Risk Management 2022

Danske Bank Group

Danske Bank

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The objective of Risk Management 2022 is to inform Danske Bank's shareholders and other stakeholders of the Group's risk management, including policies, methodologies and practices.

Additional Pillar III disclosures required under the Capital Requirements Regulation and the Danish Executive Order on Calculation of Risk Exposure, Own Funds and Solvency Need can be downloaded from www.danskebank.com/investor-relations.

2022 in brief

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1.

1.1 Macroeconomic and geopolitical challenges

In 2022, the uncertainty from COVID-19 diminished but was quickly replaced by uncertainty surrounding geopolitical and macroeconomic trends. The year was characterised by rapidly growing inflation and monetary tightening by central banks following an unprecedented period of negative interest rates. Economies returned to positive interest rate environments, which may be considered to be more 'normal' in a historical context. The year was also affected by Russia's invasion of Ukraine. Altogether, this resulted in increased energy and commodity prices, volatile markets and growing fears of recession, signs of which became increasingly visible in the past few months of the year.

The Russian invasion of Ukraine had only a minor direct impact on the Danske Bank Group's risk profile, but indirect effects were noticeable as a number of business customers were hit by the war. The impact assessment suggested that approximately 185 business customers were directly exposed to the Russian invasion of Ukraine, with 22 customers, mainly from the Finnish portfolio, assessed as high-risk customers. Initiatives in relation to high-risk customers involved stress testing, monitoring, re-rating and intensified early involvement by the credit department. With back-office operations in Lithuania and Poland, the Group implemented actions to accelerate operational resilience and business continuity efforts and to support employees affected by the situation in Ukraine.

1.2 Financial risks

Despite the weakening global economy and the escalating energy crisis, the credit quality of the Group's customer portfolios remained strong in 2022, supported by a decreasing portfolio of customers with low classifications, which resulted in a lower exposure-weighted probability of default. Overall, net credit exposure from lending activities decreased from the end of 2021. At the business unit level, net credit exposure increased at Large Corporates & Institutions, while Personal & Business Customers saw a decrease as a result of a net negative effect of fair value adjustments and currency rates. The loan impairment charges were affected by macroeconomic uncertainty and adjustments in the macroeconomic scenarios and by compensation for overcollection relating to the Group's debt collection case, while the impairment charges in core activities returned to normal levels in 2022.

In January 2022, the Group successfully implemented the new definition of default. While being of a technical nature – because the customer portfolio remained the same – the change meant that risk is now treated in accordance with EBA guidelines. The implementation implied an increase in the portfolio of defaults due to alignment between non-performing loans (stage 3) and customers in default. Furthermore, the implementation contributed to an increase in the total risk exposure amount in the first quarter, which was expected and accounted for and hence did not result in increased impairment charges and expected credit losses for stage 3 customers.

In 2022, the volatility in the financial markets was considerably higher than in 2021. This was driven primarily by continued inflation pressures, hawkish central banks, the Russia-Ukraine war and general uncertainty about the direction of the global economy. Because of high market volatility resulting in higher trading-related market risk, the Group lowered its risk appetite and implemented stop-loss limits to supplement the forward-looking risk limits. The market risk appetite in relation to fair value adjustments (xVA-related market risk) was reduced following increased hedging efforts. In the non-trading portfolio, the sensitivity to interest rates (EV IRRBB) was affected mainly by rising interest rate volatility in the markets.

The Group's liquidity position remained prudent and liquidity metrics were comfortably above regulatory and internal limits, but declined over the year. The decrease was the result of a combination of factors, such as increased lending, maturing of debt and the fine in relation to the Estonia matter. Deposit volumes varied over the year, but the effect on liquidity was muted for the year as a whole.

At the end of 2022, the Group continued to have a strong capital position, with a CET1 capital ratio of 17.8% and a total capital ratio of 22.1%. In 2022, the Group's solvency need decreased by DKK 9.0 billion, mainly because of the removal of the DKK 7.5 billion Pillar II add-on following the additional provisions related to the Estonia matter made in the third quarter of 2022.

1.3 Sustainability risks

Sustainability risk and the management of the negative effects continued to be in focus in 2022, with climate-related risks being prioritised because of societal urgency. The Group strengthened its risk management practices where this was deemed necessary, with additional focus on credit, operational and compliance risks in particular. This also included matching customer sustainability preferences and product recommendation to ensure fair treatment of customers. The Group accelerated its target-setting efforts in order to align with externally verified standards, i.e. the Science Based Targets initiative, for the purpose of setting additional targets for high-emitting sectors to support the process of setting a long-term climate risk appetite for the Group. These portfolio targets were further supported by the development of

a transition framework to assess the credibility and plausibility of customers' transition plans. The overall purpose is to ensure ongoing monitoring of progress against climate targets and execution risks over the medium- and long-term horizon. In 2022, the focus was also on collecting relevant ESG data for both portfolio management and due diligence processes. Regulatory implementation continued to be a focus area for the second line of defence, predominantly with respect to products and services in the investment area, and this implementation will be monitored closely in step with requirements.

1.4 Non-financial risks

During 2022, the Group continued its efforts to strengthen the non-financial risk management framework and to increase awareness of non-financial risk across the Group. Activities included maturing non-financial risk tolerances and working with change risk management in respect of major strategic initiatives as well as critical and important outsourcing agreements. The Risk and Control Self-Assessment Module of the new Risk Governance and Compliance management tool went live in 2022. The implementation of the Governance Risk Compliance platform (a multi-year programme) progressed as two new applications were successfully launched in 2022, with the last three to go live in 2023.

The New & Amended Product Approval (NAPA) process underwent significant transformation and simplification, resulting in improved efficiency. The Group maintained its focus on risk management, risk awareness and risk culture initiatives, proceeding with prompt operational risk event reporting and follow-up on legacy issues. The follow-up on operational risk events continued to ensure greater transparency through increased focus on event data analysis and to provide a better overview of the progress in mitigating actions. The Group has a substantial focus on strengthening its control environment across the organisation through a number of programmes in order to address orders issued by regulators, control weaknesses observed, and adhere to regulatory requirements.

The Group's non-financial risk picture in 2022 was affected by the Russian invasion of Ukraine, resulting in an increased level of cyber-related threats, especially in the form of DDoS attacks. The Group managed to avert and mitigate these attacks and is on track in completing its plans to increase security in the cyber domain. Furthermore, an increase in third-party risks was observed, driven by intensified financial crime activity, mainly in the form of phishing and smishing attacks on Group customers.

1.5 Coordinated resolutions with US and Danish authorities regarding the Estonia matter

In December 2022, Danske Bank reached final coordinated resolutions with the US Department of Justice (DoJ), the US Securities and Exchange Commission (SEC) and the Danish Special Crime Unit (SCU) following the investigations into failings and misconduct related to the non-resident portfolio at Danske Bank's former Estonia branch.

Danske Bank cooperated with all investigations, which resulted in a total settlement of DKK 15.3 billion, covered by the provisions booked in the third quarters of 2018 and 2022, respectively, and the resolutions concluded the investigations into Danske Bank by the DOJ, SEC and SCU.

Danske Bank has taken extensive remediation action to address those failings to prevent any similar occurrences, including new leadership and significant investments in systems, controls and competencies to fight financial crime.

1.6 Embedding a strong risk and compliance culture

The Group continues to embed a strong risk and compliance culture throughout the organisation to empower all employees to understand their own roles and responsibilities. The purpose is to ensure that the Group adheres to applicable laws, rules and regulations and to make sure that risk-taking is aligned with the Group's risk appetite. This is achieved by setting a clear tone from the top, by promoting individual accountability and risk awareness through appropriate policies and training, and by supporting open communication through accessible tools, behavioural standards and reward structures. Furthermore, the Group's Code of Conduct Policy outlines the principles that govern behaviour and the way of doing business at Danske Bank. In 2022, the Group also introduced a new policy on treating customers fairly to further strengthen the objective of fair and compliant treatment of all customers.

In 2022, the Group further enhanced internal compliance processes, systems and controls, and the major compliance risk remediation programmes saw solid progress across regulatory compliance and financial crime risk areas.

1.7 *Key ratios and risk figures*

Key ratios and risk figures for the Danske Bank Group

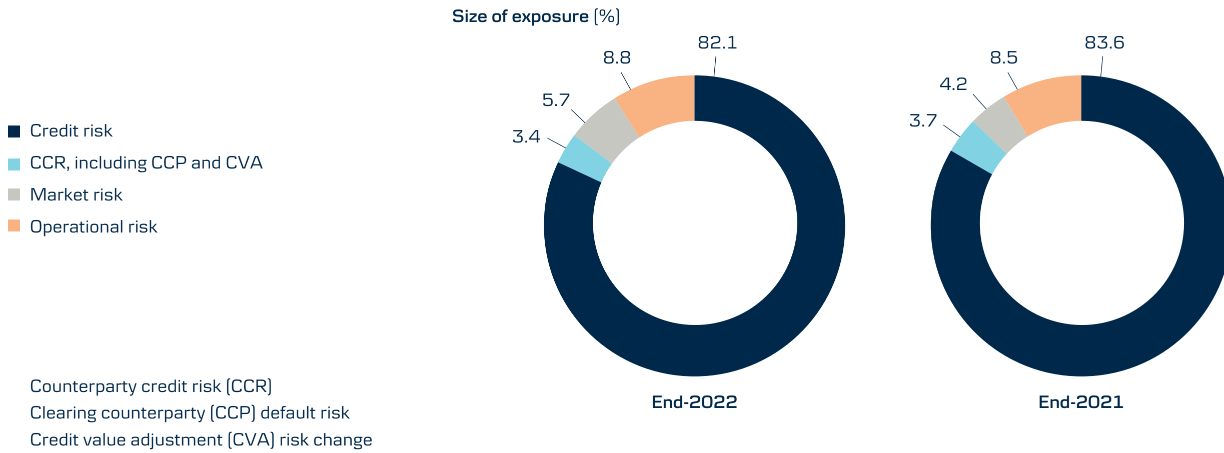
(At 31 December)	2022	2021
Capital		
Common equity tier 1 capital ratio (%)	17.8	17.7
Tier 1 capital ratio (%)	19.6	20.0
Total capital ratio (%)	22.1	22.4
Leverage ratio, transitional rules (%)	5.0	4.9
Leverage ratio, fully phased in (%)	4.9	4.8
Funding and liquidity		
Liquidity coverage ratio (LCR) (%)	151	164
Net stable funding ratio (NSFR) (%)	123	130
Asset encumbrance (DKK billions)	1,262	1,384
Asset encumbrance ratio (%)	38	41
Issuer rating and outlook – S&P Global[1]	A+/A-1/stable	A+/negative
Issuer rating and outlook – Moody's Investors Service[1]	A3/P-2/stable	A3/stable
Issuer rating and outlook – Fitch Ratings[1]	A/F1/stable	A/stable
Asset quality		
Risk exposure amount, total (DKK billions)	838.2	860.2
Impairment charges, loans, total, full year (DKK millions)[2]	1,568	348
Loan loss ratio, full year (%)[2]	0.08	0.02
Stage 3 (non-performing) loans, gross exposure (DKK billions)[3]	32.1	46
Stage 3 (non-performing) loans, net exposure (DKK billions)[3]	23.9	33.6
Stage 3 (non-performing) loans as % of total gross exposure[2]	1.3	1.7
Stage 3 (non-performing) loans coverage ratio[4]	73	78
Forborne loans (DKK billions)	9.6	28.7
Other		
Core net credit exposure, lending activities (DKK billions)	2,513	2,716
Non-core net credit exposure, lending activities (DKK billions)	2.5	2.9
Exposure at default (DKK billions)[5]	2,705	2,918
Total assets (DKK billions)	3,778	3,936

[1] Danske Bank A/S.
[2] At the group level, core portfolios, excluding Non-core.
[3] At the group level, core portfolios, excluding Non-core. Stage 3 loans decreased primarily due to two factors: a) final adjustments of staging during the implementation of the new definition of default in January 2022 and b) write-offs.
[4] Accumulated expected credit losses (IFRS 9) as percentage of gross exposure net of collateral (after haircuts).
[5] Excluding counterparty credit risk.

REA figures

In 2022, credit risk was by far the largest risk type among the Group's risk categories, amounting to 82.1% of the Group's total REA. Counterparty credit risk, market risk and operational risk constituted the remaining 17.9% of the total REA. The relative proportion for credit risk decreased by some 1.5 percentage points from the 2021 level due to a decline in the REA for credit risk. Higher volatility in the financial markets led to an increase in the REA for market risk and thus to a higher relative proportion for this risk type.

Risk exposure amount broken down by material risk type



Counterparty credit risk (CCR)
Clearing counterparty (CCP) default risk
Credit value adjustment (CVA) risk change

Risk strategy and governance

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2.

2.1 Risk strategy

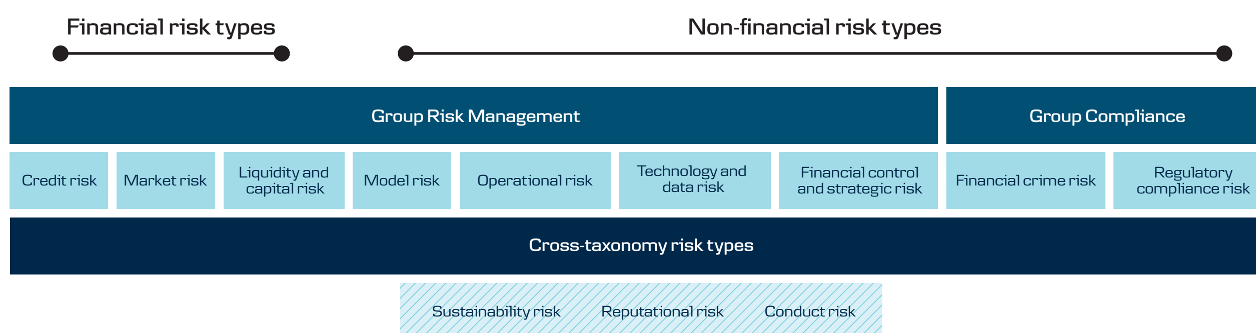
The Danske Bank Group assumes risks to support the activities of its customers, while ensuring stability of its financial position to the benefit of shareholders, society, customers and employees.

The Group applies an enterprise risk management (ERM) approach under which long-term risk tolerance statements and analytics-based risks assessments increasingly support the Group in protecting its long-term financial stability, risk-informed commercial planning and strategic allocation of capital. The ERM framework also sets common standards for how the Group manages risk across all risk types and organisational entities. Supported by policies approved by the Board of Directors, the framework defines the Group's risk taxonomy, risk roles and responsibilities, risk governance, approach to risk appetite, and risk culture. The Group continuously monitors its internal and external environment to identify and manage any emerging risks that could have a material impact on its performance and that need to be captured under this framework.

In 2022, the Group continued its efforts to embed sustainability-related risks into its risk management framework. For more information about sustainability-related risk management, see section 4, Sustainability risk.

2.2 Risk taxonomy

The risk taxonomy organises and visualises the most material risk types applicable to the Group and is intended to ensure adequate risk identification and ownership across the Group. The risk types cover both financial and non-financial risks, and roles and responsibilities are defined for each identified risk type to ensure continued risk assessment and monitoring. The taxonomy is reviewed on an annual basis to ensure its relevance.



2.3 Risk management organisation

The Group's risk management practices are organised in line with the principles of the three-lines-of-defence model. The three lines of defence segregate duties between 1) units that enter into business transactions with customers or otherwise expose the Group to risk (risk ownership), 2) units in charge of risk oversight and challenge in respect of risk owners (risk oversight), and 3) Group Internal Audit (risk assurance).

2.3.1 Three lines of defence

The first line of defence owns and manages the business activities and related risks. It consists of frontline and support functions, i.e. the following entities: Personal Customers; Business Customers; Large Corporates & Institutions; Technology & Services; CFO Area; and Group HR. These entities are responsible for identifying and managing risks across national borders.

Risks must be managed in line with delegated responsibilities and policies as set by the second line of defence and approved by the Board of Directors. The mandate of the business units is governed by risk policies, instructions, risk committees, risk appetite targets and limits.

The second line of defence consists of Group Risk Management and Group Compliance. These units provide the risk management framework and are responsible for setting standards, policies and methods. The second line of defence supports, challenges and is responsible for the risk oversight of the first line of defence and operates independently of the first line of defence.

The chief risk officer (CRO) as head of Group Risk Management and the chief compliance officer (CCO) as head of Group Compliance are responsible for the independent risk and compliance functions. The CRO is a member of the Executive Leadership Team. In cooperation with and under the responsibility of the chief executive officer (CEO) of Danske Bank, the CRO and the CCO submit risk and compliance reports to the Executive Leadership Team and the Board of Directors.

The CRO and the CCO may file reports to and contact the Board of Directors directly. The second line of defence has the authority to veto any decisions proposed by the first line of defence that fall outside the set risk appetite or are not aligned with agreed policies.

Group Risk Management is organised in risk functions with group-wide risk type oversight responsibility. The following units form part of Group Risk Management: Retail Credit Risk Management; Wholesale Credit Risk Management; Market, Liquidity & Non-Financial Risk; Risk Analytics; and Enterprise Risk Management. Furthermore, each business unit has been assigned a separate CRO who has oversight responsibility across all risk types for the unit in question. Business unit CROs also head risk functions at Group Risk Management and have group-wide responsibility for specific risk types. Moreover, country heads of the credit units in Norway, Sweden and Finland act as senior Group Risk Management leads for the respective countries to coordinate risk oversight tasks.

Group Compliance is responsible for monitoring and assessing the Group's compliance with applicable laws, rules and regulations and maintains the governance framework for regulatory compliance risk, conduct risk and financial crime risk. The following units form part of Group Compliance: Regulatory Compliance; Financial Crime Compliance; Regulatory Affairs, Data Protection & ESG; Compliance Oversight; and Central Compliance.

Group Compliance has specific second-line responsibility for organising compliance training; providing independent advice, guidance and challenge; undertaking risk assessments and risk-based monitoring; and providing independent reporting to senior management and the Board of Directors on compliance risks and issues.

In addition, Group Compliance undertakes compliance oversight assessments to evaluate the adequacy and effectiveness of other risk management frameworks and also owns the Group's whistleblowing system.

The third line of defence consists of the Group Internal Audit (GIA) function. GIA is an independent and objective assurance entity that assists the Board of Directors and the Executive Leadership Team in protecting the assets, reputation and sustainability of the Group by evaluating the effectiveness of risk management, controls and governance processes in relation to the control environments of the first and second lines of defence. GIA is headed by the chief audit executive (CAE), who reports directly to the Board of Directors.

2.4 Risk governance

The Group's risk governance structure includes five Board of Directors and four Executive Leadership Team committees that cover all significant risks and perform control and oversight of the Group's risk exposure. This committee structure is designed to support effective information, discussion and escalation paths to the Group's senior management while also providing a consistent approach to risk management and decision-making.

Risk governance: two-tier management and committee structures

The Group has principles and standards for escalating matters to the Executive Leadership Team, the Board of Directors' Risk Committee and the Board of Directors in respect of the size and affairs of the Group and the potential impact of such matters. These principles are communicated through relevant policies, and the Executive Leadership Team must ensure that the day-to-day management activities are undertaken in accordance with these policies and that all decisions of the Board of Directors are executed and implemented.

In addition, the Group's Escalation Policy sets the requirements for appropriate and timely internal identification, referral to the Executive Leadership Team, and subsequent management and resolution of matters considered to be extraordinary events or circumstances requiring the immediate attention of the Executive Leadership Team.

2.4.1 Board of Directors and Executive Leadership Team

The Group's Rules of Procedure for the Board of Directors and the Executive Leadership Team specify the responsibilities of the two bodies and the division of responsibilities between them. The two-tier management structure and the Rules of Procedure developed in accordance with Danish law, regulations and relevant corporate governance recommendations are central to the organisation of risk management and the delegation of authorities across the Group.

The Board of Directors appoints members to the Executive Leadership Team, the CAE and the Company Secretary to the Board of Directors. In accordance with the Rules of Procedure, the Board of Directors sets the Group's overall business model, the Group's strategic and financial targets, and the mandates of the Executive Leadership Team. It also approves the Group's risk appetite, policies and instructions on the basis of recommendation of the Executive Leadership Team. In addition, the Board of Directors receives regular reports, oversees the main risks, and reviews the largest credit exposures.

The Executive Leadership Team is responsible for the Group's day-to-day management. It supervises the Group's risk management practices, oversees developments in Group Compliance's methods (such as for anti-money laundering), approves credit applications up to a defined limit, and ensures that bookkeeping and asset management are both sound and consistent with the Group's strategy and in compliance with applicable legislation. The Executive Leadership Team consists of the CEO and the heads of the following entities: the three business units, CFO Area, Technology & Services, Group Risk Management, and Group HR.

2.4.2 Board of Directors and Executive Leadership Team committees

The Board of Directors has established five committees to provide effective oversight of risks and prepare matters for consideration by the Board.

Committees established by the Board of Directors

Committee	Description
Audit Committee Convenes at least four times a year Number of meetings in 2022: 7	The Audit Committee operates as a preparatory committee for the Board of Directors with respect to accounting and auditing matters, including relevant risk matters. The Audit Committee considers Group Internal Audit (the third line of defence) and external audit matters.
Conduct & Compliance Committee Convenes at least four times a year Number of meetings in 2022: 7	The Conduct & Compliance Committee operates as a preparatory committee for the Board of Directors with respect to conduct and reputational risk, compliance and financial crime prevention, and other matters that the Board of Directors wants the Conduct & Compliance Committee to examine.
Nomination Committee Convenes at least twice a year Number of meetings in 2022: 6	The Nomination Committee operates as a preparatory committee for the Board of Directors with respect to the nomination and appointment of candidates to the Board of Directors and to the Executive Leadership Team and with respect to the evaluation of the work and performance of the Executive Leadership Team and the Board of Directors, including the individual evaluation of each member of the Board of Directors. The committee also submits proposals to the Board of Directors on policies for succession planning as well as diversity and inclusion.
Remuneration Committee Convenes at least twice a year Number of meetings in 2022: 5	The Remuneration Committee operates as a preparatory committee for the Board of Directors with respect to remuneration matters. Its main focus is on the remuneration of the members of the Board of Directors, the Executive Leadership Team, material risk takers, key employees and executives in charge of control and internal audit functions, and on incentive programmes. The committee monitors trends in the Group's salary and bonus policies and practices. It also monitors the incentive programmes to ensure that they promote ongoing, long-term shareholder value creation and comply with the Remuneration Policy.
Risk Committee Convenes at least six times a year Number of meetings in 2022: 8	The Risk Committee operates as a preparatory committee for the Board of Directors with respect to risk management and related matters, including IT and data security. The committee advises the Board of Directors on the Group's risk profile, risk culture, risk appetite, risk strategy and risk management framework.

The Executive Leadership Team has established four committees that act on its behalf with respect to risk monitoring and decision-making of matters within their mandate and responsibility: i) the Group All Risk Committee, ii) the Impairment Committee, iii) the Group Credit Committee, and iv) the Business Integrity Committee.

Committees established by the Executive Leadership Team

Committee	Description
Group All Risk Committee Convenes at least nine times a year	The Group All Risk Committee acts on behalf of the Executive Leadership Team with respect to the Group's risk management practices. The committee makes decisions on and monitors all material risks associated with the Group's business model and activities. It covers all risks across risk types, business units, functions and geographical regions in alignment with the Group's ERM framework. Specific reviews on compliance-related risks are managed directly by the Executive Leadership Team and not by the Group All Risk Committee. All members of the Executive Leadership Team are permanent members of the Group All Risk Committee. The Group All Risk Committee has established and delegated parts of its responsibilities to a number of sub-committees. Each sub-committee oversees a specific risk type or all risks related to a specific business area. Delegation of responsibilities does not relieve the Group All Risk Committee of its responsibilities, and the sub-committees must report any decisions and issues to the Group All Risk Committee.
Group Credit Committee Convenes with the aim of meeting twice a week	The Group Credit Committee reviews and decides on individual credit applications on behalf of the Executive Leadership Team. The CEO, the CRO, the CFO and the heads of the three business units are permanent members of the Group Credit Committee.
Business Integrity Committee Convenes at least four times a year	On behalf of the Executive Leadership Team, the Business Integrity Committee decides on ambition levels and develops and oversees the implementation of the Societal Impact and Sustainability strategy and related Group policies. All members of the Executive Leadership Team are permanent members of the Business Integrity Committee.
Group Impairment Committee Convenes at least four times a year	On behalf of the Executive Leadership Team, the Group Impairment Committee oversees the implementation and maintenance of the group-wide framework for assessing the Group's credit impairment charges. The CEO, the CRO, the CFO and the heads of the three business units are permanent members of the Group Impairment Committee.

2.5 The Group's risk appetite

The Group's risk appetite specifies the overall level of risks that the Group is willing to assume, or avoid, in order to achieve its long-term strategic ambitions of serving its customers and ensuring the stability of its financial position. This includes supporting customers through the economic cycle and the Group's performance at all times, also during an economic downturn.

The Group's risk appetite is owned by the Board of Directors and sets the direction for the Group's overall risk-taking by formulating group-wide qualitative and quantitative statements while taking aggregated financial, non-financial and sustainability risk impacts into consideration.

The Group's risk appetite forms an integral part of its financial and strategic planning processes for the purpose of ensuring that both risks and opportunities are considered during the strategic decision-making processes. In addition, group-wide limits or tolerance levels exist for credit, market, liquidity and non-financial risks, all of which are specified in related documents, policies and instructions.

2.6 Risk culture

The Group recognises the importance of building and maintaining a strong risk culture in day-to-day activities to ensure that Danske Bank creates value for all of its stakeholders and lives up to its societal responsibilities as one of the leading financial institutions in the Nordic region. This includes ensuring a high level of risk awareness and making sure that risk-taking is aligned with the Group's risk appetite. Every employee plays a vital role in maintaining a strong risk culture while the Board of Directors and the Executive Leadership Team act as role models to set the tone from the top. This work is underpinned by the Group's purpose and culture commitments and by governance documents, communications, the remuneration structure and staff training.

The performance agreements of Executive Leadership Team and senior management members two levels below the Executive Leadership Team include risk and compliance performance targets. The Group develops and maintains risk management skills and an understanding of risk through tailored training to ensure that risk management is embedded

in daily routines. All employees, including the members of the Executive Leadership Team, maintain their qualifications through participation in annual compulsory eLearning courses on competition law, financial crime, GDPR, security, and other group and role-specific training to make informed, risk-based decisions and exercise due care in their day-to-day responsibilities.

2.7 Risk monitoring and reporting

The Group has an enterprise-wide approach to risk reporting. This approach is supported by a wide range of reporting that covers analyses across risk types, core geographical regions and key subsidiaries.

Risk reporting	Content	Frequency	Sent to
Capital and REA report	An assessment of developments in the underlying parameters affecting the Group's overall capital position, including an analysis of the risk exposure amount (REA).	Monthly	Chief financial officer Chief risk officer
CRO letter	A comprehensive overview of the Group's risk profile across risk types, core geographical regions and key subsidiaries.	Monthly (quarterly in respect of the Board of Directors; the Board of Directors receives verbal reports between the quarterly written reports)	Group All Risk Committee Risk Committee (Board of Directors) Board of Directors
Group compliance quarterly report	An overall assessment of the Group's compliance risk management and control environment.	Quarterly	Executive Leadership Team Conduct & Compliance Committee (Board of Directors) Board of Directors
ICAAP report	An assessment of the adequacy of the Group's short-term and long-term capital levels as measured against its risks and business strategy. The assessment includes upcoming regulatory changes and stress testing results.	Annually (reports on capital levels are regularly issued outside the ICAAP reporting cycle)	Group All Risk Committee Risk Committee (Board of Directors) Board of Directors Danish FSA
ILAAP report	A description of the Group's liquidity situation and liquidity management, including its funding profile and plan. The report assesses liquidity risk indicated by liquidity stress tests and similar analyses and also describes the minimum amount of liquidity reserves required by the Group.	Annually (reports on liquidity are regularly issued outside the ILAAP reporting cycle)	Group All Risk Committee Risk Committee (Board of Directors) Board of Directors Danish FSA
Impairment report	An overview of detailed developments in the Group's impairment charges.	Quarterly	Group Impairment Committee Audit Committee (Board of Directors) Risk Committee (Board of Directors) Board of Directors

Industry reviews	Reviews based on a risk-based approach; they cover specific risks related to selected portfolios and all material portfolios. Ad hoc reports are prepared when relevant.	At varying intervals; high-risk portfolios are reported more frequently	Group All Risk Committee
Risk management report	A description of the Group's risk strategies and profile, capital management, risk management organisation and risk frameworks and policies. The report is prepared annually and published on Danske Bank's website along with the Additional Pillar III Disclosures tables.	Annually	Risk Committee (Board of Directors) Board of Directors Public
Risk profiles	Detailed portfolio and industry analyses focusing on exposure, risk factors, structural trends, performance and forward-looking developments, including portfolio stress tests. Risk profiles cover all material portfolios.	At varying intervals; high-risk portfolios are reported more frequently	Group All Risk Committee Risk Committee (Board of Directors) Board of Directors

Credit risk

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3.

3.1 Credit risk management

Credit risk is the risk of losses because debtors fail to meet all or part of their payment obligations to the Danske Bank Group. Credit risk includes counterparty credit risk.

The Group manages credit risk in accordance with its Credit Policy, credit risk appetite and related governance documents. The purpose of these elements is twofold: 1) to ensure a consistent approach to credit risk management as well as clear roles and responsibilities across markets and business units and 2) to make sure that risk-taking remains supportive of the Group's business strategy, including sustainable finance.

The Group ensures compliance with the Credit Policy and related governance documents through the credit control environment (includes both system-supported controls and manual controls), while portfolio monitoring ensures alignment with the credit risk appetite.

3.1.1 Risk governance and responsibilities

Credit risk is managed in line with the principles of the three-lines-of-defence model. This means that the first line of defence (business-facing units and direct support functions) is responsible for the risks assumed, while the second line of defence (Group Risk Management) is responsible for risk oversight and risk challenge.

Delegated lending authorities

The mandate for approving credit risk is cascaded from the Board of Directors to the Executive Leadership Team and further down the organisation via lending authorities that are delegated on the basis of qualifications and need, for example. If a credit application exceeds the delegated lending authority of the individual mandate holder, the application is submitted to a lending officer with the necessary authority. The second line of defence must be involved in the credit sanctioning process for credit applications and renewals above a certain materiality threshold, while both the Executive Leadership Team and the Board of Directors are involved in the approval process for credit applications of a reputational or material financial nature.

3.1.2 Monitoring and reporting

At the group level, Group Risk Management oversees the Group's credit activities and reports on developments in the credit portfolios. Portfolio reports are presented to the Executive Leadership Team on a monthly basis and to the Board of Directors on a quarterly basis through the CRO letter.

