Risk Report 2022

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shipfinance.dk

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LEGAL FRAMEWORK

DSF is governed by its own dedicated legislation in the Act on a Ship Finance Institute (the Act) and the Executive Order on a Ship Finance Institute (the Executive Order).

DSF is also governed by:

- The Executive Order on the Issue of Bonds, the Balance Principle and Risk Management (the Executive Order on Bond Issuance)
- The Executive Order on Calculation of Risk Exposures, Own Funds and Solvency Need
- The Executive Order on Management and Control of Banks, etc. (the Executive Order on Governance)
- The Executive Order on Financial Reports for Credit Institutions and Investment Firms, etc. (the Executive Order on Financial Reports)

Pursuant to the Act and the Executive Order, the Group is governed by parts of the Danish Financial Business Act and the Regulation on prudential requirements for credit institutions and investment firms (CRR) via the Executive Order.

Scope

This Risk Report is presented for the Danish Ship Finance Group (referred to as the Group) on a consolidated basis and for the subsidiary Danish Ship Finance A/S (referred to as DSF) on a standalone basis. The pronouns “we” and “our” are used to refer to DSF and the Group where the specific entity is not important.

All economic activity in the Group is carried out by DSF. The Group comprises DSF and the holding company, Danish Ship Finance Holding A/S (DSH). DSH has no business activity apart from its majority ownership of DSF.

This report describes the various risks to which the Group and DSF are exposed and the associated risk capital requirements. This report also details the composition of the Group’s capital base and the material risk and capital management methodologies employed by the Group.

Further information about risks and risk management can be found in the DSF Annual Report.

Reporting pursuant to statutory disclosure requirements is conducted annually in conjunction with the presentation of financial statements. A regulatory capital adequacy assessment is published quarterly.

The Risk Report 2022 is presented in unaudited form.

Additional Pillar 3 disclosures required under Regulation (EU) No. 575/2013 of the European Parliament and of the Council of 26 June 2013 (CRR) and the Danish Executive Order on Calculation of Risk Exposure, Own Funds and Solvency Need can be downloaded from:

www.shipfinance.dk

The year *in summary*

There were no fundamental changes to the Group's risk and capital management framework in 2022.

Activities completed this year included establishing a hold-to-maturity investment portfolio, aligning the Group's CVA and DVA methodologies with new regulatory methods for counterparty credit risk measurement, and an on-site review by the Danish Financial Supervisory Authority of the processes and risk reporting governing DSF Capital Centre A[1].

The Danish Financial Supervisory Authority (FSA) implemented the EU Covered Bond Directive into domestic law with effect from July 2022. The amendment introduced new coverage requirements that we have implemented: a minimum 2% overcollateralisation requirement and a mandatory 180-day liquidity coverage buffer.

The changes to the CRR expected in 2023 will include revised standard approaches for credit risk, operational risk and market risk, and a revised counterparty valuation adjustment (CVA) framework. We do not expect new output floors for IRB models to impact DSF's capital calculations under the standardised approach.

We remain in active dialogue with the Danish FSA regarding the specific mechanisms ensuring appropriate solvency calculation with respect to the collateral value of ship mortgages (as for real estate) across capital adequacy methodologies under the European Union legislation on minimum loss coverage for non-performing loans (the NPL backstop) that became effective on 26 April 2019.

Development in key risk figures for DSF

DKK MILLION / %	2022	2021
Capital		
Own funds (less deductions)	9,263	9,131
Total risk exposure amount	42,389	45,477
Internal capital adequacy requirement, incl. buffers	13.0%	11.6%
Total capital ratio	21.9%	20.1%
Excess coverage	8.8%	8.4%
Leverage ratio	13.7%	14.1%
Funding and liquidity		
Liquidity coverage ratio (LCR)	560%	449%
Net stable funding (NSFR)	175%	165%
Issuer rating – S&P	BBB+ (Stable)	BBB+ (Stable)
Covered bond rating – S&P	A (Stable)	A (Stable)
Asset quality		
Annual loan impairment ratio	(1.6)%	(0.1)%
Accumulated loan impairment charges as % of loan book (year-end)	2.1%	2.6%
Net NPL ratio	2.1%	3.0%

[1] The details of the Danish FSA review can be found here: https://www.skibskredit.dk/selskabet/finanstilsynets-redegoerelse/

Risk Report

Risk and *capital profile*

Risk and *capital profile*

DSF is a leading provider of ship financing internationally and domestically and among the 20 largest lenders to the shipping industry globally.

DSF's business model comprises senior secured lending, secured by ship mortgages and funded by the issuance of covered bonds under the Danish balance principle.

DSF's invests its own funds in a portfolio of high-quality, mostly AAA, fixed income assets. This portfolio forms a liquidity reserve for the Group's activities. Around half of this portfolio is in the form of a hold-to-maturity portfolio, established during 2022, with expiry in January 2025.

Financing to shipowners is only provided against first lien mortgages on vessels. Our lending to shipowners is in line with general market practice. Loans are mostly issued in USD and to a lesser extent in other currencies.

We fund our lending activity through the issuance of DKK-denominated ship mortgage bonds from Capital Centre Institute in General and, since 2019, EUR-denominated CRR-compliant covered bonds (SDO) from Capital Centre A. Although EUR bonds remain a smaller share of our overall funding than DKK bonds, we strive to ensure similar risk profiles and equally robust operating procedures and controls around Capital Centre A and Capital Centre Institute in General.

Bonds issued out of either capital centre are listed on Nasdaq Copenhagen and have been assigned ratings of A (Stable) by Standard & Poor's Global Ratings. Bonds are issued under Danish law.

Our business model naturally incurs foreign exchange mismatches between loans and bonds in different currencies. These mismatches are hedged with financial counterparties, subject to the strict requirements of the Danish specific balance principle.

RISK TYPES

The Group is exposed to credit risk, market risk, liquidity risk and various types of operational risk:

Credit risk, defined as the risk of losses arising from clients or financial counterparties failing to meet their payment obligations, is the primary risk related to the business model. Credit risk stems primarily from shipowners defaulting on their obligations towards us or, more remotely, defaults by financial counterparties with a credit exposure to the Group.

Market risk is the risk of losses due to factors that affect the overall performance of the financial market. Our exposure to market risk mainly stems from direct and indirect effects of changes in interest rates and USD/ DKK, EUR/USD or DKK/NOK exchange rates on our loan book or capital reserves.

Liquidity risk is the risk of not being able to fulfil a payment obligation when due. Liquidity risk primarily arises from a maturity mismatch between the Group's payment obligations in DSF to e.g. bondholders, financial counterparties or lending clients and the amount of liquidity available at any one time. This risk is partly mitigated by a requirement to pre-fund all loans and commitments to clients under the Danish specific balance principle and is further managed subject to strict liquidity limits. Regular stress tests are carried out.

Operational risk is the risk arising from breakdowns in our internal procedures, or failures by people or systems. In this category, we also consider structural risks to our business model, ESG risks and the risk of material damage to our reputation.

Risk governance

The Group has a two-tier management structure, reflecting statutory requirements for listed Danish companies and the provisions laid down in the Danish Financial Business Act. The Board of Directors defines overall policies, while the Executive Board is responsible for the day-to-day management of the Group.

The Board of Directors is responsible for ensuring that the Group has an appropriate organisational structure, sound principles of risk and capital management, and that governance, risk policies and limits are established for all important risk categories, including the handling and monitoring of such risks by the credit risk management, risk management, internal control and compliance functions, which all report to the Executive Board.

The Board of Directors has laid down guidelines for the Executive Board, clearly specifying the areas of responsibility and scope of action for management. In addition, all new loans above certain limits must be submitted to the Board of Directors for approval. The Board of Directors furthermore receives detailed client-specific information on loan exposures and loan portfolios.

The Board of Directors has appointed a Chief Risk Officer with responsibility for monitoring and reporting on the risk management processes of the Group. The Chief Risk Officer is a member of the Executive Board and the Credit Committee. The Executive Board has established a Risk Management function with responsibility for identifying, analysing and monitoring all risks except for credit risk. The Credit department is responsible for monitoring and reporting on credit risk. Such risk arises from lending activities and financial counterparty risk.

The Head of Compliance is responsible for monitoring compliance with applicable legislation, standards and policies, and ensuring that the Group applies effective and suitable techniques for identifying and mitigating the risk of non-compliance.

The Head of Compliance is also in charge of maintaining effective measures to prevent money laundering and terrorist financing and ensuring management focus on these areas.

Segregation of duties is in place to secure a robust control environment. Full segregation of duties is in some cases impossible or impractical to achieve, due to the size of the Group. Mitigation measures are in place and are reviewed by the Audit Committee.

Overview of risk reports

Report	Frequency	Applicable legislation
Internal management report	Monthly	The Executive Order on Governance for Credit Institutions The Executive Order on Financial Reports
Treasury reporting	Quarterly	The Executive Order on Financial Reports
Stress test	Quarterly	The Executive Order on Governance for Credit Institutions
Credit reporting	Quarterly	The Executive Order on Governance for Credit Institutions
Loan impairment review	Semi-annually	The Executive Order on Governance for Credit Institutions
Compliance reporting	Annually	The Executive Order on Governance for Credit Institutions
Internal solvency, ICAAP	Annually	Guidelines on Adequate Capital Base and Solvency Needs for Credit Institutions
Internal solvency, ILAAP	Annually	Guidelines on Internal Liquidity Adequacy Assessment Process
Recovery plan	Annually	The Danish Financial Business Act
Report from the Chief Risk Officer	Annually	The Executive Order on Governance for Credit Institutions
Statement to be used for risk assessment	Annually	The Executive Order on Governance for Credit Institutions
Annual asset review	Annually	The Executive Order on Governance for Credit Institutions
IT risk assessment	Annually	The Executive Order on Governance for Credit Institutions
Sustainability report	Annually	The Executive Order on Financial Reports

In accordance with applicable legislation, the Board of Directors, including its Audit Committee, annually assesses the need for establishing an internal audit function.

Board committees

The Board of Directors has set up an Audit Committee and a Remuneration Committee. The committees review and discuss topics in the respective subject areas and assist the Board of Directors in decision-making.

The Audit Committee is responsible for overseeing accounting and audit matters and for preparing accounting and audit-related topics for consideration by the Board of Directors. The Audit Committee comprises four members of the Board of Directors. The Chairman of the Board of Directors is not a member of the Audit Committee.

The Remuneration Committee assists the Board of Directors in preparing the Group remuneration policy and remuneration proposals. The remuneration policy is adopted at the general meeting. The Chairman of the Board of Directors chairs the Remuneration Committee. The total remuneration of the Board of Directors, the Executive Board and employees who are deemed to have a material impact on the company's risk profile is specified in Annex 9.

Internal audit

The Group is not required to have an internal audit function and currently does not have such a function. To promote a robust control environment and to support the work of the external auditors, the Group has established an internal control function, reporting to the Executive Board.

In accordance with applicable legislation, the Board of Directors, including the Audit Committee, regularly assesses the need for an internal audit function.

Reporting

Regular reporting is provided to ensure that the Board of Directors possesses sufficient information concerning risk levels and trends.

The Board of Directors assesses the adequacy of relevant policies and the framework and principles for risk and capital management.

Risk governance structure

Board of Directors

Audit committee

Remuneration committee

Executive Board

External auditors

Chief Risk Officer
(Member of Executive Board)

Credit committee

Internal control

Third line of defense

Credit department
Managing credit and counterparty risk

Risk Management
Managing all other risks

Compliance
Managing compliance with regulation

Second line of defense

Client Relations

Treasury

First line of defense

Capital and risk management framework

We have a strong culture of risk awareness and long-term decision making coupled with stringent requirements for day-to-day monitoring and management of risks. We maintain strong capital and liquidity buffers well beyond regulatory minimum requirements. Prudent risk management is pivotal to our activities and shall ensure the long-term viability of our highly specialised business model.

The Group's risk limits and risk tolerance are defined in policies and principles established by the Board of Directors and ultimately determined by applicable regulation.

Capital management

We shall at all time maintain sufficient own funds for lending activity in DSF to continue, even in the event of large cyclical fluctuations in the shipping industry and adverse business conditions. Our capital is managed at a level deemed sufficient to underpin the credit rating of the issued bonds.

Credit and counterparty risk

In our credit risk management activities, we distinguish between credit risk relating to lending to clients and credit risk relating to transactions with financial counterparties.

Our efforts are founded on the limits set out in the credit risk and counterparty risk policies. The policies build on the provisions of the company's own Act and the Executive Order, stipulating, among other things, that the Board of Directors must lay down risk diversification rules.

Market risk

Market risk is governed by limits laid down in the Bond Executive Order and the Executive Order. Limits specified in our internal policy further mitigate market risk.

The overall objective is to safeguard our capital adequacy, to make sure that interest rate- and foreign exchange risks are managed either by hedging or through controlled open positions and to achieve an adequate financial return within the risk targets defined.

Liquidity risk

Liquidity risk is prudently managed under the specific balance principle in accordance with the Bond Executive Order. In addition, the liquidity risk policy defines risk limits to ensure adequate liquidity at all times.

