spar Nord

Risk report 2022

The risk report has been prepared in accordance with the disclosure requirements under Part 8 of the Capital Requirements Regulation (CRR) and pertaining guidelines (ITS 2021/637 of 15 March 2021). Requirements on the disclosure of information about individual solvency need are anchored in the Executive Order on Calculation of Risk Exposure Amount, Own Funds and Solvency Need (Executive Order no. 2155 of 3 December 2020).

The rules regarding the capital adequacy of credit institutions are laid down in European Parliament and Council Directive 2013/36/EU (CRD) and Regulation no. 575/2013 (CRR), including the associated delegated regulations and guidelines. The rules originate from the Basel III rules and determine the rules for the disclosure of capital adequacy requirements and risk management.

Spar Nord's disclosure of information pursuant to the regulatory framework relate to Spar Nord Bank A/S, CVR no. 13737584, and the subsidiary Aktieselskabet Skelagervej 15, which is fully consolidated in the Group. Unless otherwise explicitly stated in the report, figures express consolidated figures.

The disclosure requirements laid down in the CRR regulation and the pertaining guidelines are mainly published via this risk report. In addition, Spar Nord publishes quarterly "Additional Pillar 3 Disclosures" on its website at https://www.sparnord.com/investor-relations/.

Figures in the risk report are presented in millions of Danish kroner, unless otherwise stated. Consequently, rounding differences may occur because grand totals are rounded and the underlying decimal places are not shown.

Contents

Section 1

Introduction

2022 was in many ways a challenging year that brought historically high economic uncertainty for customers and the financial markets. At the beginning of 2022, the Danish economy was booming after having emerged from the depths of the Covid-19 pandemic, but less than a month after the last restrictions were lifted in Denmark, Russia invaded Ukraine, making war in Europe a reality.

Financial risks
Over the course of the year, Spar Nord managed to generate stable organic growth in its lending operations of 12.4% by attracting new customers and supporting existing customers through offering financing for new projects.

In the credit area, an important focus was to support customers by providing advice at a time of elevated uncertainty and higher cost of living due to volatile energy prices, a high rate of inflation, falling housing prices and higher market rates. The Bank has supported its customers by pro-actively contacting specific customers who were particularly affected in 2022 by rising energy prices and higher interest rates.

Heightened uncertainty also resulted in a need to make larger provisions to cover the expected losses relating to higher inflation and the expected drop in housing prices. This the Bank has done by making management estimates, which at end-2022 amounted to DKK 434 million. However, this risk has yet to materialise. Total management estimate amounts to DKK 574 million at end-2022.

The financial markets were extremely volatile in 2022 with sharply falling prices across most asset classes and sectors due to increasing interest rates and macroeconomic uncertainties. Over the course of the year, the Bank reduced its market exposure to shares and credit bonds because of the higher volatility in these asset classes, while it increased its portfolio of investment grade mortgage bonds.

The Bank retains a comfortable level of cash resources. The short-term Liquidity Coverage Ratio (LCR) has been calculated at 211%, and the long-term Net Stable Funding Ratio at 127%. Both liquidity ratios are thus well above both the statutory requirements and the Bank's own targets.

In the funding area, the general market uncertainty was reflected in lower market liquidity, which in combination with rising interest rates resulted in higher funding costs. Over the course of the year, the Bank made a number of debt issues to ensure an even maturity structure, which will contribute to maintaining a low refinancing risk.

Non-financial risks
In 2022, the Spar Nord worked intensively to strengthen its IT security because of the very high level of threat in relation to cyber attacks against the financial sector. The threat has been exacerbated by the war in Ukraine, which led to a number of preventive measures being implemented in 2022.

In recent years, the Bank has made a dedicated effort to reduce losses relating to online banking and card fraud, and with the measures taken Spar Nord has successfully reduced the number of cases quite significantly.

The increasing importance of the Environmental, Social and Governance area (ESG risk) is reflected in the activities pursued by the Bank. In 2022, the Bank intensified its sustainability risk efforts, identifying how these risks may be further incorporated into the credit assessment process and in connection with investment in the financial markets.

Capital requirement
Spar Nord had a strong capital position at the end of 2022. The common equity tier 1 capital ratio and the own funds ratio were 16.4% and 20.9%, respectively, which is a good deal higher than the Bank's capital targets of 13.5% and 17.5%, respectively. Relative to the capital requirement, the excess coverage is 5.5%-points, or DKK 3.3 billion.

Overall, the Bank is estimated to have a solid capital position, poised for entering 2023 and capable of dealing with strong fluctuations in macroeconomic trends.

Outlook
The outlook for 2023 reflects a more uncertain economic future with retail customers still squeezed by high energy and food prices and higher interest rates. Some customers are thus expected to face economic challenges in 2023, and as in 2022 the Bank will assist its customers by offering advice through a pro-active approach.

Weaker economic activity will also affect business customers who operate in cyclical industries, so a major task for the Bank will be helping viable customers through the upcoming crisis.

The elevated macroeconomic uncertainties are thus expected to continue into 2023, with focus centring on the upcoming collective bargaining rounds and general labour market developments.

In relation to IT security, the level of threat is expected to remain very high, so maintaining a sharpened focus and increasing investment in the area will be necessary in the upcoming period.

Section 2

Business model

Founded in Aalborg, Denmark in 1824, Spar Nord has historically been rooted in northern Jutland, and continues to be a market leader in this region.

Since 2002, Spar Nord has been dedicated to establishing, and has on several occasions acquired, local banks outside northern Jutland and now has a nationwide distribution network totalling 60 local banks.

Spar Nord is a bank built on strong customer relationships. The Bank believes relations and business are best cultivated through a local presence and decentralised decision-making powers. That is why Spar Nord operates its business based on the local bank model – which builds on local autonomy combined with an efficient centralised engine room.

The local bank model is inspired by the franchise concept, in which strongly anchored local ownership and responsibility help drive customer relations and business volume. The local bank model supports a high degree of local autonomy in terms of picking a team and process the market through initiatives and marketing.

Spar Nord offers all types of financial services, consultancy and products, focusing its business on retail customers and small and medium-sized enterprises (SMEs) in the local areas in which the Bank is represented.

The Spar Nord Group consists of two earnings entities: Spar Nord's Local Banks, including leases for the business segment, and the Trading Division. The Group also has a number of staff and support divisions at its Aalborg headquarters.

Vision and strategy

At Spar Nord, we believe that personal relations are also important for our ability to attract and retain customers in an increasingly digitalised world. No matter what tomorrow brings, people will always desire a bank that is close to its customers in every sense of the term, and which knows and understands their needs and wants.

Therefore, Spar Nord's vision – the landmark which all staff members steer for – is to become Denmark's most personal bank.

With the local bank model as its foundation, Spar Nord works with 3-year strategy periods. 2023 is the first year of a new strategy period that extends to the end of 2025. The strategy for 2023-2025 operates with a vision, a diagnosis of the current situation, a strategic direction and specific actions – with the broad aim of strengthening decentralised decision-making powers as the Bank's distinctive features.

That is why we have named the strategic direction for the period 2023-2025 A COMMITTED BANK.

Customers

Spar Nord's two primary target groups are retail customers and small and medium-sized businesses in the local areas where the Bank has a presence.

In its retail segment, Spar Nord gives priority to full-service customers. This means that Spar Nord intends to be a banker for financially sound customers and their entire families, thus catering to all their banking needs. The Bank focuses its day-to-day operations on retaining existing full-service customers, turning existing non-regular customers into full-service customers and attracting new customers with good potential.

Spar Nord's credit exposure at Group level is characterised by an exposure to retail customers that is higher than the sector average and generally good sector diversification in its business customer portfolio.

In the business customer segment, Spar Nord focuses on sound businesses across industry sectors. In other words, it is to a large degree the structure of a local business community and the local focus that determine the distribution of industry sectors in the individual banking areas.

Spar Nord generally aims to be the customer's primary banker and that customers conduct their basic banking business with the Bank.

As an entity, the Trading Division serves customers from Spar Nord's Local Banks as well as large retail customers and institutional clients in the field of equities, bonds, fixed income, forex products, asset management and international transactions.

Section 3

Risk management

Risk assumption is a natural component of banking operations, placing heavy demands on the Bank's risk management organisation and risk management environment. As a result of business activities, Spar Nord is exposed to credit, market and liquidity risk as well as operational risk, including IT, compliance and reputational risk. Risk attaching to climate change is included in the management of the individual risk areas. Strategic and regulatory risk is also a significant focus area.

For a more detailed description of risk management in the individual risk areas, including a description of policy, monitoring and reporting, reference is made to the respective sections in the report.

Disclosure obligations with respect to management systems, cf. Article 435(2)(a)-(c) of the CRR Regulation, are described on pages 30-34 of Spar Nord's Annual Report.

3.1 Risk management organisation

In accordance with Danish legislation, Spar Nord has established a two-tier management structure consisting of a Board of Directors and an Executive Board. Moreover, the Bank has established segregation of functions between entities entering into business transactions with customers or otherwise assuming risk on behalf of the Bank, and entities in charge of risk management.

The structure of Spar Nord's risk management organisation is based on the Institute of Internal Auditors' (IIA) three lines model and is shown in figure 3.1.

3.2 Board of Directors

The Board of Directors handles the overall and strategic management with a view to running a healthy and competitive bank, thus securing long-term value for the Bank's stakeholders.

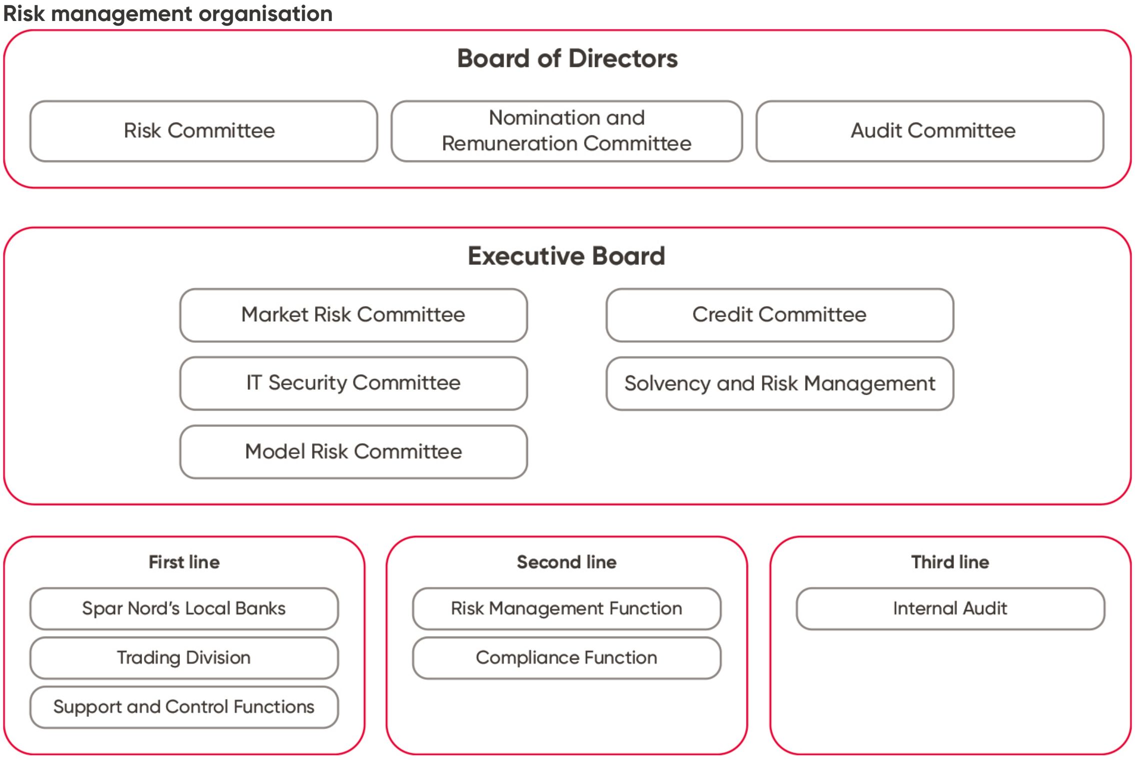
Using the strategic objectives as its point of departure, the Board of Directors determines a risk profile, which describes the risk within the Bank's most important risk types that the Board of Directors is willing to undertake while meeting the objectives set forth in the strategy.

The objective is to ensure cohesion between Spar Nord's vision and strategy while ensuring that the risk profile is appropriate at all times, having regard to the Bank's capital and liquidity situation.

The Board of Directors has defined a number of risk policies that set out the overall handling and management of the Bank's risks. These policies are reviewed and approved by the Board of Directors at least once a year.

In order to underpin the management structure, the Board of Directors has drafted written guidelines for the Executive Board, specifying the areas of responsibility and scope of action. As and when required, the Board of Directors will assess and update these guidelines.

Figure 3.1
Risk management organisation



3.3 Board committees
The Board of Directors has set up a Risk Committee, a Nomination and Remuneration Committee and an Audit Committee. The committees are charged with arranging the preparatory work for the Board of Directors' consideration of matters within the respective committee areas.

Establishing these board committees helps ensure a better utilisation of the specific competences held by the board members, thus ensuring in-depth dealing with the board material. The sole purpose of the committees is to facilitate the transaction of business by the Board of Directors, and they have no independent decision-making powers.

The terms of reference of the committees are available at www.sparnord.com/committees. A presentation of the board members and their qualifications is provided on pages 39-41 of the Annual Report.

3.3.1 Risk Committee
The principal purpose of the Risk Committee is to handle risk-related matters, including to review and assess the adequacy and efficiency of the Bank's policies, guidelines and systems. The Risk Committee also serves to advise the Board of Directors on the Bank's overall current and future risk profile and strategy and to ensure the correct implementation of the risk strategy in the Bank.

The Risk Committee consists of three independent board members. The Committee held eight meetings in 2022.

3.3.2 Nomination and Remuneration Committee
The principal purpose of the Nomination and Remuneration Committee is to facilitate the decisions to be taken by the Board of Directors with respect to remuneration, including the remuneration policy, and other related decisions that may influence risk management. The Committee also serves to facilitate work related to the Bank's diversity policy, the process of board evaluation, nominating new candidates for the Board of Directors and Executive Board.

Regularly, and at least once a year, the Committee evaluates the Board of Directors' and Executive Board's structure, size, composition and results and prepares recommendations for the Board of Directors for any changes.

The Nomination and Remuneration Committee consists of three board members, one of which is an independent member and one a member elected by the employees. The Committee held six meetings in 2022.

3.3.3 Audit Committee
The principal purpose of the Audit Committee is to monitor and control accounting and auditing matters, including informing the Board of Directors of the outcome of the statutory audit. Its duties also include monitoring the efficiency of the Bank's internal control system, Internal Audit and risk management systems for financial reporting purposes.

The Audit Committee consist of three board members, one of whom is independent and one elected by the employees. The Committee held eight meetings in 2022.

3.4 Executive Board
In accordance with the guidelines and risk policies issued by the Board of Directors, the Executive Board is in charge of the day-to-day management.

The Executive Board must ensure that risk policies and guidelines are implemented in the Bank's day-to-day operations while also ensuring that business procedures or work descriptions have been prepared for all important areas.

The Executive Board delegates specific guidelines and authorisations to selected departments of the Bank with a view to the practical implementation of the guidelines and policies adopted by the Board of Directors.

The Executive Board has set up a number of committees which in specific areas contribute to Spar Nord's risk management, preparing issues and themes for consideration by the Executive Board and Board of Directors.

3.4.1 Solvency and Risk Management Committee
The Solvency and Risk Management Committee is composed of a member of the Executive Board, Trading Division, Credit Department, Finance & Accounts and the risk management function, respectively. The Committee meets every quarter and serves to define targets and principles for calculating adequate own funds and the individual solvency need. The Solvency and Risk Management Committee prepares a recommendation for the individual solvency need and passes it on to the Board of Directors for approval. The Committee handles input from the Market Risk, IT Security and Model Risk Committees and the Credit Committee to ensure that any capital consequences are dealt with by the primary capital and solvency authority.

3.4.2 Market Risk Committee
The Market Risk Committee is composed of a member of the Executive Board and members of the Trading Division, Finance & Accounts and the risk management function. The Committee meets every quarter to review developments in Spar Nord's positions, risks as well as the liquidity situation and expectations regarding market developments and future plans.

3.4.3 IT Security Committee
The IT Security Committee is composed of a member of the Executive Board, the IT department, the

risk management function and selected heads of business areas. The Committee serves to advise on and deal with any issues that may arise in relation to the IT security policy and related rules, procedures and contingency plans. The IT Security Committee also addresses the Bank's IT risk profile.

3.4.4 Model Risk Committee
The Model Risk Committee is composed of a member of the Executive Board and representatives from the risk management function and the Credit Department. The Committee meets once every quarter to discuss and monitor the management of model risks and to consider recommendations of newly developed and revised models prior to approval and implementation.

3.4.5 Credit Committee
The Credit Committee is composed of two members of the Executive Board and one member from the Credit Department. The Committee deals with credit facilities that exceed the Credit Department's authorisation limits or involve a matter of principle. The Committee meets several times a week. Frequently, matters that have been dealt with by the Credit Committee will be prepared for subsequent discussion among all members of the Board of Directors.

3.5 First line
The business units Spar Nord's Local Banks and Trading Division together with the support and control functions represent the first line. The Bank's day-to-day risk management is handled through risk policies, guidelines, limits and a number of internal controls and is performed in all major risk areas, including credit, market, liquidity and operational risk. In order to support the business units in relation to preventing money-laundering and terrorist financing, the Bank also has a centralised department AML & Fraud, which is part of the first line.

3.6 Second line
The second line consists of the risk management function and the compliance function. The functions have key assignments of monitoring, controlling and reporting the Bank's risks and control environment.

3.6.1 Risk management function
The risk management function is responsible for providing an overview of the Bank and its risk exposure to be able to assess whether such risk exposure is adequately addressed. The risk management function's area of responsibility comprises the Bank's risk-prone activities across various risk areas and organisational units and risks attaching to outsourced functions. The risk management function also serves as a secretariat to the Bank's Risk Committee and will assist the Risk Committee in providing information about the Bank's risk exposure.

The risk management function reports to the Board of Directors on a quarterly basis. The activities of the risk management function are rooted in the annual plan adopted by the Board of Directors.

The Chief Risk Officer reports directly to the Executive Board. Dismissal of the Chief Risk Officer is subject to the prior approval of the Board of Directors.

3.6.2 Compliance function
The compliance function is charged with assessing and checking Spar Nord's compliance with applicable legislation, banking sector standards and internal guidelines, as well as advising on how to reduce compliance risk.

The compliance function reports to the Executive Board on a quarterly basis and to the Board of Directors twice a year. The activities of the compliance function are rooted in the annual plan adopted by the Board of Directors.

The Head of Compliance reports directly to the Executive Board. Dismissal of the Head of Compliance is subject to the prior approval of the Board of Directors.

3.7 Third line
The Internal Audit Department serves as the third line of defence, which on the basis of the annual plan adopted by the Board of Directors is responsible for planning and performing an operational audit. An operational audit encompasses sample audits of internal processes, business procedures and internal controls in significant and high-risk areas, including in connection with preparing the financial statements.

The Internal Audit Department is also responsible for planning and performing an audit to obtain reasonable assurance as to whether the consolidated financial statements and the parent company financial statements are free from material misstatement.

It reports directly to the Board of Directors and regularly reports on an ongoing basis to the Executive Board and the Board of Directors. Dismissal of the head of Internal Audit is subject to the approval of the Board of Directors.

3.8 Reporting
To ensure an adequate decision-making basis for the Executive Board and the Board of Directors, management regularly receives reporting material pertaining to the principal risk areas.

Figure 3.2 shows the risk reports submitted to the Board of Directors, including their frequency, use and the primary contents of the reports. The Board of Directors is continually involved in defining the contents to be reported on.

Risk management

Figure 3.2

Risk policies and guidelines

Governance	Frequency	
Risk policy	Annually	Data protection policy
		Data governance policy
		Insurance policy
		IT policy
		IT security policy
		Capital policy
		Credit policy
		Liquidity and funding policy
		Market risk policy
		Model risk policy
		Active ownership policy
		Policy for responsible investments and sustainability risk
		IT risk management policy
		Operational risk policy
		Policy on risk tolerance and risk-mitigating anti-money laundering measures
		Policy on outsourcing of activity areas
		Policy on Spar Nord's disclosure obligations
		Product policy
Guidelines	Annually	Board guidelines to the Executive Board

Risk reporting

Risk area	Frequency	
Overall risk management	On an ongoing basis	Audit report: Review of risk areas
	Quarterly	Risk presentation: Combined overview of developments in key risks, which is presented in connection with the publication of the quarterly financial statements
	Quarterly	Individual solvency need (ICAAP): Assessment of the risk profile and calculation of adequate own funds. Conclusions reached in respect of stress test and an assessment of the capital needs in respect of the individual risks. Once a year, an extended version of the report is prepared.
	Semi-annually	AML & Fraud: Review of status of controls in relation to compliance with the Danish AML Act.
	Semi-annually	Risk report: Overall risk assessment of the individual risk areas with a focus on the overall level of risk and first-line risk management capabilities. Monitoring of risk profile and recovery indicators.
	Semi-annually	Compliance report: Review of the most significant compliance controls. Progress on ongoing tasks. DPO Report: Review of the most important controls relative to compliance with the GDPR and the Danish Data Protection Act. Progress on ongoing tasks.
Credit risk	Annually	Credit and balance sheet report: Review and analysis of assets, including a specific review of individual exposures. Analysis and assessment of future trends for important lines of business and asset areas.
	Semi-annually	Reporting on credit-weak exposures: Review of weak credit-weak exposures larger than DKK 50 million.
	Monthly	Reporting on credit facility extensions in excess of DKK 10 million. Credit facility extensions in excess of DKK 10 million that have not been considered by the Board of Directors.
	Monthly	Reporting on individual unauthorised overdrafts in excess of DKK 1 million. Overview of all individual unauthorised overdrafts in excess of DKK 1 million.
	Monthly	Reporting on losses in excess of DKK 1 million
	Monthly	Reporting on statistics of unauthorised overdrafts: Overview of unauthorised overdraft statistics in all banking areas.
Market risk	Monthly	Market risk report: Overview of and developments in current interest, equity and foreign-exchange risks Trend in utilisation of frameworks, cf. Board guidelines to the Executive Board.
Liquidity risk	Monthly	Liquidity report: Overview of and developments in short-term and long-term liquidity risk
	Annually	Calculation and assessment of liquidity position and liquidity risks – internal liquidity adequacy assessment process (ILAAP): Combined calculation and assessment of Spar Nord's liquidity position and liquidity risks. The assessment supports Spar Nord's liquidity management and is a component of the statement of the individual solvency need.
IT risk	Quarterly	Reporting from IT security Threat scenario, IT risk profile, material deviations from IT security policy, adequacy of controls and IT contingency plan.

