Risk Management 2019

Danske Bank Group

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The objective of Risk Management 2019 is to inform shareholders and other stakeholders of Danske Bank Group's risk management, including policies, methodologies and practices.

Additional Pillar III 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 danskebank.com/investor-relations.

2019 in brief

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1.

In 2019, one of the key priorities of Danske Bank Group was to strengthen the management of non-financial risks, including compliance risks. Among other things, the Group focused on redesigning and simplifying risk management frameworks, methodologies and policies, as well as improving event management capabilities.

For developments in the Estonia case, reference is made to section 1.1. The Flexinvest Fri case is described in section 1.2.

Financial risks

In 2019, the Estonia case continued to have an impact on Danske Bank's ratings. Following the publication of the revised financial targets for 2020-2023, Moody's downgraded Danske Bank's issuer rating from 'A2' to 'A3'. In 2019, S&P Global affirmed its 'A' issuer credit rating of Danske Bank and revised the outlook to stable from negative, citing reduced leverage in the Danish household sector and the build-up of a substantial amount of non-preferred senior debt as decisive factors. Fitch Ratings maintained its ratings of and outlook for Danske Bank during the year.

The Group's solvency need increased by DKK 4 billion in 2019, due to the inclusion of Pillar II add-ons to cover general product governance risk following the Flexinvest Fri case and risks related to the Group's IT governance structure. At the end of 2019, the Group's solvency need including buffers was DKK 97.3 billion, or 12.7% of the total REA.

At the end of 2019, the Group's liquidity coverage ratio was 140%. This is an increase from the prior-year level (121%) and well above the internal limit set at 110% by the Board of Directors. The increase in the Group's LCR was due to lower outflows.

Credit quality remained solid, and the main causes were stable macroeconomic conditions, managerial efforts and enhanced underwriting since the financial crisis. In 2019, partnerships enabled the Group to expand business in the Nordic markets without increasing the overall risk level as the credit quality of such new lending is generally high. Nevertheless, the Group's NPL levels rose during the year as a result of a number of single-name exposures to companies in the construction as well as oil and gas industries. This led to higher impairment charges than in 2018 while the rate of new non-performing loans in other industries remained low.

The Group continued to maintain a low risk in its trading operations in 2019. Throughout the period, the risk related chiefly to fixed income products, and this gave rise to interest rate risk and bond spread risk. Because of substantial diversification, however, the two main risk factors hedged each other well. In the non-trading portfolio, the sensitivity to falling interest rates increased from DKK 2.5 billion in 2018 to DKK 2.7 billion at the end of 2019, while the sensitivity to rising interest rates increased from DKK 4.1 billion in 2018 to DKK 4.4 billion at the end of 2019.

Non-financial risks

In 2019, the Group continued to develop its non-financial risk management capabilities, for example by strengthening the risk culture and awareness throughout the organisation, by redesigning and simplifying risk frameworks, methodologies and policies; and by improving the handling and learnings from risk events.

Danske Bank continued to recruit additional resources across the Group to ensure that sufficient skills and expertise are in place for further implementation of its non-financial risk framework.

To ensure that products and services offered by the Group are in the customers' best interests and in alignment with the Group's business model and risk appetite, the Group strengthened its governance procedures in 2019 for developing and introducing new and amended products and services. The implementation of the New & Amended Product Approval Directive was started across the Group in 2019.

As part of the management of non-financial risks, the Group has a tolerance threshold for net losses after recoveries during a calendar year. The Group standards require group-level aggregation and monitoring of its non-financial risk events against this risk tolerance threshold.

In 2019, inspections made by the Danish Financial Supervisory Authority (the Danish FSA) pointed out material gaps in both the Group's IT risk management and market abuse surveillance frameworks. Remediation plans were drafted to address the gaps in IT risk management, and the plans are expected to be shared with the Danish FSA in the first quarter of 2020. A remediation programme is already underway to address the issues relating to market abuse surveillance, and improvements were made during 2019.

1.1 Estonia case and exit from the Baltics and Russia

The Estonia case continues to be a major focus area for Danske Bank and all its stakeholders.

The findings of the investigation into the non-resident portfolio at the Estonian branch, published in September 2018, revealed a series of significant deficiencies in governance and control systems at Danske Bank's Estonian branch as well as deficiencies at the group level.

Danske Bank has embarked on a multi-year enhancement programme designed to materially upgrade its systems and controls relating to money laundering and other forms of financial crime more broadly. Danske Bank made material progress across a number of these initiatives in the past year. This includes

- significantly increasing the number of employees engaged in preventing financial crime, including hiring senior staff with expertise in these areas from international markets
- improving KYC controls so that they are more efficient and more effective
- delivering training to all employees to enable them to better identify and manage potential financial crime risks
- investing in more effective IT systems for automated transactions monitoring
- creating a Board of Directors committee, Conduct & Compliance Committee, to improve the Board's oversight of compliance matters

For more information, see section 7, Non-financial risk, in this report.

Authorities' investigations
Danske Bank remains in dialogue with various international authorities regarding the matters arising out of its Estonian branch. This includes criminal and regulatory investigations by authorities in Estonia, Denmark, France and the US. Danske Bank is reporting to, responding to inquiries from and cooperating with these authorities, including the U.S. Department of Justice (DOJ), the U.S. Securities and Exchange Commission (SEC), the Estonian Office of the Prosecutor General and the Danish State Prosecutor for Serious Economic and International Crime (SØIK), relating to Danske Bank's Estonian branch.

The overall timing of completion and the outcome of the investigations by, and subsequent discussions with, the authorities are uncertain.

In November 2018, Danske Bank was preliminarily charged by SØIK with violation of Danish anti-money laundering legislation on four counts all relating to the Estonian branch in the period from 1 February 2007 to the end of January 2016.

In February 2019, Danske Bank was placed under formal investigation by an investigating judge at the Tribunal de Grande Instance de Paris in the context of an ongoing French criminal investigation and on the grounds of money laundering suspicions relating to certain transactions in the terminated portfolio.

Internal investigations
Danske Bank's internal investigation into the terminated non-resident portfolio is currently expected to conclude by the fourth quarter of 2020. This timing is estimated and is subject to change, including as a result of further requests from authorities. The investigation continues to focus on issues arising out of the non-resident portfolio at the Estonian branch and includes reviewing whether similar issues have been present historically at Danske Bank's other Baltic branches.

A further, and important, aspect of Danske Bank's ongoing investigation into historical activities at the Estonian branch relates to sanctions screening. As set out in its interim report for the first nine months of 2019, Danske Bank has enhanced its methodology since publishing the Report on the Non-Resident Portfolio in September 2018 and is screening historical data on relevant historical customers of the Estonian branch, including the terminated non-resident portfolio, as well as associated persons and transaction information for possible sanctions violations. Danske Bank will inform the market if there are material developments that require disclosure.

Civil proceedings
In addition to the investigations by the authorities, a number of lawsuits have been filed against Danske Bank in the US and in Denmark.

On 9 January 2019, an action was filed in New York by an alleged holder of Danske Bank's American Depositary Receipts, representing its ordinary shares, against Danske Bank. The complaint seeks unspecified damages on behalf of a putative class of purchasers of Danske Bank's American Depositary Receipts between 9 January 2014 and 23 October 2018.

On 3 March 2019, a court case was initiated against Danske Bank for approval of a class action led by a newly formed association with the aim of representing former and current shareholders in a liability action relating to the Estonia case.

On 14 March 2019, 168 separate cases were further initiated simultaneously concerning shareholder claims relating to the Estonia case with claims totalling approximately DKK 3.5 billion.

Between 16 and 18 October 2019, a further 64 investors joined the action with claims totalling approximately DKK 2.5 billion. On 24 January 2020, a further 9 investors joined the action, bringing the total number of claims in the proceedings to 241 with a total claim amount of approximately DKK 6.3 billion.

On 27 December 2019, a separate claim was filed by 63 investors against Danske Bank with a total claim amount of approximately DKK 1.3 billion.

These cases relate to alleged violation at Danske Bank's branch in Estonia of the rules on prevention of money laundering and the alleged failure to timely inform the financial markets of such violation.

Danske Bank is defending itself against these claims. The timing of completion of any lawsuits (pending or threatening) and their outcome are uncertain.

Exit from the Baltics and Russia

Danske Bank is closing down its remaining banking activities in Estonia in accordance with the resolution announced on 19 February 2019 and the precept issued by the Estonian FSA. Danske Bank Estonia Branch has entered into solvent liquidation. This reflects the fact that Danske Bank has essentially exited its banking activities in Estonia, with mainly technical matters outstanding. The management now lies with a liquidation committee.

On 1 November, Danske Bank's Russian branch entered into solvent liquidation. This is in line with Danske Bank's decision to close down its Russian activities as communicated on 19 February 2019.

On 23 November, the sale of Danske Bank's remaining portfolio of personal customers in Estonia to LHV Pank was finalised.

On 9 January 2020, Danske Bank announced the sale of its portfolio of personal customers in Lithuania to Siauliu Bankas. The sale is expected to be finalised in the second quarter.

As previously announced, Danske Bank will also be closing down its banking activities in Latvia and Lithuania, but will continue to operate the shared services centre in Lithuania, which undertakes a number of administrative functions for the Group.

1.2 Compensation to Flexinvest Fri customers

The Flexinvest Fri case was a major focus area for Danske Bank in 2019.

On 24 June 2019, Danske Bank publicly announced that customers who had invested in the Flexinvest Fri product during a certain period had paid fees that were too high. This was a result of a number of management decisions to change Flexinvest Fri fees in connection with the implementation of new regulation (MiFID II) in 2017. At the time, interest rates and expected returns were low. In this perspective, the management decisions caused the fees to be set at too high a level in relation to the expected returns. This meant that the product was unsuitable for some customers.

In October 2018, Danske Bank commenced an investigation and notified the details of the case to the Danish FSA. On 30 August 2019, the FSA issued a decision containing a number of orders. Danske Bank is currently taking the steps necessary to ensure compliance with them.

On 14 November 2019, Danske Bank was preliminarily charged by the Danish State Prosecutor for Serious Economic and International Crime (SØIK) for violating the Danish Executive Order on Investor Protection in connection with the Flexinvest Fri case. Danske Bank cooperates fully with SØIK.

As at 31 December 2019, close to 83,000 customers had received a total of DKK 310 million in compensation. The remaining around 4,000 customers are expected to be compensated during 2020.

On 30 September 2019, Danske Bank received final joint supervisory decisions on capital and liquidity from the supervisory college. As expected, the Danish FSA required Danske Bank to reassess its solvency need to reflect general product governance risk following the Flexinvest Fri investigation and increased risk following an inspection of its IT governance structure. As of the third quarter of 2019, Danske Bank increased its Pillar II add-ons by DKK 4 billion, leading to an increase of 0.5 percentage points in the solvency need and an increase of 0.3 percentage points in the CET1 capital requirement.

1.3 Conduct compliance and culture

As a direct consequence of the eight orders received from the Danish FSA on 3 May 2018 in relation to the Estonia case, the Group decided to hire a new chief compliance officer (CCO) with broad international experience in the compliance area for the purpose of further strengthening the expertise build-up in Group Compliance. The developments in the Estonia case and the Flexinvest Fri case underline the importance of ensuring a well-functioning and high-quality Group Compliance function.

On 26 November 2018, Danske Bank onboarded a new chief compliance officer and member of the then Executive Board (now the Executive Leadership Team). Since then, efforts have been undertaken to (i) design an adequate organisational structure to support the ambitions of running a sustainable and high-quality Group Compliance function, and (ii) ensure adequate capabilities to meet the ambitious agenda. Hence, with effect from 1 April 2019, a new Group Compliance organisational structure was implemented to strengthen the function and establish clearer roles and responsibilities.

In addition, the Group is in the process of hiring experienced professionals in key positions across Group Compliance, including new heads of Financial Crime, Surveillance & Investigation, and Central Unit. At the end of 2019, the new Group Compliance organisation was almost in place with only a few positions yet to be filled.

Two dedicated committees were established in 2019 to strengthen the work previously performed by other management committees: the Conduct & Reputational Committee (at the Executive Leadership Team level) and the Conduct & Compliance Committee (at the Board of Directors level).

With the 2023 Ambitions (published on 1 November 2019 as part of the Group's interim report for the first nine months of 2019) to "Get compliance under control", identifying and operationalising the adequate initiatives from a Group Compliance perspective to support the Group ambitions will be a key priority for 2020.

The Executive Leadership Team has identified a number of initiatives to accelerate the required cultural change. For example, adherence to core values was further reinforced in the annual performance evaluation for 2019. In addition, it is an integral part of employee promotion and talent management. Finally, the management agenda operationalised through the 2023 Ambitions will have 11 initiatives, of which one in particular, ''Purpose, brand, culture and engagement", drives the cultural agenda.

Throughout 2019, a number of initiatives were launched to further promote the cultural journey of Danske Bank. Efforts were made to promote the "DoRight" site and risk management awareness through e-learning and team exercises. This supplements the significant efforts already made in the following areas: (i) massive upgrading of the Group's compliance area through substantial investments in expertise and programmes to ensure compliance and strengthen the culture across the organisation; (ii) substantial remediation efforts, including the comprehensive AML programme, under which StoneTurn is performing quality assurance of the ongoing work, and: (iii) efforts to improve the Group's governance and controls.

1.4 Key ratios and risk figures

Key ratios and risk figures for Danske Bank Group

(At 31 December)	2019	2018	2017
Capital			
Common equity tier 1 capital ratio (%)	17.3	17.0	17.6
Tier 1 capital ratio (%)	20.4	20.1	20.1
Total capital ratio (%)	22.7	21.3	22.6
Leverage ratio, transitional rules (%)	4.7	4.6	4.4
Leverage ratio, fully phased in (%)	4.6	4.5	4.4
Funding and liquidity			
Liquidity coverage ratio (LCR) (%)	140	121	171
Asset encumbrance (DKK billions)	1,224	1,278	1,328
Asset encumbrance ratio (%)	40	44	43
Issuer rating and outlook – S&P Global	A / stable	A / negative	A / stable
Issuer rating and outlook – Moody's	A3 / stable	A2 / negative	A1 / positive
Issuer rating and outlook – Fitch Rating	A / negative	A / negative	A / stable
Asset quality			
Risk exposure amount, total (DKK billions)	767.2	748.1	753.4
Expected loss (DKK billions)[1]	15.1	13.4	13.2
Impairment charges, loans, total, full year (DKK millions)[2]	1,516	-650	-873
Loan loss ratio, full year (%)[2]	-	-	-
Non-performing loans, gross exposure (DKK billions)[2]	34.7	29.9	33.3
Non-performing loans, net exposure (DKK billions)[2]	21.3	16.9	17.3
Non-performing loans as % of total gross exposure (%)	1.4	1.2	1.2
Non-performing loans coverage ratio (%)[3]	77.6	85.0	86.1
Loans defaulted on, gross (DKK billions)[2]	17.6	16.0	16.0
Loans defaulted on, net (DKK billions)[2]	9.4	7.3	6.0
Forborne loans (DKK billions)	22.4	24.5	27.4
Other			
Core net credit exposure, lending activities (DKK billions)	2,444	2,392	2,688
Non-core net credit exposure, lending activities (DKK billions)	10.4	18.4	8.0
Exposure at default (DKK billions)[4]	2,589	2,574	2,716
Total assets (DKK billions)	3,761	3,578	3,540
Assets under management (DKK billions)	1,651	1,575	1,530

[1] Expected loss figure (downturn-adjusted amount according to regulatory requirements).
[2] At the group level, core portfolios, excluding Non-core.
[3] Accumulated expected credit losses (IFRS 9) as a percentage of gross exposure net of collateral (after haircut).
[4] Excluding counterparty credit risk.

Risk strategy and governance

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2.

2.1 Risk strategy

The Group's risk objective is to support Danske Bank's ambition of creating value for customers, employees, society and shareholders. To meet this objective, Danske Bank applies an enterprise risk management (ERM) framework that sets common standards for risk management across all risk types.

The ERM framework defines how the Group manages risk and it specifies how risk governance and risk responsibilities are structured to ensure appropriate oversight and accountability. Furthermore, it defines the Group's risk taxonomy and approach to risk appetite setting. The ERM framework is supported by policies approved by the Board of Directors.

Risk culture

The Group recognises the importance of having a strong risk and compliance culture in everyday work to ensure that Danske Bank creates value for all of its stakeholders and lives up to its responsibility as one of the largest financial institutions in the Nordic region. The process of building and maintaining a strong risk and compliance culture across the Group involves ensuring a high level of risk awareness and enforcing sound risk-taking behaviour aligned with the risk appetite. This work is underpinned by the Group's core values and by policies, communications and staff training.

The Group's risk culture is reinforced by its approach to remuneration. The performance agreements of all Executive Leadership Team members and staff reporting directly to them include risk/compliance indicators. Ensuring the right set of risk skills and expertise also helps strengthen the culture. The Group develops and maintains risk skills through tailored risk and compliance training to ensure that risk management expertise is embedded in daily work routines. All employees, including Executive Leadership Team members, participate in annual compulsory eLearning courses on competition law, anti-money laundering, whistleblowing, GDPR and information security awareness, for example.

Risk taxonomy

The risk taxonomy is a common set of risk categories and definitions intended to ensure adequate risk identification and ownership across the Group. The risk categories cover both financial and non-financial risks, and roles and responsibilities are defined for each identified risk category to ensure continued monitoring and risk assessment. The taxonomy is reviewed on an annual basis to ensure that the risk categories reflect the Group's current main risks.

Group risk appetite

The Group's risk appetite specifies the types and the maximum level of risk that Danske Bank is willing to accept in order to meet its strategic objectives. This is to ensure an adequate balance between risk and return. As part of the risk appetite setup, the Group sets tolerance levels for non-financial risks. These specify the level of non-financial risk that Danske Bank is prepared to take in pursuit of its business strategy.

The Group's risk appetite is owned by the Board of Directors and sets the direction for the Group's overall risk-taking by specifying the aggregate level of risk acceptable to the Group on the basis of credit, market, liquidity and non-financial risk. The risk appetite is linked to the strategic and financial planning processes to ensure that both risks and opportunities are considered in the strategic decision-making process.

2.2 Risk management organisation

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

2.2.1 Three lines of defence

The first line of defence owns and manages the business activities and related risks. It consists of frontline and direct support functions and includes the business units, COO Area, CFO Area, Group Legal, Group HR as well as Group Communications, Brand & Marketing. These units are responsible for identifying and managing risks across national borders, including designing, implementing and operating effective controls.

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

The second line of defence provides the risk management framework and performs risk oversight. It consists of Group Risk Management and Group Compliance. These units are responsible for setting the standards, policies and methods under which the first line of defence operates with respect to risk management and compliance. The second line of defence supports, challenges and is responsible for the risk oversight of the first line of defence and operates independently of the first line of defence.

The head of Group Risk Management has the title of chief risk officer (CRO), is a member of the Executive Leadership Team, and in cooperation with and under responsibility of the chief executive officer (CEO) of Danske Bank, the CRO reports to the Board of Directors. The CRO may file reports to and contact the Board of Directors directly. Furthermore, the CRO has the authority to veto any decision in relation to credit applications and new products.

Group Risk Management is organised in a matrix structure in which units have individual risk type oversight responsibility. The following units are part of Group Risk Management: Risk Analytics, Market & Liquidity Risk, Group Non-Financial Risk, COO Risk Functions, Banking Denmark Risk Management, Retail Credit Risk and Wholesale Credit Risk. In addition, each business unit has appointed a CRO who has oversight responsibility across all risk types for the unit in question. In most cases, business unit CROs are also head of one of the units in Group Risk Management and have group-wide responsibility for specific risk types. Finally, country CROs in Norway, Sweden, Finland and Northern Ireland are responsible for overseeing all types of risk in the respective countries.

The head of Group Compliance has the title of chief compliance officer (CCO), is a member of the Executive Leadership Team, and in cooperation with and under responsibility of the chief executive officer (CEO) of Danske Bank, the CCO reports to the Board of Directors. The CCO may file reports to and contact the Board of Directors directly.

Group Compliance is responsible for overseeing conduct and financial crime risks and for providing advice and guidance to the first line of defence. This includes providing support and creating awareness. Group Compliance monitors the adherence to processes and controls at the business units and staff areas and monitors whether controls are properly designed and operating as intended. Group Compliance has independent oversight of conduct and financial crime risk management and maintains the Group's conduct and financial crime risk management framework. These activities should be seen as part of an ongoing compliance process that is adjusted to regulatory changes and requirements and to business activities.

The following units are part of Group Compliance: Financial Crime, AML Programme, Compliance, Group Regulatory Affairs, COO, Surveillance & Investigation, and Northern Bank. In addition, country compliance officers in Norway, Sweden, Finland and Northern Ireland are responsible for all compliance-specific risk types in the respective countries.

The third line of defence is made up by Group Internal Audit (GIA). GIA is an independent and objective unit evaluating and improving the effectiveness of risk management, control and governance processes in relation to the control environments of the first and second lines of defence. GIA is headed by the chief audit executive (CAE) and reports directly to the Board of Directors.

2.3 Risk governance

The Group has a structure of decision-making bodies that cover all relevant risks to ensure control and oversight of risk decisions. The committee structure is designed to support an effective information and escalation path to the Group's senior management and to provide a consistent approach to risk management and decision-making.

Risk governance: two-tier management and committee structures

The Group's Escalation Policy constitutes an overall framework for internal escalations. The policy lays down the general principles and standards for timing, responsibility, processes, requirements for accuracy, etc., in relation to escalating matters to the Executive Leadership Team and the Board of Directors.

2.3.1 Board of Directors and Executive Leadership Team

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

The Board of Directors appoints members to the Executive Leadership Team, the CAE and the secretary to the Board of Directors. In accordance with the rules of procedure, the Board of Directors approves the Group's overall business model, strategy, risk appetite, risk profile, policies and instructions with mandates to the Executive Leadership Team. In addition, the Board of Directors receives regular reports, monitors the main risks and reviews the largest credit exposures.

The Executive Leadership Team is responsible for the Group's day-to-day management. It supervises the Group's risk management practices, oversees developments in Group Compliance's methods such as for anti-money laundering, approves credit applications up to a defined limit and ensures that bookkeeping and asset management are sound and in accordance with the Group's business model, strategy, policies and instructions established by the Board of Directors and in compliance with applicable legislation. The Executive Leadership Team consists of the chief executive officer, the heads of the four main business units and the heads of CFO Area, COO Area, Group Compliance and Group Risk Management.

2.3.2 Board of Directors and Executive Leadership Team committees

The Board of Directors has established five committees to supervise risks and prepare cases for consideration by the full Board.

Committees established by the Board of Directors

Committee	Description
Risk Committee Convenes at least six times a year Number of meetings in 2019: 8	The Risk Committee operates as a preparatory committee for the Board of Directors with respect to risk management and related matters. The committee advises the Board of Directors on the Group's risk profile, risk culture, risk appetite, risk strategy and risk management framework.
Audit Committee Convenes at least four times a year Number of meetings in 2019: 7	The Audit Committee operates as a preparatory committee for the Board of Directors with respect to accounting and auditing matters, including relevant risk matters.
Remuneration Committee Convenes at least twice a year Number of meetings in 2019: 6	The Remuneration Committee operates as a preparatory committee for the Board of Directors with respect to matters concerning remuneration. Its main focus is on the remuneration of the members of the Board of Directors and the Executive Leadership Team, material risk takers, key employees and executives in charge of control and internal audit functions. Another focus area is incentive programmes. The committee monitors trends in the Group's salary and bonus policies and practices. It also monitors the incentive programmes to ensure that they promote ongoing, long-term shareholder value creation and are in compliance with the Remuneration Policy.
Nomination Committee Convenes at least twice a year Number of meetings in 2019: 6	The Nomination Committee operates as a preparatory committee for the Board of Directors with respect to the nomination and appointment of candidates to the Board of Directors and to the Executive Leadership Team and with respect to the evaluation of the work and performance of the Executive Leadership Team and the Board of Directors, including individual evaluation of each member of the Board of Directors. The committee also submits proposals to the Board of Directors on policies for succession planning as well as diversity and inclusion.
Conduct & Compliance Committee Convenes at least four times a year Number of meetings in 2019: 9	The Conduct & Compliance Committee operates as a preparatory committee for the Board of Directors with respect to conduct and reputational risk, compliance and financial crime. The committee oversees Danske Bank's conduct in relation to its corporate and societal obligations and monitors Danske Bank's systems and processes to ensure compliance with rules and regulations applicable to Danske Bank.

The Executive Leadership Team has established four committees that act on behalf of the Executive Leadership Team with respect to risk monitoring and decision-making in certain areas.

Committees established by the Executive Leadership Team

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

2.4 *Risk monitoring and reporting*

The Group has an enterprise-wide approach to risk reporting. This approach is supported by the monthly CRO letter, which covers analyses across all risk types, business units and geographical regions.