Liquidity is managed with the objective of ensuring continued access to funding on adequate terms and to avoid any situation where lack of funding could challenge the business model. Ultimately, the aim of the liquidity management framework is to ensure that we are consistently able to meet our payment obligations even under stressed market conditions.

Operational risk

Operational risk is governed by the operational risk policy issued by the Board of Directors. The policy sets out the overall framework for identifying, evaluating and managing operational risk and is supplemented by operating procedures and internal controls.

On an ongoing basis, we register losses and potential loss events deemed to be attributable to operational risk. The registration is used as a basis for assessing the adequacy of controls, processes, operating procedures, etc. If required, these may from time to time be adjusted to increase the resilience to operational risks.

KEY DEVELOPMENTS IN 2022

The regulatory solvency ratio for DSF was 21.9% at year-end 2022 (20.1% at year-end 2021).

DSF's internal capital adequacy requirement, including buffers, amounted to 13.0% at year-end 2022 (11.6% at year-end 2021).

Capital profile

The Board of Directors and the Executive Board shall prudently manage capital such that adequate own funds are always maintained.

Adequate own funds are defined as the minimum capital required, in the assessment of the Board of Directors and the Executive Board, to ensure only a remote risk of the Group becoming distressed or insolvent during the following 12-month period such that bondholders could be exposed to a potential loss. Bondholders are subject to further protection under the specific balance principle.

The capital in both DSF Holding and DSF is deemed adequate to meet the above-mentioned objective. As at 31 December 2022, the Group's total capital ratio was 19.4%.

Available own funds

The Group's own funds net of statutory deductions amounted to DKK 8,250 million as at 31 December 2022 (against DKK 8,115 million at year-end 2021). DSF's own funds net of statutory deductions amounted to DKK 9,263 million (against DKK 9,131 million in 2021).

The Group's own funds consist of Common Equity Tier 1 (CET1) capital in the form of share capital and tied-up reserve capital in DSF, retained earnings from previous years, and a subordinated Tier 2 debt instrument in DSH.

Calculation of capital ratio

	Group		DSF	
DKK MILLION	**2022**	**2021**	**2022**	**2021**
Own funds less deductions	8,250	8,115	9,263	9,131
Total risk exposure amount	42,494	46,020	42,389	45,477
Total capital ratio (%)	**19.4**	**17.6**	**21.9**	**20.1**

The development in available own funds is determined primarily by net profit for the year and the dividend policies of the Group companies DSH and DSF.

DEFINITIONS

Own funds
Own funds may be composed of three different types of capital: Common Equity Tier 1 capital, Additional Tier 1 capital and Tier 2 capital. Own funds are subordinated to the claims of ordinary creditors in the event of bankruptcy or other forms of financial restructuring.

The ratio of own funds to the total risk exposure amount is referred to as the total capital ratio.

Common Equity Tier 1 capital
A firm's Common Equity Tier 1 capital (CET1) is the aggregate of the share capital, other reserves and retained earnings after certain statutory supplements and deductions.

Additional Tier 1 capital
Additional Tier 1 (AT1) capital consists of capital that forms part of Tier 1 capital and is senior to shareholders' equity.

Tier 2 capital
Tier 2 capital consists of subordinated debt subject to certain restrictions. Tier 2 capital is senior to AT1.

Capital requirements

The internal capital adequacy requirement, including the combined capital buffer requirement, totalled 13.0% for DSF and 13.0% for the Group as at 31 December 2022. Own funds after statutory deductions totalled DKK 9,263 million for DSF and DKK 8,250million for the Group, resulting in total capital ratios of 21.9% and 19.4%, respectively. This corresponds to excess coverage in the amount of DKK 3,745 million, or 8.8 percentage points, for DSF, and DKK 2,720 million, or 6.4 percentage points, for the Group.

Our capital requirement is calculated based on the 8+ approach and the Danish Financial Supervisory Authority's (FSA) guidelines on Adequate Capital Base and Solvency Needs for Credit Institutions.

Own funds shall be at least equal to the sum of the own funds requirements associated with each of the risk types defined as Pillar 1 requirements, Pillar 2 requirements and the combined capital buffer requirement.

Adequate own funds and internal capital adequacy requirement

	Group		DSF	
DKK MILLION	**2022**	**2021**	**2022**	**2021**
Total capital less deductions	**8,250**	**8,115**	**9,263**	**9,131**
Pillar 1 requirements (8% of total risk exposure amount)	3,400	3,684	3,391	3,638
Pillar 2 requirements	704	455	704	455
Capital conservation buffer	1,062	1,151	1,060	1,141
Countercyclical capital buffer	364	65	363	65
Excess capital	2,720	2,778	3,745	3,839
Solvency ratio (%)	19.4	17.6	21.9	20.1
Internal capital adequacy requirement, including combined capital buffer requirement (%)	13.0	11.6	13.0	11.6
Excess capital (%)	6.4	6.0	8.8	8.4

Risk Report

Credit risk *management*

Credit risk *management*

KEY DEVELOPMENTS IN 2022

In 2022, the credit quality of the loan book continued to strengthen, positively impacted by increased freight rates in several shipping segments and successful workouts of some legacy non-performing loans. In line with this, the average DSF Rating of the loan book and its collateral coverage improved. Non-performing loans (NPL) were further reduced, resulting in a DKK 583 million reversal of loan impairment charges. The net NPL ratio improved to 2.1% at year-end 2022, down from 3.0% the year before.

Credit risk is the risk of incurring losses because of clients (shipping companies) or financial counterparties (financial institutions) failing to meet their payment obligations towards us. We are mainly exposed to the credit risk of clients through loans collateralised by vessels.

Guarantees are obtained from parent companies of clients to which loans are made, when applicable. Guarantees from non-related parties and credit derivatives used as credit protection are not applied as security and to reduce capital requirements.

Credit risk of financial counterparties is exposed through the high-quality bonds we hold in our portfolio and the financial contracts we have entered into with those counterparties.

Credit risk is managed pursuant to the credit policy approved by the Board of Directors, containing specific guidelines for credit risk appetite, risk-taking and ongoing risk management carried out in relation to lending activities.

Standard operating procedures are in place, ensuring a consistent approach to credit assessment and credit risk management.

Counterparty risk is managed pursuant to the counterparty risk policy approved by the Board of Directors, containing guidelines for credit risk appetite and risk management carried out in relation to counterparty risk exposure.

Limits on counterparty risk are set by the Board of Directors based on the creditworthiness of financial counterparties, which in turn is based on DSF Ratings and external credit ratings.

Governance structure

The credit governance structure rests upon the three lines of defence principle, which ensures organisational separation of loan origination, credit risk management and control functions.

Client Relations, comprising our client-facing and loan origination employees, is responsible for interaction with clients, loan and security documentation and the operational management of loans. Together with operations, support and development functions it forms the first line of defence.

The Credit department is the second line of defence, with day-to-day responsibility for the credit policy, the counterparty risk policy, credit risk monitoring, loan impairment reviews and the reporting of credit risk.

The third line of defence is carried out by Internal Control, which reports its findings to the external auditors as a supplement to their audit process.

The criteria and approach used for defining the credit risk management policy and setting credit risk limits are based on extensive experience of the shipping markets and how the volatility in freight rates and vessel values is best managed.

Credit risk limits are set according to the creditworthiness of clients, including the assigned DSF Rating, and the characteristics of the segment in which the vessels pledged as collateral operate.

Client selection and diversification

We strive to maintain a conservative risk profile when structuring and originating loans, focusing on clients' credit quality through the shipping cycle while at the same time ensuring adequate diversification by country and vessel type. Thus, clients' financial standing and robustness, market position, track record in stressed markets, sustainability efforts and reputation are criteria we consider when assessing loan requests.

In addition, the composition of clients in the loan book (total loans and guarantees) must be adequately diversified. The diversification rule is related to the objective clause in DSF's articles of association.

We have established guidelines limiting large credit exposures.

At year-end 2022, the five largest credit exposures were secured by mortgages on 58 vessels split between nine vessel types.

Credit exposure to one client group, secured by mortgages on 25 vessels in the Container Liners and Product Tankers segment, represented approximately 9% of the loan book at year-end 2022. This is the only client whose aggregated credit exposure exceeds 25% of the eligible capital.

Credit exposure to any non-Danish client may not exceed 25% of eligible capital in DSF.

Loan-to-value

We grant loans with an initial loan-to-value (LTV) of up to 70%, subject to a first priority mortgage on the financed vessels. The level of initial LTV accepted on a new loan will depend on the client's creditworthiness (as reflected by its DSF Rating), where each shipping segment is in the market cycle, and the characteristics of the financed vessel(s). We may, under certain conditions, grant loans above the 70% LTV limit against supplementary collateral and/or subject to an additional capital charge. The additional capital charge is maximised to an amount in DKK determined on the date of granting the loan or at disbursement of the loan at the latest.

The additional capital charge is a deduction from Tier 1 capital equal to the part of the loan that exceeds 70% of the value of the mortgaged vessel(s) at the time of calculation, but not exceeding the maximum defined.

We have for several years not granted loans with an initial LTV exceeding 70% to acquire new business and no capital deduction was made in 2022.

Loans held in Capital Centre A are subject to a maximum LTV of 60% after including any additional collateral posted for the benefit of the bondholders.

In 2022, we did not grant any loans for the financing of clients' payments of instalments to shipyards.

The loan book after loan impairment charges was on average secured by mortgages within 43% of the market valuation of the financed vessels.

Five largest credit exposures

DKK MILLION	2022	2021
Five largest credit exposures	9,156	11,467
Loan book	35,005	37,544

Loan documentation

The lending activity involves extensive loan and security documentation. The loan documentation sets out the contractual terms of the loan and the rights and obligations of both parties.

If a client defaults on its representations, warranties or undertakings (payment or otherwise) and workout proceedings fail, the loan documentation provides for legal remedies whereby we can reduce our exposure to the client.

Ultimately, if the client defaults on its payment obligations pursuant to the loan documentation and such default continues, a first priority mortgage on vessels gives us the right to apply for the issue of a warrant of arrest by way of levy of execution against the mortgaged vessel with the local enforcement court.

The execution lien gives us the right to apply for a forced sale of the mortgaged vessel with the enforcement court or in a private sale, if permitted pursuant to the relevant arrest jurisdiction, and off-set the auction/sales proceeds against the defaulted loan. Such enforcement action takes time and is costly. Use of this action will vary depending on the choice of arrest jurisdiction. The last time we arrested a vessel was in 2011.

Most of our loan and security documentation uses "one-sided exclusive jurisdiction clauses", which allow us to take up proceedings against the client in any court of competent

OBJECTIVE CLAUSE

The objective of the company is to provide ship financing in Denmark. In addition, the company may provide ship financing in the international market if such activities do not unnecessarily limit the company's Danish operations.

jurisdiction to ensure that any legal disputes are resolved in an orderly fashion and in a jurisdiction favourable to us.

We also participate in syndicated and club deal loans to shipowners together with other lenders. Standard Loan Market Association documentation is typically applied in adapted form in these transactions.

Risk mitigation

In addition to first priority mortgages on the financed vessels and assignment of each vessel's primary insurances, the composition of the loan book adheres to a set of diversification rules. The purpose of the diversification rules is to ensure adequate diversification by client, vessel type and country.

Vessel type diversification

The loan book shall be adequately diversified across vessel types. No single vessel type may be provided as security for more than 50% of the loan book. Within any vessel type, no segment may account for more than 33% of the loan book.

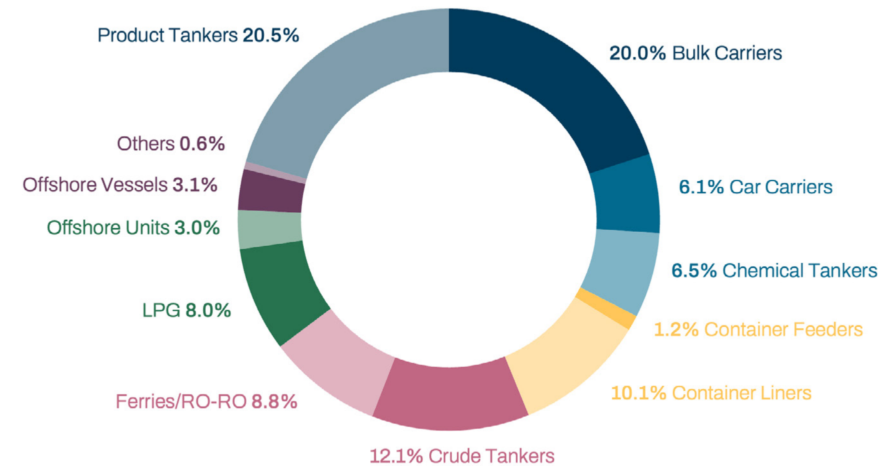
Country risk diversification

The loan book shall be adequately diversified by country. The country risk is monitored in terms of both country of ultimate risk and operational head office, and the latter is used for regulatory purposes such as solvency calculations.