Section 4

Capital and solvency need

Developments in 2022

In 2022, Spar Nord's capital position was affected by strong earnings in spite of higher impairment charges, a share buyback programme and the re-establishment of the countercyclical capital buffer.

A historically strong financial performance in 2022 enabled Spar Nord to maintain a solid capital position with a total capital ratio of 20.9%. The capital ratios realised were well above the regulatory capital requirement and internal targets, and the excess coverage was at a satisfactory level.

Spar Nord's risk exposure remained similar to year-end 2021 despite significant changes to the balance sheet composition.

On the basis of the historical results for 2022, and in accordance with the Bank's dividend policy, Spar Nord intends to pay ordinary dividends of DKK 4.50 per share. Furthermore, the Board of Directors has found it appropriate to further adjust Spar Nord's own funds by establishing a share buyback programme of up to DKK 300 million. The total amount distributed relative to the profit for the year thus comes to 60%.

The DKK 225 million share buyback programme established in 2022 was completed after full utilisation at the end of January 2023.

The excess coverage was reduced from 7.4%-points at end-2021 to 5.5%-points at end-2022. The lower excess coverage was primarily the result of the re-establishment of the countercyclical capital buffer requirement, with the Danish Minister of Industry, Business and Financial Affairs setting the requirement at 2.0% at the end of 2022.

The excess coverage to the regulatory requirement and internal targets is still believed to be solid. Entering a period of economic uncertainty, Spar Nord is reassured by its strong capital position.

TOTAL RISK EXPOSURE AMOUNT

DKK 60.5 billion

2021: DKK 60.5 billion

COMMON EQUITY TIER 1 CAPITAL RATIO

16.4%

2021: 16.3%

OWN FUNDS RATIO

20.9%

2021: 20.8%

INDIVIDUAL SOLVENCY NEED

9.8%

2021: 9.6%

EXCESS CAPITAL COVERAGE IN PCT.-POINTS

5.5

2021: 7.4

LEVERAGE RATIO

9.7%

2021: 8.2%

Definition of capital requirements

The regulatory capital requirements express the capital a bank must reserve to cover the risk undertaken by the bank as part of its operations in the fields of credit risk, market risk and operational risk. Spar Nord must ensure that it has access at all times to sufficient capital to support its future business activities and growth. At the same time, Spar Nord must be able to overcome cyclical downturns. The Bank should thus be able to absorb unexpected substantial credit losses, substantial negative changes in the value of market-risk-related positions or losses caused by operational risk events.

Section 4

Capital and solvency need

4.1 Capital policy

The capital policy forms the foundation of Spar Nord's risk profile in terms of capital. The capital policy aims to ensure that the Bank consistently complies with applicable legislation in respect of the following three areas:

- Calculation of risk exposure, own funds and capital requirement
- Calculation of the individual solvency need and supervision procedures
- Market discipline through a number of disclosure obligations

The capital policy defines targets for the common equity tier 1 ratio and the own funds ratio. The capital targets at end-2022 are:

- A common equity tier 1 capital ratio of 13.5%
- An own funds ratio of 17.5%

In its endeavours to comply with the described targets, Spar Nord has adopted a number of guidelines intended to ensure that the management of the Bank's capital matters is appropriate and adequate and in compliance with applicable legislation. The capital policy also defines a target for the leverage ratio of at least 6%.

Lastly, the capital policy covers Spar Nord's dividend policy, which in 2022 expressed an intention to distribute ordinary dividends in the range of 30-50% of the net profit for the year.

4.2 Development in capital ratios

Applying the IFRS 9 transitional arrangements, at year-end 2022 Spar Nord had a common equity tier 1 capital ratio of 16.4% and an own funds ratio of 20.9%. The individual solvency need was calculated at 9.8%. The ratios are shown in figure 4.1. The excess coverage relative to the capital requirement on both the common equity tier 1 capital ratio and the capital ratio is 5.5%-points. The excess coverage is further specified in figure 4.12 and figure 4.13.

The calculated capital ratios for the past three years are shown in figure 4.2, which demonstrates that Spar Nord maintained the capital ratios at a stable and high level during the period.

Figure 4.1

Capital ratios and excess coverage using the IFRS 9 transitional arrangement

%	2022	2021
Common equity tier 1 capital ratio	16.4	16.3
Tier 1 capital ratio	18.4	18.3
Own funds ratio	20.9	20.8
Individual solvency need	9.8	9.6
Percentage points		
Excess coverage, common equity tier 1 capital ratio	5.5	7.4
Excess coverage, own funds ratio	5.5	7.4

Figure 4.2

Common equity tier 1 ratio and own funds ratio

%

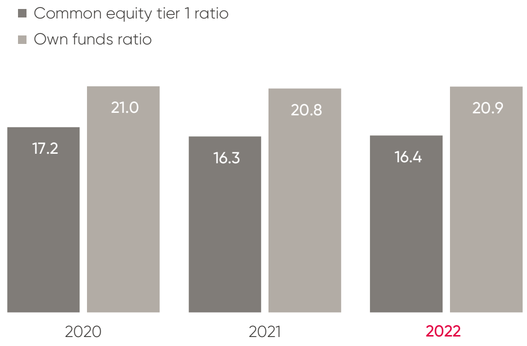


Figure 4.3 shows a calculation of the capital ratios on full phasing-in of IFRS 9. As shown in the figure, the current capital ratio will be reduced by about 0.3%-point without the use of the transitional arrangement. The transitional IFRS 9 arrangement will continue until 2024. See section 4.3.1 for additional information.

Figure 4.3

Capital ratios and excess coverage on full phasing-in of IFRS 9

%	2022	2021
Common equity tier 1 capital ratio	16.0	16.1
Tier 1 capital ratio	18.0	18.0
Own funds ratio	20.6	20.5
Individual solvency need	9.8	9.5
Percentage points		
Excess coverage, common equity tier 1 capital ratio	5.1	7.2
Excess coverage, own funds ratio	5.1	7.2

4.3 Own funds

Own funds are composed of common equity tier 1, additional tier 1 capital and tier 2 capital.

Common equity tier 1 capital, tier 1 capital and own funds are calculated with a view to calculating the capital ratios. The capital ratios express the Bank's capital resources to comply with own targets as per the capital policy as well as the regulatory requirements.

4.3.1 IFRS 9

The implementation of the IFRS 9 accounting standard affects the calculation of own funds because of the possibility of applying a transitional arrangement in relation to the IFRS 9 effect, which is incorporated in the CRR. The new accounting rules resulted in an increase in the total impairment account from 31 December 2017 to 1 January 2018.

The transitional arrangement may be applied in order to phase-in the effect of IFRS 9 when calculating own funds. The transitional arrangement was originally divided into a static and a dynamic component, but an adjustment due to Covid-19 means that the arrangement now consists of two dynamic components and one unchanged static component.

- The static component: Reflects the initial cost of changing accounting rules.
- Two dynamic components: Reflect the costs caused by any deterioration of the macroeconomic outlook, calculated as current developments in the impairment account for stages 1 and 2 for two different periods. The two periods are 1 January 2018 to 31 December 2019 and 1 January 2020 to the date of calculation.

For capital adequacy purposes, Spar Nord has opted to apply the transitional arrangement relative to both the dynamic components and the static component. Spar Nord is aware that the risk exposure amount must be increased by an amount corresponding to the positive effect contributed by the transitional arrangement in own funds.

Using the transitional arrangement means that the effect of IFRS 9 after tax is recognised in own funds according to a fixed transitional arrangement that expires at the end of 2024.

The transitional arrangement and its overall effect are shown in figure 4.4. The figure shows that 25% and 75%, respectively, of the calculated IFRS 9 effects after tax is added to common equity tier 1 capital in 2022. The effect of the transitional arrangement is thus calculated at DKK 286 million in 2022.

Reference is made to "Additional Pillar 3 Disclosures Q4 2022 – IFRS9-FL".

Figure 4.4

IFRS 9 transitional arrangement

	2021	2022	2023	2024
Transitional arrangement (%)	50	25	0	0
Transitional arrangement (%) – COVID-19 initiative	100	75	50	25
Static component in DKKm*	97	49	0	0
Dynamic component (18-19) in DKKm*	13	6	0	0
Dynamic component (20-) in DKKm*	64	230		
Total effect in DKKm*	**174**	**286**		

*) After tax

4.3.2 Issued capital instruments

The Bank can include issued additional tier 1 and tier 2 capital when calculating its own funds provided the issues were made on terms that meet the requirements for inclusion in own funds under CRR.

Spar Nord has issued additional tier 1 capital with a total principal of DKK 1.2 billion, distributed on three loans of DKK 330 million, DKK 600 million and DKK 250 million, respectively, as shown in figure 4.5.

There have been no issues or repayments of additional tier 1 capital in 2022.

Spar Nord has also issued tier 2 capital with a total principal of DKK 1.6 billion, distributed on five issues as shown in figure 4.5. The DKK 500 million tranche was issued in 2022.

In 2022, tier 2 capital with a principal of SEK 600 million was repaid, corresponding to DKK 409 million. The issued loan was repaid at the first possible date of repayment (call date).

Capital issues are recognised in own funds with the principal adjusted for the permitted treasury holding of AT1 and T2 instruments issued by the bank itself and any related expenses not expensed.

See "Additional Pillar 3 Disclosures Q4 2022 – EU CCA" for more information on issued capital instruments.

Figure 4.5

Additional tier 1 capital and tier 2 capital issued

DKKm	Principal	First call date*	Expiry date
Additional tier 1 capital – DK0030465083	330	15 April 2025	Perpetual
Additional tier 1 capital – DK0030484464	600	8 September 2026	Perpetual
Additional tier 1 capital – DK0030495668	250	30 September 2027	Perpetual
Tier 2 capital – DK0030422357	400	19 June 2023	19 June 2028
Tier 2 capital – DK0030431341	150	29 May 2024	29 May 2029
Tier 2 capital – DK0030432075	350	29 May 2024	29 May 2029
Tier 2 capital – DK0030510219	500	7 July 2027	7 July 2032
Tier 2 capital – DK0030495742	200	30 September 2028	30 September 2033

*) First option of early redemption.

4.3.3 Calculated own funds

As shown in figure 4.6, own funds increased by DKK 104 million in 2022 to DKK 12.7 billion. Own funds were primarily affected by developments in the following areas:

- Profit for the year after tax
- Adjustment for transitional arrangement for dynamic IFRS 9 component and developments in impairment accounts in stages 1 and 2.
- Provision for expected dividends for 2022 and share buyback programme
- Increased deduction for NPE Backstop
- Increased deduction for insignificant investments in CET1 instruments issued by financial sector entities
- Increased deduction for significant investments in CET1 instruments issued by financial sector entities
- Redemption and issuance of tier 2 capital

Section 4

Capital and solvency need

Profit for the year after tax and before interest on additional tier 1 capital added DKK 1.4 billion. In accordance with its dividend policy, Spar Nord intends to pay total dividends of DKK 4.50 per share and a total of DKK 554 million, or 39% of the profit for the year.

The Board of Directors has found it appropriate to further adjust the Bank's own funds by establishing a share buyback programme in 2023 of up to DKK 300 million. The framework for the share buyback programme has not been deducted from own funds at end-2022. The framework will only be deducted as of Q1 2023 and is assessed to affect the capital ratios to the tune of 0.5%-point. This means Spar Nord will retain a solid capital position after the share buyback framework has been deducted from own funds. The total payout ratio excl. interest on additional tier 1 capital is calculated at 60%.

The DKK 225 million share buyback programme established in 2022 and deducted in own funds in figure 4.6 was completed after full utilisation at the end of January 2023.

Spar Nord's total impairment account in stages 1 and 2 was increased by DKK 312 million in 2022 as shown in figure 6.25 in section 6.5, and seen in isolation this enhances the effect of the transitional arrangement. Furthermore, the original transitional arrangement will be phased in, as shown in figure 4.4, which reduces the effect of the transitional arrangement. The combined effect of the adopted transitional arrangements increase own funds by DKK 286 million after tax at end-2022, against DKK 174 million at end-2021.

In 2021, a new deduction for non-performing exposures was implemented (NPE-Backstop). The effect was low in 2021 because the deduction was implemented with a phasing-in option. The phasing-in was sharply increased in 2022, and as shown in figure 4.6 the effect increased dramatically with the deduction in own funds rising from DKK 17 million in 2021 to DKK 173 million in 2022.

Figure 4.6 also shows that the deduction for holdings of insignificant and significant CET1 instruments has increased. The primary reason for the higher deductions is that the market value of Spar Nord's strategic holdings of CET investments have risen significantly compared with end-2021.

The distinction between insignificant and significant holdings is defined by the ownership share. An ownership share of less than 10% is defined as insignificant holdings, while ownership share of more than 10% are defined as significant holdings.

The net effect on own funds from both redeemed and issued tier 2 capital in 2022 is DKK 63 million.

Figure 4.6

Calculation of own funds

DKKm	2022	2021
Share capital	1,230	1,230
Retained earnings	10,123	9,384
IFRS 9 transitional arrangement	286	174
Revaluation reserves	113	113
Proposed dividend	-554	-308
Share buyback limit	-225	0
Intangible assets	-341	-348
Deduction for NPE Backstop	-173	-17
Deduction – Holdings of insignificant CET1 inst.	-116	-56
Deduction – Holdings of significant CET1 inst.	-352	-247
Prudent valuation	-31	-24
Adjustment, permitted holding of treasury shares	-25	-28
Other deductions	-4	0
Common equity tier 1 capital after primary deductions	**9,930**	**9,872**
Additional tier 1 (AT1) capital	1,173	1,173
Deduction – Holdings of insignificant CET1 inst.	-1	-1
Tier 1 capital (incl. additional tier 1 capital) after deductions	**11,103**	**11,045**
Tier 2 capital	1,579	1,516
Deduction – Holdings of insignificant CET1 inst.	-19	-2
Own funds	**12,662**	**12,558**

4.4 Total risk exposure amount

The total risk exposure amount (REA) is used for determining the minimum capital requirement and also for calculating capital ratios, buffer requirements and the individual solvency need. The risk exposure thus represents the basis for determining the capital that must be reserved relative to the risk undertaken.

As shown in figure 4.7, the calculation of the total risk exposure amount derived from credit and market risk is calculated using the standardised approach. Counterparty risk is measured pursuant to the rules of SA-CCR, which was implemented by way of CRRII 30/6 2021, while the exposure derived from operational risk is calculated using the basic indicator approach. In addition, the comprehensive approach is used for financial collateral.

Figure 4.7

Spar Nord's use of capital models

Credit risk	Standardised approach
Counterparty risk	SA-CRR
Valuation of collateral security	Comprehensive method
Market risk	Standardised approach
Operational risk	Basic indicator approach
CVA – Credit Value Adjustment	Standardised approach
Prudent valuation	The simplified approach

Capital and solvency need

Figure 4.8

Calculation of own funds requirements and risk exposure

DKKm	Own funds requirement		Risk exposure amount	
Credit risk, incl. CVA	2022	2021	2022	2021
Central governments or central banks	0	0	0	0
Regional governments or local authorities	1	0	17	0
Public-sector entities	3	3	41	42
Institutions	58	67	723	840
Corporates	1,533	1,504	19,167	18,794
Retail customers	1,292	1,554	16,152	19,429
Exposures secured by mortgage on immovable property	418	300	5,226	3,746
Exposures in default	77	64	960	796
Items associated with particularly high risk	32	57	402	712
Covered bonds	54	0	677	0
Short-term credit assessment	27	0	342	0
Claims in the form of CIU	0	2	0	19
Equity exposures	289	283	3,615	3,535
Other items	195	151	2,435	1,886
CVA risk	25	29	307	365
Total credit risk, incl. CVA	**4,005**	**4,013**	**50,063**	**50,165**
Market risk				
Debt instruments	290	300	3,622	3,744
Equity, etc.	17	26	206	319
Foreign exchange risk	6	6	69	75
Commodity risk	0	0	3	2
Total market risk	**312**	**331**	**3,901**	**4,140**
Total operational risk	**520**	**494**	**6,499**	**6,174**
Total	**4,837**	**4,838**	**60,463**	**60,479**

4.4.1 Calculated risk exposure

At end-2022, Spar Nord's total risk exposure amount was calculated at DKK 60.5 billion, which was largely unchanged compared with end-2021. However, the composition of the risk exposure changed considerably over the course of the year. Figure 4.8 shows the components of the total risk exposure amount and the own funds requirement, which is 8% of the risk exposure amount.

In 2022, the total risk exposure amount for credit risk incl. CVA fell by DKK 102 million to stand at DKK 50.1 billion at the end of the year. Of this amount, risk exposure from OTC derivatives with financial counterparties (CVA risk) accounted for DKK 307 million. The amounts take into consideration the fact that the IFRS 9 transitional arrangement results in higher risk exposure. The effect was calculated at DKK 286 million at end-2022.

Figure 4.8 shows a substantial reduction in retail customer exposure of DKK 3.3 billion, which is partly explained by a substantial reduction in guarantees and that the risk-weighted exposures secured by mortgage on immovable property rose by DKK 1.5 billion. It is mainly retail exposures which are recognised at the lower risk weighting due to security in immovable property that meets the CRR requirements.

Developments in the exposure category Short-term credit assessment were driven by the fact that the Bank in 2022 moved short-term exposures to this separate exposure category.

Developments in the covered bonds exposure category were driven by the fact that Spar Nord in 2022 placed bonds at a value of DKK 6.8 billion outside the banking book.

Risk exposure derived from market risk fell by DKK 239 million to DKK 3.9 billion in 2022, primarily because of a small reduction in gross interest rate risk and a substantial reduction in the share portfolio in the trading book. See section 7 for a review of developments in market risk.

The risk exposure amount for operational risk rose by DKK 325 million to DKK 6.5 billion.

4.5 Individual solvency need

The Danish Financial Business Act stipulates requirements for the individual solvency need and any additional capital requirements. These requirements are to cover the risks not sufficiently covered by the minimum requirement of 8% pursuant to CRR. Such risks include business risks and special credit risks.

Spar Nord uses the so-called 8+ approach recommended by the Danish Financial Supervisory Authority in its guidelines. The 8+ approach is based on the statutory minimum capital requirement of 8.0% of the total risk exposure amount (Pillar 1) plus add-ons for risks and matters not fully reflected in the calculation of the total risk exposure amount. In other words, ordinary risks are assumed to be covered by the 8% requirement, and, consequently a position has to be taken on the extent to which Spar Nord has additional risks that necessitate an add-on to the calculated solvency need (Pillar 2).

In the guidelines issued by the Danish Financial Supervisory Authority, benchmarks have been defined within a number of risk areas determining when the Authority basically finds that Pillar 1 is insufficient, and that an add-on to the individual solvency need is required. In addition, to the extent possible methods have been introduced for calculating the amount of the add-on within the individual risk areas.

Based on the guidelines issued by the Danish Financial Supervisory Authority, the Board of Directors determines Spar Nord's adequate own funds and individual solvency need based on the recommendation of the Solvency and Risk Management Committee. The calculation method follows the guidelines issued by the Danish Financial Supervisory Authority and is based on an assessment of risks within the following areas:

1. Earnings
2. Growth in lending
3. Credit risks
   - Large customers in financial difficulty
   - Concentration risk: Individual customers
   - Concentration risk: Industries
   - Concentration, collateral
   - Concentration, geography
   - Other credit risks
   - NPE deductions
4. Market risks
   - Interest rate risk
   - Equity risk
   - Foreign exchange risk
   - Credit spread risk
5. Liquidity risk
6. Operational risk
7. Leverage
8. Regulatory maturity of capital instruments
9. Large corporates – sensitivity matrix for borrower interest rate risk
10. Other risks
    - The Bank's business profile
    - Strategic risks
    - Reputational risks
    - Properties
    - IFRS 9 transitional arrangement phase-out

The impact of the individual areas on the solvency need has been calculated in part using the methods designated by the Danish FSA in its guidelines, and partly by making supplementary calculations and own methods.

As shown in figure 4.9, the adequate own funds amounted to DKK 5.9 billion at end-2022, which is DKK 93 million up on end-2021. The increase was driven by higher add-ons as the total risk exposure amount and, by extension, the own funds requirement, were largely unchanged.

The total add-on to the solvency need increased by DKK 94 million to DKK 1.1 billion. The development was generally due to higher add-ons relating to operational risk and the phasing-out of the IFRS 9 transitional arrangement under other risks and small changes in total add-ons to credit risk and market risk.

Developments in add-ons to credit risk include substantial changes to the composition of add-ons with reduced add-ons to NPE partly being offset by higher add-ons to interest rate sensitivity under other credit risks. Developments in add-ons to market risk also include substantial changes to the composition of add-ons with reduced add-ons to credit spread risk partly being offset by higher add-ons to interest rate risk.

At end 2022, the solvency need ratio amounted to 9.8%, which means the ratio rose by 0.2 of a percentage point relative to end-2021.

Figure 4.9
Adequate own funds by risk area

DKKm/% of REA*	2022		2021	
Minimum 8% requirement				
Credit risk, incl. CVA	4,005	6.6	4,013	6.6
Market risk	312	0.5	331	0.5
Operational risk	520	0.9	494	0.8
Total	**4,837**	**8.0**	**4,838**	**8.0**
Add-on to solvency need				
Credit risk	251	0.4	243	0.4
Market risk	425	0.7	430	0.7
Operational risk	285	0.5	250	0.4
Other risks	121	0.2	65	0.1
Any add-on, if required by law	0	0.0	0	0.0
Total add-on	**1,082**	**1.8**	**988**	**1.6**
Total	**5,919**	**9.8**	**5,826**	**9.6**

*) Risk Exposure Amount

4.6 Capital buffers

By virtue of the Capital Requirements Directive, CRD IV, into the Danish Financial Business Act, Danish financial institutions must comply with a number of capital buffer requirements. A common feature of all capital buffer requirements is that only common equity tier 1 (CET1) capital may be used for meeting the requirement. If a financial institution fails to meet the capital buffer requirements, it would face restrictions in terms of making dividend payments and other distributions.

