Risk Management and Compliance assurance functions independent of the businesses, and the third line of defence comprises Internal Audit (independent of the other lines of defence). 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 available in advance. The lines of defence jointly create the risk management process, which takes account of the special features of OP Financial Group's business. There is a clear division of responsibilities between the first and second lines of defence.

- OP Financial Group's businesses fulfil its strategy and are responsible for planning and efficiently and effectively implementing their own operations and for internal control. Only the business concerned makes business decisions and is responsible for the quality of its customer service, its business continuity as well as its earnings and risks. The businesses' routines include reporting on risks concerning business operations.
- The second line of defence prepares a risk management framework for approval by OP Financial Group's management. Within this framework, the first line of defence takes and manages risks related to its daily business. The second line of defence supports the first line of defence by consulting and constructively challenging it, especially in matters forming part of its own expertise. In addition, the second line of defence oversees compliance with regulation and OP Financial Group's guidance framework, and independently analyses the balance between earnings, risks, and capital and liquidity acting as buffers. It also analyses how business continuity can be ensured during incidents. Risk Management also assesses whether the businesses' strategic goals and choices are in line with the Risk Appetite Statement set by management, and other principles covering risk-taking and risk management.
- Internal Audit, which 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 Appetite Statement

The basic principle of the Group's risk-taking is acknowledgement that it takes risks related to fulfilling its mission. In all operations, the Group emphasises moderation and careful preparation in risk taking. Risk-taking is directed and limited by means of principles and limits prepared by senior management and approved by OP Cooperative's Board of Directors.

Together with the Group's strategy, OP Financial Group's Risk Appetite Statement (RAS) creates the basis for target-setting by businesses, and this basis is binding on all OP Financial Group companies. The RAS forms the basis of guidelines (issued to member credit institutions by OP Financial Group's central cooperative) on securing liquidity and capital adequacy.

In OP Financial Group, most profits come from customer business and the earnings risks (which constitute OP Financial Group's risk appetite) taken and priced in this context. OP Financial Group companies actively manage earnings risks at customer and portfolio level within the quantitative limits set and in line with the other guidelines specified in risk policies. Risk taking to enable earnings from other operations is kept low and/or temporary.

Consequential risks also arise from business that OP Financial Group seeks to reduce. No such consequential risks involve the generation of returns, but their materialisation would lead to operational disruptions, extra costs and/or reputational damage.

Earnings and consequential risks relate to the current business and valid agreements between OP Financial Group companies and their customers and other counterparties. Risks related to future business may affect success in the years to come. OP Financial Group manages future business risks through prudential management choices, strong and comprehensive scenario work, and proactive management decisions. The Group seeks to identify the interdependencies of various risks and the resulting risk concentrations, and to organise the management of risks appropriately within each business concerned and at Group level.

OP Financial Group ensures that its companies have sufficient risk-bearing capacity, or risk capacity and risk-taking capacity in order to carry out operations in accordance with earning risks and thereby risk appetite. Risk capacity involves expertise and risk-taking capacity involves capital and liquidity. Risk capacity requires, for example, customer relationship skills and the flexibility to change OP Financial Group's risk-taking.

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 while securing its strategic flexibility. The Group defines the target level of risk-taking capacity by means of external credit rating.

Strategic indicators and their specific limits are used to guide and limit OP Financial Group's risk taking in accordance with the Group's Risk Appetite Statement. Based on the limits set in the Risk Appetite Statement, Risk Management and the businesses prepare more detailed proposals on limits and OP cooperative banks' monitoring limits. This is done in such a way that quantitative risks defined as significant within OP Financial Group are appropriately limited in revenue logic-specific risk policies. Quantitative limits are supplemented with principles included in risk policies and other guidelines issued by Risk Management, so that less-easily quantifiable risks are also covered. This is how to ensure that neither the Group nor any of its companies takes excessive risks that endanger the Group's or the company's capital adequacy, profitability, liquidity and business continuity.

1.1.2.2. Liquidity strategy and capital management strategy

If the liquidity risk is realised, this means that business cannot be practised – as expected or with the expected costs – in line with the strategy. In the most extreme situation, lack of liquidity could lead to OP Financial Group's being unable to fulfil its financial obligations towards customers and other stakeholders, and the winding up of business activity.

OP Financial Group aims to continue serving its customers on a long-term basis and in exceptionally tough market conditions in all business divisions. Its strategic goal is to ensure that customer business remains undisrupted in the case of each revenue logic.

Planning of wholesale funding takes proactive account of funding needs arising from expected growth differentials between the receivables and deposit portfolio on the balance sheet, funding maturity and other internal objectives, and regulatory requirements. Planning also assesses the certainty and price sensitivity of refinancing in different market conditions.

To ensure the liquidity of the banking operation, the liquidity buffer held by the Group Treasury is kept large enough to continue and stabilise operations in scenarios in which we lose large quantities of deposits, and wholesale funding becomes less available or unobtainable. Such a scenario may be due to a general market disruption or a problem specific to OP Financial Group.

OP Financial Group's insurance companies ensure that receivables can be realised with sufficient certainty at the same pace as liabilities mature, and that the companies have reinsurance programmes that suit their own business's risk profile. In addition, funds are made available to cover even an exceptionally large temporal concentration of indemnifications, if necessary. To ensure this, a sufficient proportion of investments have short-term maturities or are highly likely to be easily sold if necessary.

Chapter Banking risks has a more detailed description of liquidity management and control in the amalgamation.

Capital management includes strategic decisions on the use of risk-taking capacity in the form of capital for risk-taking by the business, on the selected confidence level in respect of the management buffer's sufficiency, and on the elements included in capital. Capital management also involves the allocation of internal capital to revenue logics in accordance with the Group strategy and risk appetite.

Regarding capital management, OP Financial Group first decides how much risk-taking capacity OP Financial Group will allocate to business activities, and what portion will be left as a management buffer. This is expressed as a ratio of the

need for capital specified internally (economic capital) to the capital actually in use (internal capital). In OP Financial Group, this ratio is determined at least at Group level and by revenue logic. We set a risk-taking limit for the ratio to ensure operational continuity, even during crises. Economic capital measures the probable loss due to risk taking, based on a level of probability set internally and assuming that the business environment will more or less follow historical trends. It therefore presents OP Financial Group's best estimate of how much capital is needed to cover each risk and function. Defined in this way, economic capital arranges functions and their risks in order of size. Because the world can change, OP Financial Group also uses scenarios to estimate future financial results. These scenarios and economic capital give us an idea of how to capitalise our various businesses and OP Financial Group.

The capital available, capital needs and the ratio between the two are monitored and controlled through concepts and calculation methods defined by the relevant authorities at both Group and company level.

Another capital management policy concerns capital structure. Most internal capital is available to the Group and its companies immediately and without restrictions to cover losses – no mitigating terms can be applied to the stability of such capital. Most of OP Financial Group's capital consists of Tier 1 capital, because its management is primarily based on the maintenance of a strong Common Equity Tier 1 ratio (CET1). Capital can be supplemented with subordinated debts that cannot be regarded as fulfilling the conditions for CET1 capital, but which can be used to fulfil other regulatory requirements and that cover losses as specified in their terms and conditions.

The third stage of capital management involves the allocation of internal capital to revenue logics in accordance with the Group strategy and risk appetite. When making allocation decisions, account is taken of the long-term strategy, customers' needs, the expected and sought-after result of an activity, and any changes that affect it.

OP Cooperative's Board of Directors approves OP Financial Group's capital adequacy and liquidity assessment processes: Internal Capital Adequacy Assessment Process (ICAAP), Own Risk and Solvency Assessment (ORSA) and Internal Liquidity Adequacy Assessment Process (ILAAP), as part of OP Financial Group's Risk Appetite Framework (RAF). In its quarterly risk analysis, the Risk Management function reports to the management on change drivers in the business environment, on OP Financial Group's risks, and on capital and liquidity adequacy. OP Financial Group's ICAAP, ORSA and ILAAP assessments are mainly based on the continuous analysis by risk management. Assessment of procedures' coverage (qualitative assessment) is focused on different themes in each quarterly report, whereas an overall assessment of capital and liquidity adequacy – with conclusions and possible proposals – is performed each quarter. A quality assessment (QA) evaluates whether reliable results are obtained from the models, methods and assumptions applied, and whether such results are still relevant in light of the current situation and future developments. QA focuses on compliance with OP Financial Group's risk management guidelines and supervisory regulations.