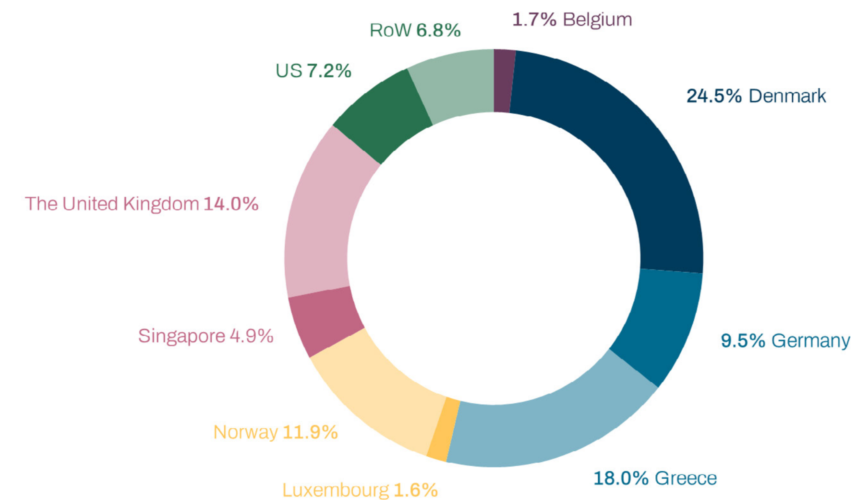
Lending to clients in most EU countries, Norway, the United Kingdom, Switzerland and the US is not subject to any restrictions. For lending to clients in other countries, we have set an overall limit per country of 25% of the loan book.

Countries accounting for a share of 1.5% or more of the loan book are shown individually. Other countries are grouped into the rest of the world (RoW).

Loan book broken down by mortgaged vessel type as at 31.12.2022 DKK 35,005 million



Loan distribution by operational head office as at 31.12.2022



Mitigation of collateral risk on mortgaged vessels

Market value of mortgaged vessels
We obtain fair market valuations for all vessels at least semi-annually. The valuations are carried out by external brokers. We may in some cases self-assess the values based on, for example, specific independent market values or external valuations of similar vessels.

Among other things, market valuations of vessels are used to determine the LTV ratios on loans and for control purposes when reassessing the collateral value of mortgaged vessels (after haircuts) as part of our semi-annual loan impairment review. The valuations are also used to monitor compliance with the 60% LTV limit in Capital Centre A.

Inspection of mortgaged vessels
As a supplement to the semi-annual market valuations, physical inspections of the financed vessels are made on a spot-check basis. An inspection may be performed both during the loan maturity period or prior to a loan offer being submitted. In the aftermath of the Covid-19 restrictions in many countries, we made fewer physical inspections in 2022 than in a normal year.

Insurance of mortgaged vessels
All vessels mortgaged as security for a credit exposure must be insured. Insurances are taken out by the client and assigned to us.

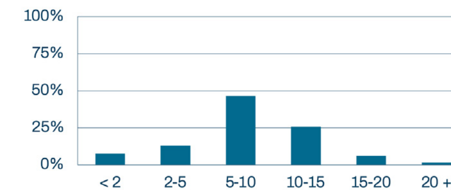
Generally, the following primary insurances are required:

- Hull and machinery insurance, which covers damage to or total loss of the vessel.
- Protection & indemnity insurance (P&I), which covers oil pollution caused by the financed vessel, damage to equipment and injuries to seafarers. This insurance is also a third-party liability insurance covering collision with another vessel.
- War risk insurance, which covers damage to the vessel, potential total loss and retention, etc. caused by war or war-like conditions.

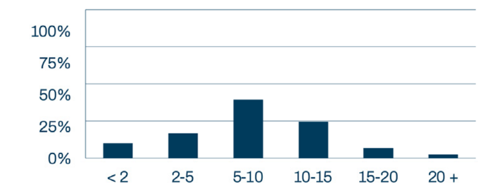
In addition, most credit exposures are covered by a mortgagee's interest insurance (MII) and a mortgagee's additional perils pollution insurance (MAPP). These insurances cover our risks in various situations where the primary insurances do not provide cover, for example if the vessel is not seaworthy at the time of the claim.

Age distribution of mortgaged vessels
The following charts display the age distribution of all mortgaged vessels, as well as the age distribution of the largest vessel types in the loan book.

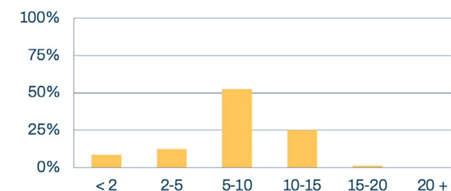
Age distribution of total ship portfolio



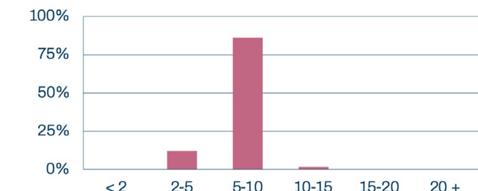
Chemical tankers / Crude tankers / Product tankers



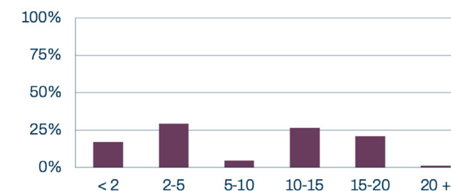
Bulk carriers



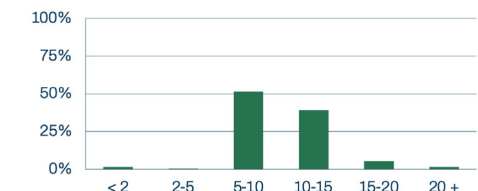
Container liners



Ferries/Ro-Ro



Others



Loan book developments

At year-end 2022, the loan book amounted to DKK 35,005 million, down from DKK 37,544 million the year before.

The composition of the loan book adheres to a set of diversification requirements, ensuring adequate diversification of the loan book by vessel type, client and country.

Net LTV intervals

%	2022
0-20	50
20-40	38
40-60	11
60-80	0
80-90	0
90-100	0
Over 100	0

The table shows the loan book after loan impairment charges, broken down by net LTV intervals.

At year-end 2022, 100% of the loan book after loan impairment charges was secured by mortgages within 60% of the market valuation of vessels.

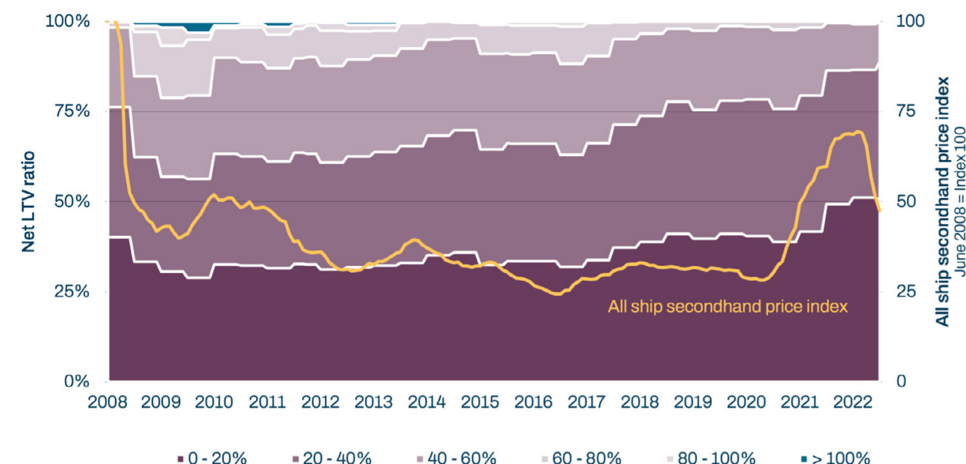
The chart illustrates the development in net LTVs over time and during periods of significant changes in the market values of vessels.

It is noteworthy that even major declines in vessel prices have not adversely affected the collateral coverage of the loan book.

This is due to the positive effect of regular loan repayment schedules and the benefit of minimum value clauses included in most loan agreements, where we have the right to demand partial prepayment and/or additional collateral if the market values of the mortgaged vessels fall below an agreed threshold.

The net LTV intervals are shown together with the development in vessel prices based on a price index for all vessel types (the solid line).

Net LTV vs price index for all vessel types



Sources: Clarksons, Danish Ship Finance

Collateral value of mortgaged vessels (after haircuts)

We have prudent methodologies in place for calculating the expected minimum realisation value of a vessel in a low market net of realisation costs (Sx value).

The Sx value is calculated by discounting the expected earnings per day in a low market for each of the subsegments of the relevant vessel types. The calculation is based on fixed low earnings throughout the estimated residual life of the vessel and an expected sale of the vessel within 12 months. The interest rate originally agreed on the loan is used as the discount rate. Estimated selling costs are deducted from the value.

The estimated earnings per day of a mortgaged vessel are expected to gradually fall throughout the residual life of the vessel due to increasing maintenance costs and decreasing operational performance, etc. The value of earnings per day in a low market is thus adjusted over the estimated lifetime.

This method of calculating the collateral value of the mortgaged vessels resulted in an average haircut of 62% to the current market value (ranging from 48% to 79% depending on the shipping segment) at year-end 2022. The method is monitored on an ongoing basis and is recalibrated when deemed prudent.

A client's unsecured credit exposure is calculated as the total credit exposure less (i) the Sx value of mortgaged vessel(s) and (ii) the value of any other collateral. Any such positive amount is applied in the calculation of loan impairment charges.

Rating

A DSF Rating is assigned to all clients. The development in the DSF Rating since initial recognition and the related stage development are monitored using a stage migration matrix. The actual stage depends on the state of the established credit risk.

In the table on the next page, the DSF Ratings are mapped to the credit risk ratings determined by the FSA and to external ratings determined by the external credit rating.

If the DSF Rating is 1 to 4 based on the mapping, the client or financial counterparty is considered to have low credit risk. Such a rating is equivalent to an investment grade rating from external credit rating agencies.

Non-performing loans

Non-performing loans (NPL) encompass all credit-impaired and defaulted loans. This includes loans for which no loan impairment charges have been recognised, for example because adequate collateral has been provided.

As at 31 December 2022, gross NPL amounted to DKK 1,245 million, down from DKK 1,911 million the year before. NPL after loan impairment charges (net NPL) decreased from DKK 1,111 million at year-end 2021 to DKK 731 million at year-end 2022. The development in key NPL figures is displayed in the table.

Rating scale

DSF Rating	External rating	
	Standard & Poor's	Danish FSA
1	AAA/AA	3
2	A	
3	BBB	2A
4		
5	BB	
6		
7	B	2B
8		
9	CCC	2C
10		
11	CC/C	1
12	D	

A loan is considered credit-impaired if one of the following events occurs, and hence is assigned a DSF Rating of 11:

- The client is experiencing significant financial difficulty and the risk of incurring a credit loss is larger than not incurring a credit loss; or

- The credit exposure has lenient repayment terms, which could include forbearance measures, which we, for reasons relating to the financial difficulty, would not otherwise have granted.

A loan is in default if the client is subject to one of the following events, and hence is assigned a DSF Rating of 12:

- Bankruptcy or another in-court restructuring.

- Arrears/past due for 90 days or more, unless the problem is short term and the amount concerned is limited in comparison to the client's financial situation, or if this is due to errors or technical problems.

- A loss is deemed inevitable.

- Non-accrual interest; or

- Foreclosure

Non-performing loans

DKK MILLION / %	2022	2021
Loan book	35,005	37,544
Gross NPL	1,245	1,911
Gross NPL ratio (%)	3.6	5.1
Net NPL	731	1,111
Net NPL ratio (%)	2.1	3.0

Forbearance measures

We focus on having a credit risk management framework that ensures consistency between the credit risk profile, credit risk appetite and current legislation and guidelines, including definitions of restructured and forborne credit exposures. Risk management should ensure financial solutions that are viable in the short, medium and long term, supporting a robust capital structure.

Forbearance plans may be adopted to assist clients in temporary financial difficulty. Given the cyclical nature of shipping, temporary forbearance measures are common in ship finance.

Concessions granted to clients include temporary partial payment deferrals, interest-only schedules and term extensions. Forbearance plans are adopted solely in accordance with the credit policy with the aim of reducing the long-term risk of credit losses. As at 31 December 2022, forbearance measures had been granted on a limited number of loans.

NPL PRUDENTIAL BACKSTOP

Legislation has been implemented by the European Union (EU) aimed at reducing non-performing loans (NPL) on balance sheets across the European banking sector. This includes an amendment to CRR regulation no. 575/2013 as regards minimum loss coverage for non-performing exposures (NPL backstop), subject to which new or modified NPL from 26 April 2019 – after two years – will require a deduction from the CET1 capital if not sufficiently covered by loan impairment charges. We have implemented this legislation in our credit risk management systems and are in active dialogue with the Danish Financial Supervisory Authority regarding the specific mechanisms ensuring appropriate capital calculation with respect to the collateral value of ship mortgages (as for real estate) across capital adequacy methodologies.

Covid-19 concessions
Forbearance practices continue to be able to cater for clients materially affected by the Covid-19 pandemic.

We did not receive any client requests for Covid-19 concessions in either 2021 or 2022.

From 1 January 2023, the European Authority (EBA) has decided to repeal guidelines on Covid-19 reporting and disclosure, due to the decreasing prevalence of Covid-19-related public support measures.

Loan impairment charges
Loan impairment charges are made subject to the International Financial Reporting Standard 9 (IFRS 9), which provides rules for classification and impairment of financial assets, including loans.