Risk reporting	Content	Frequency	Sent to
CRO letter	A comprehensive overview of the Group's risk profile across risk types, core geographical regions and key subsidiaries.	Monthly (quarterly in respect of the Board of Directors)	Group All Risk Committee Risk Committee (Board of Directors) Board of Directors
Risk profiles	Detailed portfolio and industry analyses focusing on exposure, risk factors, structural trends, performance and forward-looking developments, including portfolio stress tests. Risk profiles cover all material portfolios.	Annually	Group All Risk Committee Risk Committee (Board of Directors) Board of Directors
Risk reviews	Reviews based on a risk-based approach; they cover specific risks related to selected portfolios and all material portfolios. Ad hoc reports are made when relevant.	At varying intervals; high-risk portfolios are reported more frequently, and at least annually	Group All Risk Committee
Impairment report	An overview of detailed developments in the Group's impairment charges.	Quarterly	Group Impairment Committee Audit Committee (Board of Directors) Risk Committee (Board of Directors) Board of Directors
Risk management report	A description of the Group's risk strategies and profile, capital management, risk management organisation and risk frameworks and policies. The report is prepared annually and published on Danske Bank's website along with the Additional Pillar III Disclosures spreadsheet.	Annually	Risk Committee (Board of Directors) Board of Directors Public
Group compliance quarterly report	An overall assessment of the compliance risk management and control environment at Danske Bank Group.	Quarterly	Executive Board Audit Committee (Board of Directors) Board of Directors
ICAAP report	An assessment of the adequacy of the Group's short-term and long-term capital levels as measured against its risks and business strategy. The assessment includes upcoming regulatory changes and stress testing results.	Quarterly	Board of Directors Audit Committee (Board of Directors) Risk Committee (Board of Directors) Danish FSA

Capital and REA report	An assessment of developments in the underlying parameters affecting the Group's overall capital position, including an analysis of the risk exposure amount (REA).	Monthly	Chief financial officer Chief risk officer
ILAAP report	A description of the Group's liquidity situation and liquidity management, including its funding profile and plan. The report assesses liquidity risk indicated by liquidity stress tests and similar analyses and also describes the minimum amount of liquidity reserves required by the Group.	Annually	Group All Risk Committee Risk Committee (Board of Directors) Board of Directors Danish FSA

Credit risk

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20	3.1.5	Stress testing
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3.

3.1 Credit risk management

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

The Group manages credit risk in accordance with its Credit Policy, Credit Risk Instructions, Credit Risk Appetite and credit risk framework. The purpose of these elements is to ensure clear roles and responsibilities, a consistent approach to credit risk management across markets and business units, while making sure that risk-taking remains supportive of the Group's business strategy.-

3.1.1 Governance and responsibilities

Credit risk is managed in line with the principles of the three-lines-of-defence model.

The first line of defence consists of the frontline functions as well as business risk and control functions at the business units. Group Risk Management is the second line of defence. In particular, Retail Credit Risk and Wholesale Credit Risk facilitate the implementation of sound risk management throughout the Group and are responsible from an oversight and challenge perspective for identifying, monitoring, analysing, measuring, managing and reporting on risks and forming a holistic view of all risks on an individual and consolidated basis.

The credit control environment verifies that credit facilities are granted in accordance with the Group's Credit Policy and Credit Instructions and are in alignment with its Credit Risk Appetite. Credit exposures are monitored so that credit action plans can be made and/or forbearance measures be taken for distressed loans and impairment charges be calculated for non-performing loans.

Delegated lending authority

The Group's lending activity is governed by its Credit Policy and Credit Risk Instructions, including the principles for delegating lending authority from the Board of Directors to the Executive Leadership Team (Group Credit Committee). Lending authorities are cascaded down from the Board of Directors – through the Executive Leadership Team to Group Risk Management – to lending officers at the business units. Authorities are delegated to qualified and experienced staff at levels appropriate to such tasks and relevant to the risk profile and nature of the exposures considered by those officers. Credit applications exceeding the delegated lending authorities are submitted to the Group Credit Committee and the Board of Directors. In cases of a reputational or material financial nature, both the Executive Leadership Team and the Board of Directors are involved in the approval process.

The Delegated Lending Authorities System ensures administration and control of lending authorities. Credit applications and renewals above a certain materiality threshold must be approved by the second line of defence, which means that decisions made by business units are challenged or endorsed by Group Risk Management. The first line of defence is responsible for all credit exposures.

3.1.2 Monitoring and reporting

At the group level, Group Risk Management oversees the Group's credit activities and reports on developments in the credit portfolios. Portfolio reports are presented to the Executive Leadership Team (via the Group All Risk Committee) on a monthly basis and to the Board of Directors (via the Board of Directors' Risk Committee) on a quarterly basis. Furthermore, monitoring functions determine whether credit facilities are granted in accordance with the Credit Risk Appetite. Group Risk Management monitors, challenges and reports on credit risk performance to the Executive Leadership Team and the Board of Directors.

3.1.3 Credit risk appetite and concentration frameworks

The Group's credit risk appetite is set to support the Group's ambition of limiting impairment volatility through the business cycle and managing credit concentrations (including single names, assets and/or credit type concentrations). The appetite allows the Group to take on credit risk in areas that are within its strategic core.

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

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

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

Limiting impairment volatility
The Group has set maximum loss limits to enable it to manage the risk of credit losses in times of economic stress. The maximum loss is calculated as the largest one-year loss expected under a three-year severe recession scenario. The maximum loss limits also make it possible to monitor the credit quality of the portfolio and factor in all key credit quality drivers such as customer ratings/scores, collateral and loan maturity.

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

- Single-name concentrations
- Industry concentrations
- Geographical concentrations

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

1. Large exposures: This framework is based on the regulatory definition of large exposures in part 4 of the CRR (Regulation (EU) No. 575/2013 of the European Parliament and of the Council of 26 June 2013). The Group has defined stricter internal limits for managing single-name concentrations, including the following:

- Absolute limit on single-name exposures
- The sum of single-name exposures larger than 10% of the total adjusted capital may not exceed a portfolio limit of 95% of the total adjusted capital (at the end of December 2019, one single-name exposure exceeded 10%)
- The sum of single-name exposures equal to 5-10% of the total adjusted capital may not exceed 150% of the total adjusted capital (at the end of December 2019, this segment represented 24% of the total adjusted capital)

2. Single-name concentration: The Group has also implemented a risk-sensitive internal framework. In order to limit losses on single names, the framework sets limits on the following:

- Exposure
- Loss given default
- Expected loss

The largest exposures are monitored daily under the large exposures framework and are reported on a quarterly basis to the Group All Risk Committee, the Board of Directors' Risk Committee and the Board of Directors. At the end of December 2019, the Group was well within the regulatory limits for large exposures.

Single-name concentrations are monitored monthly and reported on a quarterly basis to the Group All Risk Committee, the Board of Directors' Risk Committee and the Board of Directors.

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

Geographical concentrations
Credit reporting includes a breakdown by country. For exposures outside the Group's home markets, limits are applied to sovereigns, financial institutions and counterparties in derivatives trading. Limits are approved by the Group Credit Committee on the basis of the expected business volume and an assessment of the specific country risk.

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

Similarly, the Group uses early warning indicators for business customers in order to identify behavioural signals that historically have indicated poor performance. This enables relationship managers and credit departments to target activities to a higher extent than previously, including taking forbearance measures where relevant.

The Group engages in work-out processes with customers in order to minimise losses and help healthy customers in financial difficulty. During the work-out process, the Group makes use of forbearance measures to assist non-performing customers. Concessions granted to customers include interest-reduction schedules, interest-only schedules, temporary payment holidays, term extensions, cancellation of outstanding fees, waiver of covenant enforcement and settlements. Because of the length of the work-out processes, the Group is likely to maintain impairment charges for these customers for years.

Forbearance plans must comply with the Group's Credit Policy and are used as an instrument to maintain long-term customer relationships during economic downturns if there is a realistic possibility that the customer will be able to meet obligations again. The purpose of the plans is therefore to minimise loss in the event of default and to help customers through a difficult period.

If it proves impossible to improve a customer's financial situation by forbearance measures, the Group will consider whether to subject the customer's assets to a forced sale or whether the assets could be realised later at higher net proceeds. Since 2014, the Group has identified an increasing number of exposures subject to forbearance measures, partly as a result of stronger focus on the registration and monitoring of forbearance activities. For figures, see section 3.2.1 below.

The credit process ensures that loans are granted to customers within their financial capacity and also that distressed and non-performing loans are identified at an early stage and managed proactively. Assessing a customer's financial capacity is a key element of the credit approval process. The Group pursues a policy of mitigating credit risk by means of guarantees and/or collateralisation.

Sustainable lending

The Group carefully assesses the financial situation of customers to ensure that loans granted are suited to their needs and financial capacity and that customers understand their financial obligations. Besides providing loans in a responsible manner, the Group has spent the past few years integrating sustainability and ESG considerations into its lending practices.

In 2015, work began to integrate ESG considerations into credit processes with the aim of identifying and managing business with customers believed to disregard or deliberately violate UN-based principles on environmental protection, human rights, labour rights and anti-corruption. In 2016, the Group published position statements on sectors with elevated ESG risks, describing processes and restrictions within these sectors.

Sectors that are recognised to have elevated ESG risks are also specified in the Credit Policy and are subject to periodic review. These include sectors such as metals and mining, forestry, fossil fuels, and arms and defence, for which instructions specify minimum requirements for managing ESG risks and how to perform ESG assessments at the customer level. Furthermore, ESG risk identification is made at the portfolio level for specific sectors on an ongoing basis by screening large customers using external ESG data providers. In 2019, ESG risk identification was discussed as part of the annual sector risk reviews by the Group All risk Committee and the Board of Directors' Risk Committee.

In addition, the Group has started to assess and quantify the financial impact of climate-related risks in the lending portfolio in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). This means reviewing selected sectors using climate scenarios to measure the sensitivity of the portfolio to climate-related risks with the aim of covering key sectors over time. In 2019, this work included an assessment of transition risks in the oil and gas portfolio and a physical risk assessment of flooding risk in relation to segments of the real estate portfolio.

Overall, the work on both ESG integration in general and assessment in accordance with TCFD recommendations is well-aligned with the Group's commitment to the Principles for Responsible Banking developed by the United Nations Environment Programme Finance Initiative. For more information about these activities, see the Group's Sustainability Report 2019.

3.1.5 Stress testing

The credit risk appetite is set annually and assessed on an ongoing basis using both top-down and bottom-up stress testing in alignment with IFRS 9 methodology.

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

The Group also conducts bottom-up stress tests on selected industries, typically the largest portfolios (reviewed at least once a year). These stress tests form part of wider sector and portfolio reviews (risk profiles), and they are used for the assessment of specific risk strategies for individual sectors. The bottom-up stress tests help set the risk appetite for industry concentrations and also help validate top-down stress testing.

3.1.6 Rating and scoring

Group Risk Management is responsible for the overall rating process, including rating models. Customer ratings are reassessed periodically on the basis of new information that affects a customer's creditworthiness.

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

Risk classification distribution

Scoring and rating are integral elements of the credit approval and the overall credit risk management processes. The Group's classification scale consists of 11 main categories, with category 11 comprising customers in default. Most of the categories are divided into two or three subcategories, making a total of 26 classification categories.

The internal PD rating scale is not directly comparable with the rating scales used by international rating agencies.[1] The Group's internal ratings are based on point-in-time (PIT) parameters, and the ratings reflect the probability of default within a year. In order to benchmark the Group's internal rating models, the Group uses Standard & Poor's and Moody's data as benchmarks.

3.1.7 Risk mitigation and collateral management

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

The market value of collateral is monitored and reassessed by advisers, internal or external assessors, or automatic valuation models. Automatic valuation models are validated annually and monitored quarterly. The Group regularly evaluates the validity of the external inputs on which the valuation models are based. The Collateral System supports the process of reassessing the market value to ensure that the Group complies with regulatory requirements.

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

For more information, see section 3.2.2 below.

3.1.8 Support systems

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

- Accurate classification of customers and timely default registration based on risk events
- Timely registration and accurate valuation of collateral
- Granting of credit facilities according to delegated lending authorities
- Formalised monitoring and follow-up procedures

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

3.2 Credit risk profile

Danske Bank Group's total net credit exposure is defined as on-balance-sheet and off-balance-sheet items net of impairment charges that carry credit risk. At the end of 2019, the Group's total net credit exposure for accounting purposes was DKK 4,153 billion (2018: DKK 3,900 billion).

Net credit exposure from lending activities accounts for most of the Group's net credit exposure, and it is the focus of this section. Counterparty credit risk is explained in sections 3.4 and 3.5, while risk arising from trading and investment securities and customer-funded investment is described in section 4, Market risk. Net credit exposure from lending activities includes amounts due from credit institutions and central banks, loans, guarantees and irrevocable loan commitments.

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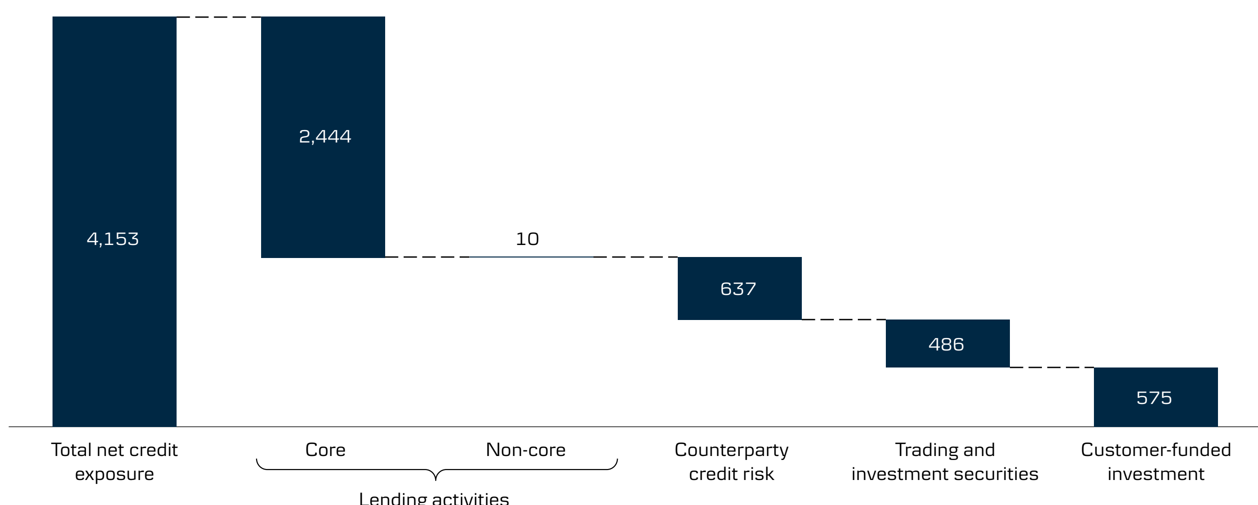
[1] Ratings 1-5 are comparable to investment grades; ratings 9 and 10 designate highly vulnerable customers; and rating 11 represents customers in default

Breakdown of net credit risk exposure
(DKK billions)



At the end of 2019, net credit exposure from core lending activities amounted to DKK 2,444 billion (2018: DKK 2,392 billion). The increase in credit exposure was attributable mainly to an increase in loans and loan commitments. Net credit exposure from Non-core lending activities came to a total of DKK 10 billion, down from DKK 18 billion at the end of 2018.

At the end of 2019, the Group's counterparty credit risk amounted to DKK 637 billion, up from DKK 564 billion at the end of 2018.[2]

Net credit exposure from trading and investment securities arises from securities positions taken by the Group's trading and investment units, and it also entails credit risk. This risk type is described in the credit risk notes to Danske Bank Group's financial statements.

The Group's credit risk exposure from assets in customer-funded investment pools, unit-linked investment contracts and insurance contracts (customer-funded investments) was DKK 575 billion in 2019 (2018: DKK 477 billion). The risk on assets under pooled schemes and unit-linked investment contracts is assumed solely by customers, while the risk on assets under insurance contracts is assumed primarily by customers. The credit risk on customer-funded investments and insurance contracts is described in the notes on credit risk and insurance contracts to Danske Bank Group's financial statements.

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

3.2.1 Net credit exposure from lending activities

Overall net credit exposure from lending activities increased by DKK 52 billion from the end of 2018. In 2019, loans increased by DKK 58 billion and loan commitments rose by DKK 34 billion, while guarantees decreased by DKK 14 billion. At the same time, the Group also saw a decline of DKK 27 billion in deposits with central banks and amounts due from central banks and credit institutions.

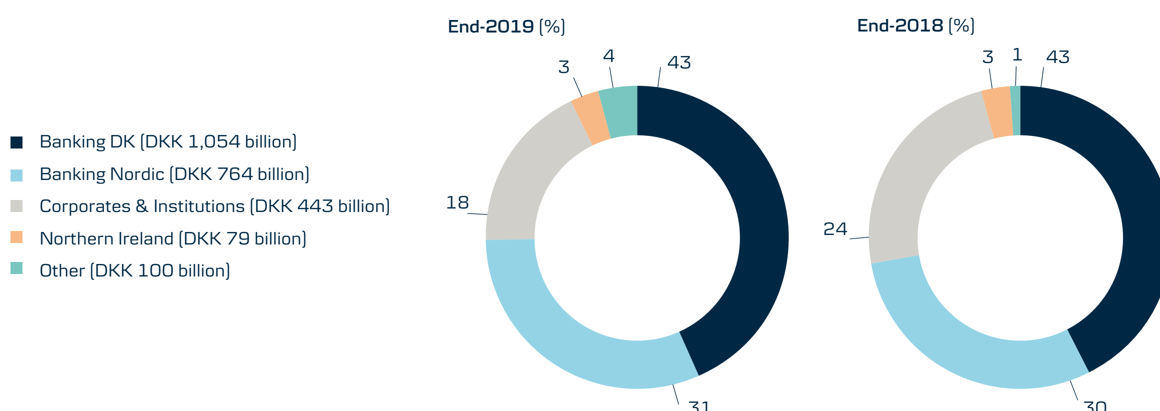
At the business unit level, credit exposure increased at Banking Nordic (up DKK 41 billion) and at Banking DK (up DKK 32 billion), while C&I saw a decrease of DKK 120 billion that was driven by the transfer of central bank exposures to Other Activities. This caused the credit exposure to increase by DKK 87 billion.

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

For more information about the trends in selected portfolios, see the sections below.

[2] In this respect, counterparty credit risk consists of reverse transactions and other loans at fair value (loans at the trading units of Corporates & Institutions) as well as derivatives with positive fair value. The figure in section 3.5 below covers only derivatives with positive fair value.

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



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

	Net credit exposure (DKK billions)	
	End-2019	End-2018
Public institutions	194	206
Financials	106	113
Agriculture	71	71
Automotive	38	35
Capital goods	70	68
Commercial property	316	301
Construction and building materials	50	52
Consumer goods	66	67
Hotels, restaurants and leisure	17	15
Metals and mining	12	12
Other commercials	21	19
Pharma and medical devices	40	29
Private housing co-ops and non-profit associations	198	189
Pulp, paper and chemicals	33	32
Retailing	25	28
Services	59	60
Shipping, oil and gas	57	65
Social services	31	27
Telecom and media	19	18
Transportation	16	13
Utilities and infrastructure	47	42
Personal customers	959	930
Total	**2,444**	**2,392**

3.2.2 Credit quality

Net credit exposure broken down by rating category

Although the risk of a downside to the outlook increased, macroeconomic conditions remained solid and, in combination with a strong focus on maintaining a high-quality loan book, continued to support the Group's credit risk profile in 2019. Overall credit quality remained stable, and the exposure-weighted PD was 0.68% at the end of 2019, against 0.62% at the end of 2018.

Overall lending activities – net credit exposure by rating category

	PD scale (%)		Net credit exposure (DKK billions)		Net credit exposure (% accumulated)	
Rating category	Upper	Lower	End-2019	End-2018	End-2019	End-2018
1	0.00	0.01	152	179	6	12
2	0.01	0.03	199	170	14	22
3	0.03	0.06	469	445	34	38
4	0.06	0.14	563	604	57	60
5	0.14	0.31	488	457	77	78
6	0.31	0.63	281	263	88	89
7	0.63	1.90	187	175	96	96
8	1.90	7.98	43	46	98	98
9	7.98	25.70	9	10	98	98
10	25.70	99.99	37	31	99	99
11	100.0	100.0	15	14	100	100
Total			**2,444**	**2,392**	**100**	**100**

Impairment charges, non-performing loans and forborne exposures

Loan impairments in core activities amounted to DKK 1.5 billion in 2019, against a net reversal of DKK 0.7 billion in 2018. The increase in loan impairments was driven mainly by increased impairment charges against a few single-name exposures at Corporates & Institutions and Banking Nordic and lower reversals on non-performing loans in Denmark. Impairment charges of DKK 0.4 billion were recognised following a review of the loan portfolio that led to some exposures being reclassified as non-performing. In addition, loan impairments were adversely affected by adjustments made to take into account the increased downside risk in the macroeconomic outlook for the Nordic countries. Although the risk of a downside to the outlook increased, credit quality remained solid during the fourth quarter of 2019, supported by stable macroeconomic conditions and stable collateral values in most markets.

Corporates & Institutions saw loan impairments against some single-name exposures, mainly in the shipping, oil and gas and the retailing industries. Banking Nordic saw increased impairments, mainly against single-name exposures in the construction industry. At Banking DK, lower reversals in 2019 were caused mostly by lower reversals on legacy non-performing loans than in 2018, an increase in impairments caused by model adjustments for retail customers in the first quarter of 2019 and adjustments due to the increased risk of a downside to the macroeconomic outlook in the third quarter of 2019. An improved outlook for agricultural customers supported reversals at Banking DK. In general, the Banking DK and Banking Nordic portfolios saw solid credit quality, with few new non-performing loans.

Non-performing loans (NPL) and impairment charges broken down by business unit

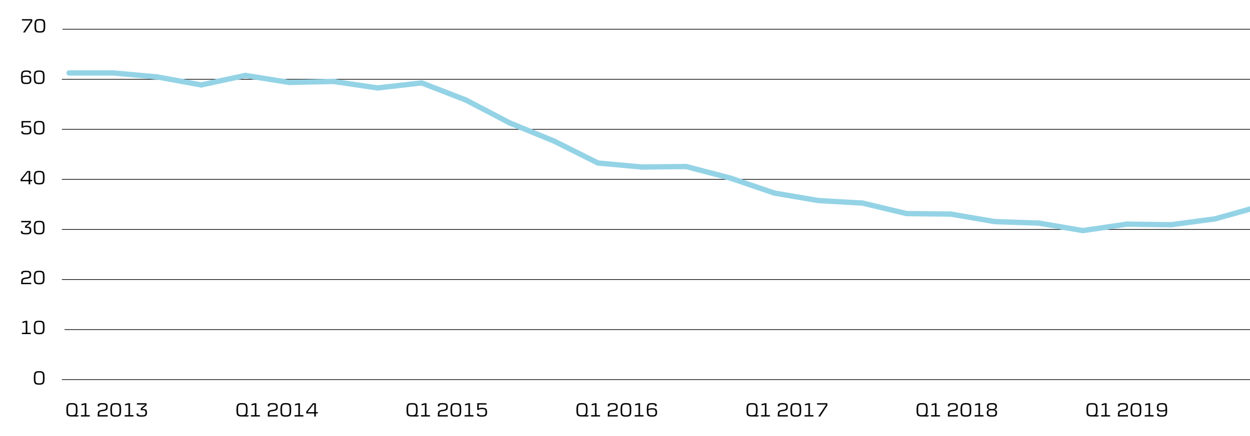
	End-2019				End-2018			
(DKK millions)	Gross NPL = a+b	Expected credit loss b	Net NPL exposure a	Net NPL exposure, ex collateral	Gross NPL = a+b	Acc. individual impairment charges b	Net NPL exposure a	Net NPL exposure, ex collateral
Banking DK	15,588	7,282	8,306	767	16,346	7,889	8,457	1,595
Retail	4,636	2,486	2,150	294	4,492	2,517	1,975	747
Commercial	10,953	4,797	6,156	472	11,853	5,371	6,482	848
Banking Nordic	5,985	2,420	3,565	154	5,319	2,455	2,863	252
Sweden	1,384	493	892	97	1,108	414	693	30
Norway	2,083	545	1,539	-	1,964	887	1,077	1
Finland	2,125	1,106	1,019	56	1,365	781	584	96
Other	392	276	116	-	882	373	509	125
C&I	11,853	3,155	8,698	2,718	6,788	2,048	4,740	347
Wealth Management	-	-	-	-	14	14	-	-
Northern Ireland	1,281	508	773	227	1,448	613	835	104
Other	6	2	4	2	9	2	6	4
Total	**34,713**	**13,367**	**21,346**	**3,867**	**29,924**	**13,021**	**16,903**	**2,302**

The Group defines non-performing loans as stage 3 exposures as defined in IFRS 9.[3] However, for non-retail exposures with one or more non-performing loans, the entire amount of the customer's exposure is considered to be non-performing. For retail exposures, only impaired facilities are included in non-performing loans. The Group excludes exposures in stage 3 with no impairment charges or where the allowance account is considered immaterial to the gross exposure.

Annual Report 2019 includes detailed information about definitions, approaches, methods, etc., in respect of expected credit losses (specific and general credit risk adjustments), IFRS 9 staging, past due facilities, etc.

The declining trend in non-performing loans reversed in 2019 as a consequence of higher impairment levels. Reversals relating to legacy non-performing loans fell, while the exposure to non-performing loans rose at primarily C&I. This increase was driven by single names in the following industries: capital goods; shipping, oil and gas; construction and building materials; and retailing. Except for single names in these industries, the level of new non-performing loans remained moderate.

Gross non-performing loans (excluding Non-core)



[3] At 1 January 2018, the Group implemented the expected credit loss impairment model in IFRS 9. The impairment charge for expected credit losses depends on whether the credit risk has increased significantly since initial recognition and follows a three-stage model: 1) If the credit risk has not increased significantly, the exposure remains in stage 1 and the impairment charge equals the expected credit losses resulting from default events that are possible within the next 12 months. 2) If the credit risk has increased significantly, the loan is transferred to stage 2 and an impairment charge equal to the lifetime expected credit losses is recognised. 3) If the customer has defaulted on loan repayments or the loan is otherwise credit-impaired, it is transferred to stage 3 and the impairment charge continues to equal the lifetime expected credit losses, but with interest income being recognised in the net carrying amount.