3.1.3 Credit risk appetite and concentration frameworks

The Group's credit risk appetite (CRA) assesses the level of credit risk that the Group is willing to assume, or avoid, in order to achieve its long-term strategic ambitions and ensure the stability of its financial position by limiting impairment volatility through the business cycle and managing credit concentrations (including single names, assets and/or credit type concentrations). The credit risk appetite allows the Group to take on credit risk in areas that are within its strategic core.

The credit risk appetite applies at business unit, country and product levels. Supporting risk limits and risk metrics are in place at various levels to help measure credit risk further.

Subsidiaries and legal entities owned by the Group set independent credit risk appetites in alignment with Group principles.

Monthly and quarterly risk reporting enables ongoing monitoring of the Group's credit risk profile to ensure that it is in line with its credit risk appetite.

Limiting impairment volatility

The Group has set maximum loss limits to enable it to manage the risk of credit losses in times of economic stress. The maximum loss limits also make it possible to monitor the credit quality of the portfolio and factor in all key credit quality drivers such as customer ratings/scores, collateral and loan maturity.

Managing credit concentrations

The Group has implemented a set of frameworks to manage credit risk concentrations. The frameworks cover the following concentrations:

- single-name concentrations
- industry concentrations
- geographical concentrations

Single-name concentrations
Single-name concentrations are managed according to two frameworks:

1. Large exposures: This framework is based on the regulatory definition of large exposures in the applicable Capital Requirements Regulation (CRR). The Group has defined stricter internal limits for managing single-name concentrations, including the following:
   - absolute limit on single-name exposures
   - limit for the 20 largest exposures
2. Single-name concentration: The Group has also implemented a risk-sensitive internal framework.[1] In order to limit losses on single names, the framework sets limits on the following:
   - exposure
   - loss given default
   - expected loss

Industry concentrations
The Group manages industry concentrations as part of its credit risk appetite framework by setting exposure limits on selected industries. For commercial property, this also includes reducing the number of low-quality customers in order to ensure creditworthiness within the concentration limits. The industry concentrations are updated on an ongoing basis and at least once a year. The Group accepts the risks on material concentrations in accordance with industry-specific guidelines that outline the use of credit policies within the industry. For personal customers, the Group also manages key concentrations in relation to high LTV ratios and short-term interest loans, for example.

Geographical concentrations
Credit reporting includes a breakdown by country. For selected countries, exposures to sovereigns, financial institutions and counterparties in derivatives trading are managed within country limits.

Warehouse risk
During the past seven years, in the large corporate space, the Group has been engaged in loan underwriting activities based on an underwrite-to-distribute approach. The activities relate primarily to M&A transactions with a Nordic footprint. The activities are conducted under a strict governance regime and are subject to a limit. The Group is one of the leading Nordic banks engaged in these activities. The Group expects to increase the underwriting activities going forward in line with international capital efficiency developments in corporate banking.

3.1.4 Risk identification and assessment

The Group's credit process ensures that loans are granted to customers within their financial capacity. Additionally, loans of customers in financial distress and non-performing loans are identified at an early stage and managed proactively. Assessing a customer's financial capacity is a key element of the credit approval process.

The Group has a high focus on early collection activities for personal and small business customers, and early signs of inability to repay are addressed by dedicated teams specialised in identifying and mitigating such issues. This allows the Group to work with customers to remediate issues in a timely manner and to reduce the volume of non-performing loans to personal and small business customers.

Similarly, the Group uses early warning indicators for business customers that show poor performance. This enables relationship managers and credit departments to target activities to a higher extent than previously.

The Group engages in work-out processes with customers in order to minimise losses and help healthy customers in temporary financial difficulty. During the work-out process, the Group makes use of forbearance measures to assist non-performing customers. Concessions granted to customers include interest-reduction schedules, temporary payment holidays, term extensions, waiver of covenant enforcement, settlements, etc. Work-out processes can be lengthy, and the Group may need to maintain impairment charges for certain customers for a long period of time.

Forbearance measures must comply with the Group's Credit Policy. They are used as a tool to maintain long-term customer viability if customers in financial difficulty are likely to be able to meet obligations at a later stage.

3.1.5 Stress testing

When setting the overall credit risk appetite at group and business unit levels, the Group stress-tests the total portfolio using the severe recession scenario that is also the foundation for the ICAAP stress tests. The credit risk appetite is thus based on forward-looking parameters.

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[1] The framework is aligned with the large exposure framework and includes the total exposure limit of consolidated entities less senior covered bonds, intraday lines, clearing services and Realkredit Danmark credit lines.

The Group also conducts bottom-up stress tests on selected industries, typically the largest portfolios. These stress tests form part of extensive sector and portfolio reviews, and they are used for the assessment of specific risk strategies for individual sectors. For relevant sectors, stress tests using climate scenarios are performed to assess climate risk exposure at the portfolio level. The bottom-up stress tests help set the risk appetite for industry concentrations and also help validate top-down stress testing.

3.1.6 Rating and scoring processes

Group Risk Management is responsible for the overall rating and scoring processes, including the underlying rating and scoring models.

The ratings of large customers are reassessed periodically on the basis of new information that affects a customer's creditworthiness.

For small customers, such as personal customers and small businesses, the Group uses fully automated and statistically based scoring models. Credit scores are updated monthly in a process subject to automated controls.

Both rating and scoring models are validated annually by an independent unit to assess their performance and highlight any deficiencies that need to be addressed.

Risk classification distribution

Both the scoring and the rating of customers are integral elements of the credit approval and overall credit risk management processes. The Group's internal classifications are based on point-in-time (PIT) parameters and reflect the probability of default within a year.

The Group's classification scale consists of 11 main categories. Categories 1-5 apply to investment grade customers, categories 6-7 apply to non-investment grade customers, and categories 8, 9 and 10 cover vulnerable customers while category 11 covers customers in default.

3.1.7 Risk mitigation and collateral management

The Group uses a number of measures to mitigate credit risk, including collateral, guarantees and covenants.

The value of collateral is monitored and reassessed by advisers, internal or external assessors, and automatic valuation models to ensure that it reflects current market prices. The Group's Collateral System supports this process by accepting only up-to-date values, thus ensuring that the Group complies with regulatory requirements.

The validity of the internal and external input on which the valuation models depend is assessed regularly, and the performance of the models themselves is validated annually by an independent unit to assess their performance and highlight any deficiencies that need to be addressed.

The market value of collateral is subject to a haircut to reflect the fact that the Group may not be able to obtain the estimated market value upon the sale of the individual asset in a distressed situation. Hence, the haircut includes a forced sale reduction, price volatility during the sales period, realisation costs and maintenance costs. The haircut applied depends on the type of collateral. For regulatory purposes, the Group also applies more conservative haircuts in order to capture the risk of an economic downturn. For more information, see section 3.2.3.

3.1.8 Support systems

The Group has a number of systems for measuring and controlling credit risk. Among the most important systems are the Credit System, the Collateral System, the Rating/Scoring System and a number of follow-up systems. Several controls are incorporated in these systems to ensure the following:

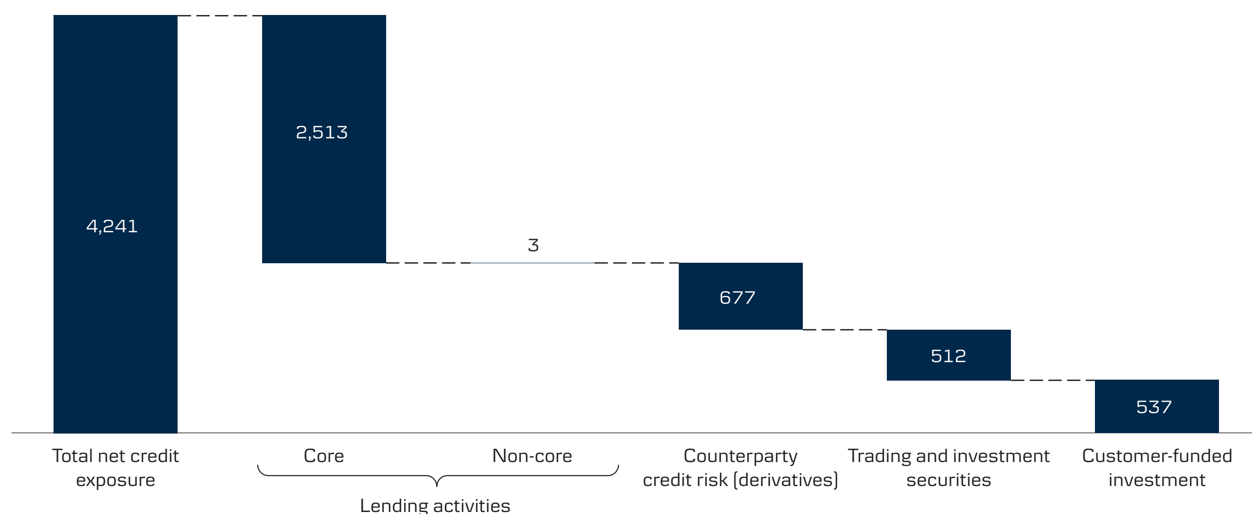
- accurate classification of customers and timely default registration based on risk events and days past due
- timely registration and accurate valuation of collateral
- granting of credit facilities according to delegated lending authorities
- formalised monitoring and follow-up procedures

The Credit System is the foundation of the credit process. It contains all relevant details about credit facilities, financial circumstances and customer relations. The system is used for all customer segments and products across all sales channels. It ensures that the basis for decision-making, including file comments and credit exposure, is created and stored properly.

3.2 Credit risk profile

The Danske Bank Group's total net credit exposure is defined as on-balance-sheet and off-balance-sheet items net of impairment charges that carry credit risk. At the end of 2022, the Group's total net credit exposure for accounting purposes was DKK 4,241 billion (2021: DKK 4,451 billion).

Breakdown of net credit risk exposure
(DKK billions)



Net credit exposure from lending activities accounts for most of the Group's net credit exposure, and it is the focus of this section. The Group's counterparty credit risk is explained in sections 3.4 and 3.5, while the risk arising from trading and investment securities and customer-funded investment is described in section 5, Market risk. Net credit exposure from lending activities includes amounts due from credit institutions and central banks, loans, guarantees, and irrevocable loan commitments.

From section 3.2.1 onwards, net credit exposure from lending activities (referred to as 'net credit exposure') excludes Non-core exposure (unless otherwise stated).

Securitisation activities
The Group's securitisation activities are by nature legacy activities and all originated before 2008. They do not include any re-securitisation activities or simple, transparent and standardised (STS) transactions. The objective of the portfolio is to reduce the securitisation transactions and ultimately to cease any involvement in third-party securitisation transactions. The Group does not have any outstanding synthetic securitisation risk transfers.

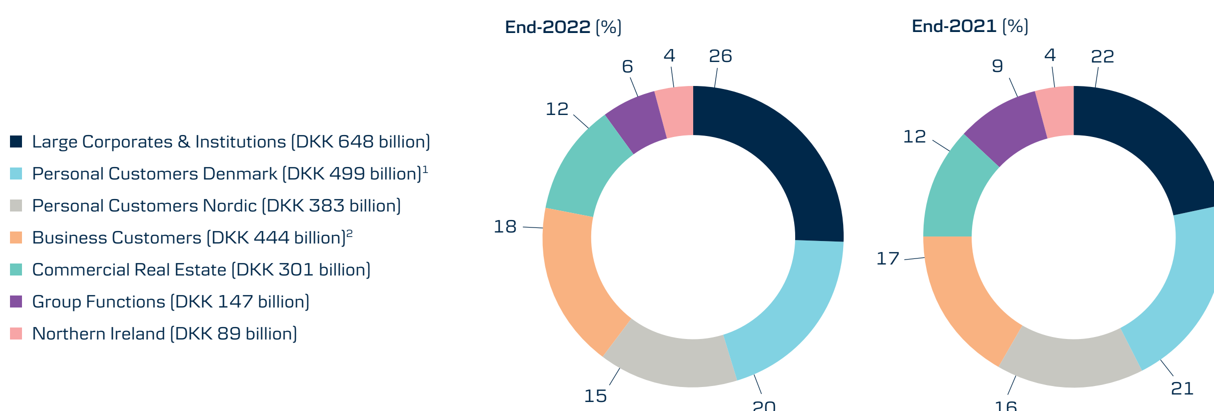
Transactions with super-senior status make up 99% of the total portfolio. These transactions consist of credit facilities provided to support special purpose vehicles (SPVs) financed by rated securitisation bonds. The credit facilities function as committed overdraft facilities and provide liquidity for the ongoing payment of interest, principal and costs. Any drawings under these credit facilities would rank above the most senior ranking tranche in the individual SPV financing structure. In many cases, the original basis of the agreement stipulates a minimum requirement for the Group's rating.

The Group has no risk positions in own-originated transactions.

3.2.1 Net credit exposure from lending activities
Overall net credit exposure from lending activities decreased by DKK 203 billion from the end of 2021. Deposits with central banks and amounts due from central banks and credit institutions declined by DKK 127 billion. Meanwhile, the Group saw a decrease of DKK 76 billion in loans and loan commitments driven by the net negative effect of fair value adjustments and weak currency rates in Sweden and Norway.

At the business unit level, net credit exposure increased at Large Corporates & Institutions and was up by DKK 58 billion. Most of the increase was driven by the following industries: utilities and infrastructure; capital goods; and pulp, paper and chemicals. Personal Customers Denmark saw a decrease of DKK 65 billion, primarily as a result of the net negative effect of fair value adjustments. Net credit exposure decreased at Personal Customers Nordic (down DKK 40 billion as a result of weak currency rates and a lower level of credit exposure) as well as at Northern Ireland (down DKK 11 billion on account of the exposure to public institutions and weak currency rates). Business Customers, including Commercials Real Estate, recorded a decrease of DKK 31 billion because of negative fair value adjustments and weak currency rates but saw increases in Sweden, Norway and Finland in local currency. The Others business unit, which also includes the Group's deposits with central banks, witnessed a decrease of DKK 110 billion.

Breakdown of net credit exposure by business unit (core lending activities)



[1] Including Personal Customers Other.
[2] Including Asset Finance and Business Customers Other.

Overall, the corporate and sovereign portfolios are well-diversified across various industries with commercial property representing the largest exposure. The credit exposure to personal customers consisted mostly of home financing secured on real property.

For more information about the trends in selected portfolios, see section 3.2.4.

Net credit exposure broken down by industry (core lending activities)

	Net credit exposure (DKK billions)		
	End-2022	End-2021	Index
Public institutions	227	334	68
Financials	120	125	97
Agriculture	62	66	94
Automotive	28	27	103
Capital goods	97	79	122
Commercial property	298	313	95
Construction and building materials	52	51	102
Consumer goods	80	76	106
Hotels, restaurants and leisure	15	15	100
Metals and mining	15	13	116
Other commercials	16	14	113
Pharma and medical devices	46	59	78
Private housing co-ops and non-profit associations	192	212	90
Pulp, paper and chemicals	51	41	127
Retailing	34	31	109
Services	66	61	108
Shipping, oil and gas	40	38	105
Social services	28	27	104
Telecom and media	24	23	106
Transportation	16	16	100
Utilities and infrastructure	107	80	133
Personal customers	897	1,014	88
Total	**2,513**	**2,716**	**93**

3.2.2 Credit quality

Net credit exposure broken down by rating category

Credit quality remained strong in 2022 even though uncertainty increased as a result of the war in Ukraine, increased inflationary pressures and interest rate hikes, whereas COVID-19 uncertainty decreased. Overall credit quality measured by exposure-weighted PD improved to 0.38% at the end of 2022, against 0.57% at the end of 2021. The implementation of the new definition of default in January 2022 led to an increase in exposure in rating category 11 (default), while exposure especially in rating category 10 decreased. Section 3.2.4 also shows the effect on the rating distribution at the industry level.

Overall lending activities – net credit exposure broken down by rating category

	PD scale (%)		Net credit exposure (DKK billions)		Net credit exposure (% accumulated)	
Rating category	Upper	Lower	End-2022	End-2021	End-2022	End-2021
1	0.00	0.01	136	265	5	10
2	0.01	0.03	234	208	15	17
3	0.03	0.06	542	574	36	39
4	0.06	0.14	632	642	61	62
5	0.14	0.31	477	491	80	80
6	0.31	0.63	289	293	92	91
7	0.63	1.90	132	148	97	97
8	1.90	7.98	34	53	98	98
9	7.98	25.70	3	5	99	99
10	25.70	99.99	12	29	99	100
11	100.0	100.0	24	7	100	100
Total			**2,513**	**2,716**	**100**	**100**

Impairment charges, stage 3 loans and forborne exposures

Loan impairment charges in core activities returned to normal levels in 2022, amounting to DKK 1,568 million (2021: DKK 348 million).

Impairment charges mainly reflected the impact of updated macroeconomic scenarios, increased post-model adjustments, and the compensation for overcollection relating to the Group's debt collection case. The Group saw reversals relating to individual customers as a result of strong credit quality driven by post-pandemic financial recoveries. There was, however, high uncertainty about the macroeconomic outlook in 2022, and this uncertainty is expected to continue in 2023.

Personal Customers and – to a smaller extent – Business Customers accounted for the main part of the loan impairment charges in 2022. The charges were driven by updated macro scenarios and increased post-model adjustments.

Large Corporates & Institutions continued its trend with decreasing loan impairment charges leading to reversals in 2022 due to post-pandemic financial recoveries. The reversals were reduced by increasing post-model adjustments addressing the macroeconomic uncertainty.

Stage 3 loans and impairment charges broken down by business unit

	End-2022				End-2021			
(DKK millions)	Gross stage 3 = a+b	Expected credit loss b	Net stage 3 exposure a	Net stage 3 exposure, ex collateral	Gross stage 3 = a+b	Expected credit loss b	Net stage 3 exposure a	Net stage 3 exposure, ex collateral
Personal Customers								
Personal Customers Denmark	6,550	1,371	5,179	0	12,044	2,273	9,771	273
Personal Customers Nordic	3,304	800	2,505	24	3,225	676	2,649	222
Personal Customers Other	-	-	-	-	91	41	50	9
Total Personal Customers	9,855	2,171	7,684	24	15,260	2,990	12,471	505
Business Customers								
Asset Finance	1,158	325	832	24	866	199	667	63
Business Customers	11,099	3,550	7,549	1,511	15,848	4,494	11,354	1,730
Commercial Real Estate	1,315	279	1,036	278	1,719	351	1,368	137
Business Customers Other	-	-	-	-	-	-	-	-
Total Business Customers	13,572	4,154	9,417	1,812	18,434	5,044	13,390	1,929
Large Corporates & Institutions	7,039	1,500	5,540	1,222	10,071	3,765	6,306	909
Northern Ireland	1,656	414	1,240	47	2,029	593	1,436	121
Group Functions	10	12	-	-	18	6	12	7
Total stage 3 loans	**32,132**	**8,251**	**23,881**	**3,106**	**46,012**	**12,397**	**33,615**	**3,471**

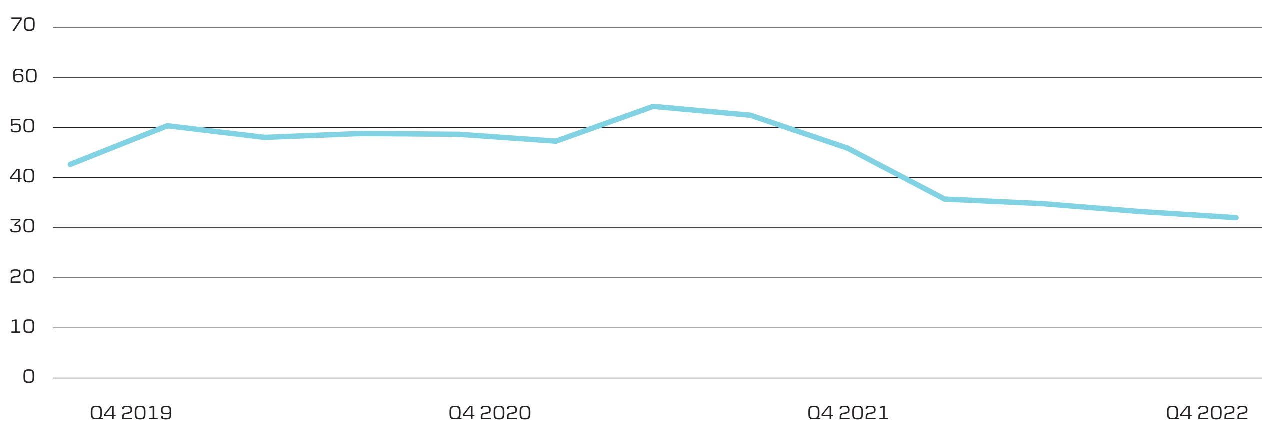
The Group defines stage 3 exposures as stated in IFRS 9. With the implementation of the new definition of default in January 2022, the Group aligned the existing definition of default for accounting purposes with the regulatory purposes. In accordance with the new definition of default, all exposures in stage 3 are considered to be in default. As a result, all non-performing loans are now considered to be in default, and hence equal to the total of stage 3 exposures.

The Group's Annual Report 2022 includes detailed information about definitions, approaches, methods, etc. in respect of expected credit losses (specific and general credit risk adjustments), IFRS 9 staging, past due facilities, etc. The report is available on Danske Bank's website at www.danskebank.com/investor-relations.

Total net stage 3 loans decreased by DKK 10 billion from the level at the end of 2021, affected primarily by the technical implementation of the new definition of default and write-offs.

Gross stage 3 loans (excluding Non-core)

(DKK billions)



Stage 3 loans and impairment charges broken down by industry

	End-2022				End-2021			
(DKK millions)	Gross stage 3 = a+b	Expected credit loss b	Net stage 3 exposure a	Net stage 3 exposure, ex collateral	Gross stage 3 = a+b	Expected credit loss b	Net stage 3 exposure a	Net stage 3 exposure, ex collateral
Public institutions	5	1	5	4	5	0	5	5
Financials	321	127	194	171	434	194	240	25
Agriculture	2,896	805	2,091	40	4,821	1,215	3,606	85
Automotive	195	71	124	33	301	80	220	89
Capital goods	1,324	651	674	289	1,579	559	1,020	526
Commercial property	3,608	713	2,895	452	5,462	1,163	4,300	555
Construction and building materials	1,176	506	670	219	1,889	697	1,192	531
Consumer goods	854	249	606	289	957	306	652	45
Hotels, restaurants and leisure	1,043	262	781	150	1,874	448	1,426	212
Metals and mining	35	10	24	10	53	21	33	16
Other commercials	250	55	195	7	125	30	95	-10
Pharma and medical devices	12	5	7	1	31	9	22	7
Private housing co-ops and non-profit associations	631	118	513	45	908	212	696	68
Pulp, paper and chemicals	292	145	147	1	166	93	73	-1
Retailing	1,670	571	1,098	419	2,404	978	1,427	222
Services	787	348	439	131	811	351	459	102
Shipping, oil and gas	5,399	975	4,424	347	6,571	2,406	4,165	-31
Social services	670	105	565	394	1,019	334	685	410
Telecom and media	166	75	90	15	201	88	113	27
Transportation	463	121	342	88	481	76	405	121
Utilities and infrastructure	9	14	-	-	31	13	17	9
Personal customers	10,327	2,325	7,997	-	15,889	3,124	12,765	458
Total	**32,132**	**8,251**	**23,881**	**3,106**	**46,012**	**12,397**	**33,615**	**3,471**

The Group adopts forbearance plans to assist customers in financial difficulty. Concessions granted to customers include interest-reduction schedules, interest-only schedules, temporary payment holidays, term extensions, cancellation of outstanding fees, waiver of covenant enforcement and debt forgiveness. Forbearance plans must comply with the Group's Credit Policy. They are used as an instrument to retain long-term business relationships during economic downturns if there is a realistic possibility that customers will be able to meet their obligations again or as a tool to minimise losses in the event of default. During the COVID-19 crisis, the Group granted concessions to assist customers affected by the crisis. This level decreased during 2022 due to the expiry of granted concessions.

Exposures subject to forbearance measures*

(DKK millions)	End-2022	End-2021
Stage 1	367	83
Stage 2	3,029	6,517
Stage 3	6,165	9,711
Total	**9,561**	**16,311**

* The presentation of exposures subject to forbearance measures no longer includes facilities under probation with no active forbearance measures. With the implementation of the new definition of default, the performing/non-performing status is replaced by impairment stages.

3.2.3 Credit risk mitigation

The main method used by the Group to mitigate credit risk is to obtain collateral with a focus on the customer's ability to repay. The most important types of collateral, measured by volume, are real property, guarantees, vehicles and vessels. Personal customers' real property accounted for 53% of the total collateral base after haircuts. Because collateral is capped at the amount of exposure, the net negative effect of fair value adjustments reduced the collateral related to property in Denmark. For more information about haircuts, see section 3.1.7.

Collateral value broken down by type (after haircuts)

At 31 December (DKK billions)	Total		Portion from: Personal Customers		Business Customers		Large Corporates & Institutions		Northern Ireland		Group Functions and Other	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Real property	1,263.2	1,372.9	730.4	800.2	458.1	495.5	38.0	41.0	36.5	35.8	0.2	0.5
- Personal	744.0	818.3	717.4	789.1	1.8	5.0	0.0	0.0	24.7	23.8	0.1	0.4
- Commercial	476.3	506.7	10.8	8.6	419.3	449.1	36.4	39.3	9.8	9.7	0.1	0.1
- Agricultural	42.9	47.9	2.2	2.6	37.0	41.3	1.6	1.7	2.1	2.3	-	-
Bank accounts	0.7	1.3	0.2	0.6	0.4	0.5	0.1	0.2	-	-	-	-
Custody accounts and securities	14.0	17.3	3.0	8.0	4.4	4.6	6.6	4.8	-	-	-	-
Vehicles	23.6	24.3	1.8	1.4	19.0	22.8	2.8	0.1	-	-	0.0	0.0
Equipment	17.5	17.1	0.0	0.1	11.7	10.6	3.3	3.5	2.5	2.9	0.0	0.0
Vessels	14.3	21.0	0.0	0.0	1.0	1.6	13.3	19.3	0.0	0.0	-	-
Guarantees	23.8	25.9	6.2	3.3	3.6	3.6	11.6	15.8	2.5	3.3	0.0	0.0
Amounts due	3.5	4.0	0.2	0.1	2.5	2.6	0.6	0.9	0.2	0.3	0.0	0.0
Other assets	34.4	34.0	0.0	0.0	29.8	29.0	3.4	3.8	1.3	1.2	-	0.0
Total collateral	**1,395.1**	**1,517.8**	**741.8**	**813.6**	**530.5**	**570.9**	**79.6**	**89.3**	**42.9**	**43.5**	**0.2**	**0.5**

3.2.4 Trends in selected portfolios

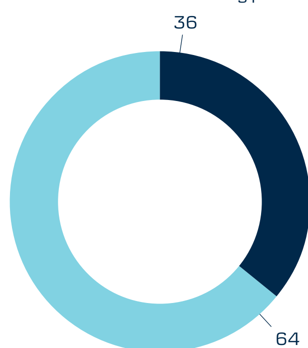
The sections below describe the trends in the credit quality of selected lending portfolios. These portfolios either have an elevated credit risk or represent a significant portion of the Group's total lending portfolio.

Personal customers

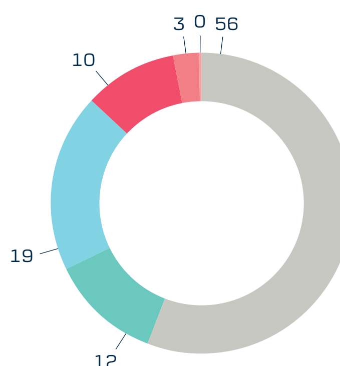
Measured by gross credit exposure, the personal customer portfolio is the Group's largest portfolio. At the end of 2022, gross credit exposure amounted to DKK 902 billion at the group level (2021: DKK 1,019 billion), with DKK 389 billion at Realkredit Danmark (2021: DKK 447 billion) reflecting the Group's position as one of the leading mortgage finance providers in Denmark. The exposure to personal customers comprises loans secured on customer assets, consumer loans and fully or partly secured credit facilities. Mortgage loans represented most of the exposure to personal customers at 83% (2021: 83%).

Personal customers

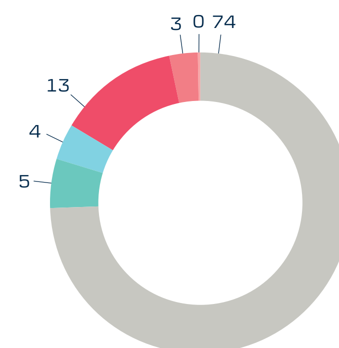
Gross credit exposure to personal customers as % of total lending portfolio



Gross credit exposure by country (%)



Expected credit loss by country (%)



Overall, the personal customer portfolio decreased by DKK 117 billion from the end of 2021 to the end of 2022. The decrease was driven mainly by the net negative effect of fair value adjustments in the Realkredit Danmark portfolio and weak currency rates (SEK and NOK) in combination with a lower level of credit exposure in Sweden and Norway.

Average households are in a sound financial position following a period of low unemployment, low interest rates and high levels of home equity and savings. During an uncertain period of rising inflation, rising interest rates and falling house

prices, the rapidly rising costs of living affect all household finances. However, some households are hit harder than others when exposed to multiple factors simultaneously. The decline in real wages affects all customers while some customers are also hit by rising gas prices and/or rising interest rates. The Group is implementing several initiatives to manage risk and to advise and support customers in a challenged economic environment. Though many households have strong buffers, the Group continues to be vigilant about a potential decline in credit quality, such as an increase in delinquencies and defaults.

Following an unprecedented period of negative interest rates, economies returned to positive interest rate environments in 2022, which may be considered to be more 'normal' in a historical context. Residential property prices in all Nordic countries started to fall as a consequence of the rapidly rising interest rates and the deteriorating economic outlook. In Denmark, house prices are overall expected to fall by 10% until end of 2023. The urban areas where prices increased the most when interest rates were low in 2022 are also the areas that are expected to bear the brunt of the rising interest rates. In Sweden, house prices dropped by 9.5% from November 2021 to November 2022. In Norway and Finland, the sharp rise in interest rates is expected to lead to falling house prices. In Denmark, because of rising interest rates, customers with strong credit quality increasingly switch to variable rate loans in order to reduce outstanding debt.

In 2022, the accelerated solution to the Group's debt collection case led to write-offs of DKK 1.0 billion for the related debts. Because the write-offs were covered by matching impairment charges, they contributed to a reduction in the Group's expected credit loss of DKK 1.0 billion.

Developments in the personal customer portfolio

	Key figures and ratios					Stage 3 loans		
(DKK millions)	Gross credit exposure	Expected credit loss	Write-offs	Loan loss ratio	Collateral (after haircuts)	Gross exposure	Share of total segment exposure	Coverage ratio
End-2021	1,019,409	5,811	322	-0.05%	837,247	15,889	1.56%	87%
End-2022	902,457	5,542	1,855	0.25%	760,759	10,327	1.14%	100%

Commercial property

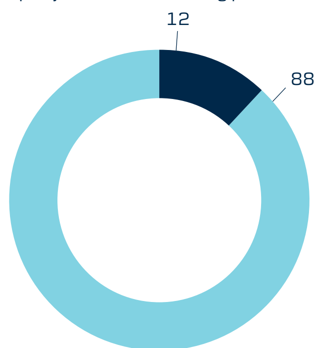
The commercial property portfolio consists primarily of secured property financing to owners of property let to third parties.