The combined capital buffer requirement consists of a capital conservation buffer, an institution-specific countercyclical capital buffer and a potential systemic buffer. In addition, a capital buffer requirement applies to banks designated as SIFIs.

The capital conservation buffer requirement serves to ensure a more robust financial sector in terms of strengthened common equity tier 1 capital. The capital conservation buffer requirement has been set at 2.5% of the total risk exposure amount.

The institution-specific countercyclical buffer requirement serves to ensure the accumulation of capital during periods of high credit growth. The countercyclical capital buffer is to be used during periods of financial stress. The purpose is to build the capital buffer before risks materialise, as was the case before the Covid-19 pandemic, when the capital buffer was released in March 2020.

The institution-specific countercyclical capital buffer on Danish exposures was re-established in 2022 from 0% to 2% and will increase by another 0.5%-point to achieve the 2.5% target at the end of Q1 2023. As a SIFI institution, Spar Nord must also comply with the SIFI buffer requirement of 1% of the total risk exposure amount.

The Minister for Industry, Business and Financial Affairs may determine a systemic capital buffer requirement to counteract and limit long-term non-cyclical systemic or macro-prudential risks that are not comprised by CRR. No systemic buffer has been implemented that will affect Spar Nord.

4.6.1 Calculated combined buffer requirement

At end-2022, the combined capital buffer requirement consists of the requirements for the capital conservation buffer, the institution-specific countercyclical capital buffer and the SIFI buffer. The calculated combined buffer requirement is shown in figure 4.10.

Figure 4.10

Combined buffer requirement

	2022	2021
Total risk exposure amount (DKKm)	60,463	60,479
Capital conservation buffer requirement (%)	2.5	2.5
Institution-specific countercyclical buffer requirement (%)	2.0	0.0
SIFI buffer requirement (%)	1.0	1.0
Capital conservation buffer requirement (DKKm)	1,512	1,512
Institution-specific countercyclical buffer requirement (DKKm)	1,187	2
SIFI buffer requirement (DKKm)	605	605
Combined buffer requirement (DKKm)	**3,303**	**2,119**

As shown in figure 4.10, the combined capital buffer requirement increased by DKK 1.2 billion in 2022, which is almost exclusively due to the re-establishment of the countercyclical capital buffer on Danish exposures. The capital conservation buffer and the SIFI buffer requirement are calculated on the basis of the total risk exposure amount and are both unchanged relative to end-2021 as the total risk exposure amount is largely unchanged during the period.

The institution-specific countercyclical buffer requirement was DKK 1.2 billion at end-2022. The buffer was calculated on the basis of the geographic distribution of the Bank's credit exposure. The breakdown of credit exposures relevant for calculating the countercyclical buffer is shown in figure 4.11. The figure shows that the Bank is primarily exposed to Denmark, where the buffer increased from 0% to 2% in 2022.

Figure 4.11

Geographical breakdown of credit exposures

	2022		2021	
%	Exposure	Buffer rate	Exposure	Buffer rate
Denmark	98.0	2.0	96.8	0.0
Germany	1.1	0.0	1.1	0.0
Sweden	0.1	1.0	0.2	0.0
Norway	0.1	2.0	0.3	1.0
United Kingdom	0.1	1.0	0.1	0.0
USA	0.0	0.0	0.2	0.0
Other countries	0.6	0.0	1.4	0.0

The standard layout to be used for publishing information regarding compliance with the requirement as to a countercyclical capital buffer appears from "Additional Pillar 3 Disclosures Q4 2022 - EU CCyB1 and EU CCyB2".

4.7 Excess coverage relative to capital requirement

The excess capital coverage shows the amount of capital the Bank has in excess of the calculated requirements in the form of the own funds requirement, add-on to the solvency need and the combined buffer requirement.

Figure 4.12 shows that the CET1 capital requirement was 11.0% at end-2022, which equates to an excess coverage of 5.5%-points as the common equity tier 1 capital ratio was calculated at 16.4%. The excess coverage was thus DKK 3.3 billion at end-2022, which is DKK 1.2 billion lower than at end-2021. The reduction in excess coverage was primarily due to the re-establishment of the countercyclical capital buffer on Danish exposures in 2022, which has increased the combined capital buffer requirement.

Figure 4.12

Excess coverage relative to common equity tier 1 (CET1) requirement

DKKm/% of REA*	2022		2021	
Basic requirement of 4.5%	2,721	4.5	2,722	4.5
Add-on to solvency need	609	1.0	556	0.9
Combined buffer requirement	3,303	5.5	2,119	3.5
Capital requirement from additional tier 1 capital	0	0.0	0	0.0
Capital requirement from tier 2 capital	0	0.0	0	0.0
Capital requirement	**6,632**	**11.0**	**5,396**	**8.9**

Common equity tier 1 capital	9,930	16.4	9,872	16.3
Excess coverage	**3,298**	**5.5**	**4,476**	**7.4**

*) Risk Exposure Amount

Figure 4.13 shows that the total capital requirement at end-2022 was 15.3%. When calculating the excess coverage for the total capital requirement, excess additional tier 1 capital and tier 2 capital is deducted, as a result of which the excess coverage is calculated at 5.5%-points with a capital ratio of 20.9%.

Figure 4.13

Excess coverage relative to capital requirement

DKKm/% of REA*	2022		2021	
Minimum 8% requirement	4,837	8.0	4,838	8.0
Add-on to solvency need	1,082	1.8	988	1.6
Combined buffer requirement	3,303	5.5	2,119	3.5
Capital requirement	**9,222**	**15.3**	**7,945**	**13.1**
Own funds	12,662	20.9	12,558	20.8
Capital deducted from excess coverage	-142	-0.2	-137	-0.2
Excess coverage	**3,298**	**5.5**	**4,476**	**7.4**

*) Risk Exposure Amount

4.8 Leverage ratio

The leverage ratio is calculated as tier 1 capital relative to total risk exposure amount. Spar Nord has put in place procedures intended to mitigate the risk of excess leverage and to ensure identification, management and monitoring of its leverage exposure. In addition, methodologies have been developed to measure risks connected with excess leverage and other methodologies designed for assessing significant changes in leverage ratio.

The implementation of CRR II 30/6 2021 resulted in a 3.0% threshold, corresponding to a maximum leverage of about 33 times the tier 1 capital. Spar Nord complies with this target and with its own minimum target of 6.0% by a fair margin, as its leverage ratio was calculated at 9.7% at end-2022, as shown in figure 4.14. This calculation was made on the basis of the calculated own funds, which complies with the rules for a transitional IFRS 9 arrangement. Using a core capital calculated relative to a fully phased-in set of rules, the leverage ratio would be calculated at 9.5%.

The leverage ratio increase from 8.2% at end-2021 to 9.7% at end-2022 was driven primarily by a changed calculation method. Pooled assets were previously included in the exposure, which is not a regulatory requirement.

Figure 4.14

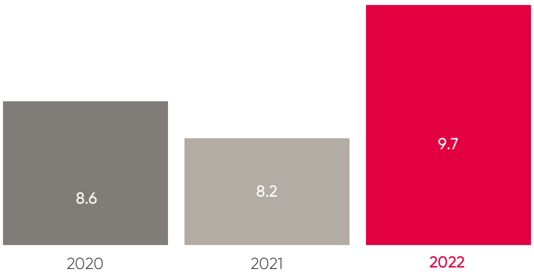
Leverage ratio

%	2022	2021
Leverage ratio – IFRS transitional arrangement	9.7	8.2
Leverage ratio – fully phased-in IFRS 9	9.5	8.1

Figure 4.15 shows the calculated leverage ratio for the period 2020-2022.

Figure 4.15

Leverage ratio



4.9 Minimum requirement for eligible liabilities

Pursuant to the Danish Financial Business Act, plans for winding up distressed banks are prepared by the Danish FSA and Finansiel Stabilitet. In connection with such plans, minimum requirements for eligible liabilities (MREL) must be defined.

The general resolution principle for SIFIs is that it should be possible to restructure them so they can be returned to the market with adequate capitalisation to ensure market confidence. BRRDII is an updated Bank Recovery and Resolution Directive implemented in Danish legislation at the end of 2020 and resulting in additional adjustments to the phasing in of the MREL requirement as from the beginning of 2022. The MREL requirement is divided into two components:

- Loss absorption amount: Determined as the solvency need
- Recapitalisation amount: Determined as the solvency need plus the combined buffer requirement with the exception of the countercyclical buffer requirement.

In addition, Spar Nord must comply with a special requirement equal to the combined buffer requirement. See section 4.6. At the beginning of 2023, the MREL requirement was phased in by 90% and will be fully phased in early 2024. The separate requirement has been fully phased in equal to the combined buffer requirement.

It is expected that the MREL in all material aspects will be met with convertible instruments ("contractual bail-in"), including common equity tier 1 capital 1, additional tier 1 and tier 2 capital, with a term to maturity of more than 12 months. In addition, capital defined as Senior Non-Preferred may be used. Senior Non-Preferred ranks ahead of the existing capital instruments (common equity tier 1 (CET1) capital, tier 1 and tier 2 capital), and must also have a term to maturity of more than 12 months.

Capital and solvency need

Figure 4.16

Issued Senior Non-Preferred (SNP) and Senior Preferred (SP)

DKKm	ISIN	Principal (DKKm)	Currency	Value (DKKm)	First call date	Maturity date
SP bonds	DK0030514559	750	DKK	750	15 May 2024	15 May 2025
SNP bonds	DK0030454129	1,350	DKK	1,350	5 December 2024	5 December 2025
SNP bonds	DK0030454202	400	DKK	400	5 December 2024	5 December 2025
SNP bonds	DK0030489349	800	SEK	535	26 May 2025	26 May 2026
SNP bonds	NO0011002602	950	NOK	672	26 November 2025	26 November 2026
SNP bonds	DK0030511886	350	SEK	234	09 March 2026	09 March 2027
SNP bonds	NO0012694316	200	NOK	141		09 September 2027
SNP bonds	NO0012694308	600	NOK	424		09 September 2027
SNP bonds	DK0030515606	650	SEK	435	01 December 2027	01 December 2028
SNP bonds	NO0012775487	724	NOK	512	08 December 2027	08 December 2028
SNP bonds	NO0011002537	750	NOK	530	26 May 2027	26 May 2028
SNP bonds	NO0011037434	500	NOK	353	30 June 2031	30 June 2032

It is also possible to comply with the requirement by partly using senior issues, always provided that the subordination requirement is complied with in accordance with BRRDII. In 2022, Spar Nord issued capital with Senior Preferred status.

Figure 4.16 provides an overview of Spar Nord's Senior Non-Preferred and Senior Preferred issues. As shown in the figure, the issues are distributed on 11 issues of Senior Non-Preferred in Danish, Swedish and Norwegian kroner.

- DKK issues total DKK 1.8 billion
- SEK issues total SEK 1.8 billion, equal to DKK 1.2 billion at end-2022
- NOK issues total NOK 3.7 billion, equal to DKK 2.6 billion at end-2022

In addition, the Senior Preferred issue amounted to DKK 750 million. At end-2022, Spar Nord had thus issued Senior Non-Preferred (SNP) bonds for DKK 5.6 billion and Senior Preferred for DKK 750 million. In 2023, the Bank expects to issue additional capital for about DKK 2 billion to meet the MREL requirement.

The subordination requirement defines the scope of how large a proportion of the capital base must be subordinated. Compliance with the separate requirement by way of the combined capital buffer requirement forms part of the compliance with the subordination requirement. The Danish FSA has set Spar Nord's subordination requirement at 23.3% at 1 January 2023, 23.8% at 31 March 2023 and 25.2% at 1 January 2024.

The Danish FSA has determined Spar Nord's MREL at 21.3% at 1 January 2023. Fully phased-in, the MREL has been determined at 22.8% at 1 January 2024. The MREL requirement is calibrated in an ongoing process so that the calibrated requirement is adjusted to applicable buffer requirements and the currently calculated solvency requirements. The calibrated MREL requirement at 1 January 2023 is higher than the requirement determined by the Danish FSA and is shown in figure 4.17.

On the basis of Spar Nord's total risk exposure amount at end-2022, the excess coverage with respect to the MREL requirement is calculated at DKK 2.5 billion, which equals an excess coverage of 4.2%-points relative to the calibrated MREL requirement at 1 January 2023. This is shown in figure 4.18. The requirement determined by the Danish FSA and the calibrated requirement were both met at 1 January 2023.

At 1 January 2023, the MREL requirement was calibrated at 21.8%, and the fully phased-in MREL requirement is calculated at 23.1%. The fully phased-in calibrated MREL requirement is also calculated at a higher amount than the requirement set by the Danish FSA.

Figure 4.17

MREL and buffer requirement – calibrated

%	01.01.2023	01.01.24
Solvency ratio	9.8	9.8
Requirement for loss-absorption amount	**9.8**	**9.8**
Solvency ratio	9.8	9.8
Capital conservation buffer requirement	2.5	2.5
SIFI buffer requirement	1.0	1.0
Phasing in	-1.3	0.0
Requirement for recapitalisation amount	**12.0**	**13.3**
Total MREL	**21.8**	**23.1**
Capital conservation buffer requirement	2.5	2.5
SIFI buffer requirement	1.0	1.0
Countercyclical buffer requirement	2.0	2.5
Total MREL and combined buffer requirement	**27.2**	**29.1**

Figure 4.18

Excess coverage, calibrated MREL requirement

DKKm/%	01.01.2023
Own funds	12,662
Non-preferred senior capital	5,562
Other MREL-eligible liabilities	750
Total capital	**18,974**
Deduction – separate combined buffer requirement	-3,303

Capital and solvency need

Total MREL-eligible liabilities	**15,671**
MREL and combined buffer requirement	16,454
MREL requirement	13,151
Excess coverage, MREL requirement	**2,520**
MREL and combined buffer percentage	31.4
NEP (%)	25.9
Excess coverage, MREL requirement in %-points	**4.2**

4.10 Internal ratings-based models

Spar Nord has applied internal models in its credit risk management for more than ten years, and since 2018 the Bank has worked intensively to prepare an application for permission to switch to the use of internal ratings-based models (IRB) for calculating risk exposure derived from credit risk.

The Bank currently employs the standard method for calculating its risk exposure. By using internal ratings-based models, the Bank may allocate more nuanced risk weights for its credit risk assets. Owing to the generally strong credit quality of Spar Nord's exposures, it is expected that Spar Nord may achieve lower risk weights, thus attaining a more appropriate capital application. These expected lower risk weights will contribute to underpinning the Bank's competitive strength going forward.

In 2023, Spar Nord expects to complete the strategic project, which is to pave way for implementing internal ratings-based models (IRB) in the Bank's internal management system and later form the basis of the Bank's calculation of credit risk exposure.

4.11 Future legislation

Bills have been published regarding new rules for calculating risk exposure, which have subsequently been amended after political negotiations. The new rules (CRRIII) will entail significant changes to the current practice.

CRR III will lead to regulatory changes in all areas related to the calculation of risk exposure.

- Credit risk
- Market risk
- Operational risk
- CVA (Credit Valuation Adjustment)
- Leverage ratio requirements for SIFI institutions
- Handling of IRB modelling

Spar Nord expects it must be able to handle new regulatory capital requirements concerning credit risk, market risk, operational risk and CVA at the beginning of 2025.

Section 5

Liquidity risk and funding

Developments in 2022

At end-2022, Spar Nord's liquidity situation remained solid. The LCR stood at 211% at end-2022, against 280% at end-2021. At end 2022, NSFR was calculated at 127%, against 125% in 2021.

At end-2022, Spar Nord's total funding amounted to DKK 94.5 billion, which is an increase of DKK 10.0 billion relative to 31 December 2021. Deposits at end-2022 accounted for 76% of total funding, thus remaining the Bank's most significant source of funding.

In 2022, Spar Nord issued capital market funding totalling DKK 3.0 billion. Overall, this brings the Bank's capital market funding to DKK 9.1 billion at end-2022.

LIQUIDITY COVERAGE RATIO (LCR)

211%

2021: 280%

NET STABLE FUNDING RATIO (NSFR)

127%

2021: 125%

ASSET ENCUMBRANCE RATIO

1.7%

2021: 2.2%

Definition of liquidity risk

Liquidity risk means that Spar Nord cannot meet its payment obligations while also meeting the statutory liquidity requirements. Moreover, a liquidity risk exists if the lack of financing/funding prevents Spar Nord from adhering to the adopted business model, or if Spar Nord's costs for procurement of liquidity rise disproportionately.

Spar Nord Bank is generally exposed to liquidity risks when lending, investment and funding activities result in a cash flow mismatch.

5.1 Liquidity and funding policy

The liquidity and funding policy determines Spar Nord's overall risk profile for liquidity risks and financing structure, as well as the overall organisational delegation of responsibilities in the liquidity area with a view to profitably supporting the business model.

The aim of the liquidity and funding policy is to ensure that the Bank has a liquidity risk that at all times bears a natural relation to Spar Nord's overall risk profile. In addition, the liquidity and funding policy is intended to ensure that the Bank continuously handles and manages its liquidity appropriately and is capable of meeting its payment obligations as and when due while complying with applicable legislation and supporting future activities and growth. Lastly, the policy is intended to ensure a financing structure that ensures a correlation between risk and price.

Spar Nord's objective is for the Bank's Liquidity Coverage Ratio (LCR) to amount to at least 125% in compliance with the regulation on LCR. The Bank has also defined a target of maintaining a Net Stable Funding Ratio (NSFR) above 105%. In addition, Spar Nord aims to stay below the liquidity benchmark threshold values in the Supervisory Diamond.

Section 5

Liquidity risk and funding

Figure 5.1

Liquidity management at Spar Nord

	Short-term liquidity management		Liquidity stress test	Management of funding sources and needs	Funding profile	Long-term liquidity management
Area	Management of intraday liquidity	Ratio 30-day rule	Liquidity stress test	Liquidity projection	Funding structure	Net Stable Funding Ratio
Management tool	Calculation of intraday liquidity	GAP analysis/ Simulation tool	GAP analysis/ projection	GAP analysis/ projection	GAP analysis	GAP analysis
Objective	Ensuring that, in the short operational term, the Bank will be able to meet its obligations at all times Ensure compliance with intraday liquidity	Ensuring that, in the short term (30 days), the Bank has adequate high-quality liquid assets to withstand a tough stress scenario Ensuring compliance with the Liquidity Coverage Ratio (LCR), see CRR	Ensuring that the Bank becomes aware in due time of future liquidity and refinancing risks Stress tests are prepared for a 12-month term	Ensuring that the Bank has a diversified and balanced funding structure and refinancing risk Ensuring that the Bank maintains an overview of future funding needs broken down by funding sources	Ensuring that the Bank has a funding structure that matches its risk appetite on the funding side	Ensuring that the Bank maintains a balance between available stable funding relative to the need for stable funding Ensuring compliance with the Net Stable Funding Ratio (as per CRR)
Determination of risk level	Decentralised instruction target	Decentralised instruction target	Decentralised instruction target	Decentralised instruction target	Decentralised instruction target	Decentralised instruction target
Transactional entity	Markets	Markets	Executive Board	Executive Board	Executive Board	Executive Board
Controlling entity	Market risk and liquidity	Market risk and liquidity	Market risk and liquidity	Finance and accounting	Finance and accounting	Market risk and liquidity
Reporting entity	Risk management	Risk management	Risk management	Risk management	Risk management	Risk management
Reporting frequency	Monthly	Monthly	Quarterly	Quarterly	Monthly	Quarterly

5.2 ESG

Spar Nord regularly considers ESG risk when placing excess liquidity, which is a significant activity to reduce the loss of market values due to environmental, social and governance-related factors. This is further described in section 7.

Furthermore, Spar Nord has established an ESG rating with rating agency Sustainalytics, which in connection with capital market issues provides an external foundation for dialogue about the Bank's ESG position with both existing and potential investors and lenders. Concurrently with these efforts, Spar Nord pays attention to various other providers of ESG ratings used by banks and asset managers for the screening of investment portfolios, and we are regularly in dialogue with these providers to ensure an accurate ESG rating of Spar Nord.

5.3 Management, monitoring and reporting

On the basis of the policies and objectives defined by the Board of Directors, the Executive Board has defined operational frameworks and specific limits for the liquidity function in the Trading Division, which is responsible for managing Spar Nord's short-term liquidity. Funding in the Finance & Accounts Department is responsible for managing and monitoring Spar Nord's long-term liquidity.

The Finance & Accounts Department is responsible for calculating, monitoring and checking that Spar Nord's liquidity risk does not exceed the allocated limits. The department regularly reports to the Executive Board, the Board of Directors and the Danish FSA.

Liquidity risk and funding

5.4 Short-term Liquidity

Spar Nord employs fixed models to monitor and manage the Bank's short-term liquidity, including the daily management of LCR and intraday liquidity as well as ongoing preparation of stress tests.

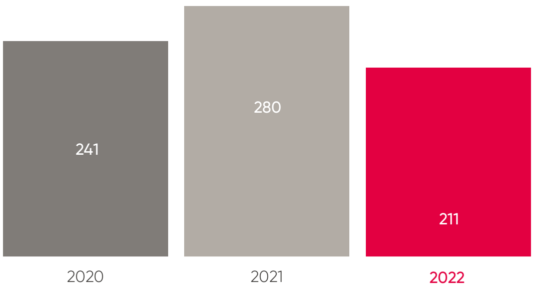
As shown in figure 5.2 and illustrated in figure 5.3, LCR was calculated at 211% at end-2022, which is well above the target LCR of at least 125%. The excess coverage of 86%-points relative to the target corresponds to DKK 12.0 billion in excess liquidity. Calculated relative to the statutory requirement of 100%, the excess liquidity amounted to DKK 15.5 billion. At end 2022, LCR was calculated at 280%.

Figure 5.2 shows that both the liquidity resources and the liquidity requirement has increased since end-2021. The LCR was thus lower because the liquidity requirement has increased by relatively more than the liquidity resources.

Figure 5.2
Liquidity Coverage Ratio (LCR)

DKKm	2022	2021
Liquidity resources	29,397	25,688
Liquidity Coverage Requirement	13,901	9,161
LCR (%)	**211**	**280**

Figure 5.3
Liquidity Coverage Ratio (LCR)
%



The liquidity reserve according to LCR basically consists of central bank reserves and government debt (Level 1A assets) and mortgage bonds offering high liquidity and high credit quality (Level 1B assets).

Reference is made to "Additional Pillar 3 Disclosures Q4 2022, EU LIQ1 and EU LIQB", regarding Liquidity Coverage Ratio.