Non-performing loans and impairment charges broken down by industry

(DKK millions)	End-2019 Gross NPL = a+b	End-2019 Expected credit loss b	End-2019 Net NPL exposure a	End-2019 Net NPL exposure, ex collateral	End-2018 Gross NPL = a+b	End-2018 Acc. individual impairment charges b	End-2018 Net NPL exposure a	End-2018 Net NPL exposure, ex collateral
Public institutions	1	-	1	1	5	4	1	1
Financials	338	263	75	-	237	237	-	-
Agriculture	3,452	1,708	1,744	412	3,622	1,897	1,725	382
Automotive	190	91	99	43	390	187	202	82
Capital goods	4,043	565	3,478	2,241	1,522	558	965	681
Commercial property	3,610	1,257	2,353	9	4,409	1,576	2,832	47
Construction and building materials	2,207	864	1,343	181	930	434	497	85
Consumer goods	886	441	446	34	573	277	296	99
Hotels, restaurants and leisure	145	81	64	12	196	117	78	11
Metals and mining	42	34	8	2	338	207	131	80
Other commercials	13	10	3	-	136	32	104	6
Pharma and medical devices	30	19	11	-	35	21	14	1
Private housing co-ops and non-profit associations	803	321	482	49	1,117	451	666	47
Pulp, paper and chemicals	368	119	249	78	222	89	134	44
Retailing	1,379	662	717	-	864	588	276	3
Services	664	402	262	50	952	523	429	-
Shipping, oil and gas	9,230	2,938	6,292	-	7,538	2,316	5,222	120
Social services	739	252	487	-	334	57	277	45
Telecom and media	220	110	109	32	159	91	68	15
Transportation	126	98	28	-	169	100	69	1
Utilities and infrastructure	59	34	25	12	220	131	89	76
Personal customers	6,167	3,095	3,072	714	5,954	3,130	2,824	477
Total	**34,713**	**13,367**	**21,346**	**3,867**	**29,924**	**13,021**	**16,903**	**2,302**

Benign economic conditions underpin the Group's approach to establishing work-out processes for large customers, including forbearance measures. In 2019, new concessions were concentrated on single names, including capital goods, retailing, and oil and gas customers. Forborne exposures generally saw an increase in credit quality, and customers started to perform again and to exit the probation period. Consequently, the underlying trend for forborne exposures is positive, as evidenced by the decrease in overall forbearance amounts since 2018. In the fourth quarter of 2019, the reported forbearance amounts increased from the levels in past quarters as a result of improvements in data quality. An uptick in the amount of non-performing forbearance exposures relates to the single names mentioned in the section on non-performing loans.

Exposures subject to forbearance

(DKK millions)	End-2019 Performing	End-2019 Non-performing	End-2018 Performing	End-2018 Non-performing
Active forbearance	8,161	9,341	9,143	8,828
Under probation	4,933	-	6,482	-
Total	**13,094**	**9,341**	**15,625**	**8,828**

3.2.3 Credit risk mitigation

The main method used by the Group to mitigate credit risk is to obtain collateral. The most important collateral types, measured by volume, are real property, vessels, aircraft and equipment. Personal customers' real property accounted for 53% of the total collateral base after haircuts at the end of 2019 (2018: 52%). For more information about haircuts, see section 3.1.7 above.

Collateral value by type (after haircuts)

At 31 December (DKK billions)	Total		Portion from											
			Banking DK		Banking Nordic		Corporates & Institutions		Wealth Management		Northern Ireland		Other	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Real property	1,322.7	1,282.1	828.6	817.4	432.1	406.6	26.6	27.5	-	-	34.8	30.3	0.6	0.3
- Personal	785.1	759.7	487.1	485.9	276.1	255.3	-	-	-	-	21.6	18.3	0.3	0.1
- Commercial	484.2	468.7	299.8	289.3	149.1	144.5	24.8	25.6	-	-	10.3	9.2	0.3	0.2
- Agricultural	53.4	53.7	41.7	42.2	7.0	6.7	1.8	1.9	-	-	2.9	2.8	-	-
Bank accounts	2.1	1.3	1.1	0.4	0.9	0.7	0.1	0.1	-	-	-	-	-	-
Custody accounts & securities	26.3	23.4	9.0	9.7	3.4	2.9	10.8	10.7	3.1	0.1	-	-	-	-
Vehicles	22.9	21.6	1.6	1.7	20.5	19.2	0.7	0.7	-	-	-	-	-	-
Equipment	23.8	22.3	3.1	3.2	15.8	15.1	1.5	1.2	-	-	3.5	2.7	-	-
Vessels and aircraft	29.6	28.9	1.7	1.6	2.6	2.4	25.2	24.9	-	--	-	-	-	-
Guarantees	14.8	12.4	1.9	2.2	7.2	6.5	5.8	3.7	-	--	-	-	-	-
Amounts due	4.7	4.5	-	-	4.0	3.9	0.2	0.2	-	--	0.5	0.5	-	-
Other assets	35.1	35.0	0.3	0.2	29.3	27.7	4.0	5.7	-	0.1	1.4	1.5	-	-
Total collateral	**1,481.9**	**1,431.6**	**847.3**	**836.4**	**515.8**	**484.9**	**74.9**	**74.7**	**3.1**	**0.3**	**40.2**	**35.1**	**0.6**	**0.3**

3.2.4 Trends in selected portfolios

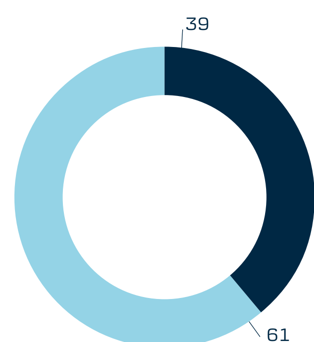
The sections below describe the trends in the credit quality of selected lending portfolios. These portfolios either have an elevated credit risk or represent a significant portion of the Group's total lending portfolio.

Personal customers

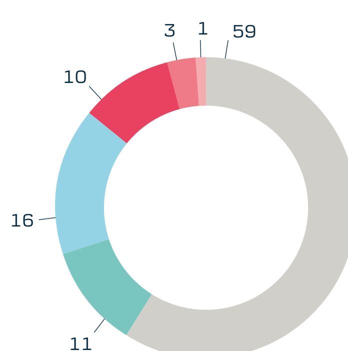
Measured by gross credit exposure, the personal customer portfolio is the Group's largest portfolio. At the end of 2019, gross credit exposure amounted to DKK 965 billion (2018: DKK 936 billion), with DKK 455 billion at Realkredit Danmark (2018: 458 billion) reflecting the Group's position as one of the leading Danish mortgage finance providers. The exposure to personal customers covers loans secured on customer assets, consumer loans and fully or partly secured credit facilities. Mortgage loans represent most of the exposure to personal customers at 86% (2018: 86%).

Personal customers

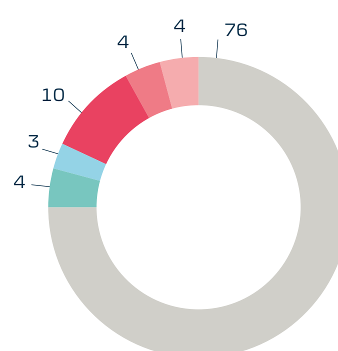
Gross credit exposure to personal customers as % of total lending portfolio



Gross credit exposure by country (%)



Expected credit loss by country (%)



■ Personal customers ■ The rest

■ Denmark ■ Sweden ■ Norway ■ Finland ■ Northern Ireland ■ Other

Overall, the personal customer portfolio increased by DKK 29 billion from the end of 2018 to the end of 2019. This increase was driven by continued growth in loans and loan commitments at Banking Nordic Norway.

Taking a selective approach to growth enables the Group to grow in the Nordic markets without increasing its overall risk level. The credit quality of new lending to the Group's partnership customers in the Nordic region is generally higher than for comparable portfolios.

In 2019, the credit quality of the personal customer portfolio continued to benefit from low interest rates and favourable macroeconomic conditions. Generally, increases in historically low interest rates could put pressure on customer affordability. Even though a stress test of the portfolio shows that customers with floating interest rates are exposed to changes in current interest rates, stress levels are highly acceptable and interest rate vulnerability is decreasing.

The Group works actively to recommend loans with a lower interest-rate sensitivity and has strengthened incentives for customers to choose mortgage products with amortisation. This has had a noticeable effect on interest rate sensitivity, with 70% of the portfolio now consisting of loans with an interest rate set for five years or more (up from 65% in 2018 and 62% in 2017). The share of new mortgages in Denmark originated as interest-only loans continues to decrease and is now around one third. Combined with a significant increase in the savings rates of Danish households since the financial crisis, this reduces the risk of losses and improves the financial stability of the households in question.

Developments in the personal customer portfolio

	Key figures					Non-performing loans		
(DKK millions)	Gross credit exposure	Expected credit loss	Write-offs	Impairment charges (bp)	Collateral (after haircuts)	Gross exposure	Share of total segment exposure (%)	Coverage ratio (%)
End-2018	936,321	5,987	876	-2	780,619	5,954	0.64	87
End-2019	964,884	6,008	500	2	807,057	6,167	0.64	81

Commercial property

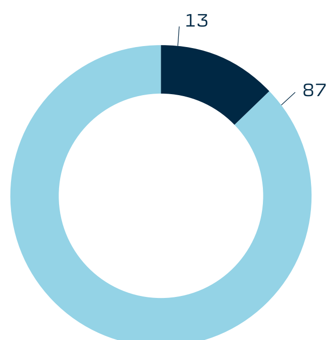
The commercial property portfolio consists primarily of secured property financing to owners of property let to third parties.

At the end of 2019, gross credit exposure amounted to DKK 318 billion. The allowance account for the portfolio, which amounted to DKK 2.2 billion, represented less than 1% of gross credit exposure.

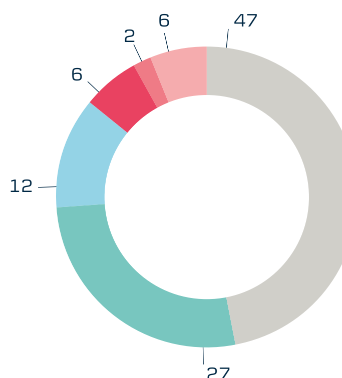
In 2019, the commercial property portfolio remained stable, while non-performing loans continued to decline as a result of solid underwriting standards and low interest rates, among other things. The Group continued to record few new impairment charges against exposures to commercial property companies in 2019. Credit quality measured by rating classification remained stable.

Commercial property

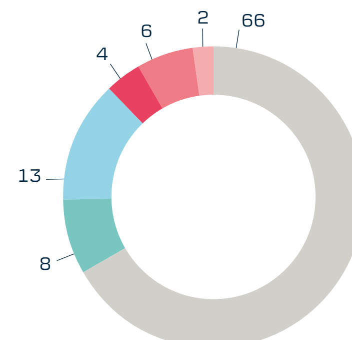
Gross credit exposure to commercial property as % of total lending portfolio



Gross credit exposure by country (%)



Expected credit loss by country (%)



■ Commercial property ■ The rest

■ Denmark ■ Sweden ■ Norway ■ Finland ■ Northern Ireland ■ Other

Developments in the commercial property portfolio

	Key figures					Non-performing loans		
(DKK millions)	Gross credit exposure	Expected credit loss	Write-offs	Impairment charges (bp)	Collateral (after haircuts)	Gross exposure	Share of total segment exposure	Coverage ratio (%)
End-2018	303,497	2,472	405	-9	247,972	4,409	1.5	97
End-2019	317,794	2,175	203	-4	248,011	3,610	1.1	99

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

Commercial property – net credit exposure by rating category

	PD scale (%)		Net credit exposure (DKK billions)		Net credit exposure (% accumulated)	
Rating category	Upper	Lower	End-2019	End-2018	End-2019	End-2018
1	0.00	0.01	0.1	0.3	-	-
2	0.01	0.03	2.5	5.4	1	2
3	0.03	0.06	9.0	8.8	4	5
4	0.06	0.14	59.0	100.0	22	38
5	0.14	0.31	131.3	93.0	64	69
6	0.31	0.63	71.7	58.3	87	88
7	0.63	1.90	32.9	25.8	97	97
8	1.90	7.98	3.8	3.7	98	98
9	7.98	25.70	0.8	0.5	99	98
10	25.70	99.99	3.7	3.9	100	100
11	100.00	100.00	0.8	1.3	100	100
Total			**315.6**	**301.0**	**100**	**100**

In 2019, the commercial property portfolio saw an overall increase in credit exposure that was driven by a DKK 13.4 billion rise in the residential segment in Denmark.

Commercial property by property type and geography

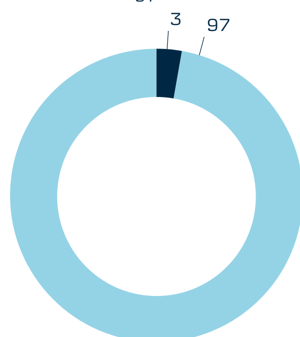
	End-2019			End-2018		
(DKK millions)	Gross credit exposure =a+b	Expected credit loss b	Net credit exposure a	Gross credit exposure =a+b	Expected credit loss b	Net credit exposure a
Non-residential	187,421	1,550	185,871	181,585	1,723	179,862
Denmark	85,519	1,029	84,490	86,131	1,188	84,943
Sweden	42,397	93	42,305	43,832	86	43,746
Norway	29,029	248	28,781	27,147	331	26,817
Finland	12,184	59	12,124	12,597	78	12,519
Northern Ireland	3,900	83	3,817	159	13	146
C&I etc.	14,392	37	14,355	11,719	27	11,691
Residential	130,374	625	129,749	121,912	749	121,163
Denmark	64,058	413	63,645	50,649	452	50,196
Sweden	42,061	86	41,974	43,621	68	43,552
Norway	10,019	43	9,976	9,141	43	9,098
Finland	7,966	38	7,929	7,563	11	7,552
Northern Ireland	1,427	38	1,389	5,344	164	5,179
C&I etc.	4,843	8	4,835	5,594	10	5,584
Total	**317,794**	**2,175**	**315,619**	**303,497**	**2,472**	**301,025**

Agriculture

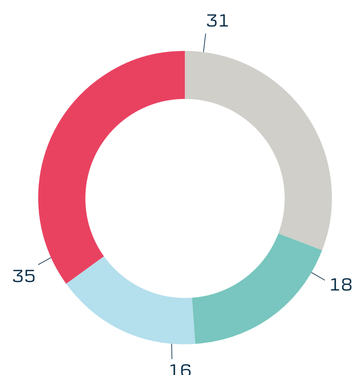
The agriculture portfolio includes customers within traditional agricultural segments, such as dairy products, pigs, cereals and other crops, as well as customers within related activities, such as the manufacture and wholesale distribution of feed and seed products. Exposure to agricultural customers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

Agriculture

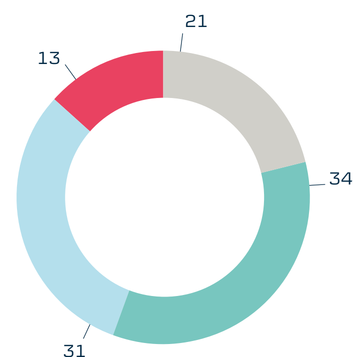
Gross credit exposure to agriculture as % of total lending portfolio



Gross credit exposure by segment (%)



Expected credit loss by segment (%)



At the end of 2019, gross credit exposure amounted to DKK 74.0 billion, down from DKK 74.2 billion at the end of 2018. Banking DK accounts for 69% of gross exposure, of which Realkredit Denmark has a share above 82%. At Realkredit Danmark, the LTV limit at origination is 60%. Credit quality was weakest among pig producers and dairy farmers.

Developments in the agriculture portfolio

	Key figures					Non-performing loans		
(DKK millions)	Gross credit exposure	Expected credit loss	Write-offs	Impairment charges (bp)	Collateral (after haircuts)	Gross exposure	Share of total segment exposure (%)	Coverage ratio (%)
End-2018	74,238	3,432	426	21	57,081	3,622	4.9	83
End-2019	74,043	2,915	336	-37	56,961	3,452	4.7	81

As a consequence of the prevailing high pork prices and the 2018 drought being less severe than expected, the Group reduced management overlays against pork producers in 2019. This led to a decline in total expected credit losses and an improved credit quality as measured by rating classification (see the table below).

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

Agriculture portfolio – net credit exposure by rating category

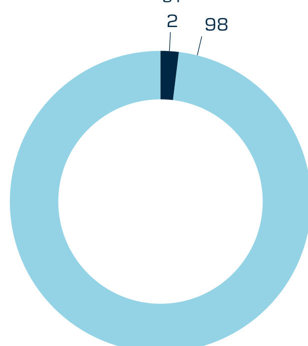
	PD scale (%)		Net credit exposure (DKK billions)		Net credit exposure (% accumulated)	
Rating category	Upper	Lower	End-2019	End-2018	End-2019	End-2018
1	0.00	0.01	-	-	-	-
2	0.01	0.03	0.4	0.3	1	-
3	0.03	0.06	0.9	1.2	2	2
4	0.06	0.14	5.3	5.1	9	9
5	0.14	0.31	8.5	9.8	21	23
6	0.31	0.63	22.9	19.0	53	50
7	0.63	1.90	20.1	21.3	82	80
8	1.90	7.98	7.1	7.6	92	91
9	7.98	25.70	0.8	0.9	93	92
10	25.70	99.99	2.7	2.7	97	96
11	100.00	100.00	2.4	3.0	100	100
Total			71.1	70.8	100	100

Shipping

The shipping portfolio includes customers in standard segments, such as container, tank, bulk, gas freight and offshore-related activities. Exposure to shipping customers relates primarily to vessel financing secured by vessel or fleet mortgages.

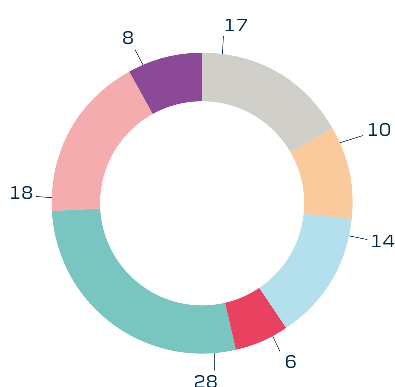
Shipping

Gross credit exposure to shipping as % of total lending portfolio

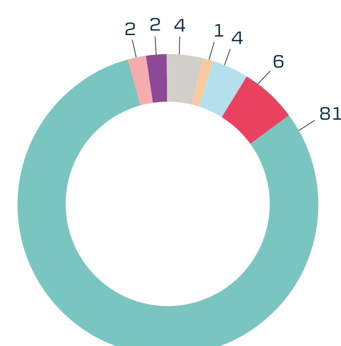


Shipping The rest

Gross credit exposure by segment (%)



Expected credit loss by segment (%)



Chemical tankers and LNG/LPG Container vessels Crude and product tankers Dry bulk and multipurpose Offshore Ro-Ro, car carrier and cruise/ferry Other shipping

At the end of 2019, gross credit exposure amounted to DKK 41.6 billion, slightly up from DKK 39.8 billion at the end of 2018.

Developments in the shipping portfolio

	Key figures					Non-performing loans		
(DKK millions)	Gross credit exposure	Expected credit loss	Write-offs	Impairment charges (bp)	Collateral (after haircuts)	Gross exposure	Share of total segment exposure (%)	Coverage ratio (%)
End-2018	39,831	2,004	18	125	25,925	5,193	13.0	100
End-2019	41,554	2,267	499	189	29,083	6,159	14.8	100

In 2019, impairment charges against exposures to non-offshore shipping customers were generally low and characterised by the continued work-out of old cases. The offshore shipping industry still has substantial overcapacity despite a continued uptick in investment levels from a low level driving higher utilisation in 2019. Therefore, some restructured exposures will need to go through a second round of restructuring. In 2019, this resulted in the additional booking of impairment charges against non-performing loans. Most customers affected have now been transferred to stage 3, with relatively insignificant expected credit losses remaining in stage 2.

In addition to the Group's exposure to the offshore shipping segment, direct exposure to oil-related industries (mainly oil services and oil majors) amounted to DKK 12.6 billion at the end of 2019. The credit quality of oil majors remains strong thanks to the recovery in oil prices and significant cost-cutting efforts in recent years. The Group's shipping customers and most of the direct oil-related exposures are managed by specialist teams for customer relationships and credit risk management.

The credit quality of the shipping portfolio weakened somewhat over the period as a result of downgrades of single names in the offshore and car carrier segments.

Shipping portfolio – net credit exposure by rating category

	PD scale (%)		Net credit exposure (DKK billions)		Net credit exposure (% accumulated)	
Rating category	Upper	Lower	End-2019	End-2018	End-2019	End-2018
1	0.00	0.01	-	-	-	-
2	0.01	0.03	-	-	-	-
3	0.03	0.06	0.5	0.2	1	-
4	0.06	0.14	3.4	2.7	10	8
5	0.14	0.31	9.9	11.5	35	38
6	0.31	0.63	8.7	8.6	57	61
7	0.63	1.90	9.4	7.9	81	82
8	1.90	7.98	0.1	1.3	81	85
9	7.98	25.70	0.1	0.4	82	86
10	25.70	99.99	5.4	3.1	95	95
11	100.00	100.00	1.8	2.1	100	100
Total			39.3	37.8	100	100

3.3 IRB framework and model development

In 2008, the Danish Financial Supervisory Authority (the Danish FSA) approved the Group's application to use the advanced internal ratings-based (A-IRB) approach for calculating the total risk exposure amount (REA). At the end of December 2019, the Group's exposure at default (EAD) was DKK 2,919 billion, with 73% calculated according to the advanced IRB approach, 2% according to the foundation IRB approach (F-IRB) and 25% according to the standardised approach.

The increase in the EAD percentage for the advanced IRB approach from 2018 to 2019 was driven primarily by an increase in corporate exposures and by a decrease in the EAD percentage for the standardised approach as a result of the removal of the Baltic exposure from the portfolio.

EAD broken down by credit risk measurement approach

Measurement approach	2019	2018	2017
Advanced IRB (%)	72.7	71.6	66.9
Foundation IRB (%)	1.9	2.2	2.0
Standardised (%)	25.4	26.2	31.1

3.3.1 Organisation of the IRB framework

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

- probability of default (PD) model development (for scoring and rating models, respectively)
- loss given default (LGD) and conversion factor(CF) model development
- maintenance of data availability and quality
- rating of large customers
- credit REA calculations

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

3.3.2 IRB exemptions

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

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

3.3.3 Models in the IRB framework

The Group classifies customers by means of PD models and uses LGD models to estimate the loss on facilities in case of default. The CF models express a conservative estimate of EAD.

The Group uses the PD models to assess the probability of default of customers in various segments. Corporate and financial customers[4] are classified by rating models, while small business customers and personal customers are classified by scoring models. Rating models rely in particular on financial data, but a rating officer may choose to include other information, including qualitative data, in the final rating. In contrast, behavioural data are, to a wider extent, used as input in scoring models, and scoring models are therefore updated at a higher frequency than rating models. Most data originate from internal sources, but data are sometimes acquired from external vendors. This includes external credit scores used as model input in some models. No models depend exclusively on external credit scores. In general, the PD model framework generates highly conservative estimates – a significant factor contributing to this result is the benign economic environment seen in recent years.

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

IRB PD models by exposure class

Exposure class		Classification process	Key model characteristics
Central governments & central banks		Permanent exemption from IRB	Permanent exemption from IRB
Institutions		1 rating model (hybrid)	Bank
Corporates excluding SMEs		1 scoring and 13 rating models (1 hybrid)	Several sub-segments with different characteristics; e.g. models differentiate between agriculture, non-profit customers, large corporates, insurance and property rental
Corporate SMEs		2 rating models	Sole proprietorships are handled separately from other corporate SME customers
Retail	Retail SMEs	7 scoring models	Country-specific models Specific models for new customers
	Immovable property	6 scoring models	
	Other retail	8 scoring models	
Equities		Permanent exemption from IRB	Permanent exemption from IRB

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

The Group's LGD models are primarily statistically driven, but parameters for low-default portfolios rely, to a high degree, on benchmarks, external data and expert opinions. CF models are statistically driven for the credit cards and credits portfolios, while other portfolios are based on expert opinions and relevant input. For regulatory purposes, downturn LGDs and CFs are used, and they include regulatory floors and additional prudential margins. The downturn LGD parameter incorporates ongoing adjustments from collateral movements to ensure a stable level that reflects downturn conditions.

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

[4] Customers with facilities exceeding DKK 2 million and customer groups with facilities exceeding DKK 10 million.

3.3.4 IRB framework monitoring

Group Risk Management reviews and follows up on compliance with the IRB minimum requirements in CRR/CRD IV.

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

Reports on all changes and ongoing activities in relation to the IRB framework are prepared and shared with the committee structure. Furthermore, the Board of Directors discusses and agrees on the IRB framework status and plans. Several independent units also monitor the IRB framework, as described below.

Validation of credit risk models

The Group has an internal independent framework for validating models.[5] This framework comprises a set of processes and activities intended to verify that the models perform as expected. All new models are subject to initial validation, while models in the production environment are validated at least annually, independently of the business units and of the team that develops the models. Furthermore, periodic independent external validation of significant models takes place, and this process is overseen by the Board of Directors' Risk Committee.

The validation is the main component for identifying model risk in the IRB framework. As part of the validation, models are assessed for purposes other than the IRB framework, such as the calculation of expected credit losses and the application for risk appetite calculations.

Model Risk Management owns the validation process and methodology. To ensure that the units remain independent, reporting and escalation take place through the committee structure and the CRO.

The validation process plays an important role for the adjustment and development of the models. The current validation scope encompasses PD models for the rating and scoring of customers as well as LGD, CF and collateral value models. The validation scope also includes the framework across models, such as TTC calibration and downturn adjustment. Validation includes both a quantitative and a qualitative aspect.