At the end of 2022, gross credit exposure amounted to DKK 301 billion. The allowance account for the portfolio, which amounted to DKK 3.3 billion, represented 1% of gross credit exposure.

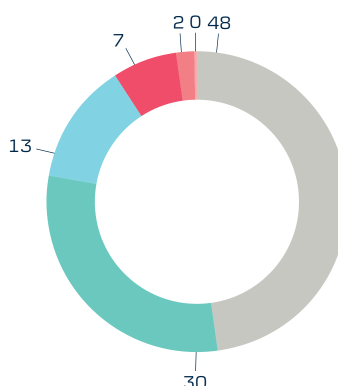
During the second half of 2022, the credit quality of the commercial property portfolio remained stable even though the industry began to feel the impact of rising interest rates and widening credit spreads. Higher interest rates and an uncertain economic outlook are likely to lead to higher yield requirements from investors, pushing property prices down and LTV ratios up. In order to mitigate the risks stemming from rising interest rates and potential future vacancy, the Group's underwriting standards have a strong focus on cash flows and the ability of cash flows to sustain significant stress.

Commercial property

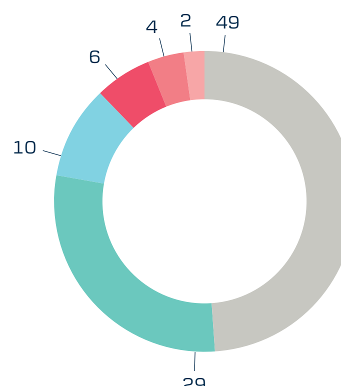
Gross credit exposure to commercial property as % of total lending portfolio



Gross credit exposure by country (%)



Expected credit loss by country (%)



Denmark Sweden Norway Finland Northern Ireland Other

Developments in the commercial property portfolio

(DKK millions)	Key figures and ratios					Stage 3 loans		
	Gross credit exposure	Expected credit loss	Write-offs	Loan loss ratio	Collateral (after haircuts)	Gross exposure	Share of total segment exposure	Coverage ratio
End-2021	316,307	3,204	115	0.21%	251,359	5,462	1.7%	68%
End-2022	301,163	3,290	153	0.15%	241,189	3,608	1.2%	61%

Most of the Group's commercial property customers are managed by specialist teams for customer relationships and credit risk management.

Commercial property – net credit exposure broken down by rating category

	PD scale (%)		Net credit exposure (DKK billions)		Net credit exposure (% accumulated)	
Rating category	Upper	Lower	**End-2022**	**End-2021**	**End-2022**	**End-2021**
1	0.00	0.01	4.0	0.2	1	0
2	0.01	0.03	0.9	1.4	2	1
3	0.03	0.06	5.6	5.6	4	2
4	0.06	0.14	46.7	43.5	19	16
5	0.14	0.31	120.6	135.3	60	59
6	0.31	0.63	89.2	85.4	90	87
7	0.63	1.90	21.0	29.4	97	96
8	1.90	7.98	5.9	7.3	99	98
9	7.98	25.70	0.2	0.1	99	98
10	25.70	99.99	0.7	4.2	99	100
11	100.00	100.00	2.9	0.6	100	100
Total			**297.9**	**313.1**	**100**	**100**

In 2022, the commercial property portfolio saw an overall decrease in net exposure of DKK 15 billion, driven mainly by a fall in the exposure to residential customers in Denmark as a result of the negative fair value adjustments in the Realkredit Danmark portfolio already mentioned above.

Commercial property broken down by property type and geography

(DKK millions)	End-2022			End-2021		
	Gross credit exposure =a+b	Expected credit loss b	Net credit exposure a	Gross credit exposure =a+b	Expected credit loss b	Net credit exposure a
Non-residential	166,739	1,991	164,747	169,213	2,192	167,021
Denmark	71,293	990	70,303	72,740	1,339	71,400
Sweden	48,406	451	47,955	51,728	277	51,452
Norway	28,841	287	28,553	29,112	211	28,901
Finland	14,088	126	13,963	12,269	127	12,143
Northern Ireland	3,174	77	3,097	3,186	76	3,109
Other	937	60	877	178	163	15
Residential	134,424	1,299	133,125	147,095	1,011	146,083
Denmark	72,092	630	71,462	83,523	650	82,872
Sweden	41,861	501	41,360	42,931	242	42,689
Norway	10,215	57	10,157	9,826	51	9,774
Finland	8,485	64	8,420	8,772	25	8,746
Northern Ireland	1,398	45	1,353	1,332	25	1,307
Other	374	1	373	711	17	694
Total	**301,163**	**3,290**	**297,873**	**316,307**	**3,204**	**313,104**

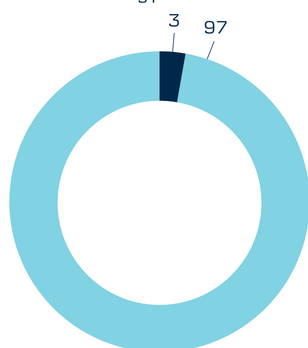
Note: The figures are based on the customers' country of residence and therefore cannot be compared at the country level with those stated in Risk Management 2021.

Agriculture

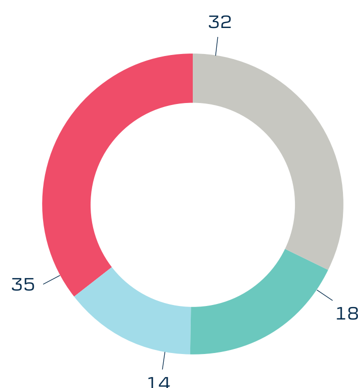
The agriculture portfolio includes customers in traditional agricultural segments, such as dairy products, pigs, cereals and other crops. It also includes customers in related activities, such as the manufacture and wholesale distribution of feed and seed products. Exposure to agricultural customers includes loans and credit facilities.

Agriculture

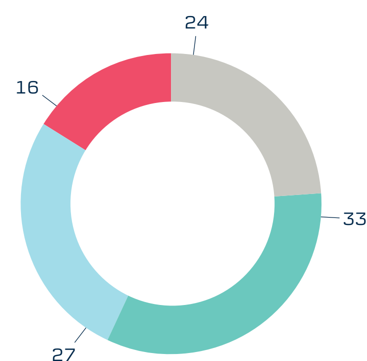
Gross credit exposure to agriculture as % of total lending portfolio



Gross credit exposure by segment (%)



Expected credit loss by segment (%)



■ Agriculture ■ Rest

■ Growing of crops and cereals ■ Dairy ■ Pig breeding ■ Mixed operations

At the end of 2022, gross credit exposure amounted to DKK 63.7 billion, down from DKK 68 billion at the end of 2021. Business Customers Denmark accounted for 56% of gross credit exposure, with Realkredit Denmark having a share above 82%. At Realkredit Danmark, the LTV limit at origination is 60%. Credit quality was weakest among pig producers and dairy farmers.

Developments in the agriculture portfolio

	Key figures and ratios					Stage 3 loans		
(DKK millions)	Gross credit exposure	Expected credit loss	Write-offs	Loan loss ratio	Collateral (after haircuts)	Gross exposure	Share of total segment exposure	Coverage ratio
End-2021	68,038	2,364	112	-0.12%	52,529	4,821	7.1%	93%
End-2022	63,703	1,913	123	-0.77%	46,957	2,896	4.5%	95%

The credit quality of the portfolio has improved over the past few years, recovering from legacy exposures from the financial crisis, thereby leading to a reduction in the expected credit loss. In 2021 and 2022, the portfolio was supported by higher-than-average milk and crop prices despite rising feed and energy costs. However, the trade-off between pork and feed prices was poor throughout the year. The expected credit loss figure included post-model adjustments to cover for potential uncertainties following the spread of African swine fever, rising interest rates and climate regulation. The Group's gross exposure to mink farmers was DKK 0.4 billion at the end of 2022.

The Group's exposure to the agricultural segment is managed by specialist teams for customer relationships and credit risk management.

Agriculture portfolio – net credit exposure broken down by rating category

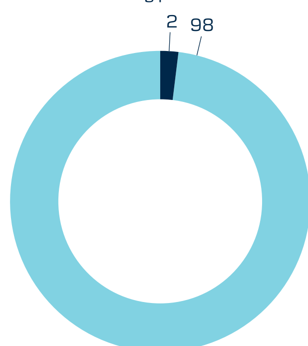
	PD scale (%)		Net credit exposure (DKK billions)		Net credit exposure (% accumulated)	
Rating category	Upper	Lower	End-2022	End-2021	End-2022	End-2021
1	0.00	0.01	0.0	0.0	0	0
2	0.01	0.03	0.8	0.9	1	1
3	0.03	0.06	0.8	1.1	3	3
4	0.06	0.14	7.0	5.5	14	11
5	0.14	0.31	9.9	10.7	30	28
6	0.31	0.63	24.2	22.4	69	62
7	0.63	1.90	13.6	16.5	91	87
8	1.90	7.98	2.4	4.3	95	94
9	7.98	25.70	0.1	0.1	95	94
10	25.70	99.99	0.9	2.9	97	98
11	100.00	100.00	2.1	1.2	100	100
Total			**61.8**	**65.7**	**100**	**100**

Shipping, oil and gas

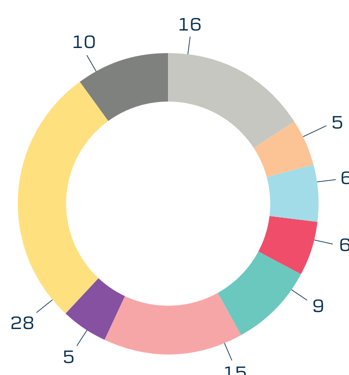
The shipping, oil and gas portfolio includes customers in standard shipping segments (such as container, tank, bulk, gas freight and offshore-related activities like rigs/FPSO units) and suppliers and customers in the oil and gas segment covering exploration and production and oil services. Exposure to shipping customers relates primarily to vessel financing secured by vessel or fleet mortgages.

Shipping, oil and gas

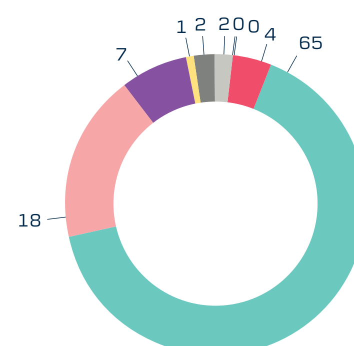
Gross credit exposure to shipping, oil and gas as % of total lending portfolio



Gross credit exposure by segment (%)



Expected credit loss by segment (%)



Chemical tankers and LNG/LPG · Container vessels · Crude and product tankers · Dry bulk and multipurpose · Offshore · Ro-Ro ships, car carriers and cruises/ferries · Other shipping · Oil and gas – exploration and production · Oil and gas – oil services

Developments in the shipping, oil and gas portfolio

	Key figures and ratios					Stage 3 loans		
(DKK millions)	Gross credit exposure	Expected credit loss	Write-offs	Loan loss ratio	Collateral (after haircuts)	Gross exposure	Share of total segment exposure	Coverage ratio
End-2021	41,066	2,830	736	0.89%	20,125	6,571	16.00%	100%
End-2022	41,228	1,027	1,017	-3.44%	14,556	5,399	13.09%	74%

The industry currently benefits from high oil prices, thereby strengthening earnings and liquidity positions after years of struggles with poor performance and financial restructuring, predominantly in the offshore segment. The increased oil price and energy security concerns are expected to have a positive effect on overall investment levels in the industry.

An intensified green transition in the coming years will force the industry to adopt to a partially new business model, and this will require new investments and thus a strong liquidity position and balance sheet.

Credit quality differs significantly across segments since the whole offshore industry has been severely affected by historically challenging market conditions, while the situation has been stronger in other sub-segments, especially within exploration and production. Consequently, most of the offshore exposure has been non-performing, and some of the legacy cases were partially written off in 2022.

Shipping, oil and gas portfolio – net credit exposure broken down by rating category

	PD scale (%)		Net credit exposure (DKK billions)		Net credit exposure (% accumulated)	
Rating category	Upper	Lower	End-2022	End-2021	End-2022	End-2021
1	0.00	0.01	0.0	0.0	0	0
2	0.01	0.03	0.0	0.0	0	0
3	0.03	0.06	6.0	1.2	15	3
4	0.06	0.14	6.3	9.0	31	27
5	0.14	0.31	10.6	6.0	57	42
6	0.31	0.63	9.4	9.8	81	68
7	0.63	1.90	2.6	6.6	87	85
8	1.90	7.98	0.8	0.2	89	86
9	7.98	25.70	0.0	0.0	89	86
10	25.70	99.99	0.0	3.4	89	95
11	100.00	100.00	4.4	1.9	100	100
Total			**40.2**	**38.2**	**100**	**100**

3.2.5 Lending to small and medium-sized enterprises (SMEs)

The Group's net credit exposure to SMEs amounted to DKK 518 billion at the end of 2022. It decreased by DKK 49 billion from the level at the end of 2021, driven by lower exposure to private housing co-ops and non-profit associations, commercial property, and agriculture. SME lending accounted for 21% of the Group's core lending activities (2021: 21%). Mortgage lending through Realkredit Danmark fell by DKK 25 billion (to DKK 246 billion), driven by negative fair value adjustments. Loan commitments and guarantees declined by DKK 20 billion, while bank lending decreased slightly from DKK 214 billion at the end of 2021 to DKK 210 billion at the end of 2022. Business Customers accounted for 89% of the net credit exposure to SMEs, while the remaining exposure was shared between Large Corporates & Institutions (4%), Northern Ireland (4%), and Personal Customers (3%).

Net credit exposure to SMEs broken down by industry (core lending activities)

	Net credit exposure (DKK billions)		
	End-2022	End-2021	Index
Financials	18.4	21.8	84
Agriculture	49.4	55.2	89
Automotive	3.6	3.9	91
Capital goods	8.8	10.2	86
Commercial property	162.7	175.1	93
Construction and building materials	11.6	13.2	88
Consumer goods	8.8	10.2	86
Hotels, restaurants and leisure	4.8	5.7	85
Metals and mining	1.2	1.5	77
Other commercials	2.2	3.0	71
Pharma and medical devices	0.7	0.8	91
Private housing co-ops and non-profit associations	179.9	198.4	91
Pulp, paper and chemicals	7.5	7.7	97
Retailing	5.5	5.9	93
Services	12.3	13.3	93
Shipping, oil and gas	2.8	2.7	103
Social services	12.0	13.0	92
Telecom and media	1.8	1.7	107
Transportation	5.8	5.8	100
Utilities and infrastructure	12.9	12.1	106
Personal customers	5.2	5.3	97
Total	**517.9**	**566.8**	**91**

3.3 IRB framework and model development

In 2008, the Danish Financial Supervisory Authority (the Danish FSA) approved the Group's application to use the advanced internal ratings-based (A-IRB) approach for calculating the total risk exposure amount (REA). At the end of December 2022, the Group's exposure at default (EAD) was DKK 2,705 billion, with 68.8 % calculated according to the advanced IRB approach, 2.0% according to the foundation IRB approach (F-IRB), and 29.1% according to the standardised approach.

EAD broken down by credit risk measurement approach

Measurement approach	2022	2021
Advanced IRB (%)	68.8	65.7
Foundation IRB (%)	2.0	1.5
Standardised (%)	29.1	32.8

3.3.1 Organisation of the IRB framework

The IRB framework is organised in teams dedicated to specific roles. This means that there are specific teams that consider the following:

- IRB model development:
  - probability of default (PD) model development (for scoring and rating models, respectively)
  - loss given default (LGD) and conversion factor (CF) model development
  - asset valuation model (AVM) development
- IRB framework maintenance and governance
- rating of large customers
- credit REA calculations

These teams are anchored in organisational units that have no direct involvement in credit granting. Control mechanisms are incorporated in their processes. Deep-dive controls are described in section 3.3.4.

3.3.2 IRB exemptions

The Danish FSA has granted the Group exemptions for the following exposure types:

- exposure to the sovereign exposure class
- exposure to local/regional authorities
- exposure to public-sector entities
- exposure to churches and religious communities that raise taxes
- exposure to equities
- exposure to covered bonds in the banking book
- exposure to purchased receivables
- exposure to LR Kredit A/S
- exposure within the Group (internally)
- exposure to the retail exposure class through the branch in the Republic of Ireland and the legal entity Danske Finance Plc (Finland)
- exposures originated by the legal entities Northern Bank Limited (Northern Ireland) and Danske Bank International (Luxembourg)
- exposure to housing companies in Finland

3.3.3 Models in the IRB framework

The Group classifies customers by means of PD models and uses LGD models to estimate the loss on facilities in case of default. The CF models express an EAD estimate for off-balance exposures.

The Group uses the PD models to assess the probability of default of customers in various segments. Business and financial customers[2] are classified by rating models, while small business customers and personal customers are classified by scoring models. The rating models rely mainly on financial data and qualitative company characteristics. Rating officers may choose to adjust the modelled ratings if they have relevant information that is not covered by the models. In contrast, behavioural data is, to a wider extent, used as input in scoring models, which are therefore updated at a higher frequency than rating models. Most data originates from internal sources, but is sometimes acquired from external vendors. This includes external credit scores used as model input in some models.

The general drivers for differences observed between PD and actual default rates include changes in economic conditions and model drivers, portfolio population changes, and increased uncertainty surrounding low default or low customer count portfolios.

For regulatory purposes in relation to the REA, in the majority of the models, point-in-time (PIT) PDs are converted into through-the-cycle (TTC) PDs by means of a scaling mechanism that ensures fixed-target levels while preserving the customer rankings. TTC PDs take into account regulatory floors where applicable.

IRB PD models by exposure class

Exposure class		Classification process	Key model segmentation
Central governments and central banks		Permanent exemption from IRB	Permanent exemption from IRB
Institutions		1 rating model (hybrid)	Bank
Corporates excluding SMEs		1 scoring and 13 rating models (1 hybrid)	Several sub-segments with different characteristics; e.g. models differentiate between agriculture, non-profit customers, large corporates, insurance and property rental
Corporate SMEs		2 rating models	Sole proprietorships are handled separately from other corporate SME customers
Retail	SMEs Personal	10 scoring models 10 scoring models	Country-specific models for new and existing customers
Equities		Permanent exemption from IRB	Permanent exemption from IRB

Two models use a hybrid PD approach in which PDs are not scaled to fixed-target levels – the hybrid models serve specifically to accommodate the low-default characteristics of banks and large corporates.

The Group's LGD models are primarily statistically driven models, but parameters for low-default portfolios rely to a high degree on benchmarks, external data and expert opinions. CF models are statistically driven for the credit cards and credits portfolios, including student loans, while other portfolios are based on expert opinions and relevant input. Downturn LGDs and downturn CFs are used for regulatory purposes, and they include regulatory floors and additional

[2] Customers with facilities exceeding DKK 2 million and customer groups with facilities exceeding DKK 7 million.

prudential margins. The downturn LGD parameter incorporates ongoing adjustments from collateral movements to ensure a stable level that reflects downturn conditions. LGD and CF model estimates are used only for exposures for which the Group is allowed to use the advanced IRB approach.

For more information about the use of models, see sections 3.1.6 and 3.1.7.

3.3.4 IRB framework monitoring

Group Risk Management reviews and follows up on compliance with the IRB minimum requirements of the Capital Requirements Regulation/Capital Requirements Directive.

The IRB governance structure and the modelling framework are evaluated regularly.

Reports on all changes and ongoing activities as well as reports on model performance and model risk status in relation to the IRB framework are prepared and shared with internal committees. Independent units monitor the IRB framework.

Validation of credit risk models

Model validation is the main component for identifying model risk in the IRB framework. The Group has an internal framework for validating models. Model Risk Management owns the validation process and methodology and has a reporting line that is separate from the teams that develop, maintain and run IRB models. For more information, see section 8.2.5, Model risk management. The validation framework comprises a set of processes and activities to verify that the models perform as expected. Model validation includes quantitative and qualitative aspects. Model validation reporting and escalation take place through the Model Risk Committee chaired by the Group CRO in the second line of defence.

All new models included in the validation scope are subject to initial validation, while models in the production environment are validated at least once a year, independently of the business units and the team that develops the models. The current validation scope encompasses PD models for the rating and scoring of customers as well as LGD, CF and collateral value models. The validation scope also includes the framework across models, such as TTC calibration and downturn adjustment. As part of the validation, certain models are also assessed for purposes other than the IRB framework where this is relevant, such as expected credit loss and risk appetite calculations.

Changes to the IRB framework and the IRB audit process

The Group has a governance structure for all changes made to the IRB framework to ensure the right level of management attention. Depending on the materiality of the individual changes, a minimum level of evaluation, challenge and signoff is required from management and the relevant control units in the second and third lines of defence. The process involves relevant model owners, Model Risk Management, Group Internal Audit, and relevant committees depending on the nature of the changes. Internal approval lies with the model owner.

Group Internal Audit, the Group's third line of defence, performs the independent audit of the IRB framework. The audit scope is determined from a risk- and control-based approach set out by Group Internal Audit. In respect of material changes to the IRB framework, Group Internal Audit performs a review of the documentation describing the changes and assesses the completeness of the application before it is submitted to the competent authority for approval.

The Danish FSA and/or the local supervisory authority must approve material changes to the IRB framework. The Group is required to notify authorities of less material changes.

3.4 Counterparty credit risk management

Counterparty credit risk is the risk that the counterparty to a transaction defaults on obligations before the final settlement of the transaction's cash flows. Counterparty credit risk is a combination of credit risk (a deterioration in the creditworthiness of a counterparty) and market risk (the potential value of derivatives contracts).

The Danske Bank Group takes on counterparty credit risk when it enters into

- over-the-counter (OTC) derivatives
- securities financing transactions (SFTs)
- exchange-traded derivatives (ETDs)

The transaction types listed above derive their value from the performance of an underlying asset and have an associated future market value that may generate an exchange of payments or financial instruments depending on the terms of the transaction. The potential future exposure (PFE) value of those instruments fluctuates since the market value is related to the underlying market factors (such as foreign exchange (FX)/interest rate movements) and may thus shift between positive and negative levels.

The Group mitigates counterparty credit risk through pre-deal controls, post-deal monitoring, clearing, close-out netting agreements and collateral agreements. The Group incurs a financial loss if a counterparty defaults on obligations and the market value of the individual derivatives transaction is not covered after netting and the realisation of collateral.

At the customer level, counterparty credit risk is managed by means of PFE lines on a set of maturity buckets. Prior to trading, PFE lines are approved by the relevant credit unit. At the portfolio level, the Group uses additional metrics to help set and monitor counterparty credit risk appetite, including current exposure and exposure at default.

The Group has set limitations and introduced portfolio-level monitoring mechanisms. This includes monitoring wrong-way risk (the risk that arises when credit exposure to a counterparty increases while the counterparty's creditworthiness deteriorates), concentration risk and stress tests. The limitations cover the product range, the counterparty's rating and the rating of the underlying securities.

The Group also manages its exposure to market risk on fair value adjustments (xVA), including credit value adjustments (CVA), under separate limits in the xVA framework as described in section 5, Market risk.

3.4.1 Risk governance and responsibilities

The Group organises its counterparty credit risk activities in line with the principles of the three-lines-of-defence model as defined in its enterprise risk management (ERM) framework.

Senior management oversees all financial risks in relation to trading activities and ensures that these risks remain within the Group's appetite. Furthermore, senior management serves as a platform between the first and the second lines of defence to discuss and escalate financial risks if necessary.

3.4.2 Methodologies and models

The Group uses a number of metrics to capture counterparty credit risk, including current exposure (CE), potential future value (PFE) and exposure at default (EAD).

Current exposure is a simple measure of counterparty credit risk exposure that takes into account only current mark-to-market values and collateral.

For risk management purposes, counterparty credit risk is measured as PFE at the 97.5% percentile for a set of future time horizons. All transactions are assumed to be held to contractual maturity.

The Group uses simulation-based models to calculate potential future counterparty credit risk exposure. The models simulate the potential future market value of each counterparty portfolio of transactions while taking netting and collateral management agreements into account. For transactions not included in the internal simulation model (about 6%), the potential change in market value is determined as a percentage (add-on) of the nominal principal amount. The size of the add-on depends on the transaction type, maturity, currency and collateral coverage and is determined using a conservative approach to ensure estimation adequacy.

The Danish Financial Supervisory Authority (the Danish FSA) approved the Group's simulation model for calculating the regulatory capital requirement for counterparty credit risk in 2015.

More advanced measures such as EAD, which is a regulatory measure, express potential future losses and are based on internal models for future scenarios of market data. EAD figures are provided in the Additional Pillar III Disclosures tables, which are available on Danske Bank's website at www.danskebank.com/investor-relations.

3.4.3 Monitoring and reporting

The Group carries out daily counterparty credit risk measurement and monitoring as well as intraday line utilisation monitoring. An overview of counterparty credit risk exposure is reported to the Executive Leadership Team and other senior management on a monthly basis.

The internal simulation model is subject to quarterly backtesting of the underlying risk factors and resulting exposures. A key control activity is model risk management, which includes independent validation of models. For more information, see section 8.2.5, Model risk management.

3.4.4 Data and systems

The Group has a system covering all aspects of counterparty credit risk management. The system is integrated with all trading systems, the master agreement management system, the collateral management system and market data systems.

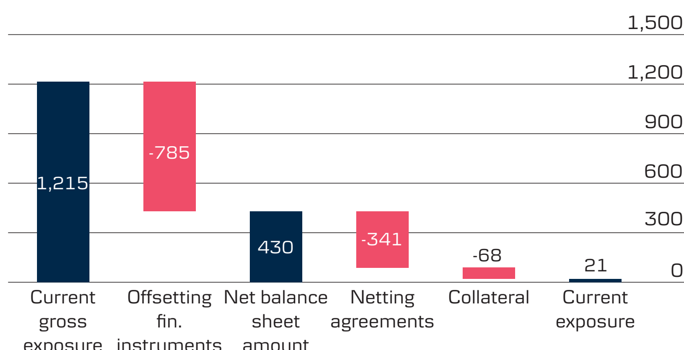
Internal management and monitoring of counterparty credit risk are performed in the Group's line system. The system covers all aspects of the internal counterparty credit risk management process, including the assignment of lines, monitoring and control of line utilisations, registration of master agreements, measurement, and management reporting.

3.5 *Counterparty credit risk profile*

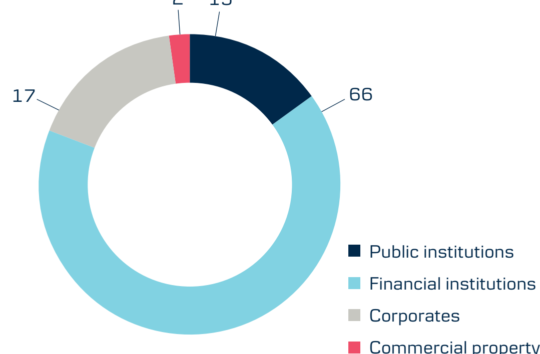
Exposures were higher at the end of 2022 than at the end of 2021. Current gross exposure is the total of all positive market values from transactions made before balance-sheet netting (netting effect) and collateral reduction (collateral effect). It is equivalent to the total amount of derivatives with positive fair value on the balance sheet. At the end of 2022, the Group's current gross exposure to derivatives was DKK 1,215 billion (end-December 2021: DKK 671 billion). When netting effects and collateral received are taken into account, the current exposure to derivatives was DKK 21 billion at the end of 2022 (end-December 2021: DKK 25 billion).

Counterparty credit risk, current exposure

Mitigation of counterparty credit risk (derivatives only)
(DKK billions)



Breakdown of current exposure by segment
(%)

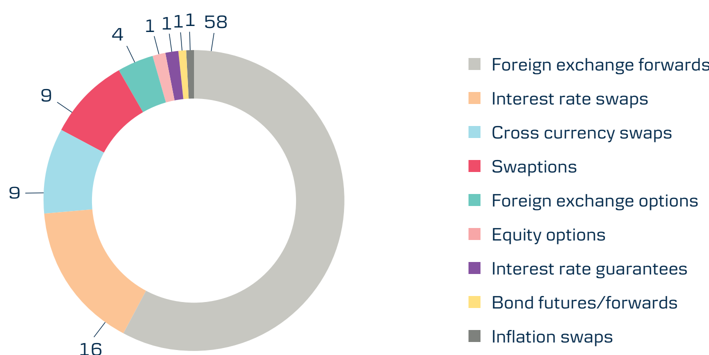


At the end of 2022, the financial institutions segment represented the Group's highest level of exposure (increasing to 66% from 45% in December 2021), while exposures to commercial property companies, corporates and public institutions were lower.

Until the end of 2022, the Group cleared around 60% of the total notional amount of derivatives transactions through central clearing counterparties and used collateral agreements to support around 93% of non-cleared transactions.

The Group's trade count for all non-cleared OTC derivatives at the end of 2022

Breakdown of current exposure by segment
(%)



At the end of 2022, in trade count terms, the Group's non-cleared OTC derivatives were concentrated in interest rates and foreign exchange contracts, with foreign exchange forwards accounting for just above half of the trade count, cross currency swaps for 9% and interest rate swaps for about 16%. The remainder consisted of a broad range of primarily other plain vanilla products. The distribution was similar to the levels seen at the end of 2021.

The following table shows the Group's current exposure to derivatives and SFTs after netting and collateral.

Current gross exposure and current exposure after netting and collateral

At 31 December (DKK millions)	2022			2021		
	Total	Derivatives	SFTs	Total	Derivatives	SFTs
Current gross exposure	1,225,587	1,214,815	10,772	676,787	670,662	6,125
Current exposure after netting	97,784	89,139	8,645	81,626	76,829	4,796
Current exposure after netting and collateral	27,274	20,659	6,615	30,586	25,209	5,377

Note: Current exposure figures for SFTs include both assets (reverse repos) and liabilities (repos). Furthermore, the current gross exposure for SFTs is net of the underlying securities. Consequently, the figures are not directly comparable with the exposure figures shown in the Group's Annual Report 2022 and in section 3.2 of this report.

At the end of 2022, some 79.6% of the Group's collateral agreement holdings consisted of cash. The remainder consisted mainly of Danish mortgage bonds and government bonds issued by Denmark, France and Germany.

The following table breaks down the Group's current exposure after netting and collateral by rating category.

Current exposure by rating category

At 31 December (DKK millions)	2022			2021		
	Total	Derivatives	SFTs	Total	Derivatives	SFTs
1	6,727	4,870	1,857	6,532	4,685	1,848
2	1,563	1,254	309	2,967	2,686	281
3	15,193	10,817	4,375	12,666	9,549	3,117
4	2,120	2,048	72	2,771	2,695	76
5	1,034	1,033	2	3,673	3,621	52
6	448	448	0	1,019	1,019	0
7	103	103	0	688	686	3
8	73	73	0	84	84	0
9	0	0	0	19	19	0
10	5	5	0	115	115	0
11	8	8	0	51	51	0
Total	**27,274**	**20,659**	**6,615**	**30,586**	**25,209**	**5,377**

At the end of 2022, the credit quality of the Group's counterparty credit risk remained strong with around 98% of the exposure relating to counterparties with a classification comparable to an investment grade rating.

