Nordea

Capital and Risk Management Report 2019

Provided by Nordea Bank Abp on the basis of its consolidated situation

Updated version including amendments to table 67 on page 148

Nordea Board of Directors' risk statement

Nordea's business model is well-diversified with the largest risks being credit and liquidity risks.

Nordea Group

The Nordea Group is the largest financial services institution in the Nordic region and a major European bank with a market capitalisation of approximately EUR 29.3bn, total assets of EUR 555bn and a Common Equity Tier 1 (CET1) capital ratio of 16.3%. The Nordea Group is a prominent Nordic retail bank, number one wholesale bank and the largest private banking, asset management and life and pension provider in the Nordic region.

Nordea has the largest distribution network and customer base in the Nordic region with approximately 9.3 million household customers, 530,000 small and medium-sized corporate customers, and 2,650 large corporate and institutional customers.

Risk Appetite

Nordea has the following capital ratios: CET1 capital ratio of 16.3%, Tier 1 capital ratio of 18.3% and own funds ratio of 20.8% at the end of 2019. Risk capacity is set on an annual basis as the maximum level of risk Nordea is deemed able to assume given its capital (own funds), its risk management and control capabilities, and its regulatory constraints. The risk appetite within Nordea is defined as the aggregate level and types of risk Nordea is willing to assume within its risk capacity in line with its business model, to achieve its strategic objectives. On-going monitoring and reporting of risk exposures against the risk limits is carried out to ensure that risk taking activities remain within risk appetite.

Key risks in Nordea's operations

A risk strategy has been developed to support strategic initiatives while ensuring a strong risk culture and control mechanisms across the Group. The overall goal is to support business momentum and structural cost reduction by being focused on our strategic priorities that lead to measurable risk and compliance improvements.

Nordea has a well-diversified business model. Risks are spread across a number of countries, industries and customer types. Material risks to the Group derive from business activities spread across banking, trading, insurance and asset management activities.

Nordea is an active lender to wholesale and institutional customers, through its business area "Large Corporates & Institutions", small and medium-sized entities, through "Business Banking", and households and individuals, through "Personal Banking". This gives rise to credit risk, which is Nordea's primary financial risk, representing approximately 86% of total risk exposure amount (REA).

Credit risk losses during 2019 were approximately EUR 536m (including EUR 282m on items affecting comparability; relating to subdued outlook in certain sectors following dialogues with the European Central Bank and the impact from reviewing the collective provisioning models) compared to REA of EUR 129.6bn attributed to credit risk at the end of Q4 2019. Nordea strives to maintain a well-diversified credit portfolio adapted to the structure of Nordea's home markets and economies. The credit risk appetite statement is defined in terms of credit risk concentration (limits for single names, specific industries and geographies), long-term credit quality (expected loss), short-term forward-looking credit quality (loan losses under plausible stress scenarios), non-performing loan ratio in line with regulatory definition and limits addressing specific sub-portfolios and financing structures. Furthermore, the principles in Nordea's sustainability policy guide the choices of customers and transactions to finance.

Internal Ratings-Based (IRB) corporate and retail exposures currently represent 44.9% and 25.0% respectively of Nordea's total REA. The housing markets overall as well as the general portfolio quality of the corporate segments are currently stable, and loan losses remain at a low level in all of Nordea's markets. However, there are downside risks considering world economic developments, such as BREXIT, and some remaining risks on the escalation of the trade war.

Operational risk is present across all Nordea's activities. Capital held for operational risk represents 10% of total REA. During 2019, total losses due to operational risks were approximately EUR 131m (including a provision of EUR 95m for a potential Anti-Money Laundering fine) compared to REA of EUR 15.7bn attributed to operational risk at the end of Q4 2019. The risk appetite statement for operational risk is expressed in terms of (1) residual risk level in breach of risk appetite and requirements for mitigating actions for risks and (2) total loss amounting from incidents and requirements for management of incidents.

Nordea's trading book gives rise to a range of market related risks. In addition, market factors may influence the value of the banking book assets and affect future income. Market risk is one of Nordea's smallest contributors to regulatory capital requirements, representing 3% of total REA, with additional capital held for banking book market risk within Nordea's Pillar 2 framework. Income derived from market risk positions counterbalanced and reflected the risks taken in 2019. Market risks are governed in the risk appetite framework by limits on (1) Value at Risk (VaR), (2) economic value, (3) stressed losses on trading and banking books, (4) structural foreign exchange (SFX), and (5) the maximum reported market risk loss within one year in a severe but plausible stress events which model CET1 movements driven by FX impacts on translation from local to reporting currency.

The primary risk not mitigated with capital and, hence, not measured in REA terms is liquidity risk, which represents one of Nordea's largest risks. Nordea adheres to a liquidity risk appetite whereby there must be sufficient liquidity to ensure that Nordea can meet its cash flow obligations at all times, including on an intraday basis and across market cycles, including during periods of stress. Liquidity risk limits and triggers are set to ensure that the liquidity risk profile of the Group and its subsidiaries and branches remain within the liquidity risk appetite. Specifically, the liquidity risk appetite requires that Nordea holds a liquidity buffer (1) to

survive at least 90 days under a combined institution-specific and market-wide liquidity stress; (2) which is sufficient to ensure a Liquidity Stress Coverage ratio based on internal stress tests of at least 105% under a combined scenario; (3) which is sufficient to ensure the Liquidity Coverage Ratio (LCR) of at least 115%; and (4) denominated in currencies that can be readily converted to meet regulatory LCR net cash outflows in all significant currencies. Throughout 2019, Nordea maintained a strong liquidity position with all metrics remaining well above risk appetite limits. The Net Stable Funding Ratio will also enter Nordea's risk appetite limits from 1 January 2020.

Material transactions

A number of external transactions took place in 2019. While each transaction was a part of achieving Nordea's on-going strategy, none were assessed as materially impacting the risk profile of the Group. This assessment took into account the set of material risks before and after the transaction, the size of the transaction, and whether the portfolio of risks before and after had changed materially. In each case, it has been assessed that no material change took place.

Board of Directors' approval of the risk statement

Nordea Board of Directors has approved this risk statement and acknowledges that Nordea Group's risk management arrangement is adequate and well adopted to Nordea Group's business model, risk appetite and capital position.

Key risks: Distribution of exposure, REA, capital requirement and Economic Capital (EC) in Business Areas

	EURbn	Exposure	%	REA	CAR	%	EC	%
Total Nordea Group	Credit risk [1]	467.3	100%	129.6	10.4	86%	17.23	67%
	Market risk			4.9	0.4	3%	0.99	4%
	Operational risk			15.7	1.3	10%	2.84	11%
	Nordea Life & Pension						1.40	5%
	Other[2]						3.26	13%
	Total	467.3	100%	150.2	12.0	100%	25.7	100%
Personal Banking	Credit risk[1]	172.4	100%	40.0	3.2	87%	5.7	71%
	Market risk			0.0	0.0		0.1	1%
	Operational risk			5.9	0.5	13%	1.0	12%
	Nordea Life & Pension						0.3	4%
	Other[2]						0.9	11%
	Total	172.4	37%	45.9	3.7	31%	8.0	31%
Business Banking	Credit risk[1]	97.8	100%	38.8	3.1	91%	4.8	68%
	Market risk			0.0	0.0		0.0	1%
	Operational risk			3.9	0.3	9%	0.6	9%
	Nordea Life & Pension						0.1	1%
	Other[2]						1.5	22%
	Total	97.8	21%	42.7	3.4	28%	7.0	27%
Large Corporates & Institutions	Credit risk[1]	84.0	100%	35.5	2.8	81%	4.9	66%
	Market risk			4.9	0.4	11%	0.7	10%
	Operational risk			3.6	0.3	8%	0.6	8%
	Nordea Life & Pension						0.0	0%
	Other[2]						1.2	16%
	Total	84.0	18%	44.1	3.5	29%	7.4	29%
Asset & Wealth Management	Credit risk[1]	11.2	100%	4.1	0.3	74%	0.3	18%
	Market risk			0.0	0.0		0.0	1%
	Operational risk			1.4	0.1	26%	0.2	13%
	Nordea Life & Pension						1.0	57%
	Other[2]						0.2	10%
	Total	11.2	2%	5.6	0.4	4%	1.8	7%
Group Functions, Other & Eliminations	Credit risk[1]	102.0	100%	11.1	0.9	92%	1.5	102%
	Market risk			0.0	0.0	0%	0.1	7%
	Operational risk			0.9	0.1	8%	0.4	26%
	Nordea Life & Pension						0.0	0%
	Other[2]						-0.5	-36%
	Total	102.0	22%	12.0	1.0	8%	1.5	6%

[1] Includes securitisation positions and other credit risk adjustments

[2] Capital deductions and internal allocations

Introduction

Executive summary

The macroeconomic development in the Nordics was steady in 2019, with modest growth in all four Nordic countries. However, signs of uncertainty rose and growth slowed in Finland and Sweden. During 2019, Nordea continued to de-risk, simplify and focus on core customers and markets in the Nordics and maintain strict underwriting discipline in lending. This strategy was evidenced through the sale of Luminor to Blackstone and the acquisition of Gjensidige Bank. With a strong balance sheet, Nordea is well placed to face volatility through the economic cycle. The transitional arrangements, following re-domiciliation to Finland in 2018, were undertaken with the European Central Bank (ECB) during 2019. This led to updated capital requirements from the ECB in December 2019 equating to a CET1 requirement of 13.1% as of 1 January 2020. Nordea's CET1 ratio was 16.3% at end of 2019, 3.2% above the requirement. In 2019, net profit was EUR 1.5bn (EUR 3bn in 2018), credit quality strength maintained, reported return on equity (ROE) decreased to 5.0% (9.7% in 2018) and underlying ROE excluding one-off items was 8.1% (8.5% in 2018). Nordea continued to commit to maintaining a AA-level rating, with a focus on profitability, a well-diversified credit portfolio, a strong capital position and a diversified funding base.

Common Equity Tier 1 (CET1) capital ratio

16.3%

Capital strength was well maintained during 2019 and the CET1 ratio increased to 16.3% (15.5%).

Total capital ratio

20.8%

Nordea issued an AT1 conversion note of USD 1,250m and called its first AT1 issued in 2014.

Net loan loss ratio (underlying, including all customer loans)

8 bps

The net loan loss ratio including fair value loans was 8 bps and 10 bps excluding these. (6 and 7 bps last year respectively). It was 22 bps including extraordinary net loan loss bookings in 2019.

Credit risk exposure change

-1.9%

Credit risk exposure decreased to EUR 467bn (EUR 476bn).

Liquidity coverage ratio

166%

Group LCR was 166% at the end of 2019 (185%).

Solid capital ratios – first full year under ECB supervision

Following re-domiciliation of Nordea from Sweden to Finland in 2018, 2019 was the first year under full ECB and SSM supervision. The banking business in Denmark, Norway and Sweden continued to be carried out through branches of Nordea Bank Abp. A close dialogue with the ECB took place during the year, with the ECB conducting an Asset Quality Review (AQR) and producing its first Supervisory Review and Evaluation Process (SREP) decision. As part of the transition to the SSM capital framework, Nordea is subject to a Pillar 2 Requirement (P2R) from 1 January 2020 of 1.75%, which including regulatory buffers gives a total CET1 requirement of 13.1%.

Nordea has set a new capital management buffer target of 150-200 bps above the regulatory requirement. The CET1 ratio at the end of 2019 was 16.3%, 3.2% above the requirement as of 1 January 2020. In 2019, Nordea launched a new business plan and financial targets, with an objective of restoring profitability and improving operational efficiency, while focusing on customer relations. Financial targets include achieving a ROE above 10% and a cost-to-income ratio of 50% by 2022.

Maintained solid credit quality with an underlying net loan loss ratio of 8bps

Credit quality remained strong in 2019 with stable underlying portfolio ratings and scores. The underlying net loan loss ratio was 8 bps including loans to the public at fair value and 10 bps excluding them (6 bps and 7 bps respectively in 2018), well below Nordea's long-term historic average of 16 bps. Credit quality was stable in all customer sectors, but with higher attention on domestic sectors such as retail, trade and construction. De-risking continued in the Russian, shipping and offshore portfolios, and the Baltic countries through the divestment of Luminor during 2019 (36% was sold and payment received in 2019, the remaining 20% to be sold with forward payments over three years). Following dialogue with the ECB, and as a result of the AQR, Nordea made additional loan loss provisions of EUR 282m, partly due to weaker macroeconomic outlook for certain sectors. Including this one-off provision, the loan loss ratio for the year was 22 bps. The impaired loans ratio decreased to 1.78% (1.82% in 2018), while credit risk exposures decreased to EUR 467bn.

Market risk remained a low contributor to risk

The Group's market risk exposure is primarily assessed and measured by VaR. VaR remained at a relatively low level throughout 2019, with a trading book VaR of EUR 17m and a banking book VaR of EUR 39m .

Strong funding and liquidity position, all ratings at AA-level

Nordea maintained its solid liquidity risk position and its strong name in the funding markets. Nordea was able to actively use all funding programs during 2019. Approximately EUR 20bn was issued in long-term debt during 2019 (excluding Danish covered bonds) compared to EUR 23bn last year. Nordea had a strong liquidity coverage ratio (LCR), with an LCR at year-end on Group level of 166%.

All three major senior unsecured issuer ratings are at AA-level, Moody's and S&P with stable outlook and Fitch with negative outlook due to Nordea's currently weaker profitability.

Key metrics

The overall increase in available capital was driven by the impairment of intangible assets following the new financial plan in Q3 2019 and FX effects in retained earnings, increasing the CET1 capital by EUR 0.3bn. REA decreased by EUR 5.7bn year-on-year, mainly as a result of adjusted risk-weights on IRB floors for commercial real estate in Sweden and Norway. Leverage ratio increased from 5.1% to 5.3% during the year, primarily as a result of decreased leverage exposure. Nordea's LCR decreased from 185% by year-end 2018 to 166% at the end of 2019, mainly driven by an increase in total net cash outflow by EUR 5.2bn accompanied with a decrease in HQLA by EUR 1.9bn. As of year-end 2019 Nordea has fully transitioned into reporting the EU NSFR.

Available capital, EURm	2019	2018
Common Equity Tier 1 (CET1)	24,421	24,134
Tier 1	27,518	26,984
Total capital	31,236	31,028

Risk-weighted exposures amounts (REA), EURm		
Total REA	150,215	155,886

Risk-based capital ratios as a percentage of REA		
Common Equity Tier 1 ratio	16.3%	15.5%
Tier 1 ratio	18.3%	17.3%
Total capital ratio	20.8%	19.9%

Additional CET1 buffer requirements as a percentage of REA		
Capital conservation buffer requirement	2.5%	2.5%
Countercyclical buffer requirement	1.4%	0.9%
Systemic risk buffer requirement	3.0%	0.0%
Total buffer requirements	6.9%	3.4%
CET1 available after meeting the bank's minimum capital requirements of 4.5%	11.8%	11.0%

Basel III leverage ratio		
Transitional leverage ratio exposure measure	5.3%	5.1%

Liquidity Coverage Ratio		
Total HQLA	99,328	101,244
Total net cash outflow	59,913	54,763
LCR ratio (%)	166%	185%

Net Stable Funding Ratio (NSFR)[1]	
Available stable funding	290,545
Required stable funding	267,603
Net stable funding	22,942
NSFR ratio (%)	109%

[1]According to CRR2 regulation published in Q219, information not available as of Q418.

Figure: Development of key capital adequacy ratios

At the end of 2019, increased by 80bps compared to year-end 2018. During the same period the Tier 1 ratio increased by 100bps and the Total capital ratio increased by 90bps. This overall increase in capital ratios was mainly explained by a decrease in REA of EUR 5.7bn driven by adjusted risk-weights on IRB floors for commercial real estate in Sweden and Norway following updated decision from ECB as part of the annual supervisory dialogue and decreased market risk REA.

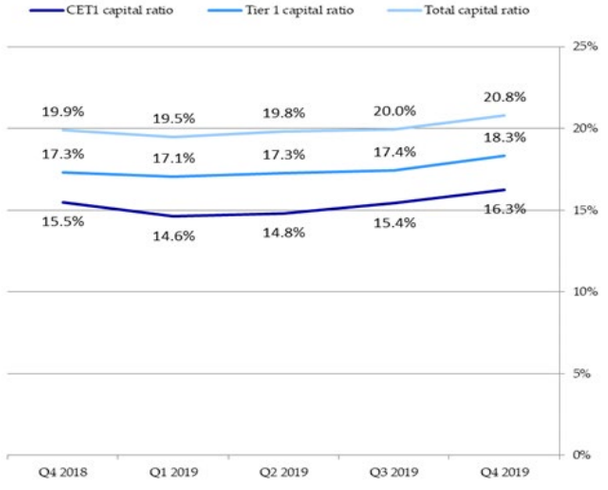
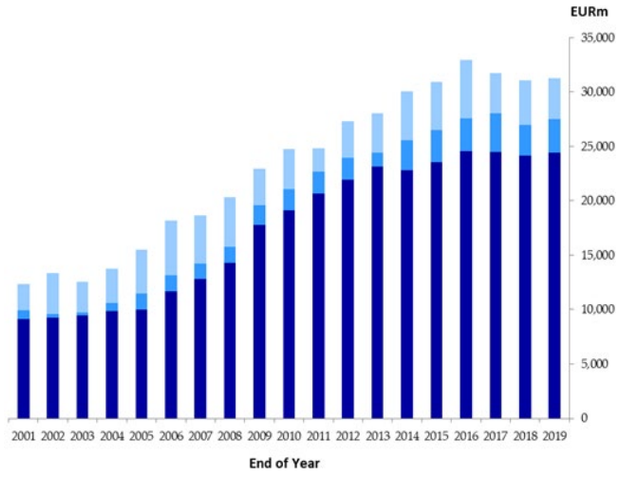


Figure: Development of own funds

During the period 2001 to 2019, the total own funds increased by EUR 18.9bn. The increase was mainly driven by retained profit as well as the implementation of Basel II in 2007 and CRR/CRD IV in 2014. Specifically, CET1 capital increased by EUR 15.3bn, AT1 capital by EUR 2.3bn and T2 capital by EUR 1.3bn. From Q4 2018 to Q4 2019, the CET 1 capital, Tier 1 capital and own funds increased by EUR 0.3bn, EUR 0.5bn and EUR 0.2bn respectively.



Nordea Bank Abp with Finnish corporate registration number 2858394-9 provides these public disclosures according to Part Eight of Regulation (EU) No 575/2013, commonly referred to as the Capital Requirements Regulation (CRR), on the basis of its consolidated situation (hereinafter referred to as simply "Nordea"). This disclosure constitutes a comprehensive disclosure on risks, risk management and capital management. It includes disclosures, or references to other disclosures, required according to Part Eight of the CRR and by EBA guidelines and standards on disclosure requirements. Information exempted from disclosure due to being non-material, proprietary or confidential can be found in Part 2, Other tables. Accompanying this report are the required disclosures for the subsidiaries Nordea Kredit Realkreditaktieselskab, Nordea Hypotek AB, Nordea Mortgage Bank Plc, Nordea Eiendomskreditt AS, Gjensidige Bank Group, Nordea Finans Norge AS. The subsidiaries' disclosures are included as apprentices and will be released on www.nordea.com after the publication date of each subsidiary's Annual Report.

Nordea Bank Abp and its subsidiaries have adopted a formal policy to assure compliance with the disclosure requirements and has established policies for assessing the appropriateness of these disclosures, including the verification and frequency. Nordea has been identified as a financial conglomerate on its own. Nordea's Board of Directors, by attesting this report, approve of the formal statement of key risks in Board Risk Statement and formally declare the adequacy of risk management arrangements given statement and the declaration are made in accordance with CRR Article 435(1).

Regulatory development

This section provides an overview of the recent regulatory developments relevant to Nordea. Nordea constantly monitors the regulatory landscape and is highly involved in consultations and advocacy towards regulators, both nationally and internationally. The main changes to currently applicable and future regulations are summarised below.

Current regulatory framework for capital adequacy

The Capital Requirements Directive IV (CRD IV) and Capital Requirements Regulation (CRR) entered into force in January 2014, followed by the Bank Recovery and Resolution Directive (BRRD) and Single Resolution Mechanism Regulation (SRMR) in May 2014. The CRR became applicable in all EU countries in January 2014, while the Directives were implemented into national law within all EU member states from 2014. The BRRD, the Deposit Guarantee Scheme (DGS) as well as MREL rules were implemented in Norway from 1 January 2019. The CRR and CRD IV were also implemented in Norway on 31 December 2019.

Regulatory minimum capital requirements

The CRR requires banks to comply with the following minimum capital requirements in relation to REA:

- CET1 capital ratio of 4.5%
- Tier 1 capital ratio of 6%
- Total capital ratio of 8%

Capital buffers

In addition to the minimum requirements, the CRD IV contains capital buffer requirements. The application and the levels are regulated and based on the institutions contribution to systemic risk and/or general macro prudential justifications. Each Member State requires the capital buffer levels applicable to the institutions within their jurisdiction. The capital buffer requirements are expressed in relation to REA to be covered by CET1 capital and represent additional capital to be maintained in addition to minimum regulatory requirements.The capital buffers comprises the capital conservation buffer (CCoB) of 2.5% applicable to all institutions. Depending on the characteristics of the institution and/or macroprudential justifications the following capital buffers may also be required: A countercyclical capital buffer (CCyB), a buffer for globally systemically important institutions (G-SII) of 1-3.5%, a buffer for other systemically important institutions (O-SIIs), as well as a systemic risk buffer (SRB).

The institution specific CCyB will, under normal circumstances, be in the range of 0-2.5%, depending on the buffer rate in the countries where the institution has its relevant exposures. These buffers should also be met with CET1 capital. Under CRD IV, the O-SII buffer can currently be set up to 2% and the SRB can be set up to 3% for all exposures and up to 5% for domestic exposures. These buffers are included in the so-called *combined buffer requirement*. The combined buffer requirement is currently the sum of the CCoB, CCyB and

- where the SRB is applicable for all exposures, the highest of the SRB and the highest SII buffer,
- where the SRB is applicable only on domestic exposures, the sum of the highest SII buffer and the SRB.

Breaching the combined buffer requirement will restrict banks' capital distribution, such as the payment of dividends, share buybacks, remuneration and payments on AT1 instruments, in accordance with the regulations on maximum distributable amount (MDA).

Nordic implementation

Both the CRD IV/CRR and the BRRD allow for national implementation of some parts, which is why there are some national differences in the implementation in the different countries.

Denmark

The CCoB is phased-in from 2016 to 2019, where the buffer in 2019 was fully phased-in at 2.5%. Additionally, the CCyB is phased-in from 2015 to 2019. During 2018 it was decided that the buffer will increase to 1.0% from 30 September 2019. During 2019 further increases were decided: To 1.5% from 30 June 2020 and 2.0% from 30 December 2020.

The SRB requirement for systemically important institutions was phased-in between 2015 and 2019. Nordea Kredit Realkreditaktieselskab was, in January 2017, identified as systemically important financial institution (SIFI) and is subject to a 1.5% SRB requirement when fully phased-in. The identification and SRB requirement have afterwards been confirmed latest 18 December 2019. The buffer requirement in 2019 was 1.5%.

There is also a potential Pillar 2 requirement that can be set on an institution on an individual basis.

As part of the implementation of BRRD in Denmark, mortgage institutions such as Nordea Kredit Realkreditaktieselskab, must hold a debt buffer requirement of 2% based on mortgage loans. The debt buffer requirement replaces a MREL requirement. The debt buffer requirement is being phased-in from 2016 to 2020. From June 2019 it was set to 1.8%, and will be fully implemented in June 2020 with 2.0%. The debt buffer can be fulfilled using CET1 or Tier 2 capital instruments as well as senior debt instruments that fulfil certain criteria.

In 2018 the debt buffer legislation was changed regarding mortgage institutions identified as SIFI. The debt buffer requirement is 2% if the mortgage institution belong to an international financial group which fulfil a MREL requirement of 8%. If the 8% MREL requirement is not fulfilled, the debt buffer requirement is set to minimum 2%, and the debt buffer requirement and own funds in total have to be minimum 8% of the total liabilities in the mortgage institution. The rule applies from 1 January 2022.

On 27 September 2019 (updated 29 November), the Danish FSA published a model for a new Pillar 2 Liquidity Coverage Ratio (LCR) add-on for mortgage institutions. The new Pillar 2 add-on have to be reported in an observations period starting with data based on figures from 31 December 2019 and running until the over collateral (OC) requirement in covered bond directive is implemented in Danish legislation. At that time - with potential changes - it is expected to replace the current requirement of 2.5% based on lending exposure. The model for LCR Pillar 2 add-on is institution specific and risk sensitive and will include risk types, which not are included in the current LCR.

Finland

The Finnish FSA has the power to impose binding macroprudential policy requirements. The CCyB is currently set to 0%.

In June 2019, the Finnish FSA decided to maintain the systemic risk buffer requirement of 3% CET1 capital in respect of Nordea Group. The Finnish FSA also decided to maintain the de-

cision of Nordea Group as O-SII with a 2% CET1 buffer requirement. However, these buffers are not additive as, according to current regulations, only the higher shall apply.

On 28 June 2019 the Finnish FSA decided to extend the application of a minimum risk weight of 15% to residential mortgages in Finland to credit institutions that have adopted the Internal Ratings Based Approach. This is in line with article 458 of the CRR which allows authorities to target asset bubbles in the residential sector by increasing the risk weights within Pillar 1.

On 4 September 2019 Nordea was identified by the ECB as a financial conglomerate pursuant to the Financial Conglomerate Directive (FiCoD), transposed by the Finnish Act on the Supervision of Financial Conglomerates and specified in the Commission delegated regulation. The rules stipulates a specific capital adequacy requirement for financial conglomerates and the competent authorities should be able to assess, at a group-wide level, the financial situation of credit institutions, insurance undertakings and investment firms which are part of the financial conglomerate. In particular as regards solvency (including the elimination of multiple gearing of own funds instruments), risk concentration and intra-group transactions.

Norway

The applicable buffer levels comprise the CCoB of 2.5%, the SRB of 3% and the increased CCyB from 2% to 2.5% with effect from 31 December 2019. In addition, the O-SII is applied to the largest institutions.

A decision is pending regarding the Norwegian Ministry of Finance's proposal to increase the SRB from 3% to 4.5% with effect from 31 December 2020, as well as to implement risk weight floors of 20% and 35%, to residential real estate exposures and commercial real estate exposures, respectively. Based on Norwegian notification, the opinion from EU Authorities is expected to impact the final implementation.

Sweden

On 19 September 2018 the Swedish FSA decided to raise the CCyB rate from 2% to 2.5%, which entered into force on 19 September 2019. The Swedish FSA stated that the reason for this change is that the systemic risk has increased, driven by low interest rates and increased residential and corporate lending growth rate.

On 28 January 2020, the Swedish FSA decided to impose average risk weight floors for commercial real estates in Sweden, applicable to banks with IRB permission. The floors are set to 35% for corporate exposures collateralised by commercial real estate and 25% for corporate exposures collateralised by commercial residential properties. The floors will be included within Pillar 2 where the add-on will be the difference between the actual average risk weight and the floor.

On 4 July 2019 the Swedish FSA published the memorandum "Requirement on the LCR and diversification of the liquidity buffer" which will replace the memorandum "Pillar 2 requirements on the LCR in individual currencies". The memorandum require the largest institutions (supervision categories 1 and 2), as a part of Pillar 2, to meet an LCR ratio of 100% in EUR and USD respectively. In addition, the Swedish FSA also intends to apply a Pillar 2 LCR requirement of 75% for each individual significant currency, including SEK (excluding EUR and USD which is 100%). The new rules are applicable from 1 October 2019.

Amended CRR, CRD IV, BRRD and SRMR

In June 2019, the 'banking package' containing revisions to the BRRD, the CRD and the CRR was adopted. The amendments to the CRR, being a regulation, will be directly applicable in all EU countries once implemented whereas the amendments to the CRD and BRRD, being directives, need to be implemented into national legislation before being applicable. The revisions include a review of the Minimum Requirement for own funds and Eligible Liabilities (MREL), a review of the market risk requirements (Fundamental Review of the Trading Book, FRTB), the introduction of a binding Net Stable Funding Ratio (NSFR), the introduction of a binding leverage ratio requirement of 3% to be met by Tier 1 capital and amendments to the Pillar 2 and macro prudential framework. The revised CRD (CRD V) and BRRD (BRRD II) are to be applied from 28 December 2020, while the majority of the changes in CRR II are to be applied from 28 June 2021. The 'banking package' is not yet implemented in Norway.

Minimum Requirement for own funds and Eligible Liabilities (MREL)

According to the amendments of BRRD and SRMR in the banking package, institutions should meet a MREL requirement decided by the resolution authorities. The requirement consists of the sum of the loss absorption amount and re-capitalisation amount, both of which are determined by the minimum capital requirement of 8% of REA and the Pillar 2 capital requirement. In addition, the resolution authorities can decide to impose a MREL market confidence buffer.

The MREL requirement should be met by own funds and MREL eligible liabilities, i.e. Senior Non-Preferred (SNP) instruments and ordinary senior unsecured liabilities meeting the MREL eligibility criteria. In addition, the resolution authorities should set a subordination requirement for Top Tier Banks (banks with balance sheet of at least EUR 100bn). The subordination requirement is at least 8% of total liabilities and own funds but capped at 27% of REA. The subordination requirement should be met by own funds and SNP instruments. In addition, the resolution authorities may decide under certain conditions to increase the subordination requirement.

In order to enable institutions to issue SNP instruments in a cost-efficient and harmonised way, a directive to introduce a new insolvency hierarchy for SNP instruments has been adopted and implemented at national levels.

Pillar 2

The changes to the CRD introduces a split of Pillar 2 add-ons into Pillar 2 Requirements (P2R) and Pillar 2 Guidance (P2G), where the P2R will increase the MDA level while the P2G does not affect the MDA level. ECB is already applying a practice where Pillar 2 add-ons are split between P2R and P2G.

Net Stable Funding Ratio (NSFR)

The revised CRR introduces a binding NSFR that requires institutions to finance their long-term activities (assets and off-balance sheet items) with stable funding. The EU NSFR rules follow the framework set out by Basel Committee on Banking Supervision (BCBS), as well as incorporate adjustments as recommended by the European Banking Authority (EBA) to ensure that the NSFR does not hinder the financing of the European real economy. Under the CRR II, institutions will need to comply with a 100% NSFR requirement starting from Q2 2021.

Leverage ratio

The CRR introduced a non-risk-based measure, the leverage ratio, to limit build-up of leverage on banks' balance sheets in an attempt to contain the cyclicality of lending. The leverage ratio is calculated as the Tier 1 capital divided by an exposure measure, comprising of on-balance and off-balance sheet exposures with adjustments for certain items such as derivatives and securities financing transactions.

The amended CRR will introduce a binding leverage ratio requirement of 3% of Tier 1 capital, harmonised with the international BCBS standard. It further includes amendments to the calculation of the exposure measure with regards to exposures to public development banks, pass-through loans and officially granted export credits. Additionally, the initial margin received from clients for derivatives cleared through a Qualifying Central Counterparty (QCCP) can be excluded from the exposure measure.

Standardised Approach for Counterparty Credit Risk (SA-CCR)

In March 2014, the BCBS published a standard on a new standardised method to compute the exposure value of derivatives exposures, the so-called Standardised Approach for Counterparty Credit Risk, to address the shortcomings of existing standardised methods. The implementation of SA-CCR in the amended CRR is accomplished by removing the existing Standardised Approach and the Mark-to-Market Method and replacing them with the new SA-CCR.

Market risk

In January 2016, the BCBS concluded its work on the fundamental review of the trading book (FRTB) and published a new standard on the treatment of market risk. However, on 14 January 2019, the BCBS published a revised version of the standard based on issues identified in the course of monitoring the implementation and impact of the 2016 framework, as expressed in a consultative paper from 2018. The revised Basel standard comes into effect on 1 January 2022 as part of Basel III ('Basel IV'). The amended CRR incorporates the 2016 FRTB rules into EU regulation.

The key features of the framework include a revised boundary for trading book and non-trading book (banking book) exposures, a revised internal model approach and a revised standardised approach. The revised internal model approach includes a shift from value-at-risk to an expected shortfall measure of risk under stress and the incorporation of the risk of market illiquidity. The revised standardised approach is composed of three components; the sensitivities-based method, the residual risk add-on and the default risk charge.

Small and Medium-sized Enterprises (SME) supporting factor

The amended CRR extends the SME supporting factor. The current SME supporting factor provides a capital reduction of 23.81% for exposures up to EUR 1.5 million towards SMEs. The amendment extends this discount with an additional 15% reduction for the part above the threshold and also increases the threshold to EUR 2.5 million, intended to further stimulate the lending to SMEs.

Non-Performing Exposures (NPE)

From 26 April 2019, an amendment to CRR regarding minimum loss coverage for NPE (defined as past due 90 days, stage 3 or unlikeness to pay) entered into force and apply to exposures that is originated and turns non-performing from this date. The amendment includes mandatory and calendar-based minimum provisioning rules. The coverage requirements for banks increase progressively up to 100%, after 3 years for unsecured NPEs, after 9 years for NPEs secured by immovable property and after 7 years for NPEs secured by other eligible credit protection. Insufficient loss coverage will have to be deducted from the CET1 capital.

Covered Bond Directive and Regulation

The new European Covered Bond Directive and Regulation have been finalised. The rules include a harmonised EU framework for covered bonds, including common definitions, supervision and the rules for allowing the use of 'European Covered Bonds' label. Finally, it will include amendment to CRR regarding the conditions to be granted preferential capital treatment. The Directive entered into force on 8 January 2020, the national transposition period will last until 8 July 2021 and national measures shall be applied starting at the latest from 8 July 2022. The Regulation will apply only from 8 July 2022, in parallel with the deadline for the national measures of the Directive.

Finalised Basel III framework ('Basel IV')

Basel III is the global regulatory framework on bank capital adequacy, stress testing, and liquidity risk. In December 2017, the finalised Basel III framework, often called the Basel IV package, was published by the BCBS. The Basel IV package will be implemented in 2022 and includes revisions to credit risk, market risk, operational risk, credit valuation adjustment (CVA) risk, leverage ratio and introduces a new output floor.

On credit risk, the package includes revisions to both the IRB approach, where restrictions to the use of IRB for certain exposures are implemented, as well as to the standardised approach. Also, for market risk the internal model approach and the standardised approach have been revised. For operational risk, the three existing approaches will be replaced by one standardised approach to be used by all banks. On CVA risk, the internally modelled approach is removed, and the standardised approach is revised. The package also includes the implementation of a minimum leverage ratio requirement of 3% to be met with Tier 1 capital with an additional leverage ratio buffer requirement for G-SIBs of half the size of the G-SIB capital buffer requirement.

The output floor is to be set at 72.5% of the standardised approaches on an aggregate level, meaning that the capital requirement under the floor will be 72.5% of the total Pillar 1 REA calculated with the standardised approaches for credit-, market- and operational risk. The floor will be phased-in, starting with 50% from 2022 to be fully implemented at 72.5% from 1 January 2027.

Before being applicable to Nordea, the Basel IV package needs to be implemented into EU regulations and will therefore be subject to negotiations between the European Commission, Council and Parliament, which might change the implementation and potentially also the timetable.

In October 2019 the European Commission issued a consultation on the implementation of the final Basel III reforms in the EU. It is expected that the Commission will publish its proposal in mid-2020 after which negotiations in the Council and Parliament will begin.

Brexit

The Brexit withdrawal agreement has a specific provision which states that during the transition period (which runs until 31 December 2020 and during this period the Union law applies as normal in the UK), the term Member State in applicable regulations shall be understood to include the UK.

Part 1 Risk management, Methodologies and Governance

Information on common processes, methods and assumptions for assessing capital adequacy in the Nordea Group

Governance of risk and capital management

The chapter introduces Nordea's governance of risk and capital management as set out in Nordea's Group Board Directives, approved by the Board of Directors (BoD) and Group CEO Instructions, approved by the Chief Executive Officer (CEO) in Group Leadership Team (GLT). These Group internal rules are reviewed at least annually and are applicable to all Group Subsidiaries, unless legal or supervisory requirements or proportionality considerations, where applicable, determine otherwise.

Internal Control Framework

The Internal Control Framework covers the whole Group and includes the Group Board and senior executive management responsibilities towards internal control, all Group Functions and Business Areas including outsourced activities and distribution channels. Under the Internal Control Framework, all Business Areas, Group Functions and units are responsible for managing the risks they incur in conducting their activities and to have controls in place that aim to ensure compliance with internal and external requirements. As part of the Internal Control Framework, Nordea has established Group Control Functions with appropriate and sufficient authority, independence and access to the Group Board to fulfil their mission, as well as the Risk Management Framework.

The Internal Control Framework ensures effective and efficient operations, adequate identification, measurement and mitigation of risks, prudent conduct of business, sound administrative and accounting procedures, reliability of financial and non-financial information (both internal and external) and compliance with applicable laws, regulations, standards, supervisory requirements and the Group internal rules.

The internal control process is carried out by the governing bodies, risk management functions, management and other staff at Nordea. The internal control process is based on five main components: control environment, risk assessment, control activities, information and communication as well as monitoring. The internal control process aims to create the necessary fundamentals for the entire organisation to contribute to the effectiveness and high quality of internal control through, for instance, clear definitions, assignments of roles and responsibilities and common tools and procedures.

Table: Three Lines of Defence (LoD)

1st LoD	2nd LoD	3rd LoD
Business Areas and Group Functions	Group Risk and Compliance (GRC)	Group Internal Audit (GIA)
• All employees in the first line of defence have a role of understanding and adhering to prudent risk management and for compliance with external and internal rules as part of performing their tasks. • All managers are fully responsible for the risks they assume and for compliance within their respective area of responsibility. Hence, they are responsible for ensuring that the appropriate organisation, procedures and support systems are implemented to ensure a sufficient system of internal controls.	• GRC oversees the implementation of the financial and the non-financial risk policies and according to a risk-based approach, monitors and controls the Risk Management Framework including the Compliance Risk Framework and oversees that risks that Nordea is or could be exposed to, are identified, assessed, monitored, managed and reported on.	• GIA conducts risk-based and general audits and reviews that the Internal Governance arrangements, processes and mechanisms are sound and effective, implemented and consistently applied. • GIA is also in charge of the independent review of the first two lines of defence including ensuring that the segregation of duties are defined and established between risk management (first line) and risk control (second line).

Three lines of defence model

The primary governance principle in Nordea for internal control is the adherence to the three lines of defence model.

- First line of defence (1st LoD) is responsible for the daily risk management and for compliance with applicable rules.
- Second line of defence (2nd LoD) is responsible for maintaining and monitoring the implementation of the Internal Control Framework.
- Third line of defence (3rd LoD) is the independent internal audit function.

Governing bodies for risk and capital management

The Group Board, the Board Risk Committee (BRIC), the President of Nordea Bank Abp and Nordea Group CEO in GLT, the Asset and Liability Committee (ALCO) and the Risk Committee (RC) are the key decision-making bodies for risk and capital management in Nordea. In addition, the CEO Credit Committee, the Executive Credit Committee and Business Area Credit Committees are the key bodies for Credit decision-making.

Board of Directors

The Group Board has the following overarching risk management responsibilities.

- It decides on the Group's risk strategy and the Risk Appetite Framework, including the Risk Appetite Statements, with at least annual reviews and additional updates when needed.
- It decides on and oversees an adequate and effective Risk Management Framework and regularly evaluates whether the Group has effective and appropriate controls to manage the risks.

The Group Board decides on the Group Board Directive on Capital including dividend policy, which ensures adequate capital levels within the Group, on an ongoing and forward-looking basis, consistent with Nordea's business model, risk appetite and regulatory requirements and expectations.

Board Risk Committee (BRIC)

BRIC assists the Group Board in fulfilling its oversight responsibilities concerning management and control of the risks, risk frameworks, controls and processes associated with the Group's operations, including credit, market, liquidity, business, life and operational risk, as well as conduct and compliance risk and related frameworks and processes. BRIC met on 8 occasions during 2019.

President and Chief Executive Officer

The Group CEO is responsible to the Group Board for the overall management of the Group's operations and risks. Responsibilities include ensuring that the risk strategy and risk management decided by the Group Board is implemented, the necessary practical measures are taken and risks are monitored and limited. The Group CEO is working together with heads of Business Areas and certain heads of Group Functions within GLT for the purposes of supporting the Group CEO's decision-making.

Group-wide committees have been established in order to promote coordination within the Group, thus ensuring commitment to and ownership of Group-wide prioritizations, decisions and implementation. The composition and the areas of responsibility of each committee are established in the Group Board Directives or Group CEO Instructions for the respective committees.

Asset and Liability Committee

Asset and Liability Committee (ALCO) is sub-ordinated to the Group CEO in GLT and chaired by the CFO. ALCO decides on changes to the financial operations and the risk profile of the balance sheet, including asset and liability management (ALM), balance sheet management and liquidity management. ALCO also decides on certain issuances and capital injections for all wholly-owned legal entities within the Group. ALCO has established sub-committees for its work and decision-making within specific risk areas. ALCO met on 11 occasions during 2019.

Risk Committee

Risk Committee (RC) is subordinated to the Group CEO in GLT and chaired by the CRO. It has been established in order to manage the overall Risk Management Framework and prepares or provides guidance regarding proposals to the Group CEO in GLT and/or the relevant BoD on issues of major importance concerning Nordea's Risk Management Framework. Given the BoD decided Risk Appetite Framework, RC decides on the allocation of cascaded risks limits to risk-taking units and on actions relating to the management of all risks. The 1st LoD is responsible for ensuring that limits are further cascaded and operationally implemented. RC has established sub-committees for its work and decision-making within specific risk areas. RC met on 12 occasions during 2019.

Credit decision-making bodies

The governing bodies for Credit Risk and/or the Credit Risk Management Framework are the Group Board and BRIC. The Group Board and the local Boards of Directors delegate credit decision-

Table: Governing bodies for risk and capital management

Board of Directors **Board Risk Committee**		
CEO / GLT		
Asset and Liability Committee (ALCO) (Chairman: Chief Financial Officer (CFO))	**Risk Committee (RC)** (Chairman: Chief Risk Officer (CRO))	**CEO Credit Committee** (Chairman: CEO) **Executive Credit Committee** (Chairman: Head of Group Credit Risk Management) **Business Area Credit Committees** (Chairman: Head of Credit)

making according to the Powers to Act as described in the Group Board Director for Risk.

- CEO Credit Committee is chaired by the Group CEO, and members include the members of the Executive Credit Committee.
- Executive Credit Committee is chaired by the Head of Group Credit Risk Management and BRIC appoints the members of the Executive Credit Committee.
- Business Area Credit Committees: The Executive Credit Committee establishes credit committees for each Business Area as required by organisational and customer segmentation.

BRIC reviews decisions of the CEO Credit Committee and the Executive Credit Committee, as well as other strategic credit policy matters and development of the credit portfolio. BRIC confirms Industry Group Strategies approved by the RC.

All credit limits within the Nordea Group are based on credit decisions or authorisations made by an ultimate Decision-Making Authority with the right to decide upon that limit. Credit decisions include, inter alia, pricing, risk mitigation and any terms and conditions related to the limit or expected utilisation. Credit decisions also serve to delegate decision making within the approved limit to lower decision makers, unless otherwise explicitly decided.

Subsidiary governance

At subsidiary level, the local BoD is responsible for approving risk appetite limits and capital actions. The proposals for such items are the joint responsibilities of relevant subsidiary management and Group Functions.

The subsidiary BoD has oversight responsibilities concerning the management and control of risk, risk management frameworks as well as the processes associated with the subsidiary's operations. In addition, there are risk management functions responsible for the risk management framework and processes within the subsidiary.

The subsidiary CEO is part of the decision-making process at the subsidiary level and is responsible for the daily operations.

Risk and capital management processes

The Risk Management Framework ensures consistent processes for identifying, assessing and measuring, responding to and mitigating, controlling and monitoring and reporting risks to enable informed decisions on risk-taking. The Risk Management Framework encompasses all risks to which Nordea is or could be exposed, including off-balance sheet risks and risks in a stressed situation.

The Risk Identification and Materiality Assessment Process starts with identifying potential risks to which Nordea is or could be exposed. Risks are then assessed for relevance, classified, and included in the Common Risk Taxonomy.

All risks within the Nordea Common Risk Taxonomy need to be classified as material or not material for risk management and capital purposes. Material risks are assessed as those that could lead to a material impact on Nordea. These risks typically refer to a higher-level risk within the Risk Taxonomy which captures a number of underlying risks in which losses arise from a common source.

Risk appetite

The Risk Appetite Framework (RAF) supports effective risk management and a sound risk culture by enabling informed decisions on risk-taking, with the objective of ensuring that risk-taking activities are conducted within the organisation's risk appetite and that emerging risks are identified and addressed in a timely way.

Risk capacity is the maximum level of risk Nordea is deemed able to assume given its capital (own funds), its risk management and control capabilities, and its regulatory constraints. Risk appetite is the aggregate level and types of risk Nordea is willing to assume within its risk capacity, in line with its business model, to achieve its strategic objectives. The Risk Appetite Statements are the articulation of the Group Board approved risk appetite and comprises the qualitative statements and quantitative Limits and Triggers by main risk type, which are deemed appropriate to be able to operate with a prudent risk profile.

Credit concentration metrics cover e.g. sectors and geographic regions of size or importance. Stress test metrics are applied to credit, market and liquidity risk metrics to ensure a forward-looking approach to risk management. Operational risk metrics cover both residual risk levels and requirements for mitigating actions as well as limits for incidents and losses.

Model risk is defined as the risk of adverse effects on capital adequacy, financial loss, poor business and strategic decision-making and damage to Nordea's reputation, from the use of quantitative methods. Environmental, Social and Governance (ESG) risk relates to the risk of negative financial impact stemming, directly or indirectly, from the impact environmental, social and governance events may have on Nordea and Nordea's key stakeholders, including customers, employees, investors and suppliers. Nordea's ESG Risk Appetite Statement ensures Nordea's commitment to contributing to sustainable business and development.

Table: Group Board approved risk metrics

Risk type	Metric
Credit risk	Non-performing loans
	Expected loss
	Stressed loan loss
	Sector limits
	Geographic limits
	Top 25 client group limit
	Single client limit – Corporate/Financial institutions
	LBO-limit
Counterparty credit risk	Credit portfolio loss
	Max settlement limit
Market risk	Regulatory VaR
	FV stress loss
	Banking book stress loss
	Structural FX CET1 ratio impact
	Economic value limit
	Staff Pension stress loss
Liquidity risk	Liquidity stress horizon
	Liquidity Stress Coverage
	Regulatory Liquidity Coverage Ratio
	Net Stable Funding Ratio
	Currency Convertibility
Model risk	Qualitative model risk assessment
Solvency	Common Equity Tier 1 capital ratio
	Leverage ratio
	NLP Solvency Ratio
Operational risk	Operational risks
	Incidents and losses
Operational and Compliance risk – Conduct risk	Code of Conduct
	Customer outcomes and market integrity
Compliance	Compliance risks
ESG Risk	ESG risks

Risk appetite processes

The RAF contains all processes and controls to establish, monitor and communicate Nordea's risk appetite:

- Risk capacity setting based on capital position: On an annual basis, the Group's overall risk capacity is aligned with the financial and capital planning process, based on Nordea's risk strategy. Risk capacity is set in line with Nordea's capital position, including an appropriate shock absorbing capacity.
- Risk appetite allocation by risk type: Risk appetite includes Risk Appetite Limits for the main risk types that Nordea is or could be exposed to in line with the Risk Taxonomy. Risk Appetite Triggers are also set for these main risk types, to act as early indicators for key decision-makers that the risk profile for a particular risk type is approaching its Risk Appetite Limit.
- Risk limit setting: Measurable risk limits are established and set at an appropriate level to manage risk-taking effectively. Risk Appetite Limits are set by the Group Board. These inform the risk limits which are established and approved at lower decision-making levels at Nordea, including RC and sub-RC levels, and also other levels as appropriate. Subsidiary risk limits must be set by the appropriate governing body in alignment with local regulatory requirements and consistent with the Group Risk Limits.
- Controlling and monitoring risk exposures against risk limits: Regular controlling and monitoring of risk exposures compared to risk limits is carried out to ensure that risk-taking activity remains within risk appetite.
- Risk appetite limit breach management process: Group Risk and Compliance (GRC) oversees that Risk Appetite Limit breaches are appropriately escalated to RC and BRIC. GRC reports monthly on any breaches of the risk appetite to the Group Board and other relevant governing bodies including a follow-up on the status of actions to be taken, until the relevant risk exposure is within appetite. The reporting includes a consistent status indicator to communicate the current risk exposure compared to Risk Appetite Limit for all risk types covered by the Risk Appetite Statements (RAS).

Embedding risk appetite in business processes

The end-to-end risk appetite process cycle is aligned with other strategic processes, including the Internal Capital Adequacy Assessment Process (ICAAP), Internal Liquidity Adequacy Assessment Process (ILAAP) and the Recovery and Resolution Plan.

Moreover, the risk appetite is embedded in business processes and communicated across the organisation in order to meet Nordea's objectives of maintaining a sound risk culture. This includes but is not limited to ensuring a strong link between the assessed risk appetite and the business plans and budgets, the capital and liquidity position, the systemic risk profile/the recoverability and resolvability assessments as well as the incentive structures and remuneration framework.

Credit risk

Credit risk is defined as the risk of loss due to failure of counterparties to meet their obligations to clear a debt in accordance with agreed terms and conditions. The risk of loss is lowered by means of credit risk mitigation techniques, such as guarantees or collaterals. The risk stems mainly from various forms of lending, but also from issued guarantees and documentary credits. Credit risk includes counterparty credit risk, transfer risk and settlement risk. This chapter discusses the governance, management and measurement of credit risk in broad terms.

Management of credit risk

Credits granted within Nordea conform to established common principles. The fundamental principles are outlined in the credit instructions for Nordea. The key principles for managing Nordea's risk exposures are:

- a risk-based approach, i.e. the risk management functions should be aligned to the nature, size and complexity of Nordea's business, ensuring that efforts undertaken are proportional to the risks in question;
- independency, i.e. the risk management function should be independent of the business it controls; and
- the three LoDs, as further described in the Group Board Directive on Internal Governance.

The basis of credit risk management in Nordea is credit risk limits that are set for individual customer and customer groups. In addition, Nordea uses sector concentration risk limits for industries, segments, products and geographies. These limits are aggregated and assigned to units that are responsible for their continuous monitoring and development.

Credit decision making is delegated from the BoD down to various sub-levels of credit decision making bodies. All internal credit risk limits within Nordea are based on credit decisions or authorisations made by a relevant decision-making body, with the right to decide upon that limit as evidenced in Nordea's powers to act.

Nordea's credit customers are continuously assessed and periodically reviewed based on internal rules dependent on segment, limit amounts and level of risk.

If credit weakness is identified in relation to a customer exposure it receives special attention in terms of more frequent review. In addition to continuous monitoring, an action plan is established outlining how to minimise the potential credit loss. If necessary, a special work-out team is set up to support the customer responsible units (CRU).

A financial asset is credit impaired when one or more credit events have occurred with a detrimental impact on the estimated future cash flows to the extent that full repayment is unlikely (pledged collaterals considered).

The follow-up of individual work-out cases forms part of the quarterly credit risk review process. In this process both the individual credit impairment and the collective credit impairment are assessed.

Table: Credit decision making structure for main operations

<table>
<tr><td colspan="9">Board of Directors / Board Risk Committee</td></tr>
<tr><td colspan="9">Chief Executive Officer (CEO) Credit Committee / Executive Credit Committee</td></tr>
<tr><td colspan="4">Business Banking Group Credit Committee</td><td colspan="5">Large Corporation & Institutions Group Credit Committee</td></tr>
<tr><td>Private Banking Global Credit Committee</td><td>Personal Banking Nordic Credit Committee</td><td>Business Banking Country Credit Committees</td><td>Leverage Buyout Credit Committee
Real Estate Management Industry Credit Committee</td><td>Large Corporations and institutions Local Credit Committee</td><td>Banks & Countries Credit Committee</td><td>Shipping, Offshore and Oil Services Credit Committee</td><td>Financial Institutions Group Credit Committee</td><td>Russia Credit Committee</td></tr>
<tr><td colspan="5">Personal Banking and Private Banking Country Credit Committees
Local Credit Committees Business Banking</td><td colspan="3"></td><td>Russia Local Credit Committee</td></tr>
<tr><td colspan="9">Four eyes principle</td></tr>
<tr><td colspan="9">Personal powers to act</td></tr>
</table>

There is currently an additional level 4 Baltic Desk Credit Committee. This committee handles carve out cases from the merger to Luminor. This committee will continue to exist as long as there are remaining customers to handle, or until other decision is taken.

Nordea has specific industry credit policies in place to monitor the distribution of the credit portfolio and to limit credit risk. Concentration risk in specific industries is monitored by industry groups. Industry credit policies are established for industries where at least two of the following criteria are fulfilled:

- Significant weight in the Nordea loan portfolio
- High cyclicality and/or volatility of the industry
- Special skills and knowledge required

Nordea has currently implemented industry credit policies, all of which are approved annually by RC:

- Animal husbandry, Crops, Plantation and Hunting
- Banks
- CCPs
- Energy
- Funds
- Insurance
- Leveraged Buy Out
- Leveraged Lending
- Oil, Gas and Offshore
- Real Estate Management Industry (REMI)
- Shipping
- Underwriting

In 2019, Nordea continued its efforts initiated in 2018 to embed ESG risk assessment and control in Nordea's financial risk management framework. This includes refining the definitions of ESG risks within Nordea's Risk Taxonomy which forms the basis of risk management activities. In addition, climate risk was added to Nordea's Risk Taxonomy as a sub-risk category to ESG risks and several Industry Credit Policies were developed with dedicated sections on ESG risks and mitigation, as part of the credit risk framework. Nordea will continue to enhance our financial risk assessment principles and monitoring activities for ESG risks in line with developments in the regulatory landscape.

Credit risk appetite

For credit risk, Nordea strives to have a well-diversified credit portfolio that is adapted to the structure of Nordea home markets and economies, and this is reflected in the RAF limit setting. Credit risk appetite statements cover the following key areas:

- Credit risk concentration (limits for single names, specific industries, products and geographies)
- Long-term credit quality (expected loss) and short-term forward-looking credit quality (loan losses under plausible stress scenarios)
- Non-performing Loans
- Limits addressing specific sub-portfolios and financing structures

Furthermore, the principles of Nordea sustainability policy guide the choice of which customers to serve and what transactions to finance.

Governance of credit risk

Nordea has an internal framework for credit risk which is approved independently of business decision-making and financial performance. The framework is approved by senior management and the BoD and aligns the risk appetite with the credit risk strategy of the bank.

1st LoD – Group Credit Management

GCM is an independent credit risk management function.
The main areas of responsibility for GCM are:

- Own and ensure a harmonised, aligned and efficient end-to-end credit process decreasing lead times and enabling great customer experience.
- Act as a competence centre, enabling high quality and maintaining the strong and compliant credit risk management in Nordea
- Meet the changes in the competitive environment and enable business opportunities through the digitalised market
- Take prudent credit decisions together with the BAs
- Optimise the credit risk profile of the bank
- Review and approve rating assignment independently from BAs

2nd LoD – Group Credit Risk & Control (GCRC) and Risk Models (RiMO)

GCRC and RiMo together comprise Nordea's independent credit risk control units.
The main areas of responsibility for GCRC and RiMo are:

- Independent oversight, monitoring and control of credit risk
- Developing the 2nd LoD credit risk framework
- Proposing credit risk metrics and limits in RAF
- Advising on interpretation and implementation of existing and upcoming credit risk regulations
- Developing, maintaining and monitoring IRB parameters and internal models for rating and scoring. Credit related model development efforts are validated in a separate process governed by Balance Sheet Risk Controls (BSRC)
- Assessing materiality of changes to the IRB approach

Measurement of credit risk

1st LoD Responsibilities

1st LoD is responsible for identifying, quantitatively and qualitatively assessing, deciding upon, controlling and reporting credit risk. This includes:

- Conducting operational credit risk monitoring and control activities to manage and mitigate risks
- Defining the relevant controls and acceptable tolerances
- Providing relevant management reporting to ensure management oversight and operative reporting to enable remedial actions
- Taking remedial actions

2nd LoD Responsibilities

In the 2nd LoD, GCRC is responsible for supporting prudent risk management and credit processes within the established credit risk appetite, models, policies and frameworks by providing an independent source of information for credit risk reporting.

Additionally, the Credit Risk Reporting unit in GCRC is responsible for independently analysing and reporting the status and development of the credit risk in Nordea's portfolio and in the credit processes both internally and externally.

Credit risk reports, provided by 2nd LoD, are included in the monthly holistic Risk Report to the GLT and BoD, as well as in the quarterly reports to the BoDs in the relevant subsidiaries on behalf of the CRO. The RAF limits set by BoD are regularly followed up in reporting.

Credit risk is measured, monitored and segmented in several dimensions. Credit risk in lending is measured and presented as on-balance sheet loans as well as off-balance sheet items on customers' and counterparts' net after allowances. Credit risk is measured utilising internal credit risk IRB models for a large portion of the portfolios. Standardised Approach (SA) is used for the remaining portfolios not covered by the IRB models. Nordea's loan portfolio

is broken down by segment, industry and geography and reported monthly, quarterly and annually.

Credit Risk Reporting and the other analytical units reconcile and use various IT-solutions and data sources in their analyses and reporting.

Credit risk in the capital adequacy framework

Standardised Approach (SA)

Nordea uses the SA to calculate own funds requirements for exposures towards central governments and central banks, equity exposures in the banking book and non-profit organisations.

Internal Ratings Based Approach (IRB)

Approval status for IRB approaches

Temporary tolerance: After the move of the headquarter to Finland in October 2018, Nordea is operating under a temporary tolerance decision from the ECB, allowing the bank to continue to use its Internal Rating Based (IRB) Approach approved by the bank's previous regulator, the Swedish Financial Supervisory Authority. The ECB's temporary tolerance is conditioned on Nordea applying to the ECB for a new permanent IRB approval, which the bank is currently preparing for.