Changes to the IRB framework and the IRB audit process

The Group has a governance structure for all changes made to the IRB framework to ensure the right level of attention. Depending on the materiality of the individual changes, a minimum level of evaluation, challenge and signoff is required from the relevant committees and the oversight and risk assurance units, that is, Model Risk Management and Group Internal Audit. Internal approval lies with the unit appointed as the model owner.

Group Internal Audit, the Group's third line of defence, performs the independent audit of the IRB framework. The audit scope is a risk- and control-based approach set out by Group Internal Audit. Group Internal Audit reports directly to the Board of Directors' Audit Committee and to the Board of Directors.

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

3.4 Counterparty credit risk management

Counterparty credit risk arises as a combination of credit risk (a deterioration in the creditworthiness of a counterparty) and market risk (the potential value of derivatives contracts). The financial loss will be the current exposure, that is, the cost of replacing an existing transaction by a new transaction with similar characteristics but at current market prices while taking into account the value of mitigating collateral.

Danske Bank Group takes on counterparty credit risk when it enters into derivatives transactions (interest rate, foreign exchange, equity and credit contracts) and securities-financing transactions (SFTs). This latter group of transactions includes repo agreements and securities lending.

The potential future value of a derivatives transaction fluctuates since the market value is related to the underlying market factors and may thus shift between positive and negative levels. The Group mitigates counterparty credit risk through clearing, close-out netting agreements and collateral agreements. The Group incurs a financial loss if a counterparty defaults and the market value of the derivatives transactions is not covered after netting and the realisation of collateral.

Counterparty credit risk is managed by means of potential future exposure (PFE) lines on a set of maturity buckets. Prior to trading, PFE lines are approved by the relevant credit unit.

Wrong-way risk is the risk that arises when credit exposure to a counterparty increases while the counterparty's creditworthiness deteriorates. Specific wrong-way risk is a subtype of risk that arises because there is a legal connection between a counterparty and the issuer of the underlying instruments involved in a derivatives or securities-financing transaction.

[5] A model refers to a quantitative method, system or approach that applies statistical, economic, financial or mathematical theories, techniques and assumptions to process input data into quantitative estimates.

The Group has set limitations on transactions entailing specific wrong-way risk. The limitations cover the product range, the counterparty rating and the rating of the underlying securities.

The Group manages its exposure to market risk on fair value adjustments (xVA), including credit value adjustments (CVA), under separate limits in the xVA framework as described in section 4, Market risk.

3.4.1 Governance and responsibilities

As part of the overall credit risk governance described in section 3.1.1, the Group's Counterparty Risk Mitigation Directive approved by the Group All Risk Committee sets the requirements for counterparty credit risk management.

Group Risk Management (second line of defence) is responsible for consolidated counterparty credit risk management, risk modelling and reporting. Market & Liquidity Risk is responsible for developing counterparty credit risk exposure models, while an independent risk model validation team outside Market & Liquidity Risk validates the models. Local credit departments (first line of defence) are in charge of day-to-day risk management, which involves assigning specific credit lines for counterparty credit risk to the individual counterparties.

3.4.2 Methodologies and models

The Group uses a range of measures to capture counterparty credit risk, including current exposure, PFE and exposure at default (EAD).

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

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

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

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

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

3.4.3 Monitoring and reporting

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

The internal simulation model is subject to quarterly backtesting of the underlying risk factors and resulting exposures. It is also subject to an annual validation performed by an independent validation team.

3.4.4 Data and systems

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

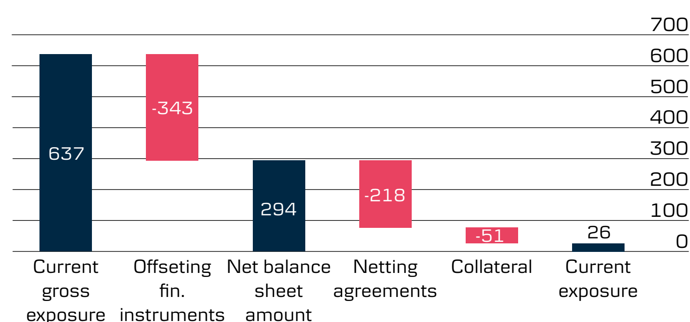
Internal management and monitoring of counterparty credit risk are performed in the Group's line system. The system covers all aspects of the internal counterparty credit risk management process, including the assignment of lines, monitoring and control of line utilisations, registration of master agreements,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

3.5 Counterparty credit risk profile

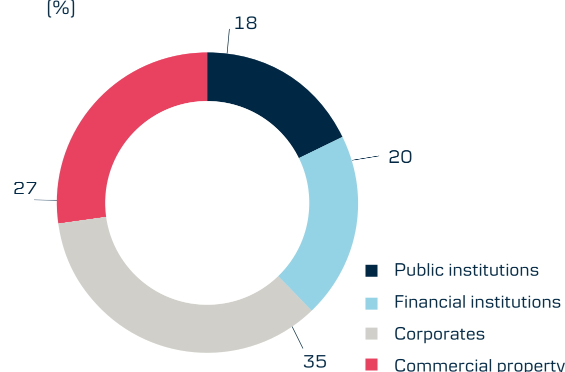
Exposures were higher in December 2019 than at the end of 2018. Current gross exposure is the total of all positive market values from transactions made before balance-sheet netting (netting effect) and collateral reduction (collateral effect). It is equivalent to the total amount of derivatives with positive fair value on the balance sheet. At the end of December 2019, the Group's current gross exposure to derivatives was DKK 637 billion (2018: DKK 383 billion). When netting effects and collateral received are taken into account, the current exposure to derivatives was DKK 26 billion in 2019 (2018: DKK 26 billion).

Counterparty credit risk, current exposure

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



Breakdown of current exposure by segment
(%)



In 2019, the Group cleared around 60% of the total notional amount of derivatives transactions through central clearing counterparties and used collateral agreements to support around 96% of non-cleared transactions.

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

Current gross exposure and current exposure after netting and collateral

	2019			2018		
At 31 December (DKK millions)	Total	Derivatives	SFTs	Total	Derivatives	SFTs
Current gross exposure	644,338	637,073	7,265	389,986	383,321	6,665
Current exposure after netting	81,391	76,361	5,030	73,687	68,636	5,051
Current exposure after netting and collateral	29,738	25,631	4,107	31,240	26,448	4,792

Note: Current exposure figures for SFTs include both assets (reverse repo) and liabilities (repo). Furthermore, the current gross exposure for SFTs is net of the underlying securities. Consequently, the figures are not directly comparable with the exposure figures shown in Annual Report 2019 and in section 3.2 of this report.

At the end of December 2019, some 73% of the Group's collateral agreement holdings consisted of cash. The remainder consisted mainly of Danish mortgage bonds and government bonds issued by Denmark, France and Germany.

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

Current exposure by rating category

	2019			2018		
At 31 December (DKK millions)	Total	Derivatives	SFTs	Total	Derivatives	SFTs
1	6,235	5,230	1,005	4,416	4,322	93
2	4,218	2,375	1,843	5,132	4,898	234
3	4,434	3,631	804	5,103	4,385	718
4	5,031	4,601	430	6,593	6,155	438
5	7,012	7,001	11	5,910	4,248	1,662
6	1,591	1,576	15	3,051	1,593	1,458
7	865	865	-	744	563	181
8	98	98	-	128	128	-
9	21	21	-	17	10	8
10	175	175	-	79	79	-
11	60	60	-	67	67	-
Total	**29,738**	**25,631**	**4,107**	**31,240**	**26,448**	**4,792**

At the end of December 2019, the credit quality of the Group's counterparty credit risk remained strong with around 91% of the exposure relating to counterparties with a classification comparable to investment grade.

Market risk

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4.

4.1 Market risk management

Market risk is the risk of losses or gains caused by changes in the market values of the Group's financial assets, liabilities and off-balance-sheet items resulting from changes in market prices or rates. Market risk affects the Group's financial statements through the valuation of on-balance-sheet and off-balance-sheet items: some of the Group's financial instruments, assets and liabilities are valued on the basis of market prices, while others are valued on the basis of market prices and valuation models developed by the Group. In addition, net interest income generated through the non-trading portfolio will be affected by the level of interest rates.

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

The Group manages its market risk by means of three separate frameworks for the following areas:

- Trading-related activities at Corporates & Institutions
- Fair value adjustments (xVA) at Corporates & Institutions
- Non-trading portfolio at Group Treasury

The Group manages the market risk associated with its trading activities in the financial markets. In particular, the Group hedges the market risk incurred from market-making activities and client flows by taking positions in financial instruments, assets and liabilities that offset this market risk. In addition, the Group uses financial instruments to hedge the fair value adjustments (xVA) in relation to derivatives trading.

Group Treasury manages interest rate risks and other market risks associated with the assets and liabilities of the non-trading portfolio. Group Treasury also manages risks associated with the Group's defined benefit pension plans.

The market risk at Danica Pension is managed separately. For more detailed information, see section 6, Insurance and pension risk.

4.1.1 Governance and responsibilities

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

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

Market & Liquidity Risk (second line of defence) within Group Risk Management owns the market risk framework and is in charge of market risk oversight and control of the first-line-of-defence units. Market & Liquidity Risk is accountable for developing and maintaining the Market Risk Policy, Market Risk Instructions, the market risk appetite and the market risk framework.

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

4.1.2 Market risk appetite

The Group operates with a market risk appetite for its trading-related activities. The market risk appetite determines how much the Group is prepared to lose on its trading-related market risk exposure over a period of one year in a severely stressed market environment. The risk appetite is based on the Group's business strategy, the expected future market environment as well as the expected earnings. The market risk appetite for trading-related activities is approved by the Board of Directors and reassessed at least once a year. In addition, the Board of Directors has defined a risk mandate that allows the Group's trading units to take on own market risk positions in keeping with the above-mentioned risk appetite.

The Group's exposure to the risk on fair value adjustments is managed under separate limits for changes in CDS spreads and interest rates supplemented by a zero appetite for exposure to foreign exchange rate changes. Such limits are based on an xVA risk appetite that expresses the maximium expected net value adjustment in a severely stressed environment arisen from risk factors that cannot be hedged or which the Group has deliberately chosen not to hedge.

The Group's exposure to market risks in the non-trading portfolio is managed under selected limits and operational targets that govern and control the market risk on these activities in relation to specific risk appetite, capital, liquidity, operational and earnings objectives.

4.1.3 Limit framework

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

1. Board limits
2. All Risk Committee limits
3. Detailed operational limits

Board limits are set by the Board of Directors in the Market Risk Instructions. This document defines overall limits for material risk factors. The overall limits are supplemented by Value-at-Risk (VaR) and Stressed Value-at-Risk (SVaR) limits for trading-related market risk. The Group All Risk Committee delegates the Board limits to business units and assigns additional limits for less significant risk factors. Detailed operational limits for trading-related market risk are set at business unit and trading section levels for relevant risk categories and metrics. The operational limit structure is sufficiently granular to facilitate effective control of market risk and to provide an overview and understanding of activities undertaken by the various units under the three distinct market risk frameworks.

4.1.4 Risk identification and assessment

The Group markets, trades and takes positions in products entailing a variety of market risk components. Most of the Group's market risks involve relatively simple products. The Group does not take on risk exposure to complex securitisation instruments for which it cannot measure and monitor the embedded market risks.

New initiatives and products are systematically reviewed in relation to the current product and market risk models. New products and business proposals are assessed in relation to current risk management practices and IT systems.

Furthermore, the Group may identify a need to take into account new risk factors through a review of its strategy. If the Group wants to expand its business into specific products or instruments, there may be a need for additional metrics and limits.

4.1.5 Monitoring and reporting

The Group carries out market risk controlling and reporting on a daily basis. The controlling process involves continuous intraday monitoring of limit utilisations with a full portfolio update every 30 minutes. The monitoring system is linked directly to front-office trading systems and automatically flags any limit excess. The business units and trading sections must comply with limits at all times. If a limit is breached, the unit responsible must document the cause and submit an action plan to rectify the situation. All limit breaches are reported to the relevant authority within the limit structure.

The Group produces a range of internal market risk reports and provides input to other internal and external reports in which market risk monitoring is presented.

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

4.1.6 Portfolio analysis and stress testing

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

On a monthly basis, the Group analyses the relationship between market risk and income for the trading sections at Corporates & Institutions. The market risk stress testing programme is designed to underpin prudent market risk management. Efforts are made to ensure that the net effect under various stressed conditions is taken into account in the risk assessment and monitoring processes.

The purpose of market risk stress testing is to

- assess the adequacy of the Group's financial resources for periods of severe stress and develop market-risk-related contingency plans for the Group if the need arises
- promote risk identification and add further insight into the need for adjusting existing or adding new limits
- provide a supplement to the ongoing quality assurance for market risk management practices

The complexity of the methodologies ranges from simple sensitivity analyses to complex scenario stress testing proportionally suited to the purpose of the stress test.

4.2 Methodologies and models

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

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

4.2.1 Value-at-Risk

The current internal market risk model was approved by the Danish Financial Supervisory Authority (the Danish FSA) in 2007 and has since then been used for the calculation of regulatory capital for Danske Bank Group and Danske Bank A/S. The model covers interest rate risk, equity market risk and exchange rate risk. At the end of 2011, the model was approved to cover interest rate basis risk, interest rate volatility risk and inflation risk. In 2015, the model was further approved to include bond-specific risk and equity-specific risk. At the same time, the Group's incremental risk model (see section 4.2.2) was included in the framework.

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

In the day-to-day risk management of trading-related positions, the internal VaR model estimates the maximum potential loss from changes in market risk factors assuming unchanged positions for one day.

In general, a VaR model estimates a portfolio's aggregate market risk by incorporating a range of risk factors and assets. As a result, the VaR measure takes portfolio diversification or hedging activities into account. VaR has well-known limitations, and the Group has a comprehensive stress testing framework in place to mitigate these limitations.

Value-at-Risk model

Value-at-Risk	Risk monitoring VaR limit	Capital requirement VaR	Capital requirement Stressed VaR	Backtesting
Percentile	95	99	99	99
Holding period	1 day	10 days	10 days	1 day
Historical data used	2 years	2 years	1 year	1 year
Period	Recent	Recent	1-year period of significant financial stress relevant to the the Group's portfolio	Recent

All figures are calculated and reported internally on a daily basis. Figures are calculated using full revaluations in all their details by using the front-office pricing models.

The VaR used for risk monitoring and capital requirement calculations is based on 2-year sliding historical data, and each calculation is based on 1,000 scenarios using bootstrapping of 1-day returns. Scenarios are time-weighted – 70% of all scenarios are based on the most recent 1-year period.

Risk-factor returns are calculated as absolute returns for spreads and volatilities and as proportional returns for equities and foreign exchange. A mixed approach is used for interest rates.

Stressed VaR is calculated using a holding period and historical data from a continued 12-month period of significant financial stress relevant to the Group's portfolio. Scenarios are equally weighted. A structured approach is used for identifying the historical period representing a significant stress on the current portfolios. The historical period is identified by running the full VaR model over a comprehensive historical period to identify the 12-month period since 2008 that produces the highest VaR for the current portfolio. On this basis, the periods with the highest level of stress are identified and analysed in more detail in order to validate the period to be used for calculating stressed VaR. For most of 2019, stressed VaR was calculated on the basis of the period from September 2008 to September 2009.

Backtesting of the internal VaR model

Regulatory backtesting is conducted on a daily basis to document the performance of the internal VaR model. The backtesting procedure compares 1-day VaR calculated on trading book positions with actual and hypothetical P/L results.

Definition of actual and hypothetical profit and loss

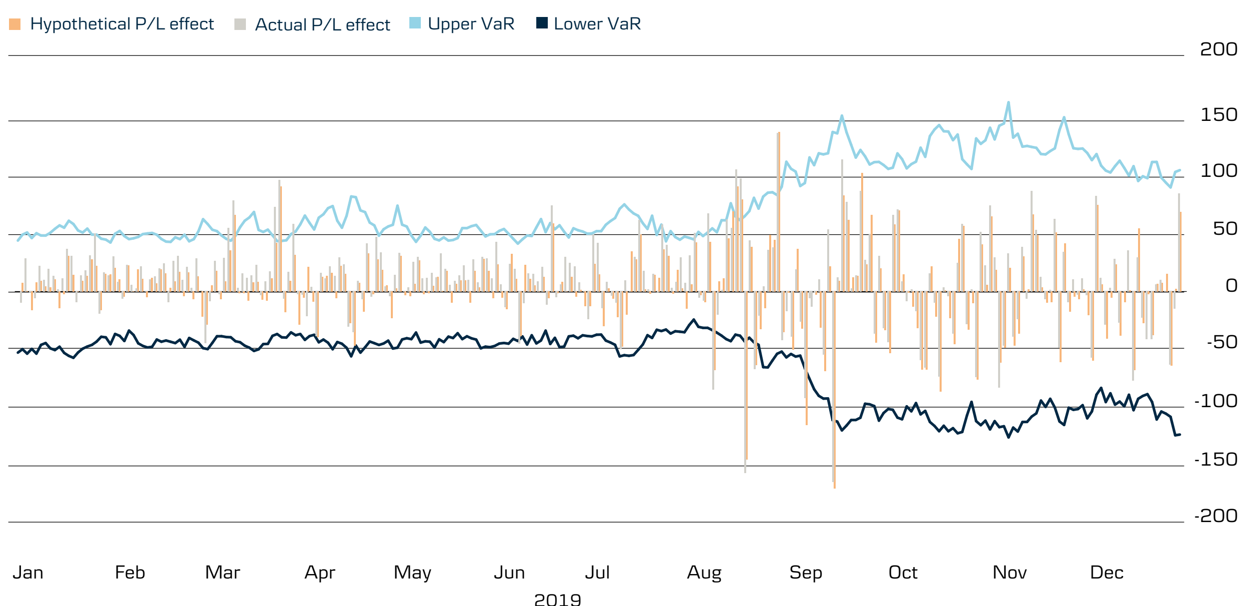
Actual P/L is defined as the loss or gain from actual changes in the market value of the trading book when daily closing values are compared with the subsequent business day's closing values (that is, intraday trades on the subsequent business day are included).

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

If the hypothetical or actual loss exceeds the predicted possible loss (VaR), an exception has occurred. Since the VaR figures used for backtesting are based on a confidence level of 99% (as in the calculation of regulatory capital), the expected number of exceptions per year is two to three. Backtesting results for 2019 are shown in the chart below.

Backtest results and P/L effect

(DKK millions)



The backtesting of the internal VaR model showed six exceptions in hypothetical P/L and seven exceptions in actual P/L in 2019. One exception occurred on 2 April and one on 7 June, while five exceptions occurred between 7 August and 12 September, all following large movements in interest rates.

4.2.2 Incremental risk charge (IRC)

IRC is an additional capital charge to be added to the multiplier-adjusted VaR and stressed VaR capital charges. No diversification effects between capital charges are thus taken into account.

The IRC model captures rating migration and default risk on a one-year horizon for all instruments subject to specific interest rate risk: bonds, mortgage-backed securities, bond futures and options, mortgage bond futures and credit default swaps (CDS).

The model estimates a P/L distribution through Monte Carlo simulations of credit events for all issuers based on transition matrices. A total of 200,000 scenarios were used.

The correlation between issuers is captured by using a one-factor Gaussian copula. The correlation parameter is estimated quarterly on the basis of pairwise correlations of bond and CDS spread time series.

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

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

4.2.3 Regulatory capital for market risk

The Group uses the internal VaR model to measure the risk exposure amount for market risk in its trading book. The Group Asset & Liability Committee (Group ALCO) oversees the trading book and approves the Regulatory Trading Book Instructions, thus ensuring that market risk positions at Danske Bank Group are labelled and handled either as regulatory trading book positions or as regulatory banking book positions in accordance with the regulatory requirements. The trading book covers trading-related market risk at Corporates & Institutions and hedging in relation to fair value adjustments of interest rate risk and the part of the CDS spread hedges not included in the risk exposure amount calculations for credit value adjustment (CVA) risk (see below).

The Group also uses the internal VaR model for calculating the stressed VaR capital charge. Incremental risks, such as default and rating migration risks on bond issuers and CDS names, are estimated in the incremental risk model.

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

The risk exposure amount for CVA risk is measured mainly using the internal VaR model based on exposure calculations from the counterparty risk exposure model and allocated CDS spread hedges. The risk exposure amount for CVA risk from the Group's minor exposures to transactions not included in the counterparty credit risk exposure model is calculated according to the standardised approach.

4.2.4 Model validation

The Group conducts a variety of activities to maintain well-performing models in the market risk area. The activities can be divided into the validation of valuation and behavioural models used in day-to-day risk management and validation of internal models used for calculating regulatory capital.

Market & Liquidity Risk is responsible for validating valuation and behavioural models independently of the development process. A model must be validated before the trading unit can trade in any new type of product that is priced or risk-managed according to that model. The purpose of the validation process is to evaluate, independently of the business unit, whether the stability and quality of the model are sufficient to enable the Group to price and risk-manage the financial products in question in a satisfactory manner.

To supplement the initial validation of valuation and behavioural models, the Group has established an ongoing monitoring process in which the crossing of specific thresholds (such as indications of a deterioration in model quality or an increase in the magnitude of risk involved) calls for additional validation activities.

An independent validation unit carries out the validation of internal models used for the regulatory capital calculations, including the validation of material changes to existing internal models and recurring validations of major model assumptions. The standards for these validations are set forth in the Group's Model Risk Policy, which is detailed and complemented by relevant Instructions.

In addition, the Group conducts a number of activities to monitor the internal VaR model on an ongoing basis. These activities include an annual review of the model in accordance with regulatory requirements, quarterly risk factor reviews and daily backtesting of the model. The quarterly risk factor reviews include an assessment of the materiality of risk factors that are not included in the model. Currently, the internal VaR model for risk monitoring contains all significant risk factors.

4.3 Data and systems

IT systems pertaining to market risk are highly integrated within the Group. Traders and customers book trades directly in the relevant trade-entry systems. The trade-entry systems are connected to the operational systems and enriched with additional static, market and reference data. The operational systems feed both risk and finance systems. The Group performs an extensive set of regular reconciliations across the system portfolio.

4.3.1 Systems integration

The Group's front-office trade-entry systems are designed to capture all trade types used by the Group. Only necessary trade-related data are entered into the trade-entry systems. Product, customer and other related static data are maintained in the Group's Master Files. Trading data are automatically fed into the Group's operational layers of other related systems (straight-through processing). Since all systems and their processes have been designed to support straight-through processing, only exceptions need to be handled manually.

In addition, trades from systems configured for straight-through processing are regularly monitored in order to identify trades that require manual intervention. Monitoring is part of the back and middle office processes, and regular reports are sent to a broad selection of stakeholders across the Group. Extensive reconciliation between the Group's internal systems and external accounts is performed on a regular basis.

4.4 Market risk profile

4.4.1 Trading-related market risk at Corporates & Institutions

The activities that involve market risk in the trading portfolio derive mainly from the Group's initiatives to provide investment and hedging products to the full range of customers. In particular, principal risk-taking is a key element in serving the Group's largest corporate and institutional clients. The Group operates mainly in the Nordic markets and selected international markets in the eurozone.

The strategic focus is to provide global fixed income, currency and capital market products to institutional and corporate clients in the Nordic countries and to offer local Nordic products to global customers. Principal risk-taking takes place mainly in fixed income products. Advanced derivatives are traded mainly with professional customers, while simple products are distributed to retail and commercial customers.

The Group's business activities involve a natural flow of various currencies. These are primarily currencies related to the Group's domestic markets in the Nordic region. They include all major currencies in support of our Nordic customers and, to a lesser extent, other currencies requested by customers in these areas. However, taking on foreign exchange risk is limited relative to the market risk derived from interest rates.

For trading and risk-taking in equity-related assets, the objective is to have a leading market position in the Nordic equity market. Taking on equity market risk is limited relative to the market risk derived from interest rates.

The table below lists the Value-at-Risk for trading-related activities at Corporates & Institutions.

Value-at-risk for trading-related activities at Corporates & Institutions

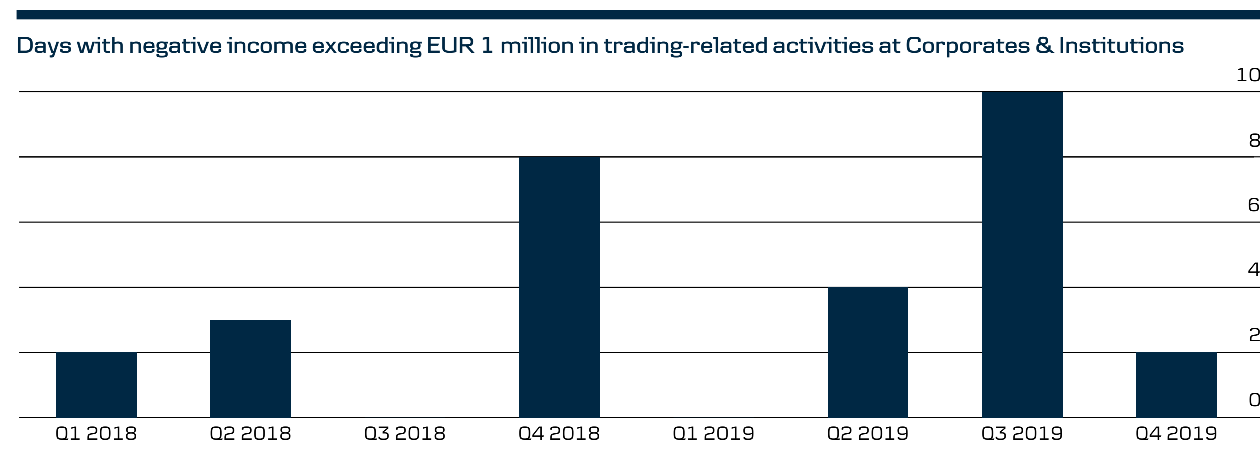
	2019		2018	
(DKK millions)	Average	31 December	Average	31 December
Interest rate risk	23	25	27	23
Bond spread risk	17	13	22	19
Equity risk	5	12	5	3
Foreign exchange risk	2	2	3	2
Diversification effects	-21	-26	-28	-17
Total VaR	**26**	**26**	**30**	**30**

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

The Group continued to maintain a low risk in its trading operations in 2019, with average trading-related market risk decreasing from 30 million in 2018 to DKK 26 million in 2019. Throughout the period, the risk related chiefly to fixed income products, which gave rise to interest rate risk and bond spread risk. Because of substantial diversification, however, the two main risk factors hedged each other well.