With the help of Risk Management, the Risk Committee of the Board of Directors prepares statements on capital adequacy (CAS, Capital Adequacy Statement) and liquidity adequacy (LAS, Liquidity Adequacy Statement), and a management assessment of capital adequacy (ORSA). After approval by the Board of Directors, Risk Management sends the statements to the European Central Bank (ECB) and the management assessment to the Finnish Financial Supervisory Authority as a combined report, the Statement on OP Financial Group's capital adequacy and management's risk and capital adequacy statement.

OP Financial Group prepares a capital plan, which is subject to the approval of OP Cooperative's Board of Directors and covers both the internal perspective and regulatory requirements in relation to capital adequacy management and resolution. It must include grounds for selections made and such grounds must accord with the strategy and OP Financial Group's Risk Appetite Framework.

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

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

- **Strategy and RAS:** In terms of risk-taking, senior management prepares business unit strategic choices that are based on OP Financial Group's Risk Appetite Statement (RAS), confirmed by the central cooperative's Supervisory Council. The Risk Appetite Statement outlines and gives grounds for what risks each business is ready to take and to what extent. Businesses are obliged to operate within the limits of these restrictions.
- **Division of responsibilities:** Senior management decides on how risk-taking responsibilities are divided. The Group defines what risks different revenue logics can take and any potential elaborations on what risks can be taken by legal entities and various functions within these revenue logics. Principles and decisions on the division of responsibilities between company roles prevent uncontrolled risk accumulation by ensuring that risks are diversified.
- **Governance structures** provide the basis on which key principles guide operations and the related policies, and operating instructions are appropriately prepared and resolved. In addition, governance structures provide a basis for proper assessment and supervision of the quality, scope and complexity of each activity by expert, business-independent parties, in addition to the business's own monitoring.
    - 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 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 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. Entities' risk management-related tasks are described in more detail in the entities' charters. OP Financial Group's Corporate Governance Statement provides more detailed information OP Financial Group's corporate governance.
    - Senior management must ensure the maintenance and development of sufficient resourcing and expertise for the monitoring functions of the first, second and third line of defence.
- **RAF:** The Risk Appetite Framework (RAF) defines the general strategic intents of the risk management process and specifies them by revenue logic. The guidelines set preconditions for how senior management should organise the risk management process at OP Financial Group.
- **Joint and several liability:** Control of joint and several liability between the central cooperative and member cooperative banks is based on the document, Principles of corporate governance as required under joint and several liability.
- **Remuneration principles:** OP Financial Group's remuneration schemes are built in line with the Group's mission, values and targets, while ensuring regulatory compliance. Remuneration must not incentivise unnecessary risk-taking or the taking of actions against the customer's interests. The same risk measurement methods are used in remuneration as in capital and liquidity adequacy assessment processes (ICAAP-ORSA-ILAAP). In addition, any risk adjustments to be made before remuneration must be based on other risk management metrics. If these metrics are adjusted as part of risk management processes, corresponding adjustments are made in remuneration.
- **Internal control, good business practices and corporate security:** Principles of internal control, good corporate governance and good business practices and corporate security also set preconditions for practices.

1.1.2.4. 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 that the following risk management objectives are achieved:

- Business processes provide a solid foundation for high-quality customer service, but are also cost-efficient, reliable, regulatory compliant and, whenever necessary, quickly restorable to working order. In addition, these

processes generate all information needed for the performance of tasks in key functions (customer relationship management, sales, risk management, finances and regulatory reporting), in functional analysis, and in management reporting. Furthermore, the management of this information has been duly organised.
  - Businesses strike a balance between earnings, risks, capital and the liquidity buffer, and cumulative risks at OP Financial Group's level can be identified and managed e.g. through principles on 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. Neither OP Financial Group nor its companies have other commitments that would prevent them from carrying out strategy-based measures for a prolonged period. OP Financial Group also has the operational flexibility required to adjust its processes rapidly enough 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 significant hindrances from internal or external factors. 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.

1.1.2.5. OP Financial Group's risk management methods and implementation

The Risk Management function prepares the RAS and RAF and, in cooperation with the business concerned, risk policies (tailored to revenue logics) that direct operations in accordance with the strategy. The risk policies include risk limits, threshold values and decision-making powers to be submitted for the approval of the competent body. Proposals for limits and threshold values must include grounds for concluding how the proposed metrics and levels have been achieved. Limits and threshold values set a maximum limit on risk-taking. An escalation process is triggered if any deviation, or the clear threat of a deviation, is detected on the basis of a set limit or threshold value. The Risk Management function ensures that each revenue logic has detailed operating instructions in respect of risk-taking and risk management which, together with the risk policies, form an extensive, regulatory compliant control framework applicable to the function concerned. Whenever necessary, Risk Management prepares these instructions.

As far as possible, the instructions framework must simultaneously meet the following two conditions:

- The framework guides the business in strategy implementation, limits risk-taking according to risk appetite, and fosters prudent and careful practices.
- The framework enables the making of business decisions deviating from the RAS and specific risk policies, but only on strong grounds and 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 an extensive risk identification process conducted at least once a year, Risk Management, representatives of the businesses concerned and other internal stakeholders assess risks that are or may have a direct, short-term effect on OP Financial Group's business and/or have a longer-term impact on its business environment and thereby OP Financial Group's business. This also involves identifying and assessing concentration risks within individual types of risk and cumulative Group-level risks and risk concentrations. In doing so, particular attention must be paid to changes in mutual dependencies. 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 to maintain the economic capital requirement and stress testing framework.

In addition to the current status, each assessment of a revenue logic's risk profile projects sufficiently far back in time and provides future scenarios, particularly in the assessment of direct and indirect concentrations and risk dependencies.

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 the related needs for data are described and documented extensively and are implemented in such a way that various risks can be made consistent within OP Financial Group, to be comparable in terms of capital and liquidity needs.

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

OP Financial Group uses its own internally developed models (internal models) for risk measurement, capital need assessment, contract and service pricing, 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 calibrated on a historical basis, and those differing from the assumptions of risk models, may affect the liquidity, risk profile, profitability and capital adequacy of the Group and/or its companies. Stress tests assess the effect of both individual stress 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 profile and challenge the adequacy of economic and solvency capital. Stress tests aim to cover all risk types identified as significant in the Risk Appetite Statement.

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

In general, the risk management methods and models must be in line with the methods used in the pricing of each business and those used in performance measurement to enable analysis of the balance between profit and loss, risks and capital.

The Risk Management function is involved in the preparation of the remuneration principles, remuneration policy and remuneration schemes, and in the determination of supervisory practices related to remuneration processes. In practice, this means participation in e.g. the risk manager designation process, determination of bonus pools, the setting of risk-adjusted performance indicators, and the specification of proactive risk adjustments.

Customer transactions arising from service involve risks borne by OP Financial Group that are managed at portfolio level within revenue 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 level. The outsourcing of functions is aimed at improving the achievement of OP Financial Group's strategic and operational goals and competitiveness. An external service provider must have practices consistent with OP Financial Group's core values and responsible practices.

1.1.2.6. Independent risk control and analysis performed by OP Financial Group's Risk Management

Risk Management supervises OP Financial Group's and its companies' daily operational activities and the related risk and liquidity management, risk-taking, pricing of business units, business and risk management processes, and their quality. It analyses the risk profile of the Group and its companies and developments, the maintenance of risk-taking within the set limits and threshold values, 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 Group companies and the central cooperative consolidated, and is in charge of supervising compliance with the instructions it issues.

Implementing and ensuring regulatory compliance is a key element of risk management goal fulfilment. The Risk Management function plays a significant role in ensuring prudential compliance.