Exposures in the IRB Approach

Institutions

Nordea uses the Foundation IRB (FIRB) approach to calculate own funds requirements for exposures towards institutional customers. Institutions constituted 5% of the total IRB REA at the end of 2019.

Corporate

For exposures towards corporate customers, the main approach used to calculate own funds requirement is the Advanced IRB (AIRB). However, for minor parts of the portfolio FIRB or SA is used. The AIRB covers banking and mortgage exposures in general in the Nordic countries and the international units. FIRB is used for derivatives and securities lending exposures as well as exposures in the Finance companies and exposures in Russia. SA is used for a small segment of non-profit organisation customers in Denmark. Exposures to corporates includes exposures towards rated Small and Medium-sized Enterprises (SMEs) and specialised lending. Corporate AIRB and FIRB made up 61% and 6% of total IRB REA, respectively.

Retail

Nordea uses the AIRB approach to calculate own funds requirements for banking and mortgage exposures towards retail customers in the Nordic countries, as well as in Nordea Finance Finland. Other entities use the SA approach to calculate own funds requirements for retail exposures. Retail constituted 28% of the total IRB REA by end of 2019.

Managing and recognising credit risk mitigation (CRM)

CRM is an inherent part of the credit decision process. In every credit decision and review, the market value of collaterals is considered as well as the adequacy of covenants and other risk mitigation techniques. The market value of a collateral is defined as the estimated amount for which the asset would exchange between a buyer and seller under current market conditions. On this market value, a haircut is applied. The haircut is defined as a percentage by which the asset's market value is reduced ensuring a margin against loss. The margin reflects the adjustments needed to assess the cash proceeds when the collateral is liquidated in a forced sale situation. A maximum collateral ratio is set for each collateral type.

The same principles of calculation are used for all exposures. However, for high-risk customers and/or specific collaterals, the foreclosure value may differ from the maximum collateral values to secure a realistic assessment for a certain asset at the specific point in time.

Risk transfer to other creditworthy parties, through guarantees and insurance, is based on legally enforceable documentation.

Credit risk concentrations within CRM may arise in relation to pools of receivables, in which case a conservative margin on the collateral value is applied. Credit risk concentration may also arise with respect to significantly large exposures, to which syndication of loans is the primary tool for managing concentration risk.

Covenants in credit agreements are an important CRM add-on for both secured and unsecured exposures. Most exposures of substantial size and complexity include appropriate covenants. Financial covenants are designed to react to early warning signs and are carefully monitored.

CRM techniques are used related to real estate, vessels, financial collateral, cash collateral and other physical assets. To a very limited extent, Nordea also utilise credit derivatives for CRM purposes. The credit derivatives are either cleared through a Qualifying Central Counterparty (QCCP) or issued by counterparties treated as EU Central governments and central banks, and are thus deemed highly creditworthy.

Nordea has permission to use the techniques for both FIRB and AIRB approaches (including retail) within the limitations of the regulation for each approach and according to fulfilment of the minimum requirements as laid out in relevant regulation.

Link between the balance sheet and credit risk exposure

This section discloses the link between the loan portfolio as defined by accounting standards and exposure as defined in the Capital Requirements Regulation (CRR). The main differences are outlined in this section to illustrate the link between the different reporting methods.

Original exposure is the exposure before substitution effects stemming from CRM, CCFs for off-balance sheet exposure and allowances within the SA. Exposure is defined as exposure at default (EAD) for IRB exposures and as exposure value for SA exposures. In accordance with the CRR, credit risk exposures are divided into exposure classes where each exposure class is divided into exposure types as follows:

- On-balance sheet items
- Off-balance sheet items (e.g. guarantees, credit commitments and unutilised lines of credit)
- Securities financing (e.g. repurchase agreements and securities lending)
- Derivatives

Items presented in the Annual Report (AR) are divided as follows (in accordance with accounting standards):

- On-balance sheet items (e.g. loans to central banks and credit institutions, loans to the public, reversed repurchase agreements, positive fair value for derivatives and interest-bearing securities)
- Off-balance sheet items (e.g. guarantees and unutilised lines of credit)

On-balance sheet items excluded from the capital requirement reporting

The following items are excluded from the balance sheet, when on-balance sheet exposure is calculated in accordance with the CRR:

- Balance sheet items not governed by the CRR, such as Nordea Life and Pension (NLP)
- Market risk related items in the trading book, such as certain interest-bearing securities and pledged instruments
- Other, mainly allowances and intangible assets

Off-balance sheet items

The following off-balance sheet are excluded when off-balance sheet exposure is calculated in accordance with the CRR:

- Non CRR related items, these items are not part of consolidated situation of CRR, e.g. NLP
- Assets pledged as security for own liabilities and other assets pledged (apart from leasing), these transactions are reported as securities financing (i.e. a separate exposure type)
- Derivatives

Derivatives and securities financing

The fair value of derivatives is recognised on the balance sheet, while the nominal amount of derivatives is reported off-balance sheet in accordance with accounting standards. However, in the CRR, derivatives and securities financing are reported as separate exposure types. Also, repurchase agreements and securities lending/borrowing transactions are included in the balance sheet calculated based on nominal value. In the CRR, estimation of these exposure types is performed net of collateral.

Rating and scoring definition

Rating and scoring of customers are used for rank ordering of the customers according to their respective default risk. Rating and scoring serve as the base for the PD estimation and are used as integrated parts of the credit risk management and decision-making process, including but not limited to:

- The credit approval process
- Calculation of own funds requirements
- Calculation of Economic Capital (EC) and Expected Loss (EL)
- Monitoring and reporting of credit risk
- Performance measurement using the Economic Profit (EP) framework
- Input for collective impairment

Rating

Rating is used for corporate and institutional customers. The rating is a rank ordering estimate that reflects the creditworthiness of a customer. The rating scale consists of 18 distinct grades for non-defaulted customers; from 6+ to 1- and three grades for defaulted customers from 0+ to 0-. The default risk of each rating grade is quantified as a one-year PD. Rating grades 2+ and lower are considered as high risk indicating financial difficulties for the customer and require special attention in the credit process. The consistency and transparency of the ratings are ensured using rating models. A rating model employs a set of specified and distinct rating criteria to produce a rating. These are called input factors and are, together with the criteria for assigning a customer to a specific rating model, the fundamental building blocks of a rating model. Typical input factors are financial factors, customer factors and qualitative factors.

Nordea has different rating models for different customer segments, e.g. real estate management, shipping, financial institutions and hedge funds. There are also risk rating frameworks for countries. Depending on the segment in question different methods, ranging from statistical to expert-based, have been used when developing rating models.

A rating is assigned in conjunction with credit proposals, reviews and the annual review of customers, approved independently by representatives from 1st LoD credit organisation. However, a customer is assigned a new rating as soon as new information indicates the need for it. If the calculated rating is assessed and deemed to not reflect the risk of default, specific override arguments or exception rules can be used within the model to adjust the calculated rating.

Controls and monitoring in connection to rating models are done within GCRC including the following:

- Monitoring of overrides/exceptions on rating models.
- Monitoring of unrated and outdated exposures
- Conducting annual control reviews on rating practices
- Evaluating model level use of overrides/exceptions on rating models

Exposures by credit quality step

Nordea applies the SA primarily for exposures to central and regional governments, central banks and equity holdings. In this approach, the rating from an eligible rating agency is converted to a credit quality step (mapping as defined by the financial supervisory authorities). Each credit quality step corresponds to a fixed risk weight, according to standard association published by the EBA. Nordea uses Standard & Poor's (S&P) as eligible rating agency. Table 41 presents the exposures for which the S&P's rating is used to arrive at regulatory credit quality steps. Exposures in the remaining standardised exposure classes are either immaterial or the risk weight is regulatory defined.

Scoring

Scoring is used for retail customers. The score is a rank ordering estimate that reflects the creditworthiness of a customer. The risk grade scale for scored customers consists of 18 grades; A+ to F- for non-defaulted customers, and three grades from 0+ to 0– for defaulted customers.

The credit scoring models are statistically derived and based on internal Nordea data. To predict the future performance of customers, certain characteristics are defined based on the customer's previous performance, the products held and behavioural information. The models also take policy requirements and credit processes into account. The customers' credit risk behaviour scores and corresponding risk grades are recalculated monthly.

The models are used to support business processes, the credit approval process and the risk management process, including monitoring of various portfolio risks. In the credit process, for example, credit bureau information is used as a supplement.

Scoring in Nordea uses a customer level approach, as opposed to a product-oriented approach. To calculate the score, the customer status as well as the customer's behaviour on all accounts/products, including potential joint commitments, is taken into consideration. The corresponding risk grade is assigned across all the customer's facilities in Nordea.

The scorecards are tailored to country specific variations, taking country specific product features, customer behaviour, macroeco-

nomic development, debt collection process and national legislation into account. Different scorecards are used to score the household and SME portfolios, as these portfolios exhibit different payment and behavioural patterns. The household portfolio is in turn segmented into smaller sub-populations based upon product combinations held by the customer. The scorecards are segmented according to the following dimensions:

- Country
- Household / SME
- Product combination (mortgage, revolving credits, other retail exposure)
- Delinquency (depending on volumes), which in this context refers to the customers that are not up to date with the account specific payment terms and conditions

Rating and scoring migration

The rating and scoring distribution changes mainly due to three factors:

- Changes in rating/scoring for existing customers (migration)
- Different rating/scoring distribution of new customers compared to customers leaving Nordea
- Changes in exposure per rating/scoring for existing customers

The rating distribution is affected by macroeconomic developments, industry sector developments, changes in business opportunities and changes to customers' financial situation and other company-specific factors. Scoring distribution is among other things affected by macroeconomic development and the customers' behaviour.

The rating models are hybrid models having characteristics of both through-the-cycle (TTC) and point-in-time (PIT), whereas the scoring models are closer to PIT. Following this, the migration due to cyclicality is greater for the scored customers than for the rated customers which is also reflected through changes in the own funds requirements.

Collateral

Collateral management principles are governed through the collateral instruction owned by GCRC in the 2nd LoD. There is a strong relationship between the data used for collateral management and the data used in calculating capital requirements.

Pledge of collateral is a fundamental CRM technique used by the bank. For corporate exposures, the main collateral types are real estate, floating charges and leasing objects. Collateral coverage should generally be higher for exposures to financially weaker customers than for those who are financially strong.

Collateral Principles

Collaterals in Nordea shall always be valued in a conservative manner based on current market values. The following key principles apply for collateral treatment:

- **Market value principle**: The market value of the collateral must always be assessed. The market value is defined as the estimated amount for which the asset or liability would exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion. Collateral may only be assessed as eligible where there is a liquid market with public prices readily available.
- **Forced sale principle:** The assessment of the collateral value must reflect that realisation of collaterals is initiated by Nordea and takes place in a distressed situation and converted into cash within a reasonable short timeframe.
- **Re-assessment principle**: The value of the collateral shall be monitored in regular intervals depending on the type of collateral. More frequent monitoring shall be carried out where the market is subject to significant changes in conditions. If the type, location or character (such as deterioration and obsolescence) of the asset indicates uncertainty regarding the sustainability of the market value, the collateral value shall be reduced. Such assessment shall also reflect previously experienced volatility of market.
- **Legal certainty principle:** No collateral value is to be assigned if a pledge is not legally enforceable and/or if the underlying asset is not adequately insured against damage.

Nordea monitors the value of pledged collaterals on a frequent basis and at least once every year. Monitoring should also include processes in place to secure timely and correct collateral registration, including updates in relevant systems. The monitoring process may use statistical information to assess when a significant change has occurred, and to identify the pledged properties for which a re-evaluation is required.

Collateral in the capital requirements calculation

CRM constitutes techniques used by a credit institution to reduce the credit risk associated with an exposure which the credit institution continues to hold. CRM techniques can be divided into unfunded credit protection, such as guarantees and derivatives, and funded credit protection, such as real estate, other physical assets, financial collateral and receivables, etc.

The collateral management in Nordea follows the specific collateral eligibility requirements in CRR and related guidelines, as well as national regulations, and includes valuation principles of collaterals, legal certainty, and other qualitative requirements that are connected to each collateral type.

IRB framework and model development

Models in the IRB framework

Nordea's rating models for corporate and institutional exposure classes are hybrid models, having characteristics of both TTC and PIT ratings, whereas the scoring models used for the retail exposure class exhibit more PIT characteristics as explained above.

The PD, LGD and CCF parameters are re-estimated and validated annually using both quantitative and qualitative assessments. The quantitative assessment includes statistical tests to ensure that the estimates remain valid when new data is added. The validation is performed by Credit Risk Model Validation (CRMV), independent from the model owners.

PD estimates are based on observed default frequency in available internal data that are adjusted to long term default frequencies through an add-on. The adjustment for the length of historical internal data available considers that the rating models used for the corporate and institutional exposure classes, have a higher degree of TTC, whereas the scoring models used for the retail exposure class are closer to PIT. The adjustment for the length of internal data available is embedded in the margin of conservatism, which

also includes an add-on to compensate for statistical uncertainty in the estimation.

LGD estimates are based on historical losses. LGD measures the net present value of the expected loss including costs caused by a customer's default. The LGD estimates are adjusted to reflect a downturn period and include a safety margin for statistical uncertainty in the estimation

CCF is a statistical multiplier used to calculate EAD by predicting the drawdown of an off-balance exposure. The CCF estimates for retail exposure class are based on internal data on drawings prior to default, whereas drawings after default are included in the LGD. The CCF estimates for corporate exposure class are also based on internal data but include both drawings prior to and after default. The CCF estimates are adjusted to reflect a downturn pe-riod and include a safety margin for statistical uncertainty in the es-timation. For regulatory purposes, downturn LGDs and CCFs are used.

Control mechanism around the rating systems

Organisation of the IRB control mechanism

Nordea's Group Risk and Compliance through the Risk Models function supports the Chief Risk Officer in executing the responsibility covering the IRB Approach. Group Risk and Compliance is responsible for the rating systems, their design, implementation and testing as well as validation by an independent unit. The Credit Risk Control Unit in Nordea, comprising of RiMO and GCRC functions, are jointly responsible for executing the credit risk control activities covering the IRB Approach in accordance with Article 190 (2) of the CRR. The Credit Risk Control Unit is independent from the personnel and management functions responsible for originating or reviewing exposures in accordance with Article 190 (1) of the CRR. Risk Models executes the responsibility covering the IRB framework and is organised in teams, dedicated to specific roles that are embedded in organisational units, which are not involved in credit granting.

IRB monitoring and reporting

Risk Models actively participates in implementation of the IRB Approach, by developing, maintaining and ensuring performance of Nordea's internal risk models for credit risk.

Reporting

Internal reporting on the IRB Approach and the Group's credit risk portfolio to Nordea's Group Leadership Team and Group Board is carried out on a regular basis. This ensures that management is reg-ularly and adequately informed of the function
ing of the rating systems, hence providing basis for supporting sound decisions on credit risk management.

The Credit Portfolio Quality Report (CPQR) is the Group's key management report on credit risk. The report covers developments in the Group's credit risk portfolio and the main business areas, in-cluding developments in key risk indicators across business areas. Developments in the portfolio quality is analysed on a segment level, among this the local business unit, industry and product type segments. The credit risk indicators used in the report include the main IRB and IFRS metrics. In addition to analysis on lending activ-ity and retail portfolio default vintages, portfolio monitoring related to credit process controls on rating overrides, unrated customers and outdated ratings are covered in the report. The CPQR report is prepared quarterly by GCRC unit and submitted to the RC, GLT and BRIC.

The status and overview of IRB related findings, recommendations and issues from internal and external stakeholders are presented in the Operational Oversight Report (OOR) prepared by Risk Models (RiMo) on a quarterly basis. Moreover, progress on model development activities and roll-out plans are covered in the report, as well as IRB related changes and FSA applications. In addition to the OOR, the model monitoring function within RiMo issues quarterly reports on IRB model performance covering aspects such as accuracy, stability and representativeness, across the range of IRB models. The OOR and the model performance reports are submitted to the Methodology and Analytics Committee (MAC), a sub-committee to the RC, who also decides on proposed mitigating actions to key issues identified during the model performance monitoring process.

Validation and review of credit risk models

As an important element of Nordea's risk management framework, validation of rating methodologies and credit risk parameters is performed on a regular basis to verify that the models perform as intended. Validation is the main component of identifying model risk in the IRB framework and plays an important role in the adjustment and development of models. The current validation scope for IRB models encompasses the rank ordering and PD models for rating and scoring customers, as well as models for LGD and CCF parameters. The validation process consists of quantitative analysis of internal historical data enriched by qualitative assessments, especially in cases where validation data is not statistically adequate to give reliable validation results. The quantitative validation of rank ordering models focuses on the discriminatory power of the models, whereas the validation of risk parameters; PD, LGD and CCF, focuses on the predictive power of the parameters in comparison to the historical default and loss experiences, as well as the customers drawing behaviour.

The risk parameters; PD, LGD and CCF, as well as the rank ordering models are reviewed annually in accordance to Nordea's standards and in line with the requirements defined in the CRR. Initial validation is performed on all new models as well as for material changes or extension to the scope of use of models already in scope. Annual validations are performed on models in use according to a pre-defined annual plan, independent of model developers and business units. A recalibration of specific parameter estimates setting is triggered based on testing results if deemed necessary. Extraordinary validations are performed out of ordinary validation cycle, triggered by specific events, such as model quality deterioration due to structural changes in the portfolio or systemic changes of input factors.

In Nordea Group, the validation of IRB models used for measurement of credit risk is conducted by Credit Risk Model Validation unit, which owns the validation process and methodologies. Independence in respect to the Credit Risk Control Unit (CRCU) is ensured through separate reporting lines and an escalation process to the Committee structure and Chief Risk Officer. All validations of credit risk models are presented to the Model Risk Committee (MRC) as input for decision.

Audit of IRB models

As the 3rd line of defence in Nordea Group, Group Internal Audit conducts independent review of the IRB framework and reports directly to the Board Audit Committee and the Group Board. The audit scope and review of the IRB framework is based on risk and control-based approach set by Group Internal Audit. This encompasses assessment of the internal controls designed to manage

model risk and evaluate the adherence to IRB model policies/guidelines, as well as regulatory expectations

Changes to the IRB framework

Nordea Group has adopted an internal governance structure covering all changes to the IRB Approach, to ensure correct and adequate level of attention is given to the respective IRB changes by the management. The materiality of the individual changes to the IRB approach determines the level of evaluation. A specific Unit in Nordea Group has been appointed as the materiality assessment process owner for the IRB models. The unit acts as one point of entry for performing materiality assessments of all potential changes to the IRB approach in accordance with Commission Delegated Regulation (EU) No 529/2014 (CDR). Challenge and sign-off is required from the respective control units; Group Internal Audit and the Committee structure. Credit Risk Model Validation (CRMV) validates all material changes before validation and validates all model changes as part of the annual validations.

Changes or extensions with a material impact on the IRB Approach are subject to supervisory permission before implementation. In Nordea, these changes require a RC approval prior to the start of development. Changes requiring a supervisory pre-notification are communicated to the supervisor two months prior to the notified implementation date. To the extent that a proposed change does not qualify as material based on the qualitative criteria, REA impact assessment is required.

Changes with a minor impact on the IRB Approach, that do not require a post supervisory notification, are communicated to the supervisor within a twelve months period from the implementation date. These changes are submitted to either the Credit Risk Sub-Committee or the Methodology & Analytics Committee for approval before implementation, after undergoing a materiality assessment.

IRB Changes considered to be out of CDR scope are classified as out of scope and are exempted from materiality classification and regulatory reporting requirements. These changes do not require approval at the committee level. However, to strengthen the IRB governance set-up, as well as ensure transparency and consistency, out of scope changes are communicated to the Credit Risk Sub-Committee or the Methodology & Analytics Committee for information purposes. The Committee can challenge the outcome of an out-of-scope assessment, of which it will be reassessed by the materiality assessment process owner.

Use of internal estimates

The IRB Approach allows Nordea to use the IRB components and the risk estimates for other internal purposes other than for regulatory capital purposes. Internal ratings and risk estimates play an important role in Nordea's risk management and decision-making process, by supporting credit decisions pertaining to credit approval, risk management, internal capital allocation and credit risk reporting. They also serve as an input in the collective impairment process governed by the IFRS 9 requirements.

Definition and methodology of impairment

Impairment requirements in Nordea are based on the IFRS 9 expected loss model. The assets to test for impairment are divided into three groups depending on the "stage" of credit deterioration: Stage 1 includes assets where there has been no significant increase in credit risk; Stage 2 includes assets where there has been a significant increase in credit risk; and Stage 3 includes defaulted assets. All assets are assessed individually for staging. Significant assets in Stage 3 are tested for impairment individually. Assets in Stage 1, Stage 2 and insignificant assets in Stage 3 are tested for impairment collectively. Impairment testing (individual and collective) applies three forward looking and weighted scenarios.

Throughout the process of identifying and mitigating credit impairment, Nordea continuously reviews the quality of credit exposures. Weak and credit impaired exposures are closely monitored and reviewed at least on a quarterly basis in terms of current performance, business outlook, future debt service capacity, and the possible need for provisions.

Individual provisioning

A need for individual provisioning is recognised if, based on credit events and forward-looking scenarios, a negative impact is expected on the customer's expected future cash flow to the extent that full repayment is unlikely (collaterals taken into account). The forward-looking scenarios include "Most likely case", "Positive case" and "Worst case" with standard probabilities of 60%, 20% and 20%.

Exposures with individually assigned provisions are considered as credit impaired and defaulted. The size of the provision is equal to the estimated loss, which is the difference between the book value of the outstanding exposure and the discounted value of the expected future cash flow, including the value of pledged collateral.

Nordea recognises only specific credit risk adjustments (SCRAs). SCRAs comprise individually and collectively assessed provisions. SCRAs during the year are referred to as loan losses, while SCRAs in the balance sheet are referred to as allowances and provisions.

Default

Customers with exposures that are past due more than 90 days, in bankruptcy or considered unlikely to pay are regarded as defaulted and can be either servicing or non-servicing debt. Defaulted customers are considered credit impaired and in Stage 3.

If a customer recovers from being in default, the customer is seen as cured. Typically, this situation occurs if the customer succeeds in creating a balance in financials. In order to be cured, the recovery should include the customer's total liabilities, an established satisfactory repayment plan and an assessment that the recovery is underway.

Collective provisioning

The collective provisioning model is executed quarterly and assessed for each legal unit/branch. One important driver for provisions is the trigger for the transferring of assets from Stage 1 to Stage 2. For assets recognised from 1 January 2018, changes to the lifetime PD are used as the trigger. In addition, customers with forbearance measures and customers with payments more than 30 days past due are also transferred to Stage 2. In Stage 1, the provisions equal the 12 months expected loss. In Stages 2 and 3, the provisions equal the lifetime expected loss. The model output is complemented with an expert-based analysis process to ensure adequate provisioning. Defaulted customers without individual provisions have collective provisions.

Forbearance

Forbearance is eased terms including restructuring due to the customer experiencing or about to experience financial difficulties. The intention with granting forbearance for a limited period is to help the customer return to a sustainable financial situation ensuring

full repayment of the outstanding debt. Examples of eased terms are changes in amortisation profile, repayment schedule, customer margin as well as ease of financial covenants. Forbearance is undertaken on a selective and individual basis and followed by impairment testing. Loan loss provisions are recognised, if necessary.

Forbearance measures that include debt forgiveness, write-offs and reduced customer margin lead to default while other forbearance measures can be related to both defaulted and non-defaulted customers.

Counterparty credit risk

Counterparty credit risk is the risk that Nordea's counterpart in an FX, interest, equity, credit or commodity derivative contract defaults prior to maturity of the contract and that Nordea at that time has a claim on the counterpart. In addition, counterparty credit risk also appears in repurchasing agreements and other securities financing contracts.

Derivative contracts are financial instruments, such as futures, forwards, swaps or options that derive their value from underlying interest rates, currencies, equities, credit spreads or commodity prices. The derivative contracts are often traded over-the-counter (OTC), which means the terms connected to the specific contract are individually defined and agreed on with the counterpart.

Nordea enters into derivative contracts based on customer demand, both directly and in order to hedge positions that arise through such activities. Interest rate swaps and other derivatives are used in hedging activities of asset and liability mismatches in the balance sheet. Furthermore, Nordea may, within clearly defined risk limits, use derivatives to take open positions in the bank's operations. Derivatives affect counterparty credit risk, market risk as well as operational and liquidity risk.

Counterparty credit risk, including that towards CCPs, is subject to credit limits like other credit exposures and is treated accordingly. To assess the counterparty credit risk towards Central Counterparties (CCPs), clearing limits are based on the potential size of the clearing related exposure on each CCP, taking regulatory requirements and the market development into account.

Pillar 1 method for counterparty credit risk

After the relocation to Finland in October 2018, Nordea is operating under a temporary tolerance decision from the ECB, allowing the bank to continue to use its IMM Approach approved by the bank's previous regulator, the Swedish Financial Supervisory Authority. The ECB's temporary tolerance is conditioned on Nordea applying to the ECB for a new permanent IMM approval. Nordea performed the IMM application in 2019 and the ECB assessment on a new permanent approval is expected to be communicated on the first semester of 2020.

The method is used for standard FX and interest rate products which constitute the predominant share of the exposure.

The expected IMM exposure is calculated by simulating a large set of future scenarios for underlying price factors and then revaluing the contracts in each scenario at different time horizons. In these calculations, netting is done of the exposure on contracts within the same legally enforceable netting agreement. Nordea uses a stressed calibration of the IMM for calculation of the counterparty credit risk internal exposures. For regulatory exposures Nordea uses the calibration that provides the highest own funds requirement calculated on the basis of Effective EPE in order to comply with Article 284 (3). Under the IMM approach, simulated exposure is subject to a regulatory multiplier of 1.4 to reflect the potential for correlation in risk across the portfolio.

For the part of the portfolio not covered by IMM, Nordea uses the Mark to Market method for calculating the regulatory exposure, which is essentially the sum of current net exposure and potential future exposure. The potential future exposure is an estimate reflecting possible changes in the future market value of the individual contract during the remaining life of the contract and is measured as the notional principal amount multiplied by an add-on factor. The size of the CRR add-on factor, depends on contracts' underlying asset and time to maturity.

Credit value adjustment (CVA) represents the market cost of hedging counterparty credit risk and the capital requirement, CVA risk charge, reflects the variability in CVA. Calculation of the CVA risk charge is based on either IMM exposure curves that are used in the advanced CVA risk charge calculation or the Mark to Market exposure amounts that are used in the standardised CVA risk charge calculation.

Mitigation of counterparty credit risk exposure

To reduce exposure towards single counterparties, Nordea employs risk mitigation techniques. The most significant one is the use of legally enforceable closeout netting agreements, which allows Nordea to net positive and negative market values on contracts within the same agreement in the event of default of the counterparty. It is Nordea's policy to have legally enforceable closeout netting agreements in place with all trading counterparties, and thereby being able to fully account for netting. The validity, legality and enforceability of the netting provisions are substantiated by legal opinions for all relevant jurisdictions. Legal opinions are reviewed continuously to ensure enforceability which ultimately increases effectiveness on Nordea's use of closeout netting. Additionally, Nordea retains capacity and authority opinions for all counterparties that reside outside Nordea's home jurisdictions to ensure that the agreements are legal, valid, binding and enforceable in accordance with its terms.

Nordea's Counterparty Credit Risk guidelines set up the overall framework for netting agreements where Group Legal signs of on local netting master agreements and negotiate all English law master netting agreements in order to ensure all agreements fulfils all regulatory requirements.

Secondly, Nordea mitigates the exposure mainly towards banks, institutional counterparties and hedge funds primarily with financial collateral agreements, where collateral is placed or received to protect the current net exposure. The collateral is mainly cash (EUR, USD, DKK, SEK and NOK), but also government bonds and to a lesser extent mortgage bonds. Most of the non-cash collateral received stems from highly rated European government bonds as well as Nordic mortgage bonds. Separate credit guidelines are in place for handling financial collateral agreements.

Nordea's financial collateral agreements do not normally contain any trigger dependent features, e.g. rating triggers. Some agreements though, still contain clauses that may require collateral postings in case of a Nordea downgrading; however, these would not impose any material impact on Nordea's liquidity and collateral preparedness. A three-notch downgrade of Nordea would trigger a collateral increase equivalent to approximately 1.5%.

Overall, Nordea's credit risk mitigation via collateral is considered highly diversified in terms of underlying instruments and

most of Nordea's collateralized exposure stems from investment grade counterparties.

In order to reduce bilateral counterparty credit risk, CCPs are increasingly used for clearing of OTC derivatives. By the end of 2019, CCPs were mainly used by Nordea to clear interest rate derivatives, repo transactions and to a lesser extent credit derivatives. Nordea continues to assess the possibility to clear more derivative volumes through CCPs in order to further reduce bilateral counterparty credit risk and to comply with the clearing obligation. Nordea's policy is to use CCPs if possible.

As well as exposure risk mitigation methods described above, Nordea employs credit default swap protection to hedge CVA risk. Protection for CVA purposes is bought from large interbank counterparties where most of the protection is being cleared by qualified central counterparties which ultimately reduces bilateral risk.

Wrong Way Risk exposures

Group Market and Counterparty Credit Risk (GMCCR) undertakes systematic analysis and reporting of general wrong way risk (GWWR), where cases of GWWR are escalated to senior management. GWWR is identified performing historical trend analysis to highlight correlations within the portfolio between the counterparty's exposure and rating.

Moreover, automatic identification procedures are in place to identify potential specific wrong-way risk (SWWR), i.e. situations where the future exposure to a counterparty is positively correlated to the counterparty's PD for a reason that is specific to the counterparty. The significance of SWWR is determined through a number of checks assessing correlation and presence of mitigating parameters. Legal connection is decided based upon principles for customer consolidation as defined in the credit guideline. Transactions that are assessed to have 1) significant degree of SWWR and 2) legal connection, are named Eligible SWWR transactions and are subject to tightened monitoring and increased capital requirements as defined in the CRR.

Counterparty credit risk and settlement risk for internal credit limit purposes

Counterparty credit risk for internal credit limit purposes is for the main part of the portfolio calculated using IMM. Model parameters are based on data from a specific three-year period, including a one-year period identified to have the most significant increase in credit spreads in recent times.

The exposures included in IMM are subject to daily and periodic stress tests with the aim to identify adverse scenarios affecting exposures on counterparty, industry and country level.

Settlement risk is a type of risk arising during the process of settling a contract or executing a payment.

The risk amount is the principal of the transaction, and a loss could occur if a counterpart was to default after Nordea has given irrevocable instructions for a transfer of a principal amount or security, but before receipt of the corresponding payment or security.

The settlement risk on individual counterparts is restricted by settlement risk limits. Each counterpart is assessed in the credit process and clearing agents, correspondent banks and custodians are selected with a view to minimise settlement risk.

Nordea is a shareholder of CLS (Continuous Linked Settlement) Bank, and member in the global FX clearing system run by CLS. The system eliminates settlement risk for FX trades in 18 different currencies between eligible counterparties in CLS.

For those counterparts and FX trades that are not eligible for CLS clearing, it is Nordea's policy to settle via in-house accounts. Only with specific credit approval from appropriate credit committee external settlement is allowed, and in those situations Nordea make use of bilateral payment netting in order to reduce the exchanged amounts to the greatest extent possible.

Market risk

Market risk is the risk of loss in Nordea's positions in either the trading book or non-trading book as a result of change in market rates and parameters that affect the market values or net interest income flows. Market risk exist irrespective of the accounting treatment of the positions.

Market risk management principles

The management of risk in Nordea is governed by principles and procedures which are stated in the Group's internal rules and adhered to throughout the organisation. This includes the three lines of defence model.

More specifically, market risk is managed based on guiding principles and overall rules set out in the "Group CEO Instructions on Market and IRRBB Risk". These instructions are supplemented by Guidelines issued by the 2nd LoD and relevant 1st LoD units. Key elements of market risk management in Nordea are summarised below:

- *Risk identification and measurement*
  - The Group uses an adequate range of measures to capture the material aspects of market risk.
  - Stress tests are carried out on a regular basis to estimate the possible losses that may occur under severe, but plausible, market conditions.
- *Market risk mitigation and management*
  - Market risk is managed through clearly defined risk mandates in terms of limits and restrictions on which instruments may be traded and by which desk.
  - Where there is a hedging strategy (or use of alternative methods of mitigation) in place, then all hedges must be monitored.
  - The framework for the approval and valuation of traded financial instruments requires the analysis and documentation of each instrument's features and risk factors.
- *Risk limits and monitoring*
  - Market risks are controlled through daily monitoring of profit and loss, daily measurement and control of risk exposures and daily monitoring of market risk appetite limits.

Governance of market risk

The market risk governing bodies are the Group BoD, BRIC, RC and ALCO. Additional decision-making bodies with responsibilities specific to market risk are shown in the Figure below.

1st LoD responsibilities - BAs and GFs

Relevant 1st LoD BAs and GFs are responsible for providing sufficient information in their business plan on the expected future risk profile of their business so that this can be used as an input to the independent determination of the risk appetite by the 2nd LoD. In addition, the 1st LoD is responsible for implementing the risk framework as designed by the 2nd LoD.

2nd LoD responsibilities - GRC

GRC provides all relevant risk-related information to the BoD to enable it to set the market risk strategy and risk appetite. GRC is also responsible for overseeing appropriate risk identification and monitoring in the business through the design of the Risk Management Framework. Furthermore, GRC is responsible for overseeing the risk framework is appropriately implemented by the 1st LoD.

3rd LoD responsibilities - GIA

GIA performs audits and provides additional assurance to the BoD and GLT on the adequacy of internal controls and risk management processes, thereby constituting the 3rd LoD.

Traded market risk

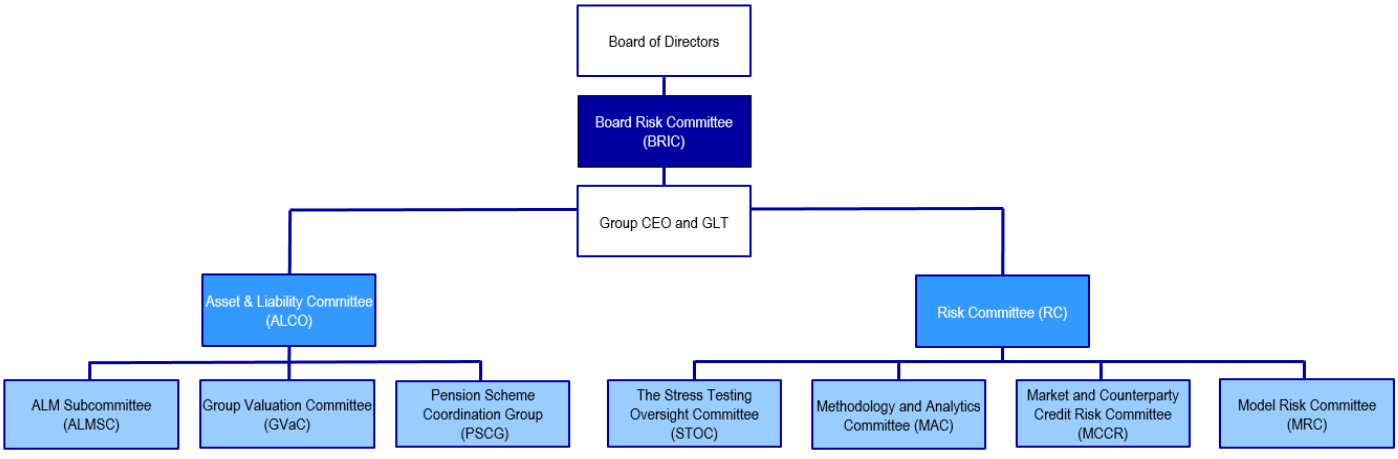
Traded market risk arises mainly from client-driven trading activities and related hedges in Nordea Markets which is part of Large Corporates & Institutions.

Traded market risk management

Nordea Markets takes market risks as part of its business model to support corporate and institutional clients through a range of fixed income, equity, foreign exchange and structured products. The market risks Nordea Markets is exposed to include interest rate risk, credit spread risk, equity risk, foreign exchange risk, commodity risk and inflation risk.

Furthermore, Nordea is one of the major Nordic mortgage lenders and market makers in Nordic corporate and government bonds. Holding inventory is a consequence of providing secondary market liquidity. As a result, Nordea's business model naturally gives rise to a concentration in Nordic mortgage and corporate bonds as well as in local market currencies.

Figure: Governance of market risk



Traded market risk measurement

Nordea uses several quantitative risk measurement methods for market risk: value-at-risk, stress testing, sensitivity analysis, parametric methods and Monte Carlo simulation.

Value-at-Risk is based on historical scenarios and is the primary market risk measurement metric, complemented by stress testing.

Parametric methods are used to capture equity event risk including the impact of defaults on equity related positions (these risks are part of specific equity risk).

Monte Carlo simulation is used in the Incremental Risk Measure model and the Comprehensive Risk Measure model to capture the default and migration risks.

The Value-at-Risk, Stressed Value-at-Risk, Equity Event Risk, Incremental Risk Measure and the Comprehensive Risk Measure models were all approved by the bank's previous regulator, the Swedish FSA, for use in calculating market risk own funds requirements under the Internal Model Approach (IMA). The same models, with same calibration and settings, as used for regulatory capital requirements are used for internal risk management purposes.

SA is applied to risk exposure which is not covered by the IMA. Nordea Bank Abp is the only legal entity for which this model is in use.

After the relocation to Finland in October 2018, Nordea is operating under a temporary tolerance decision from the ECB, allowing the bank to continue to use its IMA approved by the Swedish FSA. The ECB's temporary tolerance is conditioned on Nordea applying to the ECB for a new permanent IMA approval, which the bank is currently preparing for.

Value-at-Risk (VaR)

Nordea's Value-at-Risk (VaR) model is based on the expected shortfall measure (ES) instead of a quantile-based VaR measure, due to the advantages of ES-based VaR, e.g. more accurate and robust modelling of the tail of the portfolio loss distribution.

Nordea calculates VaR using historical simulation. The current portfolio is revalued based on historical daily changes in market prices, rates and other market risk factors observed dur-ing the last 500 business days and translated to changes in the current market risk factors. Nordea uses absolute, relative and mixed translation methods for different risk categories.

The revaluation of the current portfolio is performed for each position using either a linear approximation method or a full revaluation method, depending on the nature of the position.

The historical data window is updated every business day to cover the last 500 business days. From the empirical distribution of returns, ES is used to calculate a VaR number as the average of the 6 worst outcomes from the distribution of portfolio value changes. The resulting ES confidence level is 98.8%. The quality of the approximation depends on the magnitude of the worst observed losses (i.e. the heaviness of the tail of the portfolio loss distribution), which is reassessed periodically as part of Nordea's risk model maintenance processes. The mixed transla-tion method scales historical returns to take into account the de-pendencies that exist between risk factor levels and changes in these levels. No weighting method is used for historically simu-lated returns. The one-day VaR number is subsequently scaled to a 10-day number using the square root of time method.

The total VaR number used for regulatory capital requirements includes interest rate, credit spread, foreign exchange rate, equity and inflation risks in a single model. This allows for diversification amongst all these risk categories including general and specific risk factors in scope for the IMA VaR model.

Stressed Value-at-Risk (Stressed VaR)

The Stressed VaR number is calculated using a similar methodology to the VaR. However, whereas the VaR model is based on data from the last 500 business days, the Stressed VaR is based on a specific historical 250-business day period with considerable stress in financial markets. In addition, Stressed VaR is calculated as the average of the 3 worst returns of the empirical distribution of portfolio value changes. The ES confidence level is 98.8%. Since the relevant period with stressed markets will depend on the current portfolio composition, the level of Stressed VaR in relation to the VaR is monitored daily and the stress period can be changed if deemed necessary to adequately measure the risk in a stressed market environment. The specific historical 250-business day period to be used is reviewed at least annually. Currently, the stress period covers a period during the latest global financial crisis.

Incremental Risk Measure (IRM)

The Incremental Risk Measure (IRM) model measures the risk of losses due to credit migration or defaults of issuers of tradable debt in bond and credit derivative positions held in the trading book (excluding the correlation trading portfolio which is covered by the Comprehensive Risk Measure model). The model uses a Monte Carlo simulation approach based on a Gaussian copula model. The correlation structure between issuers is specified via a factor model. The liquidity horizon is one year, over which a constant portfolio is assumed, in line with CRR article 374.

The model is based on transition matrices, where the elements are probabilities of migration from the current rating class to another rating class. The probabilities are obtained from a single source, a major rating agency.

For each simulation and each issuer, a rating migration is generated either to a new rating class, unchanged rating class or default. In case of a simulated default, the portfolio loss is calculated based on the recovery rate of the issuer assuming deterministic recovery rates. For a simulated unchanged rating class, the portfolio loss is zero. In case of a simulated migration to another (non-default) rating class, the portfolio loss is calculated using a grid-based revaluation method (interpolation between pre-calculated portfolio net present values, where full revaluation is used in the pre-calculations). A spread multiplier matrix is then used to translate each simulated migration to a new credit spread.

For each simulation, portfolio losses are aggregated across issuers, such that each simulation corresponds to one total portfolio loss. The IRM number is based on ES. The model uses 50,000 simulated scenarios and the average of the 100 worst simulated total portfolio losses is the output of the model, corresponding to an ES confidence level of 99.8%. The transition matrices and spread multiplier matrices are recalibrated annually.

The IRM is calculated and monitored weekly.

Comprehensive Risk Measure (CRM)

The Comprehensive Risk Measure (CRM) model measures the correlation risk, credit spread risk, default risk, recovery rate risk and index credit default swap basis risk in the correlation trading

portfolio. The model is based on Monte Carlo simulation. The liquidity horizon is one year, over which a constant portfolio is assumed (consistent with the IRM model).

The approach for default simulation is the same as that used in the IRM model (Gaussian copula model). In case of default, the realised recovery rate is simulated to determine the loss given default. In case of non-default, a credit spread move is simulated based on another Gaussian copula model component (which shares the same driving random variables with the default model component, i.e. the random sources of the default model also drive the credit spread model). The marginal distribution for each single issuer spread move is given by a lognormal distribution and the recovery rates used in the valuation are simulated assuming a beta distribution. The index CDS basis is simulated as a lognormally distributed multiplier to the CDS index hazard rate curve that is implied by the spreads of the individual issuers. The resulting CDS index hazard rate curve, including the multiplier, is then used to derive the CDS index spread curve. Base correlations for CDO's and correlations for Nth-to-default baskets are simulated via a function of Gaussian random variables. The function is applied to keep the resulting correlations in the interval between zero and one.

For each simulation, a full revaluation method is used, and the results for each issuer are aggregated to determine the portfolio loss. The model uses 25,000 simulated scenarios and a sampling scheme that samples high loss scenarios more frequently, effectively producing the same tail scenarios as a method based on 50,000 simulated scenarios without the sampling scheme. The IRM number is calculated as the average of the 100 worst portfolio loss scenarios, corresponding to a 99.8% ES confidence level. The transition matrices and other model parameters are calibrated annually.

The IRM is calculated and monitored weekly.

Equity Event Risk (EER)

The Equity Event Risk (EER) model is part of Nordea's IMA framework. The EER model captures two different parts of specific equity risk: equity jump risk and equity related losses due to defaults.

The equity jump risk component measures the risk of losses that are specific to each single stock and beyond the VaR model's confidence level. The jump risk is calculated based on a parametric model for the single stock returns. The confidence level corresponds to the worst 10-business day return occurring at a frequency of once every 500 business days.

The equity default risk component measures equity related portfolio loss due to the default of a company. An intensity model with constant 10-business day intensity is assumed.

Standardised Approach (SA)

SA is used for calculating market risk exposures for commodity related products, specific risk for mortgage and government bonds, commercial papers, credit/rate hybrids and credit spread options, as well as for equity risk related to structured equity and Tier 1 and Tier 2 bonds.

Back-testing

Back-testing of the VaR model is performed daily using both hypothetical profit and loss (P&L) and actual P&L. Hypothetical P&L is the P&L that would have been realised if the positions in the portfolio had been held constant during the following trading day. The actual P&L also includes intra-day trading. The P&L numbers are compared to one-day VaR numbers (98.8% ES confidence level). Overshootings are defined as the historical days where either the actual and/or the hypothetical losses are worse than the VaR number. The largest of the number of actual P&L overshootings and hypothetical P&L overshootings in the last 12 months determines the capital multiplier addend according to the red/amber/green colour zones specified in the CRR.

Non-traded market risk

Non-traded market risk principally arises from the core banking business of Nordea, related hedges and regulatory or other external requirements (e.g. liquid asset buffer).

Non-traded market risk management

TALM is responsible for the comprehensive risk management of all non-traded market risk exposures in the Group's balance sheet. For transparency and a clear division of responsibilities within TALM, the comprehensive banking book risk management is divided across several frameworks – each with a clear risk mandate, specific limits and controls including hedges implemented to further reduce risks across frameworks.

The non-traded market risks that Nordea is exposed to are interest rate risk, credit spread risk, foreign exchange risk (both structural and non-structural) and equity risk.

Interest rate risk in the banking book (IRRBB) is the current or prospective risk to Nordea's capital and earnings arising from adverse movements in interest rates. BAs transfer their banking book exposures to TALM through a funds transfer pricing framework. The market risks are then managed centrally and include gap risk, basis risks, credit spread risk, behavioural risks and non-linear risks. These risks are also delineated by currency.

Due to the lending structure in Nordea's home markets, most of the contractual interest rate exposures are floating rate. Consequently, wholesale funding is also swapped to floating rate. The resulting repricing gap risk is managed on an aggregated basis by currency and where applicable by legal entity (primarily the mortgage companies). The net outright interest rate risk stemming from the repricing gaps, together with the limited fixed interest rate risk, is hedged with interest rate swaps (IRS) and overnight index swaps (OIS).

Liquid assets are managed in accordance with the Liquidity Buffer and Pledge/Collateral frameworks. Most of the directional interest rate risk arising from bond holdings is hedged primarily with maturity matched IRS payer swaps and to a smaller degree with OIS payer swaps. Forward Rate Agreements and listed futures contracts are also used to hedge credit spread and interest rate fixing risks.

Non-traded market risk measurement

IRRBB

IRRBB is measured, monitored and managed using three key risk metrics:

- Economic Value (EV),
- Fair Value (FV), and
- Structural Interest Income Risk (SIIR).

The three different risk metrics are used to assess differing aspects of the manifestation of interest rate risk. These are described in more detail below.

Economic value (EV) of Equity stress tests consider the change in the economic value of banking book assets, liabilities and interest-bearing derivative exposures resulting from interest rate

movements, independently of accounting classification and ignoring credit spreads and commercial margins. The model assumes a run-off balance sheet and includes behavioural modelling for non-maturing deposits and prepayments.
Changes in the Economic Value of Equity of the banking book are measured using the six standardised scenarios defined by the Basel Committee on Banking Supervision (BCBS) plus a range of internal parallel shocks. The exposure risk appetite limit under EV is measured against the worst outcome out of the six Basel scenarios measured. The EV basel scenarios are estimated daily for management information purposes, but fully calculated and monitored monthly against the risk appetite limits.
The fair value risk stress measure considers the potential revaluation risk relating to positions held under fair value accounting classifications. Fair value sensitivities in the banking book are monitored against five severe but plausible market stress scenarios. The scenarios are calibrated to reflect severe events designed to test specific exposures that are or may be held under the approved mandate. The risk is measured daily and a risk appetite limit is set against the worst outcome of the five scenarios. The FV scenarios are applied to both the banking book and trading book portfolios, and the Board risk appetite limit considers the combined impact across both. The FV stress metric is monitored daily.
The earnings risk metric measures the change in Net Interest Income (NII) relative to a base scenario, creating a Structural Interest Income Risk (SIIR) value over a one-year horizon. The model uses a constant balance sheet assumption, implied forward rates and behavioural modelling for the non-maturing deposits and prepayments. Similarly to EV, SIIR is measured using the six standardised scenarios defined by the Basel Committee on Banking Supervision (BCBS) for management information, plus a range of internal parallel shocks. The SIIR risk appetite limit is set against a +/- 50bps parallel shock. The SIIR earnings metric is monitored monthly.

The measurement of IRRBB is dependent on key assumptions applied in the models. The most material assumptions relate to loan prepayments and non-maturing deposits (NMDs) incl. floors. The models are based on historical customer behaviour and Nordea's historically observed pricing behaviour. Nordea's NMD model estimates a stable non-interest sensitive portion of the deposits that is available for hedging. Importantly, the NMD modelling segregates the linear interest rate risk and floors. Modelling of behavioural interest rate risk introduces model risk and Nordea therefore applies haircuts to the modelled NMD sensitivities. Nevertheless, the magnitude of the modelled interest rate even after haircut is not insignificant as shown in tables 61 and 62. Regular back-testing and model monitoring is performed for both prepayment models and NMD models to ensure that the models remain accurate.

The Pillar II IRRBB capital allocations consists of a Fair Value Risk component and an Earnings Risk component. The Fair Value Risk component covers the impact on the bank's equity due to adverse movements in the MtM values of positions accounted for at Fair Value through Profit and Loss (FVTPL) or Fair Value through other comprehensive income (FVOCI). The Earnings Risk component covers the impact of rate changes on future earnings capacity, and the resulting implications for internal capital buffer levels.

Structural foreign exchange

Nordea is exposed to structural FX risk defined as the mismatch between the currency composition of its common equity tier 1 (CET1) and risk exposure amounts. CET1 is largely denominated in euro with the only significant non-euro equity amounts stemming from mortgage subsidiaries and Nordea Bank Russia. Changes in FX rates can therefore negatively impact Nordea's CET1 ratio.

This risk is measured through a stress test that translates the BoD's risk appetite into a limit in CET1 ratio sensitivity which is monitored at least weekly.

Validation of risk models

Independent model validation

All models including pricing and valuation models (both vendor and proprietary), are governed by a group wide common model governance framework. This framework outlines standards for the model risk management throughout the model life cycle including the development process and the processes for independent model validation and periodic review.

As part of the model governance framework, all market risk models are subject to independent model validation. This includes models used for regulatory capital purposes for both traded and non-traded market risk. Validation activities are carried out by Model Validation, a unit within BSRC which is independent and organisationally separate from the risk-taking units and the market risk model developers.

Market risk models are validated both prior to use and on an ongoing basis to ensure that they remain sound and are used and perform in line with the design objectives. Model Validation compiles the results of validation activities in reports that are presented at the MRC, including a summary of validation activities, a list of identified model risks and assessment of their severity as well as potential mitigations to be implemented by the model owners.

Validation elements include confirmation of the conceptual soundness, verification of the model implementation in IT systems and outcome analysis, including back-testing results. Ongoing validation furthermore involves assessment of the adequacy and effectiveness of the model control setup and model performance monitoring. The implementation of model risk mitigations, as recommended in model validation reports and agreed in the MRC, is monitored on a regular basis and progress is tracked through implementation.

The model validation is carried out both on an aggregate level, through annual reviews of the models, as well as on a more granular model component level. The scope for this includes:

- Risk factor models
- Pricing models, including both full revaluation models and approximations based on sensitivities
- Adequacy of risk measure
- Choice and adequacy of proxies
- Accuracy and stability of calibrated model parameters
- Model assumptions, including correlation modelling in IRM and IRM
- Model calibration, including assessing the choice of stress period for Stressed VaR
- Evaluation of model performance through measures such as back-testing
- Robustness of models across scenarios

- Choice of variables and evaluation of explanatory power for behavioural modelling in non-traded market risk

Validation by the developers

Stress tests of the IRM input parameters (main scenarios involve shifts to probabilities of default and correlation parameters) are conducted annually, as part of the validation processes performed by RiMO in the 2nd LoD (the unit responsible for the development of risk models).

Other validation processes performed by Risk Models include proxy control, market data input controls and stress testing to assess the adequacy of the VaR and Stressed VaR numbers. Stress testing covering the VaR and Stressed VaR scope is performed weekly based on the following scenarios: Market Liquidity Freeze, Nordic Financial Crisis, Abrupt Volatility Spike, Speculation on DKK Peg and Stress Testing of Proxies. Three levels of severity are used in the definition of the scenarios: moderate (a 10-business day shock occurring once every year), large (a 10-business day shock occurring once every 5th year), severe (a 10-business day shock occurring once every 10th year). The shocks are calibrated to historical data using a parametric model to ensure consistency in the size of the shocks across all risk factors.

Market risk monitoring and control

Market risk appetite

The market risk appetite for the Group is expressed through risk appetite statements issued by the BoD. The statements are defined for the trading and banking books.

The 2nd LoD ensures that the risk appetite is appropriately translated through the RC into specific risk appetite limits for the BAs and TALM.

Stress testing

As part of the overall risk appetite framework (RAF), holistic and bespoke stress tests are used to measure the market risk appetite and calibrate limits to monitor and control the full set of material market risk factors to which the bank is exposed. The RAF scenarios cover six severe, but plausible macroeconomic events that can foreseeably affect both trading and banking book positions. The scenarios cover different risk factors, products, tenors and geographical regions. The six macroeconomic events relate to:

(i) an interest rate hike scenario,
(ii) an equity sell-off scenario,
(iii) a Nordic housing crisis scenario,
(iv) a European recession scenario,
(v) a global money market crisis and
(vi) a flight from U.S. assets. The Nordic housing crisis is considered the most banking book focused (and typically the most impactful stress), while other scenarios have a more distributed impact across the trading and banking books. The RAF stress tests are run and validated frequently in line with the regulatory requirement and are calibrated semi-annually to ensure appropriate risk factor coverage and to focus on areas to which Nordea's treasury and trading activity is particularly sensitive.

Additional controls

Global Financial Reporting and Information Control (GFRIC), within the 1st LoD, is responsible for the design and performance of comprehensive controls in line with the risk framework.

GRC monitors and controls traded market risk on a daily basis. The process includes analysis and reporting of risk sensitivities related to e.g. interest rates, credit spreads, FX and equity exposures and capital measures. Furthermore, GRC is responsible for monitoring market risk limit adherence and for the escalation of breaches in line with internal guidelines for limit monitoring and oversight.

Inclusion in the trading book

For regulatory purposes, all positions must be assigned to either the trading book or the banking book. This classification impacts the regulatory treatment of positions, in particular regulatory capital requirements. The criteria for the allocation of positions to either the trading book or banking book are set out in the internal trading book/banking book boundary guideline which is approved by the RC, applicable to all entities included in Nordea's consolidated position.

The Group includes in the trading book all positions in financial instruments held either with trading intent, or to hedge positions held with trading intent.

Positions assigned to the trading book are either free of restrictions on their tradability or able to be hedged. Any position not defined as a trading book position is assigned to the banking book. The trading strategies for the trading book and the investment policy for the banking book, mandate activities and positions in the respective books that ensure compliance with the boundary guideline and regulatory requirements.

The 1st LoD performs controls to verify that activities carried out are compliant with the trading strategies and investment policy and that they receive the appropriate book classification. GRC oversees and regularly challenges the control activities of the 1st LoD in this regard. Any position in breach of the trading strategy or the investment policy is reallocated in line with the internal reclassification guideline. The decision is taken within the senior governance body of the business areas where the 2nd LoD is represented.

Requirements for prudent valuation

Nordea's valuation framework, including standards for prudent valuation, covers all positions held at fair value across the Nordea Group including both trading and banking books

Policies, procedures and reporting lines

Nordea's valuation framework consists of policies and procedures that outline the different valuation related processes. This includes the overall principles for calculation of fair value and valuation adjustments as well as definitions of the responsibilities, a price source hierarchy, the frequency of independent price verification and the timing of closing prices.

Operational valuation controls including independent price verification are performed by a valuation control function within the 1st LoD, which is independent from the risk-taking units in the front office. An independent valuation control team within the 2nd LoD has the responsibility for further monitoring and analysis of the valuations and controls performed by the 1st LoD and provides independent assessment and reporting on any identified risks.

Daily revaluations

Positions in the regulatory trading book are revalued on a daily basis.

Whenever possible, Nordea marks its positions to market using observable prices. However, for many assets and liabilities, observable market transactions and market information might not be available. When a price for an identical asset or liability is not observable and hence marking to market is not possible, Nordea applies a mark to model approach.

Nordea marks to mid-market prices (average of bid and ask) but applies a portfolio adjustment, referred to as close-out-cost valuation adjustment, to adjust the net open market risk exposures from mid-market prices to ask or bid prices (depending on the net position). For different risk categories, exposures are aggregated and netted according to internal guidelines and aggregated market price information on bid-ask spreads are applied in the calculation.

Valuation model governance

All models, including pricing and valuation models (both vendor and proprietary), are governed by a group wide common model governance framework.

Proprietary models are developed in the 1st LoD. Independent model validation of all valuation models is conducted by the 2nd LoD before final approval in the bank's MRC and Group Valuation Committee. For the intended use of a model, the independent validation includes confirmation of the appropriateness of model assumptions, the mathematics of the model and alignment with market practice, where such exist, as well as verification of the software implementation and outcome analysis to benchmark and test of the model output. The independent validation team reports on significant model risks to senior management on a quarterly basis.

All valuation models, both complex and simple models, make use of market prices and inputs. Some of these prices and inputs are observable while others are not. For each instrument the sensitivity towards unobservable inputs is measured.

Independent price verification

The independent price verification (IPV) comprises verification of the correctness of valuations by comparing the prices to independently sourced data. The result of the IPV is analysed and any findings are escalated as appropriate. The verification of the correctness of prices and inputs is at a minimum carried out on a monthly basis and for many products it is carried out daily. Third-party information, such as broker quotes and pricing services, is used as benchmark data in the verification. The quality of the benchmark data is assessed on a regular basis.

The IPV is performed by a valuation control function within the 1st LoD, which is independent from the risk-taking units in the front office.

Valuation adjustments in fair value

Fair value of financial assets and liabilities are generally calculated as the theoretical net present value of the individual instruments. This calculation is supplemented by portfolio adjustments as detailed below.