Both average interest rate risk and average bond spread risk decreased in 2019 from 2018 levels. In addition, equity risk and foreign exchange risk were more or less unchanged.

Days with negative income exceeding EUR 1 million in trading-related activities at Corporates & Institutions



Although the risk exposure level remained low, day-to-day income from trading-related activities at Corporates & Institutions showed increased fluctuations during most of 2019 (especially in August) as a result of markedly higher interest rate volatility. The number of days with losses exceeding EUR 1 million in 2019 was somewhat higher than in 2018, mainly because of the high level seen in the third quarter of 2019.

4.4.2 Market risk in relation to fair value adjustments

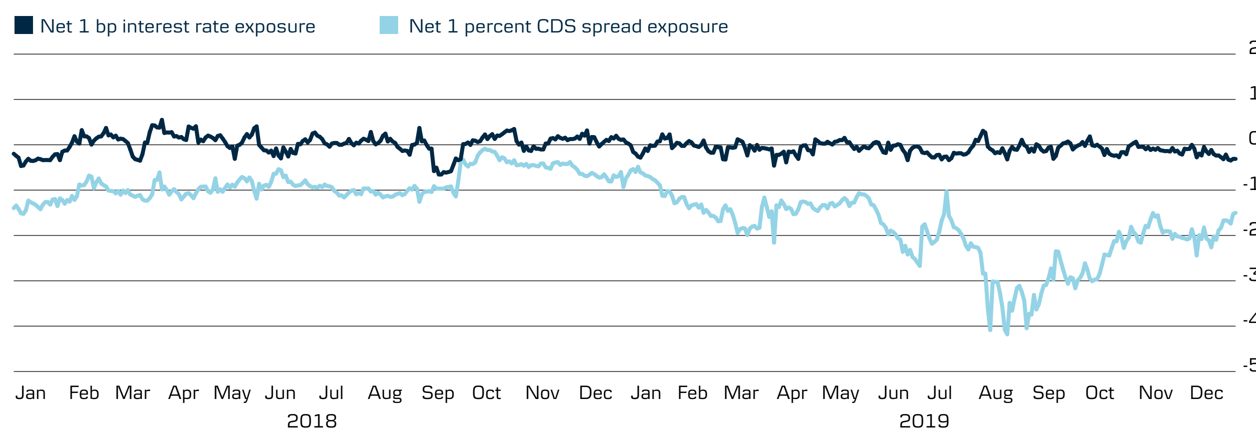
The Group's fair value adjustments (xVA) cover funding value adjustments (FVA), credit value adjustments (CVA) and debt value adjustments (DVA). The Group applies a market-implied approach that is in line with industry best practice. When managing xVA, the Group focuses on managing economic risk rather than regulatory capital. This means that the Group recognises market risk on all counterparties and not just counterparties in scope for the CVA risk charge. The Group's strategy is to continue developing the xVA model so that it remains in line with best market practice.

For the purposes of reducing P/L volatility caused by xVA, the Group pursues a strategy of hedging the most significant risk in the financial markets in order to maintain income stability and predictability under this framework. In practice, the Group buys a hedge of offsetting interest rate swaps and CDS contracts in the financial markets. The Group hedges open foreign exchange risk under this framework. Conversely, the Group may maintain exposure to own funding spread risk and sovereign spread risk.

In 2019, the xVA hedging strategy contributed to an 85% reduction in actual daily income volatility as compared with the volatility of an unhedged portfolio.

xVA-related market risk

(DKK millions)



The chart illustrates the sensitivity to CDS spread risk and interest rate risk. The sensitivity to interest rate changes fluctuated around zero for most of 2019 and ended slightly higher than the level at the end of 2018. The exposure to CDS spreads increased markedly during the first half of 2019 as a result of decreasing interest rates and credit spreads. However, the increase was more or less eliminated during the second half of the year, mainly because of increasing interest rates.

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

4.4.3 Market risk in relation to the non-trading portfolio

The Group's exposure to market risk in the non-trading portfolio originates mainly from interest rate risk in the banking book (IRRBB). IRRBB derives from providing the Group's core banking customers with conventional banking products and from the Group's funding and liquidity management activities at Group Treasury. In addition, the Group holds a portfolio of unlisted shares relating mainly to private equity funds and banking-related investments.

Interest rate risk in the banking book

The Group has progressively increased its resources to manage the interest rate risk associated with the Group's banking book activities. The day-to-day management of this risk is overseen by Group Treasury.

IRRBB is driven by a number of factors: repricing mismatches between assets and liabilities, client behaviouralisation, optionality within client products booked within the banking book, and interest rate floors and options on assets and liabilities held by the Group.

Annually, the Board of Directors determines the Group's interest rate risk appetite. This framework is translated into a limit framework used for risk management purposes. The Group ALCO is responsible for monitoring and managing the Group's IRRBB exposure.

Group Treasury provides the first line of defence for IRRBB. This involves day-to-day management of the actual risk against the limit framework. Market & Liquidity Risk provides the second line of defence and maintains the risk management systems used for calculating the economic value-based IRRBB measures. In addition, Market & Liquidity Risk maintains the limit framework and monitors adherence to the limits. On a monthly basis, the Group ALCO reviews IRRBB utilisation against a series of risk measures. These cover prescribed regulatory metrics, the risk appetite as determined by the Board of Directors and other risk measures that are considered appropriate. The Group ALCO reviews IRRBB-related issues and monitors the levels of Economic Value, Earnings-at-Risk and Credit Spread Risk utilisation.

The Group regularly reviews its IRRBB framework in order to make sure that it continues to have the capacity to capture banking book risks. Such reviews encompass new regulatory requirements and are aligned, where possible, with industry best practice. This framework seeks to identify scenarios that are generated by the following stressed situations: a short rate shock, a parallel shift in interest rates, a non-parallel shift in interest rates, contractual floors on customer products and debt issued by the Group, as well as customer behaviour. The latter is an important component and encompasses the ongoing assessment of non-maturing demand deposits (NMDs). The volume of NMDs is recalibrated each month, while the duration is reviewed annually. The Group ALCO approves the NMDs and endorses the sensitivity of the duration (any increase or decrease).

The Group's total interest rate sensitivity in the banking book (economic value-based measure) is shown below.

Interest rate risk in the banking book (a parallel yield curve shift of 100 points)

	2019		2018	
At last business day (DKK millions)	+100bp	-100bp	+100bp	-100bp
DKK	4,540	-6,135	4,902	-5,901
EUR	-299	3,309	-1,048	3,322
SEK	-49	506	-88	592
NOK	367	-504	-43	48
GBP	-82	99	403	-570
USD	-43	44	-36	35
Other	-	-	-4	4
Total	**4,433**	**-2,681**	**4,086**	**-2,471**

The sensitivity to falling interest rates increased from a loss of DKK 2,471 million in 2018 to a loss of DKK 2,681 million at the end of 2019, while the sensitivity to rising interest rates increased from a gain of DKK 4,086 million in 2018 to a gain of DKK 4,433 million at the end of 2019.

Earnings-at-Risk (EaR) is a regulatory measure that seeks to stress net interest income under a number of different scenarios using defined parameters. A constant balance-sheet approach is used for creating a base scenario over a 12-month time horizon. A number of different scenarios are then applied for the purpose of assessing the EaR sensitivity. The EaR measure complements the Economic Value interest rate measure, which measures the long-term effect. Assuming a parallel downward yield curve shift of 1%, the Group's Earnings-at-Risk would be DKK 6 million higher than a base scenario calculation at the end of 2019.

Based on a 10-day 99% VaR, the Group's credit spread risk in the banking book was DKK 99 million at the end of December 2019.

The Group hedges interest rate risk on fixed rate loans and deposits mainly during the accounting origination process, while managing the risk on the following fixed rate items on a daily basis according to the limit framework:

- Fixed rate mortgages in Denmark and other fixed rate loans that are not hedged as part of the accounting setup, including operating leases sold by the Group's leasing operations.
- Positions related to asset and liability management, including payments that are made in advance on Realkredit Danmark loans (monthly payments that are not passed on to bondholders until the end of the quarter or year).
- Bonds held in the hold-to-maturity and available-for-sale portfolios established by the Group in 2013 to stabilise net interest income by hedging its fixed rate liabilities.
- Interest rate risk exposure from NMDs.
- Other interest rate risk exposures, that is, embedded contractual interest rate floors on assets (such as lending contracts) and fluctuations in risk from changes in the core banking balance-sheet composition as well as risk migration from changes to behavioural assumptions.

IRRBB is capitalised as a Pillar II risk.

Equity investments
In its risk management of shares outside the trading book, the Group makes a distinction between ordinary open positions (including positions in associated companies), exposure to private equity funds (including exposure in the form of commitments), and banking-related investments. Banking-related investments consist of equity holdings primarily in financial infrastructure businesses.

At the end of 2019, the total value of the portfolio was about DKK 2.2 billion, against around DKK 1.7 billion at the end of 2018.

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

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

4.5 Internal pension risk management

Internal pension risk arises from Danske Bank Group's liability for defined benefit pension plans established for current and former employees. For accounting purposes, defined benefit pension plans are valued in accordance with IFRSs (IAS 19).

The Group's defined benefit plans are funded by contributions from the Group and by individual contributions from employees. Each pension plan is managed by a separate supervisory board. The Group monitors interest rate sensitivities and manages them within set boundaries. It uses derivative instruments as an additional tool to manage interest rate risks.

The Group All Risk Committee has defined risk targets for the Group's pension funds. To follow up on the objectives, the Group prepares quarterly risk reports that stress the individual plans' net obligations calculated on the basis of swap rates rather than actuarial discount rates. These levels are used in the Group's VaR model.

4.5.1 Internal pension risk profile

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

Overview of the Group's pension plans

At 31 December 2019 (DKK millions)		Northern Ireland	Ireland	Denmark	Sweden
Pension plan for new employees		Defined contribution	Cash balance	Defined contribution	Defined contribution
Status of defined benefit pension plan		Closed to new members in 2004	Closed to new members in 2008	Closed to new members	Closed to new members in 2013
Gross liabilities		10,271	3,873	689	2,079
Assets at fair value		11,988	4,367	549	1,986
Net assets (net liabilities)		1,717	494	-140	-93
Number of members:	Active	-	26	82	684
	Deferred	2,100	656	-	1,424
	Pensioners	2,527	579	157	749
	Total	**4,627**	**1,261**	**239**	**2,857**

Note: In Norway, Finland and the Baltics, the Group operates defined contribution plans under which it pays fixed contributions into separate, legally independent entities and afterwards has no further obligations. The Group wound up its Norwegian defined benefit plan in 2005, but still has an early retirement pension obligation. The obligation amounted to DKK 17 million at 31 December 2019.

At the end of December 2019, the Group's VaR was DKK 1,671 million (2018: DKK 1,253 million).

4.5.2 Liability recognition

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

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

The Group calculates the market risk on defined benefit plans on a quarterly basis. The risk is expressed as VaR at a confidence level of 99.97% and on a one-year horizon. In this scenario, equity price volatility and the correlation between interest rates and equity prices are set at values reflecting normal market data. The duration of the pension obligations is reduced by half to take into account inflation risk. This is a widely accepted proxy, which is also used by the Danish Financial Supervisory Authority (the Danish FSA), among others.

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

Sensitivity analysis of the Group's net obligation

(DKK millions)	Change	Effect, 2019	Effect, 2018
Equity prices	-20%	-360	-360
Interest rates	+1%/-1%	+260/+146	+393/-152
Life expectancy	+1 year	-356	-330

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

Liquidity, funding and capital risk

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5.1 Liquidity risk management

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

5.1.1 Risk governance and responsibilities

Like other risk types, liquidity risk is governed in line with the principles of the three-lines-of-defence model. Group Treasury is in charge of liquidity management and is therefore the first line of defence for liquidity risk. It must keep the liquidity risk profile within the risk appetite. The responsibility for short-term liquidity management is delegated to FI&C within certain limits and as outlined in Group Treasury guidelines.

Group Risk Management is the second line of defence. In particular, Liquidity Risk Management reviews and challenges the methodologies and metrics and monitors compliance with applicable limits. It is also in charge of the annual Internal Liquidity Adequacy Assessment Process (ILAAP), which is submitted to the Board of Directors and the supervisory authorities.

Liquidity risk management involves using a combination of risk indicators, risk triggers and risk policies. Two documents lay the foundation for this process: the Liquidity Policy and the Liquidity Instructions. The first document sets out the overall principles for the Group's liquidity risk management. The second document sets out the governance structure and defines limits and methods for calculating liquidity risk. Both are issued by the Board of Directors.

The Group Asset & Liability Committee (Group ALCO) manages the Group's balance sheet and funding mix in accordance with the Liquidity Policy approved by the Board of Directors.

As a subcommittee of the Group All Risk Committee, the Group ALCO has a strategic focus on asset and liability management components, such as net interest income, funds transfer pricing as well as interest and FX risks on the balance sheet.

The Group Liquidity Risk Committee (GLRC) is a Group ALCO subcommittee. It oversees the management of liquidity risk and funding at the group level. Both the Group ALCO and the GLRC consist of representatives from the Executive Leadership Team, Group Treasury, FI&C and Group Risk Management.

The GLRC monitors and challenges Group Treasury's liquidity management, including the execution of the funding plan and the management of the liquidity reserve.

Liquidity management is coordinated centrally to ensure regulatory compliance at the group level and compliance with internal requirements. Regulatory compliance and the maintenance of adequate liquidity reserves in subsidiaries are managed locally.

5.1.2 Liquidity risk appetite and limit framework

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

Liquidity risk can be seen conceptually to consist of two key elements, both of which are addressed in the Liquidity Policy.

Key element	Risk appetite
Distance to default	A sufficient distance to default should be maintained at all times: in case of a crisis, there must be sufficient time to respond to events and avoid financial or regulatory default.
Market reliance	Market reliance should be limited: if the Group relies on its ability to issue debt when needed, it becomes vulnerable to investor sentiments, market stress and market dysfunctionalities. The size and maturity profile of debt instruments must therefore be prudently adapted to funding needs.

By ensuring sufficient time to respond in case of a prolonged crisis, management will be able to adjust to changed conditions in a controlled manner, thus avoiding any hasty reactions to short-term market volatility. By reducing market reliance, the Group reduces the effects of market volatility and ensures the sustainability of its long-term business model. This allows it to serve customers at any time during the business cycle.

Realkredit Danmark and Danica Pension manage their own liquidity risks. Realkredit Danmark is largely self-financing and its liquidity is managed separately from the rest of the Group. Danica Pension's balance sheet includes assets and long-term life insurance liabilities. Readily marketable bonds and shares constitute a large part of Danica Pension's assets. Both Realkredit Danmark and Danica Pension are subject to statutory limits on their exposures to Danske Bank A/S.

For liquidity management purposes, the term “Group” does not include Danica Pension because it is not subject to the same liquidity regulations as banks. Realkredit Danmark, on the other hand, is included in the Group. Because of its particular structure, however, it is not always relevant to include Realkredit Danmark in Group figures (funding figures, for example). As a consequence, Realkredit Danmark is sometimes excluded from Group figures. It is explicitly stated when this is the case.

The Group monitors the two key elements through a set of risk indicators that make up the Group’s liquidity risk profile. The Board of Directors has set internal limits for each indicator, as shown below. A set of further limits and targets ensures that these limits are not breached.

Distance to default

Indicator	Requirement	Frequency	Monitoring unit
KRI 1	The most severe internal stress tests must be positive three months ahead.	Monthly	Group Risk Management
KRI 2	The Group’s LCR must be 110% or higher, and each legal entity must comply with local liquidity requirements.	Daily	Group Risk Management
SRI 1	The Group’s total liquidity in all currencies may not fall below DKK 100 billion four weeks ahead, and total liquidity in all currencies except DKK must be positive two weeks ahead.	Daily	Group Risk Management

Market reliance

Indicator	Requirement	Frequency	Monitoring unit
KRI 3	The Group’s funding ratio must be below 0.8	Monthly	Group Treasury
SRI 2	Long-term funding maturing within 12 months may not exceed DKK 90 billion	Daily	Group Risk Management
SRI 3	Twelve-month liquidity must be positive one year ahead	Monthly	Group Treasury

5.1.3 Stress testing

Stress tests are a core element of the models and methodologies used by the Group to manage liquidity risk. Three of the six risk indicators making up the risk profile are based on stressed liquidity scenarios.

The Group conducts stress tests to measure its immediate liquidity risk in order to have sufficient time to respond to possible crises. The stress tests use various scenarios, including three standard scenarios: a scenario specific to the Group, a general market crisis scenario and a combination of the two scenarios. A “stress-to-failure” test is also conducted.

The setup makes it possible to analyse any time horizon up to one year, but a period of three months is standard for internal stress tests.

All stress tests are based on the assumption that the Group does not reduce its lending activities. This means that an unchanged volume of lending will continue to require funding. The availability of funding varies depending on the scenario in question and the funding source. To assess the stability of its funding, the Group monitors the maturity structure and makes behavioural assumptions.

5.1.4 Methodologies and models

The Group uses regulatory indicators such as the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR) as tools for asset liability management. A crucial implementation tool is the Funds Transfer Pricing (FTP) model.

Liquidity by currency

The LCR regulation is not explicit about the currency composition of the liquidity buffer. It merely requires the denomination of the liquid assets in the buffer to be “consistent” with the currency distribution of net liquidity outflows.

In Denmark, these requirements are more specific. As a SIFI, Danske Bank is subject to quantitative currency-specific liquidity requirements for EUR and USD. In addition to these requirements, Danske Bank also balances the general composition of the buffer to ensure consistency with the outflow profile, as required by the CRR. In part, such considerations lay behind the Group’s decision to issue more debt in NOK and SEK and set up a mortgage subsidiary in Sweden (Danske Hypotek AB). The increased focus on currency-specific liquidity is also incorporated in the Group’s funding plan and ongoing balance-sheet optimisation.

Intraday liquidity is monitored and reported by currency in accordance with the guidelines issued by the Basel Committee. Overall, these measures have reduced cross-currency liquidity risk.

NSFR

Over the coming two years, the NSFR will be implemented. It was adopted by the Basel Committee on Banking Supervision (BCBS) in 2014 and formally adopted in the EU in May 2019. It will enter into force on 28 June 2021.

While the LCR focuses on short-term liquidity risk, the NSFR addresses the balance between funding needs due to assets and the stability of funding sources. Adjusting the balance sheet to comply with the NSFR is a long-term process initiated long before the NSFR proposal was adopted or the precise rules were known. Informal calculations based on the legal text indicate that the adjustment has been successful and that Danske Bank is in compliance by an acceptable margin.

Funds transfer pricing

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

FTP links the balance-sheet composition directly to the income statement, and it is a key component in determining the Group's overall funding position. FTP is fundamental in evaluating the profitability of the Group's balance-sheet composition, and it has therefore been included in the profitability analysis at the customer level. It links liquidity risk assessment, product pricing and balance-sheet valuation.

Mortgage loans provided through Realkredit Danmark are excluded from FTP because they are match-funded.

The Group's trading activities are also subject to FTP. Trading activities require funding and increase the needed liquidity buffer because they create new potential collateral outflows.

5.1.5 Monitoring and reporting

Liquidity Risk Management reports on indicators to the relevant parties and committees. Indicators set by the Board of Directors are reported back to the Board and to other relevant stakeholders (such as the GLRC and the Executive Leadership Team via the Group All Risk Committee). Indicators set by the Group All Risk Committee are reported back to the Committee and to other relevant stakeholders, including the business units. Lower-level limit indicators are reported to the head of Liquidity & Capital Risk Management.

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

Monitoring and reporting are conducted separately in line with the principles of the three-lines-of-defence model. As the first line of defence, Group Treasury reports on the risk measures. The second line of defence, Group Risk Management, monitors compliance with internal limits. Furthermore, Group Risk Management reviews and validates the models and assumptions used by the first line of defence.

Liquidity Risk Management monitors compliance with the risk limits set in the Liquidity Instructions. The LCR figures and operational liquidity are monitored and reported on a daily basis, while the other risk indicators are reported on a monthly basis to the GLRC and the Group All Risk Committee. Risk indicators are reported to the Board of Directors on a quarterly basis.

5.2 Liquidity risk profile

5.2.1 Risk indicators

Distance to default

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

Liquidity coverage ratio

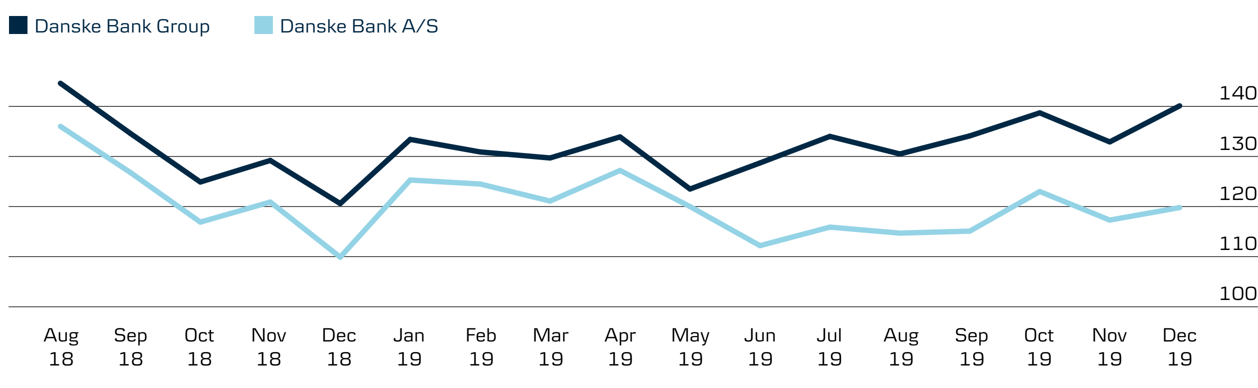
At 31 December 2019 (DKK billions)	Danske Bank Group	Danske Bank A/S
HQLA level 1	416	345
HQLA level 2	18	16
Limits due to cap	-	-
A. Liquid assets, total	432	361
Customer deposits[1]	124	120
Market funding[2]	144	139
Other cash outflows[3]	133	133
B. Cash outflows, total	401	391
Lending to non-financial customers	2	1
Other cash inflows	91	89
C. Cash inflows, total	93	90
Liquidity coverage ratio [A/(B-C)]	**140%**	**120%**

[1] Includes retail deposits, operational deposits, correspondent banking/prime brokerage accounts and non-operational deposits covered by deposit guarantees.
[2] Includes non-operational deposits, unsecured debt issuance and secured funding.
[3] Includes Realkredit Danmark's additional outflow requirement, which is equal to 2.5% of lending.

At the end of 2018, the Group's LCR stood at 120%. It increased in early 2019, when new long-term debt was issued. During 2019, it was relatively stable with an upward trend towards the end of the year.

Compared with the Group's LCR as a whole, the LCR of Danske Bank A/S was relatively low during the second half of the year. This happened in connection with an accumulation of liquid assets in Danish mortgage banks at the expense of other financial institutions, including Danske Bank A/S. Declining interest rates had made it profitable for borrowers to refinance mortgages in 2019. In the Danish match-funded mortgage system, this often involves issuing new bonds a few months before the existing bonds mature, hence the accumulation of liquidity.

LCRs of Danske Bank Group and Danske Bank A/S, 2019
(%)

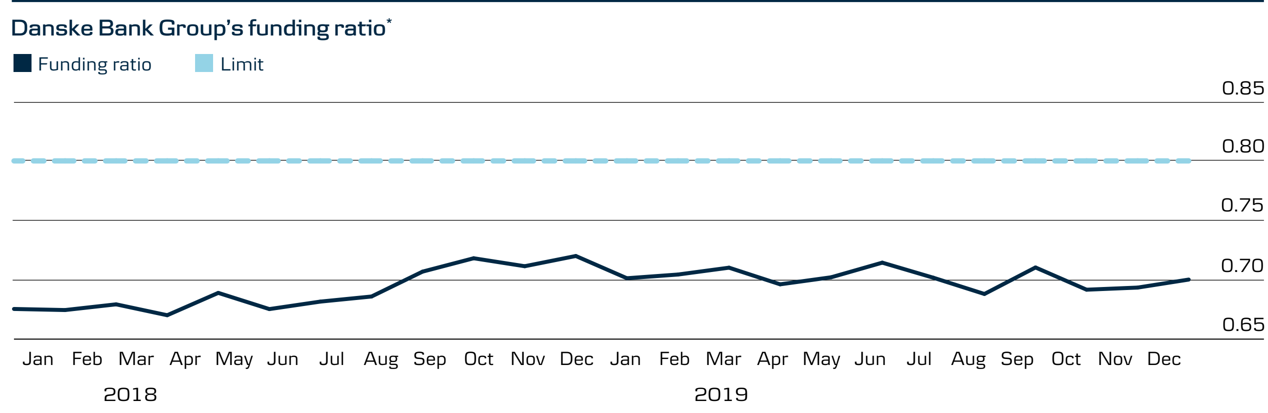


Market reliance
The risk indicators addressing market reliance are effective management tools that enable the Group to maintain an adequate level of stable funding for its long-term commitments on the asset side. This reduces any pressure on the Group during a liquidity crisis.