Sustainability risk

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4.

4.1 *Sustainability risk management*

The Group may be exposed to sustainability risk through its own operations and strategic commitments and from the activities of its customers, the companies in which it invests on behalf of its customers, its suppliers and other third-party business partners. Especially climate change and the transition to a low-carbon economy are the defining challenges of this century. Managing transition-related risks is therefore key to the Group's strategy and purpose, and the Group remains committed to supporting and financing customers undertaking the necessary transition in the Nordic economies.

The Group defines sustainability risk as the risk of a significant negative impact on the Group's performance – including financial and reputational impacts – as a result of current or future environmental, social and governance (ESG) events or conditions. Sustainability risk is considered a cross-taxonomy driver in the Group's risk taxonomy.

This means that relevant ESG events or conditions are factors capable of further driving or intensifying the Group's current risks as identified in the Group's taxonomy (for more information, see section 2, Risk strategy and governance). As a result, the potential impacts from sustainability risk have to be identified, assessed, monitored and mitigated as part of the existing management of the Group's risk categories under the three-lines-of-defence model. The group-level principles for sustainability risk management are outlined in the Group's enterprise risk management framework, and specifications are provided in relevant risk policies to enable the consideration of sustainability factors in the existing risk management processes across the Group's business activities.

In order to determine the areas in which the Group is most materially exposed to sustainability risk, the Group continuously assesses and reviews the ways in which ESG events and conditions can increase financial and non-financial risks. Taking a risk-based approach, the Group prioritises its efforts to manage sustainability risk where the negative impact on the Group is deemed to be high.

4.2 *Sustainability and financial risks*

From a group perspective, credit risk is deemed to be the risk type most materially affected by sustainability risk. Other financial risks are mostly deemed to be of low or medium materiality at the moment, and they are incorporated into relevant processes such as climate stress testing in respect of market risk. The Group will continue to monitor risk management enhancements in the coming years across financial risks.

4.2.1 Sustainability and credit risk

Sustainability and credit risk management is laid out in a number of frameworks and policies. At the core, the Group publishes its viewpoints on a number of sustainability themes in position statements that outline the Group's expectations and, in some cases, list restrictions on loans granted to and investments made on behalf of businesses that are particularly exposed to sustainability risks. Restrictions are integrated into the Group's Credit Risk Policy to allow for proper governance of the Group's due diligence to identify, assess and manage the relevant risks in credit processes at both customer and portfolio levels.

Relationship managers use a digital system to identify and assess each customer's sustainability risk level through a set of sector-specific environmental, social and governance questions for both new and existing business customers. The customer-level sustainability risk assessments serve as input factors in the overall credit decision process and also enable the Group to monitor the overall sustainability risk level.

In 2022, around 71% of the Group's business exposure in scope was assessed for sustainability risk. The Group conducted a review of human rights risks and assessment questions and implemented functional enhancements to facilitate customer engagement and action plans for the purpose of addressing any potential areas of concern identified in the due diligence process. These bottom-up customer assessments will increasingly be tied to the top-down portfolio risk management efforts. This will ensure a consistent feedback loop between strategic and customer considerations in the Group's sustainability risk management.

At the portfolio level, sustainability risks are identified, assessed and monitored as part of the annual industry reviews, which include an in-depth assessment of sub-industries and the largest customers. This enables the Group to map the most material sustainability risks facing the individual portfolios, monitor aggregate risk levels on an ongoing basis, and identify additional Credit Risk Policy requirements. When deemed necessary, the sustainability risk findings are integrated into the credit risk appetite to allow for portfolio management.

In 2022, further risk management efforts focused on the agriculture and the utilities and infrastructure portfolios. The assessment of the agriculture portfolio revealed a need for the portfolio to be rebalanced and decarbonised in the light of potential carbon taxes and other mitigation schemes that could have a significant financial impact on the sector in the long term. The Group has therefore started to look into obtaining agricultural climate footprint data in order to gain

a more accurate assessment of the exposure and to develop a long-term climate plan for the sector. The utilities and infrastructure sector has seen an early transition in the Nordic countries, with good progress towards renewable energy. To maintain energy intensity below the net-zero pathway, the Group now also assesses customers' decarbonisation strategy and transition plans.

Climate risk management
Climate risk is currently the most urgent of all ESG-related drivers capable of affecting the Group's credit risk, and risk practices are being enhanced in accordance with regulatory developments and the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). For more information, see the Group's Annual Report 2022.

Climate risk pertains to transition risks, which are risks associated with the shift to a low-carbon economy, and to physical risks arising from projected climate changes, including both long-term shifts (chronic changes) and event-driven changes (acute changes) to weather patterns. Credit risk will be affected by both of these climate-related risks in the medium and long term.

The Group takes a risk-based approach in prioritising risk management efforts for sectors that are likely to be most exposed to transition and physical risks. For that purpose, the Group's climate risk heat map is based on a mix of qualitative and quantitative input to define credit exposures most exposed to transition and physical risks. It is important to note that the climate risk heat map gives an indication of the size of the exposure at risk and not of the expected stress effects such as impairment charges. Such quantitative measures are to be assessed through scenario analysis and future stress testing. The Group will continue to refine the climate risk heat map as more climate risk data becomes available to support the identification of both transition and physical risks for the purpose of determining financial materiality.

Transition risks
The identified segments that are most likely to be exposed to future transition risks are primarily high-emitting sectors. These sectors are estimated to account for around 14% of the Group's total lending activities. The initial assessment of high-risk segments is based on qualitative input and existing carbon footprint estimates. The Group's ongoing efforts to refine the estimations of the carbon footprint and to assess customers' transition plans help improve the identification of exposures subject to high transition risk.

The initial analysis of the Group's total financed emissions shows that high-transition-risk segments make up 72% of total financed emissions. Furthermore, the emissions are predominantly attributable to only very few sectors, such as shipping, oil and gas, and to relatively few customers within these sectors. Although the real estate portfolios are large in terms of exposure, the financed emissions relating to both private and commercial property are comparably very small. As a result, the Group considers the property sector to be able to transition at a managed pace, while the urgency to adjust business models is higher in other sectors.

* Average ratings for personal customers and commercial property cover the entire portfolios and not only high-risk segments.

To further identify and assess transition risks, the Group performs scenario analyses for key sectors to assess the sensitivity to transition risk. This is done in order to determine the future resilience of the Group's portfolios and to help identify potential risk-mitigating efforts and inform portfolio strategies. It is important to note that scenario analyses rely on forward-looking parameters and long-term horizons, and this implies a higher level of uncertainty than standard forms of stress testing. The table below lists the key scenario analysis and sensitivity assessments performed in 2022.

Climate scenario analysis and sensitivity assessments in 2022: transition risks

Portfolio	Climate scenarios	Main scenario drivers	Credit impact assessed	Time horizons	Key conclusions
Agriculture	NGFS scenarios: • Below 2 degrees Celsius • Current policies • Delayed transition • Divergent net zero • Nationally Determined Contributions (NDCs) • Net Zero 2050	Agricultural production demand, product prices (indices), and carbon price	Average probability of default	2030, 2040, 2050	The long-term climate transition risk analysis indicates that the agricultural portfolio is sensitive to a carbon price and has an impact on customers' proability of default. In the analysis, cattle growing has the highest green house gas emission intensity and is therefore also highly sensitive to the applied scenarios. Risk appetite limits are in place for the portfolio.
Utilities and infrastructure	NGFS scenarios: • Below 2 degrees Celsius • Current policies • Delayed transition • Divergent net zero • Nationally Determined Contributions (NDCs) • Net Zero 2050	Carbon price, energy mix	Average probability of default	2030, 2040, 2050	The utilities and infrastructure portfolio proves fairly resilient to climate transition risks. The introduction of a carbon price will not significantly affect the utilities and infrastructure portfolio due to stable financial positions and very low price elasticity in the sector. Portfolio resilience is furthermore supported by the sector's current degree of transition in the Nordic countries.
Danish property book: Commercial property Personal customers	N/A	N/A	N/A	N/A	A deep dive into greenhouse gas emissions in the Danish property book was further analysed with a focus on heating source and energy performance certificates (EPCs). Results show that the commercial property portfolio is less emission-intensive than the Danish national stock of commercial property buildings. For private property in Denmark, we see values closer to the national average. However, compared to other sectors and especially relative to lending volume, emissions are very low.

Managing transition risks takes place at both portfolio and customer levels. At the portfolio level, the Group sets long-term targets for sectors with high financed emissions. In 2022, the Group introduced 2030 climate targets for the shipping, utilities and infrastructure industries and for the upstream oil and gas sectors. For more details, see the Group's Sustainability Report 2022, which includes updates to the targets for 2023. Climate risks are also considered part of the Group's process for setting its risk appetite, with limits either tightened or introduced for high-risk segments to further manage the portfolios.

At the customer level, the Group has developed a methodology to assess business customers' transition plans to gain a more granular overview of transition risks. The customer assessments are based on criteria that aim to capture both the customers' current performance as well as their short-, medium-, and long-term ambitions and plans to meet their decarbonisation strategy and targets. In addition, the assessments include an evaluation of the customers' risk of not executing on their strategies because of external factors that affect their ability to transition, i.e. technology and government support factors.

Alignment to net-zero pathway + Technology availability + Government incentives = Transition assessment score

On the basis of the alignment assessment, technology and government factors, it is possible to break down transition plan assessment scores into four categories. The table below illustrates both scores and assessment criteria.

In 2022, it was a top priority for the Group to ensure a good understanding of which customers accounted for most of the transition risks. As the shipping, oil and gas and the utilities and infrastructure industries make up more than two thirds of the Group's financed emissions, the key selection criteria were customers within these sectors with high financed emissions or large exposures. The transition plan assessments will be carried out as part of the normal credit application and renewal processes for relevant customers.

Transition plan assessment scores and criteria

Assessment score	Assessment criteria	Average rating*
Transitioned	• Current emissions are at or close to the 2050 net-zero level. • Investment plan/business model in line with the net-zero pathway.	A4-3
Transitioning	• Fulfilment of all criteria on ambitions, targets, emissions, decarbonisation and CAPEX/OPEX, and technological elements exist or some government incentives are needed.	A4-3
Start of transition	• Fulfilment of all criteria on ambitions, targets, emissions, decarbonisation and CAPEX/OPEX, but the necessary technology does not exist or depends to a large extent on government incentives. • Or, partial fulfilment of criteria on ambitions, targets, emissions, decarbonisation and CAPEX/OPEX, and technological elements exist or some government incentives are needed.	A7-2
Lagging transition	• Poor alignment for any criteria on ambitions, targets, emissions, decarbonisation and CAPEX/OPEX. • Or, partial fulfilment of criteria on ambitions, targets, emissions, decarbonisation and CAPEX/OPEX, but the necessary technology does not exist or depends to a large extent on government incentives.	A4-3

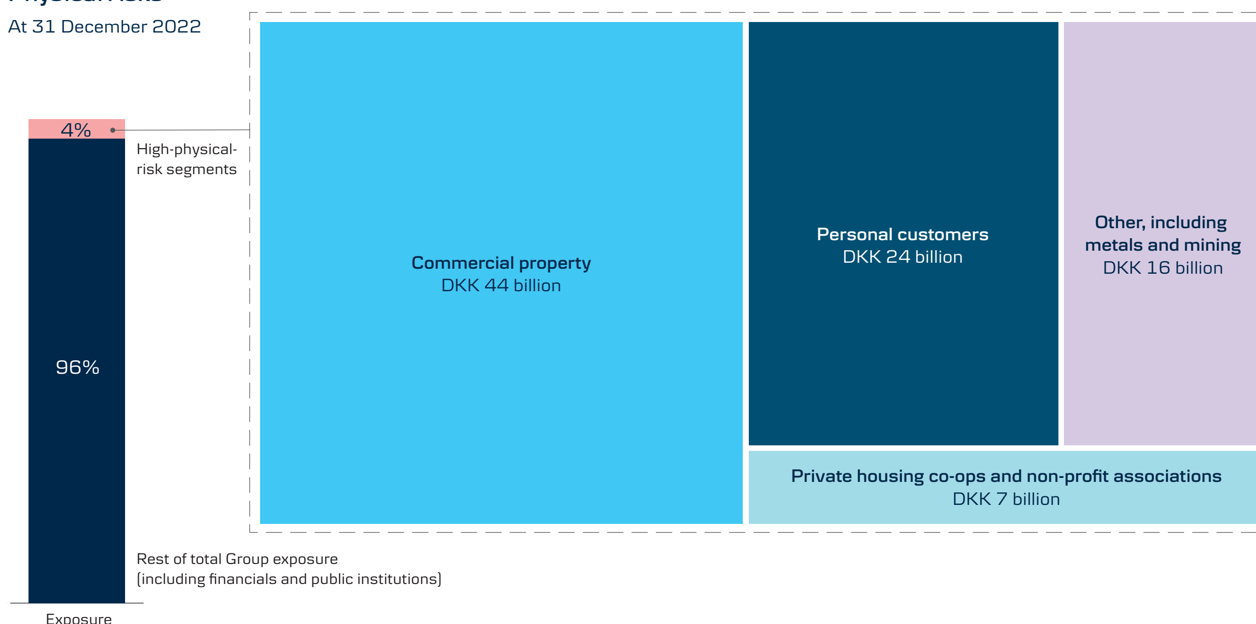
* Average credit rating of assessed customers.

The Group has an intensified focus on customers that are considered to be lagging in the transition process but have started from weak financial positions. For these customers, the Group identifies relevant mitigating actions, including increased recognition of the expected credit loss to anticipate losses during the transition phase. From the initial assessment of customers subject to high transition risk, the exposure to the lagging transition category remains limited but will be monitored on an ongoing basis. The Group will continue to assess customer progress and will remain committed to providing finance to customers that are in the process of preparing for and undertaking the necessary transition.

Physical risks
Physical risks are identified mainly for collateral-related exposure (flooding risk, in particular) by means of data on historically worst flood events and most extreme climate projections. As a result, assessments are considered to be conservative. Flooding risk is the primary physical risk hazard to be taken into consideration in the Nordic countries, with the identified risk exposure amounting to around 3.6% of the Group's total lending activities. The exposure related to high physical risks includes non-collateralised exposure only to a limited extent.

Physical risks

At 31 December 2022



From a risk management perspective, the Group's risks associated with flooding risk are managed primarily at the portfolio level. It will also be relevant to assess other physical risk hazards in future, for example extreme heat, pending good coverage of climate data in the Nordic countries. See the table below for more information about the physical risk assessments performed in 2022.

Climate scenario analysis and sensitivity assessments in 2022: physical risks

Portfolio	Hazard type	Severity	Credit impact assessed	Key conclusions
Commercial property	Storm surge Sea level rise	Return period of 1 in 100 years	Exposure at risk	A deep dive of flooding risk in Denmark. Key findings show that around 7% of the total properties are located in the 14 flooding risk zones identified by the Danish Coastal Authorities. Next steps are to conduct further financial impact assessments.
Personal customers – Finland	Storm surge River floods	Return period of 1 in 100 years	Exposure at risk	A deep dive of flooding risk in Finland was performed using maps by the Finnish Environment Institute (SYKE) and the Flood Centre. Assessments show that around 1.5% of the total properties are located in the identified flooding risk zones. Next steps are to conduct further financial impact assessments.

For more information about climate risks, see the Additional Pillar III Disclosures tables, which are available on Danske Bank's website at www.danskebank.com/investor-relations.

4.3 Sustainability and non-financial risks

From a group perspective, the non-financial risks most materially affected by sustainability drivers relate specifically to the risk of not treating customers fairly (regulatory compliance), including practices and arrangements for product governance (operational risks).

4.3.1 Sustainability and treating customers fairly

The standards for treating customers fairly are laid out in the Group's relevant policy, underlying frameworks and processes that address customer needs, profiling and information.

When it comes to investments, advisers use a digital system to identify and assess each customer's sustainability preferences as part of the suitability assessment through a set of questions based on the MiFID II and the Insurance Distribution Directive regulatory requirements for sustainability preferences. To ensure a product match between customer sustainability preferences and product recommendation, the Group's sustainability preferences concept is designed to ensure a link between the individual customer's sustainability preferences and the Group's product offerings. Efforts are still subject to further enhancement and continued close monitoring because the Sustainable Finance Disclosure Regulation and the EU Taxonomy Regulation are still considered subject to further clarifications on interpretation and application by legislators and regulators.

For product governance practices and arrangements, the Group's management of sustainability risk is laid out in frameworks and procedures subject to the Group's New & Amended Product Approval Policy and Product Governance Instructions. Similarly, the Group's position statements on various sustainability themes are integrated into the Group's investment product offerings to support the regulatory due diligence processes and the integration of sustainability risk into the investment decision-making process.

The Group continues to increase the oversight of risks in relation to its sustainability positioning, marketing and communication activities. Furthermore, additional oversight processes are being put in place with regards to the Group's general communications in its branding, marketing and disclosure activities relating to sustainability.

The expectations for sufficient oversight of non-financial risk management are likely to increase in the coming years and will be assessed through the sustainability risk inventory on an ongoing basis. This includes the Group's overall sustainability strategy and targets, including position statements and group-wide sustainability commitments. This will provide additional oversight to enable the Group to monitor progress in respect of these commitments and to ensure that there is a balance between risk and opportunities and that targets are set on the basis of sound methodologies.

Market risk

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5.

5.1 Market risk management

The Group's market risk management is intended to ensure proper oversight of all market risks, including trading-related and non-trading-related market risks as well as the market risk in relation to fair value adjustments. The market risk framework is designed to systematically identify, assess, monitor and report on market risk.

Large Corporates & Institutions manages the market risk (such as interest rate risk, equity market risk and foreign exchange risk) associated with its trading activities in the financial markets. The market risk in relation to the trading portfolio can be defined as the risk of losses caused by changes in the market value of financial assets, liabilities and derivatives resulting from changes in market prices or rates.

Group Treasury manages the interest rate risk and structural foreign exchange risk associated with the assets and liabilities of the non-trading portfolio. Interest rate risk in the banking book refers to the current or prospective risk to the Group's capital and earnings arising from adverse movements in interest rates that affect the Group's non-trading portfolio positions. Changes in interest rates also affect the Group's earnings by altering interest rate-sensitive income and expenses, thus affecting the Group's net interest income. Group Treasury also monitors the risks associated with the Group's legacy defined benefit pension plans. The equity risk in relation to the non-trading portfolio is managed by Group Finance.

Danica Pension's market risk is managed separately. For more detailed information, see section 7, Life insurance risk.

5.1.1 Risk governance and responsibilities

The Market Risk Policy set by the Board of Directors lays out the overall framework for market risk management and identifies the boundaries within which the Group's market risk profile and business strategy are defined. The policy also defines the overall limits for various market risk factors and additional boundaries within which trading activities are performed.

Market risks are managed by Large Corporates & Institutions, Group Treasury and Group Finance (the first line of defence) through the implementation of the Market Risk Policy into standard operating procedures and the control environment. Interest rate risks in relation to other business units are transferred to and managed by Group Treasury. The units own, identify and manage the market risks and perform operational and managerial controls in the day-to-day risk management.

Market & Liquidity Risk (the second line of defence) at Group Risk Management owns the market risk framework and is in charge of market risk oversight and control of the first-line-of-defence units.

Oversight and control processes at Market & Liquidity Risk encompass current and emerging risk monitoring, limit control, portfolio analysis, stress testing, reporting to senior management and challenging the risk management practices performed by the first-line-of-defence units. Group Finance is accountable for the independent price verification (IPV) framework, prudent valuation and profit and loss (P/L) control.

5.1.2 Market risk appetite

The Group has set a risk appetite for its trading portfolio covering trading-related market risk and xVA-related market risk. The trading-related market risk appetite and the xVA-related market risk appetite determine how much the Group is prepared to lose on its exposure over a period of one year in a severely stressed market environment. The risk appetite is based on the Group's business strategy, the expected future market environment and the expected earnings.

The Group's exposure to market risks in the non-trading portfolio is managed according to a set of risk appetites for interest rate risk in the banking book (both economic value and net interest income), credit spread risk in the banking book, structural foreign exchange risk and pension risk.

The market risk appetite is approved by the Board of Directors and reassessed at least once a year. In addition, the Board of Directors has defined limits that support daily market risk management in keeping with the above-mentioned risk appetite.

5.1.3 Limit framework

Market risk limits are set in terms of various metrics so that activities subject to market risk are covered from several perspectives. The Group operates with two levels in the limit hierarchy for market risk (encompassing trading-related, xVA-related and non-trading portfolio market risks):

1. Board limits
2. Group All Risk Committee limits

Board limits are set by the Board of Directors in the Market Risk Policy. This document defines overall limits for material risk factors. The overall limits are supplemented by Value-at-Risk (VaR) and Stressed Value-at-Risk (SVaR) limits for

trading-related market risk. The Group All Risk Committee delegates the Board limits to business units and assigns additional limits for less material risk factors. Stop loss limits for trading-related market risk supplement the forward-looking market risk limits.

5.1.4 Monitoring and reporting

The Group carries out market risk controlling and reporting on a daily basis. The controlling process involves continuous intraday monitoring of limit utilisations with a full portfolio update every 30 minutes. All limit breaches are reported to the relevant authority within the limit structure.

Another important control activity is model risk management, which includes independent validation of models. For more information, see section 8.2.5, Model risk management.

The Board of Directors and senior management regularly receive reports that provide an overview of the Group's portfolios, main risk drivers and stress testing results for decision-making purposes. Furthermore, detailed reporting provides granular metrics to senior management at Large Corporates & Institutions and Group Treasury for day-to-day risk management purposes.

5.1.5 Stress testing

The Group performs stress testing on a regular basis and in relation to specific events in trading and financial markets.

Efforts are made to ensure that the outcome under various stressed conditions is taken into account in the risk assessment and monitoring processes.

The stress testing programme provides additional perspectives on market risk by applying multiple methodologies with various severities. The complexity of the methodology ranges from simple sensitivity analyses to complex scenario stress testing proportionally suited to the purpose of the individual stress test. In general, the Group's stress testing practices can be divided into the following three categories: 1) scenario analysis, which stresses risk factors on an individual and collective basis without relating the change(s) to a specific event (single-factor and multiple-factor stress tests); 2) scenario stress testing, which assesses the consequences of specific events covering hypothetical and historical shocks to multiple risk factors simultaneously; and 3) reverse stress testing, which identifies extreme but plausible single- or two-factor scenarios that could result in significant adverse outcomes that may potentially threaten the viability of the business model or the set market risk appetite.

5.2 Methodologies and models

The Group uses a range of measures forming a framework that captures the material market risks to which the Group is exposed. Both conventional risk measures, such as sensitivity and market value, and mathematical and statistical measures, such as VaR, are used in day-to-day market risk management.

The Group also develops and maintains internal models that are used for the pricing and risk management of financial products that cannot be valued directly or risk-managed on the basis of quoted market prices.

5.2.1 VaR

The current internal market risk model was approved by the Danish Financial Supervisory Authority (the Danish FSA) in 2007 and has since then been used for the calculation of regulatory capital for the Danske Bank Group and Danske Bank A/S. The model covers interest rate risk, equity market risk and exchange rate risk. At the end of 2011, the model was approved to cover interest rate basis risk, interest rate volatility risk and inflation risk. In 2015, the model was further approved to include bond-specific risk and equity-specific risk. At the same time, the Group's incremental risk model (see section 5.2.2) was significantly enhanced and subsequently included in the framework. Consequently, the Group's internal model is enhanced on an ongoing basis to cater for new risk factors and products, for example.

VaR is a quantitative measure that shows, with a certain probability, the maximum potential loss that the Group may suffer within a specified holding period.

In general, a VaR model estimates a portfolio's aggregate market risk by incorporating a range of risk factors and assets.

All figures are calculated on a daily basis using full revaluations.

The SVaR used for risk monitoring and capital requirement calculations is calculated using a holding period and historical data from a continued 12-month period of significant financial stress.

The periods since 2008 with the highest level of stress are identified and analysed in order to determine the period to be used for calculating SVaR for capital requirements.

In the fourth quarter of 2022, the current inflation period, i.e. the period running from October 2021 to September 2022, became the most stressed period and was thus used for calculating SVaR for capital requirements.

In addition to SVaR for capital requirements, the Group also calculates SVaR for internal limit purposes on the basis of the financial crisis period.

The following table provides an overview of the VaR and SVaR measures used for risk monitoring and capital requirement calculations.

VaR model

VaR	Risk monitoring: VaR limit	Risk monitoring: SVaR limit	Capital requirement: VaR	Capital requirement: SVaR	Backtesting
Percentile	95	95	99	99	99
Holding period	1 day	1 day	10 days	10 days	1 day
Historical data used	2 years	1 year	2 years	1 year	1 year
Period	Recent	Financial crisis (2008-2009)	Recent	1-year period of significant financial stress relevant to the Group's trading book	Recent

Backtesting of the internal VaR model

Regulatory backtesting is conducted on a daily basis to document the performance of the internal VaR model. The backtesting procedure compares calculated one-day VaR on trading book positions with actual and hypothetical P/L results.

Definition of actual and hypothetical profit and loss

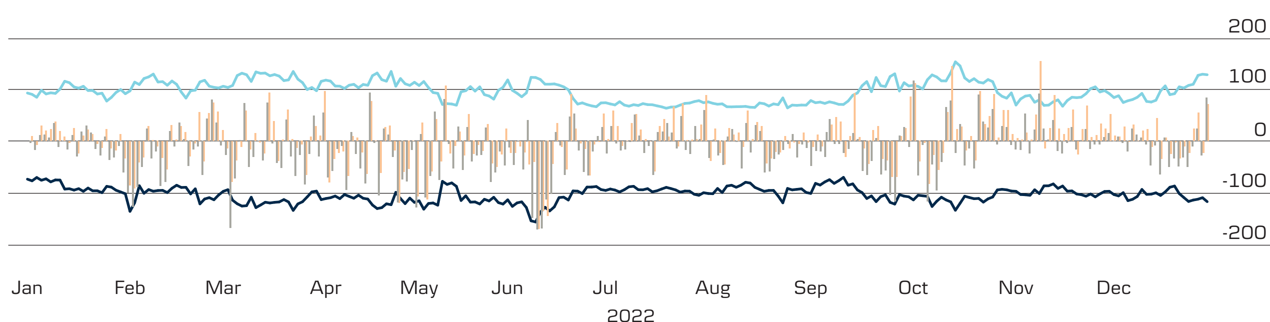
Actual P/L is defined as the loss or gain from actual changes in the market value of the trading book when daily closing values are compared with the subsequent business day's closing values (that is, intraday trades on the subsequent business day are included).

Hypothetical P/L is defined as the loss or gain calculated within the model framework as a result of keeping the portfolio unchanged for one business day (that is, no intraday trades are included although market prices change).

If the hypothetical or actual loss exceeds the predicted possible loss (VaR), an exception has occurred. Since the VaR figures used for backtesting are based on a confidence level of 99% (as in the calculation of regulatory capital), the expected number of exceptions per year is two or three. Backtesting results for 2022 are shown in the chart below.

Backtesting results and P/L effect

(DKK millions)



The backtesting of the internal VaR model showed three actual exceptions and six hypothetical exceptions in 2022. All the exceptions were related to interest rate, inflation rate and credit spread increases.

5.2.2 Incremental risk
The incremental risk model captures rating migration and default risk on a one-year horizon for all instruments subject to specific interest rate risk.

The model applies Monte Carlo simulations of credit events in respect of all issuers based on transition matrices.

Ratings and transition matrices used in the model are based on information from the major rating agencies. A constant liquidity horizon of one year is used for all instruments.

A cross-sectional model including factors such as rating, sector, region and maturity is used for the translation of simulated rating migrations to corresponding spread changes.

5.2.3 Regulatory capital for market risk
The minimum capital requirement for market risk is measured on the basis of positions in the trading book.

The Group uses mainly the internal model approach (IMA) to measure the risk exposure amount (REA) used for determining the minimum capital requirement for market risk in the trading book. The IMA comprises the Value-at-Risk (VaR) capital charge, the Stressed Value-at-Risk (SVaR) capital charge, and the incremental risk charge (IRC). The Group uses the internal VaR model to calculate the VaR and SVaR capital charges, whereas the IRC is calculated on the basis of the incremental risk model. No diversification effects between capital charges are taken into account.

The VaR and SVaR components of the REA are multiplied by a VaR multiplier. The VaR multiplier is dependent on the number of backtesting exceptions in the preceding 250-business-day window. At the end of 2022, the multiplier was 3.5 since the Group did experience six regulatory backtesting exceptions. In addition, the Danish FSA has set a model multiplier of 0.5 that must be added to the VaR multiplier to allow for any uncertainties or imperfections in the Group's internal VaR model. In total, the multiplier used for the VaR and SVaR capital charges was 4 at the end of 2022.

The REA for the Group's minor exposures to commodity risk and collective investment undertakings is calculated according to the standardised approach.

The REA for credit valuation adjustment (CVA) risk is measured mainly on the basis of the internal VaR model using exposure calculations from the counterparty risk exposure model and allocated credit default swap (CDS) spread hedges. The risk exposure amount for CVA risk from the Group's minor exposures to transactions not included in the counterparty credit risk exposure model is calculated according to the standardised approach.

5.3 Market risk profile

5.3.1 Trading-related market risk at Large Corporates & Institutions
The strategic focus is to provide global fixed income, currency and capital market products to institutional and corporate customers in the Nordic countries and to offer local Nordic products to global customers. Principal risk-taking takes place mainly in fixed income products.

The Group's business activities involve a natural flow of various currencies. These are primarily currencies related to the Group's domestic markets in the Nordic region. However, taking on foreign exchange risk is limited relative to the market risk derived from interest rates.

The Group provides liquidity and engages in market-making etc. in equity-related assets. The Group's equity market risk is limited as compared with the market risk derived from interest rates. The exposure to commodity market risk is insignificant since the Group does not want to take on material commodity market risk. However, a very small amount of market risk in respect of oil futures may be assumed to hedge inflation risks.

The table below lists the VaR for trading-related activities at Large Corporates & Institutions.

VaR for trading-related activities at Large Corporates & Institutions

(DKK millions)	Average	End-December 2022	Average	End-December 2021
Bond spread risk	26	15	25	20
Interest rate risk	46	51	32	23
Foreign exchange risk	4	8	4	1
Equity risk	3	3	7	8
Diversification effects	-31	-28	-39	-31
Total VaR	**48**	**49**	**29**	**21**

Note: VaR is calculated at a confidence level of 95% on a 1-day horizon.