Risk Management produces reports through which it is possible (using methods applicable to a revenue logic) to monitor how each business remains within the set quantitative restrictions and how it complies with the qualitative requirements set for operations, and with regulations on risk and capital adequacy management. Although the business units also report earnings and risks, official earnings and risk reporting is based on reporting by Financial Control and Risk Management. If a business's reporting differs so much from official reporting that the resulting views of the risk profile would diverge significantly, the reasons for the differences are identified and possible errors corrected.

In addition to supervising the limit, Risk Management analyses the risks and practices of each revenue logic, particularly from the perspective of compliance with the instructions and capital adequacy regulations. Risk Management also prepares a quarterly risk analysis of its observations, which includes a review of Group-level risks arising from the current business. The review focuses on direct risk concentrations and how OP Financial Group's earnings and capital and business continuity would develop in different scenarios.

Based on the Risk Management function's reporting, senior management and the Board of Directors must be able to form a clear overview, by revenue logic, of earnings and consequential risks, operational process quality and threats to continuity, and capital and liquidity needs. They must also be able to combine this information with the picture expressed by the Finance function of business profitability, and the picture of strategic planning affecting future matters. To ensure so-called prudential compliance, management reporting explains how observed phenomena will impact on risks and functions, and proposes the required further measures.

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 of a contracting party to a financial instrument being unable to fulfil its contractual repayment obligations, and thereby causing a financial loss to the other party.
Liquidity risks	A liquidity risk is the risk of liquidity or capital availability being insufficient to realise business goals as laid down in the strategy. It is caused by the timing of inflowing or outgoing cashflows (payments) and/or imbalances between them. Liquidity risks include concentration risk, market liquidity risk and refinancing risk. Concentration risk is caused by the concentration of financing across time, or between certain counterparties or instruments. Market liquidity risk is the risk of failure to execute market transactions within a desired time and/or at an estimated price, or of a contraction in the liquid assets owned by a bank. Refinancing risk involves the risk that a debt cannot be refinanced on the market.
Structural interest rate risk on the balance sheet	Risk arising from the effects of interest rate movements on Banking's annual net interest income, and on the insurance company's earnings (IFRS 17) and solvency. The banking book consists of non-trading book customer agreements (loans and deposits), market-based funding, equity capital, liquidity buffer (fixed income investments and cash) and interest rate derivatives (items that balance risks and liquidity). In the insurance companies, net interest income comprises technical provisions, interest rate-sensitive investments and interest rate derivatives used to manage interest rate risk.

Other market risks	Other 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 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 of the insured's life expectancy diverge from actual life expectancy in the case of products that include an endowment risk, or when mortality forecasts concerning the insured (for example, unpredicted growth in mortality caused by a catastrophe) diverge from actual mortality in the case of products that cover the risk of death. Biometric risk also arises when forecasts, of when the insured person's incapacity for work will begin, diverge from the actual beginning of incapacity in the case of products that cover disability risk. However, the aforementioned risk is very small in OP Life Assurance Company.
Counterparty risks	Counterparty risk refers to the risk that a party to a derivative contract, repurchase agreement (Repo), trade or reinsurance contract will fail to fulfil its financial obligations, accompanied by a risk of the growing costs associated with having to obtain a corresponding replacement contract. A special feature of counterparty risk is a change in the risk level alongside the agreement's market value, due to which contractual risk can grow after an agreement is made.
Operational risks	Operational risk is caused by all business operations and may result from insufficient or incorrect practices, processes, systems or external factors. OP Financial Group's operational risks also include ICT and security risks. Operational risk related to data capital means potential losses, loss of reputation or deterioration of operations caused by uncertainty in decision-making, management and reporting related to data and the information derived from it.
Compliance risks	Risks related to non-compliance with regulations and guidelines
Model risks	Model risk occurs when a model created to describe a certain phenomenon or behaviour fails to do so in the intended manner. Model risk can be used to monitor financial losses or loss of reputation caused by decisions made on the basis of the results of models, due to errors made in the development, implementation or use of such models. The model risk management model provides a way of describing, quantifying or simulating a certain phenomenon or behaviour. A model translates source data based on mathematics, statistics and expert assessments into data guiding business decisions or quantitative or qualitative data related to financial risk exposure. Source data/inputs can be quantitative and/or qualitative, or based on expert assessments.

Reputational risks	This is the risk of a weakening in reputation or trust, primarily due to the simultaneous materialisation of an individual risk or several risks, or to some other kind of negative publicity.
Concentration risks	Risks that may arise due to a business having an excess concentration of risk in individual customers, products, lines of business, maturity periods or geographical areas. Concentration risk can also arise due to a concentration of service providers or processes.
Risks associated with future business	Risk associated with the conditions and volumes on which similar or entirely new agreements are based. This also includes risk arising from inadequate internal reaction and inflexibility in the business and competitive environment, or changes in customers' values or in technology.

Risks associated with future business are not dealt with as a separate whole, because they may emerge in the form of various significant risks, or as part of different 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 a lingering risk which a party cannot or does not want to eliminate, or that remains after possible risk reduction measures. Residual risk can be considered synonymous with risk. As such, residual risk is not an equivalent concept to the significant risks described above, but may apply to any of those risks.

Drivers of change in the business environment, such as technological or climate change and other sustainability factors (ESG factors – Environmental, Social and Governance), affect the needs and preferences of customers and other members of society. ESG factors are external megatrends – examples of root causes on OP Financial Group's risk map. They are defined as change factors affecting different risk types, not as separate risks, in risk identification processes.

Worsening climate change and environmental damage create physical risk factors:

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

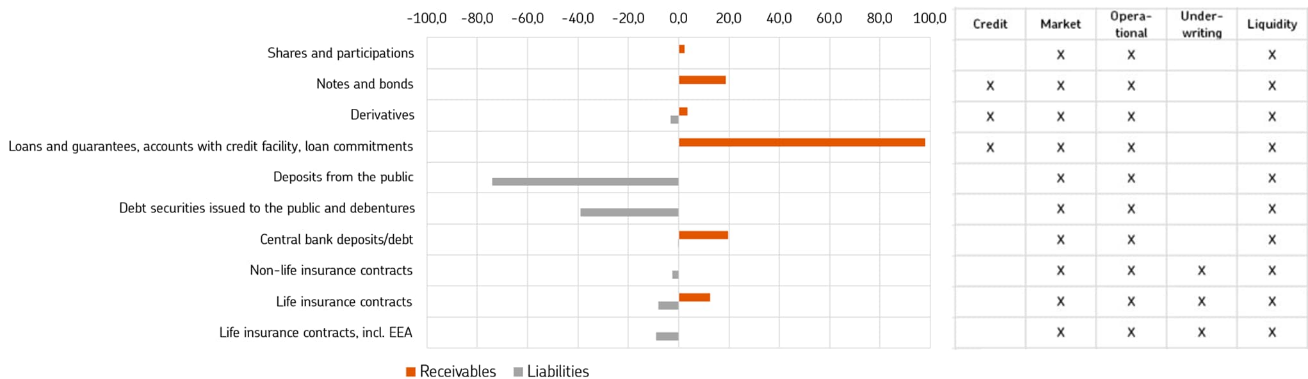
The transition towards a low-carbon and more environmentally sustainable economy will have direct and indirect impacts. These include, for example, climate or environmental policy decisions, technological development, market confidence, and changes in customer choices.

Physical and transition risks will impact on OP Financial Group's business and financial success through customers and other stakeholders, in particular. If they materialise, such risks may affect the risk profile, capitalisation, liquidity and continuity of daily business in various ways.

Key instruments and risk types

The graph below describes risk types associated with key financial instruments and illustrates the significance of risk types by means of the balance sheet values of each financial instrument (31 December 2023).