The NSFR takes effect in June 2021 and is set to become the key indicator for funding stability and market reliance. As a management tool, it has already gained significance, especially after the formal adoption of the rules in 2019.

For the time being, however, the authorities rely on the somewhat simpler funding ratio, which Danske Bank is required to keep below 0.8. The Group meets this requirement by a comfortable margin.

Danske Bank Group's funding ratio*



* Not including Realkredit Danmark.

The Group also monitors the diversification of its funding sources by product, currency, maturity and counterparty to ensure that its funding base provides the best possible protection.

Special attention is devoted to the NOK and SEK markets. Danske Bank has a deposit gap in the Norwegian and Swedish markets, meaning that the Group must obtain market funding. Covered bonds in NOK are issued by Danske Bank A/S, whereas covered bonds in SEK are issued by Danske Hypotek AB.

5.2.2 Ratings and their potential liquidity effects

On 23 October 2019, S&P Global revised the outlook on Danske Bank and Danica Pension to stable from negative, while affirming the 'A/A-1' long- and short-term issuer credit rating. The stable outlook reflects the Group's solid capital-isation, driven by S&P Global's reassessment of leverage in the Danish market and the sizeable loss-absorbing buffer established by Danske Bank through the issuance of non-preferred senior debt. This in itself would have resulted in an upgrade of the issuer credit rating. However, S&P Global continues to see risks associated with the ongoing investiga-tions relating to the Estonia case, and this resulted in a one-notch negative adjustment to the issuer credit rating.

On 10 December 2019, Moody's downgraded the senior debt rating of Danske Bank to 'A3/P-2' from 'A2/P-1', and revised the outlook to stable from negative. At the same time, Moody's downgraded the rating of non-preferred senior debt to 'Baa3' from 'Baa2', while affiming the 'A2/negative/'P-1' deposit ratings. The negative rating action reflects lower-than-expected earnings as a result of the Estonia case, net interest margins under pressure and a significant fall in trading income.

Fitch Ratings took no rating action in respect of Danske Bank in 2019. Danske Bank continues to have an 'A' rating by Fitch Ratings, and the outlook remains negative because of the uncertainty relating to the ultimate effect of the Estonia case on Danske Bank's capitalisation, franchise and funding profile.

Danske Bank's ratings, 31 December 2019

	Moody's	S&P Global	Fitch Ratings
Counterparty rating	A1/P-1	A+/A-1	A+
Senior debt	A3/P-2	A/A-1	A+/F1
Outlook	Stable	Stable	Negative
Non-preferred senior debt	Baa3	BBB+	A
Tier 2	-	BBB	A-
AT1	-	BB+	BB+

Mortgage bonds and covered bonds (*RO* and *SDRO*) issued by Realkredit Danmark are rated 'AAA' (stable outlook) by S&P Global and Scope Ratings. Fitch Ratings gives bonds issued from Realkredit Danmark's capital centre S a rating of 'AAA' (stable outlook) and bonds issued from capital centre T a rating of 'AA+' (stable outlook).

Covered bonds (*SDO*) issued by Danske Bank A/S are rated 'AAA' (stable outlook) by both S&P Global and Fitch Ratings, while covered bonds issued by Danske Mortgage Bank Plc are rated 'Aaa' by Moody's and covered bonds issued by Danske Hypotek AB are rated 'AAA' (stable outlook) by S&P Global.

The following table shows the Group's loss of liquidity under four scenarios involving downgrades of the Group's long- and short-term debt. The number in brackets after each individual rating indicates how many notches the rating would drop from its current level.

The right-hand column shows the liquidity effects due to extra collateral requirements after downgrades under the various scenarios. Most contracts do not contain rating triggers but instead aim to eliminate or reduce credit exposures regardless of the rating, but some triggers remain.

Loss of liquidity in case of rating downgrades, 31 December 2019*

	Short-term			Long-term			
Assumed rating	Moody's	S&P	Fitch	Moody's	S&P	Fitch	Liquidity effect (DKK billions)
Present rating	P-2	A-1	F1	A3	A	A+	
Scenario 1	P-2	A-1	F1	Baa1(▼1)	A- (▼1)	A (▼1)	11.8
Scenario 2 (mild crisis)	P-3(▼1)	A-2(▼1)	F2(▼1)	Baa1(▼1)	A- (▼1)	A (▼1)	12.4
Scenario 3	P-3(▼1)	A-2(▼1)	F2(▼1)	Baa2(▼2)	BBB+(▼2)	A- (▼2)	13.1
Scenario 4 (severe crisis)	P-3(▼1)	A-2(▼1)	F2(▼1)	Baa3(▼3)	BBB (▼3)	BBB+ (▼3)	14.0

* Not including Realkredit Danmark.

5.2.3 Funding

In 2019, Danske Bank issued long-term debt in the amount of DKK 100 billion, which was considerably more than in 2018. Just over half of the issues were non-preferred senior (NPS) debt issues. The first large issue was made in January in an effort to ensure early compliance with the minimum requirement for own funds and eligible liabilities (MREL), which took effect on July 1, 2019.

Further NPS issues were made after this date and will continue to be needed in the coming years to replace other debt. Some senior debt is currently MREL-eligible but will cease to be eligible towards the end of 2021. By then, all MREL debt will be NPS debt. The precise amounts needed will depend on balance-sheet developments and regulatory requirements.

The significant NPS issues meant that the need for other funding was reduced correspondingly. There were very few senior debt issues in 2019, but covered bonds accounted for DKK 25 billion.

DKK 12 billion of tier 2 capital was also issued. This should be seen as part of the Group's capital planning and not solely from a liquidity and funding perspective.

Realkredit Danmark's funding

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

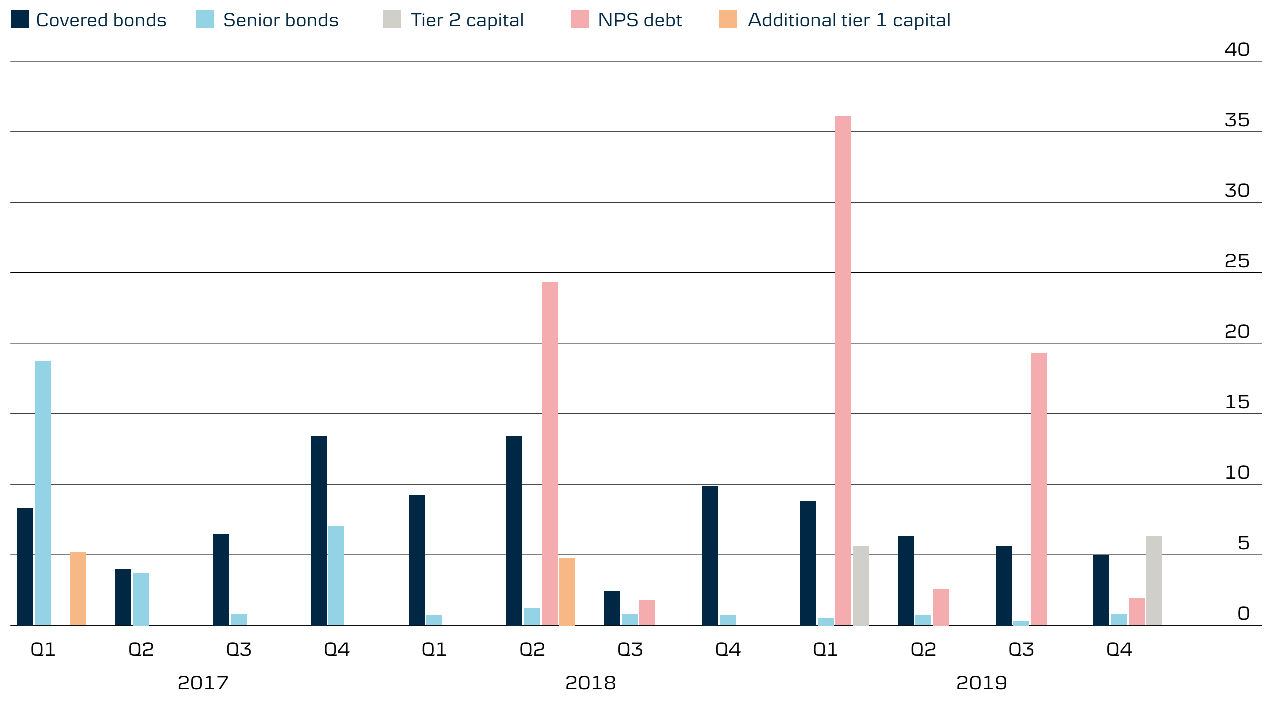
- all mortgages are funded by means of covered bonds with a matching cash flow
- all funding costs are absorbed by borrowers
- amounts of interest, redemptions and margins from borrowers fall due in advance of interest payments and principal repayments to bondholders
- covered bonds are issued on tap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

The pass-through structure allows for interest-reset loans with maturities ranging up to 30 years, while the underlying bonds are typically issued with maturities ranging from one to five years. The refinancing risk is mitigated by caps on the volume of interest-reset loans to be refinanced each quarter and each year. As a last resort, Realkredit Danmark is required by law to extend the maturity of maturing covered bonds in case of a refinancing failure.

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

Long-term debt issuance, by quarter*

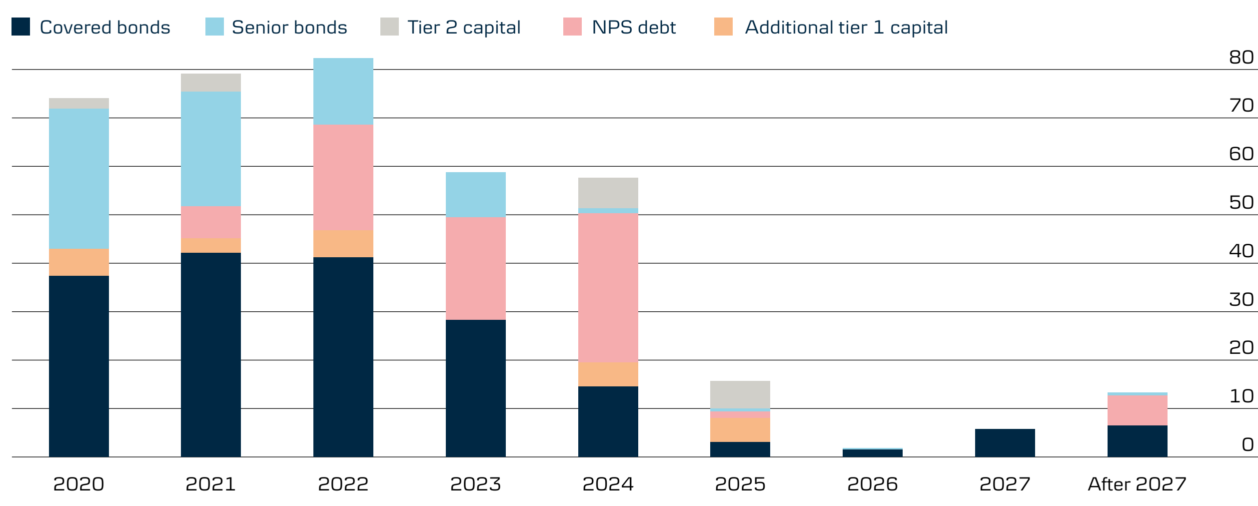
(DKK billions)



* Not including Realkredit Danmark.

Danske Bank Group's redemption profile at 31 december 2019*

(DKK billions)



* Not including Realkredit Danmark, Maturity dates for T2/AT1 capital and NPS debt are first call dates.

Total wholesale funding consists of debt issues and deposits received from credit institutions and central banks. A detailed breakdown is shown below. In 2019, overall wholesale funding was reduced slightly. The most significant development was the increase in senior unsecured MTNs, which was due to the mandatory NPS issues described in section 5.2.3. These issues meant that the need for other funding was reduced correspondingly.

Breakdown of wholesale funding[1] by contractual maturity

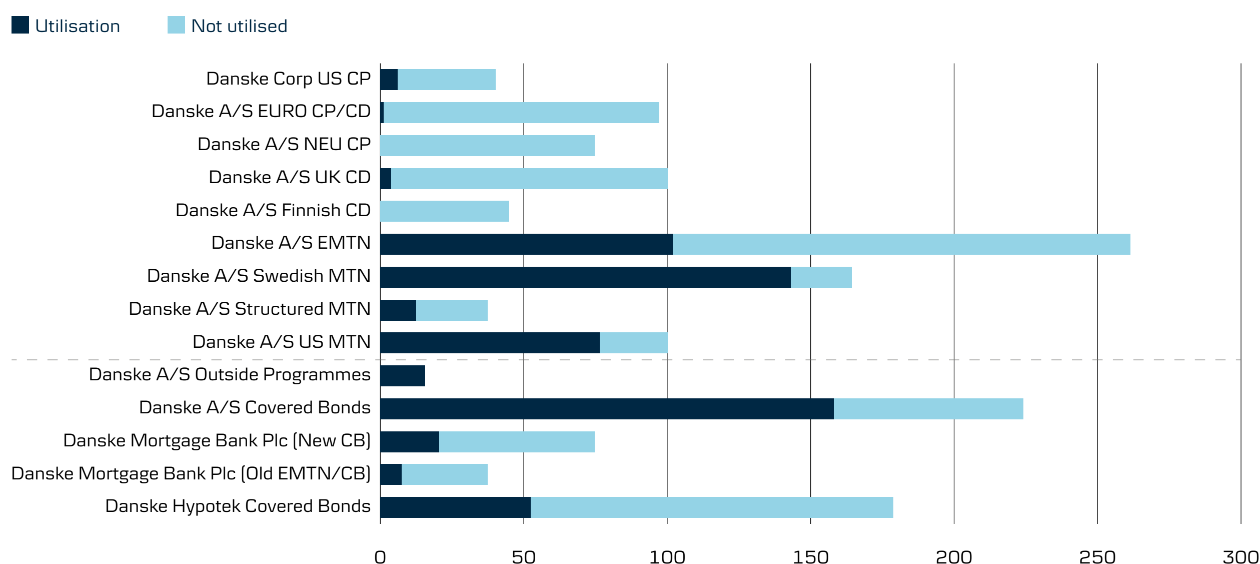
At 31 December 2019 (DKK billions)	0-1 month	1-3 months	3-12 months	1-5 years	> 5 years	Total end-2019	Total end-2018
Deposits from credit institutions	163	27	36	1	-	227	314
CDs and CP	3	6	3	-	-	11	20
Senior unsecured MTNs[2]	1	9	19	128	7	165	121
Covered bonds	1	15	29	170	24	238	240
Subordinated liabilities	-	-	2	15	11	28	19
Total	**167**	**57**	**88**	**314**	**42**	**668**	**715**
Portion from							
- secured instruments	65	11	35	5	-	116	161
- unsecured instruments	102	46	53	309	42	552	554

[1] Not including Realkredit Danmark.
[2] Net outstanding amount. It consists of NPS and senior debt.

Danske Hypotek was established in 2017 and is still in an expansion phase. Issuance continued in 2019, and the outstanding volume is now approximately DKK 53 billion.

The increased SEK issues are part of an overall asset and liability management strategy aiming to reduce currency mismatches. The overall amount of outstanding covered bonds was reduced over the year, reflecting the large NPS issues.

Utilisation of available long- and short-term programmes*, end of 2019
(DKK billions)



* Not including Realkredit Danmark.

Danske Bank has a number of funding programmes as shown above. Each programme is approved by the Board of Directors along with a limit. Several programmes, especially for short-term funding such as CP/CDs, are barely used at all, primarily due to the lack of investment opportunities that are both profitable and consistent with the liquidity policy. Covered bonds remain an important funding source. The EMTN programmes are used for NPS issues and minor volumes of capital instruments.

5.2.4 Liquidity reserve

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

The following table shows the liquidity reserve categorised according to the LCR framework. The moderate reduction of liquid assets during 2019 was in contrast to the considerable increase in the Group's LCR over the year. This was due to a reduction of stressed net outflows.

Group liquidity reserve – LCR definition

At 31 December (DKK billions after haircut)		2019	2018
Total high-quality liquid assets		**432**	**447**
Level 1a assets	Central bank reserves	87	156
	Central government debt	55	52
	Other level 1a assets	42	42
Level 1b assets	Extremely high-quality covered bonds	232	179
Level 2a assets	High-quality covered bonds	12	10
	Other level 2a assets	4	8
Level 2b assets		0.1	0.1

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

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

5.2.5 Asset encumbrance

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

The Group's asset encumbrance has three main sources:

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

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

Asset encumbrance and encumbrance ratio

At 31 December 2019 (DKK billions)	Danske Bank A/S	Danske Bank Group
Assets on balance sheet		
Derivatives	65	66
Deposits (repos)	173	169
Covered bonds	120	966
- portion from Realkredit Danmark	-	754
Other	20	23
Total encumbrance	**379**	**1,224**
Total assets	2,282	3,256
Collateral received		
Derivatives	11	9
Deposits (reverse repos)	327	301
Total encumbrance	337	309
Total assets	603	552
Asset encumbrance ratio (%)	**25**	**40**

5.3 Capital management

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

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

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

Two documents lay the foundation for the Group's capital management: (1) the Capital Policy and (2) the Capital Instructions. The first document contains the Group's overall principles and standards for capital management, including the governance process for all of the principles. The second document describes how capital must be managed within the Group in more detail. The Capital Policy is approved by the Board of Directors, while the Capital Instructions are approved by the Group All Risk Committee operating under the Executive Leadership Team.

5.3.1 ICAAP

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

5.3.2 Capital targets and capital distribution

As a consequence of increased capital requirements and general uncertainty about future regulation, the Board of Directors changed the target for Group's CET1 capital ratio from around 16% to above 16% in the short term. The target for the total capital ratio was kept at above 20% throughout 2019. The Group's capital requirements increased during 2019, mainly due to increased product governance risk as well as information and communications technology risk. Furthermore, the targets take into account the expected increase in the Group's institution-specific countercyclical buffer rate, mainly because of the increases in the countercyclical buffer rate in Denmark, which will reach a level of 2% in December 2020. The updated target for the CET1 capital ratio includes a management buffer of at least 1.2%.

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

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

5.3.3 Capital planning

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

5.3.4 Input from stress testing

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

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

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

Internal stress tests

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

Regulatory stress tests

Because the Group has approval to use internal ratings-based (IRB) models, it participates in the annual macroeconomic stress test conducted by the Danish Financial Supervisory Authority (the Danish FSA). In the latest stress test performed in the spring of 2019, the Group did not breach capital requirements during the projected period.

The Group also participates in the EU-wide stress test conducted by the European Banking Authority (the EBA) every second year. The purpose of the EBA stress test is to assess the health of the European banking sector and the ability of the individual institutions to absorb losses. The latest exercise was conducted in 2018 and included a highly adverse macroeconomic scenario in the Group's core markets. Even under such severe conditions, the Group met its projected capital requirements by a satisfactory margin.

The Group's most important stress test scenarios

Scenario	Description and use
Severe recession	A sharp slowdown in the global economy reduces exports, private consumption and GDP, while increasing unemployment. This scenario assumes a significant setback in property prices because of weak consumer confidence, high unemployment and tight credit policies.
	The Group uses the severe recession scenario in its capital planning to determine whether the capital level is satisfactory. If management concludes that the level of excess capital is too low in the scenario's worst year, it will consider changing the risk profile or raising capital.
Extreme recession	A very sharp slowdown in the global economy reduces exports, private consumption and GDP, while increasing unemployment. This scenario assumes deflation in most economies and a very sharp drop in property prices.
	The Group uses the extreme recession scenario for recovery plan purposes to test the credibility and effectiveness of its actions to restore its capital and liquidity positions.
Regulatory scenarios	Base cases and adverse scenarios of the Danish Financial Supervisory Authority and the European Banking Authority.
	The Danish Financial Supervisory Authority uses the regulatory scenarios for the Supervisory Review and Evaluation Process (SREP).
Other scenarios	Besides the main scenarios listed above, the Group also uses various specialised or portfolio-specific scenarios that give management an understanding of how specific events will affect the Group.

In conclusion, the results of both internal and external regulatory stress tests show that the Group is robust in the event of unfavourable economic developments in the selected stress test scenarios.

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

5.3.5 Capital allocation

The Group makes a full internal allocation of its total equity across business units on the basis of each unit's contribution to the Group's total risk as estimated by means of regulatory models. The Group is constantly improving its capital allocation framework to ensure that it reflects as closely as possible the effects of new regulation and the risk entailed in its business activities. The principles for allocating capital across the business units are fully aligned with the regulatory requirements. As a result, the capital consumption of the Group's individual business units is closely aligned with the Group's total capital consumption.

5.3.6 Risk governance and responsibilities

The Group's capital management practices are organised in line with the principles of the three-lines-of–defence model. Day-to-day monitoring and management of the Group's capital position and risks are handled by Capital Management under the Group's Treasury function. As the first line of deference, Capital Management is responsible for monitoring and managing the Group's capital position on the basis of the principles set out in the Capital Policy and specified in the Capital Instructions, including stress testing, setting capital and payout targets, preparing a capital plan and allocating the cost of capital. Capital Management is also responsible for the annual ICAAP and for providing quarterly updates to the Board of Directors.

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

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

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

The overall principles for the Group's capital management and recommendations based on these principles are approved by the Board of Directors and endorsed by the Group All Risk Committee and the Board of Directors' Risk Committee.

5.3.7 Monitoring and reporting

The Group monitors risks related to its capital and capital position and submits risk reports to the chief financial officer, the chief risk officer and the Board of Directors. Capital management risk reporting consists of a monthly report on the Group's capital position (the Capital and REA Report) and an overview of the Group's capital position against trigger levels (the Indicator Dashboard). In addition, the Group prepares quarterly reports on its capital position (on a short- and long-term basis) measured against its risk and business strategy as part of the ICAAP. See section 2.4 for an additional description of risk reporting.

5.4 Capital profile

At 31 December 2019, the Group's CET1 capital amounted to DKK 132.7 billion, or 17.3% of the total REA, and its tier 1 capital amounted to DKK 156.6 billion, or 20.4% of the total REA. The Group's total capital amounted to DKK 174.2 billion, and its total capital ratio was 22.7%.

5.4.1 Total capital

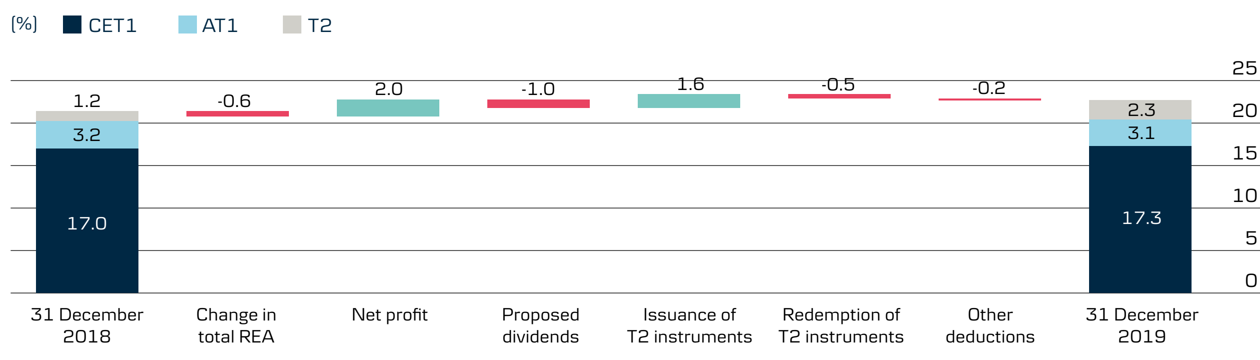
The high-level components of total capital are shown in the following table (a more detailed breakdown appears in the Group's Annual Report 2019). The figures reflect the Group's capital subject to the transitional rules of the CRR (including the phase-in of IFRS 9) at 31 December 2019.

Danske Bank Group's total capital and ratios

At 31 December (DKK millions)	2019	2018
Total equity	170,508	163,276
Adjustment to total equity	233	237
Total equity calculated according to the rules of the Danish FSA	170,741	163,513
Additional tier 1 (AT1) capital instruments included in total equity	-14,070	-14,133
Adjustments for accrued interest and tax effect on AT1 capital	-130	-130
Common equity tier 1 (CET1) capital instruments	156,541	149,250
Deductions from CET1 capital	-23,878	-22,423
- portion from goodwill	-6,339	-7,466
- portion from statutory deductions for insurance subsidiaries	-8,439	-5,987
CET1 capital	132,664	126,827
AT1 capital	23,944	23,677
Deductions from AT1 capital	-	-
Tier 1 capital	156,608	150,505
Tier 2 capital instruments	17,598	9,161
Deductions from tier 2 capital	-	-
Total capital	174,206	159,666
Total risk exposure amount	**767,177**	**748,104**
Common equity tier 1 capital ratio (%)	17.3	17.0
Tier 1 capital ratio (%)	20.4	20.1
Total capital ratio (%)	22.7	21.3

The following chart shows the change in the Group's total capital ratio from 31 December 2018 to 31 December 2019. The increase in the total REA decreased the total capital ratio by 0.6 percentage points. The other main drivers were the Group's net profit after dividend, redemption and issuance of subordinated capital instruments as part of the Group's ongoing work to optimise its capital structure.

Change in total capital ratio, Danske Bank Group, 2019



Common equity tier 1 capital

Starting with total equity under IFRSs, the Group makes a number of adjustments in order to determine its CET1 capital.