We comply with the Executive Order on Financial Reports, according to which the IFRS 9 principles, particularly Annex 10, have been implemented, and guidelines published by the Danish Financial Supervisory Authority (FSA).

This includes stage recognition of all loans in Stages 1, 2 and 3 and provides the overall rules and guidelines for calculating loan impairment charges for expected credit losses (ECL), based on a forward-looking approach.

We recognise 12-month ECL on initial recognition of loans. If a loan is subject to either significantly increased credit risk, significant signs of weakness or credit impairment since initial recognition, lifetime ECL are recognised.

All credit exposures are reviewed semi-annually to reassess the applicable stage of loans and the size of loan impairment charges. In addition, defaulted credit exposures are reviewed for partial or full write-off if a credit loss is considered unavoidable.

As part of this process and when obtaining relevant new information, it is evaluated whether the existing DSF Rating still provides the best estimate of the credit risk of the client and the loan. Where this is considered not to be the case, the client and the loan are reclassified accordingly.

Individual loan impairment charges are made based on the ECL impairment model. The size of ECL for individual credit exposures is based on the calculation of ECL, which may be supplemented by management judgment, as described in the following.

Loan impairment charges for 2022 amounted to an income of DKK 583 million compared to an income of DKK 39 million the year before.

Stage recognition
All our credit exposures are subject to stage recognition in Stages 1, 2 or 3 based on the principles set out in the table on the following page.

The subsequent calculation of loan impairment charges in the form of ECL includes, depending on the stage of the loan in question, either the 12-month probability of default (PD) or the lifetime PD.

When determining the PD, the remaining duration of a loan is evaluated for credit exposures in Stage 2. Loans in arrears/past due for 30 days or more (but less than 90 days) are generally showing significant signs of weakness, and they are classified as Stage 2 for calculating ECL. Loans in arrears/past due for 90 days or more are in default, and they are classified as Stage 3 for the purpose of calculating ECL.

At year-end 2022, no performing loans were in arrears/past due. Thus, all loans recognised as being in Stage 2 were assigned DSF Ratings reflecting significantly increased credit risk since initial recognition or the loan showing signs of weakness, rather than being in arrears/past due.

ECL impairment model
ECL is calculated as a function of PD, exposure at default (EAD) and loss given default (LGD), adjusted for forward-looking information using a macroeconomic factor (MEF) for each shipping segment.

ECL = PD * EAD * LGD * MEF

Scenario testing forms part of the ECL calculation, including the MEF, and is based on the following scenarios:

- Base-case scenario
- Worst-case scenario
- Best-case scenario

The calculation of the MEF is described in more detail on the following page.

Macroeconomic factor (MEF)

The MEF, which is used as a parameter in the calculation of ECL, is based on a semi-annual internal assessment.

The model consists of eight market indicators, which are considered for each vessel type.

Scenario testing is carried out based on three scenarios, their probability and an MEF effect. Based on this, a score, which - depending on the characteristics of the market indicator - can range from 0 to 2, is provided and accumulated, with an aggregate score close to 12 indicating elevated risk.

For each client, the PD is adjusted for the MEF to reflect the outlook for the segment to which the client is primarily exposed. The PD for each client can thus be below, at or above the standard PD. The MEF parameter ranged from 0.83 to 1.40 as at 31 December 2022.

The accumulated MEF effect is included in the total ECL allowance account. At year-end 2022, the accumulated MEF effect was minus DKK 3 million compared to minus DKK 2 million the year before, indicating a slightly positive macroeconomic outlook across the loan book.

Stage recognition, PD and ECL

Stage	Recognition	ECL
Stage 1	No increase in credit risk since initial recognition	12-month PD
Stage 2	The credit risk has increased significantly since initial recognition and/or loans are showing significant signs of weakness	Lifetime PD
Stage 3	Credit-impaired and/or defaulted loans (NPL)	Lifetime PD

Write-offs
A credit exposure is written off, in whole or in part, when we have exhausted all practical recovery and restructuring efforts and have concluded that there is no reasonable expectation of full recovery. A corresponding amount is then written off.

Indications that there is no reasonable expectation of full recovery include:

- Ceasing of enforcement activity; or
- The value of the collateral is such that there are no reasonable expectations for recovering the loan in full

We may write off credit exposures that are still subject to enforcement activity. Amounts which are legally owed in full, but which have been partially written off, are still subject to full recovery initiatives.

In 2022, net loan recoveries amounted to DKK 311 million, compared to net write-offs of DKK 284 million in 2021.

Total ECL allowance account
The total ECL allowance account amounted to DKK 736 million as at 31 December 2022, down from DKK 1,007 million the year before, primarily affected by repayments in the legacy non-performing loans (NPL) portfolio.

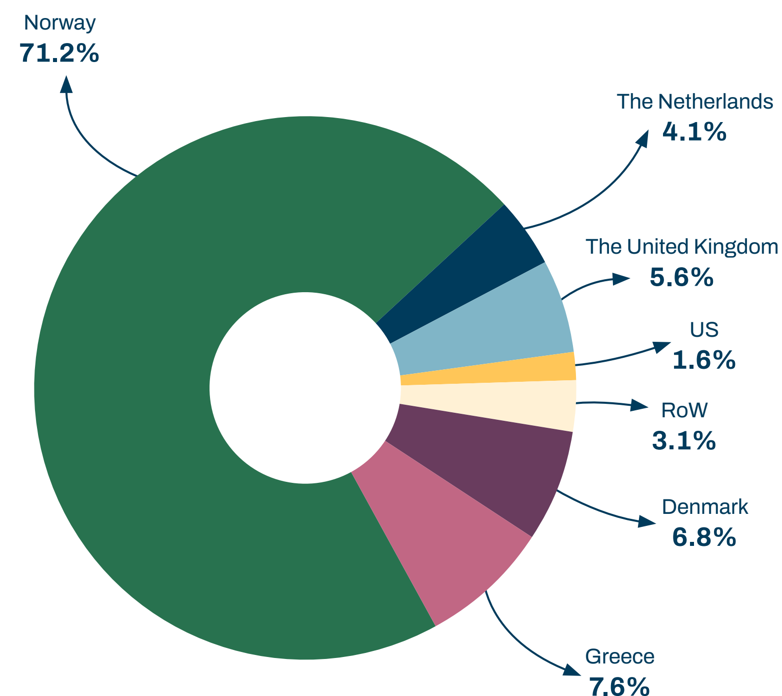
The table displays key figures related to the total ECL allowance account.

Key figures

DKK MILLION	2022	2021
Loan book	35,005	37,544
Total ECL allowance account	736	1,007
Net write-offs (minus = income)	(311)	284
Loan impairment charges (minus = reversal)	(583)	(39)

At year-end 2022, the geographical distribution (based on operational head office) of the total ECL allowance account was as shown in the graph.

Total ECL allowance account broken down by operational head office at 31.12.2022



Management judgments

Management judgments are carried out at the individual client level as add-ons or reductions to the individual loan impairment charges suggested by the ECL impairment model.

At year-end 2022, accumulated management judgments of DKK 85 million, up from DKK 75 million the year before, were included in the total ECL allowance account to cover potential uncertainties in the estimated value of collateral (after haircuts) in the Offshore segments.

Sensitivity analysis

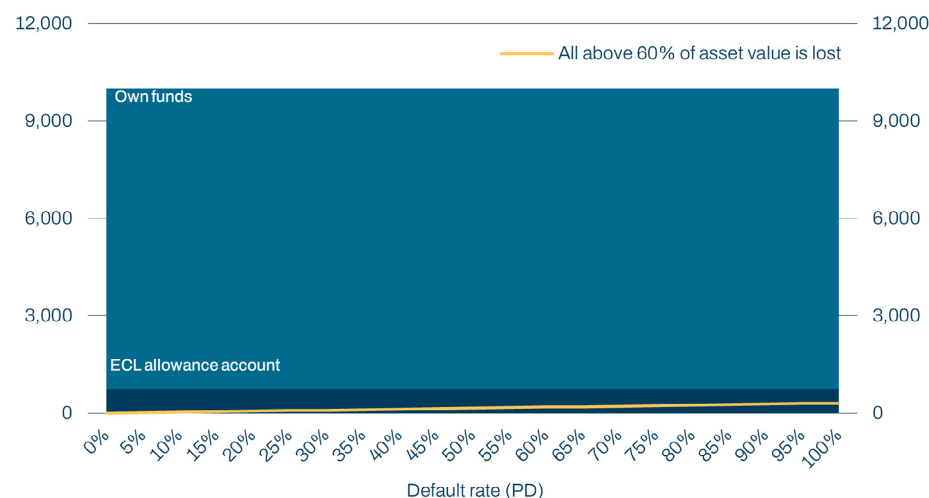
The loan impairment charges are sensitive to, among other things, changes to Sx values and the MEF. If Sx values were to decrease by 10% (in addition to the conservative 62% average haircut already applied) across the loan book, loan impairment charges would increase by about DKK 159 million. If the maximum MEF were to be applied across all shipping segments, loan impairment charges would increase by about DKK 104 million.

Loan losses at given default rates

The graph illustrates our strong ability to absorb loan losses in various default scenarios due to the collateral (asset value) obtained on our loans.

In the unlikely event of all clients defaulting, the total ECL allowance account would be sufficient to cover shortfalls if the mortgaged vessels were disposed of with haircuts of 58% to current market values.

Loan losses at given default rates



Development in the total ECL allowance account

	Clients		Financial counterparties	
DKK MILLION	**2022**	**2021**	**2022**	**2021**
Individual loan impairment charges				
Total ECL allowance account as at 1 January	1,007	1,330	0	0
New loan impairment charges/loss allowances during the year	253	277	0	0
Reversal of loan impairment charges/loss allowances made in previous years	(523)	(307)	0	0
Gross write-offs debited to the ECL allowance account	(2)	(293)	0	0
Total ECL allowance account as at 31 December	**736**	**1,007**	**0**	**0**

Financial counterparties

Credit exposure to financial counterparties, which may be credit institutions, export guarantee agencies and insurance companies, is entered into according to the counterparty risk policy. The policy sets out certain criteria, including a requirement for financial counterparties to have an investment grade rating from a recognised ECAI.

The counterparty risk policy quantifies and defines the principles for credit exposure to be granted to individual financial counterparties. The counterparty risk policy is also applied in the management of market and liquidity risks and sets out maximum risk limits for financial counterparties.

Furthermore, we prioritise financial counterparties that are global systemically important banks (G-SIB) or systemically important financial institutions (SIFI).

We carry out transactions, such as purchase of securities, with financial counterparties when investing our own funds or placing temporary excess liquidity from bond issuances.

Our investment portfolio, consisting of high-grade government and mortgage bonds, and occasionally money market deposits and interest-sensitive financial instruments, represents a significant share of our assets.

Mismatches between the lending and the funding instruments, for example in the underlying currencies or interest rates, are hedged via derivative contracts with financial counterparties, meeting certain external credit rating requirements.

Contractual framework

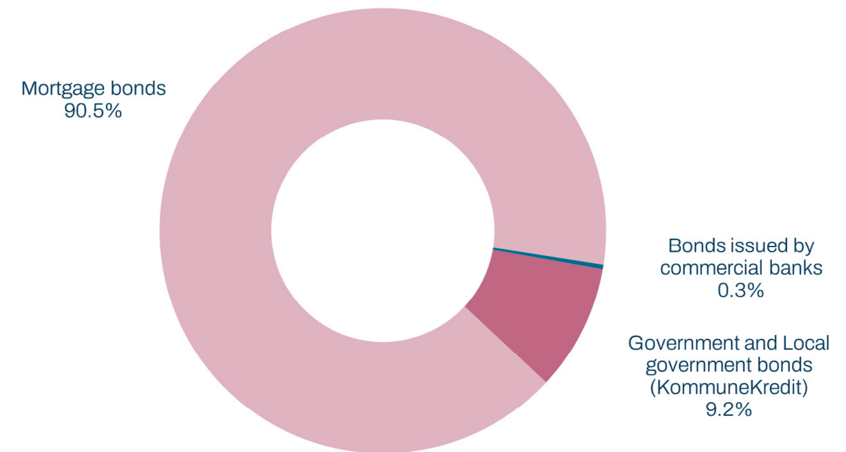
A financial contract may entail the risk of loss if it has a positive market value, and the financial counterparty does not perform on its part of the contract. This type of risk also includes settlement risk.

The contractual framework for transactions with financial counterparties and management of counterparty risk is based primarily on market standards such as the International Swaps and Derivatives Association (ISDA) and the International Capital Market Association (ICMA) agreements, which allow netting in the event of default of the financial counterparty. Furthermore, we have agreements on market-value adjustments or one- or two-sided collateral agreements (CSAs) for derivatives trading with various financial counterparties.