Nordea incorporates credit valuation adjustments (CVA) and debit valuation adjustments (DVA) into derivative valuations. CVA and DVA reflect the impact on fair value from the counterparty´s credit risk and Nordea's own credit quality, respectively. Calculations are based on estimates of exposure at default, probability of default and recovery rates, on a counterparty basis. Generally, exposure at default for CVA and DVA is based on expected exposure and is estimated through the simulation of underlying risk factors. Where possible, Nordea obtains credit spreads from the CDS market, and probabilities of default (PDs) are inferred from this data. For counterparties that do not have a liquid CDS market, PDs are estimated using a cross sectional regression model, which calculates an appropriate proxy CDS spread given each counterparty's rating region and industry.

The impact of funding costs and funding benefits on the valuation of uncollateralised and imperfectly collateralised derivatives is recognised as a funding fair valuation adjustment (FFVA). In addition, Nordea applies in its fair value measurement, close-out cost valuation adjustments and model risk adjustments for identified model deficiencies (including possibly incorrect parameter calibration).

Additional valuation adjustments

In addition to the valuation adjustments that are directly applied in fair value, Nordea calculates a number of additional valuation adjustments to account for valuation uncertainty. This includes additional valuation adjustments for:

- Market price uncertainty
- Close-out costs (covering uncertainty in the close-out cost valuation adjustment)
- Model risk (including adjustments due to unobservable parameters)
- Unearned credit spreads (covering uncertainty in the CVA)
- Investing and funding costs (covering uncertainty in the FFVA)
- Concentrated positions
- Future administrative costs
- Early termination cost
- Operational risks

The additional valuation adjustments are calculated and aggregated in accordance with the Commission Delegated Regulation (EU) 2016/101 and are deducted from the CET1 capital in the calculation of Nordea's capital ratios.

Pillar 1 market risk own funds requirement

The table below summarises the scope of the IMA approval in the context of the Pillar 1 market risk own funds requirement.

Table: Pillar 1 market risk own funds

Measure	General risk	Specific risk
VaR model	Interest rate risk Equity risk ** Foreign exchange risk Inflation risk	Specific interest rate risk * Specific equity risk **
Stressed VaR model	Interest rate risk Equity risk ** Foreign exchange risk Inflation risk	Specific interest rate risk * Specific equity risk **
EER model	No general risk	Event risk of equities **
IRM model	No general risk	Event risk of debt instruments *
IRM model	No general risk	Specific risk of correlation trading *

* IMA excludes specific risk on tier 1 and tier 2 bonds and cer-tain other bond types, credit options and related hedges,

credit/interest rate hybrids. Specific interest rate risk for these products are included under SA.
** IMA excludes both general and specific equity risk for structured equity risk and fund-linked derivatives. The excluded general and specific equity risk is included under SA.

Other risks

Pension risk

Pension risk (including market and longevity risks) arises from Nordea-sponsored defined benefit pension schemes for past and current employees. The ability of the pension schemes to meet the projected pension payments is maintained through investments and ongoing scheme contributions. Pension risks can manifest through increases in the value of liabilities or through falls in the values of assets. These risks are regularly reported and monitored and include consideration of sub-components of market risk such as interest rate, inflation, credit spread, real estate and equity risk. To minimise the risks to Nordea, limits are imposed on potential losses under severe but plausible stress events and by limits on capital drawdown. In addition, regular reviews of the schemes strategic asset allocation are undertaken to ensure the investment approach reflects Nordea's risk appetite.

On a day-to-day basis, TALM has first line responsibility for the schemes with GRC providing second line oversight and support. The overall responsibility within Nordea for the management of defined benefit pension schemes lies with the Pension Scheme Coordination Group (PSCG). The PSCG includes representatives from the Chief of Staff's office, TALM, GRC, Group People, Group Accounting, Group Corporate Law and the BAs.

Operational and compliance risk

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk. Compliance Risk is defined as the risk of failure to comply with applicable laws, regulations, standards, supervisory requirements and related internal rules governing Nordea's activities in any jurisdiction where Nordea operates.

Operational and compliance risks are inherent in all of Nordea's businesses and operations. Consequently, managers throughout Nordea are accountable for the operational and compliance risks related to their mandate and for managing these risks within risk limits and risk appetite in accordance with the operational and compliance risk management frameworks.

Group Operational Risk (GOR) and Group Compliance (GC) within Group Risk and Compliance (GRC) together constitute the second line of defence (2nd LoD) for operational and compliance risks respectively.

GOR within GRC constitutes the risk control function for operational risk and is responsible for developing and maintaining the overall operational risk management framework as well as for monitoring and controlling the operational risk management of the first line of defence (1st LoD). GOR monitors and controls that operational risks are appropriately identified, assessed and mitigated; follows-up risk exposures towards risk appetite; and assesses the adequacy and effectiveness of the operational risk management framework and the implementation of the framework.

The focus areas of the monitoring and control work performed by GOR are decided during an annual planning process that includes business areas, key risk areas and operational risk processes. GOR is responsible for preparing and submitting regular risk reports on all material risk exposures including risk appetite limit utilisation and incidents to the CRO, who thereafter reports to CEO in GLT, the Group Board and relevant committees.

The RAS for operational risk is expressed in terms of:

- residual risk level in breach of risk appetite and requirements for mitigating actions for risks; and
- total loss amount from incidents and management of incidents.

GC within GRC constitutes the independent compliance function and is responsible for developing and maintaining the risk management framework for compliance risks and for guiding the business in their implementation of and adherence to the framework.

Compliance activities are presented in the form of an annual compliance oversight plan to the CEO and BoD. The annual compliance oversight plan represents a comprehensive approach to the compliance activities of Nordea, combining GC's overall approach to key risk areas. The plan is supported by granular plans in each Business Area, Group Function, Consolidated Group Subsidiaries and Nordea Bank Abp branches and for each risk area.

GC is responsible for regular reporting to the BoD, the CEO in GLT, branch management and relevant committees, at least quarterly. GC reports on the status and development of Nordea's compliance risks including information on major deficiencies along with consequence analyses and emerging risks and trends; status and key observations from monitoring activities and investigations; general updates on Financial Supervisory Authority interactions and impact; and preparations on regulatory changes.

The RAS for compliance risk outlines that Nordea aspires to compliance with applicable laws, regulations, standards, supervisory requirements and related internal rules and is supported by statements outlining residual risk level in breach of risk appetite and requirements for mitigating actions for risks.

Management of operational and compliance risks

Nordea's Group Board Directives on Risk, Risk Appetite and Internal Governance set out the principles for the management of risks in Nordea. Based on these principles, Nordea has established supporting internal rules for operational and compliance risk that form the overall operational and compliance risk management frameworks. Management of operational and compliance risk includes all activities aimed at identifying, assessing and measuring, responding and mitigating, controlling and monitoring and reporting on risks.

Nordea also continues to develop its conduct risk management approaches. The objectives of Nordea's conduct risk management is to avoid the risk of inappropriate culture and behaviour of Nordea people or that intentional or unintentional actions of Nordea across the end to end customer lifecycle lead to unfair outcomes and harm for customers or disrupt market integrity.

Nordea has developed a reputational risk framework with guiding principles for managing reputational risk as well. The objective of Reputational Risk Management is to protect Nordea's reputation. The framework is strongly linked to the operational and compliance risk framework.

Risks are identified through various processes, for example risk assessment processes, approval of changes as well as the reporting of incidents.

Assessment and measurement of risks is done by applying Nordea's common risk assessment grid for non-financial risks, which assigns probability of the risks occurring and the impact in case of materialisation.

Response to (e.g. mitigate or accept) risks is decided in line with risk appetite and risk limits. Controlling and monitoring is performed to ensure that risks are appropriately identified, assessed and responded to; that risk exposures are kept within limits; and that risk management procedures are efficient and adhere to internal and external rules. The regulatory horizon scanning process ensures that new and amended rules and regulations are identified. The impact of the rules and regulations is assessed, and appropriate implementation measures are taken to ensure timely implementation.

Key risk management processes

Risk and Control Self-Assessment

The Risk and Control Self-Assessment (RCSA) process provides a risk-based view of operational and compliance risks across Nordea. The process improves risk awareness and enables effective assessment, control, and mitigation of identified risks. For risks identified in the RCSA, the level of risk and the controls in place to mitigate the risks, is assessed. If mitigating actions are required to reduce the risk exposure, these are identified and implemented.

Compliance Independent Risk Assessment

The objective of the Compliance Independent Risk Assessment (CIRA) process is to provide an independent view on the compliance risk exposure and to assess, challenge and advise the 1st LoD on implementation of an effective risk management framework. The CIRA process is an independent 2nd LoD risk assessment process conducted in parallel with the RCSA, where the CIRA is a top-down risk assessment using the same assessment methodology as in the RCSA process.

Change Risk Management and Approval

The objective of the Change Risk Management and Approval (CRMA) framework is to ensure that there is a full understanding of both financial and non-financial risks when executing changes. Associated risks shall be adequately managed consistent with Nordea's Risk Strategy, risk appetite and corresponding risk limits before a change is approved, executed or implemented.

Changes in scope of the CRMA framework include e.g. new or significant changes to products, services or IT systems.

Incident Management

The objective of Incident Management is to ensure appropriate handling of detected incidents in order to minimise the impact on Nordea and its customers, to prevent reoccurrence, and reduce the impact of future incidents. In addition, the Incident Management shall enable timely, accurate and complete information for internal and external reporting and capital modelling, and secure timely notification to relevant supervisory authorities.

Scenario Analysis

The objective of the Scenario Analysis process is to identify and assess non-financial risks with severe financial or non-financial impacts with low probability of materialisation, so called "tail risks" through the analysis of a broad range of internal and external events and indicators.

Analysing tail risks contributes to increased understanding of unusual risk events otherwise not being addressed by other non-financial risk assessment processes to identify and close possible control gaps in Nordea.

Business Continuity and Crisis Management

The objective of the Business Continuity and Crisis Management is to protect Nordea's employees, customers, stakeholders and assets by ensuring that Nordea builds, maintains, and tests the ability to continue and recover prioritised activities and assets, should an extraordinary event or crisis occur. Crisis Management shall ensure that extraordinary events or crisis situations are identified, escalated and managed to minimize impact.

Information Security Management

The objective of Information Security Management is to ensure the protection and preservation of information with respect to confidentiality, integrity and availability. Nordea's information security management system consisting of e.g. policies, procedures, tools and methods, supports the management and control of information security risks as well as the protection and preservation of information security and the achievement of business objectives.

Significant Operating Processes

The objective of the Significant Operating Processes (SiOPs) framework is to ensure that SiOPs are identified and documented to ensure risks and controls in the most important processes are assessed and managed in order for these processes to operate as intended, which includes ensuring Nordea's customers are offered products and services in a compliant, safe and timely way.

Financial Crime Enterprise Risk Assessment

The Financial Crime Enterprise Risk Assessment (FCERA) is an internal annual process enabling Nordea to identify and assess the inherent financial crime risks to which Nordea is exposed, to evaluate the design, operational effectiveness and quality of control measures to manage these risks, and ultimately, based on the identified inherent and residual risks, to implement a risk-based approach to its financial crime risk management activities.

Raising Your Concern

The objective of the Raising Your Concern (RYC or "whistleblowing") process is to ensure that Nordea employees, customers and external stakeholders have the right to and feel safe when speaking up if they witness or suspect misconduct or unethical behaviour.

The RYC process encompasses ways to report a suspected breach of ethical standards, or breach of internal or external rules. Concerns can be raised openly, confidentially or anonymously by individuals ("whistle-blow"). The RYC process also outlines rules and procedures for how RYC investigations are conducted.

Third Party Risk Management (TPRM)

The objective of the Third Party Risk Management (TPRM) is to ensure that risks related to Third Parties (TPs) and TP Activities, including but not limited to Outsourcing, are appropriately managed both before, during as well as when exiting a TP arrangement and ensure compliance to regulatory requirements.

While Nordea may delegate day-to-day operational activities to TPs, Nordea remains at all times fully accountable and responsible and must demonstrate effective oversight and governance of the procured or outsourced services and functions.

Complaints Handling

The objective of the Complaints Handling process is to ensure that customer complaints relating to Nordea's services or products are handled appropriately and promptly, in an independent and consistent manner. Customer complaints are considered individually to ensure fair customer outcomes. Complaints Handling process includes identifying and acting to address the root

causes of the complaints to rectify and/or mitigate systematic risks and problems.

Minimum own funds requirement for operational risk

Nordea's own funds requirements for operational risk are calculated according to the Standardised Approach. In this approach, the own funds requirement is calculated by dividing the institution's activities into eight standardised business lines and taking the gross income-based indicator for each business line and multiply it by a predefined beta coefficient. The consolidated own funds requirement for operational risk is calculated as the average of the last three years' own funds requirement.

Liquidity risk and ILAAP

Liquidity risk is the risk that Nordea is unable to service the cash flow obligations when they fall due or unable to meet cash flow obligations without incurring significant additional funding costs. Nordea is exposed to liquidity risk in lending, investment, funding and other activities which could result in negative cash flow mismatches and an inability to liquidate assets or obtain adequate funding. The internal liquidity adequacy and assessment Process (ILAAP) is a process for the identification, measurement and monitoring of liquidity risk and it aims to ensure that the Nordea is sufficiently liquid to cover all liquidity risks over a foreseeable future including during periods of stress. The level of liquidity needs to be adequate from an internal perspective, from the perspective of regulators, as well as market participants and depositors.

Management, governance and measurement of liquidity risk

The objective of liquidity risk management is to ensure that Nordea can always meet cash flow obligations, including on an intra-day basis, across market cycles and during periods of stress.

Liquidity risk is comprised of 1) funding liquidity risk, which results when Nordea is unable to service its cash flow obligations when they fall due, and 2) market liquidity risk, whereby Nordea cannot meet its cash-flow obligations without incurring significant additional funding costs.

Management of liquidity risk

Nordea's liquidity management and strategy is based on a group board directive on risk and group CEO instructions on liquidity risk resulting in various liquidity risk measures, limits and organisational procedures. Group Treasury & Asset Liability Management (TALM) is responsible for the day to day management of the Group's liquidity positions, liquidity buffers, external and internal funding including the mobilisation of cash around the Group, and Funds Transfer Pricing (FTP).

Nordea, including the Group and individual subsidiaries and branches, are subject to various liquidity regulations. On a consolidated level, the Group is regulated by the FSA in Finland and must comply with Finnish regulatory requirements. Significant branches in Denmark, Sweden, and Norway are subject to local oversight by the local regulators, while still being subject to FSA requirements on a consolidated basis. Other subsidiaries and branches are also subject to local jurisdictional requirements on a stand-alone basis. These regulations are intended to measure and monitor levels of liquidity risk and cover both short-term liquidity risk and long-term structural risk.

Liquidity risk management focuses on both short-term liquidity risk and long-term structural liquidity risk. To ensure funding in situations where Nordea is in urgent need of cash and normal funding sources do not suffice, Nordea holds a liquidity buffer. The buffer's size is linked to liquidity stress testing results which form the basis of the liquidity risk appetite. The liquidity buffer consists of central bank cash and central bank eligible high-grade liquid securities that can be readily sold or used as collateral in funding operations.

A key objective of the funding strategy is to secure continuous access to stable and competitive wholesale funding whilst considering external requirements (e.g. regulatory requirements including management buffers), and internal requirements, as well as secure prudent liquidity management. Moreover, the strategy considers market conditions such as market capacity and double-A credit rating. To that end the strategy strives to preserve Nordea's strong credit rating enabling access to wholesale funding both in periods of stress and at an attractive cost. Competitive access to wholesale funding is further enhanced by the diversified business model of Nordea resulting in low volatility in earnings and capital supporting low volatility in secondary market spreads.

Intra-day liquidity arises from intra-day timing mismatches of payments, where Nordea sends payments and expects to receive funds back later in the day to meet other outgoing payment obligations. Nordea mitigates the intra-day risk by effective operational management of intra-day liquidity including position monitoring, reporting and controls, forecasting of intra-day liquidity, payment and collateral management, and client and product management. In addition, intra-day liquidity risk can be mitigated by having access to surplus of intra-day liquidity, such as balances at central banks, unencumbered liquid assets that can converted to intra-day liquidity by pledging with the central banks, or balances with other banks that can be used for intra-day settlement.

A robust infrastructure of systems and controls is in place which enables the timely production of reports, as well as the appropriate levels of analysis needed to assess Nordea's liquidity position on an ongoing basis. Liquidity risk measures are currently calculated by using various calculation engines and tools fed by the data from a central hub deigned to support all TALM's analysis and reporting needs.

Liquidity stress testing

Liquidity stress testing is carried out to identify liquidity risk drivers and stress scenarios which could impair Nordea's ability to meet cash-flow obligations when they come due, either because of scarce liquidity resources or significant increased costs in funding needed to generate liquidity. Liquidity stress testing is an important tool for evaluating the impact of exceptional but plausible events on the liquidity position of the Group, as well as individual subsidiaries and branches.

At a minimum, liquidity stress testing should assess the cash-flow impact of the following specific liquidity stress scenarios over various time horizons:

1) Market-wide stress, characterised by events comparable to those experienced in 2007-09. Although Nordea and other financial institutions are affected by these events, Nordea is not subject to a unique institution specific stress, such as a credit rating downgrade.

2) Idiosyncratic stress, characterised by an institution specific event whereby Nordea's credit rating is downgraded. Other institutions and the markets overall are not in a stressed condition.

3) Combined stress, characterised by a Market-wide and Idiosyncratic stress occurring simultaneously.

Pricing of liquidity risk

Appropriate transfer pricing mechanisms are maintained within the internal Funds Transfer Pricing framework to ensure

that transactions are subject to market-based charges and benefits that incentivise behaviours that ultimately aim at driving the Group's balance sheet and liquidity profile in accordance with Group goals. TALM administers this process by applying interest rate charges and liquidity premiums to transactions and profit centres. It is based on the levels of funding taken, the cost of maintaining a liquidity buffer and other underlying interest rate and liquidity risk generated therein. The FTP is based on regulatory requirements and modelling of liquidity behaviours where assumptions are formally set each year in advance of the coming year. This aligns with funding and liquidity planning and overall management target setting processes for the coming year within the Rolling Financial Forecasting process.

Liquidity contingency planning

The Liquidity Contingency Plan addresses a framework for recognising a possible liquidity crisis well in advance with a set of liquidity early warning signals and the strategy for managing such liquidity crisis. The objective of the plan is to mitigate the impact of a stress event by assuring continuous access to a minimum level of liquidity needed to accommodate critical business activities. The Liquidity Contingency Plan is activated by TALM management, in consultation with the Chief Risk Officer based on an assessment of market conditions or any trends signalling a liquidity stress event for Nordea. Upon activation, TALM is responsible for notifying all relevant internal and external stakeholders, including the business areas, ALCO, GRC and Investor Relations as well as the authorities.

Liquidity risk appetite

For liquidity risk, the risk appetite is anchored to liquidity stress testing results over specified time horizons as well as regulatory requirements and has implications for nature and scope of activities undertaken by Nordea. In addition, the liquidity risk appetite determines the size of Nordea's liquidity buffers. The risk appetite framework and supporting liquidity risk limits and thresholds will secure prudent hedging activities and mitigate the overall liquidity risk in Nordea. This framework is also used in monitoring the effectiveness of the liquidity risk management.

Nordea Group adheres to the following risk appetite statements approved by the Board in December 2019:

- Nordea should hold a liquidity buffer to survive a minimum board-mandated period under a combined stress scenario
- Nordea should hold a liquidity buffer sufficient to ensure a Liquidity Stress Coverage under a combined stress scenario
- Nordea should hold a liquidity buffer sufficient to ensure compliance with the regulatory LCR
- Nordea should ensure compliance with the regulatory NSFR
- Nordea should hold a liquidity buffer denominated in currencies that can be readily converted to meet regulatory LCR requirements in all significant currencies

The combined stress scenario referred to in the first statement and Liquidity Stress Coverage referred to in the second statement both relate to the Group's internal stress testing regime.

Governance of liquidity risk

Nordea employs a three lines of defence model for the governance of liquidity risk. TALM, in its role as first LoD, is responsible for pursuing Nordea's liquidity and funding strategy in compliance with the liquidity risk appetite. TALM manages and executes liquidity risk management processes, which include issuing funding and capital, managing liquidity buffers, and defining the principles for pricing liquidity risk.

The BAs also play a key role in providing 1st LoD liquidity risk management, including identifying and assessing the liquidity risk impact of their activities, including new product initiatives, and assessing liquidity risk mitigation strategies in conjunction with TALM.

GRC, in its role as second LoD, provides independent risk oversight of liquidity risk management at Nordea and is responsible for establishing the internal rules framework for managing liquidity risk and performing independent liquidity stress testing. This includes developing and maintaining risk management processes and reporting processes, as well as reviewing and providing input to the liquidity risk appetite framework. Further, GRC also verifies that all material liquidity risks have been identified by the first line and regularly performs reviews to assess the effectiveness and efficiency of the liquidity risk management framework.

Measurement of liquidity risk

Key internal measures are the Internal Survival Horizon and Internal LCR, which defines the risk appetite by requiring that Nordea maintains sufficient liquidity to survive at least three months under a combined institution specific and market-wide liquidity stress scenario with limited mitigation actions.

A key regulatory metric is the LCR, that also defines the risk appetite. LCR is a ratio measuring the amount of qualifying highly rated assets (i.e., cash with central banks, highly rated sovereigns, otherwise known as High Quality Liquid Assets or HQLA) available to cover potential cash outflows during the first 30 days of a severe liquidity stress event, as prescribed by local regulations. The Group as well as its bank subsidiaries based in Europe must, at a minimum, comply with the LCR standards prescribed by the EU's CRR/CRD IV and further clarified though the European Commission's Delegated Acts issued in October 2014. Delegated Act have been in effect since October 2015.

A second regulatory metric, the Net Stable Funding Ratio (NSFR), has been established by the Basel Committee for Bank Supervision, with EU requirements set out by the amended CRR. The NSFR, not yet in effect, will require that banks, including Nordea, hold sufficient levels of stable funding, given the duration and stability of their assets. The CRR NSFR aligns NSFR governance, compliance and supervisory actions with the EU LCR.

Additional metrics are in place for monitoring the liquidity and funding profiles at a more detailed level across Nordea as well as its subsidiaries and branches.

A framework of liquidity risk limits is in place to gauge and assess whether the liquidity risk profile of the Group and its subsidiaries and branches remain within the parameters of the liquidity risk appetites. Liquidity limits are assigned an owner who is responsible for providing final approval of the limit. TALM will drive any actions needed to remediate any limit breach. The nature of the escalation and actions required in the event of a breach depend upon the limit hierarchy.

ILAAP

An Internal Liquidity Adequacy Assessment Process (ILAAP) is a continuous process for the Nordea Group as well as its subsidiaries. The ILAAP provides an assessment of liquidity adequacy

through a comprehensive analysis of liquidity risk management practices in the respective entities.

In the ILAAP, the board concludes in the Liquidity Adequacy Statement that Nordea Group has adequate liquidity to support current and projected business activities under both normal and stressed conditions, underpinned by a robust liquidity risk management framework as well as adequate systems and controls. The major basis of this adequacy assessment is that Nordea has rigorously adhered to regulatory and internal risk appetite limits.

Securitisation and credit derivatives

Securitisation are part of Nordea' strategic balance sheet toolbox allowing for improvements in the capital position without impacting our business practises nor client relationships.

Introduction to securitisation and credit derivatives trading

The Securitisation Regulation[1] (SR) defines securitisation as a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranched, payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures and the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme. In a traditional securitisation, the ownership of the assets is transferred to a Securitisation Special Purpose Entity (SSPE), which in turn issues securities backed by these assets. In a synthetic securitisation, ownership of these assets does not change, however the credit risk is transferred to the investor using credit derivatives or financial guarantees.

Banks can play several roles in securitisation. First, banks can act as originators by having assets they themselves originated as underlying exposures. Second, banks can act as sponsors in which role they establish and manage securitisations of assets from third party entities. Third, through their credit trading activity, banks can themselves invest in these securities or create these exposures in credit derivatives markets.

In addition to supporting our Nordic clients with advice and structuring of securitisations, Nordea is also acting as an intermediary in the credit derivatives market, especially Nordic names. In addition to becoming exposed to the credit risk of a single entity, credit derivative trading often involves buying and selling protection for Collateralised Debt Obligation (CDO) tranches. These can be characterised as credit risk related financial products, the risk of which depends on the risk of a portfolio of single entities (a reference portfolio) as well as the subordination. Subordination defines the level of defaults in the reference portfolio after which further defaults will create a credit loss for the investor. Because hedging always involves a view on how the correlation between the credit risk of single names evolves, it has been customary to talk about correlation trading in this context.

Risk transfer transactions

Risk sharing transactions constitute a core part of the toolbox that enables Nordea to free up capital at attractive rates for redeployment into our core business Under these transactions, investors agree to invest in credit linked notes (CLN), linked to the junior credit risk of a referenced portfolio

The risk transfers are typically performed through a collateralised financial guarantee structure, and no assets are derecognised from Nordea's balance sheet. Under the agreements, the buyers of the notes are responsible for a pre-agreed amount of incurred credit losses of the reference portfolio. Nordea is constantly considering its options in this market segment as a means to manage and optimise its capital position.

Relevant policies, regulations and assorted risks

This section describes the risks associated with these types of transactions and the management of said risks. More broadly, Nordea's Significant Risk Transfer (SRT) policy outlines the principles for the effective and robust assessment, monitoring and management of such transactions in Nordea under relevant regulations. Furthermore, a risk mandate is articulated outlining Nordea's appetite in terms of associated REA in relation to Nordea's credit risk REA and to flowback risks arising when the credit risk flows back to the bank and consequently become subject to a higher capital need.

As defined in the SR, the term securitisation refers to a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranched, having the following characteristics:

- the transaction achieves SRT, in case of origination;
- payments in the transaction or scheme are contingent on the performance of the exposure or pool of exposures;
- the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or risk transfer scheme and
- does not create exposures which possess all characteristics of being classified as specialised lending.

Securitisation positions are subject to the regulatory accounting treatment defined in the CRR. Such positions held in the regulatory banking book or trading book are currently given weightings ranging from 15% to 1250% depending on their credit quality and subordination rank. In the role as originator,

Nordea follows the development of the securitisation regulation framework continuously to ensure strict adherence to regulation and, as appropriate, guidance.

Accounting policies related to securitisation transactions

Financial assets are derecognised from the balance sheet when the contractual rights to the cash flows from the financial asset expire or are transferred to another party. The rights to the cash flows normally expire or are transferred when the counterparty has performed (e.g. repaying a loan to Nordea). Gains and losses are recognised when the assets are derecognised by comparing the carrying amount to the proceeds received.

Synthetic securitisations are generally defined as transactions where an institution buys protection using financial guarantees or credit derivatives where the exposures are not derecognised from the balance sheet. In the case of Nordea's Q3 2016 transaction, it follows accounting recognition rules specific to guarantees.

[1]Regulation (EU) 2017/2402 of the European Parliament and of the council of 12 December 2017 a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation, and amending Directives 2009/65/EC, 2009/138/EC and 2011/61/EU and Regulations (EC) No 1060/2009 and (EU) No 648/2012

For loans not derecognised, provisions are recognised for the expected losses on the loans without considering the protection bought. The protection is recognised separately, either as a derivative or as a reimbursement right for guarantees.

Monitoring of securitisation risks

Securitisation risks are monitored according to the internal rules established in Nordea, as per assets are recorded in the regulatory banking book (via credit risk and counterparty risk), and to specific governance processes for securitisations.

Structural risks and foreign exchange risk associated with securitisation activities are monitored in the same way as for other Nordea assets.

The associated liquidity risk linked to securitisation activities is reflected centrally through the measure of the impact of these activities on the Nordea's liquidity ratios, stress tests and liquidity gaps. Securitisation operational risks follow-ups are considered in Nordea's operational risks framework.

Traditional securitisations where Nordea acts as sponsor

Nordea sponsors a limited number of SPEs. These SPEs have been established to facilitate or secure customer transactions, either to enable investments in structured credit products or with the purpose of supporting trade receivable or account payable securitisation for Nordea corporate customers.

Credit derivative trading

Nordea acts as an intermediary in the credit derivatives market, mainly in Nordic names. Nordea also uses credit derivatives to hedge positions in corporate bonds and synthetic CDOs.

When Nordea sells protection in a CDO transaction, it carries the risk of losses in the reference portfolio if a credit event occurs. When Nordea buys protection in a CDO transaction, any losses in the reference portfolio triggered by a credit event are carried by the seller of protection.

It is Nordea's policy that CDO positions are held in the trading book and booked at fair value in accordance with IFRS 13, meaning that they are either mark-to-market or mark-to-model depending on the availability of external prices. Model prices are derived based on standard industry methods. Inputs are available market prices and assumptions primarily relate to correlation.

Credit derivative transactions create counterparty credit risk in a similar manner to other derivative transactions.

Counterparties in these transactions are typically subject to a financial collateral agreement, where the exposure is covered daily by collateral placements

ICAAP, stress testing and capital allocation

The main objective of Nordea's internal capital adequacy assessment process (ICAAP) is to ensure that Nordea and its legal entities are adequately capitalised to cover all risk incurred by the business over a foreseeable future, including during periods of stress. The level of capital needs to be adequate from internal perspective, regulatory perspective, as well as from a market participant perspective.

ICAAP

The purpose of the ICAAP is to review the management, mitigation and measurement of material risks within the business environment to assess the adequacy of capitalisation and to determine an internal capital requirement reflecting the risks of the institution.

The ICAAP is a continuous process which increases awareness of capital requirements and exposure to material risks throughout the organisation, both in the business area and legal entity dimensions. Stress tests are important drivers of risk awareness, looking at capital and risk from a firm-wide perspective on regular basis and ad-hoc basis for specific areas or segments. The process includes a regular dialogue with supervisory authorities, rating agencies and other external stakeholders with respect to capital management, measurement and mitigation techniques used.

The capital ratios, capital forecasts and capital requirement for Nordea and legal entities are regularly monitored by TALM. The current capital position and forecasts are reported to ALCO, RC, GLT and BoD. Capital requirements and capital adequacy are thoroughly reviewed and documented annually in Nordea's ICAAP submission and Capital Adequacy Statement, which is ultimately decided on and signed by BoD.

Key Interactions within ICAAP

Nordea's rolling financial forecast (RFF) incorporates strategy, market conditions and risk through loss projections, the risk appetite framework and stress testing results. The risk appetite framework (RAF) sets risk tolerance, principles and maximum exposure sizes for the forward looking portfolio, any updates to the RAF including changes to risk tolerance influence business strategy.

RAF limits are set considering vulnerabilities and behaviour under stress and are furthermore aligned to the recovery indicator framework (RIF) under Recovery and Resolution Planning. Stress testing permits evaluation of vulnerabilities and appropriateness of limits that may require adjustments to the limits, both RAF and RIF.

Performance is measured using return on capital metric (incl. funding costs). Bonus pools are determined and allocated considering implications of both stress tests and capital/funding plans. Individual bonuses are set considering individual performance relative to risk taken.

ICAAP and ILAAP are based on a common governance process as well as common processes to identify, quantify and manage risks that may impair capital and/or liquidity. Specifically, in the ICAAP firm-wide stress testing, the scenarios are targeted to key Nordea vulnerabilities also including simulation of liquidity drivers as defined in the ILAAP. Both funding and capital costs are incorporated into performance assessment, forecasting and incentivisation.

Capital planning and capital policy

The objective of the capital planning process is to ensure that Nordea and its legal entities have a sound mechanism of budgeting financial resources and forecasting the future needs of its long-term plans. The process includes forecasts of capital requirements, available capital as well as the impact of new regulations. Capital planning is based on key components of the Nordea Financial Planning Framework, which includes lending volume growth by customer segment and country as well as forecasts of net profit, including assumptions of future loan losses. The capital planning process also considers forecasts of the state of the economy to reflect the future impact of credit risk migration on the capital situation of Nordea. An active capital planning process ensures that Nordea can make necessary capital arrangements to accommodate strategic and business objectives, regardless of the state of the economy or the introduction of new capital adequacy regulations.

The capital policy states that Nordea, under normal business conditions, should have capital ratios for CET1, Tier 1 and total capital that exceed the capital requirement as communicated by the competent authorities. During 2019 Nordea had a transitional capital requirement as part of the migration into the SSM capital framework and the applicable management buffer during 2019 was 40-120 bps above the transitional CET1 requirement. From 2020, Nordea has fully migrated into the SSM capital framework including the split of Pillar 2 into Pillar 2 Requirement (P2R) and Pillar 2 Guidance (P2G). The updated capital policy under the SSM capital framework, valid from 1 January 2020, states that Nordea will maintain a management buffer of 150-200 bps above the regulatory CET1 capital ratio requirement (MDA level).

Pillar 2 Requirement (P2R)

Nordea received the final Supervisory Review and Evaluation Process (SREP) decision on 10 December 2019 including a P2R of 1.75%.

Dividend Policy

Nordea has updated the dividend policy to be applicable on profit generated from 1 January 2020, The ambition, is to distribute 60-70% of the Group´s net profit for the year to the shareholders while maintaining a strong capital position in line with the capital policy. Excess capital in relation to capital targets will be subject to buy-back considerations. For 2019, a dividend of EUR 0.4 per share is proposed to the AGM.

Capital transferability and restrictions

Nordea may transfer capital within its legal entities without operational or legal impediments, subject to the general conditions for entities considered solvent with sufficient liquidity under local law and satisfying minimum capital adequacy requirements. Internal transfers of capital between legal entities are normally possible after approval by the local regulator and are of importance in governing the capital position of Nordea's entities.

Internal capital requirement (ICR) methodology

As part of ICAAP, Nordea defines the ICR as the internal capital requirement for all material risks from an internal economic perspective, taking into account the regulatory, normative through-the-

cycle perspective, adequate to withstand periods of stress. This ensures that Nordea's ICR is aligned to, but not restricted by, the normative perspective and it also ensures that the data and process are validated and governed in an appropriate way.

Based on the normative Pillar I risks as regulatory prescribed, Nordea calculates an internal Pillar I equivalent.

For all other risks identified as material and that are determined to be covered by capital, internally assessed and approved add-ons are then quantified to arrive at a total capital requirement for ICR purposes.

In addition to calculating risk capital for its various risk types, Nordea conducts a comprehensive capital adequacy stress test to analyse the effects of a series of both global and local shock scenarios. The results of the stress tests are considered in Nordea's internal capital requirement as buffers for economic stress.

Examples of other risk types included in the internal assessment

Interest rate risk in the banking book

This risk consists of exposures deriving from the balance sheet (mainly lending to public and deposits from public) and from TALM's investment and liquidity portfolios. Interest rate risk is measured and monitored daily and in accordance with the competent authority requirements. Monitoring is performed by controlling interest rate sensitivities either to earnings or fair value for assets, liabilities and off-balance sheet items. The internal capital charge for interest rate risk in the banking book is calculated based an internal model combining earnings and fair value risk.

Pension risk

Pension risk is the risk that Nordea-sponsored defined benefit pension schemes become underfunded. The risk is captured via a stress testing model and is reported separately within the internal economic assessment of market risk.

Concentration risk

Concentration risk is the risk of losses arising due to concentrations in the exposures of the credit portfolio, e.g. when the portfolio is largely exposed to a few individual borrowers i.e. Single Name Concentration risk or when the portfolio is not diversified across industries or regions i.e. Sectoral Concentration risk. Since the Pillar I credit risk calculations are based on a framework which does not account explicitly for concentration risk, banks are required to set aside capital buffers for this risk in the internal economic perspective. The purpose of the concentration risk capital requirement add-on is to capture the capital Nordea should hold to protect itself against concentration risk.

Stress testing

Stress testing is important due to the vital role that capital plays for Nordea's profitability and resilience to stress. Thus, an appropriate governance structure is required for the stress testing process. Key responsibilities include GLT, BRIC and the legal entity BoDs engagement in the ICAAP stress testing. In addition, ALCO and RC review in detail the stress test performed and potential implications for future capital. Detailed reviews and discussions on methodologies, scenarios and results take place in the Stress Test Oversight Committee, a sub-committee of the RC.

Capital adequacy stress testing is carried out at least annually during the first quarter, using end-of-year data. Ad hoc stress testing can be carried out throughout the year when necessary. To determine the adequacy of capital for Nordea throughout the scenarios, key financial targets, which are stated in Nordea's capital policy, are also considered.

The key metric for determining the stress test impact is the CET1 ratio and how it develops during the scenarios. The stress test capital impact is defined as the percentage point drop in the CET1 ratio in the most stressed year. In addition, the stress test capital add-on, defined as the CET1 capital needed to compensate for the increase in REA and for the reduction in capital due to negative net profit in the stress scenarios, is included as a capital buffer in the bank's internal capital requirement. The impact is then analysed in relation to capital policy, regulatory buffers and internal capital requirements.

Stress tests performed

During 2019, Nordea performed internal stress tests to evaluate the general impact of an economic downturn scenario as well as specific impact for different segments and high-risk areas. Nordea has also been subject to stress tests and capital review exercises performed by financial supervisors and central banks, including the ECB's Comprehensive Assessment Stress Test. The results of these stress tests did not change the assessment of Nordea's strong position and capacity to withstand financial stress.

As part of the ICAAP and the capital planning process, firm-wide stress tests are used as an important risk management tool to determine how severe unexpected changes in the business and macro environment will affect Nordea's need for capital. The stress tests reveal how the capital need varies during a stress scenario, where the income statements, balance sheet, regulatory capital requirements and capital ratios are impacted. Nordea carries out reverse stress tests of various recovery environments in relation to the development of the recovery and resolution plan. Several stand-alone stress tests for each risk type such as market risk and liquidity risk are also carried out.

Nordea continuously refines its stress testing methodologies and practices to ensure a forward-looking element.

The general stress test process can be divided into the following three steps:

- Scenario development and translation,
- calculation, and
- analysis and reporting.

The capital adequacy stress test covers all credit exposures to corporates, retail, institutions and sovereigns. Credit exposures data is sourced on transaction level from the same database as used for the regular reporting of REA and capital adequacy. The calculation of stressed loan losses and stressed REA is carried out bottom-up based on granular portfolio data from this data source.

Stress test scenarios development

The annual ICAAP stress test is based on three-year global macroeconomic scenarios. The scenarios are designed to replicate shocks that are particularly relevant in the current macroeconomic environment and for stressing the main risks in Nordea.

While the annual stress test is based on comprehensive macroeconomic scenarios that involve estimates of several macroeconomic factors, the ad hoc stress tests are based on direct estimates of risk parameter changes or on changes of a few selected macroeconomic variables. This enables senior management to define scenarios and evaluate their impact in support for capital planning.

After a scenario is developed and quantified, impacts are translated to relevant parameters and simulated. Advanced models in combination with expert judgment from Business Areas are used to determine the effect of the scenario.

Stress test calculation

The stressed figures and parameters from the scenario are used to calculate the effects on the regulatory capital requirements and the financial statements. Regulatory capital requirement is calculated based on the credit risk, market risk and operational risk. The calculations for each risk type are aggregated into total capital requirement figures.

Stressed figures for loan losses are calculated bottom-up, based on stressed rating migrations and collateral values. Stressed point-in-time PDs that are functions of the downturn scenarios, are used in the calculation of loan losses. The loan loss calculation also covers idiosyncratic losses related to the exposure to single customers and industries. The loan loss model covers both specific and collective provisions. The stressed impact on other main items on the income statement, like net interest income and net fee and commission income, are also calculated. The resulting impact on net profit after dividend is used to calculate the impact on the own funds components. Own funds are set in relation to the stressed REA to calculate the impact on capital ratios during a stress scenario. The figure shows the calculation process used in the stress test framework.

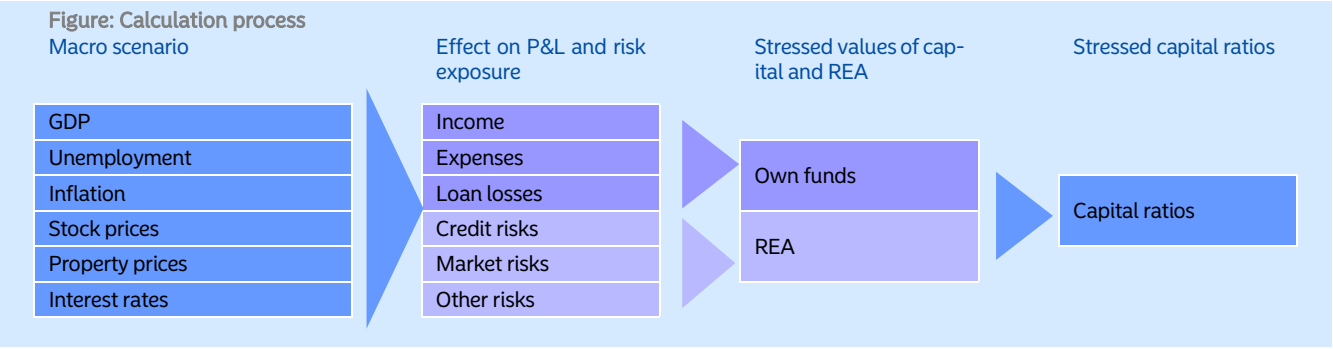
Capital allocation

EC is a method for allocating the cost of holding capital as a result of risk taking and is a central component in the Value Creation Framework (VCF). The VCF supports the operational decision-making process in Nordea to enhance performance management and ensure shareholder value creation.

EC is aligned to the Group's target CET1 ratio level which is set by the capital policy to ensure a sustainable long-term capitalization for Nordea Group. In addition, the EC framework also include the following items:

- Legal equity contribution of the insurance business
- Certain capital deductions.

Figure: Calculation process



Nordea Life and Pensions (NLP)

The nature of life insurance leads NLP to take risks that are quite different to those faced in the banking operation. The main risks are market risks and life & health insurance risks.

Governance

The Boards of Directors of NLH AB and its subsidiaries are responsible for the management of the holding functions and the legal entities. The Boards ensure that NLP's organisational structure is appropriate and transparent with a clear division of duties and areas of responsibility ensuring effective and sound governance.

As a part of Nordea Group, NLP and its employees are governed by Nordea Group Directives. In addition, NLP have implemented NLP Group policies, instructions, guidelines and charters as appropriate to meet the specific NLP business needs or regulatory requirements. The local entities have additional policies, guidelines, processes and procedures in place as needed to comply with local legislation and local business requirements.

The risk management system is embedded in this governance framework by the NLP Risk Management Strategy, NLP Risk Management Policy and the Risk Appetite Framework.
The NLP Group CRO is responsible for risk management at NLP Group level. Local CROs are responsible for risk management, and related monitoring and reporting at local entity level.

NLP Group perform a detailed annual Own Risk and Solvency Assessment (ORSA) at group level. Corresponding local ORSA processes are performed for local entities.

Risk and capital management

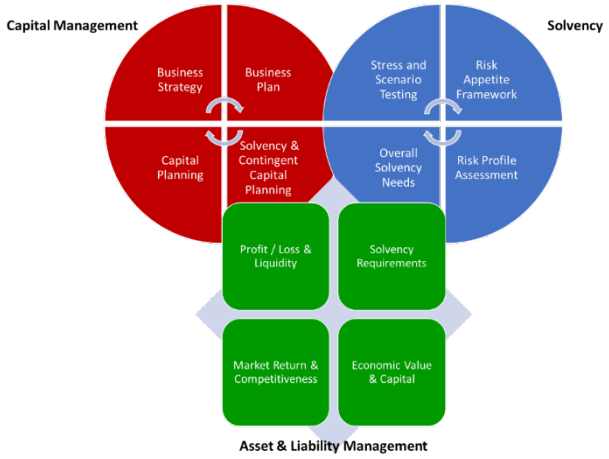
The key principles underlying the NLP Risk Management Strategy are:

- Risks to be taken on must be within the Risk Appetite Framework and its expression as limits, thresholds and targets. The risks must comply with NLP's return considerations and business strategy.
- Risks should only be taken if they are understood and can be managed, monitored and reported. Other risks must be avoided.
- The risk strategy, risk appetite, risk management and the control framework must be coherent and consistent at both global and local level.
- The risk management function acts as a risk partner for the business.
- The risk management strategy must meet present regulatory requirements. It must also acknowledge expected future regulatory requirements and pursue a swift course of alignment.

The risk management system is implemented using the well-known cycle of risk identification, risk measurement, risk monitoring, risk and capital management and risk reporting.
NLP follows a capital management process which covers all risks taken over the business planning period and assesses them under normal circumstances and stress scenarios covering macroeconomic risk, business risk and emerging risk developments.

NLP's key principle is that the level of capital must be adequate from an internal and regulatory perspective under all considered scenarios. This principle is the essence of the connection between risk management, capital management and asset & liability management.

Figure: Relating the capital management process to ORSA and Asset and Liability Management



The capital management process is based on key components of NLP's business plan and financial forecast. It ensures that NLP is prepared to make the necessary capital arrangements depending on the state of the economy, developments regarding capital adequacy regulation and changing strategic and business objectives.

Capital management is governed by the NLP Capital Policy which specifies the internal solvency ratio limit for NLP. The policy is supplemented by the NLP Capital Contingency Plan which specifies valid measures to restore the solvency position to acceptable levels in case of any breaches of the internal or regulatory limits.

Business profile

The life and pensions business of NLP consists of a range of different life and health products, from endowments with duration of a few years, to very long-term pension savings contracts, with durations exceeding 40 years. The products are categorised into different lines of business in accordance with the terminology applied in the Quantitative Reporting Templates. The following lines of business exist within NLP:

- Participating savings products
- Unit-linked products
- Other life insurance
- Health insurance

Market return products (unit- linked products) are clearly dominating NLP's new business. Traditional products (participating savings and life insurance products)and health insurance take minor roles in NLP's new business profile but remain at about 20% of the overall NLP assets under management.

Risk profile

The main risks that NLP is exposed to are market risks and life & health insurance risks. The risks are measured continuously by

solvency capital requirements, exposure measurement on investment assets, VaR analysis, and stress and sensitivity analysis. The risks are monitored against the risk appetite and existing limits.

Market risk

Market risks at NLP arise from the sensitivity of the values of assets and liabilities to changes in the level or volatility of market prices or interest rates. Main exposures to market risks originate from participating savings products and unit-linked savings products. Of these two product types, participating savings products are the main source of market risk. Sufficient buffers exist for this product portfolio which stabilises the Solvency II position and ensures stable returns to policy holders. Within market risk, the interest rate risk, equity risk and credit spread risk are the most relevant risks.

Life & health insurance risk

Life & health insurance risk is the risk of unexpected losses due to changes in the level, trend or volatility of mortality, longevity, disability and surrender/ lapse rates. The largest life insurance risks for NLP group are lapse risk and longevity risk.

Lapse risk is the most important insurance risk. It is primarily caused by unit- linked savings products and risk products, where the present value of future profits contributes positively to own funds under Solvency II.

Longevity risk is the second most important insurance risk and relates to the risk of stronger longevity improvement than anticipated in technical provisions. Main exposures to longevity risks originate from participating savings products, while there is no material longevity risk attached to unit-linked savings products.

Risk and capital management

Capital management

Managing the solvency position

NLP is regulated under Solvency II. The solvency position is calculated according to the Solvency II standard formula. The calculation of the solvency position makes use of long-term guaranteed adjustments and transitional measures. Their impacts are calculated, monitored and reported on an ongoing basis to ensure full transparency of the reliefs they provide and to consider their effect on management decisions.

NLP's Risk Appetite Framework and capital policy set a solvency ratio limit of 125% and NLP aims to operate above this. The solvency ratio limit is set well above the regulatory limit of 100%. This reflects NLP's decision to manage the business by defining a required buffer on top of the 100% regulatory solvency ratio as protection against volatility in the Solvency II balance sheet. This ensures that capital management can be performed in a planned and structured way rather than by inefficient ad- hoc measures.

Economic capital (EC)

NLP is included in the Nordea EC framework.

Financial buffers

For participating savings products, the financial buffers provide NLP with the ability to generate stable returns for policyholders. Through this NLP maintains sufficient financial buffers and effectively secure stable returns. For NLP's shareholder, Nordea, this represents P&L protection against insufficient returns on their investment.

Continuous monitoring and risk mitigation

Market risk

Market risk and its risk sub- types are measured and monitored through calculations of the Solvency II capital requirements and investment limits for risky exposures. In addition, NLP regularly performs stress tests with standalone equity and interest rate shocks and combined shocks. NLP also performs more specific macroeconomic scenarios to assess the need for future capitalization.

The results of stress tests and scenario analyses are monitored against limits prescribed by the NLP Capital Policy.

Market risk is mitigated by applying hedging and asset allocation strategies.

Life & health insurance risk

Lapse and longevity risks are measured and monitored through calculations of the Solvency II capital requirements.

To assess the resilience of the business to sudden changes in the lapse rate, a regular sensitivity test is performed at NLP group and local entity level. As lapse risk is linked to the behaviour of policy holders, it is mitigated through ensuring that NLP offers products which are attractive, competitive and meet customer needs.

Longevity risk is primarily controlled through adequate product pricing and adjusting life parameters for trends and life expectancy. The vast majority of longevity risk is attached to products no longer on sale. Mortality rates and life expectancies are updated and benchmarked annually.

Part 2 Year end results and analysis

Quantitative information accompanied by qualitative analysis of the year end results of the Nordea Group

List of tables in Part 2

Capital position

Table 1 Summary of items included in own funds

During Q4 2019, CET1 capital increased by EUR 0.3bn, driven by increased net profit and increased net pension OCI. Total own funds decreased by EUR 0.2bn mainly as a result of Tier 2 capital. Tier 2 capital decreased mainly as a result of regulatory amortisations.

EURm	2019 Q4	2019 Q3
Calculation of own funds[1]		
Equity in the consolidated situation	30,057	28,199
Proposed/actual dividend	-1,616	
Common Equity Tier 1 capital before regulatory adjustments	28,441	28,199
Deferred tax assets	-136	
Intangible assets	-3,451	-3,366
IRB provisions shortfall (-)		
Deduction for investments in credit institutions (50%)		
Pension assets in excess of related liabilities	-130	-117
Other items, net	-303	-405
Total regulatory adjustments to Common Equity Tier 1 capital	-4,020	-3,888
Common Equity Tier 1 capital (net after deduction)	24,421	24,311
Additional Tier 1 capital before regulatory adjustments	3,117	3,182
Total regulatory adjustments to Additional Tier 1 capital	-20	-27
Additional Tier 1 capital	3,098	3,155
Tier 1 capital (net after deduction)	27,518	27,466
Tier 2 capital before regulatory adjustments	4,559	4,789
IRB provisions excess (+)	220	216
Deduction for investments in credit institutions (50%)		
Deductions for investments in insurance companies	-1,000	-1,000
Pension assets in excess of related liabilities		
Other items, net	-62	-62
Total regulatory adjustments to Tier 2 capital	-841	-846
Tier 2 capital	3,717	3,943
Own funds (net after deduction)	31,236	31,409

[1]As reported to FSA.

Own funds, excluding profit

EURm	2019 Q4	2019 Q3
Common Equity Tier 1 capital, excluding profit	24,346	24,311
Tier 1 capital (net after deduction), excluding profit	27,444	27,466
Total own funds, excluding profit	31,161	31,409

Table 2 Flow statements of movements in Own funds

Own funds as of Q4 2019 was EUR 31.2bn (31.0bn in 2018), of which CET1 capital constituted EUR 24.4bn (24.1bn in 2018), Additional Tier 1 capital EUR 3.1bn (2.8bn in 2018) and Tier 2 capital EUR 3.7bn (4.0bn in 2018). Nordea's Tier 1 capital increased EUR 0.2bn in 2019, mainly due to issued loans and partially offset by redemption of loans. Tier 2 capital decreased during the year, primarily driven by the amortisation of Tier 2 instruments seen under other adjustments and partially offset by the issued Tier 2 instruments and FX effect. Amortisation is only a regulatory prudential adjustment, the loans are still included in the balance sheet to the full amount.

EURm	Amount
Common Equity Tier 1, 2018	24,134
Profit attributable to owners of the parent	1,658
Dividend	(1,616)
Change in goodwill and intangible assets	434
Change in IRB provision shortfall deduction	76
Change in prudential filters	(0)
Change in unrealised gains on AFS	
Other	(267)
Common Equity Tier 1, 2019	24,421
Additional Tier 1 capital, 2018	2,849
Issued AT1 instruments	1,105
Redeemed AT1 instruments	-873
FX effect	14
Change in Amount that exceeds the limits for AT1 grandfathering	
Other adjustments	2
Additional Tier 1 capital, 2019	3,098
Tier 2 capital, 2018	4,045
Issued T2 instruments	299
Redeemed T2 instruments	
FX effect	48
Change in Excess on the limit of AT1 grandfathered instruments	
Change in deduction due to significant investment	
Change in IRB provision excess add-on	85
Other adjustments	-759
Tier 2 capital, 2019	3,717
Total Own funds, 2019	**31,236**

Table 3 Drivers behind the development of the CET1 capital ratio

The CET1 ratio increased from 15.5% in Q4 2018 to 16.3% in Q4 2019 primarily stemming from adjusted risk-weights on internal rating based (IRB) floors for commercial real estate in Sweden and Norway, following an updated decision from the ECB as part of the annual supervisory dialogue. Decreased ownership share in Luminor further decreased REA. This was somewhat offset by the acquisition of Gjensidige Bank as well as the implementation of IFRS16.

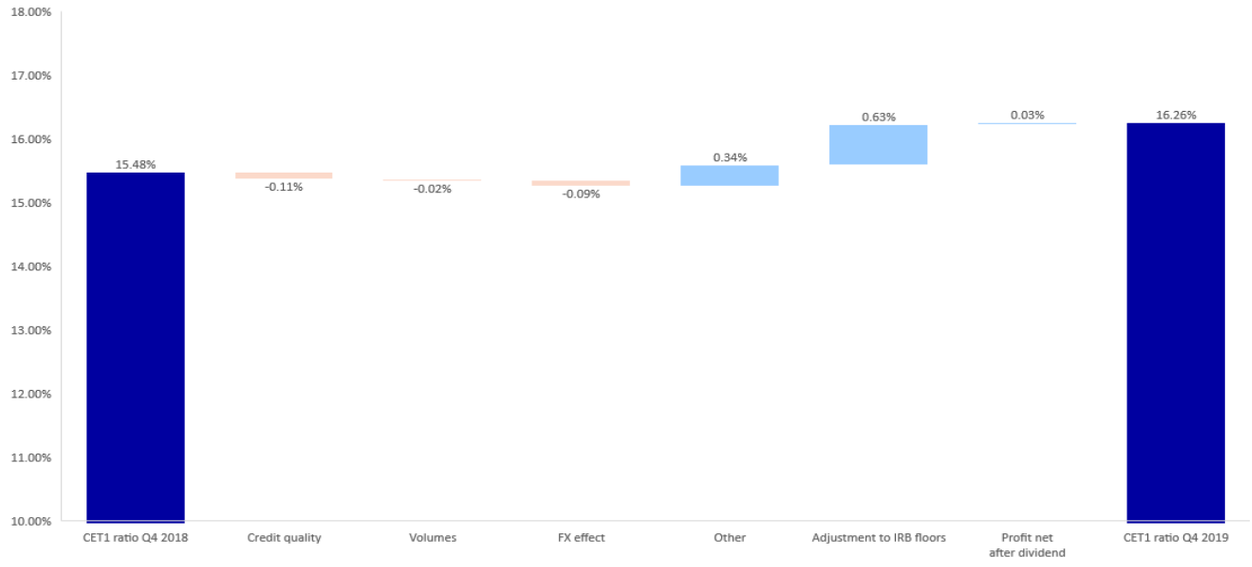


Table 4 Bridge between IFRS equity and CET1 capital

A bridge between IFRS equity and CET1 capital is provided in the table below. Nordea's CET1 capital has increased over the period. Decreased balance sheet equity together with lower proposed dividend, intangible assets, and shortfall, were partly offset by higher goodwill, pension and other deductions.

EURm	2019	2018
Balance sheet equity	31,528	32,901
Valuation adjustment for non-CRR companies	-725	-871
Other adjustments	-720	-713
CET1 before deductions	30,083	31,317
Dividend[1]	-1,616	-2,788
Goodwill	-1,837	-1,684
Intangible assets	-1,614	-2,201
Shortfall deduction		-76
Pension deduction	-130	-116
Prudential filters	-273	-273
Transitional adjustments		
Other deductions	-191	-44
Common Equity Tier 1 capital	24,421	24,134

[1]The BoD proposed to the AGM to be held on 25 March that a dividend of EUR 0.40 per share be paid based on the balance sheet to be adopted for financial year 2019.

Table 5 Capital ratios

CET1 capital ratio increased during 2019, mainly driven by the adjusted risk-weights on IRB floors for commercial real estate exposures in Sweden and Norway following updated decision from the ECB as part of the annual supervisory dialogue. Additionally, decreased ownership in Luminor as well as the annual LGD validations further decreased REA. That was somewhat offset by the acquisition of Gjensidige as well as the implementation of the IFRS16. Leverage ratio increased in 2019 primarily driven by decreased leverage ratio exposures due to a decrease in on-balance assets.

Risk based capital ratios

%	Q4 2019	Q4 2018
Common Equity Tier 1 capital ratio, including profit	16.3	15.5
Tier 1 capital ratio, including profit	18.3	17.3
Total capital ratio, including profit	20.8	19.9
Common Equity Tier 1 capital ratio, excluding profit	16.2	15.5
Tier 1 capital ratio, excluding profit	18.3	17.3
Total capital ratio, excluding profit	20.7	19.9

Leverage based capital ratios

%	Q4 2019	Q4 2018
Tier 1 capital, EURm[1]	27,518	26,984
Tier 1 capital, transitional definition, EURm[1]	27,518	26,984
Leverage ratio exposure, EURm	522,094	528,163
Leverage ratio, transitional definition, percentage	5.3	5.1
Leverage ratio, percentage	5.3	5.1

[1] Figures include profit of the period.