The average trading-related market risk increased in the first half of 2022 as a result of a rise in outright interest rate risk exposure. Later in the year, the Group shifted its strategic focus to lowering overall risk levels and expanding risk measures. However, the VaR risk measure was inflated by the recent turmoil in interest rate markets. In VaR terms, the average trading-related market risk rose from DKK 29 million in 2021 to DKK 48 million in 2022. High market volatility, especially in interest rates, caused the Group's interest rate risk to increase.

5.3.2 Market risk in relation to fair value adjustments

The Group's fair value accounting includes various valuation adjustments (referred to as xVA) inherent in the Group's derivatives portfolio – specifically credit value adjustments (CVA), funding value adjustments (FVA) and collateral value adjustments (ColVA). The Group applies a market-implied approach that is in line with industry best practice. Hence, these valuation adjustments are sensitive to market risks that chiefly materialise due to changes in interest rates, funding spreads and credit spreads. These market risks can give rise to volatility in the fair value adjustments.

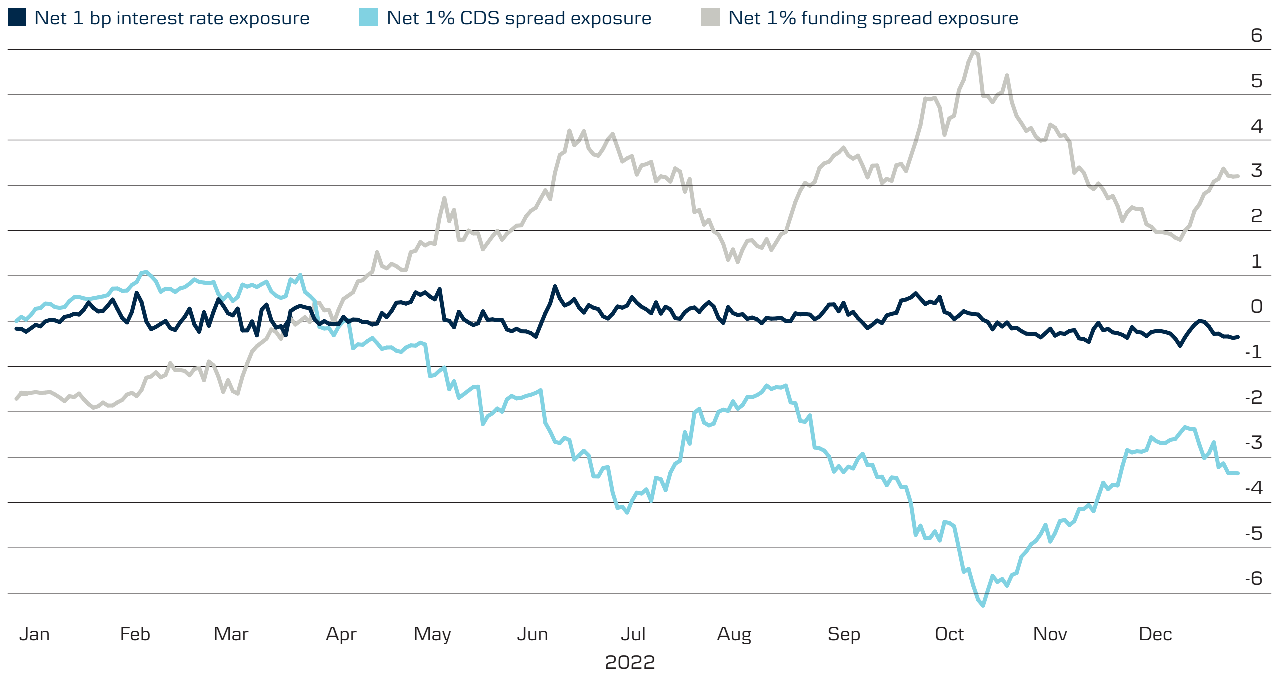
Because of the size and nature of the Group's derivatives portfolio, the credit, funding and collateral valuation adjustments are substantial, and the associated market risks are similarly of a considerable size. The strategy is therefore to hedge large parts of the market risks, while the default risks are capitalised in accordance with regulation. In relation to xVA, the Group focuses on managing economic risk rather than regulatory capital. This means that the Group also manages market risks originating from counterparties outside the scope of the CVA risk charge.

The Group manages the various xVAs components of the derivatives trading books centrally according to a clearly defined hedging strategy for each risk type associated with the xVA portfolio. The credit spread risk of CVA is significantly hedged using credit default swaps based on liquid indices or selected single-name CDS contracts. Funding spread risk is a key risk factor for xVA and has historically been a large P/L driver. In 2022, the hedging strategy was adjusted to manage credit spread risk and funding spread risk collectively. Overall, foreign exchange risks and interest rate risks from the xVA positions are almost fully hedged, with a very limited residual P/L effect.

In 2022, the xVA-related market risk appetite was further reduced following increased hedging efforts during the year. Moreover, the xVA hedging strategy contributed to a 74% reduction in actual daily income volatility as compared with the volatility of an unhedged portfolio.

xVA-related market risk

(DKK millions)



The chart illustrates the sensitivity to credit spread risk, interest rate risk and funding spread risk. The sensitivity to interest rate changes fluctuated around zero for most of 2022 and ended at the same level seen at the end of 2021. The exposure to credit spreads was somewhat stable during the beginning of the year but increased significantly after the first quarter of 2022 as a result of higher interest rates and credit spreads. The funding spread sensitivity follows a pattern that is opposite to that of the credit spread sensitivity, thus depicting the hedging strategy of the Group.

In addition to the fair value adjustment, further adjustments have to be made to ensure that prices are not only fair but also prudent. The applied methodology and the adjustments based on the methodology ensure that positions can be exited at a given price at a confidence level of 90%. Adjustments are made for multiple sources of uncertainty such as market price uncertainty, close-out costs, model risk, unearned credit spreads, concentrated positions, future administrative expenses and operational risk. Whenever possible, the calculation of the adjustments is based entirely on market data, but when such data is insufficient, individual input may be based on expert opinions. When market data is unavailable in its entirety, the application of methodologies such as the costs of hedging and generic haircuts will ensure prudence in prices as well as compliance with regulatory standards.

5.3.3 Market risk in relation to the non-trading portfolio

The Group's exposure to market risk in the non-trading portfolio originates mainly from interest rate risk in the banking book, credit spread risk in the banking book and, to a far lesser extent, from the equity risk associated with a small portfolio of equity investments.

Furthermore, the Group is exposed to market risk arising from the hedge of structural foreign exchange risk.

Interest rate risk in the banking book

Interest rate risk in the banking book (IRRBB) derives from providing the Group's core banking customers with conventional banking products and from the Group's funding and liquidity management activities at Group Treasury. IRRBB arises from adverse movements in interest rates, and in turn they change the underlying value of the Group's assets, liabilities and off-balance sheet items and its economic value.

This means that IRRBB is driven by a number of factors: repricing mismatches between assets and liabilities, customer behaviouralisation, optionality within customer products booked within the banking book, and interest rate floors and options on assets and liabilities held by the Group. Consequently, IRRBB covers interest rate risk, yield curve risk, option risk and behavioural characteristics risk.

Annually, the Board of Directors sets the Group's IRRBB appetites. These appetites are translated into a limit framework used for risk management purposes. The Group Asset & Liability Committee (Group ALCO) is responsible for the Group's IRRBB management. The Group Balance Sheet Risk Committee discharges the second-line-of-defence obligations in overseeing the implementation and maintenance of the group-wide framework for managing the Group's non-trading portfolio market risk. In the day-to-day management of activities, Group Treasury acts as the first line of defence for IRRBB. This involves managing the actual risk against the limit framework. As the second line of defence, Market & Liquidity Risk maintains the limit framework and monitors adherence to the limits.

The Group hedges its debt issuance programmes back to a short floating rate. For the purpose of preventing accounting mismatches, the hedged positions are treated using fair value hedge accounting. Moreover, the risk on material fixed-rate items is managed on a daily basis in accordance with the limit framework.

The level of IRRBB is monitored using a number of risk measures, such as prescribed regulatory metrics, the risk appetites set by the Board of Directors, and other risk measures that are considered appropriate.

The economic value (EV) risk metric is used for measuring the long-term effect of movements in interest rates by discounting future cash flows using relevant interest rate swap curves. In the modelling of future cash flows, an overnight duration is used for own equity capital, while commercial margins are excluded. Allowance is made for contractual interest rate floors on customer products. In addition, debt issued by the Group and customer behaviour are taken into consideration when future cash flows are determined. The latter is an important component and encompasses the ongoing assessment of non-maturing deposits (NMDs). The volume of NMDs is recalibrated on a monthly basis, while the duration is reviewed annually. The EV risk metric applies an average duration of 5.1 years for NMDs, and the longest repricing maturity is 14 years. The Group ALCO approves the assumption made with respect to NMDs and endorses the sensitivity of the duration (any increase or decrease).

For regulatory purposes, the Group calculates EV under six regulatory stress scenarios (Economic Value of Equity or EVE): a short interest rate up shock, a short interest rate down shock, a parallel upward shift in interest rates, a parallel downward shift in interest rates, a non-parallel flattener shift in interest rates and a non-parallel steepener shift in interest rates. In these regulatory EV calculations, the maturity of NMDs is capped to five years in compliance with regulatory requirements.

The net interest income (NII) risk metric is used for measuring the change in net interest income over a forecast horizon of 12 months in a number of different scenarios. In the modelling of future cash flows, an overnight duration continues to be used for own equity capital, while commercial margins are included in the NII calculations. Furthermore, a constant balance-sheet approach is used for creating a base scenario over a 12-month time horizon. This means that maturing and amortising positions within the 12-month time horizon are replaced with new positions that have identical features (such as amount, duration and margins).

The NII sensitivity is assessed under the six regulatory stress scenarios mentioned above and under two additional scenarios in which interest rates experience an unfloored parallel +/-100 basis point shift, respectively. In the six regulatory scenarios, additional artificial interest rate floors are implemented in the NII calculations so that DKK and EUR rates are floored at -200 basis points, while SEK, NOK, GBP and USD rates are floored at -100 basis points.

In the day-to-day risk management of IRRBB, the Group uses an EV risk metric based on unfloored parallel +/-100 basis point shifts in interest rates. These EV measures are calculated on a daily basis and evaluated against limits on an intraday basis by Group Treasury. On a daily basis, Group Treasury also tracks, comments and reports on the daily, monthly, quarterly and annual changes in EV. This also includes monitoring the development in interest rate floor risk due to instantaneous interest rate shocks. The regulatory EV calculations (EVE) are performed on a daily basis and evaluated on a monthly basis, while NII is calculated and evaluated on a monthly basis.

The Group ALCO reviews IRRBB-related issues and monitors the development in EV and NII on a monthly basis. Any strategies proposed will be submitted to the Group ALCO for approval. The Group's total interest rate sensitivity in the banking book (EV measure) is shown below.

Interest rate risk in the non-trading portfolio (a parallel yield curve shift of 100 basis points)

	End-December 2022		End-December 2021	
At last business day (DKK millions)	+100 bp	-100 bp	+100 bp	-100 bp
DKK	1,422	-1,542	691	-2,284
EUR	-655	882	-1,548	4,411
SEK	-457	458	-780	1,408
NOK	268	-275	302	-387
GBP	-40	53	-77	90
USD	-18	24	-42	45
Other	-1	1	-4	4
Total	**517**	**-399**	**-1,458**	**3,287**

The sensitivity to falling interest rates changed from a gain of DKK 3.3 billion at the end of 2021 to a loss of DKK 0.4 billion in 2022, while the sensitivity to rising interest rates changed from a loss of DKK 1.5 billion at the end of 2021 to a gain of DKK 0.5 billion at the end of 2022.

In addition, assuming a parallel downward yield curve shift of 1%, the Group's NII would be DKK 1,1 billion lower than a base scenario calculation at the end of December 2022 (end-2021: DKK 703 million).

The change in both the EV IRRBB measure and the NII sensitivity was affected mainly by rising interest rate volatility in the markets.

Credit spread risk in the banking book

Credit spread risk in the banking book (CSRBB) derives from bond positions related primarily to the Group's funding and liquidity management activities at Group Treasury. The day-to-day management of the credit spread risk associated with the Group's banking book activities is overseen by Group Treasury. The Group ALCO reviews CSRBB-related issues and monitors the levels of risk utilisation against the set appetite. As the second line of defence, Market & Liquidity Risk monitors adherence to the appetite and associated limits.

On the basis of a 10-day 99% VaR measure, the Group's credit spread risk in the banking book was DKK 178 million at the end of December2022, slightly down from DKK 202 million at the end of 2021.

Equity investments

The equity investments are divided into core and non-core investments. Core investments comprise investments that are of strategic value to the Group. That is, the Group is often a shareholder, and the target companies provide services to the Group that are needed for operational purposes. Non-core investments are investments of a non-strategic nature, such as equity for debt-converted credit facilities, and the Group is actively seeking to divest such investments.

At the end of December 2022, the total value of the non-trading-related equity investments increased to DKK 1.2 billion, slightly up from DKK 0.8 billion at the end of 2021.

Structural foreign exchange risk
Structural foreign exchange risk arises as the Group's CET1 capital is denominated in its domestic currency (DKK), while some of its assets and liabilities are denominated in foreign currencies. Although a fully matched foreign currency position will protect Danske Bank against losses from movements in exchange rates, the Group's CET1 capital ratio will fall if the domestic currency depreciates because of the imbalance between the CET1 capital in a particular foreign currency and the CET1 capital required to support the REA denominated in that same currency. This risk is labelled structural foreign exchange risk.

The Group's objective is to manage structural foreign exchange risk in order to reduce the potential effect of fluctuations in exchange rates on the CET1 capital ratio in a manner that avoids income statement volatility, while at the same time acknowledging potential increased volatility in other comprehensive income. The Group pursues a strategy of hedging the foreign exchange sensitivity of the CET1 capital ratio stemming from the allocated capital that reflects credit and operational risk REAs in the three most significant balance-sheet currencies (NOK, SEK and EUR). By nature, structural foreign exchange (hedge) positions are long-term and non-trading positions, and they also remain relatively stable over time.

5.4 Internal pension risk management

Internal pension risk arises from the Danske Bank Group's liability for defined benefit pension plans established for current and former employees. Due to the overall size and maturity of the underlying liabilities, internal pension risk is considered a legacy risk that the Group should have the opportunity to reduce going forward.

For accounting purposes, defined benefit pension plans are valued in accordance with IFRSs (IAS 19). The Group's defined benefit pension plans are funded by contributions from the Group and by individual contributions from employees. Each pension plan is controlled by a separate board that consists of current and former employees as well as independent members. These boards are independent and manage the full operations of each pension plan.

The Group monitors the interest rate, longevity, inflation and equity sensitivities of each pension plan and previously provided derivatives execution services in respect of the pension plans if the independent boards have approved the use of derivatives to adjust interest rate hedging levels.

The Group All Risk Committee has defined risk targets for the Group's pension plans. To follow up on the objectives, the Group prepares quarterly risk reports to stress the pension plans. This process uses the Group's VaR model to stress interest rates and risk assets. In addition, the liabilities are calculated on the basis of swap rates rather than actuarial discount rates. The quarterly VaR model outputs are compared against the risk targets, and follow-up takes place if certain thresholds are exceeded.

The interest rate and inflation risk hedging levels of each pension plan are constantly monitored and hedged to a high degree. The Group's ambition is to externalise risks wherever possible through the purchase of bulk annuity buy-in policies. To date, such transactions have been executed for a proportion of the liabilities in Northern Ireland, Ireland and Denmark.

5.4.1 Internal pension risk profile

The Group's defined benefit pension obligations consist of pension plans in Northern Ireland, the Republic of Ireland and Sweden as well as a number of small pension plans in Denmark. In addition, the Group has unfunded defined benefit pension plans that are recognised directly on the balance sheet. All plans are closed to new members.

Overview of the Group's pension plans

At 31 December 2022 (DKK millions)		Northern Ireland	Ireland	Denmark	Sweden
Pension plan for new employees		Defined contribution	Cash balance	Defined contribution	Defined contribution
Status of defined benefit pension plan		Closed to new members in 2004	Closed to new members in 2008	Closed to new members	Closed to new members in 2013
Gross liabilities		6,399	2,638	781	1,443
Assets at fair value		7,053	3,313	463	1,551
Net assets (net liabilities)		654	675	-318	108
Number of members:	Active	0	20	76	505
	Deferred	1,796	505		1,442
	Pensioners	2,700	600	145	885
	Total	**4,496**	**1,125**	**221**	**2,832**

Note: In Norway, Finland and the Baltic states, the Group operates defined contribution plans under which it pays fixed contributions into separate, legally independent entities but subsequently has no further obligations. The Group wound up its Norwegian defined benefit plan in 2005, but still has an early retirement pension obligation. The obligation amounted to DKK 15 million at 31 December 2022.

At the end of December 2022, the Group's VaR was DKK 1,016 million (2021: DKK 1,677 million).

5.4.2 Liability recognition

The Group's defined benefit pension plans are recognised as a balance-sheet liability subject to valuation. As the pension benefits will typically be payable for the rest of the individual employee's life, this increases the Group's uncertainty about the amount of future obligations since the liability and pension expenses are measured actuarially.

Various assumptions need to be made. Some are financial (such as the discount rate used for calculating the net present value of the pension cash flows and rates of salary and pension increases), while some are demographic (such as rates of mortality, ill health, early retirement and resignation).

The Group calculates the market risk on defined benefit plans on a quarterly basis. The risk is expressed as VaR at a confidence level of 99.97% and on a one-year horizon. In this scenario, equity price volatility and the correlation between interest rates and equity prices are set at values reflecting normal market data. The duration of the pension obligations is reduced by half to take inflation risk into account.

In addition, for each pension plan, the calculations include the sensitivity of the net obligation to changes in interest rates, equity prices and life expectancy (see the table below).

Sensitivity analysis of the Group's net obligation

(DKK millions)	Change	Effect, 2022	Effect, 2021
Equity prices	-20%	-194	-266
Interest rates	+1%/-1%	-147/+310	-259/+1,020
Life expectancy	+1 year	-283	-330

Pension obligations are measured in the Group's solvency calculations at fair value. Pension risk is assessed in the ICAAP using a VaR measurement at a confidence level of 99.9% and on a one-year time horizon.

Liquidity, funding and capital risk

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6. *Liquidity, funding and capital risk*

The Group is exposed to many different risks, and some of them may inevitably materialise, usually as financial losses. As a consequence, the Group must hold capital to absorb losses and have available liquidity to ensure that all obligations and commitments can be met, even if losses are accompanied by weakened investor confidence.

The overall structure of the balance sheet is managed to mitigate risks. Capital must be adequate, funding must be stable, and a liquidity buffer must be maintained to allow the Group to serve its customers and contribute to financial stability through the economic cycle.

Risk governance and responsibilities
In the Liquidity Policy and the Capital Policy, the Board of Directors has defined the overall principles and standards for managing liquidity, funding and capital. These are further specified in other governance documents, and adherence is monitored on an ongoing basis.

The Group All Risk Committee has established two subcommittees to address liquidity, funding and capital risks: the Group Asset & Liability Committee (Group ALCO) and the Group Balance Sheet Risk Committee (Group BSRC). The Group ALCO is anchored in the first line of defence and is chaired by the CFO, while the Group BSRC is anchored in the second line of defence and is chaired by the CRO.

The Group ALCO has a strategic focus on asset and liability management components, such as net interest income, capital allocation, funds transfer pricing as well as interest and FX risks on the balance sheet. The committee includes members from business units and CFO Area and observers from Group Risk Management.

The Group BSRC oversees the risk framework for liquidity, funding and capital risks at the group level. It monitors and challenges the management of those risks. The committee includes members from Group Risk Management and observers from business units and CFO Area.

Capital, liquidity and funding are all subject to regulatory requirements, and the Internal Liquidity Adequacy Assessment Process (ILAAP) and the Internal Capital Adequacy Assessment Process (ICAAP) serve as input for the annual Supervisory Review and Evaluation Process (SREP).

6.1 *Liquidity risk management*

Liquidity risk is the risk that a lack of funding leads to excessive costs or prevents the Group from maintaining its business model or fulfilling its payment obligations. The Group manages liquidity risk by holding sufficient liquidity reserves to meet its obligations and to support its strategies, business plans and rating ambitions even in stressed situations.

6.1.1 Risk governance and responsibilities

Like other risk types, liquidity risk is governed in line with the principles of the three-lines-of-defence model. Group Treasury and Group Finance make up the first line of defence for liquidity risk. With the support of Group Finance, Group Treasury is responsible for managing overall liquidity and ensures compliance with limits. The responsibility for short-term liquidity management is delegated to Liquidity Management at Large Corporates &Institutions within certain limits and as outlined in Group Treasury guidelines. Group Finance is in charge of the capital and funding planning process.

Group Risk Management is the second line of defence. In particular, Liquidity & Capital Risk Management reviews and challenges the methodologies and metrics and has oversight responsibility for monitoring compliance with limits.

Liquidity risk management encompasses the use of a combination of risk indicators, risk triggers and risk policies. The Liquidity Policy sets the overall principles and standards as well as more specific guidelines for strong liquidity risk management across the Group. It defines the overall liquidity risk profile and outlines the supporting principles and related governance, including for the funding plan, internal allocation of liquidity costs, reporting, the ILAAP and the contingency plan for funding and liquidity. The Liquidity Policy also includes guidelines set by the Board of Directors for the Executive Leadership Team in the liquidity area.

Liquidity management is coordinated centrally to ensure regulatory compliance at the group level and compliance with internal requirements. Regulatory compliance and the maintenance of adequate liquidity reserves at subsidiaries are managed locally, but subject to coordination to ensure consistency across the Group. Realkredit Danmark and Danica Pension manage their own liquidity risks. Realkredit Danmark is subject to special legislation on mortgage credit institutions and is largely self-financing. Danica Pension's balance sheet includes assets and long-term life insurance liabilities. A large part of Danica Pension's assets are readily marketable securities. Both companies are subject to statutory limits on their exposures to Danske Bank A/S.

6.1.2 Liquidity risk appetite and limit framework

Liquidity risk arises from the basic activities of banks such as deposit-taking and lending. The transformation of short-term deposits into long-term loans exposes banks to maturity mismatches.

The overall purpose of the Group's liquidity management is to have a prudent liquidity position for the Group to be able to meet its payment obligations at all times. This makes the following liquidity management objectives pivotal:

Key element	Risk appetite
Distance to non-viability	A sufficient distance to non-viability should be maintained at all times: in the event of a crisis, there must be sufficient time to respond to events and avoid bankruptcy or closure due to regulatory compliance failure.
Market reliance	Market reliance should be limited: if the Group relies on its ability to issue debt at all times, it becomes vulnerable to investor sentiments, market stress and market dysfunctionalities. The volume and maturity profile of debt instruments must therefore be prudently managed.

If given sufficient time to respond to a crisis, the Group will be able to adapt to the situation and thus avoid abrupt or costly reactions to short-term market volatility. Having a prudent liquidity position protects against the effects of market volatility and ensures the sustainability of the Group's long-term business model to enable the Group to serve its customers also during severe market conditions. For liquidity management purposes, the term 'Group' (the Danske Bank Group) does not include Danica Pension because it is not a credit institution. This means that Danica Pension is excluded from the prudential consolidation because it is not subject to the same liquidity regulations as credit institutions. Realkredit Danmark is included in the prudential consolidation and recognised in Group aggregates unless explicitly stated otherwise.

The Group determines a set of liquidity risk indicators against which limits are set in order to ensure clear boundaries for liquidity risk. In the Liquidity Policy, the Board of Directors has set limits for each indicator as shown below. The Group BSRC has set further limits and thresholds to ensure awareness and timely action if the liquidity position deteriorates.

Distance to non-viability

Indicator	Requirement	Frequency
1	The liquidity reserve must be positive three months ahead in the most severe internal stress tests for the Danske Bank Group and Danske Bank A/S.	Monthly
2	The Danske Bank Group's LCR must be at least 115%, while Danske Bank A/S's LCR must be at least 110%.	Daily
3	Danske Bank A/S's 90-day modified LCR, as defined by the Supervisory Diamond of the Danish Financial Supervisory Authority, must be at least 100%.	Monthly
4	The Danske Bank Group's currency-specific LCR in EUR must be at least 100%.	Daily
5	The Danske Bank Group's currency-specific LCR in USD must be at least 100%.	Daily

Market reliance

Indicator	Requirement	Frequency
6	The NSFR must be at least 104% for the Danske Bank Group and Danske Bank A/S.	Monthly
7	Long-term unsecured funding maturing within 12 months may not exceed DKK 80 billion for the Danske Bank Group.	Daily
8	Danske Bank A/S's asset encumbrance may not exceed 40% of total assets.	Quarterly

Note: The Group has also set internal limits for the currency-specific LCR in NOK and SEK requiring the LCR in NOK to be at least 50% and the LCR in SEK to be at least 75%.

6.1.3 Stress testing

Stress tests are a core element of the models and methodologies used for managing liquidity risk. Stress tests are carried out for the Group and for Danske Bank A/S to measure their immediate liquidity risks and detect signs of possible crises. The stress tests use three different standard scenarios: a scenario specific to Danske Bank, a general market crisis scenario and a combination of the two scenarios. Stress-to-failure and LCR-in-stress calculations are also performed.

All stress tests are based on the assumption that the Group continues to serve its customers and does not reduce its lending activities. This means that an unchanged volume of lending will continue to require funding. The availability of funding varies depending on the scenario and the funding source. The assessment of funding stability is based on the maturity structure for debt and behavioural data for deposits.

6.1.4 Methodologies and models

The Group uses regulatory indicators such as the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR) as tools for asset and liability management. A crucial implementation tool in the internal management system is the Funds Transfer Pricing (FTP) framework, which is based on LCR and NSFR metrics, among other things.

LCR and other liquidity metrics

A number of metrics are used for monitoring liquidity. The key regulatory requirement is the LCR (see section 6.2) using stress scenarios defined by regulators. Other scenarios are analysed in liquidity stress tests. A 90-day modified version of the LCR is also calculated as part of the supervisory process. In addition, liquidity curves based on contractual liquidity flows are monitored against limits and on a daily basis. Finally, intraday liquidity is monitored and reported by currency in accordance with the guidelines issued by the Basel Committee.

Liquidity by currency

The LCR regulation requires the denomination of high-quality liquid assets in the buffer to be consistent with the currency distribution of net liquidity outflows. In Denmark, these requirements are more specific. As a SIFI, Danske Bank is subject to currency-specific liquidity requirements for EUR and USD. Additionally, the Group has set internal limits on the LCRs for NOK and SEK.

To maintain the availability of the relevant currencies in the medium to long term, the Group's funding plan seeks to balance long-term commitments with stable funding in each of the relevant currencies.

NSFR

While the LCR focuses on short-term liquidity risk, the NSFR addresses the balance between the funding needs for assets and the stability of funding sources. The NSFR entered into force in June 2021 and applies to all individual banking units within the Group and to the Group as a whole.

FTP framework

The FTP framework is the Group's central management tool to adjust and manage the balance-sheet composition of its business units. Their business activity is guided by assigning internal funding prices based on the matched-maturity principle. The FTP framework applies charges to loans and credits to deposits and other funding on the basis of the characteristics of the individual balance-sheet items, such as product type, customer type, maturity, currency, amortisation profile, modelled behaviour and interest rate risk. Some charges and credits are based on behavioural data, such as the expected stressed deposit run-off and expected amounts drawn on committed facilities.

The FTP framework links the balance-sheet composition directly to the income statement, and it is a key component in determining the Group's overall funding position. It links liquidity risk assessment, product pricing, balance-sheet valuation and profitability analysis.

6.1.5 Monitoring and reporting

Liquidity & Capital Risk Management has oversight responsibility for monitoring, controlling and reporting on liquidity risk indicators to the relevant parties and committees. Indicators for which limits are set by the Board of Directors are reported back to the Board of Directors and to other relevant stakeholders. Limits and thresholds set by the Group BSRC are reported back to the committee and to the head of Liquidity & Capital Risk Management.

Liquidity risk reporting consists of overviews, analyses and forecasts for critical risk indicators such as the LCR. This reporting outlines the drivers for changes in liquidity and gives senior management a clear understanding of the Group's day-to-day liquidity risk profile.

Monitoring and reporting are conducted separately in line with the principles of the three-lines-of-defence model. As the first line of defence, Group Finance calculates and reports on risk measures. The second line of defence, Group Risk Management, monitors compliance with internal limits. Furthermore, Group Risk Management is responsible for model risk management, which includes independent validation of models used by the first line of defence. For more information, see section 8.2.5, Model risk management.

6.1.6 ILAAP

The ILAAP is a process that evaluates the adequacy of the Group's and Danske Bank A/S's liquidity profile, liquidity risk and governance framework.

The process highlights key developments during the past year and identifies new or changed risk drivers. Detailed quantitative analyses of liquidity and funding risks are performed and presented in an ILAAP report. The Executive Leadership Team is responsible for the ILAAP report and submits it to the Board of Directors for approval.

The ILAAP reports of the Group and relevant subsidiaries are the basis for dialogue with the supervisory authorities on the Group's liquidity risks within the SREP. The ILAAP report is submitted annually to the supervisory authorities along with the Group's ICAAP report.

6.2 Liquidity risk profile

6.2.1 Risk indicators

Distance to non-viability

The risk indicators used for managing the distance to non-viability allow the Group to adjust the size and composition of its liquidity reserve to meet its obligations in case of a stressed liquidity situation. The indicators include the LCR and the internal liquidity stress tests. The LCR covers a 30-day stressed period, while the internal stress tests cover a three-month stressed period.

Liquidity coverage ratio

At 31 December 2022 (DKK billions)	Danske Bank Group	Danske Bank A/S
High-quality liquid assets (level 1)	550	477
High-quality liquid assets (level 2)	20	17
Limits due to cap	0	0
A. Liquid assets, total	570	494
Customer deposits[1]	199	192
Market funding[2]	104	103
Other cash outflows	183	184
B. Cash outflows, total	486	479
Lending to non-financial customers	7	6
Other cash inflows	102	103
C. Cash inflows, total	108	109
Liquidity coverage ratio [A/(B-C)]	**151%**	**133%**

[1] Includes retail, operational and excess operational deposits.
[2] Includes non-operational deposits, unsecured debt issues and secured funding.

The Group maintained a prudent liquidity position throughout 2022. The LCRs of Danske Bank A/S and the Group declined from 142% and 164% at the end of 2021 to 133% and 151% at the end of 2022, respectively. For the year as a whole, maturing debt was higher than new debt issued (see section 6.2.3), which caused surplus liquidity to decline. More lending also put negative pressure on the LCR. However, the increase in lending was already captured in the LCR by loan offers. Increases in derivatives, collateral and other inflows also contributed to offsetting the negative effect on the LCR. Deposit volumes varied over the year, but the impact on surplus liquidity was muted for the year as a whole. Finally, the LCR was reduced as result of the financial impact of the fine in relation to the settlement of the Estonia matter.

Market reliance

The risk indicators addressing market reliance are effective management tools that enable the Group to maintain an adequate level of stable funding for its long-term commitments on the asset side. This reduces any pressure on the Group to fund large amounts during a liquidity crisis.