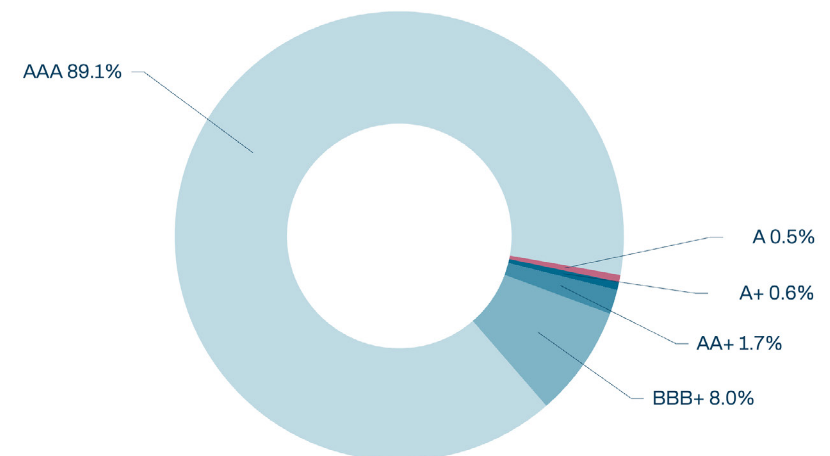
We are subject to the European regulation on OTC derivatives, central counterparties and trade repositories (known as EMIR). EMIR stipulates an obligation to clear certain types of derivatives via a central counterparty. This obligation applies to financial counterparties and non-financial counterparties that exceed the clearing threshold.

EMIR defines financial counterparties as credit institutions approved pursuant to the Credit Institutions Directive. We are exempt from this directive and are defined as a non-financial counterparty (NFC). NFCs only have a central clearing obligation if their trading vol-

Distribution of securities portfolio



Exposure to financial counterparties by credit rating



umes exceed certain thresholds. As our trading volumes do not currently exceed these clearing thresholds, we are not required to perform central clearing.

Ongoing monitoring

We continuously monitor our credit exposure to financial counterparties to ensure that they consistently comply with our requirements and to ensure compliance with approved lines. The ongoing monitoring is carried out independently of the executing entities.

External credit assessment (ECAI)

We use Standard & Poor's Global Ratings (S&P) as our external credit assessment institution (ECAI).

The credit rating categories defined by S&P are converted into credit quality steps using the FSA's conversion table. To calculate the risk-weighted exposure amounts under the standardised approach for credit risk, each credit quality step is designated a risk weight to be applied to the exposures graded at this credit quality step.

The table shows the FSA's conversion table, which translates S&P's credit rating categories to credit quality steps for exposures to corporates, institutions, central governments and central banks.

Rating conversion table

Credit quality step	S&P's credit rating category	Exposures to corporates	Exposures to institutions with terms to maturity > three months	Exposures to central governments or central banks
1	AAA to AA-	20%	20%	0%
2	A+ to A-	50%	50%	20%
3	BBB+ to BBB-	100%	50%	50%
4	BB+ to BB-	100%	100%	100%
5	B+ to B-	150%	100%	100%
6	CCC+ and below	150%	150%	150%

Exposure classes using S&P credit assessments

EXPOSURE CLASS	Group	DSF
DKK MILLION	**Exposure (unweighted)**	**Exposure (unweighted)**
Exposures to central governments or central banks	x	x
Exposures to public sector entities	0	0
Exposures to regional governments or local authorities	0	0
Exposures to institutions	x	x
Exposures to corporates	x	x
Exposures in the form of covered bonds and mortgage bonds	x	x
Exposures in default	x	x
Exposures associated with particularly high risk	0	0
Exposures to institutions and corporates with a short-term credit assessment	0	0
Exposures in the form of units or shares in collective investment undertakings (CIUs)	0	0
Equity exposures	0	0
Other items	x	x
Total	**x**	**x**

Risk Report

Market risk *management*

Market risk *management*

KEY DEVELOPMENTS IN 2022

Actual levels of market risk at the end of the year remained well within the allowed boundaries. There were no breaches of market risk policy limits in 2022.

Market risk is the risk of loss following movements in the financial markets, including movements in interest rates, yield spreads, foreign exchange rates and costs for hedging volatility, etc.

Our principal market risk is associated with the investment portfolio and the investment of any surplus liquidity from bonds issued. We maintain our investment portfolio to support our primary business activities. The Executive Order on Bond Issuance imposes restrictions on interest rate, foreign exchange and liquidity risk for the funding under the balance principle. Surplus liquidity relating to bonds and lending therefore has limited exposure to market risks.

We conduct our daily operations in observance of internal guidelines laid down by the Board of Directors, setting even stricter limits for market risk than those set by regulation. In conclusion, we believe that the probability of significant risk may be characterised as low.

Risk governance and responsibilities

The risk profile and the framework for market risk management are laid out in our market risk policy, which is set by the Board of Directors.

The market risk policy sets limits and specific guidelines for the ongoing management of risks relating to changes in financial risk factors, and lays down clear and measurable limits on, inter alia, interest rate and foreign exchange risks, building on the Executive Order on Bond Issuance and other provisions. Our internal market risk limits are more stringent than external regulatory requirements.

The Treasury department has day-to-day responsibility for complying with the limits laid down in the market risk policy, and the Risk Management department has day-to-day responsibility for the monitoring and reporting of adherence to the limits set out in the market risk policy.

Should a limit be breached, the Treasury department is responsible for documenting the cause and for submitting a plan of action to resolve the breach. The Executive Board is informed immediately and the Board of Directors no later than at the next board meeting. If required, the relevant authorities are informed immediately.

The Risk Management department provides a full market risk report to the Board of Directors and to the Executive Board members on a regular basis. The Risk Management department provides relevant data for internal and external reports in which market risk is reported.

Interest rate risk

Interest rate risk is the risk of incurring a loss due to changes in interest rates. Generally, rising interest rates have an adverse impact on the market value of the investment portfolio. Interest rate risk can also be created by a mismatch between assets and liabilities, client behaviour, and optionality in the investment portfolio.

In accordance with the specific balance principle, the interest rate risk must not exceed 1% of own funds. As at 31 December 2022, the interest rate exposure stood at DKK 12 million, against DKK 21 million as at 31 December 2021, corresponding to 0.1% of own funds.

In accordance with the Executive Order on Bond Issuance, the interest rate risk on assets, liabilities and off-balance sheet items in the investment portfolio must not exceed 8% of own funds. Based on the FSA guidelines for calculating interest rate risk, the interest rate exposure was calculated at DKK 122 million as at 31 December 2022, corresponding to 1.3% of own funds, against DKK 185 million as at December 2021. According to the FSA guidelines, it is not permitted to offset (net) interest rate risk between currencies. Netting reduces the interest rate risk. The interest rate risk after netting was calculated at DKK 120 million as at 31 December 2022.

Furthermore, the interest rate risk appetite is limited by setting a minimum and a maximum for the option-adjusted duration. The option-adjusted duration of the investment portfolio is currently limited to +/- two years. The option-adjusted duration in the trading book was calculated at approximately 0.3 years as at 31 December 2022.

IBOR reform

Following the 2021 announcement by the Financial Conduct Authority (FCA), DSF and other market participants were not allowed to originate new LIBOR loans in 2022. New USD lending has instead been done on a SOFR basis.

The work of converting the existing stock of USD LIBOR loans is ongoing and will be finalised as required by 30 June 2023.

DSF also holds a number of USD LIBOR-based derivatives contracts. We have signed up to the ISDA Fallback Protocol, which effectively back-stops any derivatives LIBOR exposure after 30 June 2023.

Credit spread risk

Credit spread risk arises from differences in yield either between different securities with the same issuer or between securities of the same type and maturity. The credit spread usually correlates with the creditworthiness of the issuer but can also be an expression of differences in liquidity, seniority of the securities, or other attributes.

Spread risk is typically measured as a decrease in market value caused by an increase in the spread of 100 bps on mortgage bonds, government bonds and other secured and unsecured bonds. Spread risk on callable bonds is calculated on the basis of option-adjusted interest rate sensitivities.

Our market risk policy limits the accepted maximum spread risk for the investment portfolio. As at 31 December 2022, the credit spread risk was calculated at DKK 451 million, against DKK 512 million as at December 2021.

Foreign exchange risk

Foreign exchange risk is the risk of financial impact from exchange rate fluctuations.

Our business activities involve a natural flow of different currencies, primarily related to the lending activities. The specific balance principle does not allow for foreign exchange risk arising from a mismatch between funding and lending on principal amounts. However, foreign exchange risk does exist in the investment portfolio, primarily in relation to net earnings, which are typically in USD.

Only a modest amount of foreign exchange risk is allowed in the investment portfolio. The market risk policy limits this risk to a maximum of 0.3% of own funds and only in currencies that are included in the FSA's exchange rate indicator 2.

Our total net exposure to foreign currency across all balance sheet items is calculated using the FSA guidelines for exchange rate indicator 1. As at 31 December 2022, the total foreign exchange risk was DKK 538 million, equal to 5.5% of own funds.

Equity risk

Equity risk is the risk involved in the changing prices of stock investments. At year-end 2022, we held no positions in equities or equity instruments, and therefore had no equity risk.

Financial derivatives

We use derivatives in accordance with the market risk policy, which limits the types of derivatives that may be used and for what purposes.

Under the specific balance principle, financial instruments are applied to hedge risks between funding and lending.

In the investment portfolio, derivatives are primarily used to hedge various market risks. The market risk policy does allow for limited use of derivatives to capture expected market movements, but the strict limits set out in the market risk policy reduce the possibility of significant risk arising from any such positions.

"The work of converting the existing stock of USD LIBOR loans is ongoing and will be finalised as required by 30 June 2023"

Liquidity risk *management*

Liquidity risk *management*

KEY DEVELOPMENTS IN 2022

The EU Covered Bond Directive was adopted in the regulatory framework and implemented in the liquidity risk policy and daily risk management. Our available liquidity remains well above the minimum required level as set out for both LCR and NSFR and the 180-day liquidity coverage buffer.

Liquidity risk is the risk of loss arising from the inability to fulfil immediate and short-term payment obligations.

Our principal liquidity risk is associated with funding our lending activities. We currently fund our lending by issuing covered bonds. The funding area is subject to the Danish balance principle in accordance with the provisions of the Executive Order on Bond Issuance. We are thereby required by law to ensure that any liquidity deficit can be covered by our own funds.

We conduct our daily operations in observance of internal guidelines laid down by the Board of Directors, setting even stricter limits for liquidity risk than those set by regulation. In conclusion, we believe that our liquidity risk may be characterised as low.

Risk governance and responsibility

Liquidity risk management is anchored in the internal liquidity adequacy assessment process (ILAAP), which is a review aimed at identifying liquidity risk exposures and determining liquidity targets. The risk profile and the framework are laid out in our liquidity risk policy, which is set by our Board of Directors.

Liquidity risk is managed in each of the applicable currencies and is subject to strict limits and stress testing. Our liquidity risk policy determines our overall liquidity risks and funding structure and contains specific guidelines for the ongoing management of liquidity risk.

Daily liquidity management is carried out by the Treasury department with the objective of ensuring that we are consistently able to meet our payment obligations and maintain our business model, which includes supporting planned lending activities and ensuring that our funding costs remain competitive.

The Risk Management department has day-to-day responsibility for the monitoring and reporting of adherence to the limits set out in the liquidity risk policy.

Should a limit be breached, the Treasury department is responsible for documenting the cause and submitting an action plan to resolve the breach. The Executive Board is informed immediately and the Board of Directors at the next board meeting, or earlier if required. If required, the relevant authorities are informed immediately.

Specific balance principle

The specific balance principle laid out in the Executive Order on Bond Issuance permits a future liquidity deficit between issued bonds and loans provided of up to 100% of own funds.

A deficit occurs if future payments related to bond issuances, financial instruments and other funding instruments exceed future incoming payments on loans, financial instruments and liquidity positions.

Our internal policies define strict requirements for any liquidity deficits between issued bonds and loans provided.

Surplus funds from pre-funding and proceeds from unscheduled prepayments of loans are placed in secure and liquid securities or as short-term money market deposits with credit institutions which qualify for credit quality step 2 or better.

Funding

We issue bonds in DKK and EUR, whereas most loans are disbursed in USD. To cover the currency mismatch, we source USD and hedge currency risks via basis swaps.

The opportunities for sourcing USD liquidity rely on efficient capital markets. Our ability to convert DKK or EUR funding into USD entails a risk of temporarily higher financing costs or a loss of business opportunities in the event of market disruption.

The liquidity policy sets strict limits for USD

liquidity requirements over time.

Credit commitments are pre-funded in advance of disbursement and we keep some amount of pre-funding readily available at all times.

Encumbered assets

Funding and lending activities are ringfenced by law to ensure timely payments to bond investors. Due to this setup, the ringfenced assets are subject to encumbrance, as per the European Banking Authority's (EBA) guidelines on disclosure of encumbered and unencumbered assets.

Apart from ringfenced assets, the primary sources of asset encumbrance are supplementary collateral under Capital Centre A (SDO) and collateral under CSA agreements.

As we source USD for lending and hedge our currency risk through basis swaps under CSA agreements, an increase in the DKK/USD or EUR/USD rate could lead to a higher degree of asset encumbrance until market values are reset.

As at 31 December 2022, encumbered assets accounted for 84.6% of total assets plus any collateral received that may be subject to encumbrance.

> According to the regulatory technical standards on disclosure of encumbered and unencumbered assets issued by the EBA in March 2017, credit institutions with less than EUR 30 billion in total assets or an encumbrance level below 15% are exempt from the disclosure requirements for high-quality liquid assets (HQLA) and extremely high-quality liquid assets (EHQLA), and thus these are not specified in Annex 7.