5.5 Long-term liquidity

NSFR has been calculated and reported since the end of June 2021 in accordance with applicable legislation and is reported each quarter to the Danish FSA.

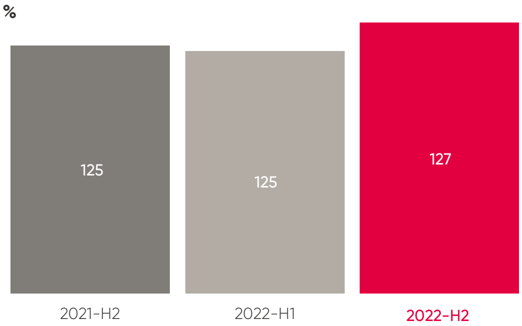
Figure 5.4 shows the calculation of NSFR, which is illustrated in figure 5.5. At end-2022, NSFR was calculated at 127%, which is comfortably above the Bank's target of 105%. The excess coverage of 22%-points relative to the target corresponds to DKK 17.6 billion in excess liquidity. Calculated relative to the statutory requirement of 100%, the excess liquidity amounted to DKK 21.6 billion.

Figure 5.4 shows that both available and required stable funding increased over the course of 2022. NSFR developments were thus explained by the fact that the available stable funding rose by relatively more than the required stable funding.

Figure 5.4
Net Stable Funding Ratio (NSFR)

DKKm	2022	2021
Available stable funding (ASF)	100,291	96,290
Required stable funding (RSF)	78,724	76,978
NSFR (%)	**127**	**125**

Figure 5.5
Net Stable Funding Ratio (NSFR)
%



The increase in the liquidity procurement under Available stable funding was driven mainly by deposit growth during the period and additional issues of MREL capital. The increase in liquidity has primarily financed an increase in lending and a higher bond portfolio under Required stable funding.

Reference is made to "Additional Pillar 3 Disclosures Q4 2022, EU LIQ2", regarding Net Stable Funding.

Liquidity risk and funding

5.6 Stress test

In accordance with the Executive Order on Management and Control of Banks etc., Spar Nord prepares internal liquidity stress tests based on LCR. The stress tests span a 12-month period and are calculated using three permanently defined scenarios: a business-specific, a market-specific and a mixed scenario. All scenarios are calculated without any management intervention. The stress tests prepared have lived up to the Bank's internal targets throughout the period.

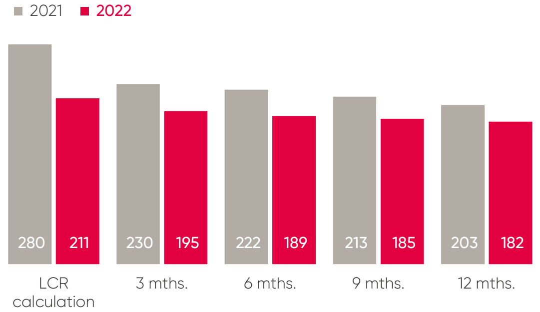
Figure 5.6 and figure 5.7 show the result of a liquidity projection in a severe stress scenario, in which Spar Nord operates with a 3-month survival period in its liquidity management. In addition to money and capital market funding falling due, the stress scenario includes a massive stress on the deposit base, continued lending growth and stress on the bond portfolio.

At end-2022, the projection in figure 5.6 shows that liquidity resources will be reduced by DKK 10 billion over the 12-month projection period, and figure 5.7 also shows that in a severe stress scenario the Bank complies with the LCR statutory requirement in the full 12-month projection period.

Figure 5.6
Run-off of liquidity resources in a severe stress scenario

	Liquidity resources		Accumulated run-off	
DKKm / %	**2022**	**2021**	**2022**	**2021**
Calculation period	29,397	25,688		
3 months	23,838	22,258	-18.9	-13.4
6 months	21,930	21,179	-25.4	-17.6
9 months	20,581	19,785	-30.0	-23.0
12 months	19,388	17,976	-34.0	-30.0

Figure 5.7
LCR projected in a severe stress scenario
%

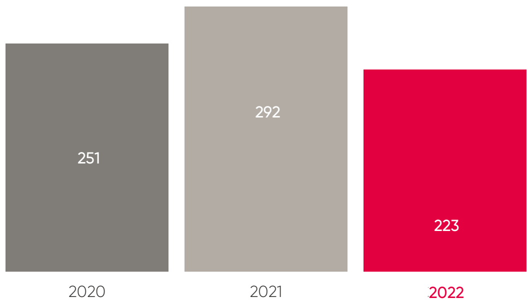


5.7 Liquidity indicator

The liquidity indicator of the Danish FSA, which is a part of the Supervisory Diamond, is based on a projected version of LCR using an adjusted calculation of the liquidity resources, while the time horizon for the liquidity requirement is extended to cover the period up to 3 months inclusive.

Since the liquidity indicator was implemented, Spar Nord has realised a level notably above the 100% requirement, as witnessed by the historical comparison in figure 5.8.

Figure 5.8
Liquidity indicator
%



5.8 Funding and maturity structure

Spar Nord's operations are predominantly funded through four funding sources:

- Customer deposits
- Loans or repo transactions from other credit institutions and Danmarks Nationalbank (the central bank)
- Issued bonds and senior loans, including Senior Non-Preferred and Senior Preferred
- Subordinated debt and equity

Spar Nord's funding structure is shown in figure 5.9. From an overall perspective, the Bank's funding at end-2022 increased by DKK 10.0 billion to DKK 94.5 billion compared with end-2021. The most important change in Spar Nord's funding structure is an increase in deposits of DKK 8.4 billion. Deposits remain Spar Nord's largest source of funding, and at end-2022 it represented 76% of Spar Nord's total funding.

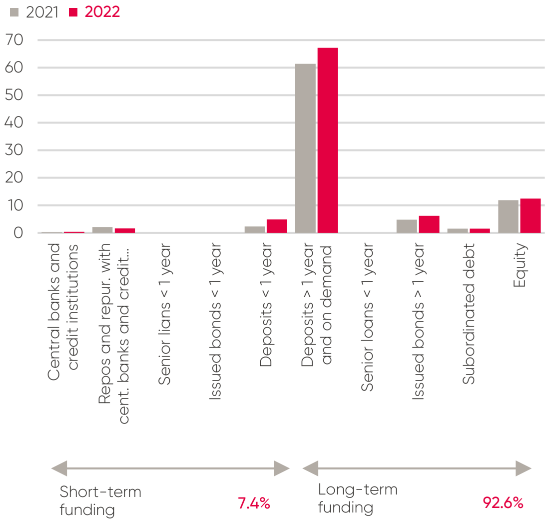
Figure 5.9
Funding structure

DKKm/%	**2022**	**2021**	**2022**	**2021**
Central banks and credit institutions	354	267	0.4	0.3
Repos and repurchases with central banks and credit institutions	1,722	2,185	1.8	2.6
Senior loans < 1 year	0	0	0.0	0.0
Issued bonds < 1 year	0	0	0.0	0.0
Deposits < 1 year	4,935	2,363	5.2	2.8
Deposits > 1 year and on demand	67,234	61,412	71.1	72.7
Senior loans > 1 year	0	0	0.0	0.0
Issued bonds > 1 year	6,216	4,845	6.6	5.7
Subordinated debt	1,597	1,523	1.7	1.8
Equity	12,469	11,924	13.2	14.1
Total	**94,527**	**84,519**	**100.0**	**100.0**

Liquidity risk and funding

As shown in figure 5.10, Spar Nord's total long-term funding (deposits on demand and funding with a term to maturity of more than 12 months) amounted to 92.6% at year-end 2022, which is close to the level of year-end 2021.

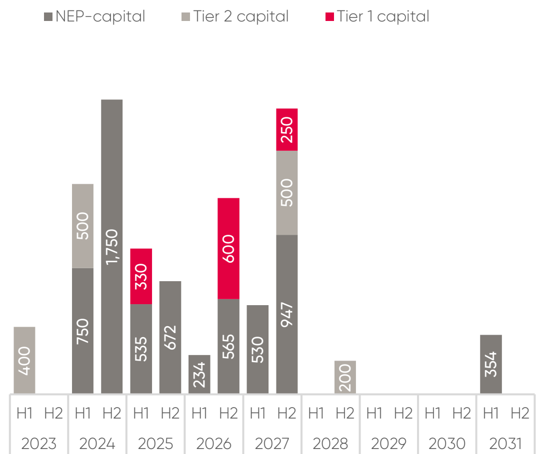
Figure 5.10
Funding structure
DKKbn



The work to ensure a balanced future maturity structure on capital market funding represents a key element in the Bank's management of long-term liquidity and funding risk.

Figure 5.11 shows the Bank's maturity structure for capital market funding at end-2022. The maturity structure was prepared based on first call date for tier 2 capital and additional tier 1 capital and one year to final maturity for MREL capital.

Figure 5.11
Maturity structure for capital market funding
DKKm



5.9 Contingency liquidity plan

Spar Nord has prepared a liquidity contingency plan pursuant to the Danish Executive Order on Management and Control of Banks. This plan contains a catalogue of possible courses of action for strengthening liquidity in a critical situation. The catalogue contains a more detailed description of the expected impact and time span of the individual actions.

The liquidity contingency plan is applied if Spar Nord can only meet the predetermined liquidity guidelines with difficulty and with resulting sharply increased funding costs.

5.10 Encumbered assets

Assets encumbrance may constitute a funding risk if Spar Nord has many encumbered assets relative to its balance sheet total. Extensive asset encumbrance may also have a negative impact on the potential for procuring unsecured financing, as increased asset encumbrance contributes to deteriorate the position of this type of creditors.

As part of its business model, Spar Nord has been active in the money and derivatives market for many years, for which reason a proportion of the Bank's assets will regularly be encumbered. They may serve as collateral on procurement of funding through repo transactions or as collateral for market values related to interbank derivatives transactions. Moreover, the Bank provides collateral for numerous other purposes, including clearing activities.

The primary sources of asset encumbrance are:

1. Encumbrance triggered by activities in the securities market:
   - Repo and reverse repo agreements
   - Repurchase transactions with Danmarks Nationalbank
   - Securities lending
2. Collateral for derivative transactions:
   - CSA collateral for the market value of derivative transactions
   - CSA collateral for the clearing of derivative transactions
3. Other assets:
   - Collateral furnished with clearing systems
   - Paid-in margins and default funds
   - Offsetting, cf. netting agreements
   - Security provided for mortgage loans

The primary collateral received derives from reverse repo agreements, which is lending against security – most often Danish mortgage bonds.

Figure 5.12 shows the asset encumbrance ratio at year-end and an average for 2022 and 2021.

Figure 5.12

Asset encumbrance ratio

	End of year		Average	
DKKm	**2022**	**2021**	**2022**	**2021**
Encumbered assets	2,323	2,847	2,825	2,214
Assets and collateral	136,825	131,431	133,740	127,390
Asset encumbrance ratio	**1.7**	**2.2**	**2.1**	**1.7**

The asset encumbrance ratio amounts to 1.7% of the total assets plus collateral received that can form the basis for encumbrance in 2022. This is 0.5 of a percentage point lower than in 2021, when the asset encumbrance ratio was 5.0%.

Reference is made to “Additional Pillar 3 Disclosures Q4 2022, EU AE1, EU AE2, EU AE3 and EU AE4”, regarding encumbered assets.

5.11 Rating

Throughout 2022, Spar Nord had an unchanged rating from rating agency Moody’s, which most recently on 20 January 2023 reaffirmed the rating with an updated credit opinion.

Spar Nord has the following stable outlook ratings:

- Baseline credit assessment: baa1
- Bank deposit rating: A1 / P-1
- Senior unsecured: A1
- Senior Non-Preferred: A3

Section 6

Credit risk

Developments in 2022

Spar Nord experienced an increase in gross lending of DKK 6.3 billion excl. reverse repo agreements in 2022. The increase covers an increase of DKK 1.8 billion to retail customers and DKK 1.4 billion in leasing loans as well as a DKK 3.1 billion increase in loans to business customers, including public-sector entities and financial customers.

Growth in the retail customer segment was driven mainly by growth in bank mortgage loans. The increase in business customer loans was mainly driven by drawings on operating credit lines.

Total impairment and provisions increased by DKK 75 million to DKK 1.7 billion in 2022, of which management estimates represent an increase of DKK 38 million. Most of the management estimates relate to macroeconomic uncertainties in the form of inflation, weak growth and property prices totalling DKK 434 million, out of total estimates of DKK 574 million.

Total facilitation of mortgage loans fell marginally by DKK 0.7 billion (0.7%) in 2022 to stand at DKK 111.1 billion. The reduction was driven by high remortgaging activity with capital gains and the fact that Spar Nord has recorded growth in its own bank mortgage loans.

The total profit impact from losses and impairment charges was an expense of DKK 78 million in 2022.

Definition of credit risk

Credit risk is the risk of loss as a result of borrowers or other counterparties defaulting on their payment obligations, including the risks attaching to customers in financial difficulty, risks relating to large exposures, concentration risks and risks attaching to granted, unutilised credit lines.

Credit risk also includes settlement and counterparty risk. Settlement risk is the risk arising when payments are settled, such as payments in respect of currency transactions and transactions in financial instruments. The risk arises when Spar Nord transfers payments before it has attained full assurance that the counterparty has met all its obligations. Counterparty risk is the risk of loss resulting from a customer's default on derivatives and securities financing instruments.

RISK EXPOSURE, CREDIT

DKK 50.1 billion

2021: DKK 50.2 billion

LOANS EXCL. REVERSE REPO AGREEMENTS (GROSS)

DKK 56.9 billion

2021: DKK 50.6 billion

IMPAIRMENT RATIO (IMPACT ON OPERATIONS)

0.11%

2021: -0.15%

IMPAIRMENT RATIO ON LOANS, ADVANCES AND GUARANTEES EXCL. REVERSE REPO AGREEMENTS

2.4%

2021: 2.3%

NPL ratio

2.3%

2021: 2.8%

SUSPENDED-INTEREST LOANS

0.3%

2021: 0.4%

UNSECURED SHARE (EXCL. REVERSE REPO AGREEMENTS)

26.5%

2021: 27.7%

Section 6

Credit risk

6.1 Credit policy

Spar Nord's overall credit risk is controlled on the basis of its credit policy, which is determined by the Board of Directors. The pivotal objective of the credit policy is to ensure that earnings and risks are balanced, and that the assumption of risk is always quantified in advance.

Spar Nord aims to develop long-term relationships with customers and does not want to use risk tolerance as a competitive parameter. The Bank only wants to conclude transactions that conform to good banking practice and do not jeopardise the Bank's reputation or professional image.

It is the Bank's policy that credit must always be granted on the basis of insight into the customer's financial position and that credit quality is a key parameter in all customer relations. In addition, the Bank applies the basic rule of not granting loans and credit facilities based on collateral alone.

6.1.1 Targets and limitations

In the efforts to ensure sound risk diversification of the Bank's credit exposure, a number of internal credit targets and limitations have been defined.

Limitations to the size of individual exposures have been determined on the basis of the following rules:

- Exposure is capped at DKK 750 million for exposure groups within the same legal entity with more stringent requirements for collateral to secure exposure amounts exceeding DKK 500 million. The unsecured share in the exposure group must not exceed DKK 250 million.
- Exposure is capped at DKK 1 billion for exposure groups consisting of customers who, financially, legally and in terms of risk, are independent of each other and are only affiliated because of a common administrative body. The unsecured share in the exposure group must not exceed DKK 250 million, and individual exposures in the group must not exceed the limits set out in the first bullet.
- For customers subject to supervision by the Danish FSA, exposure is capped at DKK 1 billion.

The statutory limitations apply to trading partners in the financial sector with an external credit rating at investment grade level.

In determining the amount of exposure, generally accepted credit risk adjustments are made, as appears from the section regarding large exposures in the CRR Regulation.

Spar Nord does not aim to increase its exposure to such an extent that the customer would not be naturally creditworthy in other banks.

Spar Nord has defined a target that the sum of the 20 largest exposures must not account for more than 150% of the Bank's common equity tier 1 capital, which at end-2022 was calculated at DKK 9.9 billion. See figure 4.6 in section 4.

To ensure an adequately diversified customer portfolio and prevent large concentration risks in individual industries, targets have been set for the maximum share of loans, advances and guarantees excl. reverse repo agreements to selected industries, as shown in figure 6.1.

Figure 6.1

Maximum share of loans, advances and guarantees excl. reverse repo agreements

%	Maximum share
Agricultural sector	10
Property sector	15
of which speculative property financing *	5
Financing and insurance	10
Industry and raw materials development	10
Trade	15
Energy supply	10

* CRR 575/2013 Article 4(79)

The Bank has defined a target policy that business customers' share of total loans, advances and guarantees excl. reverse repo agreements cannot exceed 70%. There is no upper limit for retail customers' share of total loans, advances and guarantees because a high proportion of loans, advances and guarantees to retail customers is considered a strength in terms of credit risk.

6.1.2 ESG risk

Spar Nord's credit granting is always made based on a pre-calculated risk assessment in accordance with the customer's interests and abilities to comply with any obligations undertaken, against appropriate collateral and with due consideration to environmental, social and governance (ESG) issues.

ESG risk is an inherent credit risk assessed together with other credit factors. Assessments of especially governance factors have always formed a part of the basic credit assessment of business customer exposures. Driven by both new ESG regulation and the current climate crisis, the inclusion of physical and transitional risks related to climate change is also an important assessment of the credit risk – both in relation to the individual customer, but also at portfolio level.

Businesses with significant CO2e emissions will face special market terms and conditions, more stringent regulatory requirements and an increased requirement to invest in climate measures. Climate challenges may affect the robustness of a business and will potentially impair its earnings capacity and growth opportunities. Other things being equal, this could limit the creditworthiness of a business. Companies applying a more environmentally sustainable profile are estimated to potentially have a better foundation for tackling any challenges imposed by rising climate considerations.

In 2022 and 2023, the Bank's corporate advisers and corporate specialists will improve their ESG capabilities by getting access to tools that enable them to start engaging with customers about sustainability. These customer dialogues are used for example to assess any significant ESG-related credit risks.

As of January 1st 2023, the Bank will start to report on Pillar III ESG risks, initially focusing on physical and transition risks for residential buildings and industries with the highest CO2e emissions.

6.2 Credit risk management

Spar Nord's business model builds on decentralised decision-making powers. In a decentralised effort, customer advisers, where relevant in consultation with relationship managers in retail and business banking, handle the day-to-day management of Spar Nord's credit risks. Most of the credit process in the form of granting of large credits, risk signals, rating and the impairment process is centrally managed.

Spar Nord's impairment charges are calculated in accordance with the IFRS 9 accounting standard. See the Annual Report 2022 for a review.

6.2.1 Credit granting process

Spar Nord's credit granting hierarchy is structured so as to support local autonomy while ensuring centralised management and insight into large exposures and/or more risky exposures. The credit granting hierarchy is illustrated in figure 6.2.

Figure 6.2

Credit granting structure for existing and new customers

	Credit granting limits for existing customers and new retail customers	Credit granting limits for new business customers
Local Banks	DKK 10 million	DKK 5 million
Credit Department	DKK 50 million	DKK 25 million
Credit Committee	DKK 100 million	DKK 50 million
Board of Directors	> DKK 100 million	> DKK 50 million

As shown in figure 6.2, the credit granting authority for new business customers is generally capped at half the authority for existing customers and new retail customers.

The cap in the decentralised credit granting authority is DKK 10 million for existing customers and new retail customers and DKK 5 million for new business customers. The actual decentralised credit granting authority depends on the individual local managers' ability and requirements with respect to the customer base. At the same time, the decentralised credit granting authority is graded according to the credit quality of the individual customer based on a central rating score for existing customers or application score for new customers. The weaker the credit quality, the lower the decentralised credit granting authority. If the local manager is not present, they may delegate their authority to specific middle-managers or employees.

If a credit facility exceeds the local loan approval limits, it will be passed on and dealt with by the Credit Department, the Credit Committee or the Board of Directors, as shown in figure 6.2.

6.2.2 Rating system

For several years, Spar Nord has used proprietary statistically based rating models to risk-categorise all customers. The models categorise customers according to the calculated probability of default within the next 12 months, i.e. that the individual customer fails to meet their obligations towards the Bank.

The risk categorisation based on ratings is used in early warning processes, in the Bank's impairment process (IFRS 9), for managing overdrafts and for pricing purposes to help ensure a correlation between the risk assumed by the customer and the price paid.

The probability of default is estimated on the basis of statistical models adapted to the individual customer segment. On the basis of this probability, customers are classified into rating categories from 1 to 8, with category 8 containing customers with the highest risk of default.

Customers with objective evidence of impairment (OEI) with no breach of contract or need for writedown in the most likely scenario are placed in rating category 9, while OEI customers with a need for impairment and other customers in default are placed in rating category 11. The remaining customers with exposures that have still not been rated and customers who exclusively have unutilised credit facilities or only have guarantees, are placed in the "Unrated" rating category.

The rating model is generally based on three components, the first two of which are included in the retail customer model and all three in the business customer model.

- A behavioural component that classifies the customer based on its account behaviour and credit history.
- A cyclical component that adjusts the risk classification to current and expected cyclical developments.
- An accounting component used to risk-classify the customer based on its most recent financial statements.

The structure of the behavioural and cyclical components depends on the customer segment.

New business customers are classified based on the accounting and cyclical components during the first sixth months, after which time the behavioural component is also applied in the overall rating.

New retail customers are risk-classified according to an application scoring model that is based on classical credit performance indicators, such as assets, pay, debt factor and disposable income. This model is based on a combination of a statistical and an expert model. An application score is active for six months, after which the statistical model takes over.

In addition to the above-mentioned models, Spar Nord applies a qualitative risk classification, in which the Spar Nord adviser flags the credit quality as weak if a customer shows signs of default risk. For retail customers, these signs of default risk may for instance be divorce, unemployment repeated unauthorised overdrafts or critical illness. For business customers, the signs of default could be earnings challenges, mistrust in management, the loss of key employees, repeated unauthorised overdrafts or loss of major supplier agreements and customers. Customers flagged as having a weak credit quality are reviewed at least once a year.

Retail customers flagged as having a weak credit quality but are not in default will automatically be downgraded by one rating category; However, a customer flagged as having a weak credit quality can never be placed in one of the two best rating categories (1 and 2).

Business customers are divided into two categories, customers flagged as having a weak credit quality and customers not flagged, and rated separately using two different models. While both models are based on the same components, the result of the rating calculation in the model for customers flagged as having a weak credit quality will lead to a weaker rating.