The NSFR, which took effect in June 2021, is a key indicator and management tool for funding stability and market reliance. The NSFRs of Danske Bank A/S and the Group declined from 121% and 130% at the end of 2021 to 115% and 123% at the end of 2022, respectively. The decline was due mainly to an increase in lending requiring additional stable funding and a decrease in long-term debt issues implying less available stable funding.

Net stable funding ratio

At 31 December 2022 (DKK billions)	Danske Bank Group		Danske Bank A/S	
Available stable funding (ASF)	Total liabilities	ASF	Total liabilities	ASF
Capital items and instruments	185	185	185	185
Retail deposits	565	527	505	472
Operational deposits	312	38	305	39
Non-financial customers	293	265	273	250
Financial customers and central banks	703	248	618	166
Interdependent assets/liabilities	729	0	0	0
Other[1]	218	1	202	1
ASF total[2]	3,003	1,265	2,087	1,114
Required stable funding (RSF)	Total assets	RSF	Total assets	RSF
Central bank assets	267	0	233	0
Liquid assets	409	24	350	22
Other securities	104	97	153	145
Loans	1,452	821	1,315	725
Interdependent assets/liabilities	727	0	0	0
Other[3]	475	88	453	78
RSF total[2]	3,435	1,029	2,506	969
Net stable funding ratio (ASF/RSF)		**123%**		**115%**

[1] Includes undetermined counterparties, deferred taxes and other liabilities.
[2] Total assets and liabilities shown for NSFR purposes do not align with the consolidated accounting balance sheet shown in the asset encumbrance table below. This is due to repurchase agreements and derivatives not being netted for NSFR purposes in the same manner as done for accounting purposes. Additionally, total liabilities for NSFR purposes include off-balance-sheet items.
[3] Includes derivatives, committed facilities, trade finance, non-performing exposures and other assets.

The Group also monitors the diversification of its funding sources by currency, maturity, instrument and investor type to avoid excessive reliance on individual markets and funding sources. Special attention is devoted to the NOK and SEK markets. Deposits in those currencies have risen significantly over time, but not enough to make up for a structural difference between deposits and lending. However, other sources of stable funding are available. Covered bonds in NOK are issued by Danske Bank A/S, and covered bonds in SEK are issued by Danske Hypotek AB. Danske Bank obtains additional funding in these currencies by issuing debt in USD and EUR along with strategic cross-currency swaps. Stable sources provide all the necessary funding, and no gaps need to be filled on an ongoing basis with short-term instruments.

6.2.2 Ratings and their potential liquidity effects

The Group's credit ratings were unchanged during 2022. More information is available in Danske Bank's Annual Report 2022. Rating upgrades and downgrades have liquidity implications because they affect the Group's ability to obtain market funding and the cost of such funding. They may also lead to changes in the amount of collateral needed in certain transactions.

6.2.3 Funding

Rising inflation and market expectations of less expansive monetary policy had caused interest rates to rise already in early 2022. The Russian invasion of Ukraine and new COVID-19 restrictions in China led to further increases in energy and food prices as well as broader supply-chain disruptions. As a result of the increasing inflation pressure, central banks tightened monetary policy faster than what had been expected, which led to market volatility and declining prices of stocks and other assets subject to risk. However, financial markets were generally working well, and banks were able to access the funding markets, albeit at a higher cost.

During 2022, the Group issued long-term debt in the amount of DKK 61 billion. Covered bonds were issued primarily through the NOK and SEK domestic markets. The Group also made an issue of EUR 1.25 billion in Finland through Danske Mortgage Bank Plc. The Group issued non-preferred senior debt in the form of green benchmark bonds for EUR 750 million and non-preferred senior debt in the form of Rule 144A dual tranche benchmark bonds for USD 2 billion. Overall issues in 2022 decreased from the level of DKK 75 billion in 2021.

Realkredit Danmark's funding

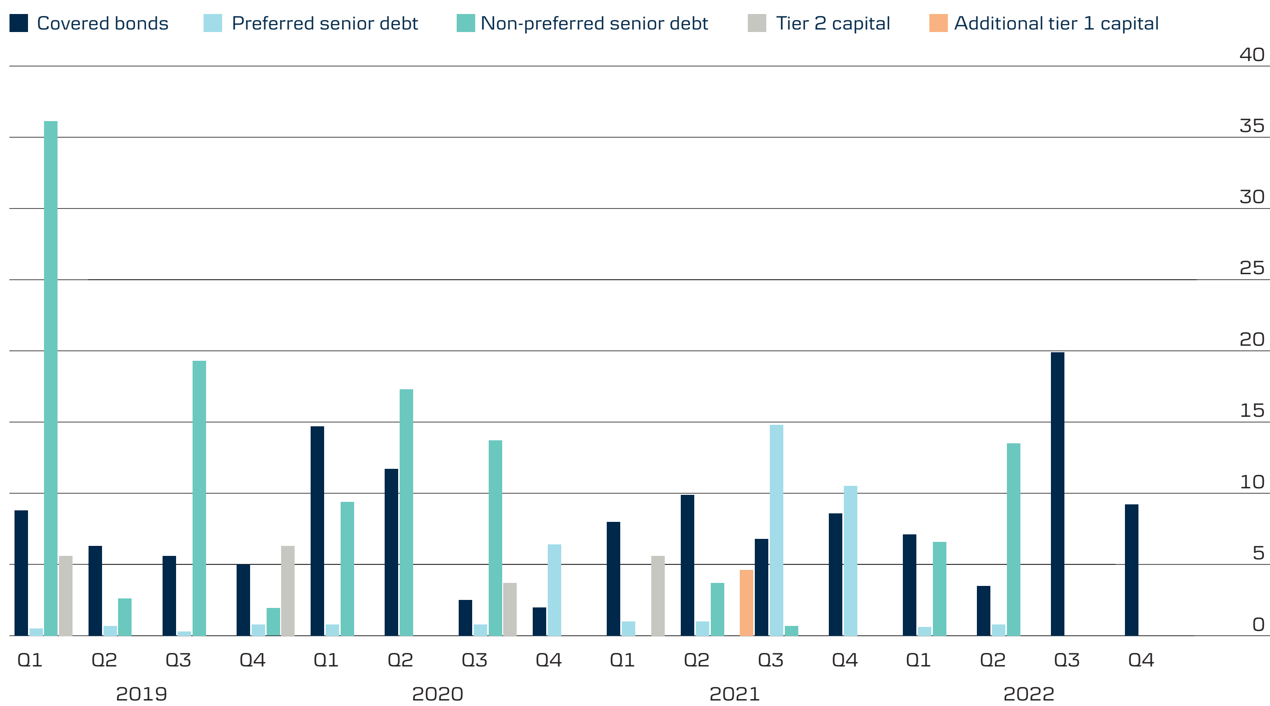
Realkredit Danmark funds its mortgage lending activities by issuing covered bonds. Mortgage finance in Denmark is subject to asset-liability balance requirements, and Realkredit Danmark complies with these requirements by applying a strict pass-through structure.
This implies that

- all mortgages are funded by means of covered bonds with a matching cash flow
- all funding costs are absorbed by borrowers
- payments of interest, redemptions and margins from borrowers fall due in advance of interest payments and principal repayments to bondholders
- covered bonds are issued on tap when mortgages are originated

The pass-through structure allows for interest-reset loans with maturities ranging up to 30 years, while the underlying bonds are typically issued with maturities ranging from one to five years. The refinancing risk is mitigated by regulatory and internal caps on the volume of interest-reset loans to be refinanced each quarter and each year. As a last resort, Realkredit Danmark is required by law to extend the maturity of maturing covered bonds in the event of a refinancing failure or if the refinancing interest rate leads to a significant increase in costs for borrowers (+500 bps).

Long-term debt issues (Group), by quarter

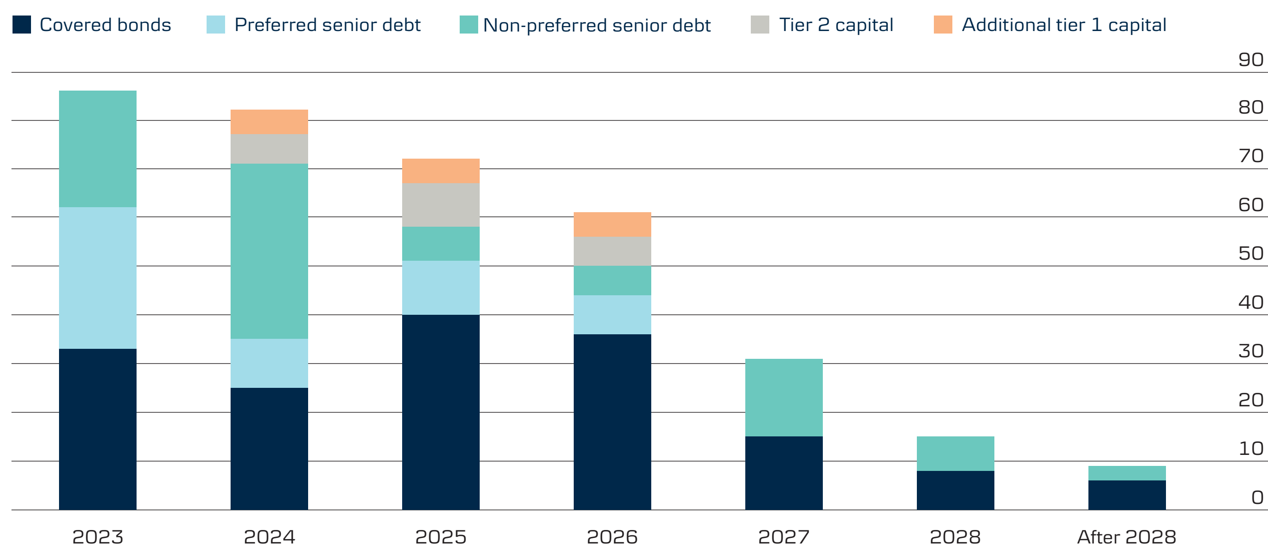
(DKK billions)



Note: Realkredit Danmark is not included.

The Group monitors the maturity profile of its long-term funding to ensure that the portions of long-term funding maturing within a year and within a quarter are maintained at acceptable levels.

Redemption profile (Group), 31 December 2022
(DKK billions)



Note: Realkredit Danmark is not included. Redemption at the earliest possible dates for preferred senior debt, non-preferred senior debt and tier 2/additional tier 1 capital.

Danske Bank has a number of funding programmes. Each programme is approved by the Board of Directors along with a limit. Several programmes, especially for short-term funding such as CP/CDs, are barely used at all, primarily due to the lack of investment opportunities that are both profitable and consistent with the Group's Liquidity Policy and its emphasis on stable funding. Covered bonds remain an important funding source. The Euro Medium Term Note (EMTN) programmes are used for NPS issues and minor volumes of capital instruments.

6.2.4 Liquidity reserve

The Group's liquidity reserve is defined as all unencumbered liquid assets that are available to the Group in a stressed situation. Assets received as collateral are included in the reserve, whereas assets used as collateral are excluded since they are encumbered.

The following table shows the liquidity reserve broken down according to the LCR framework. The decrease in liquid assets during 2022 was driven mainly by more debt maturing than being issued.

The reduction in the liquidity buffer was driven by a decline in central bank reserves. There was also a shift from other level 1a assets to covered bonds.

Liquidity reserve (Group) – LCR definition

At 31 December (DKK billions after haircuts)		2022	2021
Total high-quality liquid assets		**570**	**687**
Level 1a assets	Central bank reserves	214	318
	Central government debt	86	100
	Other level 1a assets	21	54
Level 1b assets	Extremely high-quality covered bonds	**229**	**196**
Level 2a assets	High-quality covered bonds	16	12
	Other level 2a assets	4	5
Level 2b assets		**0.1**	**0.5**

Most of the bonds held in the reserve are central-bank-eligible instruments, and they are important for intraday liquidity needs and overnight liquidity facilities.

The amounts of liquidity are calculated using haircut values mandated for each asset category in the LCR regulation. Some assets are excluded entirely. The amounts shown in the table may differ from actual market values and repo liquidity values. In internal stress tests, valuations closer to actual market values are generally used.

6.2.5 Asset encumbrance

Asset encumbrance implies structural subordination of senior unsecured creditors and depositors. Therefore, regulators, rating agencies and investors monitor Danske Bank's asset encumbrance ratio – that is, the percentage of assets pledged or mortgaged as collateral.

The Group's asset encumbrance has three main sources:

- Loans and securities serving as collateral for covered bond issuance.
- Securities provided as collateral in repo and securities-lending transactions. Such securities remain on the balance sheet and cash amounts received are recognised as deposits.
- Cash and securities provided as collateral to support business activities, such as clearing services and counterparty credit risk mitigation.

The Group's reporting follows the method set out in the EBA's implementing standard on asset encumbrance. The table shows the encumbrance of assets on the balance sheet and the encumbrance of collateral received, broken down by source of encumbrance. The level of asset encumbrance was relatively stable during the year.

Asset encumbrance and encumbrance ratio

At 31 December 2022 (DKK billions)	Danske Bank A/S	Danske Bank Group
Assets on balance sheet		
Derivatives	53	53
Deposits (repos)	251	264
Covered bonds	92	940
Other	4	4
Total encumbrance	**400**	**1,262**
Total assets	2,398	3,303
Collateral received		
Derivatives	8	5
Deposits (reverse repos)	191	161
Total encumbrance	**200**	**166**
Total assets	554	503
Asset encumbrance ratio	**20%**	**38%**

6.3 Capital risk management

Capital risk is the risk of not having enough capital to cover all material risks arising from the Group's chosen business strategy.

The Group manages its capital risks through prudent planning and thus ensures a sufficient level of capital to support its growth ambitions and to absorb unexpected losses even in severe downturns without breaching regulatory capital requirements. The Group's capital management practices are designed to support its rating ambitions, while ensuring access to funding markets under all market conditions.

Capital management involves executing the Internal Capital Adequacy Assessment Process (ICAAP), setting capital targets and dividend ambitions, capital planning, performing stress tests, allocating capital as well as monitoring and reporting.

The Group's Capital Policy set by the Board of Directors lays the foundation for the Group's capital management. The Capital Policy contains the Group's overall principles and standards for capital management, including the governance process for all of the principles.

6.3.1 Risk governance and responsibilities

The Group's capital management practices are organised in line with the principles of the three-lines-of–defence model. Day-to-day monitoring and management of the Group's capital position and risks are handled by Group Finance (CFO Area). As the first line of defence, Group Finance is responsible for monitoring and managing the Group's capital position on the basis of the principles set out in the Capital Policy, including stress testing, setting capital and payout targets, preparing a capital plan and allocating the cost of capital. Group Finance is also responsible for the annual ICAAP. The Group's capital and funding plan is implemented by Group Treasury (CFO Area).

Group Risk Management serves as the second line of defence. For capital risks, Liquidity & Capital Risk Management is responsible for reviewing and challenging the methods applied and the results produced.

Group Internal Audit (GIA) serves as the third line of defence for the Group's capital management performing independent reviews of the main processes, such as the calculation of the risk exposure amount (REA), the ICAAP, capital levels and stress testing, and addressing risk assessments performed and control setups applied.

Subsidiaries have local responsibility for capital management but work closely with Group functions to ensure consistent application of methodologies and principles.

6.3.2 ICAAP

The ICAAP is an integral part of the Group's capital management practices. The purpose of the process is to assess, on an ongoing basis, the material risks that are inherent in the Group's business activities. The solvency need is determined as part of the ICAAP, and this ensures adequate capitalisation based on the Group's risk profile. Forward-looking by nature, the ICAAP includes both group-wide and portfolio-specific stress testing. The conclusions from the ICAAP serve as input for the Supervisory Review and Evaluation Process (SREP), and they are submitted to the supervisory authorities once a year, along with the conclusions from the Group's Internal Liquidity Adequacy Assessment Process (ILAAP).

6.3.3 Capital targets and capital distribution

The target for the CET1 capital ratio was kept at above 16% in the short term to ensure a sufficiently prudent buffer in relation to the capital requirement. The target for the total capital ratio was kept at above 20%. The targets take into account the expected increase in the Group's institution-specific buffer rate, mainly because of the announced increases in the countercyclical buffer rates in Denmark and Norway, reaching a level of 2.5% in March 2023, as well as an increase in the Swedish buffer rate from 1.0% to 2.0%. The target for the CET1 capital ratio includes a management buffer of at least 2.4%.

With respect to its capital targets, the Group has an ambition of paying out ordinary dividends within the range of 40-60% of its net profit.

The Board of Directors will continue to adapt the capital targets to the regulatory developments and revise the ambitions for capital distribution in order to ensure that the Group continues to have a strong capital position.

6.3.4 Capital planning

The Group's ongoing capital planning takes into account both short-term and long-term horizons in order to give the Board of Directors a comprehensive view of current and future capital levels. The capital plan includes a forecast of the Group's expected capital performance based on budgets and takes pending regulation into account when future capital requirements are assessed. The Group's capital planning is also based on stress tests and takes rating ambitions into consideration. The Group's capital and funding planning processes are integrated in one process.

6.3.5 Input from stress testing

The Group uses macroeconomic stress tests in the ICAAP for the purpose of projecting its capital requirements and actual capital levels under various unfavourable scenarios. Stress tests are an important means of analysing the risk profile since they give management a better understanding of how the Group's portfolios are affected by macroeconomic changes, including the effects of undesirable events on the Group's capital.

When the Group uses stress tests in its capital planning, it applies stress to risks, income and the cost structure. Stressing income and costs affects the Group's capital, while stressing risk exposures affects its capital requirement.

Results from stress testing are used as input for setting capital targets, and they ultimately feed into the Group's capital planning.

Internal stress tests

The Group's internal stress tests are based on various scenarios, each consisting of a set of macroeconomic variables. The scenarios are generally used both at the group level and for subsidiaries. Specific scenarios are also developed for subsidiaries if deemed necessary. The Group evaluates the main scenarios and their relevance on an ongoing basis and at least once a year. New scenarios are added when necessary. The scenarios are approved by the Board of Directors.

Regulatory stress tests

The Group has permission to use internal ratings-based (IRB) models and therefore participates in the annual macroeconomic stress test conducted by the Danish Financial Supervisory Authority (the Danish FSA). The latest stress test was performed in the first quarter of 2022.

The Group also participates in the EU-wide stress test conducted by the European Banking Authority (EBA) every second year. The purpose of the EBA stress test is to assess the robustness of the European banking sector in the event of a very severe economic setback. The latest exercise was conducted in 2021.

For more information about the stress test process, see the ICAAP report, which is updated on a quarterly basis and published along with the Group's interim and annual reports at www.danskebank.com/investor-relations.

6.3.6 Capital allocation

The Group makes a full internal allocation of its total equity across business units on the basis of each unit's contribution to the Group's total risk as estimated by means of regulatory models. The principles for allocating capital across the business units are aligned with the Capital Requirements Regulation (CRR). As a result, the capital consumption of the Group's individual business units is closely aligned with the Group's total capital consumption.

6.3.7 Monitoring and reporting

The Group monitors risks related to its capital and capital position and submits risk reports to the CFO, the CRO and the Board of Directors. Capital management risk reporting consists of a monthly report on the Group's capital position (the Capital and REA Report) and an overview of the Group's capital position against trigger levels (the Indicator Dashboard). In addition, the Group prepares quarterly reports on its capital position (on a short- and long-term basis) measured against its risk and business strategy as part of the ICAAP. For an overview of risk reporting, see section 2.7, Risk monitoring and reporting.

6.4 Capital profile

At 31 December 2022, the Group's CET1 capital amounted to DKK 149.2 billion, or 17.8% of the total REA, and its tier 1 capital amounted to DKK 164.5 billion, or 19.6% of the total REA. The Group's total capital amounted to DKK 185.3 billion, and its total capital ratio was 22.1%.

6.4.1 Total capital

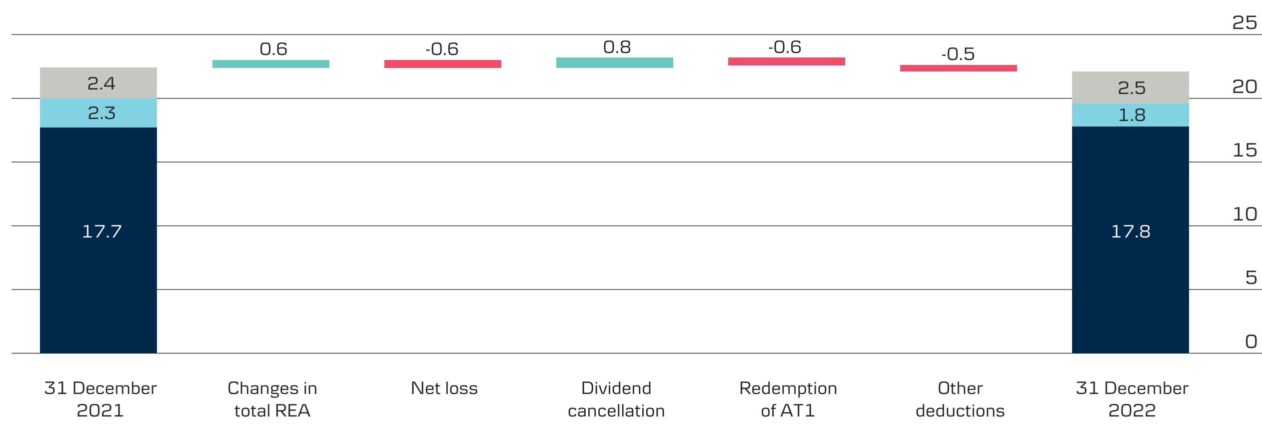
The high-level components of total capital are shown in the following table (a more detailed breakdown appears in the Group's Annual Report 2022). The figures reflect the Group's capital subject to the transitional rules of the CRR (including the phase-in of IFRS 9) at 31 December 2022.

Total capital and capital ratios (Group)

At 31 December (DKK millions)	2022	2021
Total equity	160,318	176,704
Adjustment to total equity	189	178
Total equity calculated according to the rules of the Danish FSA	160,506	176,881
AT1 capital instruments included in total equity	0	-5,419
Adjustments for accrued interest and tax effect on AT1 capital	0	-78
CET1 capital instruments	160,506	171,384
Deductions from CET1 capital	-11,309	-19,449
– portion from intangible assets	-5,529	-5,325
– portion from statutory deductions for insurance subsidiaries	-4,683	-6,882
CET1 capital	149,197	151,935
AT1 capital	15,300	19,933
Tier 1 capital	164,497	171,868
Tier 2 capital instruments	20,765	20,888
Total capital	185,261	192,757
Total risk exposure amount	**838,193**	**860,173**
CET1 capital ratio	17.8%	17.7%
Tier 1 capital ratio	19.6%	20.0%
Total capital ratio	22.1%	22.4%

The following chart shows the change in the Group's total capital ratio from 31 December 2021 to 31 December 2022. The main drivers were the realised net loss due to the effect of the coordinated resolutions with the US and Danish authorities in relation to the Estonia matter, the redemption of additional capital instruments in April 2022, changes in the total REA, and the cancellation of the remaining dividends for 2021.

Change in total capital ratio (Group)



Common equity tier 1 capital

Starting with total equity under International Financial Reporting Standards (IFRSs), the Group makes a number of adjustments in order to determine its CET1 capital.

In accordance with IFRSs and the Danish FSA's accounting rules, total equity is adjusted for the revaluation of domicile property recognised at the estimated fair value. Total equity is also subject to certain deductions to determine CET1 capital in accordance with the CRR. The main deductions are listed in the risk management note of the Group's Annual Report 2022.

Additional tier 1 capital and tier 2 capital

At the end of 2022, the Group's additional tier 1 capital amounted to DKK 15.3 billion, or 1.8 percentage points of its total capital ratio. The Group redeemed additional tier 1 capital in the amount of DKK 5.6 billion but made no issues in 2022. At 31 December 2022, all of the Group's additional tier 1 capital instruments were fully CRR-compliant.

At 31 December 2022, the Group's tier 2 capital amounted to DKK 20.8 billion, or 2.5 percentage points of its total capital ratio. The Group did not issue or redeem any tier 2 capital in 2022. At 31 December 2022, all of the Group's tier 2 capital instruments were fully CRR-compliant.

For a description of the terms and conditions applicable to the Group's outstanding issues of individual additional tier 1 and tier 2 capital instruments, see notes G22 and G25 of the Group's Annual Report 2022.

Statutory deductions for Danica Pension

The Group's statutory deduction for Danica Pension is calculated as Danica Pension's solvency need less the difference between Danica Pension's total capital and the carrying amount of Danske Bank's capital holdings in Danica Pension. This method ensures that the Group's total capital is reduced fully by deductions made from Danica Pension's total capital.

At the end of 2022, the total capital deduction for Danica Pension was DKK 4.7 billion.

Total capital deductions for insurance subsidiaries

At 31 December (DKK millions)	2022	2021
Capital requirement at Danica Pension	16,876	13,167
Less the difference between		
Danica Pension's capital base	31,556	27,586
Danske Bank's capital holdings	20,179	24,122
Total difference	11,337	3,464
Less Danica Pension's holding of Danske Bank shares etc.	815	521
Total deductions for insurance subsidiaries	**4,683**	**6,882**
Deductions from CET1 capital	4,683	6,882

Note: The carrying amount of Danske Bank's capital holdings in Danica Pension less the total deduction for Danica Pension from the Group's total capital is included in the total REA calculation at a weight of 100%.

6.4.2 Capital and solvency requirements for Danica Pension

The prudential supervision of Danica Pension is governed by the Solvency II framework, which provides for EU-harmonised solvency rules in the insurance sector. Under these rules, in 2022, Danica Pension's capital requirement was DKK 16,876 billion, and its solvency coverage ratio was 187%, down from 210% at the end of 2021.

Danica Pension's solvency coverage ratio

At 31 December (DKK millions)	2022	2021
Shareholder's equity	20,179	24,122
Differences in valuation between accounts and Solvency II	7,893	1,914
Subordinated liabilities	3,485	3,852
Foreseeable dividends	-	-2,300
Eligible own funds for covering the solvency capital requirement	31,556	27,587
Capital requirement	16,876	13,167
Solvency coverage ratio (%)	187	210

6.4.3 Total capital requirement

The total capital requirement is determined as the solvency need ratio plus the combined buffer requirement. The solvency need ratio consists of the 8% minimum capital requirement for risks covered under Pillar I and an additional capital requirement under Pillar II for risks not covered under Pillar I.

At the end of 2022, the Group's solvency need ratio was 10.6%, and the combined buffer requirement was 7.0%. When fully phased in, the buffer requirement will change to 7.5% since increases in the countercyclical buffer rates in the Group's core markets are intended to take effect in 2023. This implies that the fully phased-in CET1 capital requirement was 13.6% and the fully phased-in total capital requirement 18.2% at 31 December 2022. Assuming fully phased-in rules, the Group would have excess CET1 capital of 3.8% of its total REA at the end of 2022.

Capital ratios and requirements

(percentage of total risk exposure amount)	31 December 2022	Fully phased-in[1]
Capital ratios		
CET1 capital ratio	17.8	17.4
Total capital ratio	22.1	21.8
Capital requirements (including buffers)[2]		
CET1 capital minimum requirement (Pillar I)	4.5	4.5
Capital add-on to be met with CET1 capital (Pillar II)	1.6	1.6
Combined buffer requirement	7.0	7.5
– portion from countercyclical capital buffer	1.5	2.0
– portion from capital conservation buffer	2.5	2.5
– portion from SIFI buffer	3.0	3.0
CET1 capital requirement	13.1	13.6
Minimum capital requirement (Pillar I)	8.0	8.0
Capital add-on (Pillar II)	2.6	2.6
Combined buffer requirement	7.0	7.5
Total capital requirement	17.6	18.2
Excess capital		
CET1 capital	4.7	3.8
Total capital	4.5	3.6

[1] Based on fully phased-in CRR and CRD rules and requirements, including the fully phased-in impact of IFRS 9.
[2] The total capital requirement consists of the solvency need ratio and the combined buffer requirement. The fully phased-in countercyclical capital buffer is based on the buffer rates announced at the end of 2022.

Minimum capital requirement

The regulatory minimum capital requirement under Pillar I of the CRR is defined as 8% of the risk exposure amounts for credit risk, counterparty credit risk, market risk and operational risk.

Credit risk amounted to 82.1% of the total REA, making it the Group's largest risk type. In collaboration with other national financial supervisory authorities, the Danish FSA has approved the Group's use of the A-IRB approach for the calculation of credit risk.

The Danish FSA has granted the Group an exemption from the A-IRB approach for exposures to government bonds and equities, among other things. The exemption also applies to exposures at the legal entity of Northern Bank Limited (Northern Ireland) and to retail exposures in the Non-core Ireland portfolio. For these exposures, the Group currently uses the standardised approach. A complete list of exemptions and approvals is available in section 3.3, IRB framework and model development.

At Danske Mortgage Bank Plc (Finland), the Group has permission to use the F-IRB approach for credit risk exposures to corporate customers. In December 2016, the Group obtained permission to calculate the REA at Danske Mortgage Bank Plc using the F-IRB approach for the institutions asset class and using the A-IRB approach for the retail asset class. Implementation took place in January 2017.

Counterparty credit risk (CCR) is calculated using the same approach as mentioned above for credit risk. CCR, including central clearing counterparty (CCP) default risk and the credit value adjustment (CVA) risk charge, amounted to 3.4% of the total REA.

Market risk amounted to 5.7% of the total REA. The Group uses an internal VaR model both for the market risk on items in the trading book and for the foreign exchange risk on items outside the trading book.

Operational risk amounted to 8.8% of the total REA. The Group uses the standardised approach for the calculation of operational risk.

Risk exposure amounts and risk weights

	2022		2021	
At 31 December (DKK millions)	REA	Weight*	REA	Weight*
Credit risk				
A-IRB approach				
Institutions	4,422	24%	4,540	26%
Corporates	310,375	31%	286,151	29%
Exposures secured by real property	157,927	16%	154,071	15%
Other retail	19,754	28%	20,237	24%
Securitisation	887	37%	1,086	39%
Other assets	9,167	86%	12,510	88%
A-IRB approach, total	502,532	25%	478,595	23%
F-IRB, total	27,572	54%	20,397	48%
Standardised approach, total	158,106	21%	219,748	24%
Credit risk, total	688,210		718,740	
Counterparty credit risk	24,654	8%	26,566	9%
Central counterparty (CCP) default risk	385	3%	432	4%
Credit value added (CVA) risk charge	3,628		4,431	
Counterparty credit risk (including CCP and CVA)	28,667		31,429	
Market risk, total	47,480		36,541	
Operational risk, total	73,836		73,463	
Total risk exposure amount	**838,193**		**860,173**	

* The average risk weight is EAD-weighted. The implied risk weight is calculated as REA/EAD, thus including the SME supporting factor and risk weight floors.

During 2022, the total REA decreased by DKK 22.0 billion to DKK 838.2 billion. The main cause was a decrease in credit risk in 2022.