Table 6 EU OV1: Overview of REA

The table provides an overview of total REA. Credit risk accounts for the largest risk type with approximately 71% of Pillar I REA in Q4 2019. Operational risk and counterparty credit risk (including CVA) are for the second and third largest risk types respectively. The REA decrease of EUR 6.1 bn during Q4 2019 was primarily stemming from adjusted risk-weights on IRB floors for commercial real estate in Sweden and Norway following updated decision from ECB as part of the annual supervisory dialogue. In the counterparty credit risk category, the REA decrease was mainly driven by interest rate movements and lower volumes. The decreased REA was partially offset by increased lending volumes in the corporate portfolio.

		REA		Minimum capital requirement	
	EURm	2019 Q4	2019 Q3	2019 Q4	2019 Q3
1	Credit risk (excluding counterparty credit risk) (CCR)	106,413	110,534	8,513	8,843
2	Of which standardised approach (SA)	9,571	9,490	766	759
3	Of which foundation IRB (FIRB) approach	13,517	12,573	1,081	1,006
4	Of which advanced IRB approach	83,325	88,471	6,666	7,078
	Of which AIRB	57,103	62,301	4,568	4,984
	Of which Retail RIRB	26,221	26,170	2,098	2,094
5	Of which Equity IRB under the simple risk-weight or the IMA				
6	Counterparty credit risk	6,994	9,477	559	758
7	Of which Marked to market	617	664	49	53
8	Of which Original exposure				
9	Of which standardised approach				
10	Of which internal model method (IMM)	4,974	7,023	398	562
	Of which Financial collateral simple method (for SFTs)				
	Of which Financial collateral comprehensive method (for SFTs)	609	946	49	76
11	Of which exposure amount for contributions to the default fund of a CCP				
12	Of which CVA	795	844	64	68
13	Settlement risk	4	2	0	0
14	Securitisation exposures in banking book	874	1,467	70	117
15	Of which IRB approach				
16	Of which IRB supervisory formula approach (SFA)	874	1,467	70	117
17	Of which internal assessment approach (IAA)				
18	Of which standardised approach				
19	Market risk	4,934	4,257	395	341
20	Of which standardised approach (SA)	808	951	65	76
21	Of which IMA	4,126	3,306	330	265
22	Large exposures				
23	Operational risk	15,698	15,698	1,256	1,256
24	Of which basic indicator approach				
25	Of which Standardised Approach	15,698	15,698	1,256	1,256
27	Amounts below the thresholds for deduction (subject to 250% risk weight)	3,882	3,835	311	307
28	Additional risk exposure amount related to Finnish RW floor due to Article 458 CRR	750	711	60	57
28	Additional risk exposure amount related to Swedish RW floor due to Article 458 CRR	10,667	10,367	853	829
	Article 3 CRR Buffer				
29	Pillar 1 total	150,215	156,349	12,017	12,508

Table 7 Flow Statement of REA

REA decreased by EUR 5.7bn from Q4 2018 to Q4 2019. Credit risk factors decreased REA by EUR 3.8bn, market risk factors decreased REA by EUR 1.1bn and operational risk factors decreased REA by EUR 0.8bn. Within credit risk, the main driver was the adjustment of risk-weights on IRB floors for commercial real estate in Sweden and Norway following an updated decision from ECB as part of the annual supervisory dialogue. The decrease in credit risk was also driven by annual LGD validations and decreased ownership in Luminor, partly offset by the implementation of IFRS16 and increased exposure following acquisition of Gjensidige. Market risk REA decrease was mainly driven by a decrease in incremental risk charge and FX risk outside the trading book.

EURm	Amount
Total REA, 2018	155,886
Credit risk factors	-3,756
Book size (Exposure growth)	224
Book quality	1,109
Model & methodology changes	-1,632
Regulation	-5,037
Foreign currency translation effects	712
Securitisation	-79
Additional buffer, Article 3	
Other	947
Market risk factors	-1,126
Model & methodology changes	494
Regulation	
Movements in risk levels	-1,620
Operational risk factors	-789
Changes in Beta factors	
Income related changes	-789
Total REA, 2019 Q4	150,215

Credit risk

Table

Table 8 EU CRB-B: Total and average net amount of exposures

The net exposure reported under the IRB approach increased during 2019, mainly stemming from increased residential mortgage loan volumes across all portfolios. Institution IRB exposures decreased due to a reduction in covered bond volumes, partly offset by increased corporate portfolio IRB exposures stemming from higher lending volumes. The total net exposures under the standardised approach decreased primarily due reduced central bank exposures.

		a	b
	2019 EURm	Net exposure at the end of the period	Average net exposure over the period
	IRB approach		
1	Central governments or central banks		
2	Institutions	32,693	31,592
3	Corporates	168,230	168,175
4	- of which Specialised Lending	221	266
5	- of which SME	54,532	53,681
6	Retail	190,733	188,820
7	- of which Secured by real estate property	150,265	148,498
8	- of which SME	1,198	1,216
9	- of which Non-SME	149,067	147,281
10	- of which qualifying revolving		
11	- of which Other Retail	40,468	40,322
12	- of which SME	1,923	1,938
13	- of which Non-SME	38,545	38,384
14	Equity		
	Other non-credit obligation assets	3,458	3,905
15	Total IRB approach	395,114	392,492
	Standardised approach		
16	Central governments or central banks	66,113	69,843
17	Regional governments or local authorities	8,968	8,700
18	Public sector entities	100	104
19	Multilateral Development Banks	781	948
20	International Organisations	51	109
21	Institutions	200	219
22	Corporates	2,436	3,026
23	- of which SME	2,033	1,849
24	Retail	6,144	6,565
25	- of which SME	868	857
26	Secured by mortgages on immovable property	4,651	5,291
27	- of which SME	74	69
28	Exposures in default	94	173
29	Items associated with particularly high risk	829	764
30	Covered bonds	384	401
31	Claims on institutions and corporates with a short-term credit assessment		
32	Collective investments undertakings (CIU)	430	318
33	Equity exposures	1,697	1,695
34	Other exposures	941	948
35	Total standardised approach	93,817	99,105
36	Total	488,931	491,597

2018 EURm	Net exposure at the end of the period	Average net exposure over the period
IRB approach		
Central governments or central banks		56,333
Institutions	37,919	39,238
Corporates	162,554	164,104
- of which Specialised Lending	356	389
- of which SME	53,228	55,126
Retail	187,164	187,469
- of which Secured by real estate property	149,109	149,030
- of which SME	1,223	1,243
- of which Non-SME	147,886	147,787
- of which Other Retail	38,055	38,439
- of which SME	1,994	1,989
- of which Non-SME	36,061	36,450
Equity		
Other non-credit obligation assets	2,674	3,043
Total IRB approach	390,311	450,187
Standardised approach		
Central governments or central banks	75,632	20,562
Regional governments or local authorities	8,492	2,213
Public sector entities	105	43
Multilateral Development Banks	1,453	363
International Organisations	233	58
Institutions	426	294
Corporates	5,250	5,410
- of which SME	2,602	1,332
Retail	6,160	6,724
- of which SME	1,586	1,593
Secured by mortgages on immovable property	2,796	3,373
- of which SME	72	30
Exposures in default	287	295
Items associated with particularly high risk	543	543
Covered bonds	0	0
Claims on institutions and corporates with a short-term credit assessment	0	0
Collective investments undertakings (CIU)	0	0
Equity exposures	1,124	1,130
Other exposures	1,031	964
Total standardised approach	103,531	41,972
Total	493,842	492,159

Table 9 EU CRB-C: Geographical breakdown of exposures

The table EU CRB-C displays credit risk exposures by exposure class and domicile. The IRB net exposure increased during 2019 primarily due to increased corporate and retail exposure in the Nordic countries, partly offset by lower Danish covered bond volumes in the institution portfolio. Exposures reported under the standardised approach increased in 2019 mainly due to the acquisition of Gjensidige Bank in Q2 2019, partly offset by decreased US central bank exposure. Nordea's ownership share in Luminor decreased during 2019 which resulted in decreased Baltic exposure reported under standardised approach.

	a	b	c	d	e	f	g	h	j	n
	Net exposures									
2019, EURm	Nordic countries	of which Denmark	of which Finland	of which Norway	of which Sweden	Baltic countries	Russia	USA	Other geographical areas	Total
IRB approach										
1 Central governments or central banks										
2 Institutions	28,178	13,953	175	5,388	8,662	1,423	277	372	2,443	32,693
3 Corporates	141,043	37,773	32,761	32,748	37,762	1,248	1,086	4,448	20,406	168,230
of which Specialised Lending	154		94	61					67	221
of which SME	52,060	15,925	12,097	11,626	12,413	824		37	1,611	54,532
4 Retail	188,893	51,726	46,360	36,079	54,729	40	15	215	1,570	190,733
of which Secured by real estate property	149,000	42,506	29,011	28,237	49,246	21	9	170	1,066	150,265
of which SME	1,198	110	915	64	109					1,198
of which Non-SME	147,802	42,396	28,096	28,173	49,137	21	9	170	1,066	149,067
of which Other Retail	39,894	9,221	17,349	7,842	5,483	19	6	45	504	40,468
of which SME	1,818	209	1,048	227	334	3	2	3	97	1,923
of which Non-SME	38,076	9,011	16,301	7,615	5,148	17	5	42	406	38,545
5 Equity										
Other non-credit obligation assets	3,405	989	1,497	301	617		9	33	10	3,458
6 Total IRB approach	361,519	104,442	80,793	74,515	101,769	2,710	1,387	5,068	24,429	395,114
Standardised approach										
7 Central governments or central banks	45,318	9,247	25,919	2,363	7,789		154	15,885	4,756	66,113
8 Regional governments or local authorities	8,886	2,278	496	98	6,014		7		75	8,968
9 Public sector entities	100		100							100
10 Multilateral Development Banks	22		22						759	781
11 International Organisations									51	51
12 Institutions	14		1	13			0		186	200
13 Corporates	2,234	1,936	4	286	7		15	2	185	2,436
of which SME	2,033	1,752		281						2,033
14 Retail	6,078	1,419	1	2,344	2,313		1	7	59	6,144
of which SME	810	110	1	221	479		1	6	50	868
15 Secured by mortgages on immovable property	4,642	108		4,534				1	7	4,651
of which SME	74	69		5						74
16 Exposures in default	93	5		81	7				1	94
17 Items associated with particularly high risk	302	77	169		57			99	428	829
18 Covered bonds	384			384						384
19 Claims on institutions and corporates with a short-term credit assessment										0
20 Collective investments undertakings (CIU)	69		69					180	181	430
21 Equity exposures	1,322	7	1,095	86	135	327			48	1,697
22 Other exposures	821	54	49	630	87				120	941
23 Total standardised approach	70,285	15,131	27,927	10,818	16,409	327	177	16,174	6,854	93,817
24 Total	431,804	119,572	108,720	85,333	118,178	3,038	1,565	21,242	31,283	488,931

		Net exposures									
	2018, EURm	Nordic countries	of which Denmark	of which Finland	of which Norway	of which Sweden	Baltic countries	Russia	USA	Other geographical areas	Total
	IRB approach										
1	Central governments or central banks										
2	Institutions	34,498	18,655	293	5,608	9,942	3	125	408	2,886	37,919
3	Corporates	134,532	37,701	30,344	31,112	35,375	1,483	1,665	4,085	20,791	162,554
	of which Specialised Lending	239	3	194	31	11				117	356
	of which SME	50,825	16,321	12,150	10,699	11,655	997		40	1,366	53,228
4	Retail	185,358	51,954	44,309	34,513	54,583	39	16	213	1,537	187,164
	of which Secured by real estate property	147,858	41,642	28,515	28,680	49,021	19	12	168	1,052	149,109
	of which SME	1,223	99	960	51	113					1,223
	of which Non-SME	146,635	41,543	27,555	28,630	48,908	19	12	168	1,052	147,886
	of which Other Retail	37,500	10,312	15,794	5,833	5,562	20	4	45	485	38,055
	of which SME	1,888	221	1,055	267	344	3	1	4	98	1,994
	of which Non-SME	35,613	10,090	14,739	5,566	5,218	18	3	41	387	36,061
5	Equity										
	Other non-credit obligation assets	2,651	699	928	253	771		15	7	2	2,674
6	Total IRB approach	357,039	109,008	75,873	71,486	100,671	1,525	1,820	4,712	25,215	390,311
	Standardised approach										
7	Central governments or central banks	46,168	5,803	28,359	2,297	9,709	1,342	201	21,954	5,966	75,632
8	Regional governments or local authorities	8,334	2,092	481	67	5,694	110	2		46	8,492
9	Public sector entities	100		100			5				105
10	Multilateral Development Banks	105		105					5	1,343	1,453
11	International Organisations									233	233
12	Institutions	74	3	2	67	2	9			343	426
13	Corporates	1,747	1,763	10	5	-30	3,014	9	2	478	5,250
	of which SME	1,591	1,589	2			991			19	2,602
14	Retail	4,704	1,297	3	1,048	2,355	1,345	2	5	104	6,160
	of which SME	776	97	1	201	477	759	2	4	46	1,586
15	Secured by mortgages on immovable property	108	96	7	3	1	2,533	2	1	152	2,796
	of which SME	58	58				14				72
16	Exposures in default	18	3		9	7	265			3	287
17	Items associated with particularly high risk	92	64	4	0	24	15		129	308	543
18	Covered bonds	0									
19	Claims on institutions and corporates with a short-term credit assessment	0									
20	Collective investments undertakings (CIU)	1,024	50	716	241	17	4		4	92	1,124
21	Equity exposures	1,024	50	716	241	17	4		4	92	1,124
22	Other exposures	704	35	46	503	120	241			87	1,031
23	Total standardised approach	63,177	11,206	29,833	4,239	17,899	8,882	216	22,100	9,156	103,531
24	Total	420,215	120,214	105,705	75,725	118,571	10,407	2,036	26,813	34,372	493,842

Table 10 EU CRB-D: Concentration of exposures by industry

Table CRB-D shows exposure split by industry group and by the main exposure classes. The industry breakdown mainly follows the Global Industries Classification Standard (GICS) and is based on NACE codes (statistical classification codes of economic activities in the European community). The corporate portfolio was well diversified between industry groups, real estate commercial properties and financial institutions contributed to the largest share of total corporate exposures. During the year 2019, financial institution exposures in the institutional portfolio decreased, and was offset by a similar increase in the public services industry in the central governments and banks due to the reduced risk in the liquidity buffer. Other main movements during the year include the change in the industry hierarchy, in which exposures previously under central governments or central banks are found under other, public and organisations to financial institutions in this period.

2019	Animal husbandry	Capital goods	Commercial & prof. services	Construction	Consumer durables	Consumer staples (food and health care)	Crops etc	Financial institutions	Fishing and aquaculture	Land transportation and IT	Maritime (shipping)	Materials	Media, leisure and telecom	Oil, gas and offshore	Paper, forest and mining	Real estate commercial properties	Real estate residential properties	Retail trade	Utilities and public services	Wholesale trade	Other	Total
IRB approach																						
Central governments or central banks																						
Institutions			35					30,659			21					1			63	1	1,914	32,693
Corporates	2,525	8,991	16,053	9,741	2,438	5,492	3,134	19,976	1,576	4,859	10,480	3,565	5,333	2,997	3,539	37,571	5,425	4,484	8,990	8,244	2,816	168,230
Retail	52	96	273	367	33	131	42	64	6	248	21	27	214	1	78	968	44	254	117	178	187,520	190,733
Equity																						
Other non-credit obligations		6	118	24	1	5	1	3		73	2	6	5	20%	11	384%		5	9	18	3,166	3,458
Total IRB approach	2,577	9,093	16,480	10,133	2,472	5,628	3,176	50,702	1,582	5,179	10,524	3,598	5,552	2,998	3,628	38,544	5,468	4,743	9,178	8,442	195,416	395,114
Standardised approach																						
Central governments or central banks			74	17		52		44,371		272	4		135		35	399			11,825	25	8,904	66,113
Regional governments or local authorities			1	1		1,435		1,062		6						1			6,418		44	8,968
Public sector entities																			100			100
Multilateral Development Banks								27													754	781
International Institutions								6											51		193	51 200
Corporates		2	59	38	2	70		1	1	25		1	28		1	1,600		115	130	13	349	2,436
Retail	36	22	72	204	7	23	58	4	1	81	29	7	41	1	19	19		39	30	44	5,408	6,144
Secured by mortgages on immovable property	3					3	1									33			72		4,540	4,651
Exposures in default			3	4		1				2			1				1	1		1	79	94
Items associated with particularly high risk								771													58	829
Covered bonds								357													27	384
Claims on institutions and corporates with a short-term credit assessment																						
Collective investments undertakings (CIU)								430														430
Equity exposures								1,122													574	1,697
Other exposures		2	19	15	1	6				10		1	4		2	2		5	33	12	827	941
Total SA Approach	39	27	229	279	9	1,589	60	48,151	2	397	33	9	209	1	57	2,054	1	161	18,657	96	21,757	93,817
Total	2,617	9,120	16,708	10,412	2,481	7,217	3,237	98,853	1,584	5,577	10,556	3,607	5,762	2,999	3,684	40,598	5,469	4,904	27,835	8,538	217,172	488,931

2018	Construction and engineering	Consumer durables (cars, appliances, etc.)	Consumer staples (food, agriculture etc.)	Energy (oil, gas, etc.)	Health care and pharmaceuticals	Industrial capital goods	Industrial commercial services	IT software, hardware and services	Media and leisure	Metals and mining materials	Other financial institutions	Other materials (chemical, building materials, etc.)	Other, public and organisations	Paper and forest materials	Real estate management and investment	Retail trade	Shipping and offshore	Telecommunication equipment	Telecommunication operators	Transportation	Utilities (distribution and production)	Total
IRB approach																						
Central goverments or central banks																						37,919
Institutions											37,919											162,554
Corporates	6,760	3,777	11,349	2,982	1,857	6,066	16,967	2,602	2,242	1,160	17,749	6,252	2,535	2,519	41,989	11,698	10,188	449	1,985	4,109	7,318	187,164
Retail	339	55	222	4	94	35	480	89	225	11	65	102	183,503	79	1,185	435	17	2	8	183	31	
Equity																						
Other non-credit obligations													2,674									2,674
Total IRB approach	7,099	3,832	11,572	2,986	1,951	6,100	17,447	2,691	2,467	1,172	55,733	6,354	188,711	2,599	43,174	12,133	10,205	451	1,993	4,292	7,349	390,311
Standardised approach																						
Central governments or central banks					262			8		2	1,042		74,317									75,632
Regional governments or local authorities													8,485							6		8,492
Multilateral Development Banks					1					1					2							105
International Organisations											362		1,090									1,453
Public sector entities													233									233
Institutions					27						68		324		7							426
Corporates	271	269	296	98	88	23	211	114	46	28	28	226	597	29	1,928	583	2		15	299	98	5,250
Retail	264	64	298	3	21	16	123	63	51	22	9	58	4,688	26	88	176	35		3	146	7	6,160
Secured by mortgages on immovable property	3		2		12		1	2	1			1	2,709	1	50	4				1	8	2,796
Exposures in default	12	4	24	3		1	7	26	4		1	23	96	1	68	9						287
Items associated with particularly high risk	4							8			460		63		9							543
Equity exposures											1,041		83									1,124
Other exposures	13	2	7	1	5	1	30	17	4	2	2	5	862	1	3	22				9	44	1,031
Total standardised approach	567	340	627	105	417	42	373	239	106	54	3013	312	93649	57	2156	794	37	0	18	468	156	103,531
Total	7,666	4,171	12,199	3,091	2,368	6,142	17,820	2,930	2,573	1,226	58,747	6,666	282,360	2,656	45,330	12,927	10,242	452	2,011	4,761	7,505	493,842

Table 11 EU CRB-E: Maturity of exposures

EU CRB-E discloses net exposure values for on-balance sheet exposures. For exposures treated under the IRB approach, about 60% were in the >5 years bucket, which increased slightly during 2019 mainly driven by increased retail exposures. For corporate IRB, most exposures were within the one to five year bucket, which also increased during 2019 due to higher lending volumes. Sovereign exposures were predominantly in the on demand category, mainly due to central bank accounts.

		a	b	c	d	e	f
		Net exposure value					
	2019 Q4	On demand	>= 1 year	> 1 year >= 5 years	>5 years	No stated maturity	Total
	IRB approach						
1	Central governments or central banks						
2	Institutions	1,509	3,616	18,226	4,830	813	28,995
3	Corporates	9,516	20,653	46,586	29,476	4,273	110,503
	- of which Specialised Lending					-1	-1
	- of which SME		9,878	17,626	18,306	2,567	48,377
4	Retail		2,203	7,878	150,837	4,136	165,054
	- of which Secured by real estate property		1,308	4,796	135,102	187	141,393
	- of which SME		50	253	666	71	1,040
	- of which Non-SME		1,257	4,543	134,437	116	140,353
	- of which Other Retail		920	3,113	15,943	4,034	24,009
	- of which SME		114	610	283	180	1,186
	- of which Non-SME		806	2,504	15,661	3,854	22,824
5	Equity						
	Other non-credit obligation assets		896	2,290	272		3,458
6	Total IRB approach	11,025	27,368	74,979	185,415	9,222	308,009
	Standardised approach						
7	Central governments or central banks	39,907	46	14,990	3,972	6,525	65,439
8	Regional governments or local authorities		741	2,048	217	856	3,861
9	Public sector entities						
10	Multilateral Development Banks		363	360	57		781
11	International Organisations		51				51
12	Institutions		13		187		200
13	Corporates		3	43	122	1,369	1,537
	- of which SMEs		2	5	90	1,173	1,270
14	Retail		228	2,164	2,031	143	4,565
	- of which SMEs		71	546	129	13	759
15	Secured by mortgages on immovable property		11	69	3,965	11	4,056
	- of which SMEs			2	56	11	69
16	Exposures in default		9	40	40	2	90
17	Items associated with particularly high risk					421	421
18	Covered bonds		69	315			384
19	Claims on institutions and corporates with a short-term credit assessment						
20	Collective investments undertakings (CIU)					194	194
21	Equity exposures		1			1,696	1,697
22	Other exposures		274	665	3	-1	941
23	Total standardised approach	39,907	1,808	20,694	10,593	11,216	84,218
24	Total	50,932	29,176	95,673	196,008	20,439	392,227

		Net exposure value					
	2018 Q4	On demand	>= 1 year	> 1 year <= 5 years	>5 years	No stated maturity	Total
	IRB approach						
1	Central governments or central banks						
2	Institutions	1,462	6,026	24,548	3,304	372	35,712
3	Corporates	9,934	20,032	42,364	30,952	5,213	108,495
	- of which Specialised Lending		11	51	135	0	197
	- of which SME		9,183	15,533	18,207	2,649	45,571
4	Retail		2,529	7,842	147,148	4,382	161,901
	- of which Secured by real estate property		1,387	4,908	131,193	195	137,683
	- of which SME		58	256	674	74	1,062
	- of which Non-SME		1,329	4,652	130,519	120	136,621
	- of which Other Retail		1,142	2,935	15,954	4,187	24,218
	- of which SME		149	562	317	202	1,230
	- of which Non-SME		994	2,373	15,636	3,985	22,988
5	Equity						
	Other non-credit obligation assets		718	1,815	141		2,674
6	Total IRB approach	11,396	29,305	76,570	181,545	9,966	308,782
	Standardised approach						
7	Central governments or central banks	44,303	12,281	15,976	2,413	100	75,074
8	Regional governments or local authorities	2	854	1,362	219	938	3,374
9	Public sector entities	0	1	4	0	0	5
10	Multilateral Development Banks	0	341	1,106	0	0	1,448
11	International Organisations	0	0	233	0	0	233
12	Institutions	31	35	35	323	0	425
13	Corporates	462	1,048	1,558	290	1,147	4,505
	- of which SMEs	65	345	561	126	937	2,034
14	Retail	121	517	2,324	1,651	116	4,728
	- of which SMEs	87	242	1,015	157	8	1,508
15	Secured by mortgages on immovable property	3	11	90	2,646	46	2,795
	- of which SMEs	2	3	10	37	20	72
16	Exposures in default	40	75	102	69	0	285
17	Items associated with particularly high risk	5	9	1	0	528	543
18	Covered bonds	0	0	0	0	0	0
19	Claims on institutions and corporates with a short-term credit assessment	0	0	0	0	0	0
20	Collective investments undertakings (CIU)	0	0	0	0	0	0
21	Equity exposures	0	0	1	3	1,120	1,124
22	Other exposures	1	171	722	72	65	1,031
23	Total standardised approach	44,965	15,332	23,424	5,039	4,014	92,775
24	Total	56,363	50,131	99,512	182,654	13,596	402,255

Table 12 EU CR1-A: Credit quality of exposures by exposure class and instrument

The total net exposure at the end of the year was EUR 488.9bn, out of which EUR 395.1bn was treated under the IRB approach. The change in total net exposure was primarily driven by decreased exposure towards central banks and lower covered bond exposure in the IRB institution portfolio. This was partly offset by an increase in the IRB corporate and retail exposures driven by increased lending volumes. Credit quality has improved in 2019 as a result of decreased defaulted volumes.

2019 Q4, EURm	a	b	c	d	e	f	g
	Original exposures						
	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c-d)
1 Central governments or central banks							
2 Institutions		32,696	3		3	-42	32,693
3 Corporates	3,954	165,970	1,694		-10	-302	168,230
4 of which Specialised Lending	13	209	1			2	221
5 of which SME	1,506	53,635	609		-15	-34	54,532
6 Retail	2,077	189,203	547		-60	-59	190,733
7 of which Secured by real estate property	1,167	149,150	52		-27	-27	150,265
8 of which SME	23	1,176	2		-17	7	1,198
9 of which Non-SME	1,144	147,974	50		-25	-36	149,067
10 of which qualifying revolving							
11 of which Other Retail	910	40,053	495				40,468
12 of which SME	135	1,824	36			0	1,923
13 of which Non-SME	776	38,229	459			0	38,545
14 Equity							
Other non-credit obligation assets	4	3,454					3,458
15 Total IRB approach	6,034	391,323	2,243		-66	-406	395,114
16 Central governments or central banks		66,115	3			-1	66,113
17 Regional governments or local authorities		8,968				-2	8,968
18 Public sector entities		100					100
19 Multilateral Development Banks		781					781
20 International Organisations		51					51
21 Institutions		200			-5	4	200
22 Corporates	11	2,437	2			-10	2,446
23 - of which SME	6	2,035	1			-6	2,039
24 Retail	144	6,162	18		-10	-40	6,289
25 - of which SME	10	869	1			3	878
26 Secured by mortgages on immovable property		4,654	3				4,651
27 - of which SME		74					74
28 Exposures in default		155	61				94
29 Items associated with particularly high risk		829					829
30 Covered bonds		384	1				384
31 Claims on institutions and corporates with a short-term credit assessment							
32 Collective investments undertakings (CIU)		430					430
33 Equity exposures		1,697					1,697
34 Other exposures		942	1				941
35 Total standardised approach	155	93,750	88		-16	-48	93,817
36 Total	6,189	485,073	2,331		-82	-454	488,931
37 - of which loans	5,486	337,288	2,188		-85	-423	340,586
38 - of which debt securities		51,641				1	51,641
39 - of which off-balance sheet exposures	703	96,144	144		3	-32	96,704

	2018 Q4, EURm	a	b	c	d	e	f	g
		Original exposures		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs*	Credit risk adjustment charges of the period*	Net values (a+b-c-d)*
		Defaulted exposures	Non-defaulted exposures					
	IRB approach							
1	Central governments or central banks							
2	Institutions		37,922	2			-21	37,919
3	Corporates	4,414	159,787	1,647		-67	-4	162,554
4	of which Specialised Lending	28	334	6			-2	356
5	of which SME	1,878	52,004	697		1	-86	53,185
6	Retail	2,164	185,518	518		-51	-8	187,164
7	of which Secured by real estate property	1,272	147,948	112		-8	-75	149,109
8	of which SME	30	1,197	4		-1	5	1,223
9	of which Non-SME	1,242	146,752	108		-7	-79	147,886
10	of which Other Retail	892	37,569	406				38,055
11	of which SME	125	1,904	34				1,994
12	of which Non-SME	768	35,666	372				36,061
13	Equity							0
14	Other non-credit obligation assets	3	2,671					2,674
15	Total IRB approach	6,582	385,896	2,167		-118	-32	390,311
	Standardised approach							
16	Central governments or central banks		75,634	2			2	75,631
17	Regional governments or local authorities		8,492					8,492
18	Public sector entities		105					105
19	Multilateral Development Banks		1,453					1,453
20	International Organisations		233					233
21	Institutions		428	2		-8	6	426
22	Corporates	232	5,028	9				5,252
23	- of which SME	142	2,462	3				2,602
24	Retail	131	6,078	15		-6	-12	6,194
25	- of which SME	40	1,561	4			14	1,597
26	Secured by mortgages on immovable property	46	2,764	15				2,796
27	- of which SME	1	71					72
28	Exposures in default		412	125		-11	5	287
29	Items associated with particularly high risk	11	539	7				543
30	Covered bonds							
31	Claims on institutions and corporates with a short-term credit assessment							
32	Collective investments undertakings (CIU)							
33	Equity exposures		1,124					1,124
34	Other exposures	2	1,029					1,031
35	Total standardised approach	423	103,283	176		-142	2	103,530
36	Total	7,005	489,180	2,343		-142	-30	493,842
37	- of which loans	6,280	337,649	2,270		-142	-30	341,659
38	- of which debt securities		59,422	73				59,349
39	- of which off-balance sheet exposures	714	92,080	60			-1	92,733

Table 13 EU CR1-B: Credit quality of exposures by industry or counterparty types

The industry split has been updated to correspond to the NACE code hierarchy in Q4 2019. The industries with the highest total net exposure values in Q4 2019 were 'Other', 'Financial institutions', and 'Real estate commercial properties' with EUR 217.2bn (44.5%), EUR 98.9bn (20.1%), and EUR 40.7bn (8.3%) respectively.

Q4 2019	a	b	c	d	e	f	g
	Original exposures						
EURm	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c-d)
IRB approach							
Animal husbandry	426	2,296	105		1	-23	2,617
Capital goods	159	9,004	43		-2	-4	9,120
Commercial & prof. services	212	16,558	61		-4	-44	16,708
Construction	199	10,246	33		-3	-8	10,412
Consumer durables	137	2,371	27		1	-14	2,481
Consumer staples (food and health care)	48	7,180	11		-2	5	7,217
Crops etc	149	3,112	24			-15	3,237
Financial institutions	168	98,761	75		-2	-27	98,853
Fishing and aquaculture	1	1,583					1,584
Land transportation and IT	116	5,482	21		-6	-10	5,577
Maritime (shipping)	753	9,998	195		-3	-61	10,556
Materials	164	3,472	29			6	3,607
Media, leisure and telecom	84	5,700	22		-4	-14	5,762
Oil, gas and offshore	781	2,408	190		0	-129	2,999
Other	2,134	216,369	1,331		-37	-71	217,172
Paper, forest and mining	57	3,639	12			2	3,684
Real estate commercial properties	327	40,393	78		-1	5	40,642
Real estate residential properties	16	5,410	1		-1	-12	5,425
Retail trade	106	4,836	37		-3	-3	4,904
Utilities and public services	37	27,815	16		-12	-36	27,835
Wholesale trade	117	8,441	20		-3	-2	8,538
Total	6,189	485,073	2,331		-82	-454	488,931

Q4 2018

EURm	Original exposures: Defaulted exposures	Original exposures: Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	adjustment charges of the period	Net values (a+b-c-d)
Construction and engineering	179	7,515	43		-4	-2	7,651
Consumer durables (cars, appliances, etc.)	250	3,960	42				4,168
Consumer staples (food, agriculture etc.)	857	11,537	211		-1	-48	12,183
Energy (oil, gas, etc.)	821	2,409	139				3,091
Health care and pharmaceuticals	7	2,350				1	2,357
Industrial capital goods	80	6,089	29				6,140
Industrial commercial services	281	17,600	70		-19	28	17,811
IT software, hardware and services	50	2,865	11		-13		2,904
Media and leisure	40	2,538	8		-1	3	2,570
Metals and mining materials	39	1,196	12		-2	-38	1,223
Other financial institutions	228	58,658	142		1	-52	58,744
Other materials (chemical, building materials, etc.)	246	6,487	78				6,655
Other, public and organisations	2,187	281,423	1,156		-88	56	282,453
Paper and forest materials	26	2,631	2				2,655
Real estate management and investment	549	44,986	135		2	12	45,400
Retail trade	358	12,654	121		-5	-42	12,891
Shipping and offshore	685	9,675	117				10,242
Telecommunication equipment	2	450					452
Telecommunication operators	14	1,997					2,011
Transportation	104	4,661	25		2	28	4,740
Utilities (distribution and production)	3	7,498	1		-14	22	7,500
Total	7,005	489,180	2,343		-142	-31	493,842

Table 14 EU CR1-C: Credit quality of exposures by geography

In Q4 2019 a total of EUR 431.8bn (88.3%) of the total net exposures was stemming from Nordic countries, which is a 3% increase compared to Q4 2018, mainly stemming from increase in Norwegian exposures and increased lending volumes. Baltic exposures declined in 2019 due to decreased ownership share of Luminor. Defaulted exposures decreased EUR 0.8bn during 2019, mainly driven by reduced defaulted exposures in Denmark.

Q4 2019	a	b	c	e	f	g
	Original exposures					
EURm	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net values (a+b-c-d)
Nordic countries	5,125	428,623	1,944		-81	-453	431,804
- of which Denmark	1,874	118,498	799				119,572
- of which Finland	1,678	107,501	458				108,720
- of which Norway	1,159	84,611	436				85,333
- of which Sweden	415	118,013	250				118,178
Baltic countries	4	3,038	4				3,038
United States	7	21,238	4				21,242
Russia	43	1,551	29			15	1,565
Other	1,011	30,623	350		-1	-16	31,283
Total	6,189	485,073	2,331		-82	-454	488,931

Q4 2018							
		Original exposures					
EURm	Defaulted exposures	Non-defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs[1]	Credit risk adjustment charges of the period[1]	Net values[1] (a+b-c-d)
Nordic countries	5,381	416,608	1,774		-139	18	420,215
- of which Denmark	2,389	118,704	878		-24	-131	120,214
- of which Finland	1,616	104,564	474		-25	36	105,705
- of which Norway	1,047	75,019	340		-65	105	75,725
- of which Sweden	329	118,322	82		-24	8	118,570
Baltic countries	389	10,060	145			-4	10,304
United States	9	26,806	2			3	26,813
Poland	3	148	2			1	149
Russia	54	2,051	70			-8	2,036
Other	1,168	33,507	349		-3	-41	34,326
Total	7,005	489,180	2,343		-142	-31	493,842

[1] Q4 2018 figures restated to align with Q4 2019 interpretation.

Table 15 EU CR2-A: Changes in stock of general and specific credit risk adjustments

Accumulated specific credit risk adjustments were stable compared to end of 2018. During the year there were new/increased individually calculated loan losses of EUR -555m as well as model calculated net loan losses at EUR -91m. These were partly related to EUR 282m made in Q3 2019, after dialogue with the ECB on Asset Quality Review findings. This reflected a weaker outlook for certain sectors, and to IFRS9 model updates. Additionally Nordea had reversals during the year of EUR 223m and write-offs taken against accumulated credit risk adjustments of EUR 312m.

2019 Q4		a	b
	EURm	Accumulated specific credit risk adjustment	Accumulated general credit risk adjustment
1	Opening balance acccording IFRS 9	-2,162	
2	Increases due to amounts set aside for estimated loan losses during the period	-555	
3	Decreases due to amounts reversed for estimated loan losses during the period	223	
	Net model losses (stage 1&2)	-44	
	Net model losses (stage 3, model based)	-47	
4	Decreases due to amounts taken against accumulated credit risk adjustments	312	
5	Transfers betwen credit risk adjustments	0	
6	Impact of exchange rate differences	0	
7	Business combinations, including acquisitions and disposals of subsidiaries	0	
8	Other adjustments	90	
9	Closing balance	-2,183	
10	Recoveries on credit risk adjustments recorded directly to the statement of profit or loss	47	
11	Specific credit risk adjustments recorded directly to the statement of profit or loss	-444	

2018 Q4			
	EURm	Accumulated specific credit risk adjustment	Accumulated general credit risk adustment
1	Opening balance acccording IFRS 9	-2,477	
2	Increases due to amounts set aside for estimated loan losses during the period	-498	
3	Decreases due to amounts reversed for estimated loan losses during the period	466	
	Net model losses (stage 1&2)	53	
	Net model losses (stage 3, model based)	-45	
4	Decreases due to amounts taken against accumulated credit risk adjustments	321	
5	Transfers betwen credit risk adjustments	1	
6	Impact of exchange rate differences	0	
7	Business combinations, including acquisitions and disposals of subsidiaries	0	
8	Other adjustments	18	
9	Closing balance	-2,162	
10	Recoveries on credit risk adjustments recorded directly to the statement of profit or loss	5	
11	Specific credit risk adjustments recorded directly to the statement of profit or loss	-466	

Table 16 EU CR2-B: Changes in the stock of defaulted and impaired loans and debt securities

Impaired loans gross in Nordea Group amounted to EUR 4.6bn end of 2019. During the year new impaired exposures have increased the amount by EUR 0.6bn while exposures with improved credit quality returning to non-defaulted status amounts to EUR 0.2bn. Write-offs during the year has decreased impaired loans by EUR 0.4bn.

2019 Q4		a
	EURm	Gross carrying value impaired exposures
1	Opening balance	5,052
2	Loans and debt securities that have defaulted or impaired since the last reporting period	582
3	Returned to non-defaulted (and non-impaired) status	-228
4	Amount written off	-444
5	Other changes	-353
6	Closing balance	4,610

2018 Q4		
	EURm	Gross carrying value impaired exposures
1	Opening balance	6391
2	Loans and debt securities that have defaulted or impaired since the last reporting period	836
3	Returned to non-defaulted (and non-impaired) status	-264
4	Amount written off	-530
5	Other changes	-1,381
6	Closing balance	5052

Table 17 EU CR3: Credit risk mitigation techniques – overview

At year-end 2019, 56% of Nordea's total exposures have at least one Credit Risk Mitigation (CRM) mechanism (collateral, financial guarantees, credit derivatives). The majority of those are secured by real estate collaterals. Since Q2 2019, the secured exposures increased mainly driven by increased residential mortgage volumes.

2019 Q4	a	b	c	d	e
EURm	Exposures unsecured - carrying amount	Exposures secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1 Loans	124,916	224,776	213,622	11,154	
2 Total debt securities	52,246				
3 Total exposures	177,162	224,776	213,622	11,154	
4 - of which defaulted	1,780	3,549	2,589	323	

2019 Q2					
EURm	Exposures unsecured - carrying amount	Exposures to be secured	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1 Loans	130,039	219,872	209,040	10,831	
2 Total debt securities	52,340				
3 Total exposures	182,379	219,872	209,040	10,831	
4 - of which defaulted	1,979	3,983	3,555	428	

Table 18 EU CR4: Standardised approach – credit risk exposure and Credit Risk Mitigation (CRM) effects

Total exposure amount before CCF and CRM was EUR 93.8bn. The on-balance sheet exposure in Q4 amounted to EUR 84.2bn of the total exposure (compared to 88.7bn in Q2 2019). The decrease in on-balance exposures was mainly driven by a decrease in central governments and central banks, however the REA density remained stable (15%) between the two periods. REA further decreased driven by a change in ownership of Luminor. This decrease was partially offset by an increase in central governments or central banks due to increased deferred tax assets recognised in Q3.

Q4 2019	a	b	c	d	e	f
EURm	Exposures before CCF and CRM		Exposures post-CCF and CRM			
Asset classes	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	REA	REA density
1 Central governments or central banks	65,439	673	68,308	461	955	1%
2 Regional governments or local authorities	3,861	5,107	4,857	636	11	
3 Public sector entities		100		50		
4 Multilateral development banks	781		783			
5 International organisations	51		51			
6 Institutions	200		201		40	20%
7 Corporate	1,537	899	1,518	111	1,614	99%
8 Retail	4,565	1,579	4,529	486	3,703	74%
9 Secured by mortgages on immovable property	4,056	594	4,056	85	1,459	35%
10 Exposures in default	91	3	90		117	129%
11 Exposures associated with particularly high risk	421	407	421	204	938	150%
12 Covered bonds						
13 Institutions and corporates with a short-term credit assessment						
14 Collective investment undertakings						
15 Equity	1,697		1,697		3,515	207%
16 Other items	1,519	236	1,518	118	1,102	67%
17 Total	84,218	9,599	88,030	2,150	13,453	15%

Q2 2019						
EURm	Exposures before CCF and CRM		Exposures post-CCF and CRM			
Asset classes	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	REA	REA density
1 Central governments or central banks	70,033	563	73,036	327	453	1%
2 Regional governments or local authorities	3,389	5,118	4,351	605	6	
3 Public sector entities		100		50		
4 Multilateral development banks	880	3	891	1		
5 International organisations	102		102			
6 Institutions	199		200		40	20%
7 Corporate	1,555	651	1,542	45	1,573	99%
8 Retail	4,569	1,594	4,548	510	3,735	74%
9 Secured by mortgages on immovable property	4,062	561	4,062	75	1,457	35%
10 Exposures in default	76	1	76		94	124%
11 Exposures associated with particularly high risk	381	419	381	209	886	150%
12 Covered Bonds	417		417		42	10%
13 Institutions and corporates with a short-term credit assessment						
14 Collective investments undertakings (CIU)	162	274	162	137	299	100%
15 Equity	2312		2312		5251	227%
16 Other items	588		587		675	115%
17 Total	88,726	9,285	92,668	1,960	14,511	15%

Table 19 EU CR5: Standardised approach - credit risk exposures by regulatory portfolio and risk

Exposures shown are on- and off-balance sheet exposures post conversion factor and post risk mitigation techniques. At the end of Q4 2019, the total exposure amount was EUR 90.2bn, down EUR 4.4bn from Q2 2019. The largest decrease took place in the 0% risk weight bucket, which decreased from EUR78.7bn to EUR 74.5bn being mainly driven decreased volumes in central governments exposures. Decrease in 250% risk-weight bucket is stemming from the decreased ownership of Luminor. Other than the 0% risk bucket, the remaining exposures are mainly held in retail and corporate portfolios, within 75% and 100% risk weights.

Q4 2019 EURm		Risk weight														
	Exposure classes	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Other	Total
1	Central governments or central banks	68,252				6		147			14	9	341				68,769
2	Regional governments or local authorities	5,450				36		7									5,493
3	Public sector entities	50															50
4	Multilateral development banks	783															783
5	International organisations	51															51
6	Institutions					201											201
7	Corporate										1,628						1,628
8	Retail									5,015							5,015
9	Secured by mortgages on immovable property						4,059	82									4,141
10	Exposures in default										38	52					90
11	Items associated with particularly high risk											625					625
12	Covered Bonds																
13	Institutions and corporates with a short-term credit assessment																
14	Collective investments undertakings (CIU)																
15	Equity										485		1,212				1,697
16	Other items				384						640					612	1,636
17	Total	74,586			384	243	4,059	237		5,015	2,806	687	1,553			612	90,180

Q2 2019

	EURm	Risk weight														
	Exposure classes	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Other	Total
1	Central governments or central banks	72,794				202		231			23	8	104				73,363
2	Regional governments or local authorities	4,930				25		1									4,956
3	Public sector	50															50
4	Multilateral	891															891
5	International	102															102
6	Institutions					201											201
7	Corporate										1,587						1,587
8	Retail									5,058							5,058
9	Secured by mortgages on						4,064	73									4,138
10	Exposures in default	3									31	42					76
11	Associated with particularly high risk											591					591
12	Covered Bonds				417												417
13	Institutions and corporates with a short-term credit assessment																
14	Collective investments undertakings (CIU)										299						299
15	Equity										352.14		1959.67				2311.81
16	Other items										250.965					336	586.938
17	Total	78,771			417	428	4,064	305		5,058	2,543	641	2,064			336	94,628

Table 20 EU CR6 Total IRB: Credit risk exposures by portfolio and PD scale

The following tables show a comprehensive overview of statistics and inputs used to define the exposure classes under the IRB approach, such as EAD, average PD and average LGD. The amounts are broken down by exposure class and obligor grade. EAD increased by EUR 7.5bn in Q4 2019, mainly stemming from increased covered bond volumes in the Danish and Swedish institution portfolios. The decrease in REA is primarily driven by adjusted risk-weights on IRB floors for commercial real estate in Sweden and Norway following updated decision from the ECB as part of the annual supervisory dialogue. Average PD improved mainly driven by an increase in low risk-weighted covered bonds in the institutions portfolio. Average LGD and maturity remained stable in Q4 2019.

Q4 2019, EURm	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original exposure	Off-balance exposure	Average CCF	EAD	Average PD	Number of obligors. '000	Average LGD	Average maturity	REA	REA density	EL	Value adj. and provision
Total IRB exposures												
0.00 to < 0.15	149,643	38,358	53%	170,727	0.09%	1,331,422	18.9%	2.5	20,518	12%	29	16
0.15 to < 0.25	47,327	11,607	52%	53,086	0.20%	563,459	21.3%	2.5	10,920	21%	23	12
0.25 to < 0.50	51,966	21,383	48%	61,221	0.41%	465,684	26.0%	2.5	25,520	42%	67	49
0.50 to < 0.75	6,166	825	53%	6,392	0.60%	152,736	20.2%	2.5	1,303	20%	8	8
0.75 to < 2.50	32,674	10,921	46%	36,121	1.20%	397,451	25.3%	2.6	18,652	52%	110	162
2.50 to < 10.00	8,725	2,639	36%	8,784	4.26%	208,337	25.9%	2.6	5,072	58%	96	127
10.00 to < 100	4,819	816	44%	4,707	18.45%	81,952	25.4%	2.5	4,391	93%	214	202
100 (Default)	5,331	700	12%	5,114	100.00%	102,565	26.4%	2.5	7,506	147%	1,430	1,668
Total	306,651	87,248	50%	346,152	2.12%	3,303,605	21.6%	2.5	93,883	27%	1,976	2,243

Q3 2019, EURm

PD scale	Original exposure	Off-balance exposure	Average CCF	EAD	Average PD	Number of obligors. '000	Average LGD	Average maturity	REA	REA density	EL	Value adj. and provision
Total IRB exposures												
0.00 to < 0.15	141,904	39,003	55%	163,499	0.09%	1,364,331	19.5%	2.5	20,645	13%	29	19
0.15 to < 0.25	47,716	12,468	52%	54,003	0.20%	586,946	21.8%	2.5	12,139	22%	24	14
0.25 to < 0.50	49,675	20,794	47%	58,524	0.41%	476,498	25.6%	2.5	26,207	45%	63	46
0.50 to < 0.75	6,177	881	51%	6,420	0.60%	156,205	20.4%	2.5	1,301	20%	8	9
0.75 to < 2.50	33,917	10,697	47%	37,347	1.20%	461,227	25.6%	2.5	20,889	56%	114	177
2.50 to < 10.00	8,604	2,415	38%	8,637	4.4%	227,819	25.8%	2.5	4,904	57%	97	129
10.00 to < 100	4,857	789	40%	4,759	18.7%	88,636	25.4%	2.5	4,495	94%	219	190
100 (Default)	5,675	642	12%	5,444	100.0%	103,683	26.4%	2.5	7,768	143%	1,445	1,688
Total	298,526	87,690	51%	338,633	2.27%	3,465,345	22.0%	2.5	98,348	29%	1,998	2,272

Table 21 EU CR6 FIRB Institutions: Credit risk exposures by PD scale

Institution portfolio EAD and REA increased during fourth quarter of 2019 mainly due to increased covered bond volumes.

Q4 2019, EURm	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original exposure	Off-balance exposure	Average CCF	EAD	Average PD	Number of obligors. '000	Average LGD	Average maturity	REA	REA density	EL	Value adj. and provision
Institutions - FIRB												
0.00 to < 0.15	25,705	1,407	32%	26,205	0.07%	635	13.6%	2.5	2,553	10%	3	1
0.15 to < 0.25	2,015	72	20%	2,029	0.17%	93	12.6%	2.5	252	12%		
0.25 to < 0.50	886	1,642	55%	1,930	0.38%	239	42.9%	2.5	1,214	63%	3	1
0.50 to < 0.75	220	90	31%	227	0.66%	79	43.8%	2.5	215	95%	1	
0.75 to < 2.50	88	304	29%	126	1.24%	92	45.0%	2.5	143	114%	1	
2.50 to < 10.00	80	173	27%	113	5.26%	318	44.7%	2.5	208	184%	3	
10.00 to < 100	3	11	21%	4	14.89%	45	45.0%	2.5	11	264%		
100 (Default)												
Total	28,996	3,700	41%	30,633	0.13%	1,501	15.8%	2.5	4,597	15%	10	2

Q3 2019, EURm												
PD scale	Original exposure	Off-balance exposure	Average CCF	EAD	Average PD	Number of obligors. '000	Average LGD	Average maturity	REA	REA density	EL	Value adj. and provision
Institutions - FIRB												
0.00 to < 0.15	20,523	2,071	45%	21,538	0.07%	1,362	17.3%	2.5	2,584	12%	3	0
0.15 to < 0.25	1,793	165	51%	1,883	0.17%	185	15.2%	2.5	284	15%		0
0.25 to < 0.50	235	517	29%	487	0.37%	423	34.6%	2.5	233	48%	1	0
0.50 to < 0.75	232	171	29%	261	0.66%	222	44.0%	2.5	209	80%	1	0
0.75 to < 2.50	65	271	34%	93	1.31%	220	45.0%	2.5	73	79%	1	0
2.50 to < 10.00	164	185	26%	178	4.49%	539	44.5%	2.5	260	146%	4	0
10.00 to < 100	6	15	23%	8	16.6%	136	45.0%	2.5	7	97%	1	0
100 (Default)												0
Total	23,018	3,395	41%	24,448	0.13%	3,087	18.1%	2.5	3,651	15%	9	1

Table 22 EU CR6 IRB Corporates: Credit risk exposures by PD scale

Q4 2019, EURm	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original exposure	Off-balance exposure	Average CCF	EAD	Average PD	Number of obligors. '000	Average LGD	Average maturity	REA	REA density	EL	Value adj. and provision
Corporate - IRB, Total												
0.00 to < 0.15	34,173	22,117	47%	45,295	0.09%	12,319	29.2%	2.4	10,661	24%	13	12
0.15 to < 0.25	12,977	7,056	49%	16,364	0.22%	4,389	29.0%	2.6	7,024	43%	10	7
0.25 to < 0.50	34,182	17,349	46%	41,463	0.44%	13,242	28.3%	2.5	21,869	53%	51	40
0.50 to < 0.75[1]												
0.75 to < 2.50	21,180	8,252	43%	23,778	1.13%	13,503	28.0%	2.6	15,176	64%	76	106
2.50 to < 10.00	3,416	1,822	30%	3,262	3.27%	13,793	29.1%	2.7	2,537	78%	31	47
10.00 to < 100	2,765	680	40%	2,655	14.93%	5,221	27.6%	2.4	2,844	107%	110	123
100 (Default)	3,407	547	0%	3,140	100.00%	1,650	29.2%	2.5	2,954	94%	1,297	1,358
Total	**112,101**	**57,823**	**45%**	**135,958**	**3.07%**	**64,117**	**28.7%**	**2.5**	**63,065**	**46%**	**1,589**	**1,694**
Corporate - AIRB, Total												
0.00 to < 0.15	31,246	21,208	49%	41,597	0.09%	11,409	28.0%	2.4	9,421	23%	11	11
0.15 to < 0.25	11,766	6,698	51%	15,116	0.22%	4,010	27.9%	2.7	6,460	43%	9	6
0.25 to < 0.50	31,973	16,362	48%	39,347	0.44%	11,857	27.5%	2.5	20,575	52%	47	38
0.50 to < 0.75[1]												
0.75 to < 2.50	19,055	7,324	48%	21,605	1.12%	11,929	26.6%	2.7	13,354	62%	65	97
2.50 to < 10.00	2,435	1,289	43%	2,764	3.27%	10,710	26.9%	2.7	2,001	72%	25	40
10.00 to < 100	2,451	549	51%	2,348	14.92%	4,609	25.8%	2.4	2,338	100%	91	113
100 (Default)	3,289	502	0%	3,042	100.00%	1,572	28.7%	2.5	2,954	97%	1,255	1,325
Total	102,214	53,931	48%	125,819	3.16%	56,096	27.5%	2.5	57,103	45%	1,503	1,631
Corporate - AIRB, Corporates (exluding SMEs and specialised lending)												
0.00 to < 0.15	15,561	18,962	49%	23,851	0.11%	2,275	31.4%	2.3	6,449	27%	8	4
0.15 to < 0.25	7,611	5,999	50%	10,129	0.22%	1,452	29.4%	2.6	4,667	46%	7	6
0.25 to < 0.50	21,831	14,268	47%	27,029	0.44%	4,303	28.7%	2.5	15,214	56%	34	30
0.50 to < 0.75[1]												
0.75 to < 2.50	10,312	5,629	45%	11,321	1.12%	4,165	28.4%	2.8	8,062	71%	37	65
2.50 to < 10.00	1,034	965	39%	1,335	3.09%	5,273	29.9%	3.0	1,209	91%	13	23
10.00 to < 100	831	302	51%	825	14.38%	1,426	28.5%	2.3	1,001	121%	34	60
100 (Default)	1,983	369	0%	1,826	100.00%	484	30.5%	2.5	1,504	82%	821	865
Sub-total	59,163	46,495	48%	76,317	2.99%	19,378	29.7%	2.5	38,106	50%	953	1,053
Corporate - AIRB, SMEs (excluding specialised lending)												
0.00 to < 0.15	15,617	2,192	50%	17,664	0.07%	9,131	23.4%	2.5	2,937	17%	3	7
0.15 to < 0.25	4,155	699	55%	4,987	0.22%	2,558	24.9%	2.7	1,793	36%	3	1
0.25 to < 0.50	10,069	2,079	53%	12,251	0.44%	7,552	24.8%	2.5	5,324	43%	13	8
0.50 to < 0.75[1]												
0.75 to < 2.50	8,743	1,694	54%	10,284	1.12%	7,763	24.6%	2.5	5,292	51%	28	32
2.50 to < 10.00	1,402	324	53%	1,429	3.44%	5,437	24.1%	2.5	792	55%	12	16
10.00 to < 100	1,620	247	50%	1,523	15.22%	3,183	24.4%	2.5	1,337	88%	57	54
100 (Default)	1,296	130	0%	1,206	100.00%	1,088	26.1%	2.5	1,437	119%	434	460
Sub-total	42,901	7,364	52%	49,344	3.41%	36,712	24.3%	2.5	18,912	38%	550	578
Corporate - AIRB, Specialised lending												
0.00 to < 0.15	68	55	26%	82	0.15%	3	34.1%	4.2	36	44%		
0.15 to < 0.25												
0.25 to < 0.50	72	15	56%	67	0.47%	3	36.1%	2.0	37	55%		
0.50 to < 0.75[1]												
0.75 to < 2.50					1.30%	1	36.6%	5.0		124%		
2.50 to < 10.00												
10.00 to < 100												
100 (Default)	10	3		10	100.00%	1	27.4%	1.0	13	130%	1	1
Sub-total	150	72	31%	158	6.46%	8	34.5%	3.1	85	54%	1	1

Corporate - FIRB, Total

0.00 to < 0.15	2,927	909	5%	3,698	0.10%	2,449	42.5%	2.5	1,240	34%	2	1
0.15 to < 0.25	1,212	358	7%	1,248	0.22%	1,359	41.8%	2.5	564	45%	1	1
0.25 to < 0.50	2,210	986	8%	2,116	0.44%	3,977	42.9%	2.5	1,293	61%	4	2
0.50 to < 0.75[1]												
0.75 to < 2.50	2,125	929	10%	2,173	1.19%	4,848	42.4%	2.5	1,822	84%	11	9
2.50 to < 10.00	981	533	2%	497	3.23%	5,054	41.0%	2.5	535	108%	7	8
10.00 to < 100	314	131	2%	307	14.99%	2,022	41.4%	2.5	506	165%	19	10
100 (Default)	118	45	1%	98	100.00%	320	43.2%	2.5			42	32
Total	9,887	3,892	7%	10,138	1.99%	20,029	42.4%	2.5	5,961	59%	86	62

Corporate - FIRB, Corporates (excluding SMEs and specialised lending)

0.00 to < 0.15	2,120	712	5%	2,518	0.10%	1,647	42.4%	2.5	882	35%	1	1
0.15 to < 0.25	553	257	8%	533	0.22%	664	43.5%	2.5	257	48%	1	
0.25 to < 0.50	1,410	756	9%	1,290	0.44%	2,002	43.5%	2.5	872	68%	2	1
0.50 to < 0.75[1]						0						
0.75 to < 2.50	1,044	629	11%	1,080	1.13%	1,861	42.6%	2.5	1,048	97%	5	3
2.50 to < 10.00	770	452	2%	292	3.10%	2,331	40.3%	2.5	358	123%	4	5
10.00 to < 100	88	29	5%	87	15.21%	456	42.1%	2.5	188	215%	6	3
100 (Default)	61	22	0%	41	100.00%	92	43.8%	2.5			18	18
Total	6,045	2,858	7%	5,841	1.46%	9,053	42.7%	2.5	3,604	62%	37	31

Corporate - FIRB, SMEs (excluding specialised lending)

0.00 to < 0.15	807	197	4%	1,180	0.12%	2,001	42.9%	2.5	359	30%	1	
0.15 to < 0.25	659	101	5%	716	0.22%	1,145	40.5%	2.5	307	43%	1	1
0.25 to < 0.50	800	230	4%	826	0.45%	3,034	41.9%	2.5	421	51%	2	1
0.50 to < 0.75[1]						0						
0.75 to < 2.50	1,081	299	9%	1,093	1.25%	3,912	42.1%	2.5	774	71%	6	6
2.50 to < 10.00	211	81	3%	205	3.41%	2,883	42.0%	2.5	178	87%	3	2
10.00 to < 100	226	102	1%	220	14.91%	1,729	41.2%	2.5	318	145%	14	7
100 (Default)	58	23	2%	57	100.00%	321	42.7%	2.5			24	15
Sub-total	3,841	1,034	5%	4,297	2.72%	15,025	42.0%	2.5	2,357	55%	49	31

Corporate - FIRB, Specialised Lending

0.00 to < 0.15												
0.15 to < 0.25												
0.25 to < 0.50												
0.50 to < 0.75[1]												
0.75 to < 2.50												
2.50 to < 10.00												
10.00 to < 100												
100 (Default)												
Sub-total												

[1]For corporate exposure class the bucket 4 is empty, since no regulatory PD in the range 0.5% - 0.75%.