Refinancing risk

Our funding is subject to the Danish balance principle, in accordance with the provisions of the Executive Order on Bond Issuance. Future funding mismatches may appear, as our loans and funding are not currency matched on a loan-by-loan basis. Such mismatches are actively rebalanced on an ongoing basis.

Through issued bonds, derivatives contracts and available own funds, we ensure sufficient liquidity coverage for all existing loans and credit commitments until expiry.

A potential downgrade of our external rating would not change our robust liquidity situation but could lead to higher funding costs for new loans not yet offered.

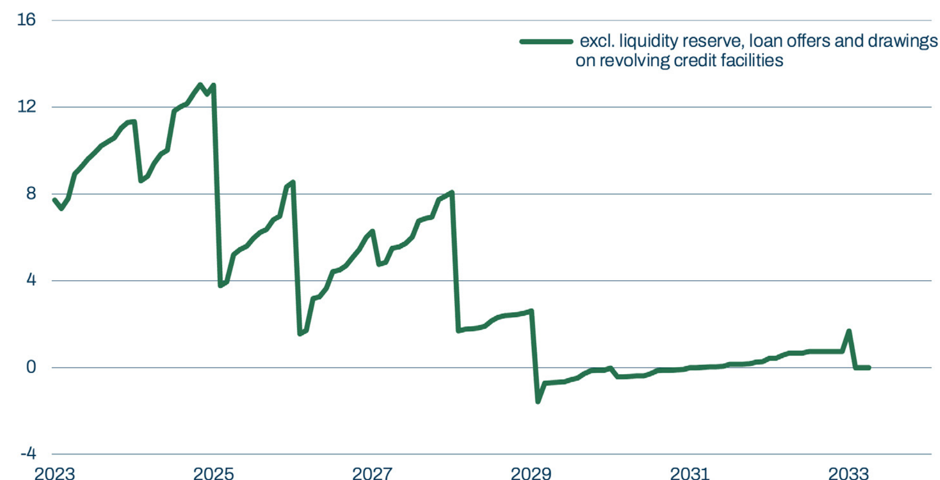
The charts show the primary liquidity mismatch between currently outstanding funding and lending, before considering our DKK 9.3 billion liquidity reserve. Including this reserve, liquidity is positive at all times.

Stress testing

We undertake a stress test programme in ac-

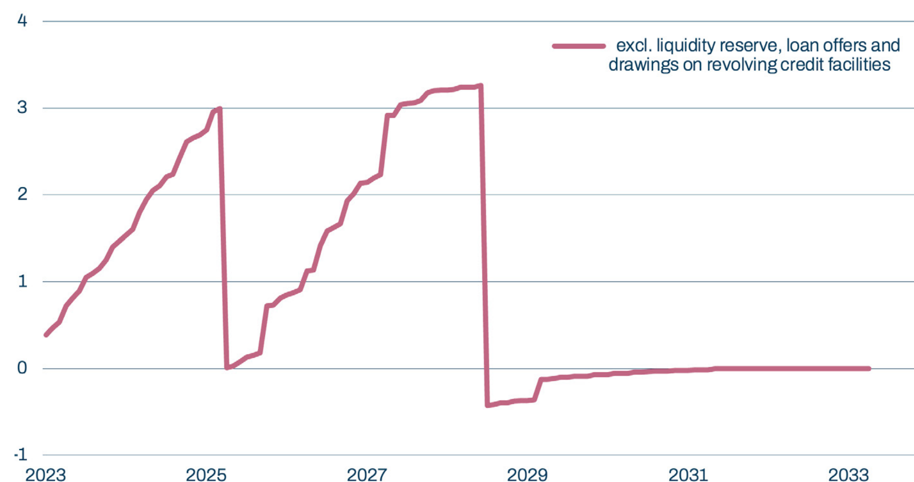
Net liquidity in Capital Centre Institute in General

DKK billion



Net liquidity in Capital Centre A

DKK billion



cordance with the guidelines set out by the EBA on institutions' stress testing. As part of this programme, a liquidity stress test is performed on a monthly basis to ensure sufficient liquidity to maintain the business model and meet our total payment obligations.

The liquidity stress test identifies the resilience of our short-term liquidity position in a stressed scenario in which we have no access to our usual funding sources. The liquidity stress test focuses on the effects of simultaneous shocks to several interrelated risk factors, such as currency rates, interest rates, credit spreads and loan losses. The results of the liquidity stress test are used to manage and adjust internal liquidity limits.

At least once a year, the underlying assumptions and parameters for the stress test are reviewed. The latest review found the current framework to be adequately conservative.

Our stress testing confirms that the current limit structure is adequately robust in relation to these risk exposures.

Contingency plans

In accordance with the Executive Order on Governance for Credit Institutions, we have prepared a liquidity contingency plan containing a catalogue of possible initiatives with which to strengthen the liquidity position in a critical situation. The liquidity contingency plan takes effect if predefined triggers are activated.

Other liquidity risk indicators

In combination with our liquidity stress test, we calculate on a daily basis regulatory liquidity indicators in the form of the 30-day liquidity coverage ratio (LCR), the net stable funding ratio (NSFR) and the 180-day liquidity coverage buffer. All these indicators are used as tools for daily asset-liability management.

In the liquidity risk policy, the Board of Directors has set minimum limits for both the LCR and the NSFR requirements that are higher than the regulatory requirements.

Daily management of the LCR is carried out by the Treasury department, while the Risk Management department has day-to-day responsibility for the monitoring and reporting of adherence to the limits in the liquidity risk policy. Risk Management reports on indicators to the FSA on a monthly basis for the LCR and on a quarterly basis for the NSFR and the 180-day liquidity coverage buffer.

The LCR is a key regulatory requirement. According to the CRR regulation, liquidity is required to ensure that credit institutions have adequate unencumbered high-quality liquid assets (HQLA), consisting of cash or assets that can be converted into cash at little or no loss of value in private markets, to meet liquidity needs for a 30-calendar-day liquidity stress scenario.

Our own funds investment portfolio represents a significant share of the liquid assets. The investment portfolio consists of government and mortgage bonds, money market transactions and interest-sensitive financial instruments.

Another regulatory indicator in the CRR regulation is the NSFR requirement. While the LCR focuses on short-term liquidity risk, the NSFR addresses the balance between funding needs and the stability of funding sources. This ensures that institutions use stable medium- and long-term funding to support their lending operations and ensures an appropriate liquidity level over a full calendar year. Due to our business model, we maintain a high and stable NSFR level by default.

In accordance with the Covered Bond Directive (CBD), each of our cover pools is required to cover the maximum cumulative net liquidity outflow over the next 180 days. The quality of the assets used for covering the requirement follows the rules of HQLA in the LCR. As at 31 December 2022, both our cover pools had sufficient liquidity to cover the requirement.

As at 31 December 2022, the LCR was calculated at 560% and the NSFR was calculated at 176%.

$$\text{Liquidity coverage ratio} = \frac{\textit{HQLA}}{\textit{Net liquidity outflow over a 30 days stress period}} \geq 100\%$$

$$\text{Net stable funding ratio (NSFR) formula} = \frac{\textit{Available amount of stable funding}}{\textit{Required amount of stable funding}} \geq 100\%$$

Risk Report

Operational risk *management*

Operational risk *management*

KEY DEVELOPMENTS IN 2022

Our Operational Excellence programme continued to markedly improve the robustness of our operating environment.

Operational risk is the risk arising from breakdowns in internal procedures, human error or failure of systems. In this category, we also consider structural risks to our business model, sustainability risks and the risk of material damage to our reputation.

Governance and responsibilities

Our operational risk policy stipulates that operational risk shall be kept low overall. Operational risk is assessed on the basis of the probability of a given event occurring and the potential loss resulting from the event.

Given its nature and characteristics, operational risk is best mitigated and managed as part of day-to-day business conduct. Responsibility for the day-to-day management of operational risk lies with the individual business areas. Operational risk management activities are coordinated by Risk Management to ensure coherence, consistency and effectiveness across the Group.

It is our policy to promote a culture where openness about and awareness of operational risk are natural elements of the day-to-day work of all staff members, and to ensure that the Executive Board and the Board of Directors are briefed regularly on key risk areas.

As part of operational risk management, operational risk events are systematically recorded, categorised and reported. Operational events are divided into three main groups by potential or actual loss:

Small event (<DKK 25,000)
Medium-sized event (<DKK 5 million)
Large event (>DKK 5 million)

Events can be upgraded to a more severe category according to management judgment if the event is deemed to represent a higher latent (but not realised) risk. We make regular use of this option, and did so in 2022.

Small events are reported to the relevant head of department. Medium-sized and large events are reported to the Executive Board. The Board of Directors is notified of large events.

The recording of operational risk events must include information about the type of product, process and risk concerned and a plan of action for more severe events.

Compliance

Operational risk includes compliance risk, which is subject to separate guidelines. This area is managed by the Head of Compliance. An assessment of the level of compliance risk is reported annually to the Board of Directors and the Executive Board.

The Compliance department is an independent function which serves to assess and report the implementation of applicable legislation, practice and market standards, and any non-compliance with these. This helps mitigate the risk of sanctions being imposed on the Group, the risk of loss of reputation or the risk of the Group or its clients suffering material financial losses.

The Compliance department takes a risk-based approach when identifying areas for review.

Money laundering risk

In relation to anti-money laundering (AML), we have laid down specific policies, business procedures and controls. Furthermore, extensive efforts are made to ensure compliance with requirements pertaining to proof of client identity (know-your-customer procedures). The prevention of money laundering and terrorist financing is a high priority. The business model in itself significantly limits the risk of DSF being used for such purposes.

The AML function is responsible for ensuring that we comply with the Danish Act on Measures to Prevent Money Laundering and Financing of Terrorism, the EU Funds Transfer Regulation and EU anti-terrorism regulations. The AML function is anchored in the Compliance department and reports

directly to the Executive Board and the Board of Directors.

Sustainability/ESG risk

We work actively with sustainability and ESG initiatives, particularly with regard to our clients, to improve the visibility of the loan portfolio and mitigate sustainability/ ESG-related risks.

Strong client engagement and sustainability ratings as part of the lending process enable us to gain complementary insights into the portfolio alongside our DSF credit ratings to enable risk mitigation and elimination of potential reputational risks.

This is further advanced by our participation in industry initiatives such as the Poseidon Principles and Responsible Ship Recycling Standards, and formalised through the growing share of sustainability-linked loans.

For further information, please see our Sustainability Report.

It security

Information and information systems are vital to our business, and IT security is therefore essential to our credibility and continued existence. The IT department reports on IT security measures to the Executive Board and the Board of Directors, which regularly review these.

The IT department works to a defined security and risk tolerance level aimed at ensuring that our day-to-day business and activities are consistently supported by a secure and reliable IT infrastructure.

The Board of Directors has set targets for IT security adequacy. The IT department is responsible for complying with the adopted IT security level and IT contingency plan. The IT department contributes to ensuring and monitoring that our IT activities are protected to a very high degree against internal and external threats and is responsible for ensuring compliance with legislative and internal requirements.

Our priorities in the IT security area are based on regulatory requirements as well as considerations about the necessary robustness of day-to-day operations. Our operations must be secure and stable, a requirement fulfilled through automation and ongoing capacity adjustments. Our IT security efforts include the preparation of contingency plans and recovery procedures and periodic testing of such measures aimed at ensuring our continued operation at a satisfactory level should extraordinary events occur.

In our assessment of IT risk, we revise and describe all our systems. For each single risk event, requirements for support and error handling are included in the description. Levels for system availability and stability are determined and revised regularly, and IT security is tested frequently.

We consider cyber security to be the most important aspect of IT security that cannot be fully mitigated. To reduce the exposure to cyber risk, we undertake various initiatives to maintain and improve security, and constantly keep our knowledge of cyber threats up to date in order to prioritise these initiatives. We also use knowledge gathered to inform employees of pending cyber security threats and thereby heighten awareness. We engage with external partners to monitor and periodically test our cyber security defences, to ensure that we keep our infrastructure protected against the prevailing cyber security threat level.

“Strong client engagement and sustainability ratings as part of the lending process enable us to gain complementary insights into the portfolio”

Risk Report

Capital *management*

Capital *management*

KEY DEVELOPMENTS IN 2022

The capital ratio for DSF increased to 21.9% at year-end 2022 (from 20.1% the year before), mainly due to a smaller loan book in 2022. DSF's internal capital adequacy requirement, including buffers, amounted to 13.0% at year-end 2022 (compared to 11.6% the year before).

Adequate own funds are defined as the minimum amount of capital required to ensure only a remote risk of the Group becoming distressed or insolvent during a 12-month period such that bondholders could be exposed to a potential loss. Bondholders are subject to further protection ensured by law, as non-acceleration clauses apply in the event of bankruptcy.

Available own funds

The Group's own funds net of deductions amounted to DKK 8,250 million as at 31 December 2022 (against DKK 8,115 million in 2021). DSF's own funds amounted to DKK 9,263 million (against DKK 9,131 million in 2021).