Key instruments, associated risk types and volumes, € billion



	Credit	Market	Opera-tional	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
Debt securities issued to the public and debentures		x	x		x
Central bank deposits/debt		x	x		x
Non-life insurance contracts		x	x	x	x
Life insurance contracts		x	x	x	x
Life insurance contracts, incl. EEA		x	x	x	x

1.1.3.2. Banking risks

Credit risks

Credit risk related to customer relationships in banking mainly concerns bilateral promissory notes agreed with Finnish customers. As a rule, the terms of these promissory notes do not allow them to be sold onwards. Exposures' maturities vary from short-term products with credit limits to longer-term promissory notes, but the latter dominate the balance sheet quantitatively. The average maturity of personal customer exposures is based on mortgages, and that of corporate customers is based on promissory notes with 3–7-year maturity periods. The credit risk transfer of these assets to the markets, either individually or in portfolios, is not part of OP Financial Group's business model. Personal customers can repay variable-rate loans faster than required by the repayment schedule. Correspondingly, successful companies often use their negotiation power to refinance variable-rate loans prematurely, when the new loan is available for a lower loan margin than the current one. This results in faster contraction of assets based on borrowers with improved creditworthiness, than on those whose credit risk has increased.

The above require that OP Financial Group succeed overall in:

- proactively steering the overall portfolio structure so that each portfolio goes overweight in terms of customer groups (portfolio segments) with homogeneous risks, which are likely to succeed in the future business environment,

- excelling our competitors at selecting customers from the overall customer population that improve/maintain their creditworthiness and retaining such customers and their loans on the basis of the original, risk-based terms. Conversely, the pricing of each customer with deteriorating creditworthiness must be adjustable to cover the growing risk.

To succeed in risk management, senior management needs top-quality, continuously updated data on individual groups of connected clients, the financial status of each group of connected clients, and the related, explanatory factors (particularly how such factors change in different future business environment scenarios). In addition, senior management must identify mutual dependencies between individual actors. Through this information, it must assess the repayment ability of groups of connected clients on the basis of forecast free cash flow and the related uncertainty. Such assessment requires comprehensive, continuously updated data on customers, their "balance sheet", and the management of current agreements, as well as analyses in support of decision-making.

Phases of credit risk management strategy

To arrange credit risk management in line with risk appetite, senior management must define and describe the following matters, and implement them in processes:

- **A consistent picture of processes:** The basis of all activities must be a shared view of the customer financing process, the related credit risk management process phases, and dependencies between these phases. Each process forms a whole whose phased tasks, the outputs of such tasks, and the data needed and created at each phase must be defined. The credit risk management principles are also applied to management of Corporate Banking's bond portfolio.

- **A clear picture of homogenous groups**: customer and/or transaction groups (portfolio segmentation) with homogeneous credit risks must be defined on the basis of the borrower's income sources and collateral types. Repayment of loans and/or the refinancing of debt depend on the borrower's ability to generate free cash flow. For this reason, income source is the primary segmentation criterion and segmentation must be adjusted by collateral type. Grounds must be given for not adjusting segmentation in this way. Although agreements' legal terms and conditions are not used as grounds for credit risk segmentation, such information must be taken into account when advising the customer and assessing credit risk.

- **Credit risk management:** consistent customer relationship management and agreement management practices, and analysis and measurement methods, must be defined for portfolio segments. This must take account of legal terms and conditions in the agreement that affect the size of the credit risk (PD, LGD and EAD). When risk parameters are assessed at portfolio level, account must be taken of e.g. probability of default (PD) and collateral value dependencies. These consistently defined practices must be systematically applied at the various phases of the financing process. This group of portfolio segment-specific practices (the credit rating system) must form the basis of operations and their development.

- **Definition of data needs:** The same systematic practices can be applied in different portfolio-specific credit rating systems, but such systems differ in terms of the data required. Data must be defined for each portfolio, to enable the various phases of financing and credit risk management processes. In addition, possible deficiencies in data availability and usability must be reported to the management and the data owner.

- **Processes and instructions:** Customer financing service processes and the related credit risk management processes must take account of the above matters, to ensure that the required source data can be collected from customer processes and external sources, and that quantitative data generated in various process phases is made available for other phases. This is described in greater detail in section 4.2.3.

Credit risk management phases of customer relationship

Maintenance of customer's basic information: The legal basis for determining groups of connected clients must be recorded and customers' basic information kept up to date, to enable high-quality and efficient risk management.

Continuous profiling of the customer and collateral: the customer business's revenue logic, current status and current realisation value of assets to be pledged as collateral must be determined. Information must also be collected to enable assessment of the customer's financial success and how collateral value will develop in various scenarios. Customer analysis is done whenever a new customer is onboarded or the customer's situation changes. Senior management must arrange at least the following:

- The financial statements and balance sheet information of groups of connected clients must be kept up to date, and historical data must be maintained. If a borrower is in default and their information must be updated, a quantitative grading and collateral liquidation value are required.

- A granular assessment must be performed of the customer's revenue logic and of factors affecting future free cash flow and asset values. The customer's vulnerability to price risks on the markets – whether they involve

production factors, financial assets or end products – must be determined. The customer's financial statements must be closely analysed to identify balance sheet and profit dependencies on particular product ranges or customers, suppliers and market areas etc, so that actual groups of connected clients can be identified.

- Assessment of financial sustainability must include taking account of climate-related factors as part of financing decisions. Collateral valuation must include assessment of how climate and biodiversity-related factors impact on projected values. Our corporate customers must be sorted into ESG (Environmental, Social, Governance) categories based on industry exposure to ESG factors, and an ESG analysis must be performed, if necessary.
- Information on the customer and collateral must be updated sufficiently often and used as the basis for assessing the customer's or transaction's credit rating and/or collateral liquidation value. The credit rating methodology (specific to the credit rating system) and collateral valuation methodologies must be described.
- The probability of default (PD) trends of individual borrowers in each rating grade and loss given default (LGD) ratios must be assessed over time.

Sizing and pricing of new loans

When the customer and their collateral have been assessed, the results must be used to measure and price any new loans, or to restructure the customer's current loan portfolio.

Granting of loans must be based on the customer's repayment capacity and the loan terms and conditions. The current and future repayment capacity set limits on the loan amount and other terms. In addition, loan sizing must take account of how future terms will impact on the customer's financial success. The purpose of collateral is to limit potential credit loss – collateral is only realised in cases of default.

Agreement pricing must include the customer's PD over time and LGD over time, but in such a way as to avoid allocating the entire portfolio's diversification or concentration impacts to these risk parameter values. It must also take account of interdependencies between (as well as developments in) default and collateral value, and the loan repayment schedule and seniority of creditors. Detailed pricing principles are presented in Appendix 2: senior management can base precise, portfolio segment-specific pricing models on these principles.

Deciding on and implementing agreements

Because credit decisions involve a decision to take a risk, there must be sufficient, accurate and up-to-date information about the factors affecting the project and decision. The decisions and its grounds must be recorded in the decision-making system. Financing decision-making is based on the principle of segregation, whereby the person preparing financing may not make the financing decision alone. Decisions that deviate from the target risk profile specified in the risk policy must be explained on a broader basis.

Credit management during the agreement's validity

Credit control and proactive customer-specific assessment must be based on the same information (on the customer, collateral and agreement terms) as credit granting. The agreement terms set must be based on such information, or indicators derived from it.

To identify the customer's financial situation (particularly possible financial distress), credit control processes must comply with the practices defined for the credit rating system. Precise indicators and their threshold values must be defined, on the basis of which the customer/loan is assigned to a certain credit risk-cycle phase. Comprehensive information must be available across the credit life cycle about different credit risk-cycle phases and rating grades, and about any realised losses, to enable the allocation of collateral assets to the correct exposures. As the values of defined indicators change, the responsible parties must take action in accordance with agreed practices and report the matter to management.

Customers that are most significant to the bank and whose risk of default has clearly increased, or whose repayment capacity is subject to another significant threat, must be placed under special control. For these customers, the bank must prepare an action plan on measures to resolve the customer's situation from the bank's perspective, and minimise any risk that might materialise for the bank.

Senior management must define and describe how work is divided between the first and second lines of defence for the above customer-specific credit risk management. As a general principle, the first line of defence is responsible for all credit risk management tasks except the following second line of defence roles: credit rating methodology, verification of rating grades and collateral values, and quantification of risk parameters. The division of tasks between lines of defence is described in section 4.2. Risk management process infrastructure.