If the adviser or another person believes that the rating of a major business customer with an exposure in excess of DKK 10 million does not reflect their true creditworthiness, for example due to inefficiencies in the data or otherwise, a process will be identified to evaluate and, where relevant, change the rating (rating override).

6.2.3 Debt collection

Loan transactions involve the risk that the borrower is unable to repay the loan. In a small number of cases, the customer's inability to pay persists and Spar Nord's collateral is insufficient to cover the risk of loss. In these situations, the unrecoverable part of the debt is written off.

Customers whose debts have been written off will be further processed in Spar Nord's collection department, which pursues the claim if the customer's financial situation changes and they have a possibility of settling all or parts of the outstanding debt.

In 2022, DKK 107 million was written off (2021: DKK 131 million), of which DKK 88 million (2021: DKK 107 million) is still the object of collection efforts.

6.2.4 Monitoring and reporting

The risk management function performs the overall monitoring of credit risk exposure. This monitoring covers a range of activities, including credit quality control of new exposures, credit reviews in the local banks, verification of credit policy compliance, document and credit granting control and analyses of customer advisers' portfolios. These activities are regularly supplemented with relevant thematic reviews.

New exposures to existing and new customers are systematically screened in order to analyse credit quality and risk for the customers in question. This is supplemented with sample tests.

A credit review is made in the local banks, where customers are selected for review to ensure adequate credit quality. Moreover, the Bank performs a document and credit granting control to check that all relevant financial information about the customer has been obtained and that collateral security has been correctly registered.

Analyses of customer advisers' portfolios are made centrally to ensure that no adviser undertakes risks that exceed the Bank's defined risk tolerance. These analyses are shared with the local area managers, who are contacted if the analyses give rise to concern.

Developments in the above monitoring activities are reported at the Bank's quarterly credit quality meetings, at which the Executive Board, the Credit Department and the risk management function are represented. Furthermore, the results of the monitoring activities are reported and processed in the Bank's Risk Committee and the Board of Directors.

Credit risk

Figure 6.3

Composition and development in overall credit mediation excl. reverse repo agreements

	2022			2021		
DKKm	Retail customers	Business customers	Total	Retail customers	Business customers	Total
Loans and advances excl. reverse repo transactions	20,711	36,187	56,898	18,858	31,748	50,606
Guarantees	8,673	3,719	12,392	13,402	4,225	17,628
Loans, advances and guarantees	29,385	39,905	69,290	32,260	35,973	68,234
Unutilised credit facilities	9,753	15,341	25,095	10,633	16,300	26,932
Mortgage loan facilitation	97,120	14,024	111,144	97,870	14,015	111,885
Total credit mediation	**136,258**	**69,271**	**205,529**	**140,763**	**66,288**	**207,051**

6.3 Credit risk developments

Spar Nord's total credit mediation break down into loans, advances and guarantees excl. reverse repo agreements, unutilised credit facilities and facilitated mortgage loans, as illustrated in figure 6.3. Total credit mediation amounted to DKK 205.5 billion at end-2022, which is a DKK 1.5 billion decrease compared with end-2021. The decline, which is explained in the sections below, includes substantial growth in lending, which is offset by a drop in the volume of guarantees and unutilised credit facilities.

Of the total credit mediation, business customers accounted for DKK 69.3 billion and retail customers DKK 136.3 billion at end-2022. Credit mediation for retail customers thus declined by DKK 4.5 billion in 2022, primarily because of a sharp drop in the volume of guarantees. Credit mediation for business customers rose by DKK 3.0 billion, driven primarily by growth in lending excl. reverse repo agreements.

Unutilised credit facilities amounted to DKK 25.1 billion at end-2022, which is DKK 1.8 billion less than at year-end 2021. Of the unutilised credit facilities, retail customers accounted for DKK 9.8 billion and business customers DKK 15.3 billion, and there was a fall for both customer groups in 2022.

A significant part of the credits consists of mortgage credit facilitation through Spar Nord's collaboration partners Totalkredit and DLR-Kredit. Most of these activities are Totalkredit mortgage loans to retail customers.

Figure 6.4 shows the correlation to the credit exposure for financial reporting purposes which includes loans in the form of reverse repo agreements. In the following sections, all figures are excluding loans in the form of reverse repo agreements. Reverse repo agreements amounted to DKK 10.5 billion in 2022.

Figure 6.4

Credit exposure on acquired exposures, provisions and fair value adjustment for financial reporting purposes

DKKm	2022	2021
Lending, reverse repo agreements	10,510	12,850
Lending, banking and leasing activities	55,296	49,086
Loans, advances and other receivables at amortised cost	**65,806**	**61,936**
Guarantees	12,342	17,566
Net credit exposure relating to loans, advances and guarantees	**78,148**	**79,502**
Impairment of loans and provisions against guarantees, etc.	1,652	1,582
Gross credit exposure relating to loans, advances and guarantees	**79,800**	**81,084**
Cash balances and demand deposits with central banks	1,893	1,855
Balances at notice with the central bank	0	0
Reverse repo transactions with credit institutions	1,620	1,515
Due from credit institutions and central banks	1,126	971
Credit exposure for financial reporting purposes lending activities	**82,787**	**83,842**
Positive fair value of derivatives, etc.	444	542
Credit exposure relating to assets in the trading book	25,509	19,169
Assets in strategic business partners	1,647	1,678
Associates	736	663
Credit exposure for financial reporting purposes	**111,123**	**105,893**

Credit risk

Figure 6.5

Loans, advances and guarantees excl. reverse repo agreements by industry

DKKm/ %	2022				2021			
	Loans and advances	Guarantees	Loans, advances and guarantees	Share	Loans and advances	Guarantees	Loans, advances and guarantees	Share
Public authorities	1,356	2	1,358	2.0	1,257	2	1,259	1.8
Agriculture, hunting and forestry	2,490	313	2,802	4.0	2,466	277	2,743	4.0
Fisheries	86	6	93	0.1	109	4	114	0.2
Industry and raw materials extraction	3,173	493	3,666	5.3	2,700	355	3,055	4.5
Energy supply	2,070	89	2,159	3.1	1,768	74	1,842	2.7
Building and construction	2,652	454	3,106	4.5	2,422	571	2,993	4.4
Trade	4,583	394	4,977	7.2	3,734	457	4,191	6.1
Transport, hotels and restaurants	2,955	210	3,165	4.6	2,643	254	2,897	4.2
Information and communication	292	38	330	0.5	301	88	389	0.6
Financing and insurance	3,939	530	4,469	6.4	3,682	457	4,139	6.1
Real estate	7,427	774	8,200	11.8	6,167	1,176	7,343	10.8
Other business areas	5,165	415	5,580	8.1	4,499	509	5,008	7.3
Business customers, total	36,187	3,719	39,905	57.6	31,748	4,225	35,973	52.7
Total retail customers	20,711	8,673	29,385	42.4	18,858	13,402	32,260	47.3
Total	**56,898**	**12,392**	**69,290**	**100.0**	**50,606**	**17,628**	**68,234**	**100.0**

6.3.1 Loans, advances and guarantees

Spar Nord's loans, advances and guarantees excl. reverse repo agreements totalled DKK 69.3 billion at end-2022, as shown in figure 6.5, consisting of loans and advances of DKK 56.9 billion and guarantees of DKK 12.4 billion. Loans and advances increased by DKK 6.3 billion, or 12.4%, in 2022, while guarantees were reduced by DKK 5.2 billion, or 29.7%. The substantial reduction in guarantees was ascribable primarily to lower housing market activity. Overall, Spar Nord's loans, advances and guarantees increased by 1.5% relative to 2021.

Loans and advances primarily consist of housing loans for retail customers and loans for businesses within a broad range of industries, as shown in figure 6.5, which means the Bank has a well-diversified loan portfolio with no specific concentrations in specific industries.

As shown in figure 6.5, retail customers accounted for 42.4% and business customers for 57.6% of Spar Nord's loans, advances and guarantees excl. reverse repo agreements in 2022, with real estate, other business areas and trade representing the three largest industries. At end-2021, the distribution in loans, advances and guarantees excl. reverse repo agreements between retail and business customers was 47.3% and 52.7%.

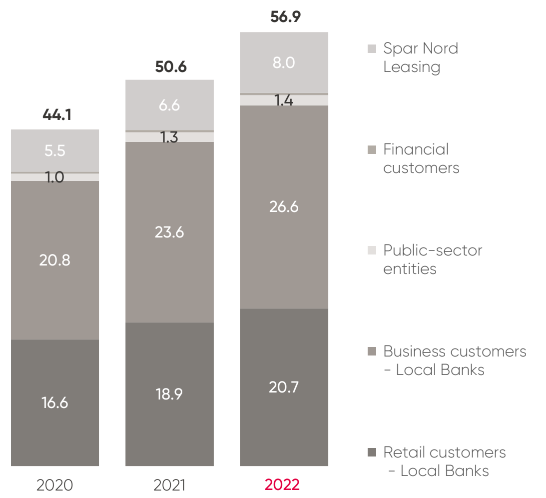
Loans and advances can generally be broken down into five customer groups, as illustrated in figure 6.6, of which the two largest groups, which account for 83.1% of loans and advances, are retail and business customers with Spar Nord's Local Banks. A growing share of lending derives from Spar Nord Leasing, in which most customers are business customers. At end-2022, leasing loans amounted to DKK 8.0 billion, which is an increase of 21.1% on 2021. Moreover, the Bank has a small portfolio of loans to public-sector entities and financial customers.

Loans and advances to retail customers amounted to DKK 20.7 billion at end-2022, which is a significant portion (36.4%) of total loans and advances of DKK 56.9 billion. Retail customer loans and advances have developed favourably over the past three years due to the acquisition of BankNordik's Danish business in 2021 and organic growth through existing and new local banks.

Business customers excl. public-sector entities and leasing amounted to DKK 26.6 billion in 2022, as shown in figure 6.6, which is an increase of DKK 3.0 billion on 2021.

Figure 6.6

Loans and advances excl. reverse repo agreements by category



Credit risk

6.3.2 Concentration risk

A significant objective of Spar Nord's risk management in the credit area is to ensure sufficient diversification to avoid large concentrations in specific industries, geographical areas or individual customers.

Spar Nord's credit policy lays down limits for the maximum share of loans, advances and guarantees excl. reverse repo agreements for selected industries, see figure 6.1.

Figure 6.5 shows that the share of loans, advances and guarantees to specific industries are within the Bank's own targets and the legislative requirements as per the Supervisory Diamond.

Figure 6.7 shows loans, advances and guarantees by exposure size. The figure shows that Spar Nord generally has a broad customer composition with a large number of small customers, but also a substantial proportion of large customers. The figure illustrates that more than half of total loans, advances and guarantees are attributable to customers with less than DKK 10 million in loans, advances and guarantees and that the Bank has 61 customers with loans, advances and guarantees of more than DKK 100 million.

Figure 6.7

Loans, advances and guarantees by exposure size* by customer group

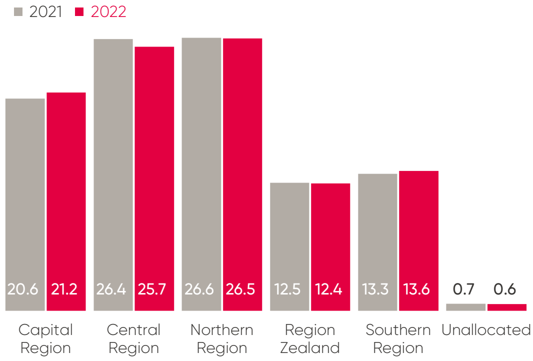
	Number		Share	
Number/%	**2022**	**2021**	**2022**	**2021**
DKK 0 - 0.1 million	52,642	53,625	0.9	0.8
DKK 0.1 - 0.5 million	37,895	39,995	9.8	10.4
DKK 0.5 - 1 million	14,529	16,582	10.9	12.6
DKK 1 - 5 million	11,068	11,187	26.3	27.3
DKK 5 - 10 million	1,107	1,192	8.7	9.5
DKK 10 - 20 million	453	478	7.1	7.5
DKK 20 - 50 million	306	275	10.9	9.8
DKK 50 - 100 million	99	93	8.1	7.6
>DKK 100 million	61	57	17.4	14.5
Total	**118,160**	**123,484**	**100.0**	**100.0**

*) Excl. reverse repo agreements and SparXpres

Figure 6.8 shows the geographical breakdown of the credit portfolio. At end-2022, the Northern Region accounted for 26.5% of total loans, advances and guarantees. The large concentration in Northern Jutland is due to the Bank's origins in this region.

Figure 6.8

Loans, advances and guarantees broken down by region (%)



6.3.3 Rating developments

As described in section 6.2.2, Spar Nord has a rating system that contributes to risk-classify the Bank's customers, with the lowest risk levels found in the lowest rating categories (1-3).

In 2021 and 2022, the Bank's rating models were affected by profound macroeconomic uncertainty. The high level of uncertainty has caused substantial fluctuations in the cyclical component of the models, especially in the business customer segment, which has resulted in a deterioration of the general rating level for both retail and business customers.

In spite of the deteriorated rating level, overall customer credit quality levels are not considered to be notably lower in 2022 because the other model components have been stable.

The following sections provide more details on rating developments for Spar Nord's retail and business customers.

Retail customers

The rating level for Spar Nord's retail customers deteriorated over the course of 2022, primarily due to developments in the cyclical component of the rating model, which reflects the macroeconomic outlook.

The average rating for Spar Nord's retail customers since 2020 is shown in figure 6.9. The figure shows that the average rating has increased from 2.3 at end-2021 to 2.6 at end-2022, which expresses a deterioration of the rating level.

Figure 6.9

Retail customers: Average rating*

	2022	**2021**	**2020**
Average rating	2.6	2.3	2.2

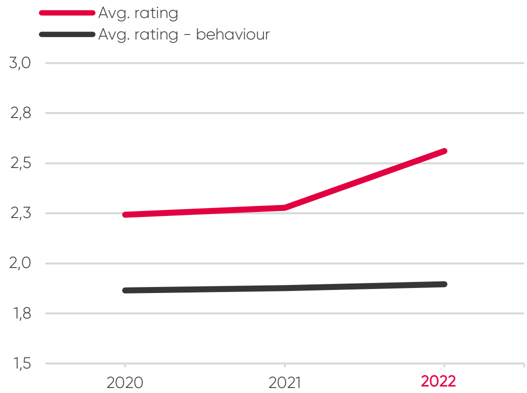
*) Loans, advances and guarantees excl. reverse repo agreements and SparXpres

Credit risk

Figure 6.10 illustrates developments in the average rating from the behavioural component and the overall rating for retail customers. As shown in the figure, customers' behavioural rating is largely unchanged in 2022, whereas the overall rating deteriorated.

Figure 6.10

Average rating and average behavioural rating for retail customers



*) Loans, advances and guarantees excl. reverse repo agreements and SparXpres

Figure 6.10 shows that retail customer behaviour was relatively stable, and developments in the average rating are therefore driven mainly by the cyclical component. The cyclical component encompasses a range of soft (expectations-based) macroeconomic indicators, which were very volatile in 2022 due to generally higher macroeconomic uncertainties.

Figure 6.11 shows total loans, advances and guarantees to retail customers by rating category over the past three years. The figure shows that most of the retail customers are still placed in the best rating categories (1-3), but that the retail customer exposure has generally migrated to rating categories with an expected higher risk in 2022.

Figure 6.11 shows that 76% of the retail customer exposures are in the best rating categories from 1 to 3. Rating categories 4-5 cover 16% of the retail customer exposures, where the last part is distributed on the most risky rating categories 6-9 and exposures that are in default or have not yet received a rating.

Figure 6.11

Exposures to retail customers by rating categories excl. SparXpres

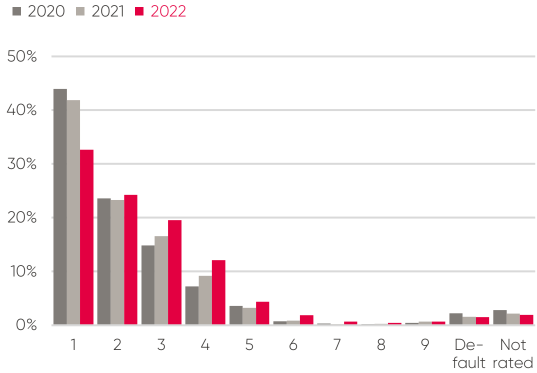
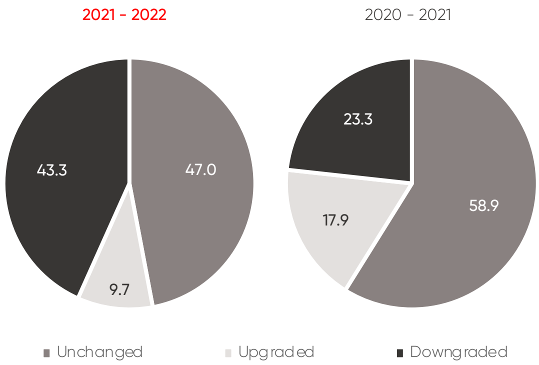


Figure 6.12 shows the share of retail customer exposures which migrated into better rating categories, the share with an unchanged rating category and the share which migrated into more risky rating categories in 2022 and 2021. The figure reflects the general trend described in the section, with a large proportion of the retail customer exposures having migrated to more risky rating categories.

Figure 6.12

Migration rating – loans, advances and guarantees excl. reverse repo agreements for retail customers excl. SparXpres (%)



Other things being equal, the deteriorated rating level in Spar Nord's retail customer portfolio means more impairment charges especially on exposures with higher risk, which from a risk point of view is sensible during times of elevated macroeconomic uncertainty.

However, some uncertainty attaches to the rating models, primarily as a result of volatile cyclical indicators included in the model. To cover this model uncertainty, dedicated management estimates have been made to reflect anticipated losses due to the model uncertainty. These provisions are monitored and adjusted in an ongoing process.

The credit quality of the retail customer portfolio is not believed to have been significantly impaired in 2022 despite the deterioration of the overall rating level.

Credit risk

Business customers
The rating level for Spar Nord's business customers, deteriorated significantly over the course of 2022, primarily due to developments in the cyclical component of the rating model, which reflects the macroeconomic outlook. Seen in isolation, the behavioural and financial performance of business customers do not give rise to a deteriorated rating level in 2022.

The average rating for Spar Nord's business customers since 2020 is shown in figure 6.13. The figure shows that the average rating has increased from 3.4 at end-2021 to 4.4 at end-2022, which expresses a deterioration of the rating level.

Figure 6.13
Business customers: Average rating*

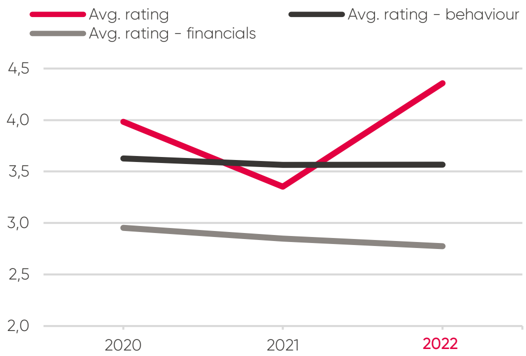
	2022	2021	2020
Average rating	4.4	3.4	4.0

*) Loans, advances and guarantees excl. reverse repo agreements and public-sector entities

Figure 6.14 illustrates developments in the average rating from the behavioural and financial performance components and the overall rating for business customers. As shown in the figure, business customers' behavioural rating is largely unchanged in 2022, whereas their financial performance rating improved slightly. In other words, Spar Nord's business customers generally reported decent financial performance and unchanged behaviour in 2022.

Figure 6.14 shows that the behavioural and financial performance of the business customers were relatively stable components of the model, and developments in the average rating are therefore driven mainly by the cyclical component. The cyclical component encompasses a range of soft (expectations-based) macroeconomic indicators such as consumer expectations, consumer confidence and industrial confidence. These indicators were very volatile in 2022 due to generally higher macroeconomic uncertainty.

Figure 6.14
Average rating, behavioural rating and rating from financials for business customers



*) Loans, advances and guarantees excl. reverse repo agreements and public-sector entities

Figure 6.15 shows total loans, advances and guarantees to business customers by rating category over the past three years. The figure shows a clear tendency for business customer exposures to generally have migrated to rating categories with a higher expected risk in 2022.

Figure 6.15
Exposures to business customers by rating category excl. public-sector entities

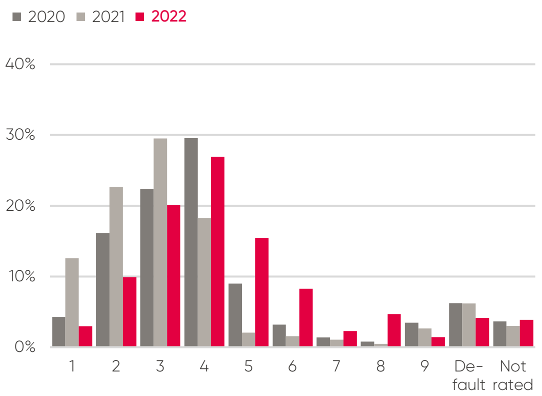
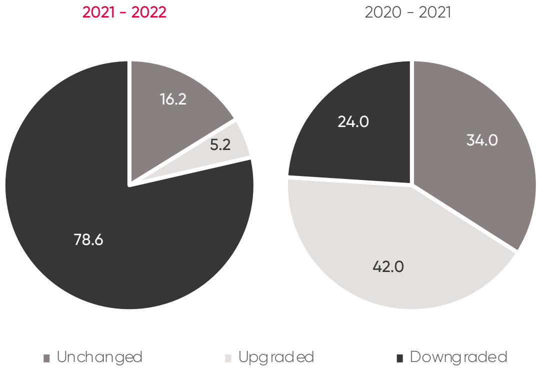


Figure 6.15 shows that 33% the business customer exposures are in the best rating categories from 1 to 3. Rating categories 4-5 cover 42% of the business customer exposures, where the last part is distributed on exposures in the most risky rating categories 6-9 and exposures that are in default or have not yet received a rating.

Figure 6.16 shows the share of business customer exposures which migrated into better rating categories, the share with an unchanged rating category and the share which migrated into more risky rating categories in 2021 and 2022. The figure reflects the general trend described in the section, with most of the business customer exposures having migrated to more risky rating categories.