Q3 2019, EURm

PD scale	Original exposure	Off-balance exposure	Average CCF	EAD	Average PD	Number of obligors. '000	Average LGD	Average maturity	REA	REA density	EL	Value adj. and provision
Corporate - IRB, Total												
0.00 to < 0.15	34,284	21,839	49%	45,167	0.10%	12,478	29.2%	2.4	10,981	24%	13	13
0.15 to < 0.25	13,388	7,623	48%	17,105	0.22%	4,395	29.8%	2.6	8,154	48%	11	8
0.25 to < 0.50	32,442	17,773	46%	40,021	0.44%	13,195	28.5%	2.5	23,500	59%	50	37
0.50 to < 0.75[1]												
0.75 to < 2.50	22,610	8,094	45%	25,255	1.13%	13,740	28.2%	2.6	17,560	70%	81	128
2.50 to < 10.00	3,153	1,606	32%	2,996	3.38%	13,932	28.6%	2.6	2,289	76%	30	51
10.00 to < 100	2,713	642	36%	2,622	15.23%	5,293	27.8%	2.5	2,899	111%	111	110
100 (Default)	3,687	503	0%	3,411	100.00%	1,686	29.2%	2.5	3,144	92%	1,323	1,402
Total	112,277	58,080	46%	136,577	3.26%	64,719	28.8%	2.5	68,527	50%	1,619	1,749
Corporate - AIRB, Total												
0.00 to < 0.15	31,489	20,929	50%	41,738	0.10%	11,496	28.1%	2.4	9,862	24%	12	12
0.15 to < 0.25	11,621	7,248	51%	15,318	0.22%	3,991	28.4%	2.7	7,187	47%	10	7
0.25 to < 0.50	30,223	16,739	48%	37,826	0.44%	11,892	27.7%	2.5	22,154	59%	46	36
0.50 to < 0.75[1]												
0.75 to < 2.50	20,662	7,172	49%	23,228	1.13%	12,168	27.0%	2.6	15,857	68%	71	121
2.50 to < 10.00	2,225	1,095	48%	2,457	3.42%	10,990	26.0%	2.7	1,704	69%	23	44
10.00 to < 100	2,403	477	49%	2,318	15.24%	4,693	26.0%	2.5	2,393	103%	92	101
100 (Default)	3,575	445	0%	3,315	100.00%	1,595	28.8%	2.5	3,144	95%	1,282	1,373
Total	102,198	54,106	49%	126,200	3.37%	56,825	27.7%	2.5	62,301	49%	1,535	1,695
Corporate - AIRB, Corporates (exluding SMEs and specialised lending)												
0.00 to < 0.15	16,473	18,469	50%	24,552	0.11%	2,291	31.3%	2.4	7,040	29%	9	11
0.15 to < 0.25	7,673	6,470	49%	10,467	0.22%	1,461	29.9%	2.6	5,082	49%	7	7
0.25 to < 0.50	20,455	14,811	47%	26,053	0.44%	4,232	29.0%	2.5	16,433	63%	33	30
0.50 to < 0.75[1]												
0.75 to < 2.50	11,346	5,412	47%	12,702	1.12%	4,241	28.8%	2.6	9,690	76%	42	84
2.50 to < 10.00	897	719	47%	1,062	3.38%	5,374	28.4%	2.9	936	88%	11	25
10.00 to < 100	869	253	49%	791	14.76%	1,494	29.0%	2.5	1,020	129%	34	44
100 (Default)	2,175	309	0%	2,028	100.00%	476	30.5%	2.6	1,773	87%	814	866
Sub-total	59,887	46,443	48%	77,657	3.20%	19,569	29.8%	2.5	41,974	54%	949	1,066
Corporate - AIRB, SMEs (excluding specialised lending)												
0.00 to < 0.15	14,946	2,398	51%	17,100	0.07%	9,202	23.5%	2.5	2,785	16%	3	1
0.15 to < 0.25	3,948	778	57%	4,851	0.22%	2,530	25.2%	2.7	2,105	43%	3	1
0.25 to < 0.50	9,682	1,905	53%	11,688	0.44%	7,655	24.6%	2.5	5,674	49%	13	6
0.50 to < 0.75[1]												
0.75 to < 2.50	9,317	1,760	54%	10,526	1.14%	7,926	24.7%	2.5	6,167	59%	30	36
2.50 to < 10.00	1,328	376	50%	1,395	3.45%	5,616	24.2%	2.5	768	55%	12	20
10.00 to < 100	1,534	224	49%	1,527	15.49%	3,199	24.5%	2.5	1,373	90%	58	58
100 (Default)	1,390	133	0%	1,277	100.00%	1,119	26.1%	2.5	1,361	107%	467	506
Sub-total	42,145	7,575	52%	48,363	3.63%	37,247	24.3%	2.5	20,233	42%	585	628
Corporate - AIRB, Specialised lending												
0.00 to < 0.15	70	62	25%	86	0.15%	3	34.1%	4.1	37	43%		
0.15 to < 0.25												
0.25 to < 0.50	86	23	57%	85	0.45%	5	36.2%	2.4	47	56%		
0.50 to < 0.75[1]												
0.75 to < 2.50					1.29%	1	36.6%	5.0		124%		
2.50 to < 10.00												
10.00 to < 100												
100 (Default)	10	3		10	100.00%	1	23.2%	1.0	10	102%	1	1
Sub-total	166	87	33%	180	5.67%	10	34.5%	3.2	94	52%	1	1

Q3 2019, EURm

PD scale	Original exposure	Off-balance exposure	Average CCF	EAD	Average PD	Number of obligors. '000	Average LGD	Average maturity	REA	REA density	EL	Value adj. and provision
Corporate - FIRB, Total												
0.00 to < 0.15	2,795	910	5%	3,429	0.10%	2,568	42.7%	2.5	1,118	33%	2	1
0.15 to < 0.25	1,766	375	7%	1,787	0.22%	1,351	41.9%	2.5	968	54%	2	1
0.25 to < 0.50	2,220	1,034	9%	2,195	0.44%	3,953	42.4%	2.5	1,345	61%	4	2
0.50 to < 0.75[1]												
0.75 to < 2.50	1,947	922	12%	2,027	1.16%	4,905	42.0%	2.5	1,703	84%	10	7
2.50 to < 10.00	929	511	3%	539	3.22%	4,932	40.6%	2.5	585	108%	7	6
10.00 to < 100	310	165	3%	304	15.14%	2,014	41.3%	2.5	506	166%	19	8
100 (Default)	112	58	0%	96	100.00%	332	43.0%	2.5	0	0%	41	29
Total	10,079	3,974	8%	10,377	1.92%	20,055	42.2%	2.5	6,225	60%	84	54
Corporate - FIRB, Corporates (excluding SMEs and specialised lending)												
0.00 to < 0.15	2,153	683	6%	2,491	0.10%	1,088	43.0%	2.5	839	34%	1	1
0.15 to < 0.25	1,134	257	8%	1,106	0.22%	490	42.8%	2.5	576	52%	1	
0.25 to < 0.50	1,342	779	11%	1,288	0.44%	1,447	42.8%	2.5	857	67%	2	1
0.50 to < 0.75[1]												
0.75 to < 2.50	968	592	14%	1,032	1.11%	1,488	42.2%	2.5	992	96%	5	2
2.50 to < 10.00	722	421	3%	339	3.10%	2,134	40.2%	2.5	415	122%	4	4
10.00 to < 100	90	57	6%	90	15.21%	433	42.2%	2.5	192	215%	6	2
100 (Default)	56	30		41	100.00%	89	43.6%	2.5			18	17
Sub-total	6,465	2,820	9%	6,387	1.36%	7,169	42.6%	2.5	3,872	61%	37	25
Corporate - FIRB, SMEs (excluding specialised lending)												
0.00 to < 0.15	642	227	2%	938	0.12%	1,480	42.0%	2.5	279	30%		1
0.15 to < 0.25	632	118	5%	681	0.22%	861	40.6%	2.5	391	57%	1	1
0.25 to < 0.50	878	255	5%	907	0.44%	2,506	41.8%	2.5	489	54%	2	1
0.50 to < 0.75[1]												
0.75 to < 2.50	980	331	9%	995	1.22%	3,417	41.7%	2.5	711	71%	5	5
2.50 to < 10.00	207	90	2%	200	3.41%	2,798	41.3%	2.5	169	85%	3	3
10.00 to < 100	219	107	1%	215	15.11%	1,581	40.9%	2.5	314	146%	13	7
100 (Default)	56	27	1%	55	100.00%	243	42.6%	2.5			23	12
Sub-total	3,614	1,154	5%	3,991	2.82%	12,886	41.5%	2.5	2,353	59%	47	29
Corporate - FIRB, Specialised Lending												
0.00 to < 0.15												
0.15 to < 0.25												
0.25 to < 0.50												
0.50 to < 0.75[1]												
0.75 to < 2.50												
2.50 to < 10.00												
10.00 to < 100												
100 (Default)												
Sub-total												

Table 23 EU CR6 IRB Retail: Credit risk exposures by PD scale

Q4 2019, EURm	a	b	c	d	e	f	g	h	i	j	k	l
PD scale	Original exposure	Off-balance exposure	Average CCF	EAD	Average PD	Number of obligors. '000	Average LGD	Average maturity	REA	REA density	EL	Value adj. and provision
Retail - RIRB, total												
0.00 to < 0.15	89,766	14,834	65%	99,227	0.09%	1,318,468	15.5%	2.5	7,303	7%	14	3
0.15 to < 0.25	32,335	4,479	58%	34,693	0.19%	558,977	18.2%	2.5	3,644	11%	12	5
0.25 to < 0.50	16,897	2,392	55%	17,829	0.36%	452,204	19.0%	2.5	2,438	14%	12	8
0.50 to < 0.75	5,947	735	56%	6,165	0.60%	152,657	19.3%	2.5	1,088	18%	7	7
0.75 to < 2.50	11,406	2,365	57%	12,217	1.34%	383,856	20.0%	2.5	3,333	27%	33	55
2.50 to < 10.00	5,229	643	53%	5,409	4.84%	194,226	23.6%	2.5	2,328	43%	62	79
10.00 to < 100	2,052	124	63%	2,048	23.02%	76,686	22.4%	2.5	1,536	75%	103	79
100 (Default)	1,924	154	54%	1,973	100.00%	100,915	21.9%	2.5	4,552	231%	133	310
Total	165,555	25,726	61%	179,561	1.74%	3,237,989	17.2%	2.5	26,221	15%	376	547
Retail - RIRB, Non-SME (excluding exposures secured by immovable property)												
0.00 to < 0.15	5,445	8,267	54%	9,747	0.09%	1,151,812	29.8%	2.5	709	7%	3	2
0.15 to < 0.25	4,029	3,382	56%	5,701	0.19%	523,011	29.7%	2.5	697	12%	3	4
0.25 to < 0.50	3,761	1,799	53%	4,326	0.36%	430,103	29.2%	2.5	789	18%	5	6
0.50 to < 0.75	1,381	500	51%	1,446	0.60%	139,678	29.4%	2.5	358	25%	3	6
0.75 to < 2.50	2,794	1,429	55%	3,093	1.37%	328,703	29.8%	2.5	1,091	35%	13	44
2.50 to < 10.00	3,655	507	45%	3,753	4.79%	166,668	25.7%	2.5	1,501	40%	46	71
10.00 to < 100	1,184	96	55%	1,162	21.10%	71,530	26.8%	2.5	736	63%	66	69
100 (Default)	665	111	53%	700	100.00%	91,201	31.1%	2.5	2,190	313%	108	258
Sub-total	22,913	16,091	54%	29,928	4.05%	2,902,706	29.1%	2.5	8,071	27%	246	459
Retail - RIRB, SME (excluding exposures secured by immovable property)												
0.00 to < 0.15	1	7	67%	5	0.10%	1,931	34.7%	2.5		8%		
0.15 to < 0.25	9	8	57%	14	0.19%	1,228	33.7%	2.5	2	11%		
0.25 to < 0.50	49	74	67%	97	0.39%	8,645	31.5%	2.5	18	19%		
0.50 to < 0.75	38	78	79%	98	0.60%	7,149	27.7%	2.5	20	20%		
0.75 to < 2.50	592	442	59%	805	1.51%	41,188	28.4%	2.5	246	31%	3	3
2.50 to < 10.00	341	102	80%	395	4.94%	25,273	28.3%	2.5	150	38%	5	5
10.00 to < 100	71	12	85%	75	22.96%	3,968	27.1%	2.5	41	55%	5	2
100 (Default)	97	38	55%	107	100.00%	7,139	29.7%	2.5	344	320%	13	25
Sub-total	1,198	760	65%	1,597	9.85%	96,521	28.6%	2.5	821	51%	27	36
Retail - RIRB, SME exposures secured by immovable property												
0.00 to < 0.15	5	11	41%	10	0.09%	897	16.8%	2.5		3%		
0.15 to < 0.25	371	23	41%	380	0.19%	6,608	17.1%	2.5	20	5%		
0.25 to < 0.50	111	20	51%	121	0.36%	2,003	16.6%	2.5	10	9%		
0.50 to < 0.75	75	17	53%	84	0.60%	1,366	16.4%	2.5	11	13%		
0.75 to < 2.50	390	77	48%	427	1.27%	8,048	17.2%	2.5	93	22%	1	
2.50 to < 10.00	52	8	53%	57	4.04%	1,100	16.5%	2.5	23	41%		
10.00 to < 100	15	1	66%	16	28.19%	277	16.3%	2.5	13	80%	1	
100 (Default)	21	2	66%	23	100.00%	588	17.4%	2.5	47	207%		1
Sub-total	1,041	158	48%	1,117	3.27%	20,887	17.0%	2.5	218	19%	3	2
Retail - RIRB, Non-SME exposures secured by immovable property												
0.00 to < 0.15	84,315	6,549	79%	89,465	0.09%	629,621	14.0%	2.5	6,593	7%	11	2
0.15 to < 0.25	27,927	1,066	63%	28,598	0.19%	196,190	16.0%	2.5	2,925	10%	9	2
0.25 to < 0.50	12,975	500	62%	13,284	0.35%	95,264	15.7%	2.5	1,620	12%	7	2
0.50 to < 0.75	4,453	140	60%	4,537	0.60%	32,724	15.9%	2.5	699	15%	4	1
0.75 to < 2.50	7,629	416	63%	7,892	1.31%	55,348	15.4%	2.5	1,903	24%	16	8
2.50 to < 10.00	1,180	27	1	1,205	5.01%	8,058	15.8%	2.5	654	54%	10	2
10.00 to < 100	781	15	1	795	25.73%	6,930	15.6%	2.5	746	94%	32	7
100 (Default)	1,141	3	68%	1,143	100.00%	11,047	15.7%	2.5	1,971	172%	12	27
Sub-total	140,402	8,716	75%	146,919	1.00%	1,035,182	15.0%	2.5	17,111	12%	101	50

Q3 2019, EURm

PD scale	Original exposure	Off-balance exposure	Average CCF	EAD	Average PD	Number of obligors. '000	Average LGD	Average maturity	REA	REA density	EL	Value adj. and provision
Retail - RIRB, total												
0.00 to < 0.15	87,097	15,093	65%	96,793	0.09%	1,350,491	15.5%	2.5	7,080	7%	13	6
0.15 to < 0.25	32,536	4,681	58%	35,015	0.19%	582,366	18.3%	2.5	3,700	11%	12	6
0.25 to < 0.50	16,998	2,504	55%	18,015	0.36%	462,880	19.1%	2.5	2,474	14%	12	8
0.50 to < 0.75	5,945	709	57%	6,159	0.60%	155,983	19.4%	2.5	1,092	18%	7	9
0.75 to < 2.50	11,242	2,332	56%	11,999	1.33%	447,267	19.9%	2.5	3,255	27%	32	48
2.50 to < 10.00	5,287	624	54%	5,464	4.90%	213,348	23.6%	2.5	2,355	43%	63	78
10.00 to < 100	2,139	133	62%	2,129	23.07%	83,207	22.3%	2.5	1,588	75%	107	80
100 (Default)	1,988	140	55%	2,034	100.00%	101,997	21.9%	2.5	4,624	227%	122	287
Total	163,231	26,215	62%	177,607	1.80%	3,397,539	17.3%	2.5	26,170	15%	370	521
Retail - RIRB, Non-SME (excluding exposures secured by immovable property)												
0.00 to < 0.15	5,137	8,166	54%	9,364	0.09%	1,183,964	30.0%	2.5	687	7%	3	5
0.15 to < 0.25	3,979	3,494	56%	5,727	0.19%	547,392	29.8%	2.5	702	12%	3	4
0.25 to < 0.50	3,746	1,855	53%	4,369	0.36%	441,124	29.2%	2.5	799	18%	5	6
0.50 to < 0.75	1,367	482	52%	1,429	0.60%	142,646	30.0%	2.5	360	25%	3	8
0.75 to < 2.50	2,769	1,387	53%	3,004	1.35%	389,404	29.5%	2.5	1,042	35%	12	37
2.50 to < 10.00	3,694	490	46%	3,787	4.85%	185,746	25.7%	2.5	1,516	40%	47	70
10.00 to < 100	1,247	103	54%	1,217	21.05%	77,677	26.6%	2.5	765	63%	69	70
100 (Default)	675	100	54%	709	100.00%	92,121	31.0%	2.5	2,166	306%	95	236
Sub-total	22,614	16,077	54%	29,606	4.17%	3,060,074	29.1%	2.5	8,037	27%	236	436
Retail - RIRB, SME (excluding exposures secured by immovable property)												
0.00 to < 0.15	1	6	67%	5	0.10%	1,882	33.7%	2.5		7%		
0.15 to < 0.25	9	10	58%	14	0.19%	1,254	34.2%	2.5	2	11%		
0.25 to < 0.50	40	71	65%	85	0.38%	7,964	32.1%	2.5	16	18%		
0.50 to < 0.75	42	77	81%	103	0.60%	7,102	27.5%	2.5	20	20%		
0.75 to < 2.50	612	431	60%	823	1.53%	43,773	28.5%	2.5	254	31%	4	3
2.50 to < 10.00	346	98	81%	399	5.06%	25,452	28.1%	2.5	150	37%	6	5
10.00 to < 100	74	13	86%	79	24.25%	4,214	26.7%	2.5	43	54%	5	3
100 (Default)	103	35	56%	112	100.00%	7,304	29.8%	2.5	357	319%	14	24
Sub-total	1,226	741	66%	1,620	10.17%	98,945	28.6%	2.5	842	52%	29	35
Retail - RIRB, SME exposures secured by immovable property												
0.00 to < 0.15	5	12	41%	10	0.09%	901	16.7%	2.5	0	3%		
0.15 to < 0.25	366	24	41%	375	0.19%	6,557	17.1%	2.5	20	5%		
0.25 to < 0.50	118	21	50%	129	0.36%	2,124	16.6%	2.5	11	9%		
0.50 to < 0.75	77	15	52%	85	0.60%	1,325	16.3%	2.5	11	13%		
0.75 to < 2.50	394	80	49%	433	1.28%	8,187	17.2%	2.5	94	22%	1	
2.50 to < 10.00	53	7	54%	57	4.13%	1,116	16.5%	2.5	24	42%		
10.00 to < 100	16	1	58%	17	29.67%	321	16.5%	2.5	14	81%	1	
100 (Default)	23	2	63%	24	100.00%	626	17.5%	2.5	51	209%		1
Sub-total	1,053	161	48%	1,130	3.45%	21,157	17.0%	2.5	225	20%	3	2
Retail - RIRB, Non-SME exposures secured by immovable property												
0.00 to < 0.15	81,953	6,909	79%	87,414	0.09%	628,584	14.0%	2.5	6,393	7%	11	1
0.15 to < 0.25	28,182	1,153	62%	28,899	0.19%	200,965	16.0%	2.5	2,976	10%	9	2
0.25 to < 0.50	13,094	558	61%	13,432	0.35%	97,803	15.8%	2.5	1,649	12%	8	2
0.50 to < 0.75	4,459	134	62%	4,542	0.60%	33,299	16.0%	2.5	701	15%	4	1
0.75 to < 2.50	7,467	434	63%	7,740	1.31%	55,760	15.4%	2.5	1,865	24%	16	7
2.50 to < 10.00	1,194	30	91%	1,221	5.05%	8,189	15.8%	2.5	666	55%	10	2
10.00 to < 100	802	15	95%	816	25.83%	7,354	15.6%	2.5	767	94%	33	8
100 (Default)	1,187	2	70%	1,189	100.00%	11,240	15.8%	2.5	2,050	172%	13	25
Sub-total	138,338	9,236	75%	145,251	1.22%	1,043,194	14.7%	2.5	17,067	12%	102	49

Table 24 EU CR7: Effect on REA of credit derivatives used as CRM techniques

Outside of the synthetic securitisation for specific corporate exposures, Nordea does not use credit derivatives as a credit risk mitigation technique in the banking book. REA decrease during the year was primarily stemming from adjusted risk-weights on IRB floors for commercial real estate in Sweden and Norway following updated decision from the ECB as part of the annual supervisory dialogue.

	Q4 2019	a	b
		Pre-credit derivatives	
	EURm	REA	Actual REA
1	Exposures under Foundation IRB		
2	Central governments and central banks		
3	Institutions	4,597	4,597
4	Corporates - SME	2,357	2,357
5	Corporates - Specialised Lending		
6	Corporates - Other	3,604	3,604
7	Exposures under Advanced IRB		
8	Central government and central banks		
9	Institutions		
10	Corporates - SME	18,912	18,912
11	Corporates - Specialised Lending	85	85
12	Corporates - Other	38,106	38,106
13	Retail - Secured by real estate SME	218	218
14	Retail - Secured by real estate non-SME	17,111	17,111
15	Retail - Qualifying revolving		
16	Retail - Other SME	821	821
17	Retail - Other non-SME	8,071	8,071
18	Equity IRB		
19	Other non credit-obligation assets	2959	2,959
20	Total	96,841	96,841

	Q2 2019		
		Pre-credit derivatives	
	EURm	REA	Actual REA
1	Exposures under Foundation IRB		
2	Central governments and central banks		
3	Institutions	4,539	4,539
4	Corporates - SME	2,412	2,412
5	Corporates - Specialised Lending		
6	Corporates - Other	3,821	3,821
	Other non credit-obligation assets		
7	Exposures under Advanced IRB	20,796	20,796
8	Central government and central banks		
9	Institutions		
10	Corporates - SME	106	106
11	Corporates - Specialised Lending	42,260	42,260
12	Corporates - Other	226	226
13	Retail - Secured by real estate SME	16,964	16,964
14	Retail - Secured by real estate non-SME	832	832
15	Retail - Qualifying revolving		
16	Retail - Other SME	8,215	8,215
17	Retail - Other non-SME	3,470	3,470
18	Equity IRB		
19	Other non credit-obligation assets		
20	Total	103,641	103,641

Table 25 EU CR8: REA flow statements of credit risk exposures under IRB

During the last quarter IRB REA decreased by EUR 4.2bn, primarily stemming from adjusted risk-weights on IRB floors for commercial real estate in Sweden and Norway following an updated decision from the ECB as part of the annual supervisory dialogue. That was somewhat offset by increased asset size in the institution and corporate portfolios as well as increased IRB floors which was not part of the commercial real estate in Sweden and Norway.

		a	b
	EURm	REA	Capital requirement
1	REA 2019 Q3	101,045	8,084
2	Asset size	1,737	139
3	Asset quality	-106	-9
4	Model updates		
5	Methodology and policy	-5,450	-436
6	Acquisitions and disposals		
7	Foreign exchange movements	130	10
8	Other	-514	-41
9	REA 2019 Q4	96,841	7,747

	EURm	REA	Capital requirement
1	REA 2019 Q2	103,641	8,291
2	Asset size	-1,596	-128
3	Asset quality	-572	-46
4	Model updates		
5	Methodology and policy		
6	Acquisitions and disposals		
7	Foreign exchange movements	-44	-4
8	Other	-384	-31
9	REA 2019 Q3	101,045	8,084

Table 26 EU CR9 - IRB approach - Backtesting of PD per exposure class

The table shows a back testing of the probability of default (PD) by comparing the regulatory PD with the actual default frequency (ADF). PD and ADF are calculated per exposure class and sub-exposure class, as well as on the approach levels; FIRB vs AIRB for the Corporates. REA under the IRB approach is distributed between Institutions, Corporates and Retail exposure classes, each accounting for 5%, 57% and 22%, respectively. The exposure classes and PD ranges are specified in columns a and b. Columns d and e depicts the exposure-weighted average PD per exposure class and the simple arithmetic average PD at the end of the reporting period.1 Column f shows the number of obligors during the previous and current period, distributed between the respective PD ranges. Column g indicates the number of obligors who defaulted in the year, including obligors with no exposure at the beginning of period and defaulted during the reporting period (column h). Obligors already in default at the beginning of the reporting period are not included in column g. Column i shows the five-year historical average ADF per PD range. A comparison of columns i and e gives an indication of how Nordea's current regulatory PD performs in a 5 year horizon.

a	b	d	e	f		g	h	i
				Number of obligors				
Exposure class	PD range	Weighted average PD 2019	Arithmetic averaged PD by obligors 2019	2018	2019	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Retail AIRB	0.00 to < 0.15	0.1%	0.1%	602,825	608,134	112	0.0%	0.0%
Of which secured by immovable property	0.15 to < 0.25	0.2%	0.2%	204,120	200,023	165	0.0%	0.1%
	0.25 to < 0.50	0.4%	0.4%	100,977	95,978	265	0.0%	0.2%
	0.50 to < 0.75	0.6%	0.6%	35,319	33,754	139	0.0%	0.4%
	0.75 to < 2.50	1.3%	1.3%	63,375	62,297	604	0.1%	0.8%
	2.50 to < 10.00	5.0%	4.7%	9,019	9,072	703	0.2%	7.1%
	10.00 to < 100	25.8%	26.9%	7,179	7,156	1,262	0.5%	21.5%
	100 (Default)	100.00%	100.00%	12,318	11,635	-	-	-

a	b	d	e	f		g	h	i
				Number of obligors				
Exposure class	PD range	Weighted average PD 2019	Arithmetic averaged PD by obligors 2019	2018	2019	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Retail AIRB	0.00 to < 0.15	0.1%	0.1%	1,107,063	1,153,743	454	0.0%	0.0%
Of which other retail	0.15 to < 0.25	0.2%	0.2%	524,708	524,239	668	0.0%	0.1%
	0.25 to < 0.50	0.4%	0.4%	449,312	438,748	1,738	0.0%	0.3%
	0.50 to < 0.75	0.6%	0.6%	155,307	146,827	1,177	0.1%	0.6%
	0.75 to < 2.50	1.4%	1.3%	380,601	369,891	5,582	0.4%	0.9%
	2.50 to < 10.00	4.8%	4.8%	199,931	191,941	5,905	0.3%	2.5%
	10.00 to < 100	21.2%	22.2%	73,790	75,498	7,950	0.1%	9.3%
	100 (Default)	100.0%	100.0%	93,109	98,340	-	-	-

a	b	d	e	f		g	h	i
				Number of obligors				
Exposure class	PD range	Weighted average PD 2019	Arithmetic averaged PD by obligors 2019	2018	2019	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Corporate FIRB	0.00 to < 0.15	0.1%	0.1%	2,615	2,562	-	0.0%	0.1%
	0.15 to < 0.25	0.2%	0.2%	1,349	1,374	3	0.0%	0.1%
	0.25 to < 0.50	0.4%	0.4%	4,268	3,913	2	0.0%	0.2%
	0.50 to < 0.75	-	-	-	-	-	-	0.4%
	0.75 to < 2.50	1.2%	1.3%	4,944	4,844	29	0.0%	1.0%
	2.50 to < 10.00	3.2%	2.9%	4,398	5,013	18	0.0%	0.9%
	10.00 to < 100	15.0%	19.0%	2,159	2,004	73	0.0%	6.0%
	100 (Default)	100.0%	100.0%	334	318	-	0.0%	-

a	b	d	e	f		g	h	i
				Number of obligors				
Exposure class	PD range	Weighted average PD 2019	Arithmetic averaged PD by obligors 2019	2018	2019	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Corporate AIRB	0.00 to < 0.15	0.1%	0.1%	11,800	11,778	2	0.0%	0.0%
	0.15 to < 0.25	0.2%	0.2%	4,248	4,116	6	0.0%	0.1%
	0.25 to < 0.50	0.4%	0.4%	12,797	12,032	13	0.0%	0.2%
	0.50 to < 0.75	0.0%	-	-	-	2		0.4%
	0.75 to < 2.50	1.1%	1.3%	12,383	11,864	78	0.0%	1.1%
	2.50 to < 10.00	3.3%	2.9%	9,034	10,333	62	0.1%	1.2%
	10.00 to < 100	14.9%	19.6%	4,931	4,405	216	0.0%	11.1%
	100 (Default)	100.0%	100.0%	1,662	1,568	-	-	-

a	b	d	e	f		g	h	i
				Number of obligors				
Exposure class	PD range	Weighted average PD 2019	Arithmetic averaged PD by obligors 2019	2018	2019	Defaulted obligors in the year	Of which new obligors	Average historical annual default rate
Institution FIRB	0.00 to < 0.15	0.1%	0.1%	616	638	-	0.0%	0.0%
	0.15 to < 0.25	0.2%	0.2%	84	93	-	0.0%	0.0%
	0.25 to < 0.50	0.4%	0.4%	186	238	-	0.0%	0.0%
	0.50 to < 0.75	0.7%	0.7%	77	78	-	0.0%	0.0%
	0.75 to < 2.50	1.2%	1.3%	95	94	-	0.0%	0.2%
	2.50 to < 10.00	5.3%	4.7%	318	318	-	0.0%	0.0%
	10.00 to < 100	14.9%	14.7%	40	43	-	0.0%	0.0%
	100 (Default)	100.0%	100.0%	-	-	-	0.0%	0.0%

[1] Bucket 4 is empty for the exposure class corporate, since Nordea does not have regulatory PD in the range 0.5% - 0.75%.

Table 27 Minimum capital requirements for credit risk, split by exposure class

The table shows a comprehensive overview of regulatory exposures and capital requirements for credit risk split by exposure class. IRB exposures remain the largest component of REA, comprising EUR 102.8bn (88%) of a EUR 116.5bn total (compared to EUR 109.4bn of EUR 123.0bn Q3 2019). The largest decrease in IRB exposures during the quarter is as result of the corporate exposure class. This is primarily stemming from adjusted risk-weights on IRB floors for commercial real estate in Sweden and Norway following updated decision from the ECB as part of the annual supervisory dialogue.

Q4 2019, EURm

EURm	Original exposure	Exposure	Average risk weight	REA	Capital requirement
IRB exposure classes					
Sovereign	0	0	0%	0	0
Institution	36,856	34,794	18%	6,135	491
Corporate	178,643	144,313	47%	67,479	5,398
- of which advanced	156,145	125,819	45%	57,103	4,568
Retail	191,343	179,624	15%	26,248	2,100
- of which mortgage	150,317	148,036	12%	17,329	1,386
- of which other retail	41,026	31,587	28%	8,919	714
- of which SME	3,179	2,735	38%	1,047	84
Other non-credit obligation assets	3,458	3,456	86%	2,959	237
Total IRB approach	410,300	362,186	28%	102,821	8,226
Standardised exposure classes					
Central government and central banks	68,650	71,304	1%	980	78
Regional governments and local authorities	10,518	7,407	1%	67	5
Institution	1,777	1,778	9%	163	13
Corporate	2,456	1,647	99%	1,629	130
Retail	6,162	5,015	74%	3,704	296
Exposure secured by real estate	4,654	4,141	35%	1,459	117
Equity	1,697	1,697	207%	3,515	281
Other[1]	4,410	3,974	46%	2,156	172
Total standardised approach	100,324	96,963	10%	13,673	1,094
Total	510,624	459,149	25%	116,494	9,320

[1] Includes exposure classes Administrative bodies and non-commercial undertakings, Multilateral development banks, International organisations, Past due items, Items belonging to regulatory high-risk categories, Other items and Equity.

Q3 2019, EURm					
EURm	Original exposure	Exposure	Average risk weight	REA	Capital requirement
IRB exposure classes					
Sovereign					
Institution	31,319	29,355	19%	5,507	441
Corporate	181,692	147,913	51%	74,949	5,996
- of which advanced	156,304	126,200	49%	62,301	4,984
Retail	189,525	177,687	15%	26,203	2,096
- of which mortgage	148,787	146,381	12%	17,291	1,383
- of which other retail	40,738	31,306	28%	8,912	713
- of which SME	3,205	2,775	39%	1,077	86
Other non-credit obligation assets	3,123	3,002	90%	2,697	216
Total IRB approach	405,659	357,956	31%	109,357	8,749
Standardised exposure classes					
Central government and central banks	69,770	72,638	1%	970	78
Regional governments and local authorities	10,322	6,643	1%	79	6
Institution	3,728	3,730	6%	236	19
Corporate	2,440	1,699	99%	1,680	134
Retail	6,180	5,042	74%	3,724	298
Exposure secured by real estate	4,665	4,182	35%	1,470	118
Equity	1,562	1,562	216%	3,378	270
Other[1]	4,283	3,842	47%	2,109	169
Total standardised approach	102,951	99,338	10%	13,646	1,092
Total	508,611	457,294	26%	123,003	9,840

[1] Includes exposure classes Past due items, Items belonging to regulatory high-risk categories, Other items and Equity.

Table 28 Original Exposure split by exposure class and exposure type

The table shows a comprehensive overview of original exposure split by exposure class and exposure type. By year-end 2019, 80% of total credit risk exposures were calculated using the IRB approach, compared to 79% in year-end 2018. Compared to year-end 2018, total original exposure decreased by EUR 5.2bn, mainly driven by a decrease in central governments and central banks by EUR 9.2bn and offset by increased corporate exposure by 6.1bn.

2019, EURm	On-balance sheet items	Off-balance sheet items	Securities financing Transactions	Derivatives	Total
IRB exposure classes					
Sovereign					
Institution	28,996	3,700	1,033	3,127	36,856
Corporate	112,101	57,823	1,663	7,056	178,643
- of which advanced	102,214	53,931			156,145
Retail	165,555	25,726	1	62	191,343
- of which mortgage	141,443	8,874			150,317
- of which other retail	24,112	16,851	1	62	41,026
- of which SME	2,240	919		21	3,179
Other non-credit obligation assets	3,458				3,458
Total IRB approach	310,109	87,248	2,697	10,246	410,300
Standardised exposure classes					
Central government and central banks	65,442	673	967	1,568	68,650
Regional governments and local authorities	3,861	5,107	1	1,549	10,518
Institution	200		687	889	1,777
Corporate	1,538	899		19	2,456
Retail	4,583	1,579			6,162
Exposures secured by real estate	4,060	594			4,654
Other[1]	4,428	511	432	307	5,677
Total standardised approach	84,306	9,599	2,087	4,332	100,324
Total	394,415	96,848	4,784	14,577	510,624

[1] Includes exposure classes Administrative bodies and non-commercial undertakings, Multilateral development banks, International organisations, Past due items, Items belonging to regulatory high-risk categories, Covered bonds, Short-term claims on institutions and corporate, Other items and Equity.

2018, EURm	On-balance sheet items	Off-balance sheet items	Securities financing Transactions	Derivatives	Total
IRB exposure classes					
Sovereign					
Institution	35,712	2,209	1,410	3,490	42,822
Corporate	108,495	55,706	1,134	7,144	172,479
- of which advanced	97,891	52,077			149,968
Retail	161,901	25,781		71	187,753
- of which mortgage	137,683	11,538			149,220
- of which other retail	24,218	14,243		71	38,533
- of which SME	2,292	963		26	3,281
Other non-credit obligation assets	2,674				2,674
Total IRB approach	308,782	83,696	2,544	10,705	405,727
Standardised exposure classes					
Central government and central banks	75,069	558	656	1,611	77,893
Regional governments and local authorities	3,367	5,125		1,271	9,763
Institution	393	10	1,226	954	2,583
Corporate	3,638	1,613		19	5,271
Retail	4,508	1,666		1	6,175
Exposures secured by real estate	2,805	5			2,810
Other[1]	4,790	119	429	305	5,642
Total standardised approach	94,569	9,097	2,311	4,161	110,138
Total	403,351	92,793	4,855	14,866	515,865

[1] Includes exposure classes Past due items, Items belonging to regulatory high-risk categories, Other items and Equity.

Table 29 Average quarterly original exposure, split by exposure class and exposure type

The table shows average quarterly exposures by exposure class and type, providing a comprehensive picture of the average original exposure during the year. Average numbers are broadly in line with year-end numbers, while sovereign exposures constitute the largest change during the period due to a roll-back into standardised approach during Q4 2018.

2019, EURm	On-balance sheet items	Off-balance sheet items	Securities financing Transactions	Derivatives	Total
IRB exposure classes					
Sovereign					
Institution	28,321	3,274	1,581	3,190	36,365
Corporate	112,168	57,646	1,740	8,351	179,904
- of which Advanced	102,085	53,759			155,844
Retail	163,700	25,651	2	73	189,426
- of which mortgage	139,284	9,289			148,573
- of which other retail	24,416	16,362	2	73	40,854
- of which SME	2,276	915		24	3,215
Other non-credit obligation assets	3,905				3,905
Total IRB approach	308,093	86,570	3,323	11,614	409,601
Standardised exposure classes					
Central government and central banks	69,244	603	1,184	1,574	72,604
Regional governments and local authorities	3,509	5,192		1,625	10,327
Institution	217	3	2,333	1,143	3,696
Corporate	2,065	966		19	3,050
Retail	4,915	1,668			6,584
Exposures secured by real estate	4,732	563		6	5,301
Other[1]	4,879	635	503	297	6,314
Total standardised approach	89,561	9,630	4,020	4,664	107,875
Total	397,654	96,201	7,343	16,278	517,476

[1] Includes exposures classes Administrative bodies and non-commercial undertakings, Multilateral development banks, International organisations, Past due items, Items belonging to regulatory high-risk categories, Covered bonds, Short-term claims on institutions and corporate, Other items and Equity.

2018, EURm	On-balance sheet items	Off-balance sheet items	Securities financing Transactions	Derivatives	Total
IRB exposure classes					
Sovereign	52,008	4,327	1,173	2,762	60,271
Institution	37,098	2,156	2,020	3,948	45,221
Corporate	109,571	56,289	1,390	7,569	174,818
- of which Advanced	98,811	52,860		0	151,672
Retail	162,041	25,944	5	73	188,063
- of which mortgage	137,494	11,641			149,135
- of which other retail	24,547	14,303	5	73	38,928
- of which SME	2,323	947		28	3,299
Other non-credit obligation assets	3,015	29		3	3,048
Total IRB approach	363,733	88,745	4,588	14,355	471,422
Standardised exposure classes					
Central government and central banks	20,402	154	164	408	21,127
Regional governments and local authorities	926	1,287		318	2,531
Institution	224	15	1,837	937	3,013
Corporate	3,482	1,932		76	5,490
Retail	4,579	2,167		9	6,755
Exposures secured by real estate	3,003	382			3,385
Other[1]	3,502	41	107	76	3,726
Total standardised approach	36,118	5,978	2,108	1,823	46,027
Total	399,851	94,723	6,696	16,178	517,449

[1] Includes exposure classes Administrative bodies and non-commercial undertakings, Multilateral developments banks, International organisations, Past due items, Items belonging to regulatory high-risk categories, Other items and Equity.

Table 30 Exposure secured by collaterals, guarantees and credit derivatives, split by exposure class

In Q4 2019, the share of total exposure secured by eligible collateral increased slightly compared to Q4 2018. The increase was primarily driven by increased collateral volumes under the standardised approach following the acquisition of Gjensidige Bank in Q2 2019. In the IRB portfolio, the share of exposure secured by eligible collateral remained stable.

2019, EURm	Original exposure	Exposure	- of which secured by guarantees and credit derivatives	- of which secured by collateral	Average weighted LGD[1]
IRB exposure classes					
Sovereign					
Institution	36,856	34,794	271	70	19.3%
Corporate	178,643	144,313	11,444	64,109	29.6%
- of which Advanced	156,145	125,819	10,487	59,975	27.5%
Retail	191,343	179,624	2,343	144,685	17.2%
- of which secured by immovable property	149,118	146,919		141,089	14.7%
- of which other retail	39,046	29,970	2,004	2,184	29.1%
- of which SME	3,179	2,735	339	1,411	23.9%
Other non-credit obligation assets	3,458	3,456	1		n.a.
Total IRB approach	410,300	362,186	14,058	208,864	22.4%
Standardised exposure classes					
Central government and central banks	68,650	71,304	324		
Regional governments and local authorities	10,518	7,407			
Institution	1,777	1,778			
Corporate	2,456	1,647	15	5	
Retail	6,162	5,015	36	0	
Exposures secured by real estate	4,654	4,141		4,141	
Other[2]	6,107	5,671	1		
Total standardised approach	100,324	96,963	377	4,146	
Total	510,624	459,149	14,435	213,010	

[1] IRB total average LGD is excluding other non-credit obligation assets.

[2] Includes exposures classes Administrative bodies and non-commercial undertakings, Multilateral Developments Banks, International Organisations, Past due items, Items belonging to regulatory high-risk categories, Other Items and Equity.

2018, EURm	Original exposure	Exposure	- of which secured by guarantees and credit derivatives	- of which secured by collateral	Average weighted LGD[1]
IRB exposure classes					
Sovereign					
Institution	42,822	41,309	154	165	18%
Corporate	172,479	140,365	11,150	62,867	30%
- of which Advanced	149,968	121,183	10,510	58,290	28%
Retail	187,753	177,452	2,247	141,865	17%
- of which secured by immovable property	147,994	144,685		137,819	15%
- of which other retail	36,478	29,932	1,901	2,579	29%
- of which SME	3,281	2,835	346	1,467	24%
Other non-credit obligation assets	2,674	2,509	3		n.a.
Total IRB approach	405,727	361,636	13,554	204,897	23%
Standardised exposure classes					
Central government and central banks	77,893	80,772	350		
Regional governments and local authorities	9,763	6,115			
Institution	2,583	2,568	13	0	
Corporate	5,271	3,974	24	51	
Retail	6,175	4,559	36	10	
Exposures secured by real estate	2,810	2,791		224	
Other[2]	5,642	5,468	3		
Total standardised approach	110,138	106,248	426	284	
Total	515,865	467,884	13,981	205,182	

[1] IRB total average LGD is excluding other non-credit obligation assets.

[2] Includes exposures classes past due items, items belonging to regulatory high-risk categories, other items and equity.

Table 31 Distribution of collateral

The distribution of collateral has remained stable between 2019 and 2018, with the majority of collaterals stemming from residential and commercial real estate. The shares of financial collateral, receivables, and other physical collaterals have decreased slightly during 2019, while the share of commercial real estate has increased by 2% in 2019.

	2019	2018
Financial collateral	1%	1%
Receivables Residential	1%	1%
real estate Commercial	73%	73%
real estate Other	19%	18%
physical collateral	7%	7%
Total	100%	100%

Table 32 Credit risk adjustments by customer[1]

	Specific credit risk adjustments charges (on balance)				
	Individually calculated		Collectively calculated		Total
2019, EURm	Provisions	Reversals	Net model losses (stage 1&2)	Net model losses (stage 3, model based)	Total
To central banks and credit institutions	0	0	1	3	4
- of which central banks	0	0	1	0	1
- of which credit institutions	0	0	0	3	3
To the public	-555	223	-45	-50	-427
- of which corporate	-503	182	-29	3	-347
Financial institutions	-55	10	-1	17	-30
Crops etc	-12	4	-5	-2	-15
Animal husbandry	-21	9	-3	-1	-15
Fishing and aquaculture	0	0	0	0	0
Paper, forest and mining	-7	5	7	0	5
Oil, gas and offshore	-150	31	7	-17	-129
Consumer staples (food and health care)	-3	11	-2	0	6
Media, leisure and telecom	-22	13	-2	-1	-12
Consumer durables	-11	2	-4	0	-13
Retail trade	-6	13	-6	-3	-1
Land transportation and IT	-12	1	2	-1	-9
Materials	-11	2	16	0	7
Capital goods	-16	19	-3	-1	-2
Commercial & prof. services	-33	11	-6	-2	-30
Construction	-22	8	-3	0	-16
Wholesale trade	-14	14	-8	0	-8
Maritime (shipping)	-95	16	-4	22	-61
Utilities and public services	-5	1	0	0	-4
Real estate	-7	11	-8	-2	-6
Other	0	0	-6	-6	-11
- of which household	-53	41	-14	-53	-79
Mortgage financing	-4	1	36	21	54
Consumer financing	-49	40	-50	-74	-133
- of which public sector	0	0	-1	0	-1
Total loans	-555	223	-44	-47	-423

[1]This table is not covering all net loan losses. The difference is recoveries, write-offs and allowances used to cover write-offs.

	Specific credit risk adjustments charges (on balance)				
	Individually calculated		Collectively calculated		Total
2018, EURm	Provisions	Reversals	Net model losses (stage 1&2)	Net model losses (stage 3, model based)	Total
To central banks and credit institutions	0	0	10	-3	6
- of which central banks	0	0	-1	0	-1
- of which credit institutions	0	0	10	-3	7
	0	0	0	0	0
To the public	-498	466	43	-42	-31
- of which corporate	-454	421	36	-7	-4
Construction and engineering	-11	12	-2	-5	-6
Consumer durables (cars, appliances, etc.)	-21	36	1	0	16
Consumer staples (food, agriculture, etc.)	-47	11	-6	-3	-45
Energy (oil, gas, etc.)	-101	70	-7	4	-34
Financial institutions	-40	19	-7	-17	-45
Health care and pharmaceuticals	0	1	0	0	1
Industrial capital goods	-14	3	0	0	-11
Industrial commercial services, etc.	-44	67	2	1	25
IT software, hardware and services	-2	10	-2	0	5
Media and leisure	-4	5	0	-1	0
Metals and mining materials	0	3	-6	0	-4
Other materials (chemical, building materials, etc.)	1	27	-21	0	6
Other, public and organisations	-2	17	30	12	57
Paper and forest materials	0	0	-1	-2	-3
Real estate management and investment	-22	34	4	7	23
Retail trade	-61	18	1	2	-40
Reversed repurchase agreements	0	0	0	0	0
Shipping and offshore	-80	47	54	-3	18
Telecommunication equipment	0	0	0	0	0
Telecommunication operators	0	15	1	0	16
Transportation	-3	3	-4	-1	-5
Utilities (distribution and production)	-1	23	0	0	22
- of which household	-45	45	4	-35	-29
Mortgage financing	-2	1	-10	-23	-33
Consumer financing	-43	44	15	-12	4
- of which public sector	0	0	2	0	2
Total loans	-498	466	53	-45	-25

[1]This table is not covering all net loan losses. The difference is recoveries, write-offs and allowances used to cover write-offs.

Table 33 Loans, impaired loans, allowances and provisioning ratios, split by customer type, amortised cost

2019, EURm	Loans after allowances	Impaired loans before allowances	Impaired loans in % of loans	Allowances on balance stage 1&2	Allowances on balance stage 3	Allowances in relation to impaired loans (stage 3)
To central banks and credit institutions	11,613	0	0%	4	10	0%
- of which central banks	5,889		0%	0	0	0%
- of which credit institutions	5,724		0%	4	10	0%
			0			
To the public	245,226	4,610	2%	492	1,677	36%
- of which corporate	107,639	3,183	3%	285	1,327	42%
Financial institutions	13,010	127	1%	29	58	46%
Crops etc	960	54	6%	11	30	54%
Animal husbandry	642	193	30%	11	108	56%
Fishing and aquaculture	1,261	37	3%	1	0	1%
Paper, forest and mining	2,003	44	2%	4	20	44%
Oil, gas and offshore	1,939	747	39%	1	298	40%
Consumer staples (food and health	3,073	33	1%	7	13	40%
care) Media, leisure and telecom	3,107	54	2%	8	33	61%
Consumer durables	1,429	47	3%	7	22	48%
Retail trade	2,917	88	3%	20	49	55%
Land transportation and IT	3,504	74	2%	11	29	39%
Materials	1,819	117	6%	9	71	61%
Capital goods	3,173	110	3%	10	73	67%
Commercial & prof. services	10,164	273	3%	23	86	32%
Construction	5,721	119	2%	17	74	62%
Wholesale trade	4,725	94	2%	23	36	38%
Maritime (shipping)	7,605	706	9%	46	230	33%
Utilities and public services	4,775	34	1%	3	16	47%
Real estate	35,504	224	1%	29	81	36%
Other	308	7	2%	14	0	0%
- of which household	133,525	1,427	1%	204	350	25%
Mortgage financing	108,393	630	1%	23	29	5%
Consumer financing	25,132	797	3%	182	320	40%
- of which public sector	4,062	0.00	0%	2	0	38%
Total loans	256,839	4,610	2%	496	1,686	37%

Provisions for off-balance sheet items for 2019 were EUR 144m.

2018, EURm	Loans after allowances	Impaired loans before allowances	Impaired loans in % of loans	Allowances on balance stage 1&2	Allowances on balance stage 3	Allowances in relation to impaired loans (stage 3)
To central banks and credit institutions	19,034	0	0%	12	3	
- of which central banks	7,660	0	0%	1	0	
- of which credit institutions	11,374	0	0%	12	3	
To the public	261,837	5,052	2%	454	1,693	34%
- of which corporate	128,919	3,634	3%	264	1,405	39%
Construction and engineering	4,213	128	3%	13	75	59%
Consumer durables (cars, appliances, etc.)	1,656	138	8%	3	44	32%
Consumer staples (food, agriculture, etc.)	5,153	412	8%	21	213	52%
Energy (oil, gas, etc.)	1,842	666	36%	9	159	24%
Financial institutions	14,165	287	2%	32	55	19%
Health care and pharmaceuticals	983	5	0%	2	2	37%
Industrial capital goods	1,351	59	4%	3	39	66%
Industrial commercial services, etc.	10,680	351	3%	23	81	23%
IT software, hardware and services	1,614	14	1%	8	11	80%
Media and leisure	1,687	34	2%	4	13	36%
Metals and mining materials	671	34	5%	7	13	38%
Other materials (chemical, building materials, etc.)	4,064	173	4%	30	88	51%
Other, public and organisations	3,084	6	0%	11	160	2765%
Paper and forest materials	1,268	21	2%	3	6	26%
Real estate management and investment	36,032	322	1%	22	114	35%
Retail trade	8,381	311	4%	27	163	52%
Reversed repurchase agreements	16,711	0	0%	0	0	
Shipping and offshore	7,635	588	8%	34	135	23%
Telecommunication equipment	18	1	7%	0	1	46%
Telecommunication operators	859	6	1%	1	5	89%
Transportation	3,299	73	2%	11	27	38%
Utilities (distribution and production)	3,553	5	0%	2	1	27%
- of which household	128,995	1,418	1%	188	289	20%
Mortgage financing	103,869	776	1%	66	85	11%
Consumer financing	25,126	642	3%	122	204	32%
- of which public sector	3,923	0	0%	1	0	
Total loans	280,871	5,052	2%	465	1,697	34%

Provisions for off-balance sheet items for 2018 were EUR 121m.

Table 34 Impaired loans to the public: gross, allowances and past due gross loans split by geography and industry

Impaired loans at amortised cost decreased by EUR 0.4bn to EUR 4.6bn, primarily driven by decreased impairments in corporate portfolio, while the household portfolio remained stable. Impaired Fair value decreased by EUR 0.2bn, mainly driven by decreased impairments in the corporate portfolio.

EURm	Total Impaired loans 2019	Impaired fair value 2019	Impaired amortised cost 2019	Denmark	Finland	Norway	Sweden	Russia	Outside Nordic	Total allowances on balance	Past due gross carrying amounts
To the public	5,332	722	4,610	899	1,331	1,282	410	0	688	-2,169	3,207
- of which corporate	3,601	418	3,183	662	532	1,010	291	0	688	-1,612	969
Financial institutions	136	9	127	92	16	5	14	0	0	-87	130
Crops etc	133	79	54	52	2	0	0	0	0	-41	25
Animal husbandry	407	214	193	178	13	1	1	0	0	-119	25
Fishing and aquaculture	37	0	37	0	0	37	0	0	0	-1	4
Paper, forest and mining	50	6	44	17	21	6	0	0	0	-23	43
Oil, gas and offshore	747	0	747	0	0	307	79	0	360	-299	1
Consumer staples (food and health care)	35	2	33	4	20	5	4	0	0	-20	31
Media, leisure and telecom	54	0	54	4	35	3	11	0	0	-42	44
Consumer durables	47	0	47	37	6	0	4	0	0	-29	8
Retail trade	94	6	88	38	25	6	19	0	0	-69	72
Land transportation and IT	75	1	74	8	25	33	4	0	3	-40	42
Materials	123	6	117	2	67	6	42	0	0	-80	9
Capital goods	112	2	110	20	74	1	15	0	0	-84	32
Commercial & prof. services	275	2	273	29	23	62	79	0	80	-109	74
Construction	123	3	119	21	66	23	10	0	0	-91	124
Wholesale trade	95	1	94	44	28	18	5	0	0	-59	17
Maritime (shipping)	706	0	706	49	6	406	0	0	245	-276	39
Utilities and public services	35	0	34	1	2	28	2	0	0	-19	25
Real estate	310	86	224	60	103	58	2	0	0	-110	196
Other	7	0	7	3	0	4	0	0	0	-14	27
- of which household	1,731	304	1,427	237	799	272	119	0	0	-554	2,229
Mortgage financing	934	304	630	0	440	134	56	0	0	-52	1,556
Consumer financing	797	0	797	237	359	138	63	0	0	-502	673
- of which public sector	0	0	0	0	0	0	0	0	0	-2	9
Total impaired loans	5,332	722	4,610	899	1,331	1,282	410	0	688	-2,169	
Past due loans	3,207	79	3,128	195	1,366	1,313	255	0	0		3,207
Allowances	-2,169		-2,169	-730	-446	-495	-254	0	-244	-2,169	0

EURm	Total Impaired loans 2018	Impaired fair value 2018	Impaired amortised cost 2018	Denmark	Finland	Norway	Sweden	Russia	Outside Nordic	Total allowances on balance	Past due gross carrying amounts
To the public	6,027	975	5,052	1,230	1,289	1,088	295	9	1,141	2,147	3,093
- of which corporate	4,278	645	3,634	1,048	511	921	184	9	961	1,669	1,015
Construction and engineering	136	8	128	37	33	22	13	0	23	88	97
Consumer durables (cars, appliances, etc	138	1	138	23	25	82	4	0	3	47	85
Consumer staples (food, agriculture, etc.)	756	344	412	335	49	5	4	0	20	234	87
Energy (oil, gas, etc.)	765	99	666	0	0	281	0	7	377	168	8
Financial institutions	287	0	287	195	8	64	19	0	2	86	29
Health care and pharmaceuticals	8	3	5	2	3	0	0	0	0	4	8
Industrial capital goods	59	0	59	9	46	0	3	0	1	42	21
Industrial commercial services, etc.	357	6	351	89	35	54	54	2	116	104	81
IT software, hardware and services	15	1	14	8	5	0	0	0	0	19	32
Media and leisure	35	0	34	8	15	4	1	0	6	17	37
Metals and mining materials	34	0	34	0	6	28	0	0	0	20	28
Other materials (chemical,	175	2	173	14	128	6	9	0	16	117	38
building materials, etc.)	0		0	0	0	0	0	0	0	0	0
Other, public and organisations	7	1	6	3	0	0	0	0	3	171	139
Paper and forest materials	61	7	55	17	1	0	0	0	36	9	18
Real estate management and investment	457	159	298	82	84	66	2	0	65	136	170
Retail trade	307	7	301	164	48	14	67	0	7	190	65
Reversed repurchase agreements	0		0	0	0	0	0	0	0	0	0
Shipping and offshore	588	0	588	51	0	266	1	0	269	169	1
Telecommunication equipment	1	0	1	0	1	0	0	0	0	1	0
Telecommunication operators	11	3	8	0	3	0	2	0	2	6	3
Transportation	75	4	71	10	20	27	4	0	9	39	63
Utilities (distribution and production)	5	0	5	1	0	1	0	0	4	4	5
- of which household	1,749	330	1,418	182	778	167	111	0	180	477	1,801
Mortgage financing	1,106	330	776	0	438	127	53	0	158	151	1,394
Consumer financing	642		642	182	341	40	58	0	21	326	408
- of which public sector	0	0	0	0	0	0	0	0	0	1	277
Total impaired loans	6,027	975	5,052	1,230	1,289	1,088	295	9	1,141	122	
Past due loans	3,093	70	3,023	544	1,233	715	247	10	274	0	3,093
Allowances	2,147	0	2,147	820	472	317	172	9	357	2,147	

Table 35 Reconciliation of allowance accounts

Accumulated specific credit risk adjustment had an opening balance of EUR 2.2bn, and closing balance of EUR 2.2bn at the end of 2019. Individually assessed loan losses were EUR 555m at the end of 2019. This was offset by reversals of EUR 223m and release of allowances used to cover write-offs of EUR 312m. Net model losses were EUR -91m at the end of 2019.