The Group's own funds consist of Common Equity Tier 1 capital (CET1) in the form of share capital and tied-up reserve capital in DSF, retained earnings, and a subordinated Tier 2 debt instrument in DSH.

The tied-up reserve capital was established in 2005 when DSF was converted from a foundation into a limited liability company. The amount has remained unchanged at DKK 8,343 million.

Tied-up reserve capital was recognised in the Group's own funds at DKK 4,719 million as at 31 December 2022 (against DKK 4,735 million in 2021). The recognition of tied-up reserve capital at the Group level is calculated as an amount corresponding to the tied-up reserve capital's proportionate share of DSF's capital requirement.

The tied-up reserve capital may only be used to cover losses that cannot be covered by the amounts available for dividend distribution. In the event that the tied-up reserve capital is used to cover losses, the tied-up reserve capital must be restored by a priority claim on profit in the subsequent years. No dividends may be paid, and no distributions may be made in connection with capital reductions until the tied-up reserve capital has been restored to its original nominal amount.

DSH has issued Tier 2 capital on terms and conditions that meet the requirements for inclusion in the Group's own funds as a Tier 2 instrument under the CRR. The Group's Tier 2 capital, amounting to a nominal sum of DKK 2 billion, is provided by the pension fund PFA and pension funds under management by PKA. These pension funds are shareholders of DSH. Annex 2 details the terms and conditions of the Tier 2 capital.

The FSA has ruled that tied-up reserve capital shall be included in the determination of consolidated capital adequacy at an amount corresponding to the tied-up reserve capital's proportionate share of the capital requirement.

The share of the tied-up capital that may be included is calculated according to the following formula:

$$\text{Share} = \frac{\textit{Tied-up reserve capital}}{\textit{Total CET1 capital}} * (\text{Capital requirement} * \text{total exposure})$$

Capital requirements

The Group's capital requirement is calculated based on the 8+ approach and the Danish Financial Supervisory Authority's (FSA) Guidelines on Adequate Capital Base and Solvency Needs for Credit Institutions.

The FSA has issued guidelines containing benchmarks for stress tests, etc. These benchmarks define the limits within which the FSA assesses an institution's risks as being covered by 8% of the total risk exposure amount. If these limits are exceeded, the institution is required to increase its adequate own funds.

The Group shall have own funds at least equal to the sum of the own funds requirements associated with each of the risk types defined as Pillar 1 requirements, Pillar 2 requirements and the combined capital buffer requirement.

Adequate own funds and internal capital adequacy requirement

	Group		DSF	
DKK MILLION / %	**2022**	**2021**	**2022**	**2021**
Total risk exposure amount	**42,494**	**46,020**	**42,389**	**45,477**
Pillar 1 requirements (8% of total risk exposure amount)	**3,400**	**3,682**	**3,391**	**3,638**
Pillar 2 requirements				
Earnings	-	-	-	-
Growth in lending	-	-	-	-
Credit risks				
- Credit risks for large clients in financial difficulty	0	34	0	34
- Other types of credit risk	30	34	30	34
- Concentration risks	32	29	32	29
Market and liquidity risks	641	358	641	358
Operational and control risks	0	0	0	0
Leverage risk	-	-	-	-
Other risks	-	-	-	-
Total adequate own funds	**4,103**	**4,139**	**4,095**	**4,093**
Total capital less deductions	8,250	8,115	9,263	9,131
Total adequate own funds	4,103	4,139	4,095	4,093
Capital conservation buffer	1,062	1,151	1,060	1,137
Countercyclical capital buffer	364	63	363	62
Excess capital	**2,720**	**2,778**	**3,745**	**3,839**
Solvency ratio (%)	19.4	17.6	21.9	20.1
Internal capital adequacy requirement	9.7	9.0	9.7	9.0
Capital conservation buffer	2.5	2.5	2.5	2.5
Countercyclical capital buffer requirement	0.9	0.1	0.9	0.1
Internal capital adequacy requirement, including combined capital buffer requirement	13.0	11.6	13.0	11.6
Excess capital	**6.4**	**6.0**	**8.8**	**8.4**

Pillar 1	Pillar 2	Combined capital buffers

Pillar 1 requirements
The Pillar 1 own funds requirement is a regulatory requirement for financial institutions. Own funds must amount to at least 8% of an institution's total risk exposure amount (risk-weighted assets). Non-compliance with the own funds requirement will lead to withdrawal of the institution's licence.

Pillar 1 requirements

We apply the standardised approach for the calculation of the total risk exposure amount and the own funds requirement for credit and market risks. When using the standardised approach, the applicable risk weights to calculate the risk exposure amount are predefined. In addition, we apply the basic indicator approach to calculate the risk exposure amount for operational risk.

Credit risk
According to the standardised approach, loans generally carry a risk weight of at least 100%. The security value of the ship mortgage collateral cannot be deducted, and for capital adequacy purposes the loans are thus treated in the same way as unsecured loans.

As shown in the table, the majority of our risk exposures have a risk weight of 100%.

As at 31 December 2022, no construction loans were present in the portfolio.

Credit risk exposure by risk weight

	Group	Group
Risk weight	Credit risk exposure (weighted)	Own funds requirement
DKK MILLION	**2022**	**2022**
0	-	-
10	1,201	96
20	267	21
50	714	57
100	36,035	2,883
150	132	11
200	-	-
250	232	19
Total credit risk exposure	**38,581**	**3,086**

Pursuant to the Executive Order, the following loans or shares of loans each carry a risk weight of more than 100%:

- Pursuant to section 24(3) of the Executive Order, construction loans carry a risk weight of 200% if total construction loans do not exceed 125% of the excess capital coverage. If total construction loans exceed 125%, the excess amount must be deducted from Tier 1 capital. Construction loans are secured through the client's liability, assignment and subrogation in the construction contract and assignment of the shipyard's collateral for payments according to the construction contract.
- Pursuant to the definition in Article 178 of CRR, loans in default (equivalent to internal DSF Ratings 11 and 12) carry a risk weight of 150%.
- Under certain conditions, we may grant loans exceeding 70% of the value against other collateral and/or against additional reservations of our own funds. The maximum deduction is determined in DKK at the date of approval.
- Where the client either has an external rating corresponding to credit quality steps 5 and 6 or is unrated and is headquartered in a country where the country risk calls for a higher weighting, the loan carries a risk weight of 150%.

Counterparty risk on derivatives and calculation of capital
We apply the new standard approach under CRR II, SA-CCR, to calculate derivative exposures. We similarly apply the SA-CCR method to determine the exposure value for counterparty risk.

The total Group counterparty credit risk amount was calculated at DKK 1,512 million as at 31 December 2022.

Pursuant to the CRR, institutions shall calculate a credit valuation adjustment (CVA) charge. The CVA charge is a separate capital requirement for OTC derivatives to cover the risk of loss due to a value adjustment caused by a deterioration of a counterparty's credit quality.

Credit valuation adjustment (CVA)
We use the standardised approach for calculating the CVA charge, which allows the use of risk mitigation techniques such as netting and collateral.

Counterparty risk on financial derivatives is reduced through netting agreements, margin calls and collateral provided in accordance with standard documentation from the ISDA and the ICMA. Bilateral collateral agreements (CSAs) have been signed with the largest financial counterparties, such that collateral is received or posted automatically if the positive market values of the respective exposures exceed a specified minimum threshold.

The CVA charge for the Group amounted to DKK 476 million as at 31 December 2022.

Collateral and guarantees
We may receive the following types of financial collateral and guarantees:

- Deposit funds
- Securities (debt instruments, investment fund units), primarily listed; or
- Government and credit institution guarantees

We have operating procedures in place for the management and valuation of collateral. These procedures form an integral part of the regular risk monitoring process.

We use the simple method for valuing financial collateral in our credit risk mitigation assessment. This means that the capital charge on a credit exposure can be reduced by means of collateralisation. The CRR specifies the financial collateral eligible for credit risk mitigation purposes.

In accordance with the rules of the CRR, we use financial collateral and guarantees to hedge credit and counterparty risk. The table on funded credit protection shows the level of protection in each exposure category, i.e. the fully adjusted size of the collateral within each exposure category.

CVA charge - standardised approach

DKK MILLION	2022
Exposure – unweighted	1,398
Exposure – weighted	476
Own funds requirement	38

Funded credit protection

	Group Exposure (weighted)	
DKK MILLION	2022	2021
Deposits in cash or cash assimilated instruments	25	319
Debt securities issued by central governments or central banks	-	-
Debt securities issued by institutions	-	-
Total financial collateral	**25**	**319**

Market risk

We apply the standardised approach (FRTB SA). The final implementation of FRTB is set to follow the CCR III regulation.

Positions involving market risk and foreign exchange risk are instruments in the trading book.

Operational risk

We apply the basic indicator approach to calculate the own funds requirement for operational risk. The risk exposure amount for operational risk is calculated at 15% of a three-year average of net interest income and non-interest-related net income.

An assessment of the own funds requirement for operational risk is performed quarterly. If the own funds requirement is deemed to be higher than the level mentioned below, we adjust the own funds reservation accordingly.

Risk exposure amount and own funds requirement

DKK MILLION	**Group** Exposure (weighted) 2022	**Group** Own funds requirement 2022
Debt instruments, specific risk		
Total specific risk *)	717	57
Debt instruments, general risk		
Total general risk	1,277	102
Shares, etc.		
Total shares, etc.	93	7
Foreign currency positions		
Total long foreign currency positions	538	43
Total amounts for market risk	**2,625**	**210**

**) Specific risk for debt instruments is calculated for all debt instruments in the trading book, including unweighted and weighted amounts for repo transactions.*

DKK MILLION	2022	2021	2020	Average
Accounting items	934	783	820	846
Interest income	(308)	(279)	(279)	(289)
Interest expenses	-	-	0	-
Dividends on equity investments	14	32	21	22
Fee and commission income	-	-	-	-
Fee and commission expenses	(206)	(82)	(150)	(146)
Market value adjustments				
Sum of accounting items	**434**	**454**	**411**	**433**
Risk exposure amount (weighted) under the basic indicator approach	**813**	**829**	**880**	

Summary of Pillar 1 requirements
The following table details the risk exposure amounts and own funds requirement for each exposure category.

Risk exposure amount

	Group		Group		DSF		DSF	
	Risk exposure amount (weighted)		Own funds requirement		Risk exposure amount (weighted)		Own funds requirement	
DKK MILLION	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Credit risk								
- Central governments or central banks	232	580	19	46	139	18	11	1
- Regional governments or local authorities	0	0	0	0	0	0	0	0
- Public sector entities	-	-	-	-	-	-	-	-
- Institutions	981	1,492	78	119	969	1,492	78	119
- Corporates	34,706	36,681	2,776	2,934	34,706	36,681	2,776	2,934
- Covered bonds and mortgage bonds	1,201	502	96	40	1,201	502	96	40
- Exposures in default	794	1,274	63	102	794	1,274	63	120
- High-risk exposures	-	-	-	-	-	-	-	-
- Exposures with short-term credit assessment	-	-	-	-	-	-	-	-
- Equity exposures	-	-	-	-	-	-	-	-
- Other items	668	562	53	45	668	562	53	45
Total credit risk	**38,581**	**41,090**	**3,086**	**3,287**	**38,476**	**40,529**	**3,078**	**3,242**
Of which, counterparty risk	1,512	1,163	121	93	1,512	1,163	121	93
Market risk								
- Debt instruments	1,994	3,045	160	244	1,994	3,045	160	244
- Shares, etc.	93	18	7	1	93	18	7	1
- Foreign exchange risk	538	284	43	23	538	284	43	23
- Commodity risk	-	-	-	-	-	-	-	-
Total market risk	**2,625**	**3,346**	**210**	**268**	**2,625**	**3,346**	**210**	**268**
Credit valuation adjustment (CVA)	**476**	**772**	**38**	**52**	**476**	**772**	**38**	**62**
Total operational risk	**813**	**829**	**65**	**66**	**813**	**829**	**65**	**66**
Total risk exposure amount	**42,494**	**46,020**	**3,400**	**3,683**	**42,389**	**45,477**	**3,391**	**3,638**

Pillar 1	Pillar 2	Combined capital buffers

Pillar 2 requirements
While Pillar 1 entails the calculation of risks and capital requirements on the basis of uniform rules for all credit institutions, Pillar 2 considers the individual characteristics of a given institution and covers all relevant risk types, including risks not addressed under Pillar 1.

Pillar 2 requirements

Own funds requirements for specific risk areas
We base our calculations for the Pillar 2 requirements and our total adequate own funds on a number of predefined risk areas and other relevant risk elements:

1. Credit risk including counterparty risk
2. Market risk
3. Liquidity risk
4. Operational and control risk
5. Leverage risk
6. Earnings
7. Growth in lending
8. Other risks

A capital requirement deemed adequate to cover the underlying risks is determined for each risk area. Institutions must decide whether other elements of risk should be considered when calculating adequate own funds. Additionally, the Group's operating results are stress tested to determine, among other things, whether it will require additional capital within the next 12 months.

Credit risk
In its guidelines, the FSA divides credit risk into three subgroups: credit risk exposure to large clients in financial difficulty, other credit risk and credit risk concentration.