Phases of portfolio-level credit risk management

Due to OP Financial Group's structure, there is no single, centralised party that could decide on the portfolio structure and its adjustment. Senior management must arrange portfolio management and the organisation of tasks based on the following phases:

- **Basic monitoring of the credit risk portfolio:** Assets must be divided into portfolio segments and rating grades, customer and transaction specifically. Descriptive indicators must be defined for such assets, which make monitoring of risk allocation easy. The grounds for portfolio diversification benefits and concentrations, and the impacts of such benefits and concentrations on capital need, must be reported separately.
- **Preparation of target portfolio and risk policy:** A target portfolio for credit risk assets in banking must be prepared annually, as part of the annual planning process. This target portfolio must take account of the current portfolio structure and its economic capital, business strategy priorities, forecast changes in the external business environment, and customers' needs. Portfolio segment/credit rating-specific weightings for new lending and pricing, and indicators and impact analyses that give an accurate picture of assets, must be specified for the risk policy.
- **Preparation of detailed credit policy:** The credit policy must define portfolio-specific weightings for new sales and pricing, for inclusion in the risk policy. Customer-specific credit risk taking is steered by the credit policy, which provides portfolio segment-specific policies for rating grades, collateral shortfalls and loan repayment terms and conditions. Implementation of the credit policy must be reported and monitored on the basis of the portfolio segment-specific return on risk-adjusted capital (RORAC). Accordingly, the economic capital metrics used must make different asset types mutually comparable, to enable credit risk taking in line with the credit policy.
- **Detailed analysis and reporting and ad-hoc reporting of the credit risk portfolio:** The risk parameters of assets, and the impact of sectors and large, individual customers in the portfolio, must be reported for banking as a whole and broken down between the Retail and Corporate Banking segments. Moreover, senior management must be capable of producing specific reports based on separately defined target groups and scenarios, rather than portfolio segmentation.

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 must also take account of liquidity risks. At least once a year, the Risk Management function and representatives of the business concerned make a comprehensive liquidity risk assessment to ensure that the internal liquidity adequacy assessment process (ILAAP) is appropriate and adequate in relation to the Group's liquidity risks.

Assessment and measurement

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

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

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

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

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

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

Funding plan

OP Financial Group's funding plan defines guidelines for wholesale funding for the next few years. In its funding plan, OP Financial Group must take account of its member banks' estimate of the funding need for years to come. Implementation of the plan is monitored regularly and the plan is updated, where needed, during the year. Deposit funding is primarily based on the business strategy and plan. The funding plan specifies the sources of wholesale funding and presents how the Group covers its need for key wholesale funding sources in view of market depth and sufficient diversification. It also defines the related decision-making powers. Moreover, the funding plan must take account of unfavourable scenarios lasting several years, and of any abrupt changes in key funding items.

OP Financial Group's liquidity and wholesale funding plan and authorisations to raise capital are subject to approval by the Boards of Directors of OP Corporate Bank and OP Mortgage Bank.

Non-euro liquidity management

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

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

Management of intraday liquidity

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

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

Liquidity buffer

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

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

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

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

Collateral management and asset encumbrance

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

Home loans serving as collateral for covered bonds issued by OP Mortgage Bank constitute the largest source of asset encumbrance in the balance sheet. Central bank operations and the derivatives business are the other main sources of asset encumbrance. From the perspective of preparing for liquidity needs, the central cooperative consolidated restricts asset encumbrance through the quantitative limits specified in its Risk Policy.

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

Securing liquidity in stress conditions

OP Financial Group's liquidity contingency plan establishes a framework that safeguards the Group's ability to meet its payment obligations, even during a liquidity crisis. The plan provides well-defined operational guidelines and operating models for reducing liquidity risk: these enable the detection of elevated liquidity risks and steer OP Financial Group towards timely and appropriate measures if the threat of a crisis has grown. It specifies control and monitoring practices for each liquidity level, which become more rigorous as escalation proceeds. The liquidity contingency plan is subject to approval by the central cooperative's senior management.

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, switching to weekly or daily reporting if the liquidity preparedness level is raised. OP Financial Group's companies report regularly to boards of directors on liquidity risks. As part of OP Financial Group's risk analysis, Risk Management reports quarterly to the Risk Committee, which operates under the central cooperative's Board of Directors, on liquidity risks.

Liquidity management and control within the amalgamation

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

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

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. OP Financial Group places its entities' liquidity in its Treasury's cheque account with the Bank of Finland. This means that the Group always manages its overall liquidity position through the central bank cheque account. 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. In addition, OP Financial Group's Group Treasury ensures that liquidity and maintenance of the minimum reserve are managed in accordance with each country's regulatory requirements. OP Corporate Bank manages the Group's wholesale funding on a centralised basis, in the form of debt capital and equity capital, while OP Mortgage Bank manages wholesale funding based on covered bonds. Companies that fall within the scope of joint and several liability of market-based financing seek financing from Group Treasury and other companies from OP Corporate Bank's banking operation.

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

The primary funding sources of OP cooperative banks' lending include equity capital, deposit funding and funding for intermediary loans from OP Mortgage Bank.

Allocation of liquidity risk costs within the amalgamation

The costs of wholesale funding and liquidity buffer maintenance are allocated among member banks based on the principles adopted by OP Cooperative's Board of Directors. The costs of liquidity maintenance are allocated through liquidity deposits and the costs of wholesale funding are allocated through the margin added to the base rate of OP Financial Group's loans/deposits, or through some other practice.

Market risks

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

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

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

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

- Regular stress tests must be performed regarding interest rate risk. In particular, this involves testing any change in customer behaviour in relation to how credit, deposits and Profit Shares have performed historically as portfolios. Changes in other key operational assumptions must also be tested, such as removal of the zero interest rate floor or the possible impacts of climate or biodiversity risk factors on interest rate risk.
- The risk assessment procedure applied to OP Financial Group's new products, services, operating models, processes and systems must ensure that the requirements of interest rate risk management are appropriately described and taken into account when developing customer business.
- Economic capital is allocated for interest rate risk in the banking book.

Management of other market risks in Banking through the balance sheet

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

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

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

- The Banking risk policy determines the risk measurement methods and risk-taking limits, as well as other restrictions.
- An investment plan is prepared for the investment portfolio, describing business models, 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 a lending business.

The following methods are used to manage and monitor OP Corporate Bank's bond portfolio:

- The banking risk policy determines the risk measurement methods and risk-taking limits, and other restrictions.
- An investment plan is prepared for the portfolio, describing the goals of investment activities and the principles of portfolio management.
- Investment decisions for the portfolio comply with OP Corporate Bank's corporate responsibility principles.

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

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

Risk management in Markets

OP Financial Group's trading in capital market products has been centralised in OP Corporate Bank's Markets function. The risks taken include market risks such as interest rate risk in different currencies, currency risk, volatility risk related to options, credit spread risks, and credit risks such as counterparty and issuer risks. Repurchases of structured investment products also generate a degree of equity risk. Markets manages risk exposures by actively trading on the market. Risks and earnings in Markets are monitored on a daily basis. In addition, Markets' risks are reported to the Board of Directors' Risk Committee and the senior management, as part of OP Financial Group's risk analysis.

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

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

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

Ownership of bonds and money market instruments causes issuer risk. Risk is limited by setting limits on portfolio composition in the Markets supplementary limit framework or by setting issuer specific limits.

Risk management for the Asset Management business model

The key risks associated with the Asset Management revenue logic are operational and compliance risks related to the provision of asset management services. OP Financial Group manages these risks in accordance with its operational risk and compliance risk management framework and the framework's procedures. The sale of asset management products is subject to detailed regulation seeking to ensure that clients understand the risks, costs and environmental and social impacts of their investment decisions. The sale of investment products carries a reputational risk. The effect of market developments on assets under management exposes the business model to market risk. Economic capital is assigned to the asset management revenue logic under the risk type, operational risks. It is also allocated to cover future business risks, such as unexpected changes in the competition or customer behaviour.