The REA for credit risk decreased by DKK 30.5 billion because the buffer held for the implementation of the new definition of default was DKK 15 billion larger than the actual impact. The difference comes from improvements made in parallel to the implementation offsetting the initial estimate.

The REA for market risk increased by DKK 10.9 billion from the 2021 level.

The REA for operational risk was stable with a slight increase of DKK 0.4 billion from the 2021 level.

The REA for counterparty credit risk, including CCP default risk and the CVA risk charge, decreased by DKK 2.8 billion from the 2021 level.

Solvency need

The solvency need is the amount of capital that is adequate in terms of size and composition to cover the risks to which a financial institution is exposed. As stated in Danish legislation, the solvency need ratio is the solvency need divided by the total REA as determined under Pillar I.

The Group assumes risks as part of its business activities and expects to incur some financial losses as a consequence of these risks. Under normal circumstances, it expects losses to be well covered by its earnings. If earnings are not sufficient to cover the losses, they are covered by the Group's capital.

All material risks arising from the Group's strategy and business model must be identified for the purpose of assessing the adequate level of capital. This risk identification is based on the Group's enterprise risk management (ERM) framework and risk taxonomy. After identifying the risks, the Group determines how and to what extent they will be mitigated. Mitigation usually takes place by means of business procedures and controls, contingency plans, and other measures. Finally, the Group determines the risks to be covered by capital. The Group thus ensures that it has sufficient excess capital to cover the risks associated with its business activities. It uses models and expert assessments to monitor all significant risks.

As part of the ICAAP under Pillar II, the solvency need is determined on the basis of an internal assessment of the Group's risk profile in relation to the minimum capital requirement. An important part of the process of determining the solvency need is to evaluate whether the calculation takes into account all material risks to which the Group is exposed. The Group uses its internal models as well as expert judgement and Danish FSA benchmark models to quantify whether the regulatory framework indicates that additional capital is needed.

At the end of 2022, the Group's solvency need was DKK 89.1 billion, or 10.6% of its total REA. The solvency need decreased by DKK 9.0 billion.

For information about the general methods of calculating the solvency need and the solvency need ratio, see the Group's ICAAP report, which is updated on a quarterly basis and published along with the Group's interim and annual reports on the Group's website at www.danskebank.com/investor-relations.

Combined buffer requirement

As stipulated in the Capital Requirements Directive (CRD), a combined buffer requirement applies to financial institutions in addition to the solvency need ratio. The Group's combined buffer requirement consists of a countercyclical buffer, a capital conservation buffer and a SIFI buffer and must be funded with CET1 capital.

The countercyclical buffer requirement is calculated as a weighted average of the national buffers in effect in the jurisdictions in which an institution has credit exposures. The Group's countercyclical buffer rate of 1.5% at the end of 2022 was based primarily on the countercyclical buffer rates in Denmark and Norway (both set at 2.0%) and in Sweden (set at 1.0%).

The capital conservation buffer is 2.5% and is applicable to all financial institutions.

Because the Group is designated as a systemically important financial institution (SIFI) in Denmark, the Group must meet a SIFI buffer requirement of 3%.

Breaching the combined buffer requirement will restrict the Group's capital distribution, including the payment of dividends, payments on additional tier 1 capital instruments, and variable remuneration.

As laid down in the CRR, any dividends on CET1 and additional tier 1 capital instruments must be paid from distributable items. These are primarily retained earnings. At the end of 2022, Danske Banks A/S's distributable items amounted to DKK 126.2 billion.

Distributable items (Danske Bank A/S)

At 31 December (DKK billions)	2022	2021
Retained earnings	128.8	131.9
Proposed dividends	0.0	1.7
Interest on AT1 capital instruments, not distributed	0.0	0.1
Foreign currency translation reserve	-2.6	-0.6
Distributable items	**126.2**	**133.1**

6.4.4 Leverage ratio

The CRR stipulates that financial institutions maintain a minimum leverage ratio of 3%. In addition, the CRR/CRD rules require a credit institution to calculate, monitor and report on its leverage ratio (defined as tier 1 capital as a percentage of total leverage exposure). The leverage ratio represents a non-risk-adjusted capital requirement that is implemented as a further backstop measure for risk-based capital.

The Group takes the leverage ratio into consideration in its capital management process. The Group's overall monitoring of leverage risk is performed in the ICAAP, which also includes an assessment of changes in the leverage ratio under stressed scenarios. On a monthly basis, the Group determines and monitors its leverage ratio. To ensure sound monitoring, the Group has set forth policies for the management and control of each component that contributes to leverage risk.

At the end of 2022, the Group's leverage ratio was 5.0% under the transitional rules and 4.9% under the fully phased-in rules.

Leverage ratio

At 31 December (DKK billions)	2022	2021
Total exposure for leverage ratio calculation	3,284.8	3,532.3
– portion from derivatives	105.6	132.9
– portion from securities financing transactions	260.3	264.5
– portion from exposure to central banks, institutions and cash in hand	198.5	326.8
Reported tier 1 capital (transitional rules)	164.5	171.9
Tier 1 capital (fully phased-in rules)	161.4	169.3
Leverage ratio (transitional rules)	5.0%	4.9%
Leverage ratio (fully phased-in rules)	4.9%	4.8%

Under the transitional rules, the leverage ratio increased by 0.1 percentage points during 2022, due mainly to a decrease in exposures to central banks and credit institutions, which was partly counterbalanced by a decrease in tier 1 capital.

6.4.5 Minimum requirement for own funds and eligible liabilities

As a consequence of the Bank Recovery and Resolution Directive (BRRD), credit and financial institutions in the EU are required to hold a certain amount of bail-in-able resources to fulfil the minimum requirement for own funds and eligible liabilities (MREL). The purpose of the MREL is to ensure that institutions can absorb potential losses and be recapitalised with no recourse to public funds.

The national resolution authorities are required to set an MREL for each institution on the basis of its institution-specific resolution plan. Danske Bank's resolution plan is based on a single-point-of-entry (SPE) approach at the group level. The requirement for the Group is calibrated in accordance with the Danish FSA's resolution strategy. This strategy states that a systemically important financial institution (SIFI) is to be recapitalised in order for the entire institution to be able to continue its activities post resolution.

For Danish SIFIs, the MREL is set at two times the solvency need plus one time the SIFI buffer and one time the capital conservation buffer. Furthermore, the combined buffer requirement (CBR) must now be met in addition to the MREL. The MREL is set on an annual basis by the Danish FSA. The Group's MREL is set at 26.7% of the total REA adjusted for Realkredit Danmark. With the addition of the combined buffer requirement of 7.0%, this corresponded to a de facto MREL of 33.7% of the total REA at the end of 2022, and the MREL ratio was 36.2%, or a surplus of DKK 18.6 billion. The MREL is to be met with eligible instruments as defined in the CRR, which includes equity, subordinated debt, non-preferred senior debt, and preferred senior debt.

In addition, part of the MREL must be met with own funds and liabilities capable of bearing losses before unsecured claims. This is known as the subordination requirement and can be met with subordinated debt, which includes non-preferred senior debt but excludes preferred senior debt. The subordination requirement for Danish SIFIs is calibrated as the higher of 8% of total liabilities and own funds (TLOF) and two times the solvency need plus one time the combined buffer requirement, where the latter is currently binding. For the Group, the subordination requirement is set at 28.2% of the total REA. At the end of 2022, the MREL subordination ratio was 32.2%, equal to a surplus of DKK 28.9 billion.

Since mortgage credit institutions are exempt from the MREL, Realkredit Danmark figures are excluded from the consolidation for the purpose of determining the requirement. The exclusion of Realkredit Danmark figures from this consolidation is shown in the table below. Furthermore, the capital and debt buffer requirements applicable to Realkredit Danmark are deducted from the own funds and liabilities used for the fulfilment of the MREL.

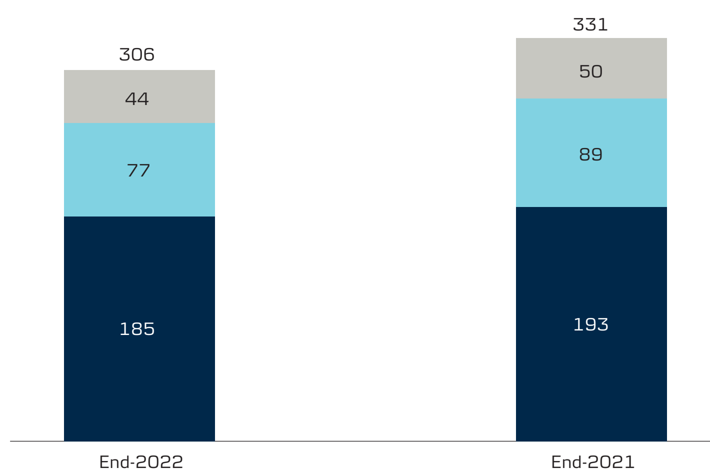
Total REA (Group excluding Realkredit Danmark)

At 31 December (DKK billions)	2022	2021
Danske Bank Group REA	838	860
Deduction for RD REA contribution to Group REA	159	184
REA adjustment for Danske Bank A/S exposure to RD		
Add-on for guarantees	23	28
Add-on for bonds, repos and derivatives	15	5
Add-on for RD equity (100% risk weight)	49	49
Deduction of RD capital and debt buffer requirements	-43	-45
NPS, risk-weighted (150% risk weight)	3	3
Group REA adjusted for RD	726	716
MREL liabilities - Danske Bank A/S	306	331
Deduction for RD capital requirements	-29	-29
Deduction for RD debt buffer requirement	-14	-16
Available MREL liabilities in DKK	263	287
Available MREL liabilities as % of REA adjusted for RD	36.2%	40.0%

The following table shows the composition of the Group's eligible liabilities that may be used for meeting the MREL.

Composition of own funds and eligible liabilities (Group)

(DKK billions) Own funds Non-preferred senior debt >1 year Preferred senior debt >1 year



Life insurance risk

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7.1 Life insurance risk management

The Danske Bank Group's life insurance risk consists of risks originating from its ownership of Danica Pension. This includes pension-related market risk and insurance risk. In addition, the operations of Danica Pension are exposed to non-financial risk and ESG risk. The Group runs its life insurance operations with the aim of providing best-in-class services to customers, while at the same time maintaining a predictable risk profile.

Danske Bank's financial results are affected by Danica Pension's financial position. Earnings from Danica Pension consist mainly of the risk allowance from with-profits policies, earnings from unit-linked products and from health and accident products, and the investment return on Danica Pension's equity capital.

Furthermore, Danica Pension has a financial impact on the Group's capital through a capital deduction from its CET1 capital. The deduction is driven mainly by Danica Pension's solvency capital requirement, which again is driven primarily by pension-related market risk, insurance risk and the size of the buffers for with-profits products.

The life insurance risk framework is governed by Danica Pension's Board of Directors. On a daily basis, Danica Pension's risk management function monitors both the risk and the asset-liability management (ALM) limits set by its Board of Directors, including limits set for the solvency capital requirement, the solvency coverage ratio, and the own funds loss exposure in a risk scenario defined by Danica Pension's Board of Directors. The risk management function also follows up on investment limits and calculates key risk figures for ALM purposes.

Danica Pension's CRO reports to Danica Pension's CFO and to the Group's Large Corporates & Institutions CRO at Group Risk Management. Group Risk Management thus has oversight of Danica Pension's life insurance risk.

7.1.1 Life insurance risk categories

Operating under Solvency II regulations, Danica Pension provides pensions as well as life and health insurance products in Denmark. As part of its product offerings, Danica Pension provides guaranteed life annuities; insurance against death, disability and accident; and guaranteed benefits on retirement. This exposes Danica Pension to insurance risks (such as longevity and disability risks) and to pension-related market risk.

Pension-related market risk

Pension-related market risk involves the risk of losses because of changes in the fair value of Danica Pension's assets and liabilities since assets and liabilities are not fully exposed to the same types of pension-related market risk. Pension-related market risk primarily covers changing market conditions, such as changes in interest rates, equity prices, property values, exchange rates and credit spreads. Pension-related market risk also includes

- volatility risk, which relates primarily to the value of assets with embedded options, including equity options and swaptions
- inflation risk, which relates mainly to the indexation of benefits for part of Danica Pension's health and accident products
- liquidity risk, which is the risk of losses because Danica Pension may be forced to sell investment assets to meet liquidity needs
- counterparty credit risk, which is the risk of losses because counterparties default on their obligations
- concentration risk, which is the risk of losses as a result of high exposure to a few asset classes, industries, issuers, etc.

Pension-related market risk may lead to financial losses for Danica Pension and thus reduce the total value of Danica Pension's investment assets and technical provisions, thereby reducing future fee earnings.

Danica Pension has three sources of pension-related market risk:

- with-profits products (conventional, average-rate products)
- unit-linked products (to which customers may have attached an investment guarantee)
- investments relating to assets allocated to the shareholders' equity of Danica Pension and other products with direct equity exposure

The amount of pension-related market risk differs for the various products in Danica Pension's product range.

Danica Pension's most significant pension-related market risk is the market risk relating to its **with-profits products**.

The with-profits products offer guaranteed benefits based on a technical rate of interest and are called *Danica Traditionel*. The portfolio of with-profits products is closed for new business, which means that it is in run-off.

The products offer the policyholders an annuity or a lump sum consisting of a guaranteed minimum amount in nominal terms. Customers are divided into homogeneous interest rate groups on the basis of the technical rates, and each group has its own investment strategy and asset allocation. In each interest rate group, customers participate in a collective investment pool that covers a range of different assets (such as equities, property and bonds).

The policyholders earn interest at a rate set at the discretion of Danica Pension and subject to change at any time.

The difference between the actual (set) interest rate and the return on the policyholders' (collective) assets is allocated to collective buffer accounts owned by the customers. The balances of these buffer accounts are gradually transferred to the individual customer accounts in subsequent years by means of a bonus allocation mechanism. This means that high investment returns may lead to higher benefits than those guaranteed.

The mark-to-market value of the guaranteed benefits depends on the level of the discount curve, which is defined under Solvency II and based primarily on EUR swap rates and also takes into account yields on Danish mortgage, credit and government bonds. The level of the long end of the discount curve, for which no reliable market data is available, is determined by the European Insurance and Occupational Pensions Authority (EIOPA).

For the portfolio of with-profits products, Danica Pension will have to cover the shortfall if the value of the assets falls below the value of the liabilities. This will be the case if, for example, investment returns become sufficiently negative (reducing the asset values) or if the level of the discount curve, other things being equal, falls (increasing the value of the liabilities). Hence, the market risk on investments is borne by the customers to the extent that the negative returns can be covered by the collective buffer accounts. Once the buffer accounts have been depleted, negative investment returns on customer savings will force Danica Pension to step in with funds to ensure that it is possible to provide the benefits guaranteed to the policyholders. In that case, Danske Bank A/S will incur a loss in the form of a decrease in equity holdings in Danica Pension.

Furthermore, Danica Pension can book the annual risk allowance fee income for each of the individual interest rate groups only if the collective bonus potential for the interest rate group is sufficient to cover the risk allowance.

Managing the with-profits products thus involves a combination of managing risks on behalf of the policyholders and managing Danica Pension's risk of having to cover losses. For more information about the management of these risks, see Danica Pension's Annual Report 2022.

The pension-related market risk associated with **unit-linked products** is primarily borne by the policyholders, particularly in respect of contracts without an investment guarantee.

In unit-linked products, the policyholders receive the actual return on the investments rather than a fixed interest rate return. However, some of the unit-linked products give the policyholders the option to have their benefits guaranteed.

Danica Pension's main savings product – and the product recommended to most customers – is called *Danica Balance*. *Danica Balance* is a life-cycle product, meaning that the asset allocation between different risk categories (bonds or equities, for example) for each customer is adjusted gradually as the customer gets older and approaches retirement.

For unit-linked products with financial guarantees, Danica Pension hedges the risk on the financial guarantees by means of financial derivatives and by adjusting the investment allocation during the period leading up to retirement. The investment allocation is adjusted according to the guarantee amount, the investment horizon etc. However, if a guarantee is attached to the individual policy, Danica Pension bears the risk in relation to the guarantee.

The pension-related market risk associated with **assets allocated to shareholders' equity and other products** concerns the following:

- Assets in which the shareholders' equity of Danica Pension is invested, i.e. investment returns have a full effect on Danica Pension's profits.
- The investment results for Danica Pension's health and accident products and some life insurance products with investment guarantees. This means that Danica Pension bears the risk if the changes in the value of provisions for these products differ from the changes in the value of the corresponding assets. The provisions are the net present value of expected future pay-outs and are exposed to movements in the discount curve, which is defined under Solvency II. The corresponding assets may be exposed to changes in interest rates and also to changes in the values of equities and property.

Danica Pension has separate investment strategies for assets allocated to shareholder's equity, health and accident products, and life insurance products with investment guarantees.

Insurance risk
Insurance risks are linked to trends in policy surrender activity, mortality, disability, critical illness and other variables that could materialise unfavourably from Danica Pension's current assumptions and expectations. For example, an increase in longevity lengthens the period during which benefits are payable under certain pension plans and may potentially have a negative effect on Danica Pension's profits. Similarly, trends in mortality, sickness and recovery affect life insurance and disability benefits. The principal insurance risks are longevity risk and the risk of increased surrenders (i.e. the risk of customers leaving Danica Pension or ceasing to pay premiums). Most insurance risks materialise over long-time horizons, during which the gradual changes in biometric conditions deviate from those assumed in contract pricing.

Insurance risk may also materialise through changes in the actuarial assumptions used for liability valuation. Unfavourable changes in assumptions resulting in an increase in liabilities will, to the extent possible, be covered by the customer buffers. Once the buffer accounts have been depleted, Danica Pension will have to step in with funds to ensure that it is possible to provide the benefits guaranteed to the policyholders. In that case, Danske Bank A/S will incur a loss in the form of a decrease in equity holdings in Danica Pension.

Concentration risk relating to life insurance risk is the risk of losses as a result of high exposure to a few customer groups and to a few individuals. Danica Pension limits concentration risk by means of risk diversification of the insurance portfolio and by means of reinsurance.

To limit losses on individual life insurance policies subject to high-risk exposure, Danica Pension reinsures a small portion of the risk related to mortality and disability.

The various risk elements are subject to ongoing actuarial assessment for the purposes of calculating insurance obligations and making relevant business adjustments.

7.1.2 Risk governance and responsibilities
The general strategic goals and the risk management framework for Danica Pension are decided by its Board of Directors. The risk appetite set by Danica Pension's Board of Directors defines the material risks to which Danica Pension is exposed and sets limits on aggregate measures of these risks. The Board of Directors has two committees: the Risk Committee and the Audit Committee. The general objective of the Risk Committee is to advise the Board of Directors on Danica Pension's risks and internal control system and to oversee the adequacy and effectiveness of Danica Pension's risk structure. The Audit Committee prepares the work of the Board of Directors in respect of financial reporting and auditing matters.

Danica Pension's solvency capital requirement is calculated in accordance with the Solvency II Directive standard model. However, a partial internal model is applied to the calculation of longevity risk. Approved by the Danish Financial Supervisory Authority (the Danish FSA), the partial internal model is based on the Danish FSA's life expectancy benchmark and longevity observations for Danica Pension's policyholders.

Danica Pension's daily risk management activities are governed by the risk management policy issued by Danica Pension's Board of Directors.

Accordingly, Danica Pension's risk management practices are organised in line with the principles of the three-lines-of-defence model:

- The first line of defence consists of all Danica Pension employees who are not organised within the second or third line of defence. The first line of defence owns and manages the business activities and related risks.
- The second line of defence oversees risk exposure and risk management in the first line of defence and consists of Danica Pension's risk management function, compliance function and actuarial function.
- The third line of defence consists of Danica Pension's internal audit function and internal audit employees.

Danica Pension's risk management activities are anchored in Danica Pension's All Risk Committee, which is chaired by Danica Pension's chief risk officer (CRO), who is also responsible for the risk management function. The All Risk Committee is responsible for maintaining the complete risk picture across all risk types and undertakings.

The All Risk Committee is supplemented by the Asset & Liability Management (ALM) Committee. The ALM Committee coordinates the management of risks arising from differences in exposures between assets and liabilities and also ensures that limits set by the Board of Directors are not breached. The ALM Committee is chaired by Danica Pension's CRO.

Danica Pension has three other committees focusing on the management of Danica Pension's risks: the Investment Committee, the Valuation Committee and the Product Committee.

As a part of its risk governance, Danica Pension's Board of Directors approves a capital plan and a capital contingency plan every year. Danica Pension may issue capital in the form of restricted tier 1 or tier 2 capital instruments in order to

improve or optimise its capital structure. Danske Bank A/S has no obligation to provide capital to Danica Pension to help re-establish its solvency position in adverse events.

7.1.3 Monitoring and reporting

Danica Pension's Board of Directors has set overall risk limits on the potential loss in a number of stress scenarios. The risk management function monitors these limits on a daily basis. Any breaches are reported by the CRO to the ALM Committee and senior management.

Danica Pension's Board of Directors receives quarterly reports on Danica Pension's risk and solvency position, including stress and sensitivity figures. Stress and sensitivity figures are also reported to Danske Bank A/S via Group Risk Management and CFO Area (Capital Management).

7.2 *Life insurance risk profile*

The with-profits products and the guarantees that are part of these products, expose Danica Pension's equity to a higher loss risk than the unit-link products. In recent years, Danica Pension's new sales have primarily been sales of unit-linked products, and the portfolio of with-profits products (average rate products) has been in run-off since the first half of 2020. At 31 December 2022, the life insurance provisions for unit-linked products accounted for about 61% of total provisions for insurance and investment contracts, up from 58% at year-end 2021, 53% at year-end 2020, and 50% at year-end 2019, i.e. the shift towards the more capital-light unit-linked products continued in 2022.

Provisions for insurance and investment contracts

At 31 December (DKK billions)	2022	2021	2020	2019
Life insurance provisions, with-profits products	141	172	184	186
Life insurance provisions, unit-linked products	251	272	232	212
Other provisions	21	26	25	23
Provisions for insurance and investment contracts	**414**	**470**	**440**	**421**

In January 2020, the Danish FSA ordered almost all life insurance and pension providers in Denmark – including Danica Pension – by 31 December 2022 to calculate their technical provisions for solvency purposes on the basis of expected cash flows from premiums and benefits calculated under a number of different return scenarios.

In response to the order, Danica Pension decided to develop a projection model for the calculation of provisions for solvency purposes. As planned, this work was completed at the end of 2022 and resulted in a solvency coverage ratio of 187% and an excess capital base of DKK 14.7 billion at 31 December 2022. By comparison, the solvency coverage ratio was 210% and the excess capital base was DKK 14.4 billion at 31 December 2021.

The table below shows the changes in different risk factors that result in a solvency coverage ratio of 125%. However, for the interest rate risk sensitivity, the table shows the lowest possible solvency coverage ratio in the event of an interest rate change ranging from -2 percentage points to +2 percentage points.

Sensitivities – solvency coverage ratio

At 31 December 2022 (DKK millions)	Stress (%)	Own funds	Solvency capital requirement	Solvency coverage ratio (%)
Interest rate risk	-2	28,205	19,057	148
Equity risk	95	19,389	15,511	125
Property risk	82	21,846	17,477	125
Credit spread risk				
Danish government bonds	22	22,627	18,102	125
Other government bonds	66	23,481	18,785	125
Other bonds	64	21,958	17,567	125
Longevity risk	61	30,044	24,035	125

Non-financial risk

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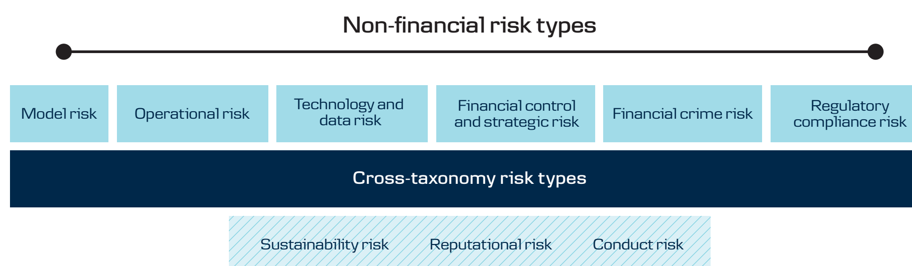
8.1 *Introduction to non-financial risk*

Non-financial risk is defined as the risk of financial losses or gains, regulatory impact, reputational impact or customer impact resulting from inadequate or failed internal processes or from people, systems or external events, including legal and compliance risks.

The purpose of this section is to describe the Group's approach to non-financial risk management. Subsection 8.1.1 describes the Group's overall approach to managing non-financial risk, while subsection 8.2 elaborates on the Group's management of specific non-financial risk types.

8.1.1 Non-financial risk management

In accordance with the Group's risk taxonomy as set out in its ERM framework (see section 2.2, Risk taxonomy), non-financial risk consists of six risk types:



Three additional risk types – sustainability risk, reputational risk and conduct risk – are embedded across the taxonomy along with the six non-financial risk types. These are risks that either materialise in association with or compound the risk impact of the non-financial risks and must consequently be managed as an integral part of these six risk types.

The Group's approach to non-financial risk management is set out in a number of governance documents. The Group Non-Financial Risk Policy is the overarching policy and lays down the principles and responsibilities for managing non-financial risk across the three lines of defence. Supplementary policies are in place and reviewed annually to ensure alignment with regulatory developments. Implementation of the non-financial risk management framework is linked to the process of maintaining a strong risk and compliance culture across the Group.

During 2022, the Group continued its efforts to strengthen the non-financial risk management framework and to increase awareness of non-financial risk across the Group. Activities included maturing non-financial risk tolerances and working with change risk management in respect of major strategic initiatives as well as critical and important outsourcing agreements. The Risk and Control Self-Assessment Module of the new Governance Risk and Compliance (GRC) management tool also went live in 2022.

The Group conducts scenario analyses to understand exposure to low-frequency high-severity events. Results from risk assessments and stress tests are used as input for the Group's Internal Capital Adequacy Assessment Process.

The Group takes mitigating actions and learns from materialised non-financial risk events in order to reduce the likelihood and impact of such risk events in future and to avoid breaches of the risk tolerance threshold.

The non-financial risk tolerance threshold is set for net losses after recoveries for events that occur in the current calendar year. Compliance with this tolerance threshold is monitored and reported in accordance with internal procedures. The net loss for 2022 did not breach the threshold. Following a phased approach, additional tolerances were introduced and approved by the Board of Directors in April 2022, primarily covering compliance and financial crime risk types.

In 2022, the Group strengthened many of its policies as part of the annual review process. The Product Governance Policy for New & Amended Product Approval (NAPA) was updated along with the accompanying instructions and template, and the underlying process underwent significant transformation and simplification. The Risk and Control Self-Assessment Instructions were reviewed to strengthen risk identification and management, thereby further aligning existing methodologies with changing industry good practice.

The implementation of the GRC platform progressed with releases of additional applications and an underlying platform upgrade. The Group is implementing the new platform in order to strengthen its risk management and regulatory compliance controls through effective data analytics. The GRC platform helps the Group identify immediate actions to ensure regulatory compliance on the basis of increased quality information and process optimisation. Using a shared data model, the new platform will consist of seven applications that span all three lines of defence. Two new applications were successfully launched in 2022, with the last three to go live in 2023.

8.1.2 Risk governance and responsibilities

Business units and functions across the Group, including dedicated business risk and control units, are responsible for the management of the Group's non-financial risks and act as the first line of defence. They are in charge of managing non-financial risks in accordance with the Group's risk tolerance threshold (where set). The Group's second line of defence consists of Group Risk Management and Group Compliance, and these functions oversee all non-financial risks.

The Group ensures compliance with the Non-Financial Risk Policy and related governance documents through continuous oversight and monitoring by a number of sub-committees and councils, including the Non-Financial Risk Committee (NFRC), the Compliance Risk Committee and the Model Risk Management Committee.

As part of the process of simplifying the Group's committee structure, a new governance structure for product approval has been implemented as an element of the NAPA Policy with the introduction of product decision desks.

8.1.3 Risk assessment and risk event management

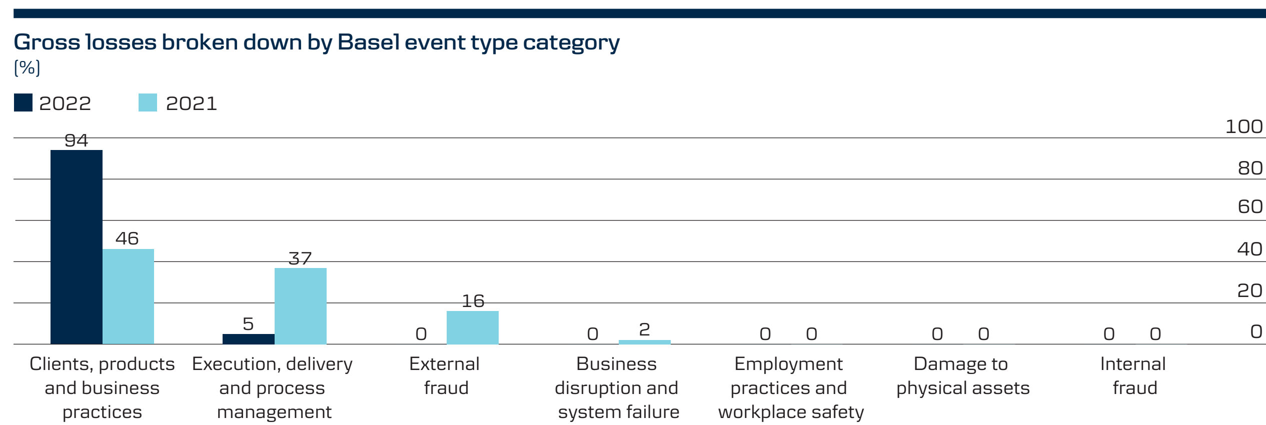
It is a prerequisite for non-financial risk management that the Group understands and maintains an overview of its organisation and takes ownership of its activities.

The Group's standard approach to risk assessment of its non-financial risks and controls is in line with industry standards and comprises the following steps: non-financial risk and control identification, inherent risk assessment, assessment of controls, residual risk assessment, and definition of mitigating actions. This is encapsulated in both the Non-Financial Risk Policy and the supporting Risk and Control Self-Assessment Instructions.

Risk event management aims to ensure timely and appropriate handling of detected events in order to minimise the potential impact on the Group and its stakeholders and to prevent reoccurrence. Furthermore, risk event management ensures timely, accurate and complete information for both internal and external reporting, including timely notification to relevant supervisory authorities. Non-financial risk events are registered, categorised and handled in line with reporting thresholds, and risk assessment and root cause analysis are performed to effectively address underlying risks and provide mitigation plans. The Group strives to learn from materialised events and observed near misses to improve its operational risk management framework on an ongoing basis. Event awareness and coverage continue to strengthen across the Group as registration, approval and escalation take place in an increasingly timely manner.