In accordance with IFRSs and the Danish FSA's accounting rules, total equity is subject to the following adjustments:

- Revaluation of domicile property is recognised at the estimated fair value. Revaluation to a value above the cost of acquisition is recognised as CET1 capital. The revaluation of domicile property is not affected by the implementation of IFRS 16, which concerns leased assets on the balance sheet rather than domicile property owned by the Group.
- The CRR-compliant additional tier 1 capital instruments issued in the period 2014-2016 count as equity under accounting rules, but do not qualify as equity under capital and solvency rules. The additional instruments are therefore excluded from CET1 capital and instead categorised as additional tier 1 capital. The additional tier 1 capital instruments issued in March 2017 and June 2018 are not recognised as equity under accounting rules.

In addition to the adjustments listed above, total equity is also subject to certain deductions to determine CET1 capital in accordance with the CRR. These are the main deductions:

- Adjustment to eligible capital instruments
- Deferred tax assets that rely on future profitability
- Defined benefit pension fund assets
- Intangible assets of banking operations, including goodwill
- Proposed dividends
- Prudential filters
- Statutory deduction for insurance subsidiaries (see section 3.2.3)

Finally, a reversal is made to offset part of the IFRS 9 effect reflected in total equity under IFRSs since the effect is being phased in during a 5-year transitional period. At the end of 2019, the reversal was 85% of the total IFRS 9 effect. In terms of fully phased-in capital ratios, the remaining IFRS impact is expected to reduce the CET1 capital ratio by 0.2 percentage points.

At the end of 2019, the Group's CET1 capital amounted to DKK 132.7 billion, an increase of DKK 5.8 billion from 2018. The Group's net profit increased its CET1 capital by DKK 15.1 billion in 2019, but this was partly offset by a deduction for proposed dividends of DKK 7.3 billion.

Additional tier 1 capital and tier 2 capital

At the end of 2019, the Group's additional tier 1 capital amounted to DKK 23.9 billion, or 3.1 percentage points of its total capital ratio. In 2019, the Group did not issue or redeem any additional tier 1 capital. At 31 December 2019, all of the Group's additional tier 1 capital instruments were fully CRR-compliant.

At 31 December 2019, the Group's tier 2 capital amounted to DKK 17.6 billion, or 2.3 percentage points of its total capital ratio. In 2019, the Group redeemed tier 2 capital in the amount of DKK 3.5 billion. In 2019, the Group issued CRR-compliant tier 2 capital in the amount of 11.9 billion. At 31 December 2019, all of the Group's tier 2 capital instruments were fully CRR-compliant.

For a description of the terms and conditions applicable to the Group's outstanding issues of individual additional tier 1 and tier 2 capital instruments, see notes G22 and G25 in Annual Report 2019.

Consolidation methods and statutory deductions for insurance companies and significant investments

The consolidation of the Group's financial statements is based on IFRSs, whereas the prudential consolidation in the statement of capital is based on the rules of the Danish FSA and the CRR. The main difference is that, under IFRSs, Danica Pension is consolidated on a line-by-line basis, whereas, under the rules of the Danish FSA, it is treated as a (net) investment in a subsidiary in accordance with the equity method.

In December 2013, the Danish FSA designated the Group as a financial conglomerate because of its ownership of Danica Pension. Consequently, the Group is subject to supplementary supervision as a financial conglomerate (at the group level). For this reason, the Group performs its solvency calculations using the deduction method.

In rare circumstances, companies taken over by the Group because they are in default are consolidated in the financial statements and sold as soon as possible. The holdings are included in the calculation of the total REA. The following table shows the differences between the ordinary consolidation principles used in the financial statements and those used in solvency calculations for subsidiaries and significant investments in credit institutions.

Consolidation principles for subsidiaries and other holdings of Danske Bank A/S

	Consolidation of solvency calculations		Consolidation in IFRS accounts	
Subsidiaries and other holdings of Danske Bank A/S	Full	Capital deductions	Full	One line
Credit institutions	√		√	
Significant investments in credit institutions		√		√
Insurance operations (consolidated*)		√	√	
Foreclosed companies (risk-weighted)			√	

* Insurance operations are consolidated using the capital deduction method.

As a financial conglomerate, the Group has obtained approval to use the Danish FSA's deduction method for investments in subsidiaries carrying out insurance operations in line with the conglomerate method stated in the CRR. The Group's statutory deduction for Danica Pension is calculated as Danica Pension's solvency need less the difference between Danica Pension's total capital and the carrying amount of Danske Bank's capital holdings in Danica Pension. This method ensures that the Group's total capital is reduced fully by deductions made from Danica Pension's total capital, among other things.

The statutory deductions for insurance companies were previously divided equally between tier 1 and tier 2 capital. Since 2018, the deductions for subsidiaries carrying out insurance operations are fully deducted from CET1 capital in accordance with the transitional rules of the CRR. At the end of 2019, the total capital deduction for Danica Pension was DKK 8.4 billion.

Total capital deductions for insurance subsidiaries

At 31 December (DKK millions)	2019	2018
Capital requirement at Danica Pension	13,343	13,370
Less the difference between		
- Danica Pension's capital base	25,317	25,819
- Danske Bank's capital holdings	20,887	18,898
Less Danica Pension's holding of Danske Bank shares etc.	472	461
Total deductions for insurance subsidiaries	**8,439**	**5,987**
- Deductions from common equity tier 1 capital	8,439	5,987

Note: The carrying amount of Danske Bank's capital holdings in Danica Pension less the total deduction for Danica Pension from the Group's total capital is included in the total REA calculation at a weight of 100%. Danske Bank's capital holdings in Danica Pension at the end of 2019 reflect the deduction of a proposed dividend from Danica Pension.

The CRR defines capital holdings in other credit and financial institutions that represent more than 10% of the share capital of such institutions as significant investments. Significant investments in financial sector entities, excluding subsidiaries, are subject to a deduction from CET1 capital if the total sum of significant investments is higher than a threshold defined in the CRR. Holdings below the threshold will be risk-weighted at 250%. At the end of 2019, the sum of significant investments held by the Group in financial sector entities was below the threshold, and the deduction was thus not applicable.

5.4.2 Capital and solvency requirements for Danica Pension

The prudential supervision of Danica Pension is governed by the Solvency II framework, which provides for EU-harmonised solvency rules in the insurance sector. Under these rules, Danica Pension's capital requirements are DKK 13.3 billion, and its solvency ratio is 190%, down from 193% at the end of 2018.

Danica Pension's solvency ratio

At 31 December (DKK millions)	2019	2018
Shareholder's equity	20,887	18,898
Differences in valuation between accounts and Solvency II	0,486	3,072
Subordinated liabilities	3,950	3,850
Foreseeable dividends		
Eligible own funds for covering the solvency capital requirement	25,322	25,819
Solvency capital requirement	13,343	13,370
Solvency ratio (%)	190	193

5.4.3 Total capital requirement

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

At the end of 2019, the Group's solvency need ratio was 12.7%, and the combined buffer requirement was 6.7%. When fully phased in, the buffer requirement will be 7.2%, bringing the fully phased-in CET1 capital requirement to 14.9% and the fully phased-in total capital requirement to 19.9%. Assuming fully phased-in rules, the Group would have excess CET1 capital of 2.2% of the total REA at the end of 2019.

Capital ratios and requirements

(percentage of total risk exposure amount)	31 December 2019	Fully phased-in[1]
Capital ratios		
CET1 capital ratio	17.3	17.1
Total capital ratio	22.7	22.5
Capital requirements (incl. buffers)[2]		
Minimum CET1 capital requirement (Pillar I)	4.5	4.5
Capital add-on to be met with CET1 capital (Pillar II)	3.2	3.2
Combined buffer requirement	6.7	7.2
- portion from countercyclical capital buffer	1.2	1.7
- portion from capital conservation buffer	2.5	2.5
- portion from SIFI buffer	3.0	3.0
CET1 capital requirement	14.4	14.9
Minimum capital requirement (Pillar I)	8.0	8.0
Capital add-on (Pillar II)	4.7	4.7
Combined buffer requirement	6.7	7.2
Total capital requirement	19.4	19.9
Excess capital		
CET1 capital	2.9	2.2
Total capital	3.3	2.6

[1] Based on fully phased-in CRR and CRD IV rules and requirements.
[2] The total capital requirement consists of the solvency need ratio and the combined buffer requirement. The fully phased-in countercyclical capital buffer is based on the buffer rates announced at the end of 2019.

Minimum capital requirement

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

Credit risk amounted to 80.4% of the total REA, making it the Group's largest risk type. In collaboration with other national financial supervisory authorities, the Danish FSA has approved the Group's use of the A-IRB approach for the calculation of credit risk.

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

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

Counterparty credit risk (CCR), including central clearing counterparty (CCP) default risk and the credit value adjustment (CVA) risk charge, amounted to 4.9% of the total REA.

Market risk amounted to 5.2% of the total REA. The Group uses an internal VaR model both for market risk on items in the trading book and for foreign exchange risk on items outside the trading book.

Operational risk amounted to 9.6% of the total REA. The Group uses the standardised approach for the calculation of operational risk.

Risk exposure amounts and risk weights

	2019		2018	
At 31 December (DKK millions)	REA	Weight* (%)	REA	Weight* (%)
Credit risk				
A-IRB approach:				
Institutions	3,924	22	4,848	23
Corporates	269,782	30	262,613	30
Exposures secured by real property	156,946	17	152,195	17
Other retail	18,217	23	18,722	23
Securitisations	1,206	45	424	19
Other assets	11,214	76	12,742	85
A-IRB approach, total	461,289	24	451,543	24
F-IRB approach, total	26,347	53	29,650	53
Standardised approach, total	128,842	19	121,661	18
Credit risk, total	616,478		602,855	
Counterparty credit risk	32,010	10	30,581	10
Central counterparty (CCP) default risk	858	7	921	6
Credit value adjustment (CVA) risk charge	4,361		4,686	
Counterparty credit risk (incl. CCP and CVA)	37,228		36,188	
Market risk, total	40,071		30,702	
Operational risk, total	73,400		78,358	
Total risk exposure amount	**767,177**		**748,104**	

* The average risk weight is determined as the REA relative to the EAD for each exposure class.

During 2019, the total REA increased by DKK 19.1 billion to DKK 767.2 billion. The main cause was an increase in credit risk and market risk in 2019.

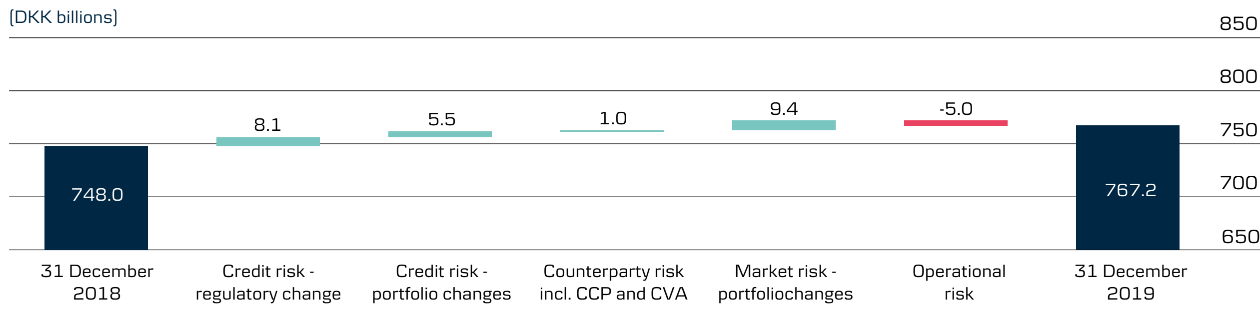
The REA for credit risk increased by DKK 13.6 billion, mainly due to increased credit exposure and the implementation of IFRS 16, leading to changed recognition of rights-of-use assets.

The REA for market risk increased by DKK 9.4 billion from the 2018 level. This was primarily due to increased volatility in the financial markets and specifically large movements in interest rates.

The REA for operational risk decreased by DKK 5.0 billion from the 2018 level. The main cause was a decrease in income.

The REA for counterparty credit risk, including CCP default risk and the CVA risk charge, increased by DKK 1.0 billion from the 2018 level.

Change in total risk exposure amount in 2019



Solvency need

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

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

The Group is involved in a broad range of business activities. These activities can be divided into five segments for the purpose of risk identification: banking, market, asset management, insurance and group-wide activities. The latter category covers management activities that are not specific to any of the first four business segments but broadly support them all. Each of these activities entails various risks, which fall into the ten main categories of the Group's enterprise risk management (ERM) framework. These risks can be mapped to the risk types listed in the Danish Executive Order on Calculation of Risk Exposure, Own Funds and Solvency Need.

Risk identification by Danish FSA risk type

	Danske Bank Group risk categories									
Danish FSA risk types	Credit risk	Market risk	Liquidity, funding and capital risk	Insurance and pension risk	Model risk	Operational risk	Technology risk	Financial crime risk	Conduct risk	Financial control and strategic risk
Earnings		√	√	√						
Credit growth	√									√
Credit risk	√				√	√				
Concentration risk	√	√	√							
Market risk	√	√	√	√	√	√				
Interest risk outside the banking book		√	√							
Liquidity risk			√							
Operational risk	√	√	√	√	√	√	√	√	√	√
Gearing	√	√	√							
Other risk*	√	√	√	√		√	√	√	√	√
Control environment	√	√	√	√	√	√	√	√	√	√

* Includes strategy risk, reputational risk, external risk, group risk and settlement risk.

After identifying the risks, the Group determines how and to what extent they will be mitigated. Mitigation usually takes place by means of business procedures and controls, contingency plans and other measures. Finally, the Group determines the risks to be covered by capital. The Group thus ensures that it has sufficient excess capital to cover the risks associated with its business activities. It uses models and expert assessments to monitor all significant risks.

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

The Group's ICAAP also forms the basis for the Supervisory Review and Evaluation Process (SREP), which is a dialogue between a financial institution and the relevant financial supervisory authority on the institution's risks and capital needs.

At the end of 2019, the Group's solvency need was DKK 97.3 billion, or 12.7% of its total REA. The solvency need increased by DKK 8.8 billion.

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

Combined buffer requirement

CRD IV introduced a combined buffer requirement that applies in addition to the solvency need ratio, and it was fully phased in from the beginning of 2019. The combined buffer consists of a countercyclical buffer, a capital conservation buffer and a SIFI buffer and must be funded with CET 1 capital.

The capital conservation buffer and the countercyclical capital buffer are designed to ensure that credit institutions accumulate a sufficient capital base during periods of economic growth to absorb losses during periods of stress. The capital conservation buffer is now fully phased in at a level of 2.5%. The countercyclical buffer requirement is calculated as a weighted average of the national buffers in effect in the jurisdictions in which an institution has credit exposures. The Group's countercyclical buffer rate of 1.2% at the end of 2019 was based primarily on the countercyclical buffer rates in Denmark (set at 1.0%) and in Norway and Sweden (both set at 2.5%). The Group takes into account announced national buffer rates when determining its fully phased-in capital requirement.

The Group was designated as a SIFI in Denmark in 2014. Consequently, the Group is subject to higher capital requirements than non-SIFIs. The phase-in began in 2015, and the Group's SIFI buffer requirement was fully phased in at 3% at the beginning of 2019.

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

As stated in the CRR, any dividends on CET1 and additional tier 1 capital instruments must be paid from distributable items. These are primarily retained earnings. At the end of 2019, Danske Banks A/S's distributable items amounted to DKK 121.1 billion.

Distributable items for Danske Bank A/S

At 31 December (DKK billions)	2019	2018
Retained earnings	114.1	109.7
Proposed dividends	7.3	7.6
Interest on AT1 capital instruments, not distributed	0.1	0.1
Foreign currency translation reserve	-0.4	-0.7
Distributable items	**121.1**	**117.4**

5.4.4 Leverage ratio

The leverage ratio represents a non-risk-adjusted capital requirement implemented to serve as a further backstop measure for risk-based capital. Since January 2014, the CRR/CRD IV rules have required that a credit institution calculate, monitor and report on its leverage ratio (defined as tier 1 capital as a percentage of total leverage exposure). On the basis of the implementation of the revised CRR, a leverage ratio of 3% will become a minimum requirement in the second quarter of 2021.

Even though the leverage ratio is not yet a regulatory binding capital requirement, the Group still takes it into consideration in its capital management process. The Group's overall monitoring of leverage risk is performed in the ICAAP, which also includes an assessment of changes in the leverage ratio under stressed scenarios. On a monthly basis, the Group determines and monitors its leverage ratio. To ensure sound monitoring, the Group has set forth policies for the management and control of each component that contributes to leverage risk.

At the end of 2019, the Group's leverage ratio was 4.7% under the transitional rules and 4.6% under the fully phased-in rules.

Leverage ratio

At 31 December (DKK billion)	2019	2018
Total exposure for leverage ratio calculation	3,359.7	3,278.7
- portion from derivatives	125.6	145.1
- portion from securities-financing transactions	359.0	335.5
- portion from exposure to central banks, institutions and cash in hand	180.0	209.3
Reported tier 1 capital (transitional rules)	156.6	150.5
Tier 1 capital (fully phased-in rules)	155.3	149.0
Leverage ratio (transitional rules) (%)	4.7	4.6
Leverage ratio (fully phased-in rules) (%)	4.6	4.5

Under the transitional rules, the leverage ratio increased by 0.1 percentage points during 2019. The increase was driven by an increase in tier 1 capital.

5.4.5 Minimum requirement for own funds and eligible liabilities

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

The national resolution authorities are required to set an MREL on the basis of the institution-specific resolution plan for each individual institution. The resolution plan for Danske Bank is based on a single-point-of-entry (SPE) approach at the group level. The requirement for the Group is calibrated in accordance with the Danish FSA's resolution strategy. This strategy states that a systemically important financial institution (SIFI) is to be recapitalised in order for the entire institution to be able to continue its activities post resolution. Consequently, the MREL for a SIFI is calculated as twice the total capital requirement, including the combined buffer requirement. However, the countercyclical capital buffer is included only once. At the end of 2019, the requirement was 37.6%. The MREL ratio was 40.0%, supported by issues of non-preferred senior debt in the amount of DKK 60.2 billion in 2019.

Since mortgage credit institutions are exempt from the MREL, Realkredit Danmark figures are excluded in the consolidation for the purposes of determining the MREL. Thus, the calculation of the risk exposure amount to be used for determining the Group's MREL does not include the risk exposure amount for Realkredit Danmark.

The exclusion of Realkredit Danmark figures from this consolidation is shown in the table below. Furthermore, the capital and debt buffer requirements applicable to Realkredit Danmark are deducted from the liabilities and own funds used for the fulfilment of the MREL.

Total REA for Danske Bank Group excluding Realkredit Danmark figures

At 31 December (DKK billions)	Q4 2019	Q4 2018
Danske Bank Group REA	767	750
Deduction for RD REA contribution to Group REA	-150	-150
REA adjustment for Danske Bank A/S exposure to RD		
Add-on for guarantees	30	31
Add-on for bonds, repos and derivatives	3	2
Add-on for RD equity (100% risk weight)	50	50
Deduction of RD capital and debt buffer requirements	-40	-38
Group REA adjusted for RD	661	643
MREL liabilities - Danske Bank A/S	304	255
Deduction for RD capital requirements	-25	-24
Deduction for RD debt buffer requirement	-14	-14
Available MREL liabilities in DKK	264	217
Available MREL liabilities as % of REA adjusted for RD	40.0	33.7

In 2017, the BRRD was amended to include an EU-harmonised approach to bank creditor insolvency rankings. This meant the introduction of a new creditor class for credit and financial institutions. The creditor class covers "non-preferred senior debt" (NPS), that is, typically senior funding programmes fulfilling some specific requirements. The new creditor class ranks immediately below ordinary unsecured claims. The purpose of the creditor class is to improve the possibility of bailing in such non-preferred senior debt in case of the resolution of the individual institution. In July 2018, these changes were implemented in Danish legislation with retroactive effect from 1 January 2018.

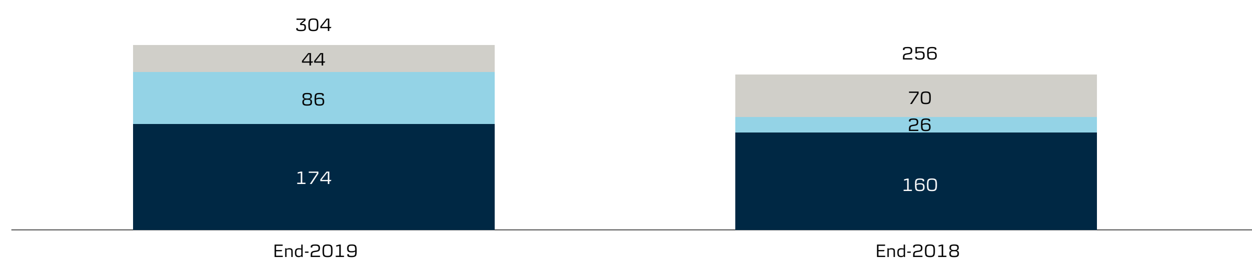
Institutions may use their available own funds (CET1, AT1 and T2 capital) as well as certain debt instruments for the MREL calculation, provided that they meet regulatory requirements. However, the Danish FSA stipulates that only liabilities and own funds that bear losses before other senior unsecured claims in resolution and insolvency may be included in the calculation for MREL fulfilment (subordination requirement). This effectively means non-preferred senior debt (see above). Debt issued before 1 January 2018 that fulfils all the criteria for MREL-eligible liabilities and own funds (with the exception of the subordination requirement) may be included until 1 January 2022. The subordination requirement implies that the Group's long-term funding need in the senior unsecured format will, to a large extent, be met by issues of non-preferred senior debt.

The Danish FSA's current approach to the MREL is based on the Danish implementation of the BRRD, and hence the framework for setting the MREL might be revised in the context of the ongoing legislative process to implement the revised BRRD (BRRD II).

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

Composition of the Group's eligible liabilities*

(DKK billions) Own funds NPS > 1 year Senior preferred debt >1 year



* "Senior preferred" is classified as eligible liabilities until 1 January 2022. Structured notes are included in eligible liabilities.
The sum of eligible liabilities is calculated before the deduction of the capital and debt buffer requirements applicable to Realkredit Danmark.

5.5 Future regulatory requirements

5.5.1 Basel IV

In December 2017, the Basel Committee on Banking Supervision (BCBS) published the final, revised standards for REA calculations. The standards are also known as “Basel IV”. As stated by the BCBS, the standards are revised in order to restore credibility in REA calculations and to improve the comparability of the capital ratios of financial institutions. This will be done by

- enhancing the robustness and risk sensitivity of the standardised approaches for calculating the REA
- constraining the use of internal model approaches by introducing parameter floors under the internal ratings-based (IRB) approach and by removing the use of internal model approaches for credit valuation adjustment (CVA) and for operational risk
- introducing a REA output floor of 72.5% of the total REA measured by the revised standardised approaches

The BCBS recommends that the constraints on internal models and the revised standardised approaches be implemented from 2022. The REA floor will be subject to a phase-in period from 2022 to 2027. The final EU implementation date is subject to the EU implementation process.

The Group supports the ambition of the BCBS to re-establish confidence in internal models. This is best achieved by addressing key concerns directly in the internal models and maintaining the risk sensitivity of the capital adequacy framework.

The process for its implementation in the EU has recently started, and a legislative proposal from the European Commission is expected in the second quarter of 2020. The final outcome of EU implementation is thus still subject to uncertainty.

5.5.2 New directive on covered bonds

In December 2019, the EU covered bonds package was adopted. It outlines requirements for bonds to be recognised as covered bonds under EU law. This includes a requirement for a new cover pool liquidity buffer and stipulates eligible cover pool assets. Furthermore, the package introduces a new requirement of a minimum level of cover pool overcollaterisation. Depending on the transposition of the directive in the individual EU member states, the Group expects the new rules to have a limited effect on the Group since the proposal, to some extent, introduces features that are already part of legislation on covered bonds in Denmark.

5.5.3 EU risk reduction measures – RRM package (CRD V, CRR II and BRRD II)

In May 2019, the EU banking package (CRD V, CRR II and BRRD II) was adopted. CRD V and BRRD II are to be implemented into national law by the end of 2020, while CRR II will apply from the end of the second quarter of 2021. The Group expects CRR II and CRD V to have a limited capital and REA effect on the Group. Among several changes, the package includes the implementation of the leverage ratio (LR), the net stable funding ratio (NSFR) and the fundamental review of the trading book (FRTB) (the latter as a reporting requirement). In addition, the Pillar II framework will be harmonised to ensure alignment with the international standards and to ensure further harmonisation towards a single rule book in the EU. As regards BRRD II, the package introduces changes to the future MREL in relation to the size of the requirement, the composition of eligible liabilities and the phase-in period.

As regards the LR, the agreed 3% minimum requirement for non-global SIFIs will not be binding as opposed to the risk-based requirement. Global SIFIs will be subject to an LR add-on equal to 50% of the G-SII buffer. In addition, the Commission is mandated to submit a report to the EU co-legislators on the appropriateness of an LR add-on for domestic SIFIs (O-SIIs). As a non-G-SIFI, the Group will be subject to a 3% leverage ratio requirement.

As regards the FRTB, the changes to the CRR relate only to supervisory reporting standards, so the existing market risk framework will continue to apply as a capital requirement in parallel with new reporting standards. The implementation of the Basel FRTB standard is likely to be proposed by the Commission by the end of June 2020.

Insurance and pension risk

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6.1 Insurance and pension risk management

Danske Bank Group's insurance and pension risk consists of the risks originating from its ownership of Danica Pension. This includes market risk, life insurance risk and operational risk. The Group runs its life insurance and pension operations with the aim of providing best-in-class services to customers, while at the same time maintaining a predictable risk profile. The Group is also subject to internal pension risk through its defined benefit plans established for current and former employees. For a description of this particular risk, see section 4.