In asset management business activities, low liquidity may be a feature of an investment (for example, real estate) or liquidity may become weaker in exceptional market conditions, in which, for example, certain securities are not traded actively or differ greatly in their bid and ask prices. Liquidity risk may also arise due to unexpected customer behaviour, especially in turbulent markets, for example in terms of larger-than-usual redemption requests sent to a mutual fund. This

may result in a situation where the fund cannot perform the redemptions. Liquidity risk associated with the asset management business must be managed in advance by informing customers of liquidity risks associated with the investment product in marketing materials. The liquidity of OP Mutual Funds must be assessed through stress tests. In problem situations, liquidity risk is managed by delaying and interrupting redemptions, charging redemption fees or changing pricing and possibly increasing cash allocation.

By ensuring that the product range meets customer demand and needs, customer retention can be improved in situations where clients want to switch or diversify their investments.

1.1.3.3. Risks of insurance operations

Life insurance risks

Biometric risks associated with life insurance products (both investment contracts and insurance contracts) consist of claim payouts: mainly due to a higher number of deaths, or pension disbursement periods being longer, 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 gives rise to lapse risk. Policyholders have the right to stop paying their premiums, terminate the contract early, or change the contract based on an embedded option in a way which results 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, and term life policies (which the policyholder can terminate anytime), are particularly susceptible to lapse risk related to customer behaviour. Pension insurance can only be surrendered 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 premium rating. The early lapse of insurance policies may also jeopardise the accuracy of cost assumptions used for premium rating and thereby contribute to the materialisation of expense risk.

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

Life insurance underwriting risks are managed by means of strict risk selection and pricing and by ensuring the right level of measurement of insurance contract liabilities. 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 can only change the prices of these long-term contracts to a very limited extent. This is why risk caused by any later changes in the premium rating bases is borne by the insurance company, which raises the premiums of new policies and records an insurance contract liability supplement for sold policies. Offering insurance policies with the opposite risk exposures reduces the net risk incurred by 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. Realisation of assumptions concerning premium rating is regularly monitored and, if necessary, the premiums of new policies are raised. In addition, assumptions used in the measurement of insurance contract liability are assessed and updated on a regular basis.

Reinsurance is also used to mitigate 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.

In relation to OP Life Assurance Company insurance risks, the largest risk concentrations particularly concern individual counterparties associated with the same reinsurance contract. The reinsurance principles also set limits on authority to take reinsurance counterparty risk – the document sets limits based on the counterparty's rating grade and the reinsurance contract type (contract business, facultative).

Each year, the actuary in charge presents the company's Board of Directors with a statement of continuous compliance with the insurance contract liability requirements and the requirements set by the nature of the underwriting business. The actuarial function presents the company's Board of Directors with annual statements on its policy concerning insurance and on reinsurance arrangements, and a report on completed actuarial tasks. The economic capital tied up in underwriting risks is limited in relation 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 largest insurance risks pertain to risk selection and pricing, the acquisition of reinsurance cover, and the adequacy of technical provisions. In non-life insurance, the risk inherent in technical provisions 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 causing longevity risk. Inflationary development too may cause the materialisation of underwriting risk through compensation inflation.

Risks of loss or damage are managed by means of strict risk selection and pricing, and provision risks are managed by ensuring the right level of the measurement of insurance contract liabilities.

Premium rating is based on risk correlation, which means that the insurance risk premium 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 Pohjola Insurance's Management Team or the company's Pricing and Risk Selection Management Team.

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

Pohjola Insurance's underwriting risk concentrations tend to be geographical in nature, or to consist of several insured assets categorised under the same risk. Another substantial risk concentration consists of assets insured against storm risk in Finland.

Reinsurance is also used to mitigate 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. Potential gaps in reinsurance cover are eliminated in accordance with 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 disasters 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 rating 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.

Reinsurance principles are supplemented by the Reinsurance principles practical application guide, approved by the Pricing and Risk Selection Management Team. The guide describes reinsurance tasks and the related division of responsibilities.

The amount of insurance contract liabilities is estimated securely in such a way that it would be sufficient to fulfil the obligations arising from insurance contracts. Irrespective of the calculation framework (FAS, IFRS 17, Solvency II), a risk component must be added on top of technical provisions based on the best estimate as a result of the uncertainty of technical provisions. Each year, the actuary in charge presents the company's Board of Directors with a statement of continuous compliance with the insurance contract liability requirements and the requirements set by the nature of the underwriting business. The actuarial function presents the company's Board of Directors with annual statements on the general insurance policy and on completed actuarial tasks. Non-life insurance underwriting risks are assessed by applying the Solvency Capital Requirement (SCR) and economic capital. Stress tests are used to supplement the assessment. The economic capital tied up in underwriting risks is limited relative to OP Financial Group's internal capital. Underwriting risks are also restricted by a target set in the capital plan for the ratio of own funds to the solvency capital requirement.

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 contract liabilities, investments and derivatives. Investment operations aim to ensure customer income, obtain assets covering insurance contract liabilities, and invest profitably to generate returns. Investment operations take account of factors such as the structural interest rate risk arising from the cash flow structure of insurance contract liabilities, and the other requirements that insurance liabilities impose on investment assets and their liquidity. For this reason, companies must divide future cash flows, the related uncertainties and causes of uncertainty by insurance type and asset class. In addition, in their investment plan, companies must define and give grounds for which investment instruments are covered by which part of insurance contract liabilities and how large a deviation will be allowed between the duration of investment portfolio and insurance contract liability cash flows, interest rate sensitivity and other relevant key figures. Application of the principle of equity in life insurance also affects investment targets and the amount of risk taken.

An analysis of structural interest rate risk – interest rate risk on the balance sheet – begins by assessing how well cash flows from fixed income investments and insurance liability match each other (ALM, Asset and Liability Management). Interest rate movements affect the value of derivatives used to hedge against interest rate risks posed by insurance contract liabilities, investments and technical provisions. The companies' market risks on the balance sheet are managed in line with investment plans, using investment allocation and insurance contract liabilities as hedging, while taking account of expected returns.

In the Solvency II framework and the economic capital model, the insurance contract liability discounting curve includes a volatility adjustment, which also creates exposure to credit spread risk on the balance sheet in terms of structural interest rate risk. 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. Differences between the company's fixed income investments and volatility adjustment portfolio may be related to geographical distribution, corporate loan sectors, credit ratings or maturities. Fixed income investments involve a risk of credit loss and a lower credit rating for the investment in question; sufficient diversification is used to manage such risk.

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 and the solvency capital requirement (SCR). Stress tests are used to

supplement the assessment. Insurance companies' risk concentrations within asset classes are assessed by examining the asset class allocation distribution.

Market risks are limited using risk limits, which are set in revenue logic-specific risk policies and investment policies confirmed by the Board of Directors. Risk policies set limits for market risks that are determined based on the limits based on OP Financial Group's Risk Appetite Statement. Technical-provision interest rate hedging targets are set in the companies' investment policies. Asset class limits are set for liquid and illiquid investments. Credit rating limits are used to manage credit risks related to the investment portfolio. The insurance companies' boards also approve principles for the use of derivatives. In addition to the Group's risk policy lines and limits, investment portfolios are restricted by the responsible investment principles confirmed by the companies' boards of directors.

Insurance companies' investment activities involve a country risk due to the geographical distribution of investments. Such risk is limited by setting a maximum limit based on a credit rating from outside the country in question (the risk country) – a credit rating given by an international rating agency. On the basis of OP Financial Group's maximum limits for each country, company-specific country limits are allocated separately to OP Life Assurance Company and Pohjola Insurance in order to limit geographical concentrations in their investments. The geographical distribution of investment risks is regularly monitored.