In 2022, the Group maintained its focus on risk management, risk awareness and risk culture initiatives, proceeded with prompt event reporting and follow-up on legacy issues, and continued its efforts to address significant events and remediation issues, with the debt collection case remaining the most critical one. An accelerated solution was developed to provide closure for the vast majority of debt collection customers, with the debts of a large number of customers to be set to zero. Only a few remediation issues are now outstanding since customers have been compensated and new solutions are in place. The Group maintains the aim of ensuring that all issues are handled in a consistent, timely and proactive manner and that lessons learned are applied across all issues. The central remediation unit is supplemented by operational units to ensure customer-oriented remediation and follow-up.

The following chart provides an overview of the Group's materialised losses broken down into seven Basel II event type categories.



Note: The chart shows gross losses (actual losses sustained by the Group excluding any recovery) for non-financial risks broken down by Basel II event type category, as reported for COREP reporting.

In 2022, the majority of the loss events fell into two broad categories: *Clients, products and business practices* and *Execution, delivery and process management*. There were losses relating to legacy systems and limitations in manual processes as well as product and services-related events.

In 2022, Danske Bank reached resolutions with the US Department of Justice (DoJ), the US Securities and Exchange Commission (SEC) and the Danish Special Crime Unit (SCU) on the Estonia matter. The total settlement of DKK 15.3 billion covered by provisions made in 2018 and in 2022 accounted for a marked increase in losses reported under *Clients, products and business practices*.

8.1.4 Monitoring and reporting

The Group monitors trends in risk performance data to identify changes in non-financial risk management that may require further analysis and mitigation and/or support risk profile conclusions and managerial decisions.

The Group standards require group-level aggregation and monitoring of its non-financial risk profile against the risk tolerance threshold. Non-financial risk monitoring comprises two core components: financial losses stemming from non-financial risk events and non-financial risk exposure derived from continuous risk assessments.

Reports on the Group's non-financial risk profile, including risks, events and risk tolerances, are submitted on a monthly basis to the Executive Leadership Team and on a quarterly basis to the Board of Directors.

Semi-annually, the Group's non-financial risk loss events are reported to the Danish Financial Supervisory Authority (the Danish FSA) on the basis of the EBA standards for common reporting (COREP). Operational risk is assessed annually within the scope of the Group's Internal Capital Adequacy Assessment Process (ICAAP).

8.2 Non-financial risk types

In addition to the Group's general approach to non-financial risk management, each non-financial risk type, as defined by the Group's risk taxonomy set out in its ERM framework, is managed in accordance with specific regulatory requirements and business objectives.

8.2.1 Operational risk management

Operational risk is inherent in the Group's day-to-day operations. Such risk may occur in relation to the Group's products and services, reporting procedures, employment practices, workplace safety, damage to physical assets, outsourcing agreements, third parties dealing with the Group, mismanagement of legal disputes or contractual rights and obligations, or as the result of business continuity events (such as natural disasters, pandemics or power outages).

Operational risk is managed in line with the principles of the three-lines-of-defence model and in accordance with the Group Non-Financial Risk Policy, which is supported by related policies and instructions.

Danske Bank's approach to ongoing identification and management of operational risks

Risk event management

Risk event awareness and coverage continue to improve across the Group as registration, approval and escalation take place in a timely manner. All employees are instructed and required to register risk events in the Group's risk event registration system. This information is analysed to identify root causes, estimate the exposure and perform the remediation actions needed. Where the level of impact exceeds agreed thresholds, risk events are escalated to the relevant internal and external bodies.

Conduct

Conduct risk is the risk that the Group's behaviour in providing financial services causes customer detriment and/or damages the integrity of financial markets. Conduct risk occurs as a cross-cutting risk across the enterprise risk management (ERM) taxonomy and may arise as any or all other risk types materialise. The supporting risk management framework is developed and implemented through the Conduct Programme. This programme was established in 2020 as a key strategic initiative under the Group's Better Bank transformation programme.

Risk and control self-assessment instructions

The Group's approach to risk assessment provides a common methodology for all business units and subsidiaries to apply in a broad range of contexts and potentially identify opportunities to improve existing processes. For example, risk and control self-assessments are completed to assess the risks associated with products, processes, organisational changes and outsourcing arrangements, and the assessments can be scheduled or based on triggers.

Outsourcing

Outsourcing risk management addresses the risks associated with processes, services or activities outsourced to third parties by the Group or Group entities. The purpose is to identify, manage and mitigate non-financial risks stemming from outsourcing arrangements. Centralised teams are in place in both the first and second lines of defence to ensure uniform application of the outsourcing process and appropriate governance both prior to decision-making on outsourcing and during the outsourcing engagement lifecycle.

New and amended product approval (NAPA)

The NAPA process ensures that the products and services offered by the Group are in the best interests of the customers and comply with relevant regulations. The NAPA Policy defines roles and responsibilities, including but not limited to those of the product owners, the manufacturing and distributing business units, and the approving body. The policy requires the product owners to consider all relevant risks in line with the Group's enterprise risk management framework.

For investment products manufactured and/or distributed for customers requesting financial instruments with a sustainability-related profile, the underlying instructions for the NAPA Policy require consideration of sustainability factors such as environmental, social and employee-related matters, respect for human rights, and anti-corruption and anti-bribery matters.

Financial crime

The Group continues to expand its business-as-usual risk management frameworks in anticipation of the transition from a remediation approach to a focus on measuring, reporting and mitigating risks in real time. The Group has established more detailed risk tolerance statements for elements of financial crime, and they are now being operationalised. The Group has also set up a formalised governance structure for overseeing its business-as-usual risk management in a more systematic way, making greater use of key risk indicators.

In 2022, the Danish FSA issued an order on Danske Bank A/S's operational risk management execution. Danske Bank subsequently provided the Danish FSA with a detailed plan that will ensure, in conjunction with other ongoing initiatives, that the Danish FSA's observations are adequately addressed by the end of 2024. The Danish FSA has concluded that Danske Bank has complied with the order regarding the plan and has agreed to follow up with quarterly updates on the implementation of the plan.

Operational resilience

Operational resilience is the Group's ability to continue to serve its customers and society and to protect its workforce in the face of operational stress resulting from disruptions. The Group's approach to operational resilience is based on effective operation of risk management frameworks combined with sufficient resources to manage and learn from disruptions and to adapt to changing conditions.

In 2022, the Group continued its efforts to strengthen operational resilience by further enhancing its policies and frameworks for alignment with regulatory and industry expectations and subsequent implementation. Implementation included planning for resilience in the event of effects from the Russian invasion of Ukraine materialising, including IT disruption and power outages.

Moreover, the Group has a recovery plan to recover its capital and/or liquidity position and long-term viability in a crisis situation. An indicator framework has been established to escalate signs of financial weaknesses and to identify potential threats in due time for the Group to act.

Third-party risk

Third-party risk management (TPRM) is the process of managing the risks associated with processes, services or activities provided to the Group by third parties. The purpose of TPRM is to identify, manage and mitigate non-financial risks when the Group engages with a third party. Third-party arrangements classified as *outsourcing* or *critical or important outsourcing* are subject to specific regulatory requirements listed in the EBA Guidelines on Outsourcing and the Danish Executive Order on Outsourcing. Outsourcing arrangements are to be managed in accordance with the Group's TPRM Policy.

8.2.2 Financial crime risk management

Financial crime risk is the risk that internal or external parties misuse the Group's infrastructure and services to steal, defraud, manipulate or circumvent established rules, laws and regulations through money laundering, terrorist financing, sanctions violations, bribery and corruption, tax evasion or fraud.

The Group's business units and their support functions constitute the first line of defence and are responsible for identifying financial crime risks and for having appropriate controls in place to ensure that these risks are identified, assessed, managed and reported appropriately.

The Financial Crime Compliance function (a Group Compliance unit) forms part of the second line of defence and is responsible for designing frameworks, setting policies and providing independent oversight and challenge to ensure that financial crime risks are managed effectively.

Financial crime strategy

The Group is undertaking a multi-year enhancement programme to materially upgrade its financial crime risk management framework. The pace of progress has been significant in the past few years in particular. The Group has embarked on a comprehensive transformation covering all aspects of an effective control environment. The programme covers controls to manage the elements of financial crime such as money laundering, terrorist financing, sanctions violations, fraud, tax evasion, and bribery and corruption, and controls to support processes such as data, reporting and employee training. In 2022, the Group continued to make progress in executing its enhancement programme, which is scheduled to be completed at the end of 2023.

The enhancement programme is tracked through specific workstreams according to clearly defined roles and responsibilities. In addition, a monthly meeting to track progress is held with senior stakeholders, including Executive Leadership Team members, to discuss and align progress and risks. Monthly status updates are provided to the Executive Leadership Team, the Conduct & Compliance Committee, the Board of Directors and the Danish FSA. The responsibility for tracking and reporting progress rests with Group Compliance to ensure independent and objective assessments to senior management.

The aim of the enhancement programme is to ensure that the Group operates a financial crime control framework that

- meets the regulatory requirements in the jurisdictions in which the Group operates
- manages the Group's inherent financial crime risk in line with the Group's risk appetite

The Group welcomes the Danish FSA's recent conclusions in its final report on the review of the Group's management of EU sanctions against Russia and Belarus and its framework for managing money laundering and terrorist financing. The Danish FSA's review did not give rise to any supervisory reactions.

In 2022, the Group continued to expand its business-as-usual risk management frameworks in anticipation of the transition from a remediation approach to a focus on measuring, reporting on and mitigating risks in real time. The Group established more detailed risk tolerance statements for elements of financial crime, and these are now being operationalised. The Group also set up a formalised governance structure for overseeing its business-as-usual risk management in a more systematic way, making greater use of key risk indicators.

Financial crime risk

In 2022, the Group continued to strengthen its oversight and management of financial crime risk in a number of areas:

- **Geographic risk:** Having significantly reduced its inherent risk by exiting certain high-risk jurisdictions in previous years, the Group continued this work in 2022.

- **Product risk:** The implementation in 2022 of the Enterprise Product Repository and a compulsory NAPA-embedded questionnaire allows the Group to more accurately assess financial crime risks related to products. This in turn helps evaluate the need for customised, product-specific controls in order to reduce the Group's residual risk in this area. The Group's highest-inherent-risk segments include business areas offering products such as trade finance, mobile payments, safe deposit boxes, bonds and swaps.

- **Management information and reporting:** The Group continued to enhance the level of risk management data in 2022 to provide management with a more comprehensive and holistic overview of risk and emerging trends. Quantitative and qualitative information is reported to senior management in a number of ways, including through the Group Compliance Quarterly Report, which is presented to the Executive Leadership Team, the Conduct & Compliance Committee and the Board of Directors.

- **Roles and responsibilities:** Combatting financial crime relies on a number of functions working together across the organisation (branch staff, technology units, dedicated risk managers, Group Compliance and Group Legal). As part of its broader implementation of the three-lines-of-defence model, the Group further defined and developed roles and responsibilities for managing each risk type within the organisation.

- **Training:** In 2022, all staff across the Group received online training in core financial crime risks and the Group's systems and controls. In addition, ongoing training to increase employee awareness and expertise is provided through various channels and external vendors.

- **Quality assurance and testing:** The control testing infrastructure of the Group Compliance unit transitioned fully from the financial crime change programme to a business-as-usual state, and the Group continued to perform quality assurance and testing in 2022 to assess whether financial crime risk management controls were designed and operating as intended. In addition, Group Compliance performed independent testing of certain high-risk areas, and the Group continued to retain a third-party professional services firm to provide independent assessments of the Group's remediation programme.

- **Independent experts:** The Danish FSA continued to monitor the implementation of the Group's Financial Crime Plan by extending the period of time for which the independent experts are appointed to oversee the ongoing work. These activities are expected to continue in 2023.

Technology and tools
The Group seeks to leverage on technological innovation as part of its financial crime transformation and control infrastructure. New technology solutions such as robotics are being deployed to increase the speed at which certain high-volume, repeatable and consistent controls are executed. The Group has implemented further analytical software solutions and enhanced its use of the solutions in place. This has enabled a more thorough investigation of potentially suspicious activity for the purpose of providing law enforcement agencies and management with high-quality suspicious activity reporting.

Industry collaboration
Combatting financial crime effectively requires strong industry collaboration in order to ensure the security and soundness of the entire financial system. In 2022, the Group was also an active participant in industry initiatives across the Nordic region. These initiatives aim to increase the effectiveness of the public and private sectors in reaching the common goal.

8.2.3 Regulatory compliance risk management
Regulatory compliance risk is defined as the risk that the Group receives regulatory, criminal or administrative sanctions, incurs material financial losses or suffers a loss of reputation as a result of its failure to comply with laws, rules and regulations applicable to the Group's activities in the areas of fair treatment of customers, market integrity, data protection and confidentiality, and breach of licensing, accreditation and/or individual registration requirements.

Group Compliance is responsible for designing frameworks, setting policies and providing independent oversight, challenge and advice to ensure that regulatory compliance risks are identified and managed effectively.

Regulatory compliance risks are reported to senior management in various ways, including through the Group Compliance Quarterly Report, which is presented to the Executive Leadership Team, the Conduct & Compliance Committee and the Board of Directors.

In order to enhance the governance and oversight of regulatory and conduct risk management, the Group set up the Regulatory Compliance & Conduct Council in 2022. The council is responsible for coordination and ongoing monitoring of the Group's regulatory and conduct risk profile.

In 2022, the Group continued to mature its regulatory compliance risk management framework with important enhancements made in the following areas:

- **Framework:** The Board of Directors approved risk tolerance statements for market integrity, treating customers fairly, and data protection risks. The development and calibration of the underlying indicators are currently underway. Implementation and enhanced reporting against tolerance thresholds will improve the Group's prioritisation of risk management decisions and mitigation responses.

- **Treating Customers Fairly Policy:** A new policy outlining common principles and standards for all products and services offered by the Group was introduced to support the objective of fair and compliant treatment of all customers.

- **Strengthening compliance expertise:** Group Compliance further developed its activity planning processes to focus on the most material risks facing the Group. Strengthening compliance expertise and culture across the Group's business units – through more proactive advice and challenge – is a key aspect of the plan.

- **Risk assessment:** The Group completed its first group-wide licensing, registration and accreditation risk assessment. The outcome of the risk assessment provided a robust basis for developing a structured oversight framework across the Group. The first group-wide instructions addressing licensing requirements were introduced in 2022. The implementation and embedding of these instructions will continue throughout 2023.

- **Branches and legal entities:** Group Compliance continued to strengthen the governance, reporting and oversight of regulated subsidiaries and branches through ongoing activities supported by a consistent service delivery model.

- **Trade and communications surveillance:** The Group continued to make significant improvements in its trade and communications surveillance framework, having implemented automated and manual trade and communications systems across all relevant regulated activities. Through these achievements, the Group has taken significant steps to ensure compliance with the last remaining order issued by the Danish FSA. The previous gaps in surveillance and the execution of a number of wash trades (as defined by the Danish FSA) caused the regulator to report Danske Bank to the Danish Special Crime Unit. The Group continued to cooperate with the authorities, while making improvements in relation to the issues identified.

- **Conflict management:** The Group set up a control room to improve the oversight of conflicts of interest risks. The Group has a policy and instructions that adequately describe its framework for effectively managing conflicts of interest risks. The Group continued to embed and improve its processes, IT systems and training with a focus on the following two key objectives:

  - the protection and governance of strictly confidential/inside information flows
  - the control and oversight of the processes to detect and manage conflicts of interest predominantly involving legal entities (customers and suppliers, for example)

- **Data protection and confidentiality:** In 2022, the Danish Data Protection Agency reported Danske Bank to the police for violations of the GDPR and recommended a fine of DKK 10 million. The case has now been handed over to the Danish State Prosecutor. The Group has a high focus on data protection regulatory compliance risks and is currently making significant enhancements to develop the risk management framework in this area.

- **Risk remediation:** Regulatory Compliance continued to focus on advising on and challenging the work performed on the Group's remediation cases, in particular in relation to debt collection, to ensure alignment with the Group's remediation principles that apply to cases in which customers suffer detriment.

8.2.4 Technology and data risk management

Technology and data risk is the risk of losses due to the breach of confidentiality, the failure of integrity of systems and data or the inappropriateness or unavailability of systems and data. This includes security risks resulting from inadequate or failed internal processes or external events, including cyber-related attacks or inadequate physical security.

Requirements for the management of technology and data risk are documented in the Group's Non-Financial Risk Policy, IT Risk Management Policy and Security Policy.

Business units are responsible for managing their own technology and data risks, while the Security, Resilience and Controls function provides support in identifying, assessing and tracking technology and data risks. The Security, Resilience and Controls function, which reports to the chief security officer (CSO), submits monthly security risk updates

to the chief risk officer (CRO). On a quarterly basis, Group Non-Financial Risk undertakes a review of IT risks to assess the completeness and accuracy of the Group's risk profile and the effectiveness of the risk management activities performed. An update on the technology risk profile is provided to the Non-Financial Risk Committee on a regular basis.

Various forums discuss and decide on technology risk matters. These forums include councils that are specific to technology-related teams and the Technology & Services Risk Committee. If required by Group policies, matters are escalated to the Group All Risk Committee. Oversight is provided through the Non-Financial Risk Committee (in the second line of defence).

Although individual business units are responsible for control management activities as part of their standard operations, there are known deficiencies in control activities and gaps in the technology and data risk profile. This is consistent with the IT inspection conducted by the Danish FSA in 2019. The inspection observed material gaps in the Group's IT risk framework and control activity, and they are being addressed through ongoing enhancements.

In addition, the Group has minimised customer impact across all critical services by managing system availability supported by the introduction of formal service continuity governance for critical IT services and the establishment of failover capabilities.

Cyber-related risk
The Board of Directors and the Executive Leadership Team acknowledge the materiality of the risk posed by cyber-related attacks and continue to invest in the Group's capabilities to prevent, detect, respond to and recover from cyber-related attacks.

The management of cyber-related risk is covered within the Group's overall risk management framework since such risk may prevent the Group from achieving its objectives. Governance structures and methods to oversee, prioritise and undertake risk mitigation activities related to cyber-attacks are in place to ensure that the focus remains on the area.

8.2.5 Model risk management

Models form a key part of the Group's core business processes and play a critical role in the day-to-day delivery of services to customers and in the processes that the Group uses to manage its risks. Models are also essential to the Group's ambition of improving customer experience and driving efficiency and agility. The use of models generates model risk, which is the potential risk of adverse consequences resulting from decisions based on incorrect or misused model output and reports.

The Group manages model risk in accordance with its Model Risk Policy. The Model Risk Policy sets out standards and principles for the identification, management and governance of model risk.

Model risk tolerance
In order to ensure that the amount of model risk acceptable to the Group continues to be aligned with its overall strategic objectives, the Group has defined and implemented a model risk tolerance statement. It supports clear communication of the requirements for mitigating excessive model risk and is included in the group-wide non-financial risk tolerance framework.

Roles and responsibilities
Each model identified is assigned a risk tier based on its size and significance as well as a model owner. The model owner has the primary responsibility for managing model risk. This includes identification of new models in the individual area, implementation of new models, adherence to the model risk tolerance statement, maintenance of data quality, development of model risk instructions, validation of new models and significant changes, implementation of model performance controls, risk tier updates where relevant and reaffirmation that models are suitable for ongoing use on a periodic basis.

The Model Risk Management (MRM) function is responsible for developing and maintaining the Model Risk Policy and for model risk oversight, which includes independent model validation. The MRM function acts as the second line of defence within Group Risk Management and thus has a separate reporting line from model owners and the teams that develop and run models.

Model validation
A key component of MRM oversight is the independent validation of models. The MRM function performs model validation for in-scope models and owns the validation process and methodology. The validation framework consists of a set of quantitative and qualitative processes and activities intended to verify that the models perform as expected.

New models in the validation scope are subject to initial validation before deployment into production, whereas in-scope models in the production environment are validated periodically, independently of the business units and of the team that develops the models. Significant model changes are validated before they go into production.

The scope of annual independent validation covers all capital models in the IRB, market risk and credit counterparty risk areas as well as liquidity risk models, as required by regulation. In other areas that are not subject to explicit regulation, models with a 'high' risk tier are also validated annually.

Model risk inventory and reporting
When models have been identified, their risks are assessed and the models are then registered in a model inventory repository that features key characteristics of the models. Using this repository, the MRM function performs model risk monitoring, including checking adherence to model risk tolerances. Along with the overall status of the Group's model risk and the results of model validation, this information is reported on a periodic basis to the Model Risk Management Committee and through the CRO letter to the Group All Risk Committee, the Board of Directors' Risk Committee and the Board of Directors.

8.2.6 Financial control and strategic risk management

Financial control risk is the risk of inaccurate or incomplete application of accounting and tax laws. Strategic risk is the risk of an opportunity loss of earnings resulting from the failure to account adequately for the impact of external factors on the Group's corporate strategy or the risk of a loss of market position due to the failure of the Group's corporate strategy (wrong prioritisation or strategic choice, for example).

The consolidated financial statements are prepared in accordance with the International Financial Reporting Standards (IFRSs) as adopted by the EU, while the parent company's financial statements are prepared in accordance with the Danish Financial Business Act. Interim and annual reports are prepared in accordance with Danish disclosure requirements for listed financial institutions. The risk of non-compliance with these standards is assessed on a quarterly basis in advance of the preparation of interim and annual reports.

The Group's risk appetite is embedded in its strategic and financial planning processes to ensure that the strategic decision-making process is based on a strong risk culture. Strategic risks are monitored by the owner of each strategic initiative and by business unit heads. Strategic risks are reviewed on a quarterly basis by the Executive Leadership Team and at least twice a year by the Board of Directors. Significant deviations from the goals set for strategy execution are escalated to the Executive Leadership Team or the Board of Directors.

As the first line of defence, the Group Strategic Steering unit is responsible for the development of the Group's corporate strategy in co-operation with business units and other Group functions. As such, it has the responsibility for identifying and managing the risks associated with this process. The Group's corporate strategy is formulated on the basis of both internal and external factors that shed light on the capabilities, challenges and opportunities that are relevant for the Group. Internal factors relate to past performance, available capacity and capabilities within the organisation. This is supported by analyses of external factors such as peer performance and developments, changing consumer demands, technological trends, environmental and social developments, market developments, and macroeconomic and political environments.

Strategy execution results in actions plans, and action plans often introduce new processes and/or new products. With the introduction of new processes and new products, new risks are identified.

In 2022, the Group continued to make progress on its 2023 Better Bank ambitions towards customers, employees, shareholders and society. Risks related to the Better Bank transformation are identified, assessed and managed on an ongoing basis in accordance with the Group's standards. The performed risk assessment activities ensure that changes are embedded into the risk management process and that potential mitigating actions are identified and implemented. Risk assessments related to Better Bank initiatives were independently reviewed and challenged by Group Non-Financial Risk (Group Risk Management) in 2022. Ongoing risk assessment in this regard will continue, with key risk themes being evaluated on an ongoing basis. Business units and Group functions are in charge of implementing and executing on the strategy and taking corrective action in respect of deviations and risks relating to strategy operationalisation. The implementation approach is tested against the Group's risk appetite to ensure alignment.

Conduct risk

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9.1 Conduct risk management

Conduct risk is defined as the risk that the Group's behaviour in providing financial services causes customer detriment and/or damages the integrity of financial markets. Conduct risk is a cross-taxonomy risk type since it may arise when other enterprise risk management (ERM) taxonomy risks materialise.

In 2022, the Group further matured its conduct risk management framework, and significant improvements were made in the following key areas:

- **Framework:** The Group's Conduct Programme, which forms part of the Better Bank transformation programme, developed and implemented a strong supporting risk management framework. The programme remains on track to deliver scheduled enhancements in 2023.

- **Conduct Risk Policy:** The Board of Directors approved the annual review of the Conduct Risk Policy, which is supported by a new set of Conduct Risk Instructions providing additional guidance on the principles outlined in the Conduct Risk Policy.

- **Tone from the top:** Enhanced training was provided in relation to the Code of Conduct and conduct risk and is supported by additional tone-from-the-top initiatives, including the launch of videos from both the CEO and senior business management.

- **Training:** Mandatory conduct risk eLearning was provided to all employees to further increase awareness and understanding of conduct risk across the Group.

9.1.1 Governance and responsibilities

Business units and group functions own their respective conduct risks and are accountable for establishing measures and controls to identify and mitigate these risks within their respective units and areas of responsibility. Group Compliance provides independent second-line-of-defence oversight of conduct risk.

To further strengthen compliance oversight in this area, the dedicated Conduct Team was integrated into the wider business advisory compliance structure in 2022. This enables a more holistic level of conduct risk oversight across all ongoing business unit compliance activities. The Group also established the Regulatory Compliance & Conduct Council to provide additional dedicated oversight of conduct risk.

9.1.2 Monitoring and reporting

Progress in the implementation of the Conduct Programme deliverables and conduct risks is reported in the Group Compliance Quarterly Report to the Executive Leadership Team, the Conduct & Compliance Committee and the Board of Directors.

Group Compliance continues to focus on advising on and challenging the work performed on the Group's remediation cases and to include conduct risk considerations in these activities. This work supports the Group's efforts in ensuring alignment with the remediation principles that apply to cases in which customers suffer detriment.

9.2 Conduct risk profile

Group Compliance expects the oversight of the Group's conduct risk profile to mature further in 2023 following significant enhancements in 2022:

- **Conduct risk tolerance statements:** The Board of Directors approved the Group's conduct risk tolerance statement, and the underlying indicators are currently being developed. Implementation and enhanced reporting of the Group's performance against the new tolerance thresholds will continue in 2023, and these processes are targeted to improve the Group's prioritisation of risk management decisions and mitigation responses.

- **Conduct oversight:** Group Compliance continues to develop its oversight of conduct risk with a focus on enhancing risk identification and advising business units on controls and risk mitigation. Some of the activities included providing guidance in relation to new and amended product approvals, risk and control self-assessments and whistleblowing cases across a variety of business units and subsidiaries.

Management declaration

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10.1 Management declaration

As stated in article 435(1) of Capital Requirements Regulation II (CRR II), Danske Bank must publish a declaration and a risk statement approved by its management body (the Board of Directors):

- Board declaration: a declaration approved by the management body on the adequacy of the risk management arrangements of the institution providing assurance that the risk management systems put in place are adequate with regard to the institution's profile and strategy
- Risk statement: a concise risk statement approved by the management body succinctly describing the institution's overall risk profile associated with the business strategy. This statement must include
  - key ratios and figures providing external stakeholders with a comprehensive view of the institution's management of risk, including how the risk profile of the institution interacts with the risk tolerance set by the management body
  - information on intragroup transactions and transactions with related parties that may have a material impact on the risk profile of the consolidated group

Board declaration

In accordance with the responsibilities placed on a company's board of directors as stipulated in the Danish Executive Order on Management and Control of Banks etc., Danske Bank's Board of Directors assesses the Group's individual and overall risks on an ongoing basis and at least once a year in the form of a comprehensive report from the Executive Leadership Team. The Board of Directors finds that the Group has adequate risk management arrangements in place with regard to the Group's risk profile and strategy.

Risk statement

Key ratios, figures and risk profile

Danske Bank is a Nordic universal bank offering a full range of financial and banking services to personal, business and institutional customers across the Group's home markets. The Group has a diversified business model that spreads across various industries, customer types and countries.

At the end of December 2022, the Group's solvency need ratio was 10.6%.

The target for the Group's CET1 capital ratio was kept at above 16% in the short term to ensure a sufficiently prudent buffer in relation to the capital requirements. The target for the Group's total capital ratio was kept at above 20%. At the end of December 2022, the Group's CET1 capital ratio was 17.8% and its total capital ratio was 22.1%.

Credit risk is managed in accordance with the Group's Credit Policy, credit risk appetite and related governance documents. The Group operates with a credit risk appetite to achieve its long-term strategic ambitions and to ensure the stability of its financial position by limiting impairment volatility through the business cycle and managing credit risk concentrations (including limits on single names, industries and geographical regions). Risk reporting enables ongoing monitoring of the Group's credit risk profile to ensure that it remains in line with the credit risk appetite.

The Group's market risk comprises three separate frameworks for the following areas: trading-related activities at Large Corporates & Institutions, fair value adjustments (xVA) at Large Corporates & Institutions, and the non-trading portfolio at Group Treasury. Market risk is managed in accordance with the Group's Market Risk Policy. The Group operates with a market risk appetite for the various areas.

The Group manages its liquidity on a daily basis by using risk indicators and limits as defined in the Group's Liquidity Policy and Liquidity Guidelines. The policy documents define the limits and methods for calculating liquidity risk and set the overall principles and standards for the Group's liquidity management. At the end of December 2022, the Group's liquidity coverage ratio was 151% and its net stable funding ratio was 123% – well above the internal limits set at 115% and 104%, respectively, by the Board of Directors. The long-term issuer credit rating of Danske Bank A/S was 'A+'/'A'/'A3' (S&P Global/Fitch Ratings/Moody's Investors Service) at the end of December 2022.

Non-financial risk, which covers operational risk, financial crime risk, regulatory compliance risk, technology and data risk, model risk, and financial control and strategic risk, is managed in accordance with the overarching Group Non-Financial Risk Policy and a number of supplementary policies and instructions. The Group monitors non-financial risk tolerance limits to ensure that the Group pursues its business strategy according to its risk tolerance.

Intragroup transactions and transactions with related parties

The Group conducts intragroup transactions with its undertakings and foreign branches, and they cover mainly provision of short- and long-term financing in relation to lending activities, depositing of surplus liquidity, guarantees, payment services, and trading in securities and other instruments. The Group conducts such transactions on the basis of market conditions, applied limits and risk appetites in order to set a sufficient level of risk-taking. The undertakings and foreign branches operate mainly in the Group's strategic core markets. This limits the Group's risk since the Group has detailed knowledge of these markets and holds a diversified portfolio and collateral assets. As a result, intragroup transactions are not considered to have any material impact on the Group's risk profile.

The Group conducts transactions with related parties. Related parties with a significant influence are shareholders with holdings exceeding 20% of Danske Bank A/S's share capital. Between them, the A.P. Møller and Chastine Mc-Kinney Møller Foundation and the companies of the A.P. Møller Holding group hold 21.3% of the share capital. The Group's other related parties comprise associates and key management personnel defined as members of the Board of Directors and the Executive Leadership Team. The consolidated financial statements specify holdings in associates. Transactions with the members of the Board of Directors and the Executive Leadership Team and their dependants cover personal facilities, deposits, etc. and facilities with businesses on which these parties have a controlling or significant influence. Transactions with related parties are settled on an arm's-length basis and are not considered to have any material impact on the Group's risk profile.

Moreover, the Group does not conduct business with any single customer generating 10% or more of the Group's total income, and the Group is not financially dependent of any of its single customers.

For more information about intragroup transactions and transactions with related parties, see notes G3.b, G35, G38, G39 and P27 of the Group's Annual report 2022 as well as the annual reports of the Group's individual undertakings.

BOARD OF DIRECTORS

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Other Danske Bank Group publications, available at www.danskebank.com/investor-relations

Annual Report 2022

Corporate Governance Report 2022

Sustainability Report 2022

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