Figure 6.16
Migration rating – loans, advances and guarantees excl. reverse repo agreements for business customers excl. public-sector entities (%)



Other things being equal, the deteriorated rating level in Spar Nord's business customer portfolio means more model-calculated impairment charges especially on the most risky exposures, which from a risk point of view is sensible during times of elevated macroeconomic uncertainty. However, the rating model for business customers is subject to considerable uncertainty, which is reflected in a management estimate that is regularly adjusted.

The model uncertainty relates primarily to the macroeconomic variables included in the business cycle component because 2021 and 2022 were characterised by above-normal macroeconomic uncertainty.

Consequently, the credit quality of the business customer portfolio is not believed to have been significantly impaired in 2022 despite the deterioration of the overall rating level.

6.3.4 Facilitation of mortgage loans
In addition to lending on Spar Nord's own books, a major part of the Bank's business consists of facilitating mortgage loans on behalf of Totalkredit and DLR-Kredit. At end-2022, Spar Nord's total mortgage loan facilitation amounted to DKK 111.1 billion, which was DKK 0.7 billion less than at end-2021. Of this amount, mortgage loans facilitated from Totalkredit amounted to DKK 100.1 billion and from DLR-Kredit DKK 11.1 billion.

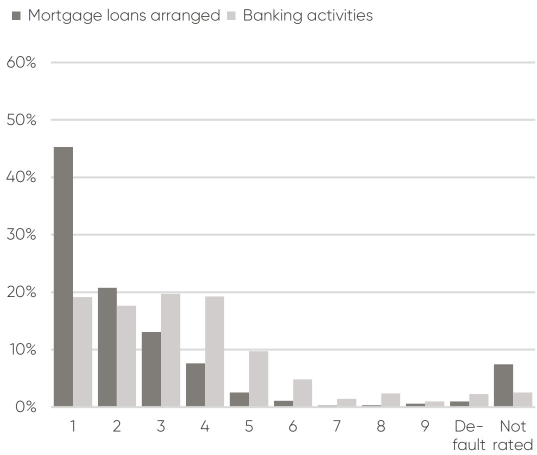
The decrease should be seen against an increase in Spar Nord's bank mortgage loans of DKK 2.3 billion and higher remortgaging activity, which resulted in capital gains and thus allowed borrowers to reduce their outstanding bond debt. The decrease in facilitated mortgage loans covers a fall of DKK 0.8 billion in the retail customer segment and an increase of DKK 0.2 billion in the business customer segment.

When facilitating mortgage loans, Spar Nord is responsible for customer services, facilitation and initial credit assessment in connection with the raising or remortgaging of a mortgage loans. Spar Nord then receives a share of the total income from the customer as payment.

With respect to the risk of mortgage facilitation, for Totalkredit retail loans Spar Nord is generally liable for losses on the cash part of the loan that exceeds 60% of the property's mortgage lending value. For Totalkredit business loans, Spar Nord is liable for one-third of the loan. On DLR-Kredit mortgage loans, Spar Nord is liable for a 6% guarantee plus a right of setoff.

Figure 6.17 shows the breakdown of customers who have taken out mortgage loans with Totalkredit and DLR-Kredit against Spar Nord's rating categories. As appears from the figure, mortgage loans facilitated for customers in the best rating categories represent the bulk of this group.

Figure 6.17
Mortgage loans arranged DLR and Totalkredit and bank exposure, by rating category



The cooperation with Totalkredit and DLR-Kredit is based on the principle that in case of losses on the loans facilitated by Spar Nord, a full or partial setoff will be made against the commission paid to Spar Nord for its loan-facilitation services.

In 2022, Spar Nord received DKK 533.3 million in commission from Totalkredit and DLR-Kredit.

Spar Nord pursues a practice of recording losses arisen on an ongoing basis, recognising them in impairment etc., so no losses are offset against future commission.

6.4 Collateral

An important component of the credit risk management efforts is to mitigate the risk attaching to individual exposures by accepting collateral, such as mortgages and charges over physical assets, securities and guarantees, etc. Mortgages and charges on real property and securities make up the most common type of collateral.

Figure 6.18 shows the different types of collateral received. As shown by the figure, property account for the largest part (74.9%) of the ordinary collateral accepted and they are thus a significant part of Spar Nord's collateral.

Figure 6.18

Collateral accepted

DKKm	2022	2021
Properties	25,845	21,485
Custody accounts/securities	1,914	1,734
Guarantees/sureties	908	936
Vehicles	578	570
Cash	398	617
Other collateral	4,840	3,967
Ordinary collateral accepted, total	**34,484**	**29,310**
Mortgage credit institution guarantees	9,756	14,483
Total collateral, excluding Spar Nord Leasing	**44,239**	**43,793**
Collateral accepted, Spar Nord Leasing	6,702	5,537
Total collateral accepted	**50,941**	**49,330**

Mortgage on real property

Mortgages on real property consist mainly of mortgages on private housing. Figure 6.19 shows mortgages on real property broken down by property type based on the registered collateral value.

The property value under mortgages broken down by property type in figure 6.19 is calculated at DKK 42.6 billion in 2022, while in figure 6.18 DKK 25.8 billion is recorded as collateral on properties. This is because the former amount represents the amount mortgaged to Spar Nord and is recorded as collateral accepted, while the latter amount is the share actually used for calculating collateral regarding a specific exposure. Some exposures are smaller than the collateral value, and collateral has also been provided by customers who do not currently have any facilities.

Figure 6.19

Mortgages broken down by property type

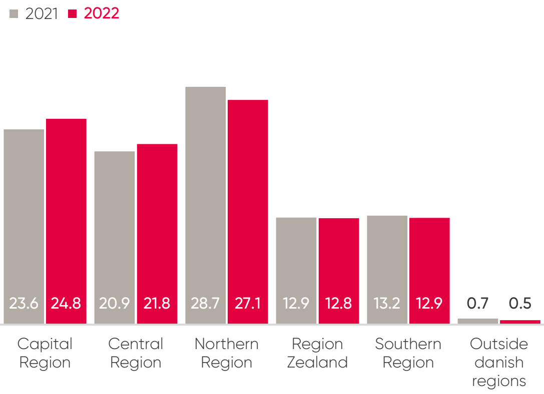
DKKm/%	2022		2021	
Private housing	29,727	69.8	25,100	67.1
Holiday homes	1,692	4.0	1,402	3.7
Offices and businesses	4,744	11.1	4,753	12.7
Agriculture	2,158	5.1	2,088	5.6
Other	4,297	10.1	4,065	10.9
Total mortgages on real property	**42,618**	**100.0**	**37,409**	**100.0**

Figure 6.20 shows the geographical breakdown of mortgages on real property based on the registered collateral value. The figure shows a generally good correlation to figure 6.8, which shows the geographical breakdown of loans, advances and guarantees.

Figure 6.20

Geographical breakdown of mortgages

%



The real estate industry

The real estate industry is monitored closely by Spar Nord. As shown in figure 6.5, the industry represents the largest share (11.8%) after retail customers (42.4%) of total loans, advances and guarantees excl. reverse repo agreements.

Figure 6.21 shows exposure details and details on collateral received for the real estate industry.

Of the DKK 8.2 billion exposure to the real estate industry, Spar Nord has collateral totalling DKK 6.6 billion, with property mortgages accounting for 80.6%, or DKK 5.3 billion, as shown in figure 6.21. Of this collateral, 73.2% are first mortgages, and 26.8% are second mortgages. The share of financing granted without corresponding security in the form of mortgaged property is primarily for subsidised housing associations and owner associations.

Figure 6.21

Exposure and collateral for the real estate industry

DKKm	2022	2021
Total exposure	**8,200**	**7,343**
- Of which loans and advances	7,427	6,167
- Of which guarantees	774	1,176
Total collateral	**6,602**	**5,778**
Mortgage on real property	5,323	4,318
- Of which first mortgage	3,899	3,247
- Of which second mortgage	1,424	1,071
Other collateral	1,279	1,460

Figure 6.22

Unsecured amounts and unsecured share of exposure broken down by industry

DKKm/%	2022		2021	
	Unsecured amount	Unsecured share	Unsecured amount	Unsecured share
Public authorities	1,357	99.9	1,259	100.0
Agriculture, hunting and forestry	356	12.7	438	16.0
Fisheries	17	18.2	13	11.6
Industry and raw materials extraction	1,155	31.5	876	28.7
Energy supply	572	26.2	485	25.5
Building and construction	487	15.7	649	21.7
Trade	1,489	29.9	1,312	31.3
Transport, hotels and restaurants	669	21.1	587	20.3
Information and communication	120	36.5	153	39.3
Financing and insurance	2,405	16.5	2,300	14.0
Real estate	1,599	19.5	1,565	21.3
Other business areas	1,793	32.1	1,672	33.4
Business customers, total	**12,019**	**24.0**	**11,309**	**23.4**
Total retail customers	**6,331**	**21.3**	**7,595**	**23.2**
Total	**18,349**	**23.0**	**18,904**	**23.3**

Unsecured amounts and shares

Figure 6.22 shows unsecured amounts and unsecured share of exposure broken down by industry The figure shows that the total unsecured share at end-2022 was 23.0%, against 23.3% at end-2021.

The unsecured share expresses the unsecured part of the exposure, and a lower unsecured share is thus positive for the Bank's risk exposure. Figure 6.23 shows total loans, advances and guarantees excl. reverse repo agreements broken down by unsecured share.

The figure shows that 55.8% of loans, advances and guarantees (excl. reverse repo agreements) have an unsecured share of less than 10%, which means the risk of loss on this part of the exposures is limited. 17.0% of loans, advances and guarantees have an unsecured share above 75%, which expresses a higher risk of loss on this part of the Bank's exposures.

Figure 6.23

Unsecured shares for loans, advances and guarantees

%	2022	2021
< 10	55.8	54.4
10 - 50	20.9	20.7
50 - 75	6.3	6.2
> 75	17.0	18.8
Average unsecured share	**26.5**	**27.7**

Spar Nord monitors the value of collateral provided on an ongoing basis. When the risk associated with a counterparty increases, monitoring of the collateral provided will be intensified.

Credit risk

Figure 6.24

Impairment – by industry

DKKm/%	2022			2021		
	Impairment	Share	Impairment ratio*	Impairment	Share	Impairment ratio*
Public authorities	0	0.0	0.0	0	0.0	0.0
Agriculture, hunting and forestry	159	9.6	5.7	242	15.2	8.8
Fisheries	3	0.2	3.5	3	0.2	2.4
Industry and raw materials extraction	123	7.4	3.4	95	5.9	3.1
Energy supply	17	1.0	0.8	14	0.9	0.8
Building and construction	57	3.4	1.8	49	3.1	1.6
Trade	98	5.9	2.0	146	9.1	3.5
Transport, hotels and restaurants	124	7.4	3.9	123	7.7	4.3
Information and communication	11	0.7	3.5	9	0.6	2.4
Financing and insurance	187	11.2	4.2	182	11.4	4.4
Real estate	137	8.2	1.7	89	5.6	1.2
Other business areas	158	9.5	2.8	169	10.6	3.4
Business customers, total	**1,074**	**64.5**	**2.7**	**1,120**	**70.4**	**3.1**
Total retail customers	**591**	**35.5**	**2.0**	**471**	**29.6**	**1.5**
Total	**1,666**	**100.0**	**2.4**	**1,591**	**100.0**	**2.3**

*The impairment ratio expresses impairment in % of loans, advances and guarantees excl. reverse repo agreements

6.5 Impairment and losses on loans, advances and guarantees

In the following section, describes developments in Spar Nord's impairment charges, including model-calculated and individual impairment charges as well as management estimates. We also show developments in customers whose loans are subject to forbearance, have been written off or are characterised as non-performing (NPL).

6.5.1 Impairment

Spar Nord's impairment charges are calculated in accordance with the IFRS 9 accounting standard. See the Annual Report 2022 for a review. Figure 6.24 shows that the total impairment account rose by DKK 75 million in 2022. Of this amount, DKK 38 million was attributable to changes to management estimates, which are explained in figure 6.26.

Figure 6.24 shows that 9.6% of the impairment charges in 2022 related to the industry agriculture, hunting and forestry. In addition, financing and insurance represents a large share at 11.2%, other business areas account for 9.5% and real estate for 8.2%.

In the agriculture, hunting and forestry industry, a few large impairment charges make up a large share. Furthermore, management estimates account for a significant share at DKK 61 million, relating primarily to uncertainty about land prices, but also to the pig farmers. In the financing and insurance industry, several large impairment charges in e.g. holding companies make up a large share. In the other business areas industry, there are a few customers with large impairment charges, while the management estimates here amount to DKK 33 million, among other things to business customers with property exposure as a part of the category inflation, weak growth and properties.

In the real estate industry, a relatively large share of the lending has been invested, which is the main reason for the relatively large share of impairment charges. This is also witnessed by the low impairment percentage in the industry of 1.7%. This includes a management estimate of DKK 46 million mainly to cover business customers with property exposure.

Impairment charges for business customers fell DKK 46 million in 2022, in part driven by a fall in management estimates for business customers of DKK 111 million. This relates primarily to the reversal of the Covid-19 management estimate and a reduced management estimate for land prices. Without the management estimates, an increase of DKK 65 million was observed for business customers in 2022.

Impairment charges for retail customers rose DKK 120 million in 2022. The increase was driven by a DKK 149 million increase in management estimates for retail customers, which primarily concern uncertainty regarding inflation, weak growth and property prices. Without the management estimates, a decrease of DKK 29 million was observed for retail customers in 2022.

Spar Nord's loans, advances and guarantees excl. reverse repo agreements and impairment charges by stage are shown in figure 6.25.

At end-2022, stage 1 and 2 impairment charges accounted for a larger share (49%) than at end-2021 (32%). Stage 3 impairment charges fell by DKK 238 million, of which DKK 101 million relates to developments in management estimates. The development is explained both by a generally favourable trend among Spar Nord's weakest customers and by a re-allocation of the management estimates from stage 3 to stages 1 and 2. Overall, stage 1 and 2 impairment charges rose by DKK 312 million. The re-allocation of management estimates contributed DKK 139 million of that amount. Furthermore, developments in stages 1 and 2 are explained by the higher model-calculated impairment charges resulting from the elevated risk level in the cyclical component in Spar Nord's rating system of rating-models.

Figure 6.25

Development in loans, advances and guarantees excl. reverse repo agreements and impairment by stage

	2022		2021	
DKKm	Loans, advances and guarantees	Impairment	Loans, advances and guarantees	Impairment
Stage 1	52,356	247	60,506	156
Stage 2	15,204	567	5,793	346
Stage 3	1,730	851	1,935	1,089
Total	**69,290**	**1,666**	**68,234**	**1,591**

In addition to the model-calculated impairment charges, the Bank makes a management estimate to supplement the impairment charges with amounts relating to special societal developments which the models cannot reflect.

In 2022, the Bank increased its management estimates by DKK 38 million to a total of DKK 574 million. The amount relates to three overall areas, as shown in figure 6.26.

Figure 6.26

Management estimates

2022	Stage 1 DKKm	Stage 2 DKKm	Stage 3 DKKm	Total DKKm
DKKm				
Inflation, weak growth and property prices	44	204	187	**434**
Model uncertainty	34	65	0	**98**
Land prices	0	0	41	**41**
Covid-19	0	0	0	**0**
Discounting of collateral	0	0	0	**0**
Management estimates, total	**78**	**268**	**228**	**574**

2021	Stage 1 DKKm	Stage 2 DKKm	Stage 3 DKKm	Total DKKm
DKKm				
Inflation, weak growth and property prices	5	19	42	**65**
Model uncertainty	21	16	0	**37**
Land prices	0	0	105	**105**
Covid-19	20	126	148	**295**
Discounting of collateral	0	0	34	**34**
Management estimates, total	**46**	**161**	**329**	**536**

At DKK 434 million at end-2022, inflation, weak growth and property prices represents by far the largest management estimate. The estimate covers enhanced credit risk due to macroeconomic uncertainty. The development in 2022 (+ DKK 369 million) were driven by macroeconomic uncertainty exemplified by the high level of inflation, weak growth and falling property prices. The estimate was extended in 2022 to also cover potential consequences of the higher inflation and fears of a recession.

Furthermore, the Bank has a management estimate relating to model uncertainty amounting to DKK 98 million at end-2022. The Bank's rating models have historically shown an unintentional volatility in risk level adjustment via macroeconomic variables, and therefore an amount has been allocated to cover the increased risk. The development in 2022 (DKK +61 million) were also driven by a higher probability of default, which results in higher estimates. The method applied to calculate the estimate was retained in 2022 as it is believed to accurately reflect uncertainty associated with the model calculation.

Lastly, the Bank has a management estimate of DKK 41 million relating to a fall in land prices. The assessment offsets any land valuation uncertainty. The estimate is calculated on the basis of a reduction of DKK 7,500 per hectare of eligible land relative to recommended prices. The development in 2022 (-DKK 64 million) were due to reduced stress on land prices from DKK 15,000 to DKK 7,500 per hectare of eligible land. This was based on observations of higher trading prices of agricultural land. The estimate was retained in 2022 as the risk relating to land prices is believed to be covered.

In 2022, Spar Nord recorded a decline of DKK 205 million in loans, advances and guarantees to customers with individual impairment. At end-2022, the impaired claims represented 3.0% of total loans, advances and guarantees compared with 3.8% in 2021. Figure 6.27 shows a calculation of impaired claims. Total value adjustment must be supplemented by calculated impairment in stages 1 and 2 of DKK 814 million in 2022.

Figure 6.27

Impaired claims

2022

DKKm	Loans, advances and guarantees	Impaired
Insolvent liquidation and bankruptcy	25	12
Debt collection and restructuring, etc.	77	19
Other financial difficulty	1,628	820
Total impairment	**1,730**	**851**
Impairment in stages 1 and 2		814
Total impairment		**1,666**

2021

DKKm	Loans, advances and guarantees	Impaired
Insolvent liquidation and bankruptcy	63	36
Debt collection and restructuring, etc.	84	26
Other financial difficulty	1,788	1,027
Total impairment	**1,935**	**1,089**
Impairment in stages 1 and 2		502
Total impairment		**1,591**

Credit risk

Figure 6.28

Profit impact from losses and impairment of loans, advances and guarantees by industry

	2022		2021	
DKKm	Profit impact	Loss	Profit impact	Loss
Public authorities	0	0	0	0
Agriculture, hunting and forestry	-79	7	-88	11
Fisheries	0	0	1	0
Industry and raw materials extraction	32	5	17	9
Energy supply	2	0	-16	0
Building and construction	6	2	-8	5
Trade	-28	19	0	5
Transport, hotels and restaurants	1	3	-21	12
Information and communication	3	1	0	0
Financing and insurance	6	6	67	1
Real estate	44	1	-58	26
Other business areas	-2	16	31	6
Business customers, total	**-15**	**59**	**-74**	**75**
Total retail customers	**92**	**48**	**-46**	**55**
Total	**78**	**107**	**-120**	**130**

6.5.2 Profit impact

The profit impact expresses the impact of the credit-granting process on the Bank's operating profit. The profit impact expresses the year's losses and impairment/provisions after reversals and adjustment of discount on exposures taken over and recognised interest accrued on loans subject to impairment as well as recoveries of prior losses. Figure 6.28 shows developments in the profit impact and losses by industry. Negative figures in the table express a positive effect (income), and positive figures express a negative effect (loss).

The total profit impact from losses and impairment charges was an expense of DKK 78 million in 2022, corresponding to 0.1% of total loans, advances and guarantees. The DKK 78 million profit impact breaks down into an expense of DKK 92 million on retail customers (incl. SparXpres), an expense of DKK 64 million on business customers (ex. agriculture) and an income of DKK 79 million on agricultural customers.

The profit impact of the management estimates is a total expense of DKK 38 million. Retail customers represent an expense of DKK 147 million, which is due to the increase of the management estimate for inflation, weak growth and property prices. For business customers, the profit impact is an income of DKK 52 million because of the reversal of the COVID-19 management estimate. Finally, there is an income of DKK 57 million on agricultural customers, which is due to a change in the calculation method for the management estimate for land prices, as shown in figure 6.26.

In 2022, a loss of DKK 107 million was recognised, against DKK 130 million in 2021. Losses were recorded especially in the trade and other business areas segments, which was due to a number of individual customers.

6.6 Non-performing loans

An exposure is defined as "Non-performing" (NPL), if:

- the exposure has been in arrears (i.e. if any amount of interest, fees or instalments remains unpaid) for more than 90 days; or
- it is considered unlikely that the debtor will fully meet its payment obligations without realising collateral.
- In addition, a stage 3 exposure is always defined as NPL in IFRS 9 even if the above criteria are not met.

Figure 6.29 shows a calculation of the Bank's NPL ratio.

Figure 6.29

NPL ratio

	2022	2021
NPL (DKK millions)	1,627	1,818
Exposure (DKKm)	69,952	65,817
NPL ratio	2.3	2.8

The figure shows that the Bank had exposures categorised as NPL for DKK 1.6 billion in 2022. Relative to the Bank's total exposures, this results in an NPL ratio of 2.3.

Forbearance

Exposures flagged as non-performing may be subject to forbearance to increase the likelihood of the customer being able to meet his obligations.

A loan facility is defined as being subject to forbearance if the conditions regarding interest payments and/or repayments have been relaxed on account of the borrower's financial difficulty or if the loan has been refinanced on more lenient terms. Forbearance must be approved by the Credit Department. Customers who have been granted forbearance are automatically flagged for OEI.

In addition to decentralised registration, customers flagged as having a weak credit quality and OEI with an indication of credit impairment will be monitored centrally and reported on periodically.

Figure 6.30 shows a breakdown of loans and advances subject to forbearance broken down by performing and non-performing and by business and retail customers.

Figure 6.30

Loans and advances subject to forbearance

2022

DKKm	Business customers	Retail customers	Total
Non-Performing	82	171	**253**
Performing	1	0	**1**
Total	**82**	**172**	**254**

2021

DKKm	Business customers	Retail customers	Total
Non-Performing	142	181	**323**
Performing	0	2	**3**
Total	**142**	**183**	**325**

As shown in figure 6.31, exposures for which interest accrual has been suspended fell from DKK 257 million at end-2021 to DKK 213 million at end-2022.