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

Liquidity risks arise in insurance companies' insurance and investment activities, due to imbalances between incoming and outgoing cash flow. Such imbalances can be caused by fast growth in insurance contract cancellations leading to reimbursements of premiums and decreases in premiums written, by sudden growth in loss expenditure, by exceptionally high amounts of major losses, or by defaults by reinsurers. Regarding investment, liquidity needs can be caused by changes in the market environment, such as the impacts of interest-rate rises on the collateral requirements of interest rate derivatives. Insurance contract liabilities are valuated using a yield curve that takes account of the liquidity premium, providing the company with partial protection against illiquid financial markets. To ensure that the liquidity position remains good and keep illiquid investments at conservative level, the liquidity position is analysed on a regular basis by the Actuarial function, Risk Management and investment activities. The analyses include stress testing of liability and the cash flows of investments, considering liquidity needs arising, for example, from collateral and underwriting risks. The company's short-term minimum liquidity requirement is limited.

Counterparty risk management

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

The counterparty risk related to the investment portfolio is limited using limits, which are included in investment policies. Diversification limits are set for direct and fund investments. Sufficient diversification of insurance companies' investment portfolios is ensured by issuer limits set in the companies' investment policies. Derivative-related counterparty risk is limited on the basis of the counterparties' credit ratings. The derivative instruments to be used and related practices are described in the documentation, approved by the Board of Directors, on the principles underlying the use of derivatives.

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

1.1.3.4. Group-level risks

Operational risks

Operational risk means the consequential risk, associated with all business operations, which may result from insufficient or incorrect practices, processes, systems or external factors. Operational risk could be realised as financial losses or other detrimental consequences, such as damaged or lost reputation or trust.

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

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

Through operational risk management, the companies' management ensures that the risks do not cause unforeseen financial losses or other harmful consequences. Due to the qualitative nature of operational risks, it is never possible to gain full protection against them, or to prevent their adverse effects in all cases. Operational risk management does not always involve eliminating risk altogether, but does involve the mitigation of risks in line with risk appetite.

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

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

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

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

OP Financial Group's operational risk management framework is divided into backward-looking (for example, operational risk events), current-situation based and proactive procedures (risk and control self-assessment, business continuity and outsourcing management, and risk assessment of new products). The central cooperative's Risk Management is responsible for OP Financial Group's operational risk management framework, and the framework's maintenance and development. In addition, Risk Management issues detailed instructions on operational risk management procedures

followed in OP Financial Group. Risk Management maintains a shared risk library system for identifying operational risks at OP Financial Group, which it reviews regularly to ensure that it is comprehensive and up to date.

In addition to standardised operational risk management procedures and means of mitigating individual risks, companies within OP Financial Group can take out insurance to transfer the impacts of materialised operational risks outside the company and Group.

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

OP Financial Group's management of security risks and security work seeks to foster a culture of security throughout the organisation, and to develop and maintain the desired security level by focusing on preventive measures and the effective management of threats and incidents. When a threat occurs, the primary goal is to ensure personal security and the second priority is to protect property and data.

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

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

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

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

data rests with the data repository owner. A data repository is a set of data created for a certain purpose, such as an application with databases or a data set or table created for analytical purposes.

Risks related to data capital

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

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

Data capital risk materialises when business management is based on insufficient or incorrect data. In such a case, preparation for business risk may be excessive, which may lead to financial loss. For example, a capital requirement increased due to poor data quality could tie down capital that might have been used for other purposes. Problematic issues in customer service or other operational processes can reduce customer and employee satisfaction.

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

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

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, senior management is responsible e.g. for:

- ensuring the identification, assessment and management of data quality risks, using operational risk management methods. This includes reviewing and accepting frameworks for minimising data capital risk (ensuring high data quality).
- ensuring that practices required by the frameworks are observed. Observance requires a clear picture of the status of data specification, collection and processing manageability as well as related technical and legal requirements.
- incorporating the promotion of the capabilities related to data and especially the correction of shortcomings into the strategic components related to the ICT infrastructure.
- seeing to it that financial and human resources are sufficient in the development of systems containing critical data capital.
- ensuring that risk reporting is sufficiently defined, and understanding the limitations that the status of data quality causes to risk reporting. The management must set objectives for the validity and accuracy of risk reports in both normal and crisis situations. These requirements must reflect the criticality of decisions made based on the reporting.
- being aware of the status of OP Financial Group's regulatory compliance as regards data management and data quality. The management must have an understanding of the measures taken in this respect or which are needed to take in the future to improve regulatory compliance.

Model risks

In model risk management, the term 'model' refers to a way of describing, quantifying or simulating a certain phenomenon or behaviour. In other words, modelling involves presenting a phenomenon or system more analytically than simply presenting the phenomenon or system itself. A model translates source data based on mathematics, statistics and expert assessments into data guiding business decisions or quantitative or qualitative data related to financial risk exposure. Source data/inputs can be quantitative and/or qualitative, or based on expert assessments.

Risk related to use of a model (model risk) occurs if a model fails to represent a phenomenon or behaviour as intended, resulting in inappropriate or unjustified business decisions or risk assessments based on the model's outputs. In the worst-case scenario, realisation model risk can lead to losses, reputational damage or poor customer selection. Model risk can involve possible non-compliance with regulations on operational, data processing or modelling-related matters. It can be due to factors such as deficiencies during model development, model implementation or model use. Model risk is therefore a consequential risk related to operational quality and capabilities. Model use also involves operational risk, which may be caused by insufficient or unclear responsibilities for model management at different stages of the model lifecycle, or by insufficient documentation.

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

- statistical or mathematical models and simulations based on internally managed data, which enable the generation of information derived from historical base data.
- input data derived from modelling based on internal or external data, which is utilised in formulae, calculations and simulations, classifications or in a set of calculation rules.
- well-established mathematical formulae in the financial services business, whose parameter values are available from the market.

OP Financial Group's grip on model management must be firm, because models are critical success factors in terms of revenue logic. Management of models and model risks must ensure that models describe the event concerned sufficiently well and their use is appropriately organised. It is not possible to protect against all risks associated with using models. Risk management seeks to ensure that risks associated with using models are identified and the related risk level is in line with risk appetite.

Models must be used and developed appropriately – to ensure this, Group policies and the related guidelines are applied. Risk Management must ensure that principles and procedures are drawn up for the mitigation of model risks. To ensure the appropriate model environments, Risk Management maintains a Group register of models (model inventory).

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

- Model risks are managed on the basis of clear roles and defined responsibilities. All models have an owner.
- Development and maintenance of models is ensured on the basis of sufficient expertise in and resourcing of quantitative methods.
- The model is used only for the purpose for which it is developed and approved. OP Financial Group adopts only models that it has ensured in a sufficient manner in terms of functionality and implementation.
- Models are assessed independently of their development and implementation.
- Effective practical monitoring is arranged for models.
- Risk management is performed in accordance with models' lifecycles, while taking account of documentation requirements.
- Procedures included in the operational risk framework are applied to model 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. The task of the model owner is to ensure that the models used are up to date and fit for purpose.

Standardised and regular monitoring is used in the ongoing assessment of model utilisation. The performance of the models is subject to a quantitative and qualitative review, or validation, performed on a regular basis. The validation requirement also applies to models implemented by the business concerned, not only those implemented by a function independent of the business. Evaluation takes account of the model's purpose and significance.

OP Financial Group's model risk management framework defines roles and responsibilities related to managing models and model risk, and the practices followed during the model lifecycle.

Development of models primarily requires internal high-quality, comprehensive historical data and/or market information applicable to the valuation of assets and liabilities. All such models must have a clear purpose that guides their development. Each model must be suitable for its intended purpose and its variables and parameters must be conceptually valid, enabling depiction of the modelled phenomenon and the model's successful application. Models must be based on well-founded methodologies and their background assumptions must be reasonable and valid.

In model development, the aim is to identify shortcomings in the model and situations in which it performs poorly. If models cannot be implemented according to the nature of the event they are supposed to model, the related shortcomings and solutions for correcting the models must be identified. Model risk must be mitigated by e.g. monitoring how well the model functions. Regulation, including data protection regulation, and risk management perspectives must be taken into account in the further development of models. In addition, the impact of possible missing data/information on the model's functioning must be assessed. The significance of all models must be assessed.

Any decision to take a model into production is documented in the minutes of the relevant decision-making body and reported to the risk management unit in charge of model risk management. A new decision is needed in order to extend the use of a model to a new application.