The insurance and pension risk framework is governed by Danica Pension's Board of Directors. On a daily basis, Danica Pension's Risk Management function monitors the risk limits set by its Board of Directors as well as the solvency capital requirements, follows up on investment limits and calculates key risk figures for asset-liability management (ALM) purposes.

6.1.1 Danica Pension's risks

Operating under the Solvency II rules, Danica Pension provides pensions as well as life and health insurance products in Denmark and Norway. In Denmark, Danica Pension's main product offerings are with-profit policies and unit-linked policies.

Two types of life insurance product in Denmark

With-profits policies
Danish with-profits policies have a guaranteed benefit based on a technical rate of interest (currently 0.5% for new policies). The policyholders earn interest at a rate set for each year at the discretion of the life insurance company, and the rate can be changed at any time.

The difference between the actual (set) interest rate and the return on the policyholders' savings in a given year is added to the collective bonus potential and can be used as a buffer.

At Danica Pension, with-profits policies are called *Danica Traditionel*.

Unit-linked policies
Unit-linked policies are policies in which investments are allocated to the policyholders, and they can then decide how to invest their pension savings themselves or let Danica Pension invest the savings.

In unit-linked policies, the policyholders receive the actual return on the investments rather than a fixed interest rate. The policyholders bear most of the investment risk. If a guarantee is attached to the policy, Danica Pension bears the risk for this guarantee.

The main unit-linked product, *Danica Balance*, gives the policyholders the option to have their benefits guaranteed.

As part of its product offerings, Danica Pension provides guaranteed life annuities; insurance against death, disability and accident; and cover against adverse investment returns. This exposes the Group to underwriting risks such as longevity and disability risks as well as to market risk.

Underwriting risk is the risk of losses from the insurance business. At Danica Pension, these risks are almost exclusively life insurance risks, and they arise naturally out of the business model. Most underwriting risks materialise over long time horizons during which the gradual changes in biometric conditions deviate from those assumed in contract pricing.

Lapse risk (customers leaving Danica Pension or ceasing to pay premiums) is the most prominent type of insurance risk since Danica Pension's profitability depends highly on the volume of customers and assets under management. Danica Pension has a large offering of life annuities that will pay fixed pension benefits during a policyholder's lifetime, and this makes longevity risk the second most prominent type of underwriting risk for the Group. Most pension products come with life and disability insurance, which entails exposure to mortality and disability risk. Health and accident insurance policies are typically shorter, so slowly materialising risks can be handled by means of repricing.

In with-profits policies, the policyholders bear the market risk, but in case of large losses that cause the customer buffers to be depleted, Danica Pension will have to step in with funds to ensure that the benefits guaranteed to the policyholders can be provided. Danske Bank A/S has no obligation to provide capital to Danica Pension to help re-establish its solvency position. Danica Pension can issue and has previously issued capital in the form of restricted tier 1 or tier 2/3 instruments.

In unit-linked policies, losses may reduce the assets under management and thus deplete future asset management fees in the long term. This means that Danica Pension bears only part of the investment risk.

6.1.2 Governance and responsibilities

The general strategic goals and the risk management framework for Danica Pension are decided by its Board of Directors. It identifies the material risks to which Danica Pension is exposed and sets limits on measures of aggregate risk. The daily risk management activities are based on Danica Pension's risk management policy issued by its Board of Directors.

Danica Pension's risk management activities are overseen by its All Risk Committee, which is chaired by Danica Pension's chief risk officer (CRO). The All Risk Committee is responsible for monitoring the complete risk profile across all risk types and undertakings.

Danica Pension's All Risk Committee is supplemented by the Asset and Liability Management (ALM) Committee, which manages the risks arising from differences in exposures between assets and liabilities and also ensures that limits set by the Board of Directors are not breached. The ALM Committee is chaired by Danica Pension's CRO, and it has representatives from the risk, actuarial and investments functions.

Danica Pension's CRO reports to the CEO of Danica Pension and to the Wealth Management CRO at Group Risk Management.

6.1.3 Risk identification and assessment

Risks related to Danish with-profits products

The main source of risk at Danica Pension is the Danish with-profits pension product. This product offers the policyholders an annuity of a guaranteed minimum amount in nominal terms, but lets them participate in a collective investment pool where returns may lead to higher benefits than those guaranteed. The present value of the guaranteed benefits depends on the level of interest rates used for discounting. If the value of the assets falls below the present value of the liabilities, Danica Pension will have to cover the shortfall. As the only shareholder of Danica Pension, Danske Bank A/S will incur a loss in the form of a decrease in equity holdings, but Danske Bank A/S does not have any obligation to inject further capital into Danica Pension. Managing this product thus involves a combination of managing the risks on behalf of the policyholders and managing the risk that Danica Pension will have to cover losses.

Danica Pension uses interest rate hedging to maintain customer buffers and considers any duration mismatch between assets and liabilities to be an active investment decision. The interest rate used for discounting the technical provisions is the Solvency II discount curve. It is based primarily on the EUR swap rate and also takes into account yields on Danish mortgage bonds and government bonds. It is not possible for Danica Pension to invest in instruments that completely hedge the liabilities using this discount curve, and therefore some basis risk remains. The level of the long end of the discount curve, for which no reliable market data are available, is determined by the European Insurance and Occupational Pensions Authority (EIOPA).

Derivatives used for hedging may give rise to counterparty credit risk, but this is mitigated by requiring counterparties to provide full collateral and by using many different counterparties with high ratings.

The guaranteed life annuities included in the with-profits product give rise to longevity risk. This risk is generally not hedged since it is a natural element of the business model, but rather focuses on prudent pricing of the risk.

Longevity risk is managed by means of an internal model approved by the Danish Financial Supervisory Authority (the Danish FSA) for use in solvency reporting. This model is based on the Danish FSA's life expectancy benchmark and longevity observations of Danica Pension's policyholders.

Risks related to unit-linked products

Approximately 80% of unit-linked policies have no financial guarantees. In these policies, the policyholders bear most of the investment risk. In the rest of the unit-linked policies, which consist mainly of *Danica Balance* policies, the policyholders have investment guarantees. The guarantees do not apply until the time of retirement, and they are paid for by an annual fee.

The risk on these guarantees is managed by adjusting the asset allocation to high-risk assets for each individual policy. The adjustments ensure that sufficient funds are available to cover guarantees even after a substantial decline in asset prices.

Danica Pension's activities in Norway accounted for 4% of its total provisions at the end of 2019. In this market, Danica Pension offers mainly unit-linked products without guarantees, and this gives rise to relatively little risk.

6.1.4 Risk monitoring and reporting

Danica Pension monitors sensitivities to various stresses from market and underwriting risks, and a number of these stresses are listed below. Losses borne by Danica Pension in these scenarios are generally limited since most of the losses are absorbed by buffers or borne by the policyholders themselves.

Specialised functions monitor and report on individual risks, and these tasks are coordinated by Danica Pension's All Risk Committee, as described in Danica Pension's risk management policy issued by its Board of Directors.

Sensitivity analysis for Danica Pension

At 31 December 2019 (DKK billions)	Effect on shareholders' equity
Interest rate increase of 0.7-1.0 percentage points	0.1
Interest rate decrease of 0.7-1.0 percentage points	-0.2
Decline in equity prices of 12%	-0.2
Decline in property prices of 8%	-0.3
Foreign exchange risk (VaR 99.0%)	-
Loss on counterparties of 8%	-

Stress and sensitivities are also reported to Danske Bank A/S through Group Risk Management (the Wealth Management CRO organisation) and CFO Area (Capital Management).

Danske Bank A/S owns Danica Pension, and Danske Bank's financial results are thus affected by Danica Pension's financial position. Earnings from Danica Pension consist mainly of the risk allowance from with-profits policies, the investment return on Danica Pension's equity capital and income from the administration of unit-linked policies.

6.2 Insurance risk profile

The Danish market for pension products continues to be competitive, with little prospect of increases in total market volume. The market is dominated by a small number of large commercial and mutual pension insurance companies with similar product offerings.

The low-yield market environment does not directly influence the short-term financial stability of Danica Pension because the interest rate risk on all liabilities is hedged, and there are no major differences in the interest rate sensitivities for accounting and solvency purposes. The main difficulty lies in a slower build-up of assets under management and customer buffers, which may adversely affect income in the long run.

Danica Pension's balance sheet broken down by business segment

At 31 December 2019 (DKK billions)	With-profits policies	Unit-linked policies	Health and accident insurance policies
Profit margin	2.9	3.7	-
Risk margin	1.4	0.3	-
Collective bonus potential	13.9	-	-
Individual bonus potential	0.2	-	-
Other provisions	170.4	227.3	17.6
Provisions for insurance and investment contracts	**188.8**	**231.3**	**17.6**

6.2.1 Main developments in 2019

Danica Pension sold its Swedish subsidiary, Danica Pension Sweden, in May 2019 after the authorities had given their approval. The sales price was SEK 2.6 billion. As agreed, Danske Bank and Danica Pension Sweden will continue their collaboration to distribute pension products in Sweden.

As a result of the purchase of SEB Pension Denmark, more than 200,000 customers were migrated to Danica Pension.

Non-financial risk

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7.1 Introduction to non-financial risk

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

The purpose of this section is to describe the Group's approach to managing non-financial risks. Subsection 7.1 describes the Group's overall approach to non-financial risk management, while subsection 7.2 elaborates on the Group's management of specific non-financial risk categories.

The Group recognises the importance of strengthening its management of non-financial risks. Accordingly, the Group has developed a comprehensive plan to manage non-financial risks in order to meet Danske Bank's risk objective.

In 2019, the Group continued to implement changes to its non-financial risk management framework and to increase awareness of non-financial risks throughout the Group. Important developments were made in the following key areas:

- **Risk and compliance culture:** The Group strengthened its non-financial risk awareness through various mandatory training programmes and team sessions. The Group launched an internal website, "DoRight", that allows employees to share their concerns and more easily find relevant information about the rules and standards for conducting business at Danske Bank. Additionally, the Group implemented an improved whistleblower system to make it easier for employees to report their concerns of non-compliance with applicable laws and regulations as well as breaches of internal standards, irregularities and criminal offences. Moreover, the risk and compliance culture was further reinforced by the Group's approach to remuneration. The Executive Leadership Team uses a set of key performance indicators (KPIs) to measure the risk and compliance culture. These KPIs are set for each Executive Leadership Team member's areas of activities.
- **Strengthening risk and compliance competences:** Additional resources were recruited throughout 2019 in both risk and compliance areas to ensure that sufficient skills and expertise are in place. The Group launched the new Group Non-Financial Risk (GNFR) organisation to ensure alignment with the oversight responsibility laid out in the Group's enterprise risk management (ERM) framework. Group Compliance implemented a new organisational structure to strengthen the function and establish clearer roles and responsibilities.
- **Framework and policy:** The Group redesigned frameworks and policies for simplification purposes and to strengthen compliance with internal and external requirements.
- **Event management and lessons learned:** Enhancements to the Group's risk management and culture initiatives led to better identification of legacy issues. Such issues were raised and understood in a more thorough manner.

Strengthening the management of non-financial risks is a continuous process. It is important to note that inspections made by the Danish Financial Supervisory Authority (the Danish FSA) pointed out material gaps in both the Group's IT risk management and market abuse surveillance frameworks. Remediation plans were drafted to address the gaps in IT risk management, and the plans are expected to be shared with the Danish FSA in the first quarter of 2020. A remediation programme is already underway to address the issues relating to market abuse surveillance, and improvements were made during 2019.

Additionally, significant progress is being made in addressing the orders from the Danish FSA in relation to the issues surrounding the sale of the Flexinvest Fri product.

7.1.1 Non-financial risk management

In accordance with the Group's risk taxonomy as set out in its ERM framework (see section 2), non-financial risk consists of six risk categories:

The Group's approach to non-financial risk management is set out in a number of governing documents. The Group Non-Financial Risk Policy is the overarching policy and lays down the principles and responsibilities for managing non-financial risks across the three lines of defence. In 2019, the Group upgraded this policy in order to ensure better alignment with the Group's ERM framework, to reflect the full definition and scope of non-financial risks and the roles and responsibilities for managing such risks, and to ensure that regulatory documentation expectations are met.

Implementation of the non-financial risk management framework is linked to the process of building and maintaining a strong risk and compliance culture across the Group. All employees, including Executive Leadership Team members,

participate in annual compulsory eLearning courses on competition law, anti-money laundering, whistleblowing, GDPR and information security awareness, for example.

The Group's forward-looking approach to non-financial risk management is intended to focus on risk identification and assessment of operational, financial crime, conduct, technology, model, and financial control and strategic risks in accordance with the Group's newly defined taxonomy for non-financial risks. The Group also conducts scenario analyses to understand exposure to low-frequency high-severity events. Results from risk assessments and stress tests are used as input for assessing the adequacy of the Group's capital position. Moreover, the Group's risk management relating to changes, particularly with respect to the introduction of new products, is fundamental in supporting the Group's ambition of creating value for all of its stakeholders. In 2019, the Group strengthened its governance procedures for new and amended product approvals.

The Group takes mitigating action and learns from non-financial risk events that have materialised in order to mitigate the likelihood and impact of such risk events to ensure that the risk tolerance threshold is not breached.

The non-financial risk tolerance threshold is set for net losses after recoveries for a calendar year. Compliance with this tolerance threshold is monitored and reported in accordance with internal procedures.

7.1.2 Governance and responsibilities

Business units and functions across the Group, including dedicated business risk and control units, are responsible for the management of non-financial risks, acting as the first line of defence. They are in charge of managing non-financial risks in accordance with the Group's risk tolerance threshold. The Group's second line of defence consists of Group Risk Management and Group Compliance, and these functions oversee all non-financial risks. In 2019, the Group launched the new Group Non-Financial Risk (GNFR) organisation to ensure alignment with the oversight responsibility laid out in the ERM framework. Resources were recruited throughout 2019 in both risk and compliance areas to ensure that sufficient skills and expertise are in place.

In order to support a strong governance structure and effectively cover specific non-financial risk categories, the Group All Risk Committee has a number of non-financial risk sub-committees, including the Operational Risk Committee (ORCO), the Conduct & Reputational Committee (CRP) and the Model Risk Management Committee (MRMC). Furthermore, non-financial risks are overseen by two of the Board of Directors' committees: the Risk Committee and the Conduct & Compliance Committee.

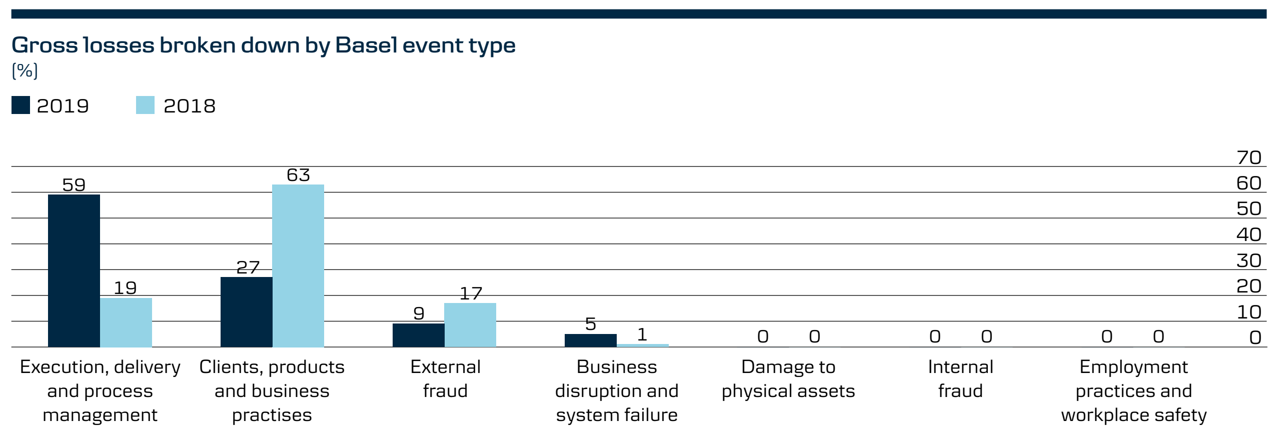
7.1.3 Risk assessment and event management

It is a prerequisite for non-financial risk management that the Group understands and maintains an overview of its organisation and takes ownership of its activities. Furthermore, non-financial risk events are registered and categorised according to reporting thresholds in order to analyse and learn from previous events.

In 2019, the Group registered materialised events in accordance with defined reporting thresholds and extracted lessons learned. Additionally, legacy issues were raised and understood in a more thorough manner. The following chart provides an overview of the Group's materialised losses broken down by Basel event type.

Gross losses broken down by Basel event type

(%)



Note: The chart shows gross losses for non-financial risks broken down by Basel event type, as reported for COREP reporting.

In 2019, the "Execution, delivery and process management" event type accounted for the majority of the actual losses incurred (59%). Additionally, the "Clients, products and business practises" event type saw much lower losses than in 2018 (27% against 63%). This was because the estimated costs associated with compensating Danish Flexinvest Fri customers were recognised as a 2018 loss of this risk type.

7.1.4 Monitoring and reporting

Significant non-financial risk events from across the Group are monitored and reported to the Executive Leadership Team, the Board of Directors, the Danish FSA and, where applicable, to relevant local financial supervisory authorities (FSAs).

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

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

7.2 Non-financial risk categories

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

7.2.1 Operational risk management

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

Operational risks are managed in accordance with the Group Non-financial Risk Policy, which is supported by additional policies and instructions, including but not limited to the following:

- Product Governance Directive for New & Amended Product Approval (NAPA) – covering the governance of products, services or channels throughout their lifecycles. In 2019, an updated version of this directive strengthened the governance of and processes for new and amended product approvals, and implementation was initiated across the entire organisation.
- Outsourcing Policy – setting out the standards for managing intragroup and external outsourcing activities and risks.
- Business Continuity Management (BCM) Directive – setting standards for and guidelines on how to identify critical business processes and prepare for disruptive incidents that could have an adverse impact on the Group.

The Group's management of operational risks is in line with the general three-lines-of–defence approach for non-financial risks as described in section 7.1.2.

Semi-annually, the Group's operational risk loss events are reported to the Danish FSA on the basis of the European Banking Authority's standards for common reporting (COREP). Significant operational risk events across the Group are monitored and reported as described in section 7.1.3. Operational risk is assessed annually within the scope of the Group's Internal Capital Adequacy Assessment Process.

7.2.2 Financial crime risk management

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

The Group´s business units and functions constitute the first line of defence and are responsible for identifying financial crime risks and for having appropriate processes and controls in place to ensure that risks are analysed, measured, monitored, managed and reported.

The Financial Crime function under Group Compliance constitutes the second line of defence and is responsible for designing frameworks and policies and for providing independent oversight and challenges to ensure that financial crime risks are managed in an effective manner.

The Group has set up units for regular quality assurance, control testing and risk assessment. In addition, the second line of defence performs intelligence- and analytics-based reviews.

A group-wide risk assessment is performed on an annual basis to measure the Group's exposure to financial crime risks. The group-wide risk assessment provides an overview of areas that have the highest risks of being misused for financial crime purposes and also rates the effectiveness of the Group's controls.

The Group has taken a number of initiatives to combat financial crime, including the establishment of a multi-year financial crime enhancement programme.

In 2019, key actions and projects relating to financial crime included the following:

- Customer due diligence: the Group enhanced the way it performs customer due diligence processes and allocated additional resources for onboarding new customers and refreshing the due diligence processes for existing customers.
- Risk ranking: the Group refined its methodology for evaluating the potential financial crime risks posed by customers.
- Sanctions: the Group strengthened its capabilities to respond to and manage emerging sanctions risks.

Financial crime risks are reported on a frequent basis to ensure that the Executive Leadership Team has sufficient information to make decisions, including escalating potentially problematic cases to the Board of Directors.

7.2.3 Conduct risk management

Conduct risk is the current or future risk of an inappropriate supply of financial services, mistreatment of customers or failure to maintain the integrity of markets and financial services. Conduct risk also includes cases of wilful or negligent misconduct. As part of Danske Bank's ongoing commitment to customers and markets, the Group continues to enhance its conduct risk management to help drive a long-term sustainable business model.

Group Compliance is responsible for conduct risk oversight in relation to the implementation and control of sound conduct risk management.

A dedicated Group Compliance conduct team has been established to enhance the Group's conduct risk management framework. Group Compliance monitors compliance with legal and regulatory requirements and internal policies and provides advice on compliance to the first line of defence, the Executive Leadership Team and the Board of Directors. A remediation programme is addressing material gaps in the Group's market abuse surveillance.

Group Compliance, in collaboration with Group Risk Management, has streamlined monitoring as well as internal and external conduct risk reporting.

7.2.4 Technology risk management

Technology risk is the potential risk that a given threat will exploit vulnerabilities of an asset or a group of assets and thereby cause harm to Danske Bank. It includes data and system risks, such as unforced failures in technical infrastructure or data integrity. Technology risks are generally related to IT assets, such as IT systems, computers, mobile devices, software, facilities, processes and data. Managing technology risks includes compliance with confidentiality, change management, integrity and availability requirements.

As the first line of defence, Group IT is responsible for managing technology risks. Group IT submits quarterly reports on technology risks to Group Non-financial Risk, which, as the second line of defence, oversees technology risks across the Group. Additionally, Group IT provides monthly updates on cybersecurity and system level risks to Group Non-financial Risk.

The Danish FSA's inspection of the Group's IT governance structure in 2019 pointed out material gaps in the Group's IT risk framework. Remediation plans are expected to be shared with the Danish FSA in the first quarter of 2020.

In 2019, IT security was improved in specific areas, including the following:

- A new security countermeasure (email gateway) was deployed to strengthen the Group's capability of detecting and blocking malicious content distributed through emails.
- The security teams strengthened the Group's capability of preventing, detecting and responding to cyber incidents.
- The Group improved its IT risk management practices by formalising risk management processes. Furthermore, the Group continued the development of processes and the governance structure needed to effectively monitor and manage risks from an IT perspective.

The IT Risk Council meets on a quarterly basis and provides status updates on risk identification, risk management execution, risk acceptance and risk escalation within Group IT.

7.2.5 Model risk management

Models are increasingly used by the Group because of their essential role in risk management across risk types. Models also play an important role for the Group to pursue its strategy, improve customer experience and drive efficiency and agility. Driving digitalisation and providing digital platforms require automation and the use of models. The use of models constitutes model risk, which is the risk of adverse consequences resulting from decisions based on incorrect or misused model outputs and reports.

In 2019, the Group focused its efforts on strengthening its model risk framework by providing resources for and implementing the framework across the Group.

The Group manages model risks in accordance with its Model Risk Policy. The Model Risk Policy sets out standards and principles for model governance, while supporting the Group's business strategy.

Model risks are managed by model owners, and they are responsible for the data quality, implementation and appropriateness of models and for adherence to the model risk tolerance statement.

The Model Risk Management (MRM) function (second line of defence) is responsible for developing and maintaining the Model Risk Policy and for model risk oversight, including independent model validation.

Model risks are reported on a monthly basis to the Model Risk Management Committee and the Group All Risk Committee.

7.2.6 Financial control and strategic risk management

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

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

As the first line of defence, the Transformation Office (CFO Area) is responsible for developing the group-level business strategy in co-operation with business units and other Group functions and for ensuring that strategy risks are identified and managed.

Business units are in charge of implementing and executing on the strategy and taking corrective action in relation to deviations and risks relating to strategy operationalisation. The implementation approach is tested against the Group's risk appetite to ensure alignment.

Strategic risks are monitored by the owner of each strategic initiative and by business unit heads. Potential strategic risks are reviewed quarterly by the Executive Leadership Team and at least twice a year by the Board of Directors. If the strategy execution deviates significantly from specifications, it is escalated to the Executive Leadership Team or to the Board of Directors.

Management declaration

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8.1 Management declaration

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

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

Board declaration

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

Risk statement

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

At the end of December 2019, the Group's solvency need ratio was 12.7%.

As a consequence of increased capital requirements and general uncertainty about future regulation, the Board of Directors decided to change the target for the Group's CET1 capital ratio in 2019. The target for the CET1 capital ratio was set to above 16% in the short term to ensure a sufficiently prudent capital buffer. The target for the total capital ratio was kept at above 20%. At the end of December 2019, the Group's CET1 capital ratio was 17.3% and its total capital ratio was 22.7%.

Credit risk is managed in accordance with the Group's Credit Policy, Credit Risk Instructions, Credit Risk Appetite and credit risk framework. The Group operates with a credit risk appetite to limit impairment volatility and manage credit risk concentrations (limits on single names, industries and geographical regions). Risk reporting enables ongoing monitoring of the Group's credit risk profile to ensure that it remains in line with the credit risk appetite.

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

The Group manages its liquidity on a daily basis by using risk indicators, risk triggers and a liquidity risk appetite as defined in the Group's Liquidity Policy and Liquidity Instructions. The policy documents define the limits and methods for calculating liquidity risk and set the overall principles and standards for the Group's liquidity management. At the end of December 2019, the Group's liquidity coverage ratio was 140% – well above the internal limit set at 110% by the Board of Directors. The Group's long-term debt was rated 'A'/'A'/'A3' (S&P Global/Fitch Rating/Moody's) at the end of December 2019.

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

BOARD OF DIRECTORS

Karsten Dybvad *Chairman*	Jan Thorsgaard Nielsen *Vice Chairman*	Carol Sergeant *Vice Chairman*
Lars-Erik Brenøe	Bente Avnung Landsnes	Jens Due Olsen
Christian Sagild	Gerrit Zalm	Bente Bang
Kirsten Ebbe Brich	Thorbjørn Lundholm Dahl	Charlotte Hoffmann

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

Annual Report 2019

Corporate Governance Report 2019

Sustainability Report 2019

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