	Specific credit risk adjustments		
2019, EURm	Individually assessed (stage 3)	Collectively assessed (stage 1&2)	Total
Opening balance acccording IFRS 9	-1,658	-505	-2,162
Changes through the income statement	-379	-44	-423
- Of which Provisions	-555	0	-555
- Of which Reversals	223	0	223
- Net model losses	-47	-44	-91
Allowances used to cover write-offs	312	0	312
Reclassificaitons	0	0	0
Currency translation differences	38	52	90
Closing balance	-1,686	-496	-2,183

	Specific credit risk adjustments		
2018, EURm	Individually assessed (stage 3)	Collectively assessed (stage 1&2)	Total
Opening balance acccording IFRS 9	-1,924	-553	-2,477
Changes through the income statement	-78	53	-25
- Of which Provisions	-498	-1	-498
- Of which Reversals	465	1	466
- Net model losses	-45	53	7
Allowances used to cover write-offs	321	0	321
Reclassificaitons	7	-6	1
Currency translation differences	16	2	18
Closing balance	-1,658	-505	-2,162

Table 36 Loan losses, split by customer type

2019, EURm	New provisions and write-offs (stage 3, individually calculated)	Reversals and recoveries (stage 3 individually calculated)	Net model losses (stage 1&2, stage 3 model based)	Net losses, Total	Loan loss ratio bps
To central banks and credit institutions	0	1	3	4	3
- of which central banks	0	0	1	1	1
- of which credit institutions	0	1	2	3	5
To the public	-703	300	-137	-540	-22
- of which corporate	-551	216	-46	-381	-35
Financial institutions	-61	18	13	-31	-24
Crops etc	-9	-1	-7	-16	-171
Animal husbandry	-37	20	-6	-23	-359
Fishing and aquaculture	0	0	0	0	-1
Paper, forest and mining	-7	5	5	3	15
Oil, gas and offshore	-150	31	-10	-129	-664
Consumer staples (food and health care)	-5	12	-3	3	10
Media, leisure and telecom	-26	13	-5	-18	-57
Consumer durables	-11	3	-5	-13	-92
Retail trade	-12	17	-11	-6	-21
Land transportation and IT	-18	1	1	-16	-46
Materials	-11	2	16	7	38
Capital goods	-18	19	-6	-6	-18
Commercial & prof. services	-36	12	-11	-35	-34
Construction	-23	15	-5	-13	-23
Wholesale trade	-17	17	-4	-4	-9
Maritime (shipping)	-94	13	19	-62	-81
Utilities and public services	-6	1	-2	-7	-14
Real estate	-7	14	-14	-7	-2
Other	0	4	-12	-9	-283
- of which household	-152	84	-90	-157	-12
Mortgage financing	-15	-11	54	29	3
Consumer financing	-137	95	-144	-186	-74
- of which public sector	0	0	-1	-1	-3
Total	-703	301	-135	-536	-21

A new distribution of industries in non-financial corporation applies from Q3 2019.

2018, EURm	New provisions and write-offs (stage 3, individually calculated)	Reversals and recoveries (stage 3 individually calculated)	Net model losses (stage 1&2, stage 3 model based)	Net losses, Total	Loan loss ratio bps
To central banks and cr	-1	2	6	7	4
- of which central banks	0	0	-1	-1	-1
- of which credit institutions	-1	2	7	8	7
					0
To the public	-745	586	-15	-175	-7
- of which corporate	-598	500	22	-76	-6
Construction and engineering	-17	19	-8	-5	-13
Consumer durables (cars, appliances, etc.)	-38	52	1	14	86
Consumer staples (food, agriculture, etc.)	-64	26	-14	-52	-101
Energy (oil, gas, etc.)	-103	70	-3	-37	-199
Financial institutions	-47	19	-23	-52	-36
Health care and pharmaceuticals	-1	2	0	1	7
Industrial capital goods	-14	4	0	-9	-70
Industrial commercial services, etc.	-79	76	-1	-5	-5
IT software, hardware and services	-4	10	-3	4	22
Media and leisure	-6	5	-1	-2	-10
Metals and mining materials	0	3	-6	-4	-55
Other materials (chemical, building materials, etc.)	-1	27	-21	4	10
Other, public and organisations	-9	6	50	47	152
Paper and forest materials	-1	0	-3	-3	-23
Real estate management and investment	-32	45	11	24	7
Retail trade	-70	29	-4	-45	-54
Reversed repurchase agreements	0	0	0	0	0
Shipping and offshore	-82	65	53	35	46
Telecommunication equipment	0	0	0	0	-39
Telecommunication operators	-9	15	1	7	84
Transportation	-4	3	-6	-6	-19
Utilities (distribution and production)	-16	23	1	8	22
- of which household	-147	86	-40	-101	-8
Mortgage financing	-10	3	-20	-27	-3
Consumer financing	-138	84	-20	-74	-29
- of which public sector	0	0	3	3	6
Total	-746	588	-9	-167	-6

Table 37 Credit quality of forborne exposures

Total forborne loans amounted to EUR 3bn end of 2019, of which non-performing amounted to EUR 2bn.

		a	b	c	d	e	f	g	h
		Gross carrying amount/nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collateral received and financial guarantees received on forborne exposures	
	2019 EURm	Performing forborne	Non-performing forborne			On performing forborne exposures	On non-performing forborne exposures		Of which collateral and financial guarantees received on non-performing exposures with forbearance measures
				Of which defaulted	Of which impaired				
1	Loans and advances	1,008	1,984	1,767	1,307	-15	-664	818	564
2	*of which Central banks*								
3	*of which General governments*								
4	*of which Credit institutions*								
5	*of which Other financial corporations*	12	71	71	29	0	-45	0	
6	*of which Non-financial corporations*	745	1,792	1,576	1,268	-11	-591	513	461
7	*of which Households*	250	122	120	10	-4	-28	305	103
8	Debt Securities								
9	Loan commitments given	31	37	136	29	1	0	23	0
10	Total	1,039	2,021	1,903	1,337	-16	-664	841	564

Table 38 Credit quality of performing and non-performing exposures by past due days

Total gross carrying amount of performing- and non-performing loans and advances amounted to EUR 308bn end of 2019, of which non-performing amounted to EUR 5bn.

		a	b	c	d	e	f	g	h	i	j	k	l
		Gross carrying amount/nominal amount											
		Performing exposures			Non-performing exposures								
	2019 EURm		Not past due or past due ≤ 30 days	Past due > 30 days ≤ 90 days		Unlikely to pay that are not past due or are past due ≤ 90	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 years	Past due > 5 years ≤ 7 years	Past due > 7 years	Of which defaulted
1	Loans and advances	303,085	302,498	586	5,329	4,293	131	248	272	216	126	43	4,616
2	Central banks	1,064	1,064										
3	General governments	4,124	4,122	2	0	0							
4	Credit institutions	4,200	4,186	14									
5	Other financial corporations	5,637	5,630	7	93	90	1	0	1	0	0	0	92
6	Non-financial corporations	121,538	121,324	214	3,505	3,154	34	69	64	69	97	18	3,097
7	Of which SMEs	47,666	38,133	9,534	1,287	1,011	27	65	37	50	88	10	935
8	Households	166,521	166,171	350	1,731	1,049	96	179	206	147	29	25	1,427
9	Debt securities	52,246	52,246										
10	Central banks	1,954	1,954										
11	General governments	15,841	15,841										
12	Credit institutions	32,823	32,823										
13	Other financial corporations	1,024	1,024										
14	Non-financial corporations	604	604										
15	Off-balance-sheet	98,357			704								704
16	Central banks	101			0								
17	General governments	5,437			0								0
18	Credit institutions	3,955			0								
19	Other financial corporations	3,284			43								43
20	Non-financial corporations	59,643			548								548
21	Households	25,937			113								113
22	Total	453,688	354,744	586	6,033	4,293	131	248	272	216	126	43	5,319

Table 39 Performing and non-performing exposures and related provisions

Total gross carrying amount of performing- and non-performing loans and advances amounted to EUR 308bn end of 2019, of which non-performing amounted to EUR 5bn. Allowances in stage 3 for non-performing loans and advances were EUR -1.8bn end of 2019.

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions							Collateral and financial guarantees received	
		Performing exposures			Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			Accumulated partial write-off	On performing exposures	On non-performing exposures
	2019 EURm		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3			
1	Loans and advances	303,085	292,368	10,717	5,329		5,329	-496	-153	-343	-1,769		-1,769		274,939	3,549
2	Central banks	1,064	1,064					0	0	0						
3	General governments	4,124	4,097	27	0		0	-1	0	-1					560	0
4	Credit institutions	4,200	4,151	49				-2	0	-2					69	0
5	Other financial corporations	5,637	5,396	241	93		93	-17	-4	-13	-77		-77		2,801	5
6	Non-financial corporations	121,538	117,509	4,029	3,505		3,505	-271	-93	-179	-1,290		-1,290		93,924	2,216
7	Of which SMEs	47,666	45,787	1,879	1,287		1,287	-77	-13	-63	-473		-473		39,382	
8	Households	166,521	160,150	6,371	1,731		1,731	-204	-55	-149	-403		-403		177,584	1,328
9	Debt securities	52,246	52,246					-1	-1	0						
10	Central banks	1,954	1,954					0	0							
11	General governments	15,841	15,841					0	0	0						
12	Credit institutions	32,823	32,823					-1	-1	0						
13	Other financial corporations	1,024	1,024					0	0							
14	Non-financial corporations	604	604					0	0							
15	Off-balance-sheet exposures	98,357	94,083	4,274	704		704	102	33	70	41		41		10,839	20
16	Central banks	101	101													
17	General governments	5,437	5,435	2	0		0	0	0	0					14	0
18	Credit institutions	3,955	2,819	1,136				2	0	1					24	0
19	Other financial corporations	3,284	3,163	121	43		43	4	2	2	0		0		715	0
20	Non-financial corporations	59,643	57,320	2,322	548		548	52	19	34	41		41		8,539	17
21	Households	25,937	25,245	693	113		113	44	12	33	0		0		1,547	3
22	Total	453,688	438,697	14,990	6,033		6,033	-395	-122	-274	-1,728		-1,728		285,778	3,569

Table 40 Collateral obtained by taking possession and execution processes

		a	b
		Collateral obtained by taking possession	
2019 EURm		Value at initial recognition	Accumulated negative changes
1	Property, plant and equipment (PP&E)		
2	Other than PP&E	10	0
3	Residential immovable property	3	0
4	Commercial Immovable property	4	0
5	Movable property (auto, shipping, etc.)	2	
6	Equity and debt instruments	0	0
7	Other	1	
8	Total	10	0

Table 41 Standardised exposure classes, distributed by credit quality step

The table presents the credit quality steps and equivalent S&P ratings for applicable exposure classes in the Standardised Approach. The decreased exposure towards central governments or central banks from 2018 to 2019 are mainly driven by changes in lending volume. This exposure class also includes Deferred Tax Assets (DTAs), which are subject to a risk weight of 100% or 250% depending on the nature of the tax asset.

EURm			Original Exposure		Exposure	
Credit quality step	Standard & Poor's rating	Risk weight	31 Dec 2019	31 Dec 2018	31 Dec 2019	31 Dec 2018
(a) Central Governments or Central banks						
1	AAA to AA-	0%	67,741	75,664	70,736	78,884
2	A+ to A-	20%	41	45	38	45
3	BBB+ to BBB-	50%	147	214	147	206
4 to 6 or blank	BB+ and below, or without rating	100-250%	721	628	383	273
Sub-total			68,650	76,551	71,304	79,408
(b) Regional Governments or local authorities						
1	AAA to AA-[1])	0% - 20%[1]	10,511	9,652	7,400	6,005
2	A+ to A-	50%	7	2	7	2
3 to 6 or blank	BBB+ and below, or without rating	100-250%				
Sub-total			10,518	9,653	7,407	6,006
(c) Public sector entites						
1	AAA to AA-[1])	0% - 20%[1]	100	100	50	50
2	A+ to A-	50%				
3 to 6 or blank	BBB+ and below, or without rating	100-250%				
Sub-total			100	100	50	50
(d) Multilateral Developments Banks						
1	AAA to AA-[2])	0% - 20%[2]	1,369	2,096	1,371	2,105
2	A+ to A-	50%				
3 to 6 or blank	BBB+ and below, or without rating	100-250%				
Sub-total			1,369	2,096	1,371	2,105
(e) Institutions						
1	AAA to AA-	20%	200	325	201	324
2	A+ to A-	50%	8		8	
3 to 6 or blank	BBB+ and below, or without rating	100-150%				
Sub-total			207	325	209	324
(f) Corporates						
1	AAA to AA-	20%				
2	A+ to A-	50%				
3 to 4	BBB+ to BB-3)	100%	2,456	2,044	1,647	1,300
5 to 6 or blank	B+ and below, or without rating	150%				
Sub-total			2,456	2,044	1,647	1,300

[1] Includes exposures treated as exposures to the central government, regional government or local authority as provisioned by CRR and that receives a 0%-risk weight.

[2] Includes exposures to specific entities and receives a 0%-risk weight as provisioned by CRR.

[3] Includes exposures to with credit assessment using a nomincated ECAI, with original exposure and exposure value of EUR 8m as of December 31 2019.

Table 42 Comparison of parameter estimates against actual outcomes

The table shows the comparison between estimated expected losses (EL) and actual losses and between exposure-weighted estimated and realised LGD and CCF for IRB exposures. Estimated EL follows the calculation rules defined in the CRR. Actual losses are defined as the full year net loss. LGD estimates measure the net present value of the nominal loss including costs resulting from a customer's default. CCF is a statistical multiplier used to predict the EAD by predicting the drawdown of an off-balance sheet exposure. The estimates are based on internal data on drawings prior to default. Realised LGD and CCF values for the retail portfolio are based on a minimum of seven years of default and a three year work-out period. The averages for the corporate portfolio are also based on at least seven years of data. The estimated LGD's and CCF's are based on available reporting data at the date in question. The estimated values include a downturn add-on and a safety margin, hence the difference between estimated and realised values.

The increase in actual losses in 2019 as compared to 2018 for the retail (other) and corporate portfolios is mainly driven by the outcome of the Asset Quality Review (AQR) process conducted by ECB in Q3 2019. To reflect this development, Nordea decided to increase the loan loss provisions covering the non-financial corporates and retail segments mainly related to the shipping, Oil and Gas customers and lending to households.

	EL		CCF		LGD	
	Estimated	Actual	Estimated	Realised	Estimated	Realised
2019 [1]						
Retail	-227	-157	49%	41%	17%	9%
Of which secured by immovable property	-89	29	49%	45%	15%	7%
Of which other retail	-138	-186	49%	41%	29%	19%
Corporate[2]	-324	-381	60%	48%	30%	14%
Institution	-13	4	n/a	n/a	n/a	n/a
Government	n/a	-1	n/a	n/a	n/a	n/a
2018						
Retail	-245	-102	52%	44%	18%	10%
Of which secured by immovable property	-87	-28	41%	38%	15%	8%
Of which other retail	-158	-74	55%	46%	29%	19%
Corporate[2]	-287	-82	60%	52%	30%	15%
Institution	-11	8	n/a	n/a	n/a	n/a
Government	-6	3	n/a	n/a	n/a	n/a
2017						
Retail	-225	-48	61%	56%	17%	10%
Of which secured by immovable property	-80	-16	43%	40%	15%	8%
Of which other retail	-145	-32	66%	60%	30%	20%
Corporate[2]	-313	-321	61%	53%	30%	15%
Institution	-14	0	n/a	n/a	n/a	n/a
Government	-4	0	n/a	n/a	n/a	n/a

[1] Actuals disclosed include extraordinary AQR provisions taken in Q3 2019

[2] Include SME retail

Table 43 Exposure weighted average PD and LGD, IRB exposure classes

Parameters are calculated excluding defaulted exposures. The average PD and LGD have decreased due to a general improvement in credit quality. In Russia the average PD has decreased as part of the de-risking strategy. The average LGD in Finland for Institution exposures was higher than in the rest of Nordic countries due to lower covered bonds exposure. Other non-credit obligation assets are excluded in 2019 due to updated interpretation.

	Denmark		Finland		Norway		Sweden		Baltic countries		Russia		US		Other	
Percent (%)	PD	LGD	PD	LGD	PD	LGD	PD	LGD	PD	LGD	PD	LGD	PD	LGD	PD	LGD
Sovereign																
Institution	0.11%	11.86%	0.56%	38.21%	0.04%	13.96%	0.09%	16.15%	0.39%	45.00%	0.70%	45.00%	0.16%	45.00%	0.26%	44.82%
Corporate	0.97%	27.54%	1.01%	29.44%	0.67%	28.67%	0.58%	29.49%	0.49%	39.25%	0.20%	41.22%	0.34%	32.97%	0.54%	33.79%
of which Advanced	1.00%	25.34%	0.97%	27.26%	0.66%	27.19%	0.56%	27.24%	0.51%	30.36%	0.14%	37.05%	0.34%	32.87%	0.56%	32.20%
of which Foundation	0.65%	44.98%	1.22%	42.02%	0.77%	43.52%	0.73%	43.78%	###	41.27%	0.25%	44.99%	0.99%	43.17%	0.39%	44.15%
Retail	0.70%	20.29%	1.17%	17.83%	0.59%	20.43%	0.24%	11.87%	1.79%	20.54%	0.77%	19.61%	0.58%	15.64%	0.84%	16.88%
- of which secured by immovable property	0.59%	17.41%	0.59%	14.61%	0.23%	19.28%	0.20%	9.95%	0.44%	13.80%	0.21%	13.52%	0.40%	12.76%	0.47%	13.11%
- of which other retail	1.25%	35.62%	2.50%	25.88%	2.06%	25.04%	0.56%	30.06%	4.18%	27.25%	1.77%	30.27%	1.34%	29.91%	1.98%	28.02%
- of which SME	2.04%	22.58%	2.59%	21.62%	2.86%	30.14%	1.99%	29.07%	2.29%	36.19%	1.99%	34.50%	3.81%	33.53%	2.01%	32.62%
Total exposure-weighted IRB 2019	0.71%	21.57%	1.10%	22.54%	0.58%	23.36%	0.34%	18.15%	0.46%	41.76%	0.23%	41.17%	0.34%	33.22%	0.50%	35.00%
Total exposure-weighted IRB 2018	0.67%	21.89%	1.20%	22.92%	0.59%	23.58%	0.33%	18.45%	0.65%	39.74%	0.36%	42.22%	0.32%	33.19%	0.82%	34.49%

Counterparty credit risk

Table 44 EU CCR1: Analysis of counterparty credit risk by approach

Nordea is using two methodologies when calculating the counterparty credit risk amounts. These methodologies are the Mark to Market Method and Internal Model Method (IMM). For Securities Financing Transactions (SFT) Nordea is using the financial collateral comprehensive method. REA decreased since last reporting period by approximately EUR 1.8bn mostly driven by increased Euro and Nordic rates. Additionally, a REA reduction of approximately EUR 339m REA has been achieved from a portfolio CDS transaction towards a pension sovereign fund in which a large pool of corporate derivatives exposures is being protected. Lower SFT volumes for the period have also pushed REA down.

Q4 2019	a	b	c	d	e	f	g
EURm	Notional	Replace-ment cost/ Current market value	Potential future value	EEPE	Multiplier	EAD post-CRM	REA
1 Mark to market		123	1,246			1,368	565
2 Original exposure							
3 Standardised approach							
4 Internal Model Method (for derivatives and SFTs)			6,075	8,805	1	12,328	4,924
5 Securities Financing Transactions							
6 Derivatives & Long Settlement Transactions			6,075	8,805	1	12,328	4,924
7 From Contractual Cross Product Netting							
8 Financial collateral simple method (for SFTs)							
9 Financial collateral comprehensive method (for SFTs)						4,096	591
10 VaR for SFTs							
11 Total							6,080

Q2 2019

	EURm	Notional	Replace-ment cost/ Current market value	Potential future value	EEPE	Multiplier	EAD post-CRM	REA
1	Mark to market		189	1,630			1,818	724
2	Original exposure							
3	Standardised approach							
4	Internal Model Method (for derivatives and SFTs)			6,871	9,804	1	13,725	6,176
5	Securities Financing Transactions							
6	Derivatives & Long Settlement Transactions			6,871	9,804	1	13,725	6,176
7	From Contractual Cross Product Netting							
8	Financial collateral simple method (for SFTs)							
9	Financial collateral comprehensive method (for SFTs)						5,377	974
10	VaR for SFTs							
11	Total							7,874

Luminor Bank CCR exposures of EUR 42m are not considered in the table.

Table 45 EU CCR2: Credit valuation adjustment (CVA) capital charge

The CVA risk capital charge computes the amount required to cover the potential losses arising from marking to market the counterparty credit risk of the OTC derivative portfolio. It is calculated using either an advanced approach or a standardised approach where the advanced approach is based on a VaR model and calculated as a 60 day average. There is no material change in SCVA when compared to the last reporting period. There is also no material change in ACVA REA when looking at VaR numbers. However, the increase in ACVA REA is mainly driven by the increase in the multiplier (from 3.0 to 3.65) as a consequence of the increased number of backtesting exemptions during the second half of 2019.

Q4 2019		a	b
	EURm	Exposure value	REA
1	Total portfolios subject to the Advanced Method	1,951	568
2	(i) VaR component (including the 3×multiplier)		85
3	(ii) Stressed VaR component (including the 3×multiplier)		484
4	All portfolios subject to the Standardised Method	1,178	226
EU4	Based on Original Exposure Method		
5	Total subject to the CVA capital charge	3,129	795

Q2 2019			
	EURm	Exposure value	REA
1	Total portfolios subject to the Advanced Method	1,968	500
2	(i) VaR component (including the 3×multiplier)		93
3	(ii) Stressed VaR component (including the 3×multiplier)		407
4	All portfolios subject to the Standardised Method	1,659	228
EU4	Based on Original Exposure Method		
5	Total subject to the CVA capital charge	3,628	728

Table 46 EU CCR3: Standardised approach - Counterparty credit risk exposures by regulatory portfolio and risk

The total amount of EAD for this approach decreased from EUR 10.5bn in Q4 2018 to EUR 6.8bn in Q4 2019, mostly explained by the decrease for repos in the Institutional exposures within the 2% risk weight bucket. The second most significant EAD change was driven by the Central governments or central banks exposures, with a total of EUR 2.5bn, having a decrease of EUR 0.6bn compared to the second quarter of 2019. Most of these exposures were classified within 0% risk weight.

Q4 2019

	EURm	Risk weight											
	Exposure classes	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	Other	Total
1	Central governments or central banks	2,484				32					18			2,535
2	Regional governments or local authorities	1,633				281								1,914
3	Public sector entities													
4	Multilateral development banks	588												588
5	International organisations	151												151
6	Institutions	120	1,104			263		8					83	1,577
7	Corporate										19			19
8	Retail													0
9	Institutions and corporates with a short-term credit assessment													
10	Other items													
	Exposures in default													
11	Total	4,975	1,104			577		8			37		83	6,783

Q2 2019

	EURm	Risk weight											
	Exposure classes	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	Other	Total
1	Central governments or central banks	3,049				109		4						3,162
2	Regional governments or local authorities	1,246				360								1,606
3	Public sector entities													
4	Multilateral development banks	560												560
5	International organisations	211												211
6	Institutions	87	3941			861		12					76	4976
7	Corporate										15			15
8	Retail													0
9	Institutions and corporates with a short-term credit assessment													
10	Other items													
	Exposures in default													0
11	Total	5153	3941			1330		16			15		76	10531

Table 47 EU CCR4: Counterparty credit risk exposures by portfolio and PD scale

EU CCR4 tables show EAD for counterparty credit risk (CCR) according to the IRB approach broken down by exposure class and obligor grade, providing a comprehensive overview of original and regulatory exposures as well as statistics on the inputs used for their computation, such as EAD, average PD and average LGD. During 2019, EAD decreased by EUR 0.7bn and REA decreased by EUR 0.3bn, while REA density remained stable at 48%. The decrease in EAD was mostly driven by the institution exposure class while REA decreased primarily driven by the corporate portfolio.

	a	b	c	d	e	f	g
PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
Total IRB							
0.00 to < 0.15	7,961	0.08%	1,714	45.0%	2.0	2,346	29%
0.15 to < 0.25	1,221	0.21%	747	45.0%	2.1	649	53%
0.25 to < 0.50	2,048	0.43%	1,585	44.9%	2.3	1,645	80%
0.50 to < 0.75	171	0.66%	63	45.0%	2.5	182	106%
0.75 to < 2.50	982	1.22%	1,814	44.8%	2.1	923	94%
2.50 to < 10.00	62	3.78%	429	44.4%	2.2	70	113%
10.00 to < 100	68	12.19%	330	44.9%	2.5	111	163%
100 (Default)	65	100.00%	157	44.7%	2.5	54	83%
Total IRB	12,578	0.85%	6,839	45.0%	2.1	5,979	48%
Sovereigns FIRB							
0.00 to < 0.15							
0.15 to < 0.25							
0.25 to < 0.50							
0.50 to < 0.75							
0.75 to < 2.50							
2.50 to < 10.00							
10.00 to < 100							
100 (Default)							
Soverigns FIRB							
Institutions FIRB							
PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	3,494	0.08%	138	45.0%	2.0	1,069	31%
0.15 to < 0.25	226	0.17%	38	45.0%	2.2	109	48%
0.25 to < 0.50	265	0.37%	62	45.0%	1.9	173	65%
0.50 to < 0.75	171	0.66%	18	45.0%	2.5	182	107%
0.75 to < 2.50	2	1.43%	3	45.0%	2.5	2	118%
2.50 to < 10.00	2	8.28%	2	45.0%	2.5	5	190%
10.00 to < 100							
100 (Default)							
Institutions FIRB	4,160	0.13%	261	45.0%	2.0	1,539	37%
Retail RIRB							
PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	7	0.09%	85	34.4%	2.5	1	8%
0.15 to < 0.25	5	0.17%	108	35.6%	2.5	1	13%
0.25 to < 0.50	17	0.36%	77	34.5%	2.5	4	21%
0.50 to < 0.75	1	0.60%	45	36.6%	2.5	0	27%
0.75 to < 2.50	25	1.54%	458	36.3%	2.4	11	43%
2.50 to < 10.00	5	4.31%	172	37.6%	2.4	2	52%
10.00 to < 100	1	20.47%	27	36.0%	2.5	1	74%
100 (Default)	2	100.00%	29	34.4%	2.5	8	430%
Retail RIRB	63	4.18%	1,001	35.6%	2.5	27	43%

Corporate FIRB, Total

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	4,460	0.07%	1,491	45.0%	2.0	1,277	29%
0.15 to < 0.25	990	0.22%	601	45.0%	2.1	539	54%
0.25 to < 0.50	1,765	0.44%	1,446	45.0%	2.4	1,468	83%
0.50 to < 0.75							
0.75 to < 2.50	955	1.21%	1,353	45.0%	2.1	911	95%
2.50 to < 10.00	55	3.53%	255	45.0%	2.2	63	115%
10.00 to < 100	67	12.08%	303	45.0%	2.5	110	164%
100 (Default)	63	100.00%	128	45.0%	2.5	46	73%
Corporate FIRB, Total	8,355	1.18%	5,577	45.0%	2.1	4,414	53%

Corporate FIRB, Corporate exposures excluding SMEs and specialised lending

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	3,837	0.07%	796	45.0%	1.9	1,053	27%
0.15 to < 0.25	815	0.22%	261	45.0%	2.0	440	54%
0.25 to < 0.50	1,413	0.43%	619	45.0%	2.4	1,184	84%
0.50 to < 0.75			0				
0.75 to < 2.50	702	1.21%	466	45.0%	2.0	697	99%
2.50 to < 10.00	23	3.43%	70	45.0%	1.8	29	128%
10.00 to < 100	12	12.62%	32	45.0%	2.5	26	206%
100 (Default)	32	100.00%	23	45.0%	2.5	38	119%
Sub-total	6,835	0.79%	2,267	45.0%	2.0	3,467	51%

Corporate FIRB, SME exposures excluding specialised lending

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	622	0.07%	695	45.0%	2.5	224	36%
0.15 to < 0.25	175	0.22%	340	45.0%	2.4	100	57%
0.25 to < 0.50	352	0.45%	827	45.0%	2.5	284	81%
0.50 to < 0.75							
0.75 to < 2.50	253	1.22%	887	45.0%	2.2	214	84%
2.50 to < 10.00	32	3.61%	185	45.0%	2.5	34	105%
10.00 to < 100	54	11.95%	271	45.0%	2.5	84	155%
100 (Default)	31	100.00%	105	45.0%	2.5	8	25%
Sub-total	1,520	2.92%	3,310	45.0%	2.4	947	62%

Corporate FIRB, Specialised lending exposures

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15							
0.15 to < 0.25							
0.25 to < 0.50							
0.50 to < 0.75							
0.75 to < 2.50							
2.50 to < 10.00							
10.00 to < 100							
100 (Default)							
Sub-total							

Q3 2019, EURm

Total IRB

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	9,957	0.08%	1,852	45.0%	1.9	3,187	32%
0.15 to < 0.25	1,386	0.21%	741	45.0%	2.2	773	56%
0.25 to < 0.50	2,982	0.43%	1,682	44.9%	2.3	2,399	80%
0.50 to < 0.75	167	0.66%	76	44.9%	2.5	168	101%
0.75 to < 2.50	1,613	1.19%	1,905	44.8%	2.2	1,521	94%
2.50 to < 10.00	69	3.80%	451	44.2%	2.4	72	105%
10.00 to < 100	73	12.20%	332	44.9%	2.5	122	168%
100 (Default)	75	100.00%	152	44.7%	2.5	69	93%
Total IRB	16,322	0.80%	7,191	45.0%	2.1	8,312	51%

Sovereigns FIRB

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15							
0.15 to < 0.25							
0.25 to < 0.50							
0.50 to < 0.75							
0.75 to < 2.50							
2.50 to < 10.00							
10.00 to < 100							
100 (Default)							
Sovereigns FIRB							

Institutions FIRB

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	4,220	0.08%	204	45.0%	1.7	1,423	34%
0.15 to < 0.25	193	0.17%	55	45.0%	2.2	73	38%
0.25 to < 0.50	313	0.36%	72	45.0%	1.9	183	58%
0.50 to < 0.75	165	0.66%	31	45.0%	2.5	168	101%
0.75 to < 2.50	13	1.08%	8	45.0%	2.5	9	65%
2.50 to < 10.00	2	8.46%	2	45.0%	2.5	1	50%
10.00 to < 100							
100 (Default)							
Institutions - FIRB	4,906	0.13%	372	45.0%	1.8	1,856	38%

Retail RIRB

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	12	0.09%	89	34.4%	2.5	1	8%
0.15 to < 0.25	6	0.18%	106	35.4%	2.5	1	13%
0.25 to < 0.50	20	0.37%	90	34.5%	2.5	4	22%
0.50 to < 0.75	1	0.60%	45	36.1%	2.5	0	28%
0.75 to < 2.50	31	1.53%	463	36.3%	2.4	13	43%
2.50 to < 10.00	7	4.64%	180	37.4%	2.5	3	51%
10.00 to < 100	1	26.19%	30	35.4%	2.5	1	82%
100 (Default)	2	100.00%	29	34.3%	2.5	9	429%
Retail - RIRB	79	4.13%	1,032	35.5%	2.5	33	42%

Corporate FIRB, Total

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	5,725	0.08%	1,559	45.0%	2.1	1,763	31%
0.15 to < 0.25	1,187	0.22%	580	45.0%	2.2	699	59%
0.25 to < 0.50	2,649	0.44%	1,520	45.0%	2.4	2,212	83%
0.50 to < 0.75							
0.75 to < 2.50	1,570	1.19%	1,434	45.0%	2.2	1,500	96%
2.50 to < 10.00	60	3.54%	269	45.0%	2.4	68	113%
10.00 to < 100	72	12.01%	302	45.0%	2.5	122	169%
100 (Default)	73	100.00%	123	45.0%	2.5	60	83%
Corporate FIRB, Total	11,336	1.07%	5,787	45.0%	2.2	6,423	57%

Corporate FIRB, Corporate exposures excluding SMEs and specialised lending

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	4,835	0.08%	817	45%	2.0	1,463	30%
0.15 to < 0.25	990	0.22%	253	45%	2.2	575	58%
0.25 to < 0.50	2,160	0.44%	644	45%	2.4	1,813	84%
0.50 to < 0.75							
0.75 to < 2.50	1,115	1.20%	498	45%	2.1	1,106	99%
2.50 to < 10.00	24	3.44%	75	45%	2.1	32	131%
10.00 to < 100	30	11.12%	40	45%	2.5	57	189%
100 (Default)	32	100.00%	12	45%	2.5	43	134%
Sub-total	9,186	0.71%	2,339	45%	2.1	5,090	55%

Corporate FIRB, SME exposures excluding specialised lending

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15	891	0.08%	742	45.0%	2.5	299	34%
0.15 to < 0.25	197	0.22%	327	45.0%	2.3	124	63%
0.25 to < 0.50	489	0.44%	876	45.0%	2.4	398	81%
0.50 to < 0.75							
0.75 to < 2.50	454	1.14%	936	45.0%	2.4	393	87%
2.50 to < 10.00	36	3.61%	194	45.0%	2.5	36	101%
10.00 to < 100	42	12.66%	262	45.0%	2.5	64	155%
100 (Default)	41	100.00%	111	45.0%	2.5	17	42%
Sub-total	2,149	2.61%	3,448	45.0%	2.4	1,333	62%

Corporate FIRB, Specialised lending exposures

PD scale	EAD post CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	REA	REA density
0.00 to < 0.15							
0.15 to < 0.25							
0.25 to < 0.50							
0.50 to < 0.75							
0.75 to < 2.50							
2.50 to < 10.00							
10.00 to < 100							
100 (Default)							
Sub-total							

Table 48 EU CCR5-A: Impact of netting and collateral held on exposure values

Lower SFT and cleared-repo volumes for year-end have driven gross and netted exposures down during the last quarter of 2019 which translated into lower netting benefits as well as lower called collateral. Higher Euro and Nordic rates since last reporting period has pushed derivatives exposures down which also translates into lower netting benefits. Note that collateral held (d) is the residual between (c) and (e) why excess collateral received was not recognised. This reflected the actual risk mitigation coming from held collateral. At the end of the year the current exposure net (after close-out netting and collateral reduction) was EUR 7.1bn.

Q4 2019	a	b	c	d	e
EURm	Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
1 Derivatives by underlying	128,150	113,951	14,199	7,717	6,482
2 Securities Financing Transactions	33,632	18,534	15,098	14,458	640
3 Cross product netting					
4 Total	161,782	132,485	29,297	22,175	7,122

Q2 2019					
EURm	Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
1 Derivatives by underlying	150,724	135,863	14,861	7,194	7,667
2 Securities Financing Transactions	52,508	27,182	25,326	23,917	1,408
3 Cross product netting					
4 Total	203,232	163,045	40,187	31,111	9,076

Table 49 EU CCR5-B: Composition of collateral for exposures to CCR

Collateral used in derivative transactions reflect the total amounts of posted and received collateral on the day of reporting. For SFT, it was the trade collateral (the counterparties obligation in the transaction) that was included as collateral. Most significant development since last reporting date was a decrease in SFT volumes which translated into lower collateral for SFT transactions.

Q4 2019	a	b	c	d	e	f
	Collateral used in derivative transactions					Collateral used in SFTs
	Fair value of collateral received		Fair value of posted collateral		Fair value of	Fair value of
EURm	Segregated	Unsegregated	Segregated	Unsegregated	collateral received	posted collateral
Cash		7,687		9,836	38,598	45,604
Government bonds		822	654	1,969	22,628	22,491
Mortgage bonds		171		585	16,340	13,672
Bonds		0	94	0	5,480	1,213
Equity					3,548	259
Other					2,980	1,827
Total		8,680	748	12,391	89,574	85,066

Q2 2019						
			Collateral used in derivative transactions			Collateral used in SFTs
	Fair value of collateral received		Fair value of posted collateral		Fair value of	Fair value of
EURm	Segregated	Unsegregated	Segregated	Unsegregated	collateral received	posted collateral
Cash		7,825		10,635	49,920	78,533
Government bonds		617	259	2,790	46,719	39,834
Mortgage bonds		169		412	18,298	7,625
Bonds		25	17	0	10,469	3,390
Equity					4,108	1,479
Total		8,636	276	13,837	129,513	130,861

Table 50 EU CCR6: Credit derivatives exposures

2019 Q4	a	b	c
	Credit derivative hedges		Other credit derivatives
EURm	Protection bought	Protection sold	
Notionals			
Credit default swaps	70,442	70,550	
Credit options			
Total notionals	70,442	70,550	
Fair values			
Positive fair value (asset)	992	19	
Negative fair value (liability)	220	806	

2019 Q2			
	Credit derivative hedges		Other credit derivatives
EURm	Protection bought	Protection sold	
Notionals			
Credit default swaps	65,324	65,387	
Credit options	105	105	
Total notionals	65,429	65,492	
Fair values			
Positive fair value (asset)	430	103	
Negative fair value (liability)	362	390	

Table 51 EU CCR7: REA flow statements of CCR exposures under the IMM

Higher Euro and Nordic rates since last reporting period has been the main factor pushing IMM exposures down. A weaker USD together with lower derivative volumes for the quarter has also contributed to lower REA down. Additionally, REA decreased in by approximately EUR 339m due to a portfolio CDS transaction towards a pension sovereign fund in which a large pool of corporate derivatives exposures is being protected.

		a	b
	EURm	REA amounts	Capital requirements
1	REA 2019 Q3	7,023	562
2	Asset size	-356	-28
3	Credit quality of counterparties	-380	-30
4	Model updates (IMM only)	23	2
5	Methodology and policy (IMM only)		
6	Acquisitions and disposals		0
7	Foreign exchange movements	-344	-28
	Interest rate movements	-970	-78
8	Other	-21	-2
9	REA 2019 Q4	4,974	398

	EURm	REA amounts	Capital requirements
1	REA 2019 Q3	6,349	508
2	Asset size	-83	-7
3	Credit quality of counterparties	62	5
4	Model updates (IMM only)	-16	-1
5	Methodology and policy (IMM only)		
6	Acquisitions and disposals		
7	Foreign exchange movements	299	24
	Interest rate movements	405	32
8	Other	7	1
9	REA 2019 Q3	7,023	562

Table 52 EU CCR8: Exposures to central counterparties

Exposure towards QCCPs decreased as a consequence of lower repo volumes since last reporting period and lower exposure values for derivative transactions mainly driven by cleared interest rate derivatives as a consequence of higher Euro and Nordic rates for the period.

2019 Q4		a	b
	EURm	EAD (post-CRM)	REA
1	Exposures to QCCPs (total)		119
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	899	36
52	(i) OTC derivatives	385	26
4	(ii) Exchange-traded derivatives	63	1
5	(iii) Securities financing transactions	451	9
6	(iv) Netting sets where cross-products netting has been approved		
7	Segregated initial margin	713	
8	Non-segregated initial margin	468	39
9	Pre-funded default fund contribution	203	44
10	Alternative calcuation of own funds requirements for exposures		
11	Exposures to non-QCCPs (total)		

2018 Q2			
	EURm	EAD (post-CRM)	REA
1	Exposures to QCCPs (total)		286
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	5,082	256
3	(i) OTC derivatives	1,408	184
4	(ii) Exchange-traded derivatives	72	1
5	(iii) Securities financing transactions	3,602	70
6	(iv) Netting sets where cross-products netting has been approved		
7	Segregated initial margin	250	
8	Non-segregated initial margin		
9	Pre-funded default fund contribution	163	31
10	Alternative calcuation of own funds requirements for exposures		
11	Exposures to non-QCCPs (total)		

Table 53 Counterparty credit risk exposures and REA split by exposure class

During 2019, total CCR EAD has decreased by EUR 0.4bn and total CCR REA has decreased by EUR 0.5bn. The EAD decrease was mainly driven by decreased institutional exposure in both IRB and standardised approach, partly offset by increased derivatives for regional governments or local authorities under the standardised approach. The decrease in REA was mainly driven by decreased corporate exposure due to rate movements during 2019.

	2019		2018	
EURm	Exposure[1]	REA	Exposure	REA
IRB exposure classes				
Sovereign				
Institution	4,160	1,539	4,900	1,681
Corporate	8,355	4,414	8,278	4,667
Retail	63	27	71	27
Other non-credit obligation assets				
Total IRB approach	12,578	5,979	13,249	6,375
Standardised exposure classes				
Central government and central banks	2,535	25	2,266	44
Regional Governments or local authorities	1,914	56	1,272	69
Other	2,334	139	2,933	182
of which cleared through CCPs	1,569	119	2,155	154
Total standardised approach	6,783	220	6,471	295
Total	19,361	6,199	19,720	6,671

[1]Exposures include derivatives as well as securities financing transactions.

Securitisation

Table

Table 54 Securitisation

The REA of Nordea's securitisation position is fully calculated using the IRB approach, where a supervisory formula method is applied. Based on the estimated exposure value of EUR 8.3bn, the REA of the securitisation position was EUR 874 m at year-end 2019. In accordance with the supervisory formula method, the increased averaged risk-weight of the underlying portfolio results in higher risk-weights being applied when calculating securitisation REA.

Securitisation positions - by capital approach

	Banking book			
	Exposure values		REA	
2019, EURm	Securitisation	Re-securitisation	Securitisation	Re-securitisation
IRB approach				
Supervisory formula method	8,285		874	
Total	8,285		874	

	Banking book			
	Exposure values		REA	
2018, EURm	Securitisation	Re-securitisation	Securitisation	Re-securitisation
IRB approach				
Supervisory formula method	8,265		1,648	
Total	8,265		1,648	

Nordea as originator - asset value and impairment charges

The total amount of outstanding securitisation exposures where Nordea stands as an originator, measured as exposure at default after concentration adjustment, amounted to EUR 8.3 bn at year-end 2019. The recognised losses amounted to EUR 36m.

	Banking book					
2019, EURm	Traditional	Synthetic	Total	Of which deducted from own funds or risk-weighted at 1250%	Of which past due	Recognised losses
Loans to corporates or SME's		8,285	8,285		42	36
		8,285	8,285	0	42	36

	Banking book					
2018, EURm	Traditional	Synthetic	Total	Of which deducted from own funds or risk-weighted at 1250%	Of which past due	Recognised losses
Loans to corporates or SME's		8,265	8,265	27	21	17
Total (originator)		8,265	8,265	27	21	17

Special purpose entities where Nordea is the sponsor

The Special purpose Vehicles (SPVs) are not consolidated for capital adequacy purposes. Instead, loans and loan commitments to the SPVs are included in the banking book and capital requirements are calculated accordingly. Bonds and notes issued by the SPV and held by Nordea as well as credit derivative transactions between Nordea and the SPV are reported in the trading book. Nordea has been approved to calculate the general and specific market risk of these transactions under the VaR model. The counterparty credit risk of credit derivative transactions is calculated in accordance with the mark to marked method.

2019 EURm	Type	Securitisation	Duration	Accounting treatment	Book	Nordea's loans to SPEs	Total assets of SPEs
Viking ABCP Conduit	Traditional	Receivables Securitisation	< 5 years	Consolidated	Banking	871	904
AR Finance[1]	Traditional	Receivables Securitisation	< 5 years	Consolidated	Banking	83	84
Total						954	988

[1] Includes all assets towards SPEs (such as bonds, subordinated loans and drawn credit facilities).

2018, EURm	Type	Securitisation	Duration	Accounting treatment	Book	Nordea's loans to SPEs	Total assets of SPEs
Viking ABCP Conduit		Receivables Securitisation	< 5 years	Consolidated	Banking	938	971
AR Finance[1]	Traditional	Receivables Securitisation	< 5 years	Consolidated	Banking	114	117
Total						1,052	1,088

[1] Includes all assets towards SPEs (such as bonds, subordinated loans and drawn credit facilities).

Market risk

Table 55 EU MR1: Market risk under standardised approach

Compared to Q2 2019, the standardised approach (SA) REA in Q4 2019 decreased by approximately EUR 664m. The interest rate risk REA decreased with EUR 345m mainly driven by updated methodology and reduction in exposure. The Foreign exchange risk dropped by EUR 423m to EUR 0m compared to Q2 mainly driven by changed SEK structural exposure position during Q2.

		a	b
	2019 Q4, EURm	REA	Capital requirements
	Outright products[1]		
1	Interest rate risk (general and specific)	369	30
2	Equity risk (general and specific)	273	22
3	Foreign exchange risk	0	0
4	Commodity risk	45	4
	Options		
5	Simplified approach	0	0
6	Delta-plus method	0	0
7	Scenario approach	121	10
8	Securitisation	0	0
9	Total	808	65

[1] Outright products refer to positions in products that are not optional.

	2019 Q2, EURm	REA	Capital requirements
	Outright products[1]		
1	Interest rate risk (general and specific)	714	57
2	Equity risk (general and specific)	319	26
3	Foreign exchange risk	423	34
4	Commodity risk	16	1
	Options		
5	Simplified approach	0	0
6	Delta-plus method	0	0
7	Scenario approach	92	7
8	Securitisation	0	0
9	Total	1,472	118

[1] Outright products refer to positions in products that are not optional.

Table 56 EU MR2-A: Market risk under the internal models approach

Since Q2 2019 MR REA from Internal Model Approach (IMA) increased by approx. EUR 433m. The increase was mainly driven by Stressed Value-at-Risk (sVaR) which increased by EUR 300m from Q2 2019 to Q4 2019. The REA component stemming from Value-at-Risk (VaR) also increased by EUR194m. The increase in VaR and sVaR was mainly due to higher interest rate risk driven by increased exposure to Danish mortgage bonds partially offset by reduced contribution from USD FX swap.

		a	b
	2019 Q4, EURm	REA	Capital requirements
1	VaR (higher of values a and b)	781	63
a	Previous day's VaR (Article 365 (1)(VaRt-1))	267	21
b	Average of daily VaR (article 365 (1)) on each of the preceding sixty business days (VaRavg) x multiplication factor ((mc) in accordance with article 366)	781	63
2	SVaR (higher of values a and b)	2,336	187
a	Latest SVaR (Article 365 (2) (sVARt-1)	835	67
b	Average of the SVaR (article 365 (2)) during the preceding 60 business days (sVaRavg) x multiplication factor (ms) (article 366)	2,336	187
3	Incremental risk charge - IRC (higher of values a and b)	654	52
a	Most recent IRC value (incremental default and migration risks section 3 calculated in accordance with Section 3 articles 370/371)	654	52
b	Average of the IRC number over the preceding 12 weeks	399	32
4	Comprehensive risk method - CRM (higher of values a,b and c)	355	28
a	Most recent risk number for the correlation trading portfolio (article 377)	238	19
b	Average of the risk numbers for the correlation trading portfolio over the preceding 12-weeks	190	15
c	8% of the own funds requirement in SA on most recent risk number for the correlation trading portfolio (Article 338 (4))	355	28
5	Other		
6	Total	4,126	330

	2019 Q2, EURm	REA	Capital requirements
1	VaR (higher of values a and b)	587	47
a	Previous day's VaR (Article 365 (1)(VaRt-1))	183	15
b	Average of daily VaR (article 365 (1)) on each of the preceding sixty business days (VaRavg) x multiplication factor ((mc) in accordance with article 366)	587	47
2	SVaR (higher of values a and b)	2,036	163
a	Latest SVaR (Article 365 (2) (sVARt-1)	470	38
b	Average of the SVaR (article 365 (2)) during the preceding 60 business days (sVaRavg) x multiplication factor (ms) (article 366)	2,036	163
3	Incremental risk charge - IRC (higher of values a and b)	554	44
a	Most recent IRC value (incremental default and migration risks section 3 calculated in accordance with Section 3 articles 370/371)	554	44
b	Average of the IRC number over the preceding 12 weeks	505	40
4	Comprehensive risk method - CRM (higher of values a,b and c)	516	41
a	Most recent risk number for the correlation trading portfolio (article 377)	255	20
b	Average of the risk numbers for the correlation trading portfolio over the preceding 12-weeks	310	25
c	8% of the own funds requirement in SA on most recent risk number for the correlation trading portfolio (Article 338 (4))	516	41
5	Other		
6	Total	3,693	295

Table 57 EU MR2-B: REA flow statements of market risk exposures under the IMA

By the end of the Q4 period, the IMA REA amounts to EUR 4,126m which corresponds to an increase of EUR 820m from Q3 2019, driven movements in risk levels. The increase in the VaR REA is primarily driven by higher levels of interest rate risk slightly offset by a decrease in the VaR multiplier since Q3. The increase in sVaR is the main driver of the REA increase driven by higher levels of interest rate risk. The Incremental Risk Charge (IRC) increased in Q4 driven by higher default risk. The slight increase in the Comprehensive Risk Charge (CRC) is mainly stemming from position changes.

EURm	VaR	SVaR	IRM	CRM	Other	Total REA	Total capital requirements
REA before regulatory adjustments 2019 Q3	670	1,934	403	300		3,306	265
Regulatory adjustment							
REA 2019 Q3	670	1,934	403	300		3,306	265
Movement in risk levels	131	458	251	56		820	66
Model updates/changes	-20	-56					
Methodology and policy							
Acquisitions and disposals							
Foreign exchange movements							
Other							
REA before regulatory adjustments 2019 Q4	781	2,336	654	355		4,126	330
Regulatory adjustment							
REA 2019 Q4	781	2,336	654	355		4,126	330

Table 58 EU MR3: IMA values for trading portfolios

Market risk measured by VaR showed an average of EUR 14m in the second half of 2019 and was primarily driven by interest rate VaR. sVaR showed an average of EUR 41m which was lower compared to first half of 2019, and was primarily driven by interest rate exposure with additional contributions from credit spreads. The high in VaR was reached in Q3 2019 and the high in stressed VaR was reached in Q4 2019. Average IRC decreased by EUR 7m, stemming from decreased default and migration risk. During second half of 2019 the CRC had an average of EUR 16m, ranging between a maximum of EUR 25m and a minimum of EUR 9m. The reduction in average CRC compared to first half of 2019 was mainly driven by decreased default exposure.

		a
	2019 Q4, EURm	
	VaR (10 day 99%)	
1	Maximum value	22
2	Average value	14
3	Minimum value	10
4	Period end	21
	SVaR (10 day 99%)	
5	Maximum value	77
6	Average value	41
7	Minimum value	28
8	Period end	67
	IRC (10 day 99%)	
9	Maximum value	23
10	Average value	13
11	Minimum value	7
12	Period end	21
	Comprehensive capital charge (99.9%)	
13	Maximum value	25
14	Average value	16
15	Minimum value	9
16	Period end	17

	2019 Q2, EURm	EURm
	VaR (10 day 99%)	
1	Maximum value	20
2	Average value	15
3	Minimum value	11
4	Period end	
	SVaR (10 day 99%)	
5	Maximum value	86
6	Average value	53
7	Minimum value	36
8	Period end	
	IRC (10 day 99%)	
9	Maximum value	41
10	Average value	20
11	Minimum value	9
12	Period end	
	Comprehensive capital charge (99.9%)	
13	Maximum value	29
14	Average value	23
15	Minimum value	18
16	Period end	

Table 59 EU MR4: Comparison of VaR estimates with gains/losses

The figure below shows the VaR backtest of the trading book for 2019. The VaR models are considered being of a satisfactory quality if less than five exceptions are recorded within the last 250 banking days. By the end of Q4 2019, backtest based on hypothetical profit/loss (SPL) was in the amber zone with seven SPL exceptions during the last 250 business days and backtest based on actual profit/loss (APL) was in the green zone with four APL exceptions during the last 250 business days. The backtest deciding the capital multiplier is the one with the highest number of exceptions based on hypothetical profit/loss or actual profit/loss.

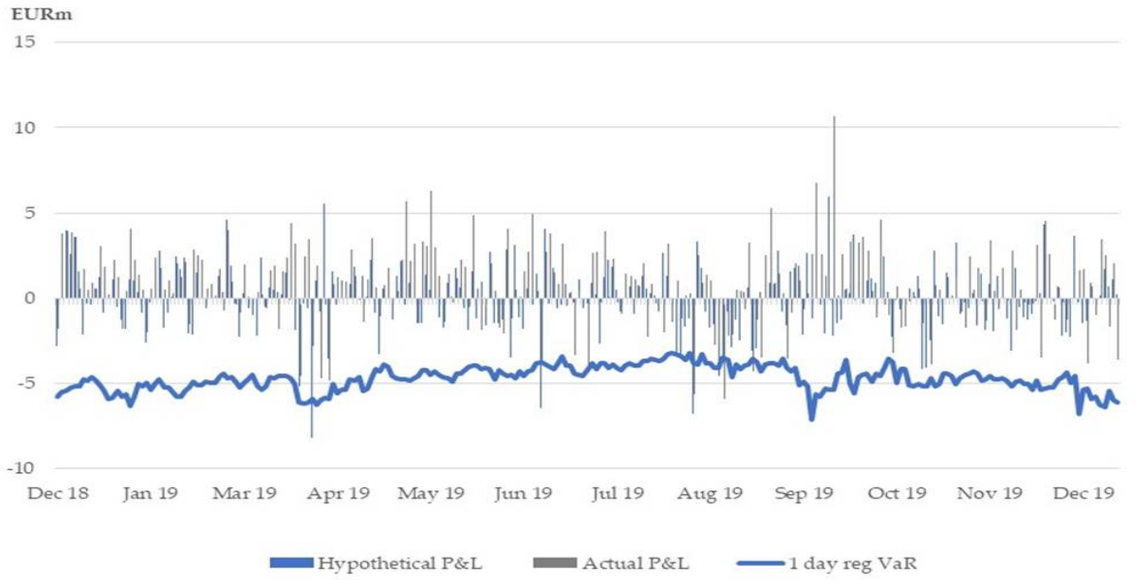


Table 60 Market risk in the trading book

Market risk measured by VaR showed an average utilisation of EUR 15m in 2019 (in line with 2018 level) and was driven primarily by interest rate VaR. sVaR showed an average utilisation of EUR 47m which is higher compared to 2018 and is primarily driven by interest rate exposure with additional contributions from credit spreads. The high in VaR was reached in Q3 2019 and the high in sVaR was reached in Q1 2019. Market risk is primarily concentrated in Northern Europe and Nordics.

The IRC at the end of 2019 was lower compared to the end of 2018 driven by reduced default and migration risk. The lowest exposure occurred during Q3 2019, while IRC peaked in Q1 2019. The average IRC decreased by EUR 8.8m compared to the previous year, mainly due to the consistently lower default risk in 2019 compared to 2018. CRC at the end of 2019 was lower than at the end of 2018 driven by buy-backs and spread tightening. The lowest exposure occurred during Q4 2019, while CRC peaked during Q1 2019. Average CRC for 2019 dropped by EUR 5.6m compared to 2018.

2019 Q4, EURm	31 Dec 2019	2019 High	2019 Low	2019 avg	31 Dec 2018
Total VaR	21	22	10	15	18
Interest rate risk	18	21	8	14	16
Equity risk	6	10	1	3	2
Credit spread risk	4	10	3	5	6
Foreign exchange risk	2	6	1	3	2
Inflation risk	2	3	1	2	2
Diversification effect	34%	58%	34%	46%	38%
Total Stressed VaR	67	86	28	47	62
Interest rate risk	79	90	32	50	59
Equity risk	13	33	4	11	14
Credit spread risk	37	41	9	20	23
Foreign exchange risk	4	13	1	5	4
Inflation risk	5	7	2	4	4
Diversification effect	0%	100%	29%	48%	40%
Incremental Risk Charge	21	41	7	16	35
Comprehensive Risk Charge	17	29	9	20	29

2018 Q4, EURm	31 Dec 2018	2018 High	2018 Low	2018 avg	31 Dec 2017
Total VaR	18	22	8	13	11
Interest rate risk	16	22	7	13	10
Equity risk	2	7	1	3	4
Credit spread risk	6	7	2	4	3
Foreign exchange risk	2	8	1	4	5
Inflation risk	2	3	1	2	-
Diversification effect	38%	59%	28%	44%	50%
Total Stressed VaR	62	70	18	33	25
Interest rate risk	59	66	18	32	25
Equity risk	14	27	2	10	5
Credit spread risk	24	35	8	18	10
Foreign exchange risk	4	18	2	7	12
Inflation risk	4	7	3	4	4
Diversification effect	40%	67%	37%	52%	55%
Incremental Risk Charge	35	41	11	25	38
Comprehensive Risk Charge	29	55	12	25	20

Table 61 Economic value sentitivity for the banking book[1], 6 scenarios from Basel Committee on Banking Supervision
The main driver of the worst loss were short term DKK covered bonds.

2019, EURm	Parallel shock up	Parallel shock down	Steepener shock	Flattener shock	Short rates shock up	Short rates shock down
DKK	29	-436	76	-166	-58	-15
SEK	281	-610	-9	-147	115	-176
EUR	260	1345	85	124	116	310
NOK	3	-64	-6	-28	-10	87
USD	-54	62	24	-36	-54	39
OTH	-19	0	7	-12	-18	9
Total	500	296	177	-265	91	253

Scenario 2019 Q4, mEUR	Total EV risk	Excl. NMD modelling	Excl. prepayment modelling
Parallel down 50bp	-10	880	52
Parallel up 50bp	6	-654	89
	138		

2018, EURm	Parallel shock up	Parallel shock down	Steepener shock	Flattener shock	Short rates shock up	Short rates shock down
DKK	302	-561	183	-164	13	-77
SEK	161	-475	10	-61	52	-17
EUR	354	865	168	-1	134	384
NOK	1	146	12	-19	-17	222
USD	-42	45	16	-26	-41	39
OTH	-17	-4 15	8	-14	-18	9
Total	759		398	-283	123	559

[1]Economic value is a new internal IRRBB measure from October 2018

Table 62 Net interest income sensitivities for the banking book over a one-year horizon (SIIR), 6 scenarios from Basel Committee on Banking Supervision

At the end of the year, the worst loss out of the 6 Basel scenarios for SIIR was driven by the Steepener Basel scenario, where the loss was of EUR 1,030m (against the worst loss in 2018 of EUR 1,176m taken from the Steepener shock scenario). These figures imply that net interest income would decrease if short term interest rates fall while long rates rise. This NII development was driven by the structural re-pricing position Nordea holds across its assets, liabilities and derivatives, where Nordea had more floating rate assets than liabilities.