If it is necessary to use parameter values defined differently for various uses, the related choices must be justified and documented in detail. Updates of a model's parameters on the basis of new data, which affect the model's results, are identified separately from actual changes to the model.

Standardised and regular monitoring is used in the ongoing assessment of model utilisation. The extent, detail and frequency of monitoring must be proportionate to the model's significance. In monitoring, the Group takes account of regulatory requirements. If monitoring indicates any deterioration in the model's functioning, or the annual risk identification process reveals trend-like or structural changes in the business environment, a validation must be performed, especially if the model is used to measure risks assessed as significant.

Validation complies with predetermined procedures, reviews and tests. Evaluation takes account of the model's purpose and significance.

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

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

Compliance risks

Managing compliance risks associated with non-compliance with regulation and instructions forms part of good corporate governance practices and internal control and, as such, is an integral part of business management duties and the corporate culture. Compliance seeks to ensure that customers, markets, supervisors and stakeholders retain their trust in OP Financial Group and its entities by ensuring compliance with regulation (including self-regulation), intra-Group instructions, regulations issued by authorities, Group values and the Code of Business Ethics.

Realisation of compliance risk can have various adverse consequences, such as financial loss, reputational damage or loss of confidence. Other ramifications could be official sanctions, such as various fines for breach of regulations, official warnings or reprimands, corporate fines, or an additional capital buffer requirement.

A particular key objective of the Compliance function is to proactively identify material risks associated with non-compliance and to reduce such risks before they have a disruptive impact on customers, erode the organisation's reputation or lead to financial losses.

Operational responsibilities related to compliance risk management and practices are based on the three lines of defence model. Responsibility for regulatory compliance and its supervision, and management of compliance risk, rests with senior management in the first line of defence, and with all supervisors and managers. In addition, every employee within the organisation is individually responsible for compliance with regulation and internal instructions. Procedures for managing operational risks are also applied to compliance risk management.

In the second line of defence, the Compliance function is responsible for maintenance and development of the Group's compliance framework (principles, practices and roles) and for its maintenance, development and the assessment of compliance risks in the Group. The Risk Management function has the main responsibility for ensuring prudential compliance. This requires close cooperation between the Compliance function and Risk Management. Risk Management informs Compliance of any material deficiencies in prudential compliance.

Functions in the second line of defence regularly assess regulatory compliance risks and draw up control plans on this basis.

The Compliance function reports to senior management and Group Executive Management on compliance risks and internal control observations regularly and whenever necessary. To provide management with an overall picture of compliance risks affecting the Group, e.g. reporting includes the Risk Management function's most material observations on compliance with prudential regulations.

Other Group-level risks

Concentration risks

Concentration risk is based on the idea of cumulative change in an individual risk factor or the realisation of a future scenario leading to higher-than-expected earnings fluctuations. This is particularly likely to happen if identifying concentrations or restricting them has failed.

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

- The identification and management of an individual risk's accumulation is organised **by revenue logic.** The structure of the risk policy promotes the identification of cumulative exposure, while limits control the magnitude of such exposures.
- **Cumulative exposures on individual risk factors across revenue logics**, where the management of such factors involves the creation of efficient management procedures that take account of conflicts of interest.

Time-variability of earnings, which is simultaneously caused by various risk factors and accumulates over revenue logics, is managed using procedures that include any conflicts of interest. The enterprise risk management process creates mechanisms which, based on decisions about the allocation of duties, prevent excess direct and indirect concentration risks at Group level. The Risk Management function creates mechanisms for identifying, assessing and managing direct and indirect Group-level cumulative exposures.

Concentration risk management is an integral part of the risk management practices and operational limits presented in the RAF's revenue logic-specific guidance on risk management processes, and in more specific risk policies.

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

OP Financial Group exercises caution when concentrating an activity with an identified service provider, acting according to the situation in question and maintaining an action plan to ensure business continuity in case of problems with the service provider.

Reputational risks

Reputational risk is managed proactively over the long term by complying with regulation, good practices in the financial sector and OP Financial Group's Code of Business Ethics, and by emphasising the transparency of operations and communications. Because reputation and trust are the foundations of financing, they must be taken into account in all activities. Each business plays an important role in recognising the positive and negative impacts of its operations on OP Financial Group's reputation and takes corrective measures, where necessary. Risk and control self-assessments of operational risks must include key greenwashing risks and evaluate the resulting reputational damage.

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

In addition to systematic communications, OP Financial Group proactively strengthens its reputation by implementing its Corporate Responsibility Programme. Responsibility-related reputational risk could affect OP Financial Group or the entire financial sector, for example as a result of changes in public opinion or customer preferences. The Group has a Code of Business Ethics in place. The Group adheres to international financial, 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, in other words 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 on the adequacy of risk management arrangements by OP Cooperative's Board of Directors on 6 February 2024

Based on risk reporting, OP Cooperative's Board of Directors regularly assesses compliance with OP Financial Group's Risk Appetite Statement and Risk Appetite Framework, OP Financial Group's Corporate Security Principles, and the risk policies of OP Financial Group and various business divisions. Based on the information it has received, the Board of Directors states that the risk management systems used by OP Financial Group are adequate regarding OP Financial Group's risk profile and strategy.

Risk statement by OP Cooperative's Board of Directors on 6 February 2024

OP Financial Group's mission is to promote the sustainable prosperity, security and wellbeing of its owner-customers and operating region. In fulfilling its mission, OP Financial Group serves its customers by meeting their banking, asset management and insurance needs.

Risk-taking starts from the fact that the Group mainly assumes risks associated with executing its mission. In all operations, the Group emphasises moderation and careful preparation in risk taking. Credit and insurance risks and maturity transformation risk are highlighted in OP Financial Group's risk profile.

OP Cooperative's Board of Directors affirms that the OP Financial Group's Risk Appetite Statement guidelines, determined by OP Cooperative's Board of Directors and confirmed by the Supervisory Council, clearly describe the bases and preconditions for OP Financial Group's risk-taking. Further, the Board considers the quantitative limits for risk-taking, which the guidelines set, to be in line with the strategy.

The Board of Directors also considers that, by means of the qualitative policies presented in the Risk Appetite Statement and limits, risk-taking capacity is allocated to businesses according to the Group's strategy and risk appetite.

OP Cooperative's Supervisory Council confirmed a number of limits for OP Financial Group for 2023, including the limits for capital adequacy, liquidity and risk appetite. The limits were used to ensure that OP Financial Group or any of its companies does not take excessive risks to endanger OP Financial Group's or its company's capital adequacy, profitability, liquidity and business continuity. The table below shows OP Financial Group's key limits and the actual values of risk-taking metrics based on the 31 December 2023 situation. Throughout the year, OP Financial Group's business risk-taking remained within the limits approved by the Board of Directors and confirmed by the Supervisory Council.

Limits in accordance with OP Financial Group's Risk Appetite Statement (RAS)	**31 Dec 2023**	**31 Dec 2022**	**Limit**
Risk-taking capacity			
Common Equity Tier 1 (CET1) ratio, %	19.2%	17.4%	14.3%
Capital adequacy ratio under the Act on the Supervision of Financial and Insurance Conglomerates (FiCo),	144%	137%	110%
Largest single customer risk / FiCo capital covering customer risks, %	5.1%	5.6%	10%
Liquidity coverage ratio (LCR), %	199%	217%	120%
Net stable funding ratio (NSFR), %	130%	128%	110%
OP Financial Group			
Materialised operational risks (net), € million	5.47	5.79	50
Risk appetite and its allocation: economic capital need / OP Financial Group internal capital, %			
OP Financial Group	32.25%	36.49%	70%
Banking in total, of which	24.78%	28.66%	49.5%
Retail Banking	11.4%	14.18%	22.0 %
Corporate Banking	10.91%	12.02%	22.5%
Group Treasury	2.04%	2.11%	4.0 %
Wealth/asset management	0.43%	0.35%	1.0 %
Non-life insurance	6.28%	6.63%	12.0 %
Life insurance	3.52%	3.76%	7.0 %
Other	0.68%	0.78%	1.5%

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