Figure 6.31

Developments in losses and value adjustments and suspended-interest loans

DKKm	2022	2021
Gross loans, advances and guarantees, end of year	79,800	81,084
Total losses and impairment for the year	**78**	**-120**
– in % of loans, advances and guarantees	0.1	-0.1
Impairment account on exposures taken over	**1,666**	**1,591**
– in % of loans, advances and guarantees	2.1	2.0
Contractual suspended-interest loans, year-end	**213**	**257**
– in % of loans, advances and guarantees	0.3	0.3
Impairment account in % of contractual suspended-interest loans	**782**	**619**

6.7 Credit risk exposure to financial counterparties

As part of its trading in securities, foreign currency and derivative instruments and its payment services, etc., the Bank will experience credit risk exposure to financial counterparties.

Spar Nord's Management allocates lines for credit risk exposure to financial counterparties, based on the specific counterparty's risk profile, rating, amount of exposure and solvency. For counterparties subject to supervision by the Danish FSA, the exposure is capped at DKK 1.0 billion. However, this cap does not apply to exposures to the Danish state, regions, municipalities, unit trusts that are entirely equity financed, and customers subject to supervision and who have an official investment grade rating. For this type of exposure, the statutory limit applies. The risks and lines of financial instruments are monitored on a day-to-day basis.

A major source of financial credit risk is the Bank's balances with credit institutions. The credit risk relates to Danish and international credit institutions which are the Bank's trading partners.

Figure 6.32 shows Spar Nord's amounts due from credit institutions by product type, and figure 6.33 shows a breakdown by rating category.

Figure 6.32

Due from credit institutions by product type

DKKm/%	2022	2021	2022	2021
Certificates of deposit	0	0	0.0	0.0
Reverse repo agreements	1,620	1,515	53.1	56.2
Deposits and unlisted bonds	649	500	21.3	18.5
Current accounts	217	166	7.1	6.1
CSA accounts, etc.	260	306	8.5	11.3
Market value, derivatives	306	212	10.0	7.9
Due from credit institutions	**3,052**	**2,697**	**100.0**	**100.0**

Figure 6.33 shows that 77.8% of Spar Nord's receivables from credit institutions concerns banks with an A rating or higher. Balances with unrated credit institutions are attributable mainly to Danish credit institutions. Other risks are mainly attributable to clearing centres.

Figure 6.33

Due from credit institutions by rating

DKKm/%	2022	2021	2022	2021
AAA	1,620	1,515	53.1	56.2
AA	318	114	10.4	4.2
A	438	437	14.4	16.2
BBB	176	120	5.8	4.5
BB-B	0	0	0.0	0.0
Not rated	501	510	16.4	18.9
Due from credit institutions	**3,052**	**2,697**	**100.0**	**100.0**

6.8 Counterparty risk for derivatives trading

Counterparty risk is the risk of loss because a financial counterparty or an institutional customer defaults on its obligations under a financial contract. In addition, settlement risks may arise when financial contracts are concluded and settled, as principals in different currencies are not necessarily exchanged at the same time or securities are not received simultaneously with the relevant payment.

Utilisation of lines with respect to financial counterparties, see figure 6.34, is calculated on a gross basis as weighted principals of all transactions concluded, to which is added the sum of all positive market values, while negative market values are not offset. The weighting of the principal of the individual financial transaction is based on the volatility of the interest rate and currency, and the term to maturity of the transaction is also taken into account.

Figure 6.34 shows Spar Nord's counterparty risk before and after netting and collateral accepted. At end-2022, the Bank's exposure after netting and collateral amounted to DKK 103 million, against DKK 292 million in at end-2021.

Figure 6.34

Counterparty risk for derivatives trading

DKKm	2022	2021
Derivatives with positive market value	444	542
Netting*	208	207
Exposure after netting	**236**	**336**
Collateral received	133	44
Exposure after netting and collateral	**103**	**292**

*) Netting under CSA agreements

Spar Nord's business procedures specify the maximum term to maturity for the individual financial transactions, and compliance is followed up on a daily basis, as is compliance with the granted lines.

In connection with lines granting and registration of lines, a check is performed to verify whether the registered lines accord with the authorisation details. Additionally, the Bank has a controller department that conducts random sampling of compliance as concerns the granting of lines, procedures and business procedures.

6.8.1 Counterparty risk against financial and institutional customers

Before lines are granted to financial counterparties and institutional customers, a thorough credit assessment is made of the financial counterparties/institutional customers based on the financial statements of the individual credit institution/institutional customer. With respect to foreign and large Danish credit institutions, the Group also considers their rating by international rating agencies, such as Moody's, Standard & Poor's or Fitch.

If the rating of a credit institution or institutional customer is lowered or withdrawn, the exposure will be reassessed. In addition, the financial statements of unrated credit institutions/institutional customers are regularly controlled, and any drop in the counterparty's equity of more than 5% will lead to a reassessment of the exposure. All exposures are reassessed at least every three years, and all exposures with size requiring the approval of Spar Nord's Board of Directors are reviewed at least once a year.

6.8.2 Framework and collateral agreements

To mitigate counterparty risk, Spar Nord will clear as many transactions as possible through a Central Clearing Counterparty (CCP) and makes framework, netting and collateral agreements to the extent possible.

For foreign and large Danish credit institutions and institutional customers, netting and framework agreements will be based on the international ISDA Master Agreements, often with associated Credit Support Annexes (CSA), according to which it is agreed that if the net market value of the concluded financial contracts exceeds an individually fixed maximum for each agreement, then collateral will have to be exchanged, most frequently by way of cash deposits in EUR or DKK.

As concerns small Danish credit institutions, such agreements will be based on the framework agreement prepared by "Finans Danmark" for forex and securities transactions. When deemed necessary, the Bank will also conclude a collateral agreement, according to which it is agreed that if the net market value of the concluded financial contracts exceeds an individually fixed maximum for each credit institution, then appropriate collateral must be furnished, in most cases by way of cash deposits in DKK.

In addition, Global Master Repurchase Agreements (GMRA) are concluded to secure reverse repo agreements.

Spar Nord currently only has one agreement (not currently active) in which the amount of collateral depends on Spar Nord's or the counterparty's rating or equity. Agreements are generally concluded without this clause.

Both Danish and foreign collateral agreements are followed up on a daily basis, and so too are exchanges of collateral/repricing of transactions as the market values of the transactions fluctuate. In addition, to the widest extent possible, Spar Nord settles transactions via CLS, VP or Euroclear, which serves to minimise settlement risks as much as possible.

6.9 ECAI

Spar Nord has selected Standard & Poor's Ratings Services as its external credit assessment institution (ECAI) to provide credit assessment information on countries, counterparties and issues.

Rating information is used as an integral part of the dataflow at Spar Nord's data processing centre, which receives external credit ratings from Standard & Poor's Ratings Services via SIX Financial.

An IT update of credit rating from Standard & Poor's Ratings Services is undertaken on an ongoing basis.

The conversion of credit rating classes to credit quality steps is based on the conversion table issued by the European Banking Authority (EBA). The individual credit quality steps are accorded a weighting to be used for the exposures on the individual credit quality steps when calculating the total risk exposure according to the standardised approach for credit risks pursuant to Articles 111-134 of the CRR.

Figure 6.35 shows ECAI exposure before and after deductions.

Figure 6.35

ECAI exposure before and after deductions

2022

DKKm	Exposure	Exposure after ECAI risk-weighted
Institutions	1,198	569
Covered bonds	6,773	677
Short-term credit assessment	725	342
Other	7	1
Total	**8,703**	**1,590**

2021

DKKm	Exposure	Exposure after ECAI risk-weighted
Institutions	2,113	745
Covered bonds	0	0
Short-term credit assessment	0	0
Other	254	107
Total	**2,367**	**852**

Section 7

Market risk

Developments in 2022

2022 was a challenging year of high uncertainty and volatility in the price of financial assets due to factors such as war, inflation, rising interest rates and slowing growth and earnings forecasts.

Compared with end-2021, the net interest rate risk was reduced by DKK 39 million to DKK 59 million at end-2022. The change was driven by the Bank's active risk management structure, reflecting a year of high volatility in the fixed income market, which means the interest risk was limited in large parts of the year.

In 2022, the net interest rate risk was mainly positive, which means the Bank loses money if interest rates go up. The average interest rate risk for 2022 was DKK 68 million, against DKK 59 million in 2021.

The net portfolio of bonds was increased by DKK 5.4 billion relative to end-2021. The increase primarily consists of a DKK 5.6 billion increase of the holding of AAA rated bonds and a reduction of the holding of bonds rated lower than AA.

The foreign exchange risk was reduced relative to 2021, consisting primarily of exposure to EUR, which means the foreign exchange risk is considered low.

The value of shares in the trading book was reduced by DKK 68 million in 2022 to DKK 70 million, reflecting the fact that the Bank consistently reduced its equity risk because of market developments.

The portfolio of shares in the banking book and in associates was reduced by DKK 97 million in 2022 to DKK 2.4 billion, which was mainly due to a lower portfolio of shares in DLR.

RISK EXPOSURE, MARKET RISK

DKK 3.9 billion

2021: DKK 4.1 billion

NET INTEREST RATE RISK

DKK 59 million

2021: DKK 98 million

BOND PORTFOLIO

DKK 22.7 billion

2021: DKK 17.3 billion

EQUITY PORTFOLIO

DKK 2.5 billion

2021: DKK 2.6 billion

Definition of market risk

Market risk is an umbrella heading for the risk of loss caused by changes in the value of a portfolio of financial instruments due to fluctuations in exchange rates or prices in financial markets.

Market risk breaks down into:

- Interest rate risk
- Foreign exchange risk
- Equity risk
- Commodity risk
- Option risk
- Own properties

Spar Nord deals and takes positions in products that involve a number of market-based risks. Most of Spar Nord's activities regarding trading and position-taking comprise relatively simple products, of which interest-based products are the most frequently traded. Spar Nord also deals and takes positions in shares and foreign exchange instruments, whereas trading in commodity derivatives is very limited.

Section 7

Market risk

7.1 Market risk policy

The market risk policy determines Spar Nord's overall risk profile for market risk, as well as the overall organisational delegation of responsibilities in the market risk area with a view to profitably supporting the business model.

The policy identifies and sets limits for the various types of market risk, setting out specific limits for how much risk the Bank is prepared to assume. Market risk is composed of:

- Interest rate risk in the trading book and the banking book
- Credit spread risk on the bond portfolio
- Equity risk in the trading book and the banking book
- Foreign exchange risk
- Option risk
- Commodity risk

The policy describes the types of risk the Bank includes in the market risk area. The Board of Directors has prepared guidelines for the Executive Board describing the methods to be used in calculating the various risk.

7.1.1 ESG risk

ESG risk is a natural component of the Bank's risk management in the market risk area. ESG risk refers to the risks associated with investing in businesses that fail to adapt to environmental, social and governance-related factors.

As part of the handling of the Bank's positions, an assessment is made of ESG issues, which is an important activity to reduce the loss of market values due to climate-related physical and transition risks or social and ethical issues that could impact businesses that fail to adapt to global developments.

The Bank's market risk policy stipulates that the Bank must work with involvement and stewardship in order to promote sustainability, and that it must use exclusion measures when necessary. The exclusion list includes companies in which the Bank may not invest. Spar Nord complies with UN and EU sanctions when investing in government bonds and excludes investment in government bonds and/or other securities from countries against which sanctions have been imposed.

7.2 Management, monitoring and reporting

For its day-to-day management of market risks, the Bank has established a three-tier set of guidelines. At the first tier, the Board of Directors issues the definition of the limits for Spar Nord, which are delegated to the Executive Board. At the second tier, the Executive Board delegates limits to the other entities of the Bank, with the Trading Division being the largest entity. At the third and last tier, the executives of the Trading Division are granted the limits within which they must operate.

The Finance & Accounts Department is responsible for measuring, monitoring, controlling and reporting market risks. Market risks are controlled and monitored through an integrated risk management system, with day-to-day follow-up on all market risks subject to the guidelines. Follow-up is made intraday and end-of-day.

If the guidelines are exceeded, the responsible entity will be informed. Information is also conveyed to the head of the Trading Division, the Executive Board and, ultimately, the Board of Directors, depending on which of the above-mentioned limits are breached. The Bank's risk management function will be informed about all breaches.

Developments in risk levels and gains or losses are regularly reported to the Executive Board and Board of Directors.

Spar Nord has a front-to-back solution for market risk management, which means that both risk-taking and risk-managing business entities work on the same platform, which contributes to ensuring effective market risk management.

7.3 Interest rate risk

Interest rate risk is the risk of loss due to interest rate fluctuations. Spar Nord's primary source of interest rate risk in the banking book derives from bank activities like deposits and lending, bonds, leases, repo and reverse repo agreements, strategic loans and possibly hedge operations in relation thereto. Interest rate risks in the trading book occur in connection with trading and position-taking in bonds and fixed-income derivatives like interest rate swaps, futures and standard interest rate options.

Interest rate risk both within the trading book and the banking book is calculated on the basis duration targets. For managing its portfolio of callable Danish mortgage bonds, the Bank uses model-based key risk indicators that provide for the embedded option component. As concerns interest rate options, the above-mentioned key indicators are supplemented by the most important risk factors expressing sensitivity of the option premium on changes in the underlying parameters.

For interest rate risk in the banking book the Bank seeks to hedge the risk by raising subordinated loans with fixed rate of interest. Interest rate swaps are also used to hedge interest rate risk in the banking book.

The interest rate risk is assessed on a daily basis, and decisions are made in light of expectations for macroeconomic developments and cyclical trends. Spar Nord converts the interest rate risk in foreign currencies into Danish kroner and offsets the negative interest rate risk against the positive one to calculate the net interest rate risk.

Section 7

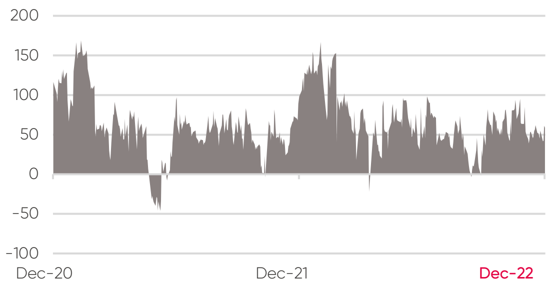
Market risk

7.3.1 Developments in interest rate risk

Figure 7.1 shows the total net interest rate risk that Spar Nord will encounter if interest rates rise by 1.0 percentage point. This implies a parallel shift of all yield curves.

Figure 7.1

Development in net interest rate risk



In 2022, the net interest rate risk was mainly positive, which means the Bank loses money if interest rates go up and make money if they fall. The interest rate risk was neutralised in parts of September because of the Bank's risk management approach during the strong market volatility caused by central banks hiking the policy rates.

Spar Nord calculates the interest rate risk relative to maturity and currencies. This shows the risk of changes for a given time interval on the yield curve.

Figure 7.2

Interest rate risk by duration and currency

2022

DKKm	Less than 3 months	3 months – 1 year	1– 3 years	3– 7 years	More than 7 years	Total
DKK	5	-4	29	-8	22	**43**
EUR	7	17	-6	9	-12	**15**
Other	1	0	-1	0	0	**0**
Total	**14**	**13**	**21**	**0**	**10**	**59**

2021

DKKm	Less than 3 months	3 months – 1 year	1– 3 years	3– 7 years	More than 7 years	Total
DKK	13	19	40	27	18	**117**
EUR	3	1	-15	-3	1	**-14**
Other	-3	0	-1	-1	1	**-5**
Total	**12**	**19**	**24**	**23**	**21**	**98**

Figure 7.2 shows the interest rate risk broken down on the individual time intervals, given a 1.0 percentage point increase in interest rates. At the end of 2022, Spar Nord was exposed to a positive interest rate risk in Danish kroner of DKK 43 million and in EUR of DKK 15 million. The limited interest rate risk for other currencies was neutralised in 2022. The total interest rate risk amounted to DKK 59 million at end-2022, which is a DKK 39 million decrease compared with end-2021.

7.3.2 Interest rate risk in the trading book

The interest rate risk attaching to positions in the trading book derives primarily from bonds, interest rate swaps, futures and options.

As appears from figure 7.3, the net interest rate risk attaching to the trading book was positive in the amount of DKK 58 million at end-2022, which is a DKK 32 million decrease compared with 2021. At the end of 2022, Spar Nord was exposed to a positive interest rate risk in EUR of DKK 5 million and a positive interest rate risk in other currencies of DKK 1 million.

Figure 7.3

Interest rate risk in the trading book

2022

DKKm	Less than 3 months	3 months – 1 year	1– 3 years	3– 7 years	More than 7 years	Total
DKK	6	-6	33	6	13	**52**
EUR	7	17	-8	1	-13	**5**
Other	1	0	-1	0	0	**1**
Total	**15**	**11**	**25**	**8**	**0**	**58**

2021

DKKm	Less than 3 months	3 months – 1 year	1– 3 years	3– 7 years	More than 7 years	Total
DKK	13	18	37	42	8	**118**
EUR	3	0	-18	-11	-5	**-31**
Other	2	0	0	0	1	**3**
Total	**18**	**18**	**19**	**30**	**5**	**90**

7.3.3 Interest rate risk in the banking book

The interest rate risk attaching to positions in the banking book derives from fixed-rate deposits and lending from ordinary banking transactions, repo and reverse repo agreements, monetary policy loans, bonds, interest rate risk related to the Bank's funding, incl. subordinated debt and issued bonds.

Figure 7.4 shows the net interest rate risk in the banking book, given a 1.0 percentage point increase in interest rates broken down by maturity and currency. The interest rate risk in the banking book was neutral at end-2022 with underlying negative interest rate risk in DKK of DKK 9 million and DKK 1 million in other currencies and a positive interest rate risk in EUR of DKK 10 million.

Market risk

Figure 7.4

Interest rate risk in the banking book

2022

DKKm	Less than 3 months	3 months – 1 year	1– 3 years	3– 7 years	More than 7 years	Total
DKK	-1	2	-5	-14	9	**-9**
EUR	0	1	2	7	1	**10**
Other	0	0	-1	0	0	**-1**
Total	**-1**	**3**	**-3**	**-7**	**9**	**0**

2021

DKKm	Less than 3 months	3 months – 1 year	1– 3 years	3– 7 years	More than 7 years	Total
DKK	0	0	3	-15	10	**-1**
EUR	0	0	3	8	6	**17**
Other	-6	0	-1	-1	0	**-8**
Total	**-6**	**1**	**5**	**-7**	**16**	**8**

Spar Nord furthermore applies two risk measures to manage interest rate risk in the banking book, changes in net interest income (NII) and the change in the economic value of equity (EVE).

NII measures the impact on the income statement of a 1.0 percentage point change in interest rates on all balance sheet items in the banking book over a period of 365 days. At year-end 2022, NII was calculated at DKK -44 million, against DKK -134 million at the end of 2021. Note that NII below zero equal positive earnings in net interest income.

EVE is based on a stress scenario defined by regulation and calculated as the change in the market value of assets and liabilities in the balance sheet and derivatives in the banking book. EVE was calculated at DKK 73 million at end-2022, against DKK 58 million at end-2021.

7.3.4 Credit spread risk

Credit spread measures the creditworthiness of a bond issuer and expresses the additional return required for investors to assume a risk in e.g. a mortgage bond instead of a government bond. A credit spread of an issued bond is derived from the effective yield, which compared to a risk-free reference rate. The difference between the two rates equals the credit spread.

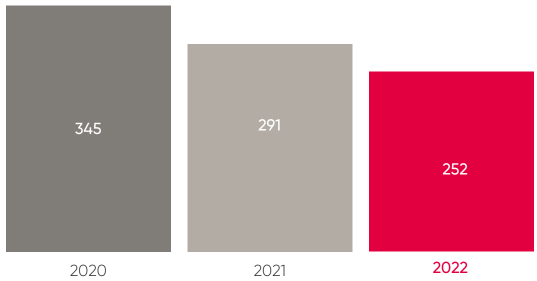
Credit spread risk is the risk that credit spreads on issuers on the bond portfolio should change. Losses may arise because of an increase in the credit risk (credit spread) on mortgage bonds relative to the risk-free reference rate. The risk is also relevant for bonds for which the overall interest rate risk has been hedged and for floating-rate bonds.

Spar Nord applies the Danish FSA's model to measure credit spread risk. The model provides different stress values for widening credit spreads, depending on the bond type. Government bonds are given a stress value of 25bp, mortgage bonds 50bp and credit and financial bonds 100bp.

Based on the above-mentioned stress scenario, the credit spread risk in the trading book has been calculated at DKK 252 million at end-2022. This is lower than in 2021 because the Bank has reduced the part of the bond portfolio in the trading book. The Bank also monitors credit spread risk in the banking book.

Developments in credit spread risk in the trading book are illustrated in figure 7.5.

Figure 7.5
Credit spread risk
DKKm



7.3.5 Other interest rate risk targets

Spar Nord has defined targets for changes in the yield structure as the general interest rate risk target assumes a parallel shift of the entire yield curve. the Bank also measures the convexity risk on interest-bearing debt instruments. Duration as a basis for the general interest rate risk target expresses the slope of the price curve, while convexity expresses the curvature of the yield curve.

Market risk

Figure 7.6

Bond portfolio

	Origin	Rating category	2022 DKKm	2022 Share	2021 DKKm	2021 Share
Mortgage bonds			**21,783**	**96.1**	**16,279**	**94.1**
	Denmark	AAA	20,888	92.2	14,621	84.5
		A	887	3.9	1,011	5.8
		Unrated	8	0.0	9	0.1
	Norway	AAA	0	0.0	637	3.7
Financial issuers			**712**	**3.1**	**865**	**5.0**
	Denmark	A	116	0.5	59	0.3
		BBB-Unrated	215	0.9	475	2.7
	Norway	A-BBB	118	0.5	61	0.4
	Sweden	Unrated	48	0.2	52	0.3
	Finland	A-Unrated	190	0.8	193	1.1
	Rest of Europe	AAA-Unrated	24	0.1	25	0.1
Credit bonds			**339**	**1.5**	**345**	**2.0**
	Denmark	BBB-Unrated	39	0.2	52	0.3
	Other	AA-Unrated	299	1.3	294	1.7
Government bonds			**-176**	**-0.8**	**-191**	**-1.1**
	Denmark	AAA	-218	-1.0	-217	-1.3
	Europe	AAA	42	0.2	24	0.1
	Outside Europe	AAA	1	0.0	2	0.0
Total			**22,657**	**100.0**	**17,299**	**100.0**
Own bonds	Denmark	Unrated	11		18	

7.3.6 Bond portfolio

Spar Nord's bond portfolio consists primarily of mortgage bond with a high credit rating. The portfolio also includes bonds from financial issuers, credit bonds and government bonds and a small holding of own bonds.