2019, EURm	Parallel shock up	Parallel shock down	Steepener shock	Flattener shock	Short rates shock up	Short rates shock down
DKK	181	-174	-164	209	268	-262
EUR	610	-121	-197	609	783	-221
SEK	84	-92	-143	75	102	119
NOK	267	-459	-478	264	334	-347
CHF	-1	2	1	-1	-1	2
USD	29	-50	-42	22	30	-127
Other	-15	-14	-6	-16	-19	-17
Total	1,155	-908	-1,030	1,162	1,496	-854

Scenario 2019 Q4, mEUR	Total NII risk	Excl. NMD modelling	Excl. prepayment modelling
Parallel down 50bp	-273	-199	-271
Parallel up 50bp	232	98	236

2018, EURm	Parallel shock up	Parallel shock down	Steepener shock	Flattener shock	Short rates shock up	Short rates shock down
DKK	261	-266	-269	315	394	-412
EUR	917	-507	-575	993	1,227	-766
SEK	33	51	8	11	19	265
NOK	269	-351	-406	299	360	-218
CHF	-20	20	19	-23	-29	30
USD	-62	36	37	-79	-100	32
Other	-45	0	9	-43	-54	-4
Total	1,352	-1,017	-1,176	1,473	1,817	-1,073

Table 63 Equity holdings in the banking book

The changes were mainly driven by new investments and reclassification of the shares in Nordea Luxemburg from shares in subsidiary (EUR 92m).

2019, EURm	Book value	Fair value	Unrealised gains/losses	Realised gains/losses	Capital requirement
Investment portfolio[1]	946	946	90	30	76
Other[2]	207	207	27	0	17
Total	1,153	1,153	117	30	93

1) Of which listed equity holdings, book value EUR 110m
2) Of which listed equity holdings, book value EUR 88m

2018, EURm	Book value	Fair value	Unrealised gains/losses	Realised gains/losses	Capital requirement
Investment portfolio[1]	713	713	18	-1	57
Other[2]	27	27	0	30	2
Total	740	740	18	29	59

[1] Of which listed equity holdings, book value EUR 59m
[2] Of which listed equity holdings, book value EUR 16m

Table 64 REA and minimum capital requirements for market risk

By the end of 2019, REA for market risk was EUR 4,934m a decrease of EUR 1,114m compared to the end of 2018. The decrease in Total REA is mainly explained by a smaller contribution from Banking Book Foreign exchange Standardised Approach REA. Additionally, interest rate and credit risk has contributed to an increase in sVaR for the Trading Book.

	Trading book		Banking book		Total	
2019 Q4, EURm	REA	Capital	REA	Capital	REA	Capital requirement
Total VaR (IA)	778	62			778	62
Interest rate risk	695	56			695	56
Equity risk	261	21			261	21
Credit spread risk	240	19			240	19
Foreign exchange risk	131	10			131	10
Inflation risk	92	7			92	7
Diversification effect	-641	-51			-641	-51
Total Stressed VaR (IA)	2,336	187			2,336	187
Interest rate risk	2,597	208			2,597	208
Equity risk	605	48			605	48
Credit spread risk	1,631	130			1,631	130
Foreign exchange risk	234	19			234	19
Inflation risk	235	19			235	19
Diversification effect	-2,965	-237			-2,965	-237
Incremental Risk Charge (IA)	654	52			654	52
Comprehensive Risk Charge (IA)	355	28			355	28
Equity Event Risk (IA)	4	0			4	0
Standardised Approach	808	65			808	65
Interest rate risk	369	30			369	30
Equity risk	393	31			393	31
Commodity Risk	46	4			46	4
Foreign exchange risk						
Total	4,934	395			4,934	395

	Trading book		Banking book		Total	
2018 Q4, EURm	REA	Capital	REA	Capital	REA	Capital requirement
Total VaR (IA)	719	58			719	58
Interest rate risk	715	57			715	57
Equity risk	88	7			88	7
Credit spread risk	180	14			180	14
Foreign exchange risk	132	11			132	11
Inflation risk	71	6			71	6
Diversification effect	-464	-37			-464	-37
Total Stressed VaR (IA)	2,173	174			2,173	174
Interest rate risk	1,971	158			1,971	158
Equity risk	596	48			596	48
Credit spread risk	1,045	84			1,045	84
Foreign exchange risk	262	21			262	21
Inflation risk	158	13			158	13
Diversification effect	-1,859	-149			-1,859	-149
Incremental Risk Charge (IA)	1,066	85			1,066	85
Comprehensive Risk Charge (IA)	425	34			425	34
Equity Event Risk (IA)	5	0			5	0
Standardised Approach	1,055	84	606	48	1,661	133
Interest rate risk	652	52			652	52
Equity risk	371	30			371	30
Commodity Risk	32	3			32	3
Foreign exchange risk			606	48	606	48
Total	5,442	435	606	48	6,048	484

Operational risk

Table

Table 65 Distribution of incidents reported

As of December 31, 2019, operational risk loss increased by approximately 420% or EURm 99.73 compared to year-end 2018. The high increase was predominately driven by the provision made for on-going AML-related matters, as Nordea expects to be fined in Denmark for weak AML processes and procedures in the past. The provision of EURm 95 is categorised to the event type "Clients, Products and Business Practices". In "Execution, Delivery and Process Management" the number of severe incidents increased with the highest losses in the sub event type "Transaction Capture, Execution & Maintenance". "External Fraud" continues to have high operational risk losses due to a large amount of both card fraud and account fraud cases, with the highest account fraud loss of EURk 813. Further information on legal disputes, fines and provisions are found in the Annual Report Nordea Bank Abp 2019.

Operational Risk Losses by Event Type in EURm	2019	2018
Clients, Products and Business Practices	98	2
Employee Practices and Workplace Safety	0	0
Execution, Delivery and Process	16	10
Management External Fraud	15	18
Internal Fraud	1	0
Damage to Physical Assets	0	0
Business Disruption and System Failures	1	1
Total	131	31

Liquidity and funding

Table

Table 66 LIQ 1: LCR Disclosures

Nordea Group's short term liquidity risk exposure measured by Liquidity Coverage Ratio (LCR) remained on good and stable level throughout 2019. During 2019 Nordea was able to actively use all its funding programs, maintained its strong name in the funding markets, and held a strong and diversified funding base across all main currencies. Nordea has a centralised liquidity management function where Group Treasury & Asset Liability Management (TALM) is responsible for the management of the Group's liquidity positions, liquidity buffers, external and internal funding including the mobilisation of cash around the Group, and Funds Transfer Pricing (FTP). Nordea actively manages LCR on currency level by holding liquid assets across all significant currencies and by managing possible currency mismatches. Nordea's derivative exposures and their impact to LCR is closely monitored and managed. Associated collateral calls during possible liquidity crises are monitored, managed as well as stressed in LCR.

		Total unweighted value (average)				Total weighted value (average)			
	EURm	Q4 19	Q3 19	Q2 19	Q1 19	Q4 19	Q3 19	Q2 19	Q1 19
	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
	High-quality liquid assets								
1	Total high-quality liquid assets (HQLA)					98,803	98,673	98,524	97,318
	Cash-outflows								
2	Retail deposits & deposits from small business customers	89,627	88,527	87,459	86,541	5,927	5,846	5,790	5,746
3	- Of which stable deposits	70,841	70,098	69,259	68,503	3,542	3,505	3,463	3,425
4	- Of which less stable deposits	18,771	18,419	18,193	18,035	2,371	2,331	2,320	2,319
5	Unsecured wholesale funding	94,775	95,581	99,402	104,059	44,826	43,393	44,228	46,535
6	- Of which Operational deposits (all counterparties) and deposits in networks of cooperative banks	32,753	37,703	42,792	44,385	7,795	8,798	9,801	10,123
7	- Of which Non-operational deposits (all counterparties)	50,146	46,752	45,512	48,425	25,155	23,469	23,330	25,163
8	- Of which unsecured debt	11,875	11,126	11,098	11,248	11,875	11,126	11,098	11,248
9	Secured wholesale funding					4,572	4,132	3,615	3,113
10	Additional requirements	53,308	51,510	49,674	49,341	10,770	10,986	10,751	11,174
11	- Of which outflows related to derivative exposures and other collateral requirements	6,933	7,280	7,407	8,060	6,253	6,778	6,927	7,513
12	- Of which Outflows related to loss Of funding on debt products	5	5	3		5	5	3	
13	- Of which credit and liquidity facilities	46,370	44,226	42,264	41,281	4,511	4,203	3,821	3,662
14	Other contractual funding obligations	1,794	2,149	2,312	2,436	1,336	1,710	1,888	2,027
15	Other contingent funding obligations	50,997	51,987	52,201	52,545	3,194	3,044	2,891	2,831
16	Total cash outflows					70,626	69,112	69,164	71,426
	Cash inflows								
17	Secured lending (e.g. reverse repos)	38,318	36,767	36,280	34,426	4,029	3,712	3,326	3,254
18	Inflows from fully performing exposures	11,736	11,781	11,874	11,890	5,998	6,008	5,918	5,785
19	Other cash inflows	9,063	10,285	11,417	12,671	6,145	7,229	8,090	9,131
EU-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)								
EU-19b	(Excess inflows from a related specialised credit institution)								
20	Total cash inflows	59,117	58,833	59,571	58,987	16,173	16,949	17,334	18,171
EU-20a	Fully exempt inflows								
EU-20b	Inflows Subject to 90% Cap								
EU-20c	Inflows subject to 75% cap	59,117	58,833	59,571	58,987	16,173	16,949	17,334	18,171
21	Liquidity buffer					98,803	98,673	98,524	97,318
22	Total net cash outflows					54,447	52,158	51,826	53,256
23	Liquidity coverage ratio (%)					182%	190%	192%	185%

Table 67 Encumbered and unencumbered assets

The below disclosure represents the computed median values of the four quarters between 31 December 2018 and 31 December 2019, in accordance with European Banking Authority Guideline EBA/GL/2014/03 and the Commission Delegated Regulation (EU) 2017/2295 on the disclosure of encumbered and unencumbered assets.

The main source of encumbrance for Nordea is issuance of covered bond and the associated encumbrance of the covered pool. Nordea issues covered bonds through its mortgage subsidiaries Nordea Eiendomskreditt AS, Nordea Kredit Realkreditaktieselskab, Nordea Hypotek AB (publ), Nordea Mortgage Bank PLC and Gjensidige Bank Boligkreditt, and consequently parts of the mortgage loans in the cover pools are encumbered. Nordea continues to maintain a level of unencumbered and eligible loans that can be used to issue funding via covered bonds if additional liquidity is required. Overcollateralization of covered bonds in each mortgage company is well of above the regulatory and rating agency requirements. Other less significant contributors to encumbrance are collateral for derivatives and repo trading within Nordea Bank Abp. Most of the unencumbered assets consist of loans and residual equity instruments, debt securities and other assets.

In the table, an asset is treated as encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralise or credit enhance any transaction from which it cannot be freely withdrawn.

2019, EURm

	Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
		of which EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA
Assets of the reporting institution	174,272	49,874			366,195	85,553		
Equity instruments	2,829	0			3,045	0		
Debt securities	22,914	17,791	22,914	17,791	44,775	38,473	43,283	38,473
of which: covered bonds	8,698	7,476	8,698	7,476	19,708	19,708	19,708	19,708
of which: asset-backed securities	0	0	0	0	0	0	0	0
of which: issued by general governments	12,437	10,540	12,437	10,540	8,282	8,081	8,282	8,081
of which: issued by financial corporations	10,018	7,488	10,018	7,488	32,768	29,442	32,768	29,442
of which: issued by non-financial corporations	547	85	547	85	1,182	196	1,182	196
Other assets	148,040	30,188			318,636	43,489		

Collateral received

	Encumbered		Unencumbered	
	Fair value of encumbered collateral received or own debt securities issued		Fair value of encumbered collateral received or own debt securities issued	
		of which notionally eligible EHQLA and HQLA		of which notionally eligible EHQLA and HQLA
Collateral received by the reporting institution	13,139	10,117	58,925	51,956
Loans on demand	0	0	0	0
Equity instruments	0	0	1,044	0
Debt securities	13,139	10,117	30,996	25,068
of which: covered bonds	4,700	3,909	10,532	8,843
of which: asset-backed securities	0	0	0	0
of which: issued by general governments	8,419	6,906	17,711	15,450
of which: issued by financial corporations	5,063	3,907	12,156	8,849
of which: issued by non-financial corporations	156	1	918	15
Loans and advances other than loans on demand	0	0	24,391	24,391
Other collateral received	0	0	4,136	4,136
Own debt securities issued other than own covered bonds or asset-backed securities	0	0	0	0
Own covered bonds and asset-backed securities issued and not yet pledged			3,370	3,370
Total assets, collateral received and own debt securities issued	187,411	60,016		

Sources of encumbrance

	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
Carrying amount of selected financial liabilities	191,345	184,034
of which: covered bonds issued	114,865	116,565

2018, EURm

	Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
		of which EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA
Assets of the reporting institution	162,521	42,593			364,730	87,614		
Equity instruments	3,099	0			1,427	0		
Debt securities	20,353	16,733	20,353	16,733	53,549	44,694	53,069	44,694
of which: covered bonds	6,007	4,969	6,007	4,969	33,951	27,947	33,951	27,947
of which: asset-backed securities	0	0	0	0	0	0	0	0
of which: issued by general governments	11,078	10,165	11,078	10,165	9,041	8,612	9,041	8,612
of which: issued by financial corporations	8,262	5,191	8,262	5,191	40,425	33,953	40,425	33,953
of which: issued by non-financial corporatio	773	435	773	435	1,367	582	1,367	582
Other assets	24,766	24,766			44,609	0		

Collateral received

	Encumbered		Unencumbered	
	Fair value of encumbered collateral received or own debt securities issued		Fair value of encumbered collateral received or own debt securities issued	
		of which notionally eligible EHQLA and HQLA		of which notionally eligible EHQLA and HQLA
Collateral received by the reporting institution	18,896	16,672	44,246	39,756
Loans on demand	0	0	0	0
Equity instruments	0	0	791	0
Debt securities	18,896	16,672	17,514	14,337
of which: covered bonds	6,500	5,685	6,380	4,781
of which: asset-backed securities	0	0	0	0
of which: issued by general governments	11,224	10,443	8,906	8,311
of which: issued by financial corporations	6,718	5,713	8,026	5,145
of which: issued by non-financial corporations	499	398	1,326	533
Loans and advances other than loans on demand	0	0	21,414	21,414
Other collateral received	0	0	3,844	3,844
Own debt securities issued other than own covered bonds or asset-backed securities	0	0	0	0
Own covered bonds and asset-backed securities issued and not yet pledged			2,650	2,650
Total assets, collateral received and own debt securities issued	180,432	58,111		

Sources of encumbrance

	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
Carrying amount of selected financial liabilities	162,439	177,681
of which: covered bonds issued	108,155	111,879

Table 68 LCR sub-components

	Combined		USD		EUR	
2019, EURm	Unweighted value	Weighted value	Unweighted value	Weighted value	Unweighted value	Weighted value
Liquid assets level 1	99,180	97,006	17,534	17,522	29,798	29,741
Liquid assets level 2	2,735	2,322	0	0	588	500
Cap on level 2	0	0	0	0	0	0
A. Liquid assets total	101,915	99,328	17,534	17,522	30,387	30,241
Retail deposits & deposits from small business customers	91,312	6,075	317	47	28,326	1,948
Unsecured wholesale funding	98,904	50,409	17,634	12,058	30,841	14,787
Secured wholesale funding	20,004	3,483	4,494	1,504	8,948	606
Additional requirements	68,718	12,394	38,351	33,844	52,249	32,872
Other funding obligations	41,705	3,267	5,943	458	12,155	1,151
B. Cash outflows total	320,644	75,627	66,739	47,911	132,518	51,363
Secured lending (e.g. reverse repos)	34,209	5,400	5,385	2,371	7,172	587
Inflows from fully performing exposures	9,587	4,700	770	446	3,452	1,568
Other cash inflows	8,278	5,615	43,112	43,038	40,008	39,812
Limit on inflows		0		-9,922		-3,444
C. Cash inflows total	52,074	15,714	49,267	35,933	50,632	38,522
Liquidity coverage ratio [A/(B-C)][1]		166%		146%		236%

[1]Liquidity Coverage Ratio (LCR) according to EBA Delegated Regulation (EU) 2015/61

	Combined		USD		EUR	
2018, EURm	Unweighted value	Weighted value	Unweighted value	Weighted value	Unweighted value	Weighted value
Liquid assets level 1	99,890	97,810	22,222	22,179	32,157	32,045
Liquid assets level 2	4,040	3,434	448	381	920	782
Cap on level 2	0	0	0	0	0	0
A. Liquid assets total	103,930	101,244	22,670	22,560	33,077	32,827
Retail deposits & deposits from small business customers	86,862	5,741	319	46	26,674	1,811
Unsecured wholesale funding	106,355	48,389	16,544	10,287	34,973	15,071
Secured wholesale funding	22,233	3,020	4,357	537	6,968	508
Additional requirements	49,194	9,252	35,125	30,955	45,367	32,866
Other funding obligations	53,153	3,474	5,803	287	16,292	877
B. Cash outflows total	317,797	69,876	62,147	42,113	130,274	51,133
Secured lending (e.g. reverse repos)	29,103	4,063	2,482	1,892	8,187	246
Inflows from fully performing exposures	9,329	4,072	751	359	3,447	1,185
Other cash inflows	10,155	6,978	38,532	38,426	39,733	39,412
Limit on inflows		0		-9,092		-2,493
C. Cash inflows total	48,587	15,113	41,765	31,585	51,368	38,350
Liquidity coverage ratio [A/(B-C)][1]		185%		214%		257%

[1]Liquidity Coverage Ratio (LCR) according to EBA Delegated Regulation (EU) 2015/61

Table 69 Liquidity buffer split by type of asset and currency

2019	Currency distribution, market values in EURbn				
Type of asset	EUR	USD	SEK	Other	Total
Level 1 Assets[1]	29.8	17.5	17.5	34.4	99.2
Cash and balances with central banks	23.6	8.6	2.0	7.3	41.6
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks	4.9	8.1	1.6	5.2	19.9
Securities issued or guaranteed by municipalities or other public sector entities	0.5	0.6	4.4	1.1	6.7
Covered bonds	0.8	0.2	9.4	20.6	31.1
Level 2 Assets[1]	0.6	0.0	0.5	1.7	2.7
Covered bonds	0.6		0.5	1.7	2.7
Other level 2 assets			0.0		0.0
Total (according to Nordea definition)	30.4	17.5	18.0	36.0	101.9
Balances with other banks	0.4	0.0	0.0	0.5	0.9
Covered bonds issued by the own bank or related unit	0.1			0.7	0.8
All other securities[2]	0.3	2.5	0.2	0.1	3.0
Total (including other liquid assets)	31.1	20.1	18.1	37.4	106.7

[1] Level 1 & Level 2 assets according to EBA LCR Delegated Act

[2] All other unencumbered securities held by TALM

2018	Currency distribution, market values in EURbn				
Type of asset	SEK	EUR	USD	Other CCY	Total
Level 1 Assets[1]	16.5	32.2	22.2	29.0	99.9
Cash and balances with central banks	4.8	26.1	12.7	4.1	47.8
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks	1.4	3.9	6.6	4.6	16.6
Securities issued or guaranteed by municipalities or other public sector entities	2.4	0.5	2.2	0.6	5.8
Covered bonds	7.9	1.6	0.6	19.6	29.7
Level 2 Assets[1]	0.4	0.9	0.4	2.3	4.0
Covered bonds	0.4	0.9	0.4	2.3	4.0
Other level 2 assets		0.0			0.0
Total (according to Nordea definition)	16.9	33.1	22.7	31.3	103.9
Balances with other banks	0.0	1.2	0.1	0.5	1.9
		0.1		2.1	2.2
Covered bonds issued by the own bank or related unit					
All other securities[2]	0.2	0.1	3.2	0.1	3.6
Total (including other liquid assets)	17.1	34.4	26.0	34.0	111.6

[1] Level 1 & Level 2 assets according to EBA LCR Delegated Act [2] All other unencumbered securities held by TALM

Table 70 Historical quarterly development of the liquidity buffer

Liquidity buffer remained on strong level throughout 2019. The exposure is focused on Nordic and core (EUR & USD) central bank cash, government bonds and Nordic covered bonds.

Type of asset	2019 Q4	2019 Q3	2019 Q2	2019 Q1	2018 Q4
Level 1 Assets[1]	99.2	97.1	100.5	99.3	99.9
Cash and balances with central banks	41.6	41.9	46.7	49.4	47.8
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks	19.9	22.1	19.3	15.7	16.6
Securities issued or guaranteed by municipalities or other public sector entities	6.7	5.6	6.7	5.9	5.8
Covered bonds	31.1	27.5	27.9	28.3	29.7
Level 2 Assets[1]	2.7	2.9	3.8	3.7	4.0
Covered bonds	2.7	2.9	3.8	3.7	4.0
Other level 2 assets	0.0	0.0	0.0	0.0	0.0
Total (according to Nordea definition)	101.9	100.0	104.3	103.0	103.9
Balances with other banks	0.9	0.6	0.8	0.7	1.9
Covered bonds issued by the own bank or related unit	0.8	2.1	0.9	1.7	2.2
All other securities[2]	3.0	2.2	2.6	3.5	3.6
Total (including other liquid assets)	106.7	104.9	108.6	108.8	111.6

[1]Level 1 & Level 2 assets according to EBA LCR Delegated Act

[2]All other unencumbered securities held by TALM

Table 71 Net Stable Funding Ratio

2019	EURbn
Available stable funding	290.5
Required stable funding	267.6
Net stable funding	22.9
Net Stable Funding Ratio (NSFR)[1]	108.6%

[1]According to CRR2 regulation, thus equivalent 2018 figures are not available

Table 72 Funding sources

During 2019, Nordea continued to benefit from its prudent liquidity risk management, in terms of maintaining a diversified and strong funding base and a diversified liquidity buffer. As of year-end 2019, the total volume utilised under short-term programmes was EUR 44.3bn with an average maturity of 0.3 years. The total volume under long-term programmes was EUR 159.3bn with an average maturity of 6.5 years.

2019 Liability type	Interest rate base	Average maturity (years)	EURm
Deposits by credit institutions			
- shorter than 3 months	Euribor, etc.	0.1	31,456
- longer than 3 months	Euribor, etc.	0.5	848
Deposits and borrowings from the public			
- Deposits on demand	Administrative	0.0	149,012
- Other deposits	Euribor, etc.	0.2	19,712
Debt securities in issue			
- Certificates of deposits	Euribor, etc.	0.4	22,094
- Commercial papers	Euribor, etc.	0.2	22,192
- Mortgage covered bond loans	Fixed rate, market-based	7.7	115,346
- Other bond loans	Fixed rate, market-based	2.6	34,094
Derivatives			42,047
Other non-interest bearing items			57,452
Subordinated debentures			
- Tier 2 subordinated debenture loans	Fixed rate, market-based	4.8	7,410
- Additional Tier 1 subordinated debenture loans (undated)	Fixed rate, market-based		2,409
Equity			31,528
Total			535,602
Liabilities to policyholders			19,246
Total, including life insurance operations			554,848

2018 Liability type	Interest rate base	Average maturity (years)	EURm
Deposits by credit institutions			
- shorter than 3 months	Euribor, etc.	0.0	39,083
- longer than 3 months	Euribor, etc.	1.5	3,336
Deposits and borrowings from the public			
- Deposits on demand	Administrative	0.0	144,656
- Other deposits	Euribor, etc.	0.2	20,302
Debt securities in issue			
- Certificates of deposits	Euribor, etc.	0.3	29,693
- Commercial papers	Euribor, etc.	0.2	17,078
- Mortgage covered bond loans	Fixed rate, market-based	7.0	108,028
- Other bond loans	Fixed rate, market-based	2.8	35,623
Derivatives			39,547
Other non-interest bearing items			53,776
Subordinated debentures			
- Dated subordinated debenture loans	Fixed rate, market-based	7.0	7,869
- Undated and other subordinated debenture loans	Fixed rate, market-based		1,286
Equity			32,901
Total			533,178
Liabilities to policyholders			18,230
Total, including life insurance operations			551,408

Table 73 Assets and liabilities split by currency

Nordea Group's loan portfolio remained focused on four Nordic markets. A strong and diversified funding base was maintained across all main currencies throughout 2019.

2019, EURbn	EUR	USD	SEK	DKK	NOK	Other	Not distributed	Total
Cash balances with central banks	25	12	0	6	2	0		45
Loans to the public	77	14	85	84	59	2		323
Loans to credit institutions	3	4	1	0	0	0		9
Interest-bearing securities including treasury bills	8	8	17	22	9	0	8	72
Derivatives	21	7	3	5	2	2		39
Other assets							68	68
Total assets	135	45	107	117	72	5	75	555
Deposits and borrowings from the public	53	12	40	39	23	2		169
Deposits by credit institutions	15	8	2	2	3	1		32
Debt securities in issue	44	31	35	55	13	15		194
- of which CDs with original maturity less		12				5		17
- of which CPs with original maturity less	10	5				6		22
- of which CD & CPs with original maturity		6						6
- of which covered bonds	18	-	31	55	11	1		115
- of which other bonds	16	8	4	0	3	3		34
Subordinated liabilities	4	5	1		0	0		10
Derivatives	20	9	4	5	3	1		42
Other liabilities							77	77
Equity	19	0	4	4	4	0		32
Total liabilities and equity	155	64	86	105	46	21	77	555
Position not reported on the balance sheet	21	19 -	21 -	12 -	25	16		
Net position, currencies			0	0	0			

2018, EURm	EUR	DKK	NOK	SEK	USD	Other	Not distributed	Total
Cash balances with central banks	20	3	2	0	23	0		48
Loans to the public	78	78	47	88	17	2		310
Loans to credit institutions	4	0	0	1	2	1		9
Interest-bearing securities including	15	20	8	16	11	0	11	82
Derivatives	30	5	2	4	4	1		46
Other assets							87	87
Total assets	147	106	59	109	57	5	98	582
Deposits and borrowings from the public	53	40	22	41	14	3		172
Deposits by credit institutions	10	2	5	4	18	1		40
Debt securities in issue	43	50	8	37	24	17		179
- of which CD & CPs with original maturity	8			3	11	11		33
- of which CDs with original maturity over 1					2			2
- of which covered bonds	18	50	7	31		1		107
- of which other bonds	17	0	1	3	11	6		37
Subordinated liabilities	4		0	1	4	0		9
Derivatives	27	5	2	4	5	1		43
Other liabilities							105	105
Equity	22	5	3	4	0	1		33
Total liabilities and equity		102	40	89	64	24	105	582
Position not reported on the balance sheet	11 -	4 -	20 -	20	7	19		
Net position, currencies	-	0	-	0	-	0		

Table 74 Maturity analysis for assets and liabilities

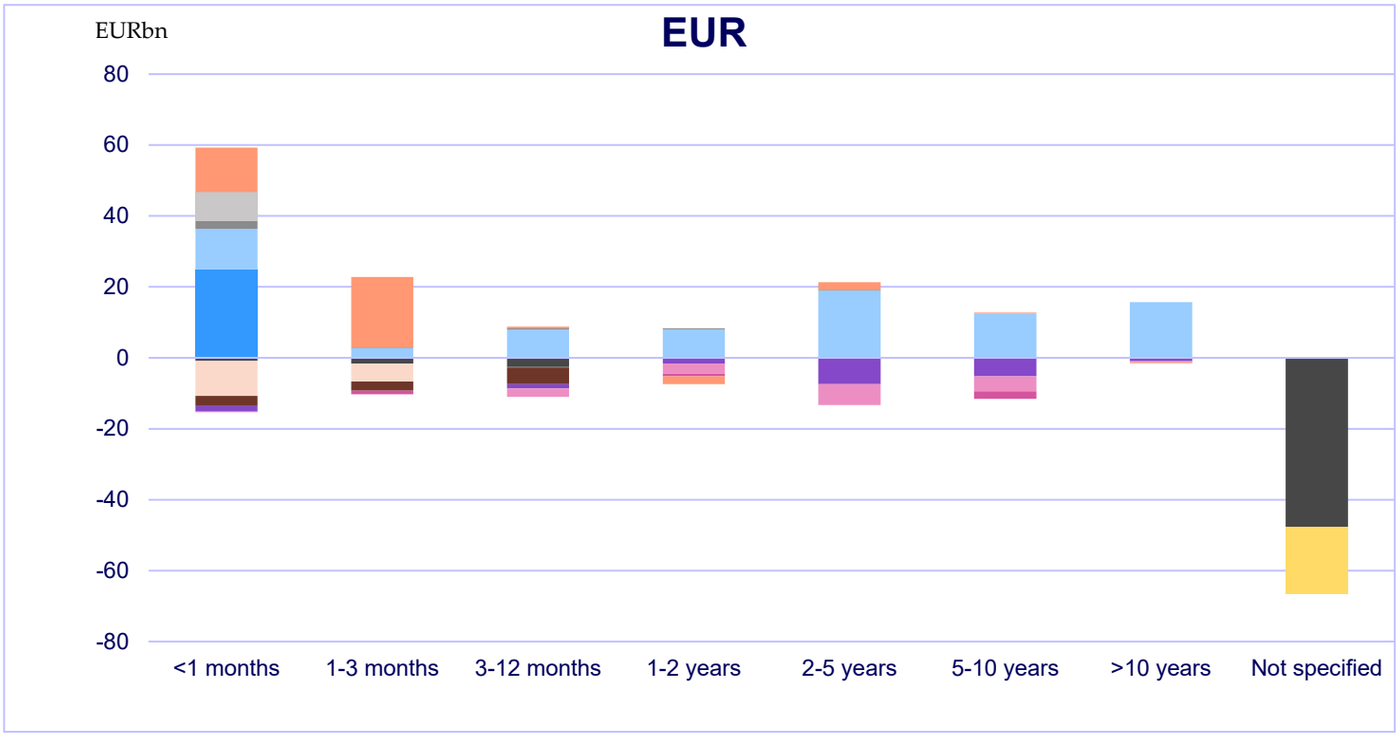
Maturity analysis is based on both contractual and behavioural information of remaining maturity of items. Amortisations are included in time bucket corresponding the estimated cash flow date. Time bucket 'Not specified' includes items which are lacking specific timing of cash flows.

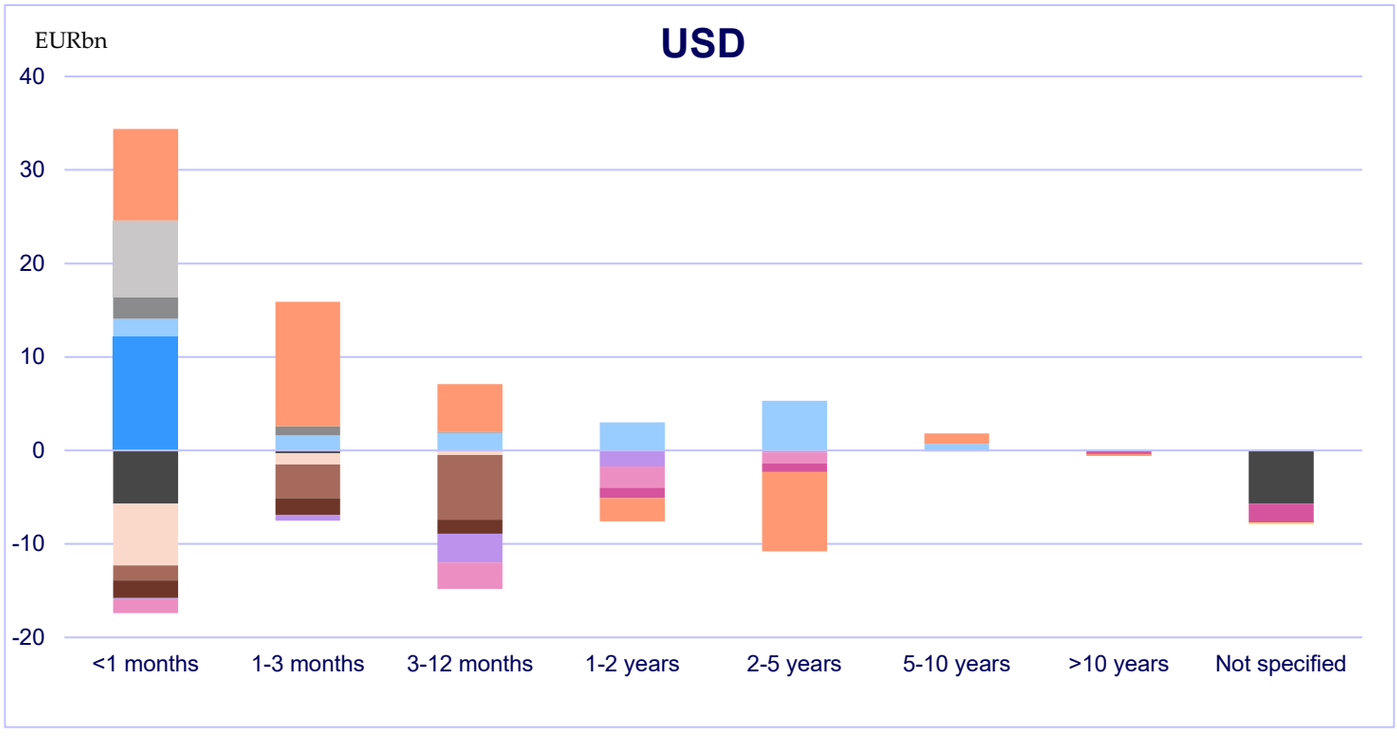
2019, EURbn	<1 months	1-3 months	3-12 months	1-2 years	2-5 years	5-10 years	>10 years	Not specified	Total
Cash and balances with central banks	45								45
Loans to the public	50	11	26	26	57	44	109		323
- of which repos	18	1	-	0					19
Loans to credit institutions	6	1	1	0	0				9
- of which repos	5	1	0						6
Interest-bearing securities including treasury bills	64							8	72
Derivatives								39	39
Other assets								68	68
Total assets	165	12	27	26	58	44	109	115	555
Deposits and borrowings from the public	13	3	4	0				149	169
- of which repos	2	0	0						2
Deposits by credit institutions	24	8	1						32
- of which repos	9	3							12
Debt securities in issue	14	13	38	25	65	12	26		194
- of which CDs with original maturity less than 1 year	4	5	8						17
- of which CPs with original maturity less than 1 year	6	7	9						22
- of which CD & CPs with original	0	1	3	2	0				6
- of which covered bonds	3	0	11	17	53	7	26		115
- of which other bonds	2	0	8	6	13	6	0		34
Subordinated liabilities		1		2	1	3	1	2	10
Derivatives								42	42
Other liabilities								77	77
Equity								32	32
Total liabilities and equity	51	24	43	27	66	15	26	302	555

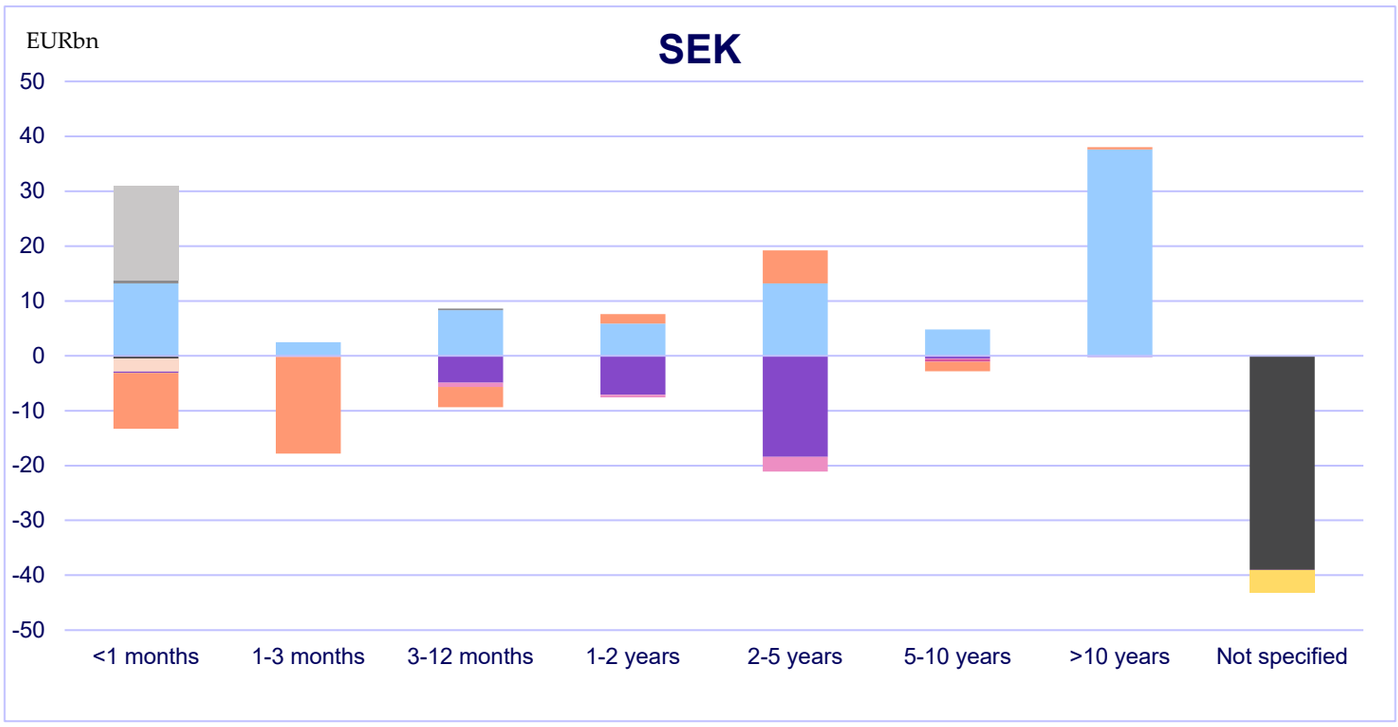
2018, EURbn	<1 months	1-3 months	3-12 months	1-2 years	2-5 years	5-10 years	>10 years	Not specified	Total
Cash and balances with central banks	49	1							49
Loans to the public	46	14	25	23	55	40	105		308
- of which repos	13	4	0						17
Loans to credit institutions	7	2	2	0	1				11
- of which repos	5	2	0						7
Interest-bearing securities including treasury bills	73							11	84
Derivatives								37	37
Other assets								62	62
Total assets	174	17	27	24	55	40	105	109	551
Deposits and borrowings from the public	11	5	4	0	0			145	165
- of which repos	2	3							5
Deposits by credit institutions	35	5	1	0	2				42
- of which repos	9	3							12
Debt securities in issue	13	23	34	27	62	10	21		190
- of which CD & CPs with original	9	21	12						43
- of which CDs with original maturity	0	1	1	2					4
-of which covered bonds	3	0	15	15	48	5	21		108
-of which other bonds	0	1	6	10	14	5	0		36
Subordinated liabilities				1	3	3	2	1	9
Derivatives								40	40
Other liabilities								72	72
Equity								33	33
Total liabilities and equity	59	33	39	28	67	13	23	290	551

Table 75 Maturity analysis of assets and liabilities, split by currency

During 2019, Nordea continued to benefit from its prudent liquidity risk management, in terms of maintaining a diversified and strong funding base and a diversified liquidity buffer in all of the main currencies.






EURbn
SEK
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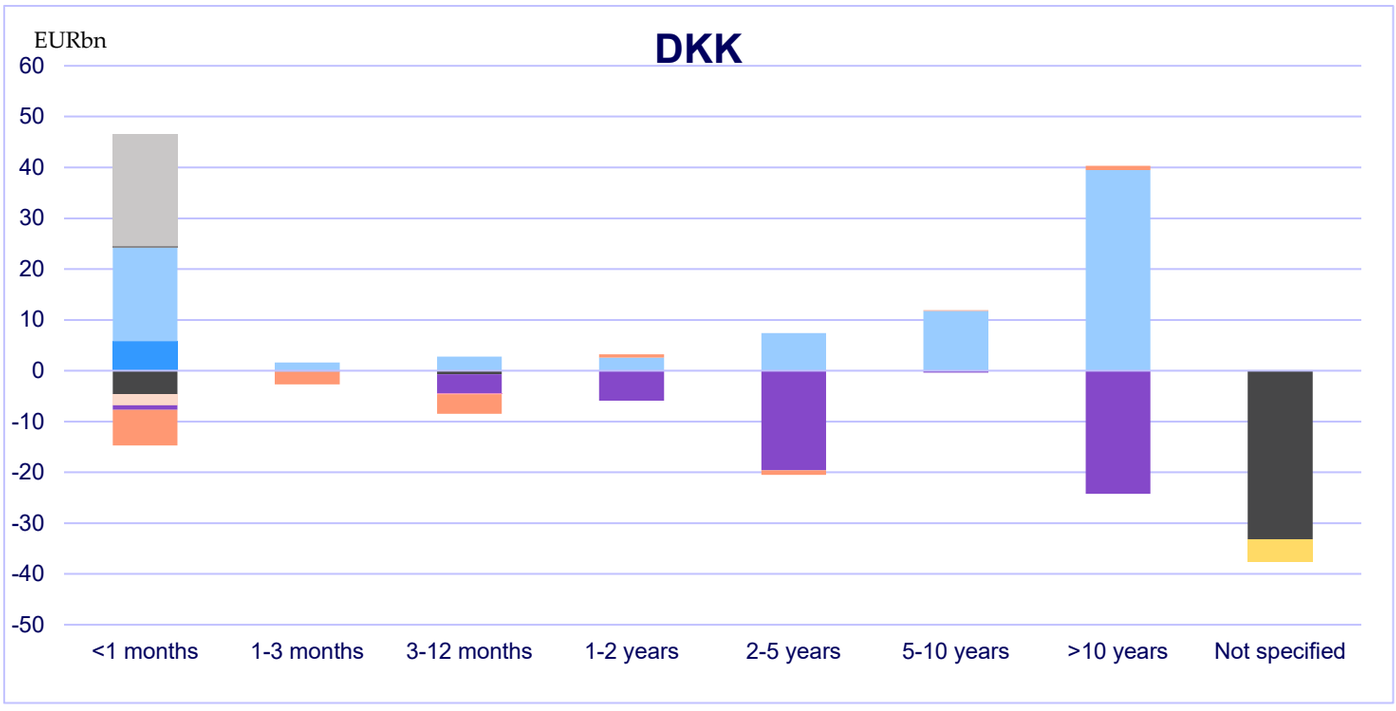
40
30
20
10
0
-10
-20
-30
-40
-50
<1 months
1-3 months
3-12 months
1-2 years
2-5 years
5-10 years
>10 years
Not specified


EURbn
DKK
60
50
40
30
20
10
0
-10
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-40
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1-3 months
3-12 months
1-2 years
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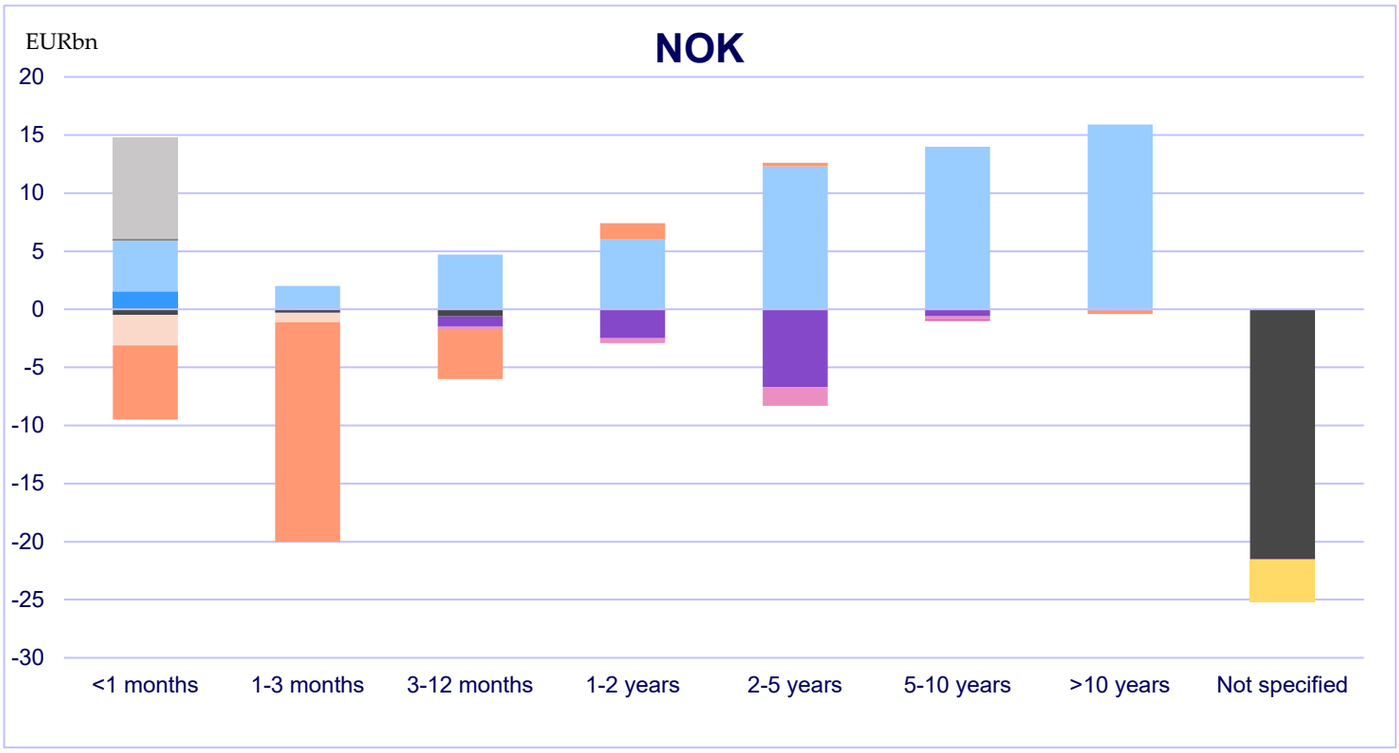
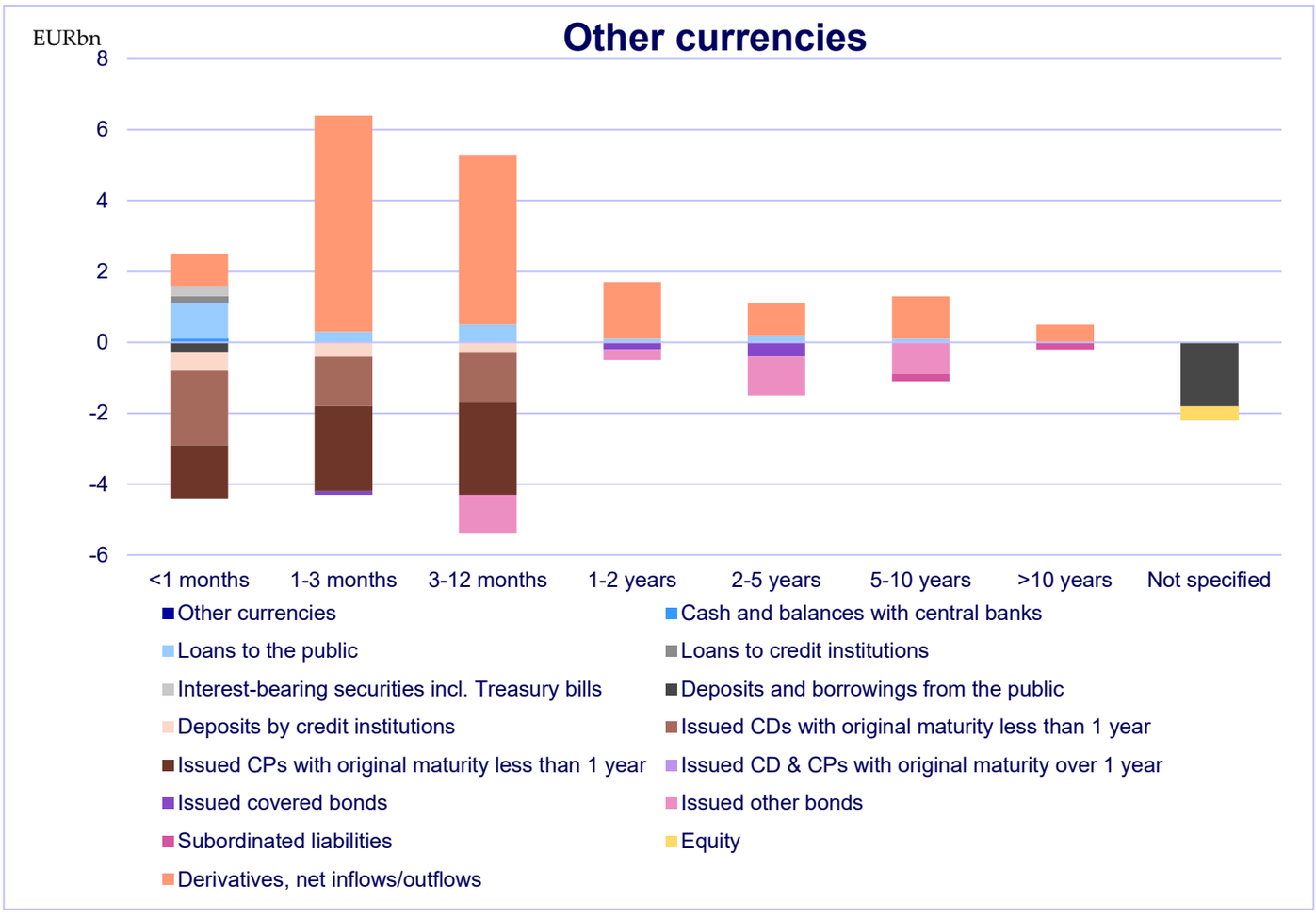
5-10 years
>10 years
Not specified


NOK
EURbn
20
15
10
5
0
-5
-10
-15
-20
-25
-30
<1 months
1-3 months
3-12 months
1-2 years
2-5 years
5-10 years
>10 years
Not specified


Other currencies
EURbn
8
6
4
2
0
-2
-4
-6
<1 months
1-3 months
3-12 months
1-2 years
2-5 years
5-10 years
>10 years
Not specified
Other currencies
Cash and balances with central banks
Loans to the public
Loans to credit institutions
Interest-bearing securities incl. Treasury bills
Deposits and borrowings from the public
Deposits by credit institutions
Issued CDs with original maturity less than 1 year
Issued CPs with original maturity less than 1 year
Issued CD & CPs with original maturity over 1 year
Issued covered bonds
Issued other bonds
Subordinated liabilities
Equity
Derivatives, net inflows/outflows

Other tables

Table 76 EU LI 1: Differences between accounting and regulatory scopes of consolidation and the mapping of financial statement categories with regulatory risk categories

	a	b	c	d	e	f	g
			Carrying values of items				
EURm	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation [1]	Subject to the credit risk framework	Subject to the counterparty credit risk framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital[2]
Assets							
Cash and balances with central banks	35,509	35,460	35,460				
Loans to central banks	9,207	9,207	5,890	3,318			0
Loans to credit institutions	8,516	8,363	2,416	5,961			-14
Loans to the public	322,740	324,097	292,523	23,217	6,924		1,432
Interest bearing securities	64,930	57,519	48,712			8,808	-1
Financial instruments pledged as collateral	7,151	7,151	2,353			4,798	
Shares	14,184	2,814	1,081			1,664	69
Assets in pooled schemes and unit-linked investment contracts	30,799	3,950				0	3,950
Derivatives	39,111	39,105		39,105			
Fair value changes of the hedged items in portfolio hedge of interest rate risk	217	217				217	
Investments in associated undertakings and joint ventures	572	1,335	1,335				0
Intangible assets	3,695	3,537					3,537
Properties and equipment	2,002	1,934	1,934				
Investment properties	1,585	4	4				
Deferred tax assets	487	477	340				137
Current tax assets	362	359	359				
Retirement benefit assets	173	173					173
Other assets	12,543	12,332	957			11,375	
Prepaid expenses and accrued income	1,065	1,051	1,051				
Assets held for sale							
Total assets	554,848	509,084	394,415	71,602	6,924	26,862	9,281
Liabilities							
Deposits by credit institutions	32,304	32,305		12,184			20,120
Deposits and borrowings from the public	168,725	170,172		4,698			165,474
Deposits in pooled schemes and unit-linked investment contracts	31,859	4,378					4,378
Liabilities to policyholders	19,246						
Debt securities in issue	193,726	194,192					194,192
Derivatives	42,047	42,101		42,101			
Fair value changes of the hedged items in portfolio hedge of interest rate risk	2,018	2,018				2,018	
Current tax liabilities	742	671					671
Other liabilities	19,868	19,749					19,749
Accrued expenses and prepaid income	1,476	1,473					1,473
Deferred tax liabilites	481	427					427
Provisions	570	568					568
Retirement benefit obligations	439	408					408
Subordinated liabilities	9,819	9,819					9,819
Liabilities held for sale							
Total equity	31,528	30,803					30,803
Total liabilities	554,848	509,084		58,984		2,018	448,083

[1] The amounts shown in column b do not always equal the sum of the amounts shown in the remaining columns (c to g) of the table, since there are items that attract capital charges according to more than one risk category framework. These items are derivatives and repurchase agreements which are shown in the market risk and counterparty credit risk framework.

[2] Provisions for loans are shown in the column g as negative values.

Table 77 Mapping of own funds to the balance sheet

EURm	Nordea Group[1]	Non-CRR companies	Nordea consolidated situation[2]	Row in disclosure template
Assets				
Intangible assets	3,695	157	3,537	
- of which: Goodwill and other intangible assets	-3,609	-157	-3,451	8
Deferred tax assets	487	11	477	
- of which: Deferred tax assets that rely on future profitability excluding those arising from temporary differences	146	10	136	10
Retirement benefit assets	173		173	
- of which: Retirement benefit assets net of tax	-130		-130	15
Liabilities				
Deferred tax liabilities	481	54	427	
- of which: Deductible Deferred tax liabilities associated with Deferred tax assets that rely on future profitability and do not arise from temporary differences				10
Subordinated liabilities	9,819	1,001	8,819	
- of which: AT1 Capital instruments and the related share -premium accounts	3,126		3,126	30
- of which: Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1				33
- of which: Direct and indirect holdings by an institution of own AT1 instruments	-29		-29	37
- of which: T2 Capital instruments and the related share -premium accounts	4,561		4,561	46
- of which: Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2				47
- of which: Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative Amount)	-64		-64	52
Equity				
Share capital	4,050	0	4,050	1
Share premium reserve	1,080	0	1,080	
- of which: Capital instruments and the related share -premium accounts	1,080		1,080	1
- of which: Retained earnings	0	0	0	2
Other reserves	-2,062	-38	-2,024	
- of which: Retained earnings	-1,293	5	-1,298	2
- of which: Accumulated other comprehensive income	-769	-43	-726	3
- of which: Fair value reserves related to gains or losses on cash flow hedges	-26		-26	11
Retained earnings net of proposed dividend	26,844	761	26,084	
- of which: Profit/loss for the year	-71	-113	43	5a
- of which: Retained earnings	26,186	874	25,312	2
- of which: Capital loan included in AT1 Capital	748		748	31
- of which: Direct holdings by an institution of own CET1 instruments (negative Amount)	-19		-19	16

[1] Nordea Group is the accounting group as disclosed in the Annual Report

[2] Nordea consolidated situation in accordance with CRR

Table 78 EU LI 2: Main sources of differences between regulatory exposure amounts and carrying values in financial statements

The following table provides information regarding the main sources of differences between the accounting carrying values and regulatory exposures. Additionally, off-balance sheet amounts are included in the exposure amounts considered for regulatory purposes, while the items are subject to deductions from capital are not risk weighted and are thus excluded from the table below.

	a	b	c	d	e
		Items subject to:			
EURm	Total[1]	Credit risk framework	Counterparty credit risk framework	Securitisation framework [2,3]	Market risk framework[4]
Assets carrying value amount under the scope of regulatory consolidation (as per template EU LI 1)	499,803	394,415	71,602	6,924	26,862
Liabilities carrying amount under the regulatory scope of consolidation (as per template EU LI1)	61,002		58,984		2,018
Total net amount under the regulatory scope of consolidation	438,802	394,415	12,618	6,924	24,844
Off-balance sheet amounts (pre CRM and CCF)	99,271	96,848		2,423	
Differences due to different netting rules	16,679		16,679		
Differences due to considerations for provisions in Standardised Approach	-88	-88			
Differences due to regulatory future exposures	12,239		12,239		
Differences due to credit mitigation techniques (CRMs), with substitution effects on the exposure	-22,173	2	-22,175		
Differences due to Credit Conversion Factor (CCF)	-52,394	-51,383		-1,062	
Differences due to the use of financial collateral in	-5	-5			
Other differences not stated above	-24,844				-24,844
Exposure amounts considered for regulatory purposes	467,486	439,787	19,361	8,285	

[1] Total values in column a may not equal the sum of the remaining columns in this table (b to e) as certain items are treated under both the counterparty credit risk as well as the market risk framework (as per template EU LI 1).

[2] As Nordea's securitisation position is synthetic, all is classified as on-balance according to the securitisation framework. But as the securitisation is including e.g. loan promises, an off-balance part is deducted, stemming from adjustments related to Credit Conversion Factors (CCFs).

[3] Sponsor activities are not included in the table above (although are included in the Securitisation chapter).

[4] Exposure at default is not calculated under the market risk framework, resulting in a difference between carrying values and exposure amounts considered for regulatory purposes. Therefore the total amount of carrying values according to the market risk framework is deducted in the final line Other differences not stated above.