Credit risk exposure to large clients in financial difficulty
For large clients in financial difficulty, a conservative loss estimate should be made for each loan. A large client is, for this purpose, defined as a client whose total credit risk exposure accounts for more than 2% of our own funds. Financial difficulty is defined as being either credit impaired (Stage 3) or showing significant signs of weakness since initial recognition without being credit impaired (Stage 2), corresponding to rating steps 1 and 2c on the FSA rating scale.

A large client is defined as a client with a credit exposure of more than DKK 185 million (corresponding to 2% of DKK 9,263 million).

FSA rating steps 1 and 2c refer to clients with a DSF Rating between 9 and 12 on our 12-point internal scale (12 being the weakest, denoting that a client is in default). A detailed description of the FSA rating steps is provided in Appendix 7 of the FSA's instructions for financial reports for credit institutions, etc.

Pursuant to the guideline method for calculating capital charges for large clients in financial difficulty, our Pillar 2 add-on amounted to DKK 0 million as at 31 December 2022.

Other credit risk
Other credit risk primarily covers "other credit risk in the loan portfolio" and "other credit risk associated with financial counterparties".

In our assessment of "other credit risk in the loan portfolio", we consider areas laid down in the guidelines on adequate own funds and internal capital adequacy requirements for credit institutions and sensitivity analyses based on scenarios, and their importance for the need to make loan impairment charges.

In 2020, based on assessments and sensitivity analyses, we made a Pillar 2 reservation of DKK 100 million to absorb potential credit risk impacts arising from Covid-19-related effects. In 2021, this reservation was reassessed and removed, as we no longer viewed the risk of Covid-19-related loss as elevated given the strong recovery in shipping markets in several segments.

Pursuant to the Executive Order on a Ship Finance Institute, additional capital is required in the event that the LTV exceeds 60% at the time a loan is added to Capital Centre A. In 2021, the Pillar 2 capital reservation was DKK 34 million.

The assessment of "other credit risk associated with financial counterparties" is based on an evaluation of the financial standings of the financial counterparties. The principal risks relate to the investment of the trading book, the majority of which is placed in Danish covered bonds.

The financial standings of financial counterparties and thereby the credit risk associated with the investment of the trading book, and interest rate and exchange rate hedging, etc. are monitored continuously, including an assessment of the capital required to hedge the exposures. Furthermore, bilateral collateral agreements (CSAs) have been signed with financial counterparties to reduce counterparty credit risk.

Based on the current financial standings of our financial counterparties, we conclude that the Pillar 1 requirement adequately covers the

capital requirement concerning "other credit risk associated with financial counterparties".

Credit risk concentration
Concentration risk is calculated with respect to single-name concentration and sector concentration pursuant to the Executive Order on Calculation of Risk Exposures, Own Funds and Solvency Need.

In its guidelines, the FSA notes that Danish mortgage lenders have a unique profile due to the nature of their core business. Against this background, the assessment of sector concentration does not apply to mortgage lenders, as per the guidelines.

However, the guidelines stipulate that those institutions exempt from these rules must consider the extent to which they have concentration risk that should be addressed and for which capital should be allocated. Based on the sensitivity analyses used in the assessment of "other credit risk in the loan portfolio", we find that there is no material risk of loss as a result of sector concentration not covered by the Pillar 1 requirements.

With respect to single-name concentration, we must consider any imbalances in the distribution of exposure sizes in the loan portfolio, irrespective of credit quality. We apply the calculation method stipulated in the guidelines with adjustments approved by the FSA. The Pillar 2 add-on for client concentration has been calculated at DKK 0 million.

Market risk
According to the FSA guidelines, mortgage banks and similar institutions are exempt from Pillar 2 add-ons with respect to market risk. We nonetheless assess our market risk based on the guidelines and increase the Pillar 2 add-on for interest rate risk and spread risk accordingly.

Interest rate risk is the risk of incurring a loss due to a change in interest rates. The Pillar 2 add-on for interest risk in the banking book as at 31 December 2022 was calculated at DKK 255 million.

A hold-to-maturity investment portfolio was established in 2022 to lock in the income from a portfolio of high-quality bonds over a period of time. The risks on the fixed-rate items in this portfolio are adequately managed.

Spread risk arises from spread movements between individual bonds and the general level of near-risk-free interest rates. The Pillar 2 add-on for spread risk as at 31 December 2022 was calculated at DKK 288 million.

Liquidity risk
The specific balance principle limits the risk that we may assume. Limits specified in our internal policies further mitigate the risk.

Collateral obligations to derivatives counterparties do impose a need for liquidity. These are carefully managed and evaluated through risk management tools including stress tests.

Mortgage banks and similar institutions are exempt from Pillar 2 add-ons with respect to liquidity risk. We nevertheless assess our liquidity risk based on the guidelines and conclude that this is covered by the Pillar 1 requirements.

"We manage this risk by applying an overall conservative approach and holding substantial capital and liquidity reserves"

Operational and control risk
Operational risk and control risks under Pillar 2 include business risk, i.e. external factors negatively influencing the business model.

In DSF, business risk would most likely arise from lower credit margins following increased competition or from structurally higher funding costs due to e.g. new regulatory requirements that jeopardise the covered bond status, LCR eligibility or repo access of our bonds. These risks are considered to be adequately monitored and managed.

Reputational risk can affect the size of the risk premium related to issuance of bonds. We manage this risk by applying an overall conservative approach and holding substantial capital and liquidity reserves.

Leverage
The leverage ratio is calculated as Tier 1 capital relative to the institution's total exposure value (unweighted). As of 31 December 2022, the leverage ratio was calculated at 9.1% for the Group and 13.5% for DSF.

Pursuant to Article 451(1) of the CRR, institutions must disclose whether they use Tier 1 capital to measure capital, cf. Article 499(1) (a) of the CRR, and whether the leverage ratio is calculated at the end of the quarter.

According to the Basel Committee, the leverage ratio should not be lower than 3%. Therefore, there is no need for the Group to increase the internal capital adequacy requirement to reduce leverage.

Further information on the leverage ratio is provided in Annex 9.

Earnings risk
Mortgage lenders with core earnings representing less than 0.1% of loans and guarantees before loan impairment charges and market value adjustments must consider whether this gives rise to an increase in the internal capital adequacy requirement. Core earnings relative to loans and guarantees amounted to 1.1% for 2022.

In addition to the level of earnings, earnings stability also forms part of the internal capital adequacy assessment. Our earnings capacity should be assessed in relation to our dividend policy and access to capital. The results of the stress test show that we will not, even in a severe stress scenario, require additional capital within the next 12 months.

We find that the Pillar 1 requirements are sufficient to cover risk relating to our earnings.

Risk from growth in lending

The FSA defines total year-on-year lending growth of 10% or more as potentially exposing an institution to higher-than-normal credit risk. Consequently, institutions with lending growth at this level or above must allocate additional capital. Our annual rate of growth in lending from 2021 to 2022 was -6.2%. From 2020 to 2022, lending increased by 7%.

Other risks

Institutions must assess whether there is a need for a Pillar 2 add-on in respect of strategic risk, group risk and external risk.

No substantial external risks have been identified that may challenge the business model. Therefore, no additional capital has been allocated to cover such risks.

Pillar 1	Pillar 2	Combined capital buffers

Pursuant to the Danish Financial Business Act, the combined buffer requirement is an addition to the capital adequacy requirements described on the previous pages. Institutions must have sufficient regulatory capital available to cover the sum of the Pillar 1 and Pillar 2 requirements and the combined capital buffer requirement. If a credit institution does not meet this total capital requirement, it will only be permitted to make distributions, disburse variable pay and make payments relating to AT1 capital instruments if certain conditions are met.

The combined capital buffer requirement consists of:

- **Capital conservation buffer**
  In 2022, the capital conservation buffer was 2.5% of the total risk exposure amount.

- **Systemic risk buffer**
  The systemic risk buffer only applies to SIFI institutions in Denmark.

- **Countercyclical capital buffer**
  The institution-specific countercyclical capital buffer may be applied by the authorities if lending growth results in higher macroprudential risk. This buffer may be between 0% and 2.5% of the total risk exposure amount.

Combined capital buffer requirement

Based on the geographical distribution of credit risk exposures, the capital requirement for the countercyclical capital buffer was calculated at DKK 363 million as at 31 December 2022. The capital requirement pertains to exposures to clients domiciled in Denmark, Hong Kong, Iceland, Luxembourg, Norway and Sweden, which have set the following countercyclical capital buffer rates:

- Denmark: 2.00%
- Hong Kong: 1.00%
- Iceland: 2.00%
- Luxembourg: 0.50%
- Norway: 2.00%
- Sweden: 1.00%

The geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer is provided in Annex 10.

All EU member states can implement a systemic risk buffer applying to domestic exposures. The requirement may apply to the entire sector or to individual subsectors.

The systemic risk buffer is aimed at preventing and mitigating long-term, non-cyclical systemic or macroprudential risks not covered by the Capital Requirements Regulation (CRR). Since the Danish systemic risk buffer rate is only applied to systemically important financial institutions, it is not relevant for DSF.

In accordance with the Executive Order on Management and Control of Banks, etc., we have prepared a capital contingency plan as part of the recovery plan, containing a catalogue of possible courses of action to strengthen our capital position in a critical situation.

The capital contingency plan would take effect in the unlikely event of predefined triggers being activated.

Leverage ratio

The leverage ratio is defined as the amount of Tier 1 capital relative to total balance sheet assets (including off-balance sheet items). The leverage ratio does not factor in loan collateral and other credit risk mitigants.

All of the Group's material risks and Tier 1 capital are in DSF. The leverage ratio for DSF is 13.5%. For DSH, the leverage ratio is 47.9% and at the Group level it is 9.1%.

Both the DSF and DSH leverage ratios are at comfortable levels. The reason that the Group leverage ratio is significantly lower

Institution-specific countercyclical capital buffer, DSF

DKK MILLION	2022	2021
Total risk exposure amount	42,389	45,477
Institution-specific countercyclical buffer requirement, DKK million	363	62
Institution-specific countercyclical buffer requirement, %	0.9	0.1

than the ratios for both DSF and DSH separately is the capital consolidation method stipulated by the Danish FSA whereby the tied-up reserve capital is only included in the determination of consolidated capital adequacy at an amount corresponding to the tied-up reserve capital's proportionate share of the capital requirement. For further information, please refer to the section on "available own funds".

According to the FSA, policies that contain a total leverage ratio target are a requirement when the leverage ratio is less than 10%. However, for the reason described above, the Group does not have a policy or a target for the consolidated leverage ratio.

Supplementary collateral and overcollateralisation

Pursuant to the Executive Order, the issuance of covered bonds in Capital Centre A requires DSF to post supplementary collateral for loans exceeding an LTV limit of 60% in the event of declining ship values.

The LTV ratios are closely monitored, and the capital centre maintains a collateral buffer should ship values decline.

The general need for supplementary collateral for Capital Centre A was low throughout 2022 and increased slightly towards the end of the year, averaging 2.6% of issued bonds.

At the end of 2022, the requirement for supplementary capital amounted to DKK 33.7 million or 0.5% of issued bonds.

The capital requirement for Capital Centre A consists of the mandatory 8% requirement plus the additional capital adequacy requirement and the combined capital buffer.

As at 31 December 2022, Capital Centre A had a cover pool ratio of 21.5%, which is well above the combined capital requirement of 13.0%.

The securities placed in the cover pool can be used for supplementary collateral to cover any breaches of the LTV ratio.

Risk Report

Management *declaration*

Management *declaration*

The Board of Directors of Danish Ship Finance A/S (Danmarks Skibskredit A/S) and Danish Ship Finance Holding A/S (Danmarks Skibskredit Holding A/S) approved the Risk and Capital Management report for 2022 on 27 February 2023.

The Board of Directors finds that the Group's risk management procedures are adequate and provide assurance that the risk management systems in place are adequate in relation to the Group's risk profile and strategy.

The risk tolerance defined by the Board of Directors is managed via applicable policies and limits.

A review of the business model and policies shows that the overall requirements set out in the model for specific risk areas are fully reflected in the specific limits of the individual policies.

The Group maintains solvency and liquidity well in excess of minimum requirements and seeks to ensure it has an appropriate and robust capital base supporting its business model.

The Board of Directors finds that the Group's overall risk profile in relation to its business model, business strategy and key metrics is compatible with the Group risk governance and accurately reflects the risk tolerance defined by the Board of Directors.

The Board of Directors made its assessment on the basis of the Group's business model, the Group strategy report, other materials and reports presented to the Board of Directors by the Executive Board, risk managers, compliance officers and the internal control officer, and any supplementary information obtained.

Board of *Directors*

Copenhagen, 27 February 2023

Eivind Drachmann Kolding
(Chairman)

Peter Nyegaard
(Vice Chairman)

Marcus Freuchen Christensen

Anders Damgaard*

Povl Christian Lütken Frigast*

Thor Jørgen Guttormsen

Anna-Berit Koertz

Ninna Møller Kristensen

Jacob Meldgaard

Michael Nellemann Pedersen*

Christopher Rex

Henrik Sjøgreen

**) also signed in the capacity of board member of Danmarks Skibskredit Holding A/S*

Danish Ship Finance A/S
(Danmarks Skibskredit A/S)

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