The Bank's total bond portfolio and its composition is shown in figure 7.6, and figure 7.7 shows the portfolio by rating.

The total bond portfolio rose by DKK 5.4 billion compared with end-2021 to DKK 22.7 billion in 2022. The change covers a modest shift in the composition as the holding of mortgage bonds was increased by 2%-points. The holding of bonds from financial issuers and credit bonds was reduced, and the holding of government bonds was held as a short position at end-2022.

The bond portfolio is composed of 96.1% mortgage bonds, 3.1% bonds from financial issuers, 1.5% credit bonds and -0.8% government bonds.

As shown in figure 7.7, 91.4% of the Bank's bond portfolio had an AAA rating at end-2022, which is 4.3%-points higher than in 2021. The reason is that the elevated market uncertainty has made the Bank prefer bonds with the highest credit rating.

Figure 7.7

Bond portfolio by rating*

DKKm/%	2022	2021	2022	2021
AAA	20,712	15,067	91.4	87.1
AA	67	3	0.3	0.0
A	1,189	1,278	5.2	7.4
BBB	207	342	0.9	2.0
BB	129	130	0.6	0.7
B	15	16	0.1	0.1
CCC	2	1	0.0	0.0
Not rated	336	462	1.5	2.7
Unallocated	0	0	0.0	0.0
Total bonds	**22,657**	**17,299**	**100.0**	**100.0**

*) Bond portfolio plus spot and forward purchases and sales

Market risk

7.4 Foreign exchange risk

Foreign exchange risk is the risk of loss on positions in foreign currency due to exchange rate fluctuations. Currency options are included in the calculation at the Delta-adjusted position.

Foreign exchange risk is shown in figure 7.8. The calculation is based on the assumption that all exchange rates change unfavourably by 2.0% which at end-2022 will result in a loss of DKK 2.8 million.

Figure 7.8 shows that the Bank's foreign exchange position was reduced from DKK 204 million in 2021 to DKK 141 million in 2022. Foreign exchange risk generally remains at a low level.

Figure 7.8

Currency

	Foreign exchange position		Foreign exchange risk	
DKKm	**2022**	**2021**	**2022**	**2021**
EUR	109	137	2.2	2.7
SEK	2	3	0.0	0.1
USD	11	11	0.2	0.2
GBP	1	5	0.0	0.1
CHF	0	1	0.0	0.0
NOK	6	33	0.1	0.7
JPY	1	1	0.0	0.0
Other currencies	10	11	0.2	0.2
Total	**141**	**204**	**2.8**	**4.1**

7.5 Equity risk

Equity risk is the risk of losses caused by changes in equity prices. Equity positions are the calculated net value of long and short equity positions and equity-related instruments.

The calculation of equity positions is broken down by positions in the trading book and the banking book.

7.5.1 Shares in the trading book

Shares in the trading book are held for trading purposes.

Figure 7.9 shows that the holding of shares in the trading book was reduced from DKK 138 million at end-2021 to DKK 87 million at end-2022, due to a reduction in the portfolio of listed shares. The development reflects a year of strong volatility in the equity market, which made the Bank regularly reduce its equity risk in 2022.

Figure 7.9

Equity risk in the trading book

DKKm	**2022**	**2021**
Listed shares in the trading book	64	115
Unlisted shares in the trading book	23	22
Total	**87**	**138**

7.5.2 Shares in the banking book

A salient feature of shares in the banking book is that they have not been acquired for trading purposes. In addition, a distinction is made between shares in strategic partners, including sector companies, associates and other shares in the banking book.

Shares in strategic partners in the financial sector are shares in companies whose purpose is to support financial institutions' business in the fields of mortgage credit, payment services, unit trusts, etc. Participation in the companies in question is considered a prerequisite for the Bank's operations.

In several of the sector companies, the shares are redistributed to the effect that the ownership interest of the respective institution will reflect its business volume with the sector company.

The shares are typically redistributed on the basis of the sector company's equity value. In light of this, Spar Nord adjusts the recognised value of these shares when new information is available that warrants a change of fair value measurement. In other sector companies, the shares are not redistributed, but are measured based on a fair value corresponding to the net asset value or another recognised valuation method (including discounting of cash flows and market expectations with respect to equity return requirements). The adjustments of the values of the shares in these companies are recognised in the income statement.

Figure 7.10 shows a calculation of equity risk in the banking book. The total holding of shares in the banking book dropped by DKK 72 million to DKK 2.4 billion at end-2022.

Figure 7.10

Equity risk in the banking book

DKKm	**2022**	**2021**
Shares in credit and financing institutions	1,247	1,278
Shares in unit trust man. companies	284	280
Shares in pension institutions	0	1
Shares in payment services business	27	20
Other equities	88	99
Total shares in strategic business partners	**1,647**	**1,678**
Realised gain	11	0
Unrealised gain	116	157
Associates	736	663
Other shares in the banking book	0	115
Total	**2,383**	**2,456**

Shares in strategic partners fell by DKK 31 million relative to end-2021, primarily because of a lower holding of DLR shares.

The DKK 73 million increase in the value of associates was mainly due to additional share purchases and market value adjustments of Spar Nord's ownership interest in Danske Andelskassers Bank.

7.6 Commodity risk

Spar Nord only accepts commodity risks to a very limited extent. The commodity exposure is calculated as a gross exposure, with setoffs only being made with respect to contracts having the same underlying commodity, the same maturity date, etc.

7.7 Option risk

Derivatives are used to hedge and manage Spar Nord's risks. These include options and products that contain an embedded option. Option risks originate primarily from interest and currency options and positions in callable mortgage bonds.

Option risks are measured and managed by computing the positions' Delta, Gamma, Vega and Theta risks.

7.8 Sensitivity analysis

Figure 7.11 shows how Spar Nord's income statement will be impacted if interest rates change, if share prices drop or if all exchange rates develop unfavourably.

It appears from figure 7.11 that the impact of an interest rate increase will be a loss equal to 0.4% of shareholders' equity. Furthermore, the effect of a 10% decline in the value of the share portfolio both in the banking and the trading book will be a loss equal to 2.2% of shareholders' equity.

Figure 7.11

Sensitivity analysis*

	Impact on operating profit		Impact on equity	
DKKm/%	**2022**	**2021**	**2022**	**2021**
Interest rate increase of 1%-point	-46	-77	-0.4	-0.7
Interest rate decrease of 1%-point	46	77	0.4	0.7
Share price decrease of 10% in the trading book	-7	-11	-0.1	-0.1
A fair value decrease of 10% for shares in the banking book	-249	-233	-2.2	-2.2
Unfavourable 2% exchange rate fluctuation	-2	-3	0.0	0.0

The sensitivity information includes positions in the trading book and the banking book with respect to interest rate and exchange rate risk. The impact on the operating profit and the impact on equity are calculated after tax.

7.9 Own properties

Properties are recognised at cost upon acquisition and subsequently measured at fair value. The fair value is calculated on the basis of current market data according to an asset return model that includes the property's rental income and operating expenses, including property management services and maintenance.

Operating expenses and maintenance costs are calculated on the basis of the condition of the individual property, construction year, materials used, etc. The fair value of the property is determined based on the calculated return on its operation and the individually determined rate of return. The return rate is fixed on the basis of the location of the individual property, potential use, the state of maintenance, etc.

The fair value of the individual property is reassessed at least once a year based on the current letting market and the interest level. An external valuation is obtained from a real estate agent to support the calculation of fair value, including the rental rates and rates of return used.

In 2022, the Bank sold two domicile properties, which explains the value change of DKK 24 million to DKK 622 million at end-2022. Reference is made to Annual Report 2022 for a more detailed description of the accounting treatment of properties.

Figure 7.12 Spar Nord's properties broken down by rate of return.

Figure 7.12

Yield/return

	2022		2021	
DKKm	**No. of properties**	**Value year-end**	**No. of properties**	**Value year-end**
-> 7 %	13	217	13	220
7% - 8%	12	284	15	310
8% - 9%	10	105	7	86
9% - >	5	16	7	31
Total	**40**	**622**	**42**	**647**

The most important assumptions when calculating the fair value of investment and domicile properties are the required rate of return and the rent level.

Other things being equal, an increase of the required rate of return of 0.5%-point will reduce the fair value by DKK 41 million at end-2022, against DKK 44 million at end-2021.

Other things being equal, a decrease of the rent level of 5% will reduce the fair value by DKK 31 million at end-2022, against DKK 32 million at end-2021.

Section 8

Operational risk

Developments in 2022

Since 2021, the implementation of solutions and measures to limit the potential for defrauding the Bank's customers has contributed to reducing the extent of external fraud considerably.

The level of operational events was at its lowest for several years in 2022, primarily driven by a reduction in the extent of external fraud perpetrated against the Bank's customers, which historically accounts for the largest share of operational losses in Spar Nord.

The setup for identifying and addressing operational risks was improved over the course of 2022, while the Bank at the same time increased awareness of operational risk.

Being a digital business, IT security is a prioritised focus area, and the Bank is working continuously to strengthen its IT security level, as the threat from cyber criminals has only grown bigger with the war in Europe.

Furthermore, the Bank remains focused on anti-money laundering and counter-terrorist financing, strengthening its risk identification process in connection with outsourcing and challenges relating to GDPR, including enhancing the Bank's data quality.

Definition of operational risk

Operational risk is the risk of loss resulting from inefficient or deficient internal procedures, from human or systemic errors or from external events, including legal risks.

Operational risk also comprises model risk, which is the risk of loss resulting from decisions primarily based on results of internal models. Operational risk arises due to errors in the development, execution or use of such models.

The risk exposure relating to operational risk is based on the basic indicator approach, as described in section 4.4.

RISK EXPOSURE, OPERATIONAL RISK

DKK 6.5 billion

2021: DKK 6.2 billion

8.1 Operational risk policy

Spar Nord's Board of Directors defines the Bank's operational risk policy. This includes determining risk tolerance in the area.

The purpose of the operational risk policy is to promote an open risk culture among its employees and thereby increase awareness of operational risk. The policy also describes how to ensure that the Board of Directors and the Executive Board are kept informed about significant risk areas and developments.

Operational risks are assessed on the basis of the probability of the risk materialising in the form of an operational event, and the consequences this might entail. In the policy, operational risk tolerance has been determined as being low compared with the other types of risk the Bank is exposed to.

8.2 Addressing operational risks

All of Spar Nord's activities are subject to operational risk, and therefore a key task is to limit the operational risk level as much as possible, with due consideration to continuing sound banking operations.

Operational risk is managed across the Bank through a comprehensive system of business procedures and control measures developed to ensure an adequate control environment.

Follow-up and reporting with respect to operational risk is anchored with the risk management function, while responsibility for identifying and addressing risks lies with the first line of defence in the unit responsible for the relevant business activity. This helps ensure segregation of controlling and operational functions.

In addition to identifying operational risk, all operational events resulting in a loss of more than DKK 10,000 are systematically recorded, categorised and reported. The Bank also registers operational incidents that could potentially have resulted in a loss, but did not do so (near-miss incidents). To enhance awareness and promote an open risk culture in the organisation, awareness activities are regularly undertaken aimed at operational risk management.

Operational risk

8.3 Reporting operational risks

Reporting to the Board of Directors, Executive Board and risk owners is done on a quarterly basis. The risk owners are informed about the loss events during the period under review and about changes to the risk patterns of the area. The Board of Directors and Executive Board receive a summary of significant changes to the risk patterns and a statement of total loss events.

Loss events exceeding DKK 5 million will be reported separately to the Executive Board and Board of Directors.

The operational losses are illustrated as a percentage distribution on risk types measured by number of events and loss amounts, respectively, in figure 8.1 and figure 8.2.

Figure 8.1
Number of operational loss events broken down by risk type
%

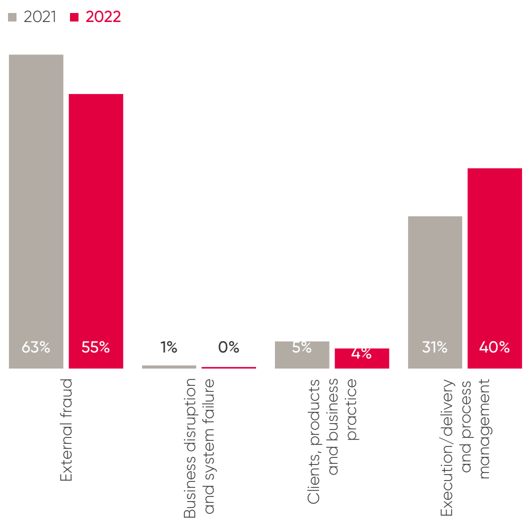
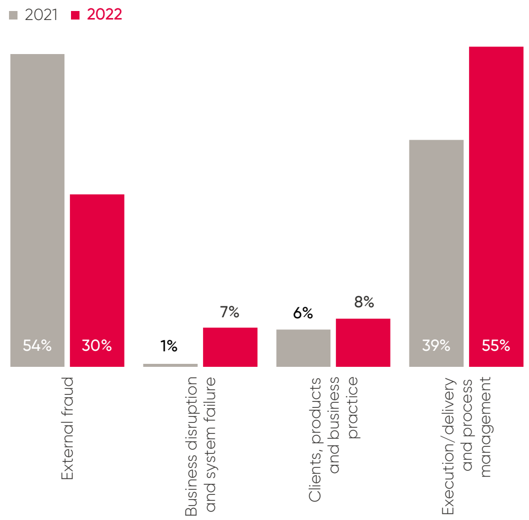


Figure 8.2
Operational loss amounts broken down by risk type
%



Most of the loss events are events involving a limited financial effect. As shown in figure 8.1 and figure 8.2, 55% of the loss events in 2022 related to external fraud (2021: 63%), which in terms of amounts equal 30% in 2022 (2021: 54%). External fraud includes payment card abuse and online banking fraud. The rest of the loss events relate to traditional banking operations.

8.4 IT security and IT risk management

As Spar Nord is a digital business, data and IT systems security are paramount to its credibility and existence and involve the Bank managing a number of business-critical IT risks.

The Bank's central IT security function teams up with the business and the IT department to ensure that the threat scenario is kept up to date, that IT risks are identified and analysed and that these risks are adequately mitigated through appropriate controls and risk-mitigating measures. As the threat landscape continues to evolve, it is important that the Bank remains vigil and stay updated on the potential threats the Bank may face. The purpose is to ensure that the day-to-day operations reflect the risk tolerance defined by the Board of Directors. The Bank's risk profile is regularly reported to the Bank's Executive Board and Board of Directors.

The IT security function is responsible for reporting on compliance with the Bank's adopted IT security risk tolerance, as defined in the IT security policy, and for the objective of the IT contingency plan. The Bank's IT security efforts also include the preparation of business continuity plans and recovery plans and for arranging periodic testing of such measures. The aim is to ensure continued operation of the Bank at a satisfactory level in the case of extraordinary events. The IT security function is also

Operational risk

charged with ensuring compliance with legislative and sector-specific requirements, requirements and customer expectations in terms of the Bank's availability, confidentiality and integrity.

The risk management function, the Executive Board and the Board of Directors regularly review the IT security and the IT risk profile. These are also regularly addressed by the IT Security Committee.

In order to protect the Bank against the growing threat in the area of cyber security, the IT security function has regularly carried out awareness activities for employees and other risk-based tests of the Bank's security measures. The function has also participated in sector-specific collaborative initiatives to build internal knowledge about information security.

8.5 Money-laundering risk

The Bank retains a strong focus on preventing money-laundering and terrorist financing, including the risk-mitigating measures that must be implemented to prevent the Bank from being used for money-laundering activities, terrorism financing purposes or sanction breaches.

The AML & Fraud function is charged with ensuring that the Bank complies with the Danish Act on Measures to Prevent Money Laundering and Financing of Terrorism, EU Funds Transfer Regulation and EU anti-terrorism regulations and sanction regulations. The AML & Fraud function supports the Bank's business development in connection with ongoing implementation of the rules. In addition, AML & Fraud carries out regular controls to ensure compliance. The Bank continues to focus on enhancing and optimising existing processes and systems.

The number of filings with the State Prosecutor for Serious Economic and International Crime (SØIK) has increased significantly. In 2022, Spar Nord had 3,934 filings with SØIK as compared with 2,194 cases in 2021.

AML & Fraud is an independent department reporting directly to the Executive Board. The Bank's AML Officer reports quarterly to the Executive Board and the Board of Directors.

8.6 GDPR

The DPO function (data protection officer) forms part of the Bank's second line and is anchored in the compliance function.

As with the rest of the Bank's compliance function, one of the duties of the data protection adviser is to control, assess and report on whether the Bank complies with current legislation and practice in the area of data protection.

The data protection adviser applies a risk-based approach to identifying areas to review. The areas form part of an annual plan approved by the Board of Directors.

In 2022, focus was on areas such as compliance with the basic principles and security of processing requirements of the GDPR, the rights of data subjects and the use of data processors.

The data protection adviser reports directly to the Executive Board and Board of Directors. Reports are made every six months.

8.7 Outsourcing

Over the course of 2022, the Bank strengthened its framework and business procedures for identifying outsourcing risks.

Enhanced focus on the area is to help identify and manage risks arising from the activities outsourced to a third party. This will help strengthen the future processing of the activities and improve the decision-making basis when entering into agreements with third parties. Reports are made twice a year to the Executive Board and the Board of Directors on the Bank's use of critical/important outsourcing and sub-outsourcing, including suppliers and sub-suppliers providing services relating thereto. The reports include information on risk developments in this area. Once a year, a report is prepared for the Executive Board on all outsourcing activities in the Bank.

The responsibility for the report on the Bank's use of outsourcing to the Executive Board and Board of Directors lies with the Outsourcing Officer appointed by the Executive Board.

8.8 Products and services

Risks associated with the implementation of new products and services are identified and assessed according to internal procedures prior to final approval by the Executive Board and/or Board of Directors.

Risk analyses and statements by selected consultation partners, including statements from the Finance Department, Legal Department and the risk management function, help ensure comprehensive insight into the risks faced by the Bank and its customers. The risk management function must at all times be able to demand that a change to an existing product be treated as a new product.

The approval procedures are described in the Bank's product policies for financial products and other bank products, respectively. The policies are reviewed annually by the risk committee, which recommends the policies for final approval by the Board of Directors.

Products which have been subjected to the internal approval procedures are regularly monitored and revisited at least every other year. If it turns out that a previous analysis of the Bank's and customers' risks is no longer accurate, the product will again be subjected to the internal approval procedure with a view to ensuring an accurate description of the Bank's and the customers' risks.

As part of the policy for financial products, a distribution strategy has been defined with the overall purpose of ensuring that the Bank distributes the right products to the right customers

8.9 Model risk

Model risk is the operational risk of loss caused by erroneous model output. Model risk is an important and growing risk area in Spar Nord due to the need for effective, data-driven decisions.

At Spar Nord, the responsibility for the individual model lies with the business unit that either develops or is the primary user of the model. The risk management function, which is placed in the second line, is responsible for the classification and risk assessment of the model.

Model risk is reported twice a year to the Board of Directors, including the Risk Committee. The report summarises developments in Spar Nord's model risk.

Section 9

Risk statement

Spar Nord's Board of Directors approved Spar Nord's 2022 Risk Report on 9 February 2023.

The Board of Directors believes Spar Nord's risk management complies with applicable rules and standards, is appropriate and effective, and is consistent with the Bank's business model. In addition, in the opinion of the Board of Directors, the risk management systems are appropriate given Spar Nord's risk appetite and strategy, thus ensuring a going concern.

We believe that Spar Nord's general risk profile with respect to the business strategy, business model and key performance indicators provides a fair representation of the Bank's overall risk management, including of the adopted risk profile and risk appetite. Selected financial ratios are shown in figure 9.1 and figure 9.2.

The Board of Directors' assessment is based on the business model and strategy adopted by it, and materials and reports submitted to it by the Executive Board, the Internal Audit Department, the Chief Risk Officer and the Compliance Officer.

Figure 9.1

Financial ratios

Capital	2022	2021
Common equity tier 1 capital ratio	16.4	16.3
Own funds ratio	20.9	20.8
Individual solvency need	9.8	9.6
Excess capital coverage in percentage points	5.5	7.4
Leverage ratio	9.7	8.2
Liquidity		
LCR (%)	211	280
NSFR (%)	127	125
Asset Encumbrance (%)	2.1	1.7
Bank deposit rating and outlook (Moody's)	A1/Stable	A1/Stable
Credit		
Impairment account (DKKm)	1,666	1,591
Impairment ratio (impact on operations)	0.11	-0.15
NPL ratio	2.3	2.8
Total assets (DKKm)	124,040	116,626

The core of the Bank's strategy, vision and fundamental values is for Spar Nord to be a strong and attractive bank for retail customers and small and medium-sized businesses in the local communities in which the Bank is present. Spar Nord strives to run a profitable business based on a pricing of its products that reflects the risk and capital tie-up that the Bank assumes. Spar Nord wants to maintain suitable and robust own funds supporting the business model at all times, based on an overall assessment of the business volume with customers and counterparties.

The Board of Directors' review of Spar Nord's business model and policies shows that the general requirements in respect of the individual risk areas are appropriately reflected in policies and specified limits, including in the Board of Directors' guidelines to the Executive Board, and powers delegated to other organisational units. The specified limits are believed to be defined in a way making them transparent and controllable.

In addition, the review shows that the actual risks are within the limits laid down in the individual policies and powers delegated, and in this light the Board of Directors believes that there is a correlation between business model, policies, guidelines and the actual risks within the individual areas.

Figure 9.2

The Supervisory Diamond

%	Threshold values	2022	2021
Sum of large exposures	<175	83.8	81.7
Growth in lending	<20	12.7	15.5
Property exposure	<25	10.7	9.7
Liquidity indicator	>100	223.0	292.0

Executive Board

Lasse Nyby
Chief Executive Officer

John Lundsgaard
Managing Director

Lars Møller
Managing Director

Martin Kudsk Rasmussen
Managing Director

Board of Directors

Kjeld Johannesen
Chairman of the Board of Directors

Per Nikolaj Bukh
Deputy Chairman of the Board of Directors

Lene Aaen

Kaj Christiansen

Morten Bach Gaardboe

André Rogaczewski

Henrik Sjøgreen

Jannie Skovsen

Kim Østergaard

Spar Nord Bank A/S

Skelagervej 15
P.O. Box 162
9100 Aalborg, Denmark

Tel. +45 96 34 40 00

www.sparnord.dk
sparnord@sparnord.dk

CVR no. 13 73 75 84