Table 79 Transitional own funds disclosure template

EURm		(A) Amount at disclosure date	(B) regulation (EU) no 575/2013 article reference	(C) Amounts subject to pre-regulation treatment or prescribed residual amount of regulation, (EU) no 575/2013
Common Equity Tier 1 capital: instruments and reserves				
1	Capital instruments and the related share premium accounts	5,130	26 (1), 27, 28, 29, EBA list 26	
	of which: Instrument type 1	4,050	EBA list 26 (3)	
	of which: Instrument type 2		EBA list 26 (3)	
	of which: Instrument type 3		EBA list 26 (3)	
2	Retained earnings	24,014	26 (1) (c)	
3	Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	-726	26 (1)	
3a	Funds for general banking risk		26 (1) (f)	
4	Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase out from CET1		486 (2)	
	Public sector capital injections grandfathered until 1 January 2018		483 (2)	
5	Minority Interests (amount allowed in consolidated CET1)		84, 479, 480	
5a	Independently reviewed interim profits net of any foreseeable charge or dividend	43	26 (2)	
6	Common Equity Tier 1 (CET1) capital before regulatory adjustments	28,460		
Common Equity Tier 1 (CET1) capital: regulatory adjustments				
7	Additional value adjustments (negative amount)	-255	34, 105	
8	Intangible assets (net of related tax liability) (negative amount)	-3,451	36 (1) (b), 37, 472 (4)	
9	Empty Set in the EU	NA		
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	-136	36 (1) (c), 38, 472 (5)	
11	Fair value reserves related to gains or losses on cash flow hedges	26	33 (a)	
12	Negative amounts resulting from the calculation of expected loss amounts		36 (1) (d), 40, 159, 472 (6)	
13	Any increase in equity that results from securitised assets (negative amount)		32 (1)	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-73	33 (b)	
15	Defined-benefit pension fund assets (negative amount)	-130	36 (1) (e) , 41, 472 (7)	
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	-19	36 (1) (f), 42, 472 (8)	
17	Holdings of the CET1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		36 (1) (g), 44, 472 (9)	
18	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)		36 (1) (h), 43, 45, 46, 49 (2) (3), 79, 472 (10)	
19	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)		36 (1) (i), 43, 45, 47, 48 (1) (b), 49 (1) to (3), 79, 470, 472 (11)	
20	Empty Set in the EU	NA		
20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative		36 (1) (k)	
20b	of which: qualifying holdings outside the financial sector (negative amount)		36 (1) (k) (i), 89 to 91	

20c	of which: securitisation positions (negative amount)		36 (1) (k) (ii) 243 (1) (b) 244 (1) (b) 258	
20d	of which: free deliveries (negative amount)		36 (1) (k) (iii), 379 (3)	
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in 38 (3) are met) (negative amount)		36 (1) (c), 38, 48 (1) (a), 470, 472 (5)	
22	Amount exceeding the 15% threshold (negative amount)		48 (1)	
23	of which: direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities		36 (1) (i), 48 (1) (b), 470, 472 (11)	
24	Empty Set in the EU	NA		
25	of which: deferred tax assets arising from temporary differences		36 (1) (c), 38, 48 (1) (a), 470, 472 (5)	
25a	Losses for the current financial year (negative amount)		36 (1) (a), 472 (3)	
25b	Foreseeable tax charges relating to CET1 items (negative amount)		36 (1) (l)	
26	Regulatory adjustments applied to Common Equity Tier 1 in respect of amounts subject to pre-CRR treatment			
26a	Regulatory adjustments relating to unrealised gains and losses pursuant to Articles 467 and 468			43
	Of which: ...filter for unrealised loss on AFS debt instruments		467	-45
	Of which: ...filter for unrealised loss 2		467	
	Of which: ...filter for unrealised gain on AFS debt instruments		468	89
	Of which: ...filter for unrealised gain 2		468	
26b	Amount to be deducted from or added to Common Equity Tier 1 capital with regard to additional filters and deductions required pre CRR		481	
	Of which: ...		481	
27	Qualifying AT1 deductions that exceed the AT1 capital of the institution (negative amount)		36 (1) (j)	
28	Total regulatory adjustments to Common equity Tier 1 (CET1)	-4,039		
29	Common Equity Tier 1 (CET1) capital	24,421		
	Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and the related share premium accounts	3,126	51, 52	
31	of which: classified as equity under applicable accounting standards	748		
32	of which: classified as liabilities under applicable accounting standards	2,378		
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1		486 (3)	
	Public sector capital injections grandfathered until 1 January 2018		483 (3)	
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties		85, 86, 480	
35	of which: instruments issued by subsidiaries subject to phase out		486 (3)	
36	Additional Tier 1 (AT1) capital before regulatory adjustments	3,126		
	Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct and indirect holdings by an institution of own AT1 Instruments (negative amount)	-29	52 (1) (b), 56 (a), 57, 475 (2)	
38	Holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		56 (b), 58, 475 (3)	

39	Direct and indirect holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)		56 (c), 59, 60, 79, 475 (4)
40	Direct and indirect holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above the 10% threshold net of eligible short positions) (negative amount)		56 (d), 59, 79, 475 (4)
41	Regulatory adjustments applied to additional tier 1 in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amounts)		
41a	Residual amounts deducted from Additional Tier 1 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013		472, 472(3)(a), 472 (4), 472 (6), 472 (8) (a), 472 (9), 472 (10) (a), 472 (11) (a)
	Of which shortfall		
41b	Residual amounts deducted from Additional Tier 1 capital with regard to deduction from Tier 2 capital during the transitional period pursuant to article 475 of Regulation (EU) No 575/2013		477, 477 (3), 477 (4) (a)
	Of which items to be detailed line by line, e.g. Reciprocal cross holdings in Tier 2 instruments, direct holdings of non-significant investments in the capital of other financial sector entities, etc		
41c	Amount to be deducted from or added to Additional Tier 1 capital with regard to additional filters and deductions required pre- CRR		467, 468, 481
	Of which: ...possible filter for unrealised losses		467
	Of which: ...possible filter for unrealised gains		468
	Of which: ...		481
42	Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)	0	56 (e)
43	Total regulatory adjustments to Additional Tier 1 (AT1) capital	-29	
44	Additional Tier 1 (AT1) capital	3,098	
45	Tier 1 capital (T1 = CET1 + AT1)	27,518	
	Tier 2 (T2) capital: instruments and provisions		
46	Capital instruments and the related share premium accounts	4,561	62, 63
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2		486 (4)
	Public sector capital injections grandfathered until 1 January 2018		483 (4)
48	Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties		87, 88, 480
49	of which: instruments issued by subsidiaries subject to phase out		486 (4)
50	Credit risk adjustments	220	62 (c) & (d)
51	Tier 2 (T2) capital before regulatory adjustments	4,781	
	Tier 2 (T2) capital: regulatory adjustments		
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-64	63 (b) (i), 66 (a), 67, 477 (2)
53	Holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		66 (b), 68, 477 (3)
54	Direct and indirect holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)		66 (c), 69, 70, 79, 477 (4)
54a	Of which new holdings not subject to transitional arrangements		

54b	Of which holdings existing before 1 January 2013 and subject to transitional arrangements		
55	Direct and indirect holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-1,000	66 (d), 69, 79, 477 (4)
56	Regulatory adjustments applied to tier 2 in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amounts)		
56a	Residual amounts deducted from Tier 2capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013		472, 472(3)(a), 472 (4), 472 (6), 472 (8) (a), 472 (9), 472 (10) (a), 472 (11) (a)
	Of which shortfall		
56b	Residual amounts deducted from Tier 2 capital with regard to deduction from Additional Tier 1 capital during the transitional period pursuant to article 475 of Regulation (EU) No 575/2013		475, 475 (2) (a), 475 (3), 475 (4) (a)
	Of which items to be detailed line by line, e.g. reciprocal cross holdings in at1 instruments, direct holdings of non significant investments in the capital of other financial sector entities, etc		
56c	Amount to be deducted from or added to Tier 2 capital with regard to additional filters and deductions required pre CRR		467, 468, 481
	Of which: ...possible filter for unrealised losses		467
	Of which: ...possible filter for unrealised gains		468
	Of which: ...		481
57	Total regulatory adjustments to Tier 2 (T2) capital	-1,064	
58	Tier 2 (T2) capital	3,717	
59	Total capital (TC = T1 + T2)	31,236	
59a	Risk weighted assets in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013(i.e. CRR residual amounts)		
	Of which: ...items not deducted from CET1 (Regulation (EU) No 575/2013residual amounts) (items to be detailed line by line, e.g. Deferred tax assets that rely on future profitability net of related tax liablity, indirect holdings of own CET1, etc)		472, 472 (5), 472 (8) (b), 472 (10) (b), 472 (11) (b)
	Of which: ...items not deducted from AT1 items (Regulation (EU) No 575/2013residual amounts) (items to be detailed line by line, e.g. Reciprocal cross holdings in T2 instruments, direct holdings of non-significant investments in the capital of other financial		475, 475 (2) (b), 475 (2) (c), 475 (4) (b)
	sector entities, etc)		
	Items not deducted from T2 items (Regulation (EU) No 575/2013residual amounts) (items to be detailed line by line, e.g. Indirect holdings of own t2 instruments, indirect holdings of non significant investments in the capital of other financial sector entities, indirect holdings of significant investments in the capital of other financial sector entities etc)		477, 477 (2) (b), 477 (2) (c), 477 (4) (b)
60	Total risk weighted assets	150,215	
	Capital ratios and buffers		
61	Common Equity Tier 1 (as a percentage of risk exposure amount)	16.3%	92 (2) (a), 465
62	Tier 1 (as a percentage of risk exposure amount)	18.3%	92 (2) (b), 465

63	Total capital (as a percentage of risk exposure amount)	20.8%	92 (2) (c)
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus the systemically important institution buffer (G-SII or O-SII buffer), expressed as a percentage of risk exposure amount)	6.9%	CRD 128, 129, 130
65	of which: capital conservation buffer requirement	2.5%	
66	of which: countercyclical buffer requirement	1.4%	
67	of which: systemic risk buffer requirement	3.0%	
67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	0.0%	CRD 131
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	11.8%	CRD 128
69	[non relevant in EU regulation]	NA	
70	[non relevant in EU regulation]	NA	
71	[non relevant in EU regulation]	NA	
	Amounts below the thresholds for deduction (before risk weighting)		
72	Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	261	36 (1) (h), 45, 46, 472 (10) 56 (c), 59, 60, 475 (4) 66 (c), 69, 70, 477 (4)
73	Direct and indirect holdings by the institution of the CET 1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	1,212	36 (1) (i), 45, 48, 470, 472 (11)
74	Empty Set in the EU		
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	79	36 (1) (c), 38, 48, 470, 472 (5)
	Applicable caps on the inclusion of provisions in Tier 2		
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)		62
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach		62
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	220	62
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	622	62
	Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 2022)		
80	Current cap on CET1 instruments subject to phase out arrangements		484 (3), 486 (2) & (5)
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)		484 (3), 486 (2) & (5)
82	Current cap on AT1 instruments subject to phase out arrangements	591	484 (4), 486 (3) & (5)
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)		484 (4), 486 (3) & (5)
84	Current cap on T2 instruments subject to phase out arrangements	332	484 (5), 486 (4) & (5)
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)		484 (5), 486 (4) & (5)

Table 80 Leverage ratio disclosure templates

Table LRSum: Summary reconciliation of accounting assets and leverage ratio exposures

	EURbn	Applicable Amounts
1	Total assets as per published financial statements	554,848
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-45,764
3	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio exposure measure in accordance with Article 429(13) of Regulation (EU) No 575/2013 "CRR")	
4	Adjustments for derivative financial instruments	-16,066
5	Adjustments for securities financing transactions "SFTs"	-1,673
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	34,817
EU-6a	(Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013)	
EU-6b	(Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013)	
7	Other adjustments	-4,068
8	Total leverage ratio exposure	522,094

Table LRCom: Leverage ratio common disclosure

	EURbn	CRR leverage ratio exposures
On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	437,482
2	(Asset amounts deducted in determining Tier 1 capital)	-4,068
3	Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)	433,415
Derivative exposures		
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	6,431
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	20,647
EU-5a	Exposure determined under Original Exposure Method	
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-8,634
8	(Exempted CCP leg of client-cleared trade exposures)	
9	Adjusted effective notional amount of written credit derivatives	68,944
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-64,348
11	Total derivative exposures (sum of lines 4 to 10)	23,039
Securities financing transaction exposures		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	42,462
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	-12,682
14	Counterparty credit risk exposure for SFT assets	1,044
EU-14a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of Regulation (EU) No 575/2013	
15	Agent transaction exposures	
EU-15a	(Exempted CCP leg of client-cleared SFT exposure)	
16	Total securities financing transaction exposures (sum of lines 12 to 15a)	30,823
Other off-balance sheet exposures		
17	Off-balance sheet exposures at gross notional amount	99,271
18	(Adjustments for conversion to credit equivalent amounts)	-64,454
19	Other off-balance sheet exposures (sum of lines 17 and 18)	34,817
Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)		
EU-19a	(Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet))	
EU-19b	(Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet))	
Capital and total exposures		
20	Tier 1 capital	27,518
21	Total leverage ratio exposures (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)	522,094
Leverage ratio		
22	Leverage ratio	5.27%
Choice on transitional arrangements and amount of derecognised fiduciary items		
EU-23	Choice on transitional arrangements for the definition of the capital measure	Transitional
EU-24	Amount of derecognised fiduciary items in accordance with Article 429(11) of Regulation (EU) NO 575/2013	

LRSpl: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)

		CRR leverage ratio exposures
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	437,482
EU-2	Trading book exposures	34,365
EU-3	Banking book exposures, of which:	403,117
EU-4	Covered bonds	26,840
EU-5	Exposures treated as sovereigns	65,351
EU-6	Exposures to regional governments, MDB, international organisations and PSE NOT treated as sovereigns	4,710
EU-7	Institutions	2,887
EU-8	Secured by mortgages of immovable properties	144,317
EU-9	Retail exposures	27,964
EU-10	Corporate	109,952
EU-11	Exposures in default	3,803
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	17,294

LRQua: Free format text boxes for disclosure on qualitative items

1	Description of the processes used to manage the risk of excessive leverage: The risk of excessive leverage is included in the Group's reporting and control processes and is monitored by the group Board and CEO. The leverage ratio as defined in the CRDIV/CRR is further an integrated part of the Risk appetite framework for which internal limits and targets are set.
2	Description of the factors that had an impact on the leverage Ratio during the period to which the disclosed leverage Ratio refers: The leverage ratio increased from 5.1% in Q4 2018 to 5.3% in Q4 2019. The improved leverage ratio was mainly driven by a decrease in on-balance exposures (with slight increase of repurchase agreements). An increase in Tier 1 capital mainly driven by increased deduction of intangible assets.

Table 81 Loans to the real estate management industry, split by geography

	2019		2018	
EURm	Loans	%	Loans	%
Denmark	10,528	24.0	9,851	22.5
Finland	8,073	18.4	7,963	18.2
Norway	9,053	20.6	9,070	20.7
Sweden	15,509	35.3	15,410	35.2
Russia	3	0.0	18	0.0
Other	707	1.6	1,443	3.3
Total	43,873	100.0	43,754	100.0

Table 82 Loans to the shipping and offshore industry, split by segment 2019

			2018	
EURm	Loans	%	Loans	%
Bulk carriers	998	12.9	1,060	13.9
Product tankers	497	6.4	439	5.7
Crude tankers	1,209	15.7	1,041	13.6
Chemical tankers	395	5.1	419	5.5
Gas Tankers	1,431	18.5	1,334	17.5
Other shipping	1,319	17.1	1,389	18.2
Offshore and oil services	1,877	24.3	1,956	25.6
Total	7,726	100.0	7,638	100.0

Table 83 Loans to corporate customers, split by size of loans

	2019		2018	
Loan size, EURm	Loans	%	Loans	%
0-10	62,602	41	64,897	43
10-50	36,112	24	35,689	24
50-100	20,737	14	19,613	13
100-250	19,798	13	17,407	12
250-500	4,078	3	5,407	4
500-	8,184	5	7,545	5
Total	151,513	100	150,558	100

Table 84 Loan-to-value distribution, retail mortgage exposure, on-balance

The loan-to-value (LTV) ratio is considered a useful measure to evaluate collateral's quality, i.e. the credit extended divided by the market value of the collateral pledged. In the table, IRB retail mortgage exposures are distributed by LTV buckets based on the LTV ratio.

	2019		2018	
EURbn	Exposure[1]	%	Exposure[1]	%
<50%	114	81	111	81
50-70%	20	14	20	14
70-80%	4	3	4	3
80-90%	1	1	1	1
>90%	1	1	1	0
Total	140	100	137	100

[1] Exposure were continuously distributed by LTV buckets.

Table 85 Countercyclical capital buffer

	General credit risk exposures		Trading book exposures		Own funds requirement					
EURm	Standardised approach	IRB approach	Standardised approach	Internal models approach	General credit exposures	Trading book exposures	Securitisation exposures	Total	Own funds requirement weight	Counter-cyclical buffer rate
Countries with existing CCyB rate										
Czech Republic	0	13			1			1	0	2%
Denmark	2,411	86,157	0	0	2,095	0		2,095	0	1%
France	2	357	0	0	16	0		16	0	0%
United Kingdom	211	1,961	0	0	95	0		95	0	1%
Hong Kong	0	64	0		3	0		3	0	2%
Ireland	14	895	0	0	19	0		19	0	1%
Iceland	1	194	0	0	4	0		4	0	2%
Lithuania	0	288			12			12	0	1%
Norway	7,648	61,549	0	1	2,123	0		2,123	0	3%
Sweden	2,101	95,025	0	1	2,306	0	70	2,376	0	3%
Slovakia	0	15			1			1	0	2%
Bulgaria	0	2			0			0	0	1%
Sub-total	12,389	246,522	0	1	6,673	0	70	6,743	1	
Countries with own funds requirements weight 1% or above and no existing CCyB rate										
Bermuda		1,605		0	113	0		113	0	
Finland	1,272	68,792	0	0	1,928	0		1,928	0	
Marshall [illegible]	0	1,559		0	126	0		126	0	
Sub-total	1,272	71,956	0	0	2,168	0		2,168	0	
Countries with own funds requirement below 1% and no existing CCyB rate										
Sub-total	1,191	17,198	0	0	804	0		804	0	
Total	14,852	335,677	1	2	9,645	0	70	9,715	1	

EURm	CCyB Rates
Total risk exposure amount	150,215
Institution specific countercyclical capital buffer rate	1.39%
Institution specific countercyclical capital buffer requirement	2,085

Table 86 LI3 Specification of undertakings

			Method of consolidation					
Owner	Company Name	Voting power of holding %	Accounting consolidation	Regulatory consolidation	Neither consoli-dated nor deducted	Deducted	Description of entity	Domicile
Nordea Bank Abp	Nordea Finance Finland Ltd	100	Acquisition method	Full consolidation			Credit institution	Finland
	Nordea Mortgage Bank Plc	100	Acquisition method	Full consolidation			Credit institution	Finland
	Nordea Funds Ltd	100	Acquisition method	Full consolidation			Financial institution	Finland
	Automatia Pankkiautomaatit Oy	33	Equity method	Equity method			Financial institution	Finland
Nordea Finance Finland Ltd	Tukirahoitus Oy	100	Acquisition method	Full consolidation			Financial institution	Finland
Nordea Bank Abp	Nordea Eiendomskreditt AS	100	Acquisition method	Full consolidation			Credit institution	Norway
	Nordea Finans Norge AS	100	Acquisition method	Full consolidation			Financial institution	Norway
	Eksportfinans ASA	23	Equity method	Equity method			Credit institution	Norway
	Tomteutvikling Norge AS	100	Acquisition method	Full consolidation			Financial institution	Norway
	Gjensidige Bank ASA	100	Acquisition method	Full consolidation			Credit Institution	Norway
Gjensidige Bank AS	Gjensidige Bank Boligkreditt AS	100	Acquisition method	Full consolidation			Credit Institution	Norway
Nordea Bank Abp	Nordea Finans Danmark A/S	100	Acquisition method	Full consolidation			Financial institution	Denmark
	Nordea Kredit Realkreditaktieselskab	100	Acquisition method	Full consolidation			Credit institution	Denmark
	Fionia Asset Company A/S	100	Acquisition method	Full consolidation			Financial institution	Denmark
Nordea Finans Danmark A/S	BH Finance K/S	100	Acquisition method	Full consolidation			Financial institution	Denmark
	NAMIT 10 K/S	100	Acquisition method	Full consolidation			Financial institution	Denmark
	UL Transfer Aps	100	Acquisition method	Full consolidation			Financial institution	Denmark
	DT Finance K/S	100	Acquisition method	Full consolidation			Financial institution	Denmark
	BAAS 2012 K/S	100	Acquisition method	Full consolidation			Financial institution	Denmark
Fionia Asset Company A/S	Ejendomsselskabet Vestre Stationsvej 7, Odense A/S	100	Acquisition method	Full consolidation			Ancillary services undertaking	Denmark
Nordea Bank Abp	LLC Promyshlennaya Kompaniya Vestkon	100	Acquisition method	Full consolidation			Financial institution	Russia
Promyshlennaya Companiya Vestkon / Nordea Bank Abp	Joint Stock Company Nordea Bank	100	Acquisition method	Full consolidation			Credit institution	Russia
Joint Stock Company Nordea Bank	Nordea Leasing LLC	100	Acquisition method	Full consolidation			Financial institution	Russia
Nordea Bank Abp	Nordea Hypotek AB (publ)	100	Acquisition method	Full consolidation			Credit institution	Sweden
	Nordea Finans Sverige AB (publ)	100	Acquisition method	Full consolidation			Credit institution	Sweden
	Nordea Asset Management Holding AB	100	Acquisition method	Full consolidation			Financial institution	Sweden
	Bankomat AB	20	Equity method	Equity method			Financial institution	Sweden
	Nordea Baltic AB	100	Acquisition method	Full consolidation			Financial institution	Sweden
	Nordea Markets Holding Company INC	100	Acquisition method	Full consolidation			Financial institution	USA
Nordea Asset Management Holding AB	Nordea Investment Management AB	100	Acquisition method	Full consolidation			Financial institution	Sweden
	Nordea Investment Funds S.A.	100	Acquisition method	Full consolidation			Financial institution	Luxembourg
Nordea Investment Management AB	Nordea Investment Management North America Inc	100	Acquisition method	Full consolidation			Financial institution	USA
	Nordea Investment Management AG	100	Acquisition method	Full consolidation			Financial institution	Germany
	Nordea Asset Management UK Ltd	100	Acquisition method	Full consolidation			Financial institution	UK
	Madrague Capital Partners AB	40	Equity method	Equity method			Financial institution	Sweden
Nordea Baltic AB	Luminor Holding AS	20	Equity method	Equity method			Finacial institution	Estonia
Nordea Markets Holding Company INC	Nordea Markets LLC	100	Acquisition method	Full consolidation			Financial institution	USA

			Entities not in the consolidated situation					
Owner	Company Name	Voting power of holding %	Accounting consolidation	Regulatory consolidation	Neither consoli-dated nor deducted	Ded-ucted	Description of entity	Domicile
Nordea Bank Abp	Nordea Life Holding AB including related subsidiaries and participations				X		Non CRR	Sweden
	Bohemian Wrappsody				X		Non CRR	Sweden
	CrediWire ApS							
	Danbolig A/S				X		Non CRR	Denmark

	Eiendomsverdi AS	X	Non CRR	Norway
	First Card AS	X	Non CRR	Norway
	Getswish AB	X	Immaterial financial institution, article 19	Sweden
	Kiinteistö Oy Kaarenritva	X	Non CRR	Finland
	Kiinteistö Oy Kellokosken Tehtaat	X	Non CRR	Finland
	Mondido Payments AB	X	Immaterial financial institution, article 19	Sweden
	Myyrmäen Autopaikoitus Oy	X	Non CRR	Finland
	Nordea Essendropsgate Eiendomsforvaltning AS	X	Non CRR	Norway
	Nordea Hästen Fastighetsförvaltning AB	X	Non CRR	Sweden
	Nordea Limited	X	Non CRR	Great Britain
	Nordea Putten Fastighetsförvaltning AB	X	Non CRR	Sweden
	Nordea Vallila Fastighetsförvaltning Ab	X	Non CRR	Finland
	Nordic Baltic Holding AB	X	Non CRR	Sweden
	Nordic KYC Utility AB	X	Non CRR	Sweden
	P27 Nordic Payments Platform AB	X	Non CRR	Sweden
	PFC Technology AB	X	Immaterial financial institution, article 19	Sweden
	Privatmegleren AS	X	Non CRR	Norway
	Relacom Management AB	X	Non CRR	Sweden
	Securus Oy	X	Non CRR	Finland
	Structured Finance Servicer A/S	X	Non CRR	Denmark
	Subaio ApS	X	Non CRR	Denmark
	Suomen Luotto-osuuskunta	X	Non CRR	Finland
	Svenska e-fakturabolaget AB	X	Immaterial financial institution, article 19	Sweden
	Swipp Holding APS	X	Immaterial financial institution, article 19	Denmark
	USE Intressenter AB	X	Non CRR	Sweden
Nordea Kredit Realkreditaktieselskab	E-nettet Holding A/S	X	Non CRR	Denmark
Nordea Finans Danmark A/S	Fleggaard Busleasing	X	Non CRR	Germany
	NF Fleet A/S	X	Non CRR	Denmark
Nordea Finance Finland Ltd	Koy Levytie 6	X	Immaterial financial institution, article 19	Finland
	Koy Raahen Tiiranpesä	X	Immaterial financial institution, article 19	Finland
	Koy Tulppatie 7	X	Immaterial financial institution, article 19	Finland
	NF Fleet Oy	X	Non CRR	Finland
Join Stock Company Nordea Bank	Lanvin	X	Immaterial financial institution, article 19	Russia
	Matis	X	Immaterial financial institution, article 19	Russia
Nordea Finans Sverige AB (publ)	NF Fleet AB	X	Non CRR	Sweden
Nordea Finans Norge AS	NF Fleet AS	X	Non CRR	Norway
Nordea Investment Funds S.A	Nordea Funds Service Germany Gmbh	X	Non CRR	Germany
	NAM Chile SpA	X	Immaterial financial institution, article 19	Chile
	Nordea Asset Management Schweiz GmbH	X	Non CRR	Switzerland
Nordea Asset Management Holding AB	Nordea Asset Management Alternative Investments AB	X	Immaterial financial institution, article 19	Sweden
Nordea Asset Management Alternative Investments AB	Nordea Private Equity GP 1 S.à.r.l.	X	Immaterial financial institution, article 19	Luxemburg
	Nordea Private Equity General Partner 1 SCS	X	Immaterial financial institution, article 19	Luxemburg
Nordea Investment Management AB	Nordea Private Equity Holding A/S	X	Immaterial financial institution, article 19	Denmark
Nordea Private Equity Holding A/S	Nordea Private Equity I A/S	X	Immaterial financial institution, article 19	Denmark
	Nordea Private Equity II - EU Mezz A/S	X	Immaterial financial institution, article 19	Denmark
	Nordea Private Equity II - EU MM Buyout A/S	X	Immaterial financial institution, article 19	Denmark
	Nordea Private Equity II - Global A/S	X	Immaterial financial institution, article 19	Denmark
	Nordea Private Equity III - GLOBAL A/S	X	Immaterial financial institution, article 19	Denmark
	PWM Global PE III ApS	X	Immaterial financial institution, article 19	Denmark

Table 87 Capital and risk information guide

Reference	Capital and Risk Management report	Annual Report	www.nordea.com
Quantification			
End of year results			
Minimum capital requirements	Part 2, table 6	Capital management	
Business area results	Board risk statement	Business area results	Nordea.com > Latest interim results > Factbook
Development of REA	Part 2, table 7	Capital management	
Development of Own funds	Part 2, table 6	Capital management	
Capital ratios	Part 2, table 5	Capital management	
Leverage ratio	Part 2, table 80		
Capital requirements parameters			
Credit Risk	Part 2, Credit risk	G2	
Counterparty Credit Risk	Part 2, Counterparty credit risk	G2	
Market Risk	Part 2, Market risk	G2	
Operational Risk	Part 2, Operational risk	Capital management	
Securitisations	Part 2, Securitisations	Capital management	
Liquidity Risk	Part 2, Liquidity risk and	G2	
Frameworks			
Governance, measurement, management and mitigation of risks			Nordea.com > About Nordea > Corporate Governance >
Credit Risk	Part 1, Credit risk	G2	
Counterparty Credit Risk	Part 1, Counterparty credit risk	G2	
Market Risk	Part 1, Market risk	G2	
Operational Risk	Part 1, Operational and compliance risk	G2	
Compliance Risk	Part 1, Operational and compliance risk	G2	
Liquidity Risk	Part 1, Liquidity risk and ILAAP	G2	
Securitisations	Part 1, Securitisations		
Life and pensions operation	Part 1, NLP		
Indicators of global systemic importance			
New regulations	Introduction, Regulatory development	New regulations	
Remuneration	Remuneration	Remuneration	Nordea.com > About Nordea > Corporate Governance > Remuneration > Nordea's Remuneration Policy

Table 88 CRR reference table

CRR ref.	High level summary	Reference
Title I: General Principles		
Article 431	Scope of disclosure requirement	
1	General disclosure requirements.	This report and disclosures at nordea.com addresses the requirement.
2	Requirement to disclose operational risk information.	Part 1 & part 2, Operational risk
3	Requirement to have a formal policy to comply with the disclosure requirements.	Nordea Bank Abp and its subsidiaries have adopted formal policies for complying with the disclosure requirements and has established policies for assessing the appropriateness of these disclosures, including their verification and frequency.
4	On request, an explanation of rating decisions to the loan applicants.	Could be provided upon request.
Article 432	Non-material, proprietary or confidential information	
(1) - (4)	Institutions may, under certain conditions, omit information that is not material, proprietary or confidential.	Part 2, table 89
Article 433	Frequency of disclosure	
	Requirements on frequency of Pillar 3 disclosures.	The disclosures are made annually in conjunction with the date of publication of Nordea Group's financial statements. For items where more frequent disclosures are assessed needed, information is given in the interim financial reports or on the Investor Relations pages on www.nordea.com.
Article 434	Means of disclosures	
1	Medium for Pillar 3 disclosures and cross-reference for synonymous information.	This table, table 87 and throughout the text where applicable.
2	Indicate location of equivalent dislosures that could satisfy both CRR and accounting or similar requirements.	Table 87
Title II: Technical criteria on transparency and disclosure		
Article 435	Risk management objectives and policies	
(1) (a)	Risk management strategies.	Throughout Part 1
(1) (b)	Organisation and governance.	Throughout Part 1
(1) (c)	Reporting systems.	Throughout Part 1
(1) (d)	Hedging policies	Part 1, Credit risk
(1) (e)	Management declaration on risk management adequacy.	Executive Summary - footer in the end.
(1) (f)	Risk profile	Introduction, Board risk statement
(2) (a) - (e)	Disclosures regarding governance arrangements.	Nordea.com > About Nordea > Corporate Governance
Article 436	Scope of application	
(a)	Name of the institution.	Part 1, Executive Summary - footer in the end.
(b) (i)-(iv)	Outline of the differences in the basis of consolidation for accounting and prudential purposes	Part 2, table 86
(c)	Practical or legal impediments to transfer funds between parent and subsidiaries.	Part 1, ICAAP, stress testing and capital requirement
(d)	Capital shortfalls in subsidiaries outside the scope of consolidation.	N/A
(e)	Making use of articles on derogations from a) prudential requirements (Article 7) and b) liquidity requirements for individual subsidiaries/entities (Article 9).	N/A
Article 437	Own funds	
(1) (a)	Full reconciliation to own funds and balance sheet.	Part 2, table 77
(1) (b)	Description of main features of the instruments.	Nordea.com > Investor relations > Reports and presentations > Capital instruments
(1) (c)	Full terms and conditions of the instruments.	Nordea.com > Investor relations > Reports and presentations > Capital instruments
(1) (d) (i)-(iii)	Separate disclosure of the nature.	Part 2, table 79
(1) (e)	Description of all restrictions applied to own funds calculations	Part 2, table 79
(1) (f)	Calcuation of capital ratios	Part 2, table 79
Article 438	Capital requirements	

(a)	Summary of the approach to assessing adequacy of capital to its activities.	Part 1, ICAAP, stress testing and capital requirement
(b)	Upon demand from the authorities, result of the ICAAP.	Could be provided upon request.
(c) - (f)	Own funds requirements for credit risk (Standardised and IRB approach), market and operational risk.	Part 2, table 6
Article 439	Exposure to counterparty credit risk	
(a)	Methodology for credit limits and internal capital allocation for counterparty credit risk.	Part 1, Counterparty credit risk
(b)	Policies for securing collateral and establishing credit reserves.	Part 1, Counterparty credit risk
(c)	Policies for wrong-way risk exposures.	Part 1, Counterparty credit risk
(d)	Impact of any collateral postings upon credit rating downgrade.	Part 1, Counterparty credit risk
(e)	Net derivative credit exposure built-up.	Part 2, tables 44, 45, 48, 49, 52
(f)	Methods for exposure value measurement.	Part 2, tables 45, 52, 53
(g)	Notional value of credit derivatives hedges and distribution of current credit exposure by type of exposure.	Part 2, table 50
(h)	Notional amounts of credit derivatie transactions and distribution of credit derivatives products.	Part 2, table 50
(i)	Estimate of alfa if the institution has received permission of the competent authorities to estimate alfa.	N/A
Article 440	Capital buffers	
(1) - (2)	Geographical distribution and amount of institution-specific countercyclical capital buffer.	Part 2, table 85
Article 441	Indicators of global systemic importance	
(1) - (2)	Indicator values used for determing the score of the institution.	N/A
Article 442	Credit risk adjustments	
(a)	Definitions of 'past due' and 'impaired'.	Part 1, Credit risk
(b)	Methodology used for determining specific and general credit risk adjustments.	Part 1, Credit risk
(c)	The total amount of original exposures and the average amount of the exposures over the period per exposure class.	Part 2, table 28, 29
(d)	Exposures distributed by exposure class and geography.	Part 2, table 9, table 20-23
(e)	Distribution of exposures by industry broken down by exposure classes.	Part 2, table 10
(f)	The residual maturity breakdown of all the exposures, broken down by exposure classes.	Part 2, table 11
(g) (i) - (iii)	Breakdown of impaired exposures and past due exposures, specific and general credit risk adjustments, charges for the period, by industry or counterparty type.	Part 2, table 33
(h)	Impaired and past due exposures broken down by geographical areas.	Part 2, table 34
(i) (i) - (v)	Reconciliation of changes in the specific and general credit risk adjustments for impaired exposures covering description of the type of adjusments, the opening balances, the amounts taken against the credit risk adjustments and the amounts that have ben set aside for estimated probable losses on the exposures.	Part 2, table 35, Nordea has no general credit risk adjustments
Article 443	Unencumbered assets	
	Disclosure on unencumbered assets according to EBA Guidelines EBA/GL/2014/03	Part 2, table 67
Article 444	Use of ECAIs	
(a)	Names of nominated ECAIs.	Part 1, Credit risk
(b)	The Exposure classes for which each ECAI is used.	Part 1, Credit risk
(c)	Description of the process for translating external ratings into credit quality steps.	Part 1, Credit risk
(d)	Mapping of external ratings from each nominated ECAI to the credit quality steps.	Part 1, Credit risk & Part 2, table 41
(e)	The exposure values before and after credit risk mitigation associated with each credit quality step.	Part 2, table 18, table 46
Article 445	Exposure to market risk	
	Own Funds requirements for market risk.	Part 2, table 64
Article 446	Operational risk	

	Approach used to calculate Own Funds requirements for operational risk.	Part 2, table 6, Part 1, Operational risk and compliance risk
Article 447	Exposures in equities not included in the trading book	
(a)	Differentiation between exposures based on their objectives.	Part 2, table 63
(b)	The balance sheet value, the fair value and, for those exchange-traded, a comparison to the market price where it is materially different from the fair value.	Part 2, table 63
(c)	The types, nature and amounts of equity exposures.	Part 2, table 63
(d)	Cumulative realised gains or losses arising from sales and liquidations in the period.	Part 2, table 63
(e)	Total unrealised gains or losses.	Part 2, table 63
Article 448	Exposure to interest rate risk on positions not included in the trading book	
(a)	Nature, key assumptions and frequency of measurement of the interest rate risk.	Part 1, Market risk
(b)	The variation in earnings, economic value or other relevant measure used by the management for upward and downward rate shocks, broken down by currency.	Part 2, tables 61-62
Article 449	Exposure to securitisation positions	
(a)	Objectives in relation to securitisation activity.	Part 1, Securitisation
(b)	Nature of other risks including liquidity risk inherent in securitised assets.	Part 1, Securitisation
(c)	Type of risks in terms of seniority of underlying securitisation positions and in terms of assets underlying those latter securitisation positions assumed and retained with re-securitisation activity.	Part 2, tables 54
(d) -(e)	Different roles played by the institution in the securitisation process and the extent of its involvement.	Part 2, tables 54, Part 1, Securitisation
(f)	Description of the processes in place to monitor changes in the credit and market risk of securitisation exposures.	Part 1, Credit risk & Market risk
(g)	Description of the institution's policy governing the use of hedging and unfunded protection to mitigate the risks of retained securitisation and re-securitisation exposures.	N/A
(h)	Approaches used to calculate REA for its securitisation activities.	Part 1, Securitisation
(i)	Types of SSPE that the institution, as sponsor, uses to securitise third-party exposures.	Part 2, table 54 and Part 1, Securitisation
(j) (i) - (vi)	Summary of the institutions accounting policies for securitisations activities.	Part 1, Securitisation
(k)	Names of ECAIs used for securitisations.	N/A
(l)	Description of Internal Assessment Approach.	N/A
(m)	Explanation of changes to any of the quantitative disclosures.	N/A
(n) (i) - (vi)	Information on banking and trading book securitisation exposures broken down by exposure type.	Part 2, table 54. Nordea does not have any securitisation exposures in the trading book
(o) (i) - (ii)	Additional information on banking book and trading book securitisation exposures.	Part 2, table 54. Nordea does not have any securitisation exposures in the trading book
(p)	Amount of impaired/past due assets securitised and the losses recognised related to banking book securitisations, by exposure type.	N/A
(q)	Outstanding exposures securitised by the institution and subject to a capital requirement for market risk, broken down into traditional/synthetic and by exposure type.	N/A
(r)	Whether the institution has provided support to securitisation vehicles and the impact on own funds.	N/A
Article 450	Remuneration policy	
1	Remuneration policy and practices:	Nordea annual report and Nordea.com > About Nordea > Corporate Governance > Remuneration > Nordea's Remuneration Policy
(1) (a)	- decision making of remuneration committee	See references above
(1) (b)	- link between pay and performance	See references above

(1) (c) - (f)	- criteria for performance measurement, variable components parameters	See references above
(1) (g) - (i)	- aggregate quantitative information including necessary splits	See references above
(1) (j)	- total remuneration for each member of the management body, upon request	Annual report
2	- quantitative information per member of the management body for significant institutions	Annual report
Article 451	Leverage	
(1) (a) - (e)	Leverage ratio and its components	Part 2, table 80

Title III: Qualifying requirements for the use of particular instruments or methodologies

Article 452	Use of the IRB Approach to credit risk	
(a)	Permission from the authority to use IRB approach.	Part 1, Credit risk
(b)	An explanation of:	
(b) (i)	Internal ratings and relation to external ratings.	N/A
(b) (ii)	Use of internal ratings other than for calculating REA.	Part 1, Credit risk
(b) (iii)	The process for managing and recognising credit risk mitigation.	Part 1, Credit risk
(b) (iv)	Control mechanisms for rating systems.	Part 1, Credit risk
(c) (i) - (v)	Description of the internal ratings process, separately for each IRB exposure class.	Part 1, Credit risk
(d)	Exposure values, separately for each IRB exposure class.	Part 2, table 20-23
(e) (i) - (iii)	For exposures towards IRB corporate and institutions, split of total exposure, 'Exposure-weighted average risk weight and Undrawn commitments per risk grade.	Part 2, tables 21-22
(f)	Information on Retail exposures under the IRB approach.	Part 2, table 23
(g)	Actual specific credit risk adjustments during the period.	Part 2, tables 15, table 32
(h)	The factors that impacted on the loan losses during the period.	Executive Summary & Part 2, table 36
(i)	Historical comparison of parameter estimates against the realised outcomes.	Part 2, table 42
(j) (i) - (ii)	PD and LGD for all IRB exposure classes, split down on relevant geographical locations.	Part 2, table 43
Article 453	Use of credit risk mitigation techniques	
(a)	Policies and processes for the use of on- and off-balance sheet netting.	Part 1, Credit risk
(b)	Policies and processes for collateral valuation and management.	Part 1, Credit risk
(c)	Main types of collateral.	Part 2, table 31
(d)	Types of guarantor and credit derivative counterparty and their creditworthiness.	Part 1, Credit risk
(e)	Information about market or credit risk concentrations within the credit mitigation taken.	Part 1, Credit risk and Market risk
(f)	The exposure value covered by eligible collateral for exposures under the Standardised or Foundation IRB approach.	Part 2, table 18, table 30
(g)	Exposures covered by guarantees or credit derivatives.	Part 2, table 30
Article 454	Use of the Advanced Measurement Approaches to operational risk	
	Description of the use of risk transfer mechanisms for the purpose of mitigation of operational risk.	N/A
Article 455	Use of Internal Market Risk Models	
(a) (i)	Characteristics of the models used.	Part 1, Market risk
(a) (ii)	The methodologies used for the internal models for incremental default and migration risk and for correlation trading.	Part 1, Market risk
(a) (iii)	Description of stress testing applied to the sub-portfolio.	Part 1, Market risk
(a) (iv)	Approaches used for back-testing and validating the accuracy and consistency of the internal models.	Part 1, Market risk
(b)	Scope of permission by the competent authority.	Part 1, Market risk
(c)	Description of the extent and methodologies for inclusion in the trading book, comply with prudential valuation requirements.	Part 1, Market risk

(d) (i) - (iii)	The highest, lowest and average of VaR, sVaR, Incremental risk charge and Comprehensive Risk Charge.	Part 2, table 60
(e)	The elements of the own fund requirements for market risk.	Part 2, table 64
(f)	Weighted average liquidity horizon for each sub-portfolio covered by the internal models.	Part 1, Market risk
(g)	Comparison of the daily end-of-day VaR measures to the one-day changes of the portfolio's value.	Part 2, table 59

Table 89 Information not disclosed due to non-materiality, proprietary or confidential nature

Regulatory reference	Reason for not including	Detailed reason for not including	Reference to information provided
EU GL OVA CRR 435 (1)(B) The approved limits to which the institution is exposed to	Risk appetite limits are strictly confidential	Thresholds for risk appetite limits are not disclosed, they are of confidential strategic nature. The relevant supervisory authorities have access to the full report including limits.	The metrics, to which risk appetite limits apply, are stated in Part 2 Governance
EBA RTS on CCB	The information is immaterial	Detailed information on domicile with 0 countercyclical buffer and less than 1% of Nordea's own fund contribution is not material contribution to the calculation of the Nordea CCyB rate.	Summary of these countries contribution to the CCyB calculation is included in table 84

Nordea Life and Pension

Table

Table 90 Assets and liabilities of NLP

The table shows NLP assets and liabilities at 31 December 2019 on an IFRS basis. The development of assets and liabilities are determined predominantly by in- and outflows of insurance premiums, claims, investment returns and holding of capital in NLP.

EURm	2019	2018 [1]
Assets		
Investment properties	1,578	1,588
Shares	10,095	8,780
Alternative investments	1,271	1,112
Debt securities - At fair value	4,424	7,361
Debt securities - Held to maturity	3,251	3,135
Bonds pledged as collateral	0	0
Deposits and treasury bills	1,184	827
Financial assets backing investment contracts without risk and guarantees	27,482	21,689
Other financial assets	79	489
Other assets	451	471
Assets held for sale	0	0
Total assets	49,815	45,452
Liabilities		
Traditional provisions	6,304	6,187
Collective bonus potential	2,112	1,930
Unit-linked provisions	6,977	6,375
Investment contracts with guarantees	3,318	3,234
Investment contracts without risk and guarantees	27,482	21,689
Other insurance provisions	535	504
Other financial liabilities	411	500
Other liabilities	280	2,508
Liabilities held for sale	0	0
Shareholders' equity	1,396	1,525
Minority interest	0	0
Subordinated loans	1,000	1,000
Total liabilities and equity	49,815	45,452

[1] The contribution of Velliv (former local entity NLP-DK) was not included in individual line items for 2018, but in "Shares". Velliv was fully divested in December 2019 and was not included in the data set for 2019.

Table 91 Effects of market risk on NLP

The table shows the sensitivity of the financial accounts to changes in market risks with the impact split between the effect on policyholders and Nordea Group's own account.

	2019[1]		2018[1]	
EURm	Effect on policyholders	Effect on Nordea Group's Account	Effect on policyholders	Effect on Nordea Group's Account
50 bp increase in interest rates	-286	7	-287	-6
50 bp decrease in interest rates	287	-7	289	6
12% decrease in all shares	-829	0	-681	-1
8% decrease in property values	-115	-1	-116	-1
8% loss of counterparties	-1	0	-2	0

"+" means that policyholders liabilities or Nordea Group's account (profit/equity) increase and "-" means that policyholders liabilities or Nordea Group's account (profit/equity) decrease

[1] Data for both years was exclusive Velliv Pension & Livsforsikringsselskab A/S, Denmark.

Table 92 Effects of life and insurance risks

The table shows the sensitivity of the financial accounts to changes in life insurance risk. The impact is split between the effect on policyholders and Nordea Group's own account. Increases in mortality and disability rates have a small negative impact on Nordea Group's own account due to the contract type and buffer.

	2019[1]		2018[1]	
EURm	Effect on policyholders	Effect on Nordea Group's Account	Effect on policyholders	Effect on Nordea Group's Account
Mortality - increased living with 1 year	23	-18	23	-18
Mortality - decreased living with 1 year	0	0	0	0
Disability - 10% increase	8	-7	9	-7
Disability - 10% decrease	-6	4	-6	5

"+" means that policyholders liabilities or Nordea Groups account (profit/equity) increase and "-" means that policyholders liabilities or Nordea Group's account (profit/equity) decrease.

[1]Data for both years was exclusive Velliv Pension & Livsforsikringsselskab A/S, Denmark.

Table 93 Investment return, traditional life insurance

The table shows the investment return of traditional business for the consolidated life companies. Assets under management (AuM) are affected by the investment return and the in- and outflows of business.

	2019[1]		2018[1]	
EURm	AuM	Investment return	AuM	Investment return
Interest-bearing securities and deposits	7,415	2.6%	7,230	0.8%
Shares	1,280	13.2%	1,228	-1.1%
Alternative investments	581	6.0%	576	2.8%
Investment property	1,017	9.1%	979	5.5%
Total return	10,292	4.7%	10,013	1.1%

[1] Data for both years was exclusive Velliv Pension & Livsforsikringsselskab A/S, Denmark.

Table 94 Insurance provisions (technical provisions) and provisions on investment contracts divided into guarantee levels (technical interest rates)

The table shows the insurance provisions and provisions on investment contracts divided into guarantee levels.

EURm	None	0%	0-2%	2-3%	3-4%	>4%	Total liabilities
2019[1]							
Technical provisions	7,059	1,426	2,827	2,228	2,170	889	16,599
2018[1]							
Technical provisions	6,447	1,367	2,772	2,181	2,175	849	15,791

[1]Data for both years was exclusive Velliv Pension & Livsforsikringsselskab A/S, Denmark.

Table 95 Financial buffers

The table shows the development in the financial buffers for NLP.

	Financial buffers[1]		% of guaranteed liabilities[1]	
EURm	2019	2018	2019	2018
Norway	423	316	8.8%	6.7%
Sweden	1,146	1,000	49.9%	43.4%
Finland	940	1,007	47.5%	52.0%
Total	2,509	2,322	27.7%	26.0%

[1]Data for both years was exclusive Velliv Pension & Livsforsikringsselskab A/S, Denmark.

Table 96 Solvency position

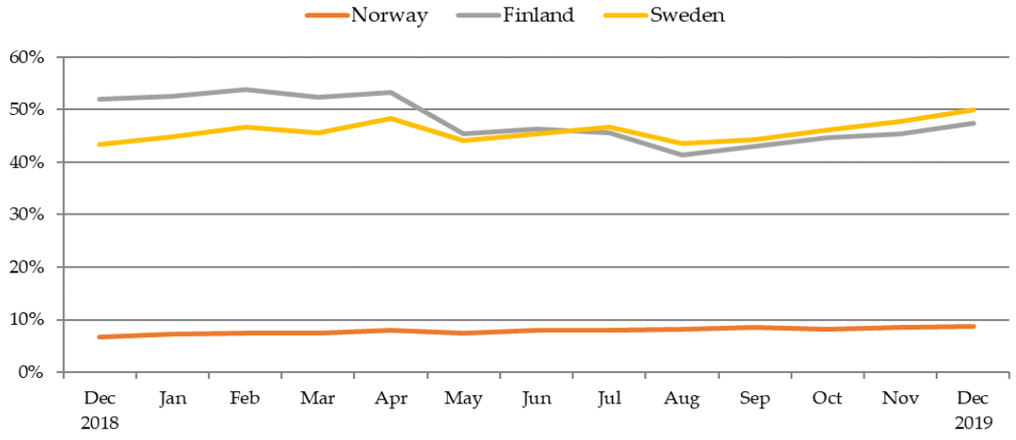
EURm	2019	2018
Solvency capital requirement	1,673	1,833
Own funds	2,682	2,706
Solvency margin	1,010	873
Solvency position	160%	148%

Table 97 Solvency sensitivity

EURm	2019	2018
Solvency position	160%	148%
Equity drops 20%	165%	149%
Interest rates down 50bp	160%	151%
Interest rates up 50bp	168%	149%

Table 98 Financial buffers compared to insurance provisions, rolling 12 months

The figure shows the development of the financial buffers during 2019.



Risk terminology and measures

Advanced IRB (AIRB) approach
See IRB

Business Model Risk
The risk to Nordea's balance sheet and profitability from potential adverse developments in the commercial aspects of Nordea's business.

Compliance risk
The risk of failure to comply with applicable laws, regulations, standards, supervisory requirements and related internal rules governing Nordea's activities in any jurisdiction where Nordea operates.

Comprehensive Risk Charge (CRC)
CRC captures risks related to positions in credit correlation products, covering structured credit trading operations. This includes the risk of losses due to credit migration or default of issuers of tradable debt and other risk factors specifically relevant for correlation products.

Concentration risk
The risk of losses arising due to concentrations in the exposures of the credit portfolio, e.g. when the portfolio is largely exposed to a few individual borrowers.

Conduct risk
The risk of inappropriate culture and behaviour of Nordea people or the risk that intentional or unintentional actions of Nordea across the end-to-end customer lifecycle lead to unfair outcomes and harm for customers or disrupt market integrity.

Correlation risk
The risk arising from a disparity between the estimated and actual correlation between two assets, currencies, derivatives, instruments or markets.

Counterparty credit risk
The risk that counterparties fail to fulfil financial contractual commitments to Nordea related to a derivative transaction, repurchasing agreement or other securities financing contracts.

Credit risk
The risk for potential loss due to failure of a borrower to meet their obligations to clear a debt in accordance with agreed terms and conditions.

Default risk
The risk that a counterparty is unable to make the required payments on their debt obligations.

Environmental, Social and Governance (ESG) risk
The risk of the negative financial impact stemming, directly or indirectly, from the impact environmental, social and governance events may have on Nordea and Nordea's key stakeholders, including customers, employees, investors and suppliers. The risk does not include reputational aspects of ESG, which are included under Reputational Risk.

Expected exposure
The Expected Exposure is the expected average exposure on a future target date conditional on positive market values. Expected exposure is calculated for Internal Model Method (IMM) approved contracts by simulating a large set of future scenarios for the underlying price factors and then revaluating the contracts in each scenario at different time horizons. In these calculations, netting is done of the exposure on contracts within the same legally enforceable netting agreement

Foreign exchange (FX) risk
FX risk concerns the market risk due to changes in foreign exchange rates.

Foundation IRB (FIRB)
See IRB

General Wrong Way Risk (GWWR)
GWWR occurs when the trade position is affected by factors like interest rates, inflation, or political tension in a particular region and most often appears on portfolio level.

Incremental Risk Charge (IRC)
IRC measures the risk of losses due to credit migration or defaults of issuers of tradable debt in bond and credit derivative positions held in the trading book

Internal Model Method (IMM)
IMM exposure is calculated by simulating a large set of future scenarios for underlying price factors and then revaluing the contracts in each scenario at different time horizons. In these calculations, netting is done of the exposure on contracts within the same legally enforceable netting agreement. Nordea uses a stressed calibration of the IMM for calculation of the counterparty credit risk exposures. Under the IMM approach, simulated exposure is subject to a regulatory multiplier of 1.4 to reflect the potential for correlation in risk across the portfolio. Nordea has approval to use the Internal Model Method (IMM) to calculate the regulatory counterparty credit risk exposures in accordance with the credit risk framework in the Capital Requirements Regulation (CRR). The method is used for standard FX and interest rate products which constitute the predominant share of the exposure.

Internal Ratings Based approach (IRB)
Subject to approval by their supervisor, banks are allowed to calculate their own funds requirements for credit risk capital using an internally developed approach, the IRB, rather than the Standardised Approach. The bank may be authorised to use the Foundation IRB (FIRB), the Advanced IRB (AIRB) or a combination of the two with FIRB used for calculating own funds requirements for some exposures and AIRB for others. With a FIRB approval, banks are permitted to use internal estimates for probability of default (PD); an AIRB approval additionally permits banks to use internal estimates for Loss Given Default (LGD) and Credit Conversion Factors (CCF).

Insurance risk
The risk of unexpected losses due to changes in the level, trend or volatility of mortality rates, longevity rates, disability rates and non-life claim rates.

Interest rate risk
The risk that the value of a position will change due to a change in the absolute level of interest rates, in the spread between two rates, in the shape of the yield curve, or in any other interest rate relationship.

Interest rate risk in the Banking Book (IRRBB)
IRRBB is the risk to future earnings and/or capital arising from changes in interest rates, through changes in the net present value of future cash flows from Banking Book assets and/or liabilities due to changes in interest rates or change in net interest income.

Liquidity risk
Liquidity risk is the risk that Nordea can only meet its liquidity commitments at an unsustainably high price or, ultimately, is unable to meet its obligations as they come due.

Market risk
Market risk is defined as the risk of loss in the Group's holdings and transactions as a result of changes in risk factors that affect the market value of these positions, for example changes in interest rates, credit spreads, FX rates or share prices.

Mark to Market Method
For the part of the portfolio not covered by IMM, Nordea uses the Mark to Market method for calculating the regulatory exposure, which is essentially the sum of current net exposure and potential future exposure. The potential future exposure is an estimate reflecting possible changes in the future market value of the individual contract during the remaining life of the contract and is measured as the notional principal amount multiplied by an add-on factor. The size of the CRR add-on factor, depends on the contracts' underlying asset and time to maturity

Model risk
The risk of adverse effects on capital adequacy, financial loss, poor business and strategic decision-making and damage to a banking organisation's reputation, from the use of quantitative methods.

Operational risk
Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk.

Pension risk
The risk that Nordea-sponsored defined benefit pension plans become underfunded.

Point-in-Time (PIT) methodology
Used for model calibration. A PIT rating system uses all currently available obligor-specific and aggregate information to assign obligors to risk grades. In a PIT rating system, an obligor's rating is expected to change as its economic prospects change.

Probability of Default (PD)
The likelihood that a loan will not be repaid and will fall into default.

Rating model
A rating model employs a set of specified and distinct rating criteria to produce a rating. These are called input factors and are, together with the criteria for assigning a customer to a specific rating model, the fundamental building blocks of a rating model. Typical input factors are financial factors, customer factors and qualitative factors.

Recovery rate risk
The risk that following a default, contracts of the defaulting entity cannot be honoured in full, thereby leading to financial loss to Nordea.

Reputational risk
The risk of damage to trust in Nordea from our customers, employees, authorities, investors, partners and general public with the potential for adverse economic impact.

Risk appetite
The risk appetite within Nordea is defined as the aggregate level and types of risk Nordea is willing to assume within its risk capacity, and in line with its business model, to achieve its strategic objectives.

Risk capacity
Nordea's risk capacity is defined as the maximum lev
el of risk Nordea is deemed able to assume given its capital, its risk management and control capabilities, and its regulatory constraints. Risk capacity is set in line with Nordea's capital position, including an appropriate shock absorbing capacity.

Risk grade
Risk grade is calculated based on the customer's behaviour on all accounts/products including potential joint commitments. The corresponding Risk Grade is assigned across all of the customer's facilities in Nordea.

Settlement risk
Settlement risk is a type of risk arising during the process of settling a contract or executing a payment. The risk amount is the principal of the transaction, and a loss could occur if a counterpart was to default after Nordea has given irrevocable instructions for a transfer of a principal amount or security, but before receipt of the corresponding payment or security.

Specific Wrong Way Risk (SWWR)
The risk arising due to the future exposure to a specific counterparty being positively correlated with the counterparty's PD due to the nature of the contracts with the counterparty.

Stressed Value at Risk (Stressed VaR)
Whereas the VaR is based on data from the last 500 days, stressed VaR is based on a specific 250-day period with considerable stress in financial markets.

Structural Foreign Exchange (FX) risk
Structural FX risk arises from the mismatch in currency composition between assets and capital. The mismatch creates volatility in capital ratios from the revaluation of foreign currency assets and capital to EUR.

Survival horizon
The Survival Horizon is a short-term measure describing the excess of liquid assets compared to net funding requirement on a 30-day horizon.

Tail risk
Risks with low probability that have the potential to result in severe impact.

Third Party Risk
The risk of adverse impact from a dependent resource to a primary supplier or service provider.

Through-The-Cycle (TTC)
For a TTC rating system, the distribution of ratings across obligors will not change significantly over the business cycle, and an obligor's rating is expected to change only when its own dynamic characteristics change.

Transfer risk
The risk that a local currency cannot be converted into the currency that a debt is denominated in.

Value at Risk (VaR)
VaR measures the expected maximum loss on a portfolio over a given time horizon with a given confidence interval under normal market conditions.