



# Capital and Risk Management Report 2015

**Provided by Nordea Bank AB on the basis  
of its consolidated situation**

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Nordea Bank AB (publ) with Swedish corporate registration number 516406-0120 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 and includes all disclosures required by Part Eight of the CRR, excluding disclosures on Remuneration which are disclosed in the Annual Report and on [www.nordea.com](http://www.nordea.com) under Corporate Governance > Remuneration.

Accompanying this report are the required disclosures for the significant subsidiaries Nordea Bank Finland Plc ("NBF"), Nordea Bank Norge ASA ("NBN"), Nordea Bank Danmark A/S ("NBD") and Nordea Hypotek AB ("Nordea Hypotek"). The disclosure of Nordea Hypotek is made on an individual basis, while the others are made on sub-consolidated basis. NBF, NBD and Hypotek are required to provide disclosures according to Articles 437, 438, 440, 442, 450, 451 and 453, according to Article 13. NBN and the Norwegian subsidiaries Nordea Eiendoms-kreditt and Nordea Finans Norge are required to provide disclosures according to local Norwegian regulations ("Kapitalkravsforskriften"), implementing parts of the CRR. The subsidiaries' disclosures are included as appendices and will be released on [www.nordea.com](http://www.nordea.com) on the publication date of each subsidiary's Annual Report.

Nordea Bank AB 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. The disclosures are made annually in conjunction with the date of publication of Nordea Group's financial statements.

The CRR only requires institutions to disclose information which is material and not proprietary or confidential. With regards to this, Nordea has implemented the EBA Guidelines on materiality, proprietary and confidentiality and disclosure frequency under Articles 432(1), 432(2) and 433 of the CRR. For items where Nordea has assessed that more frequent disclosures are needed, information is given in the interim financial reports or on the Investor Relations pages on [www.nordea.com](http://www.nordea.com). Nordea's Board of Directors, by approving this report, approve of the formal statement of key risks in Chapter 2 and formally declare the adequacy of risk management arrangements given Nordea's risk profile. The statement and the declaration are made in accordance with Article 435(1).

Nordea is part of the Sampo conglomerate and falls under the same supervisory authority (the Finnish FSA) as the Sampo Group in accordance to the Act on the Supervision of Financial and Insurance Conglomerates (2004/699), based on Directive 2002/87/EC.

All figures in this report are as of year-end 2015, unless otherwise stated.

# 1. Highlights of 2015

## Common equity tier 1 (CET1) capital ratio

# 16.5%

The CET1 capital ratio increased by 0.8 percentage points mainly due to strong profit generation.

## Total capital ratio at year-end

# 21.6%

Issuance of AT1 instruments added EUR 0.9bn to the own funds.

## Net loan losses decreased to

# 14bps

Improved conditions in Denmark were the main driver behind lower net loan losses.

## Credit exposure increased by

# 2.1%

Credit risk exposure increased to EUR 498bn.

## Liquidity coverage ratio reached

# 201%

Group LCR increased from 149% in 2014.

The Nordic economies were characterised by diverging trends. While Sweden continued to show one of the best growth rates in Europe, Finland was struggling to get back to a growth path. Norway was experiencing a slowdown of growth, mainly in the offshore economy, while Denmark displayed a better growth rate. Nordea has delivered robust results, with increased operating profit, higher income and improving cost/income ratio and return on equity, despite a challenging environment with exceptionally low interest rates, geopolitical tensions and market turmoil. Nordea is confident and well-prepared for the future in light of strong and stable profitability, solid quality in its well-diversified credit portfolio, a strong capital position and a diversified funding base.

## Further strengthened capital ratios – strong profit generation and issuance of AT1 and Tier 2 instruments

The CET1 capital ratio strengthened further in 2015 due to strong profit generation of the Group as well as continued capital management focus, to reach 16.5% by the end of 2015 (last year 15.7%). In March 2015, Nordea issued a second CRD IV compliant Additional Tier 1 (AT1) instrument, with a USD, a SEK and a NOK tranche, in total corresponding to approx. EUR 0.9bn, strengthening the Tier 1 ratio by 55bps. In 2015, Nordea issued Tier 2 instruments of EUR 1.3bn, including a EUR 750m Tier 2 benchmark transaction due in November 2025. The Group's total capital ratio was 21.6% at year-end.

## Continued solid credit quality and decreased net loan loss ratio to 14bps

Nordea's credit quality remained overall solid in 2015 with stable ratings and with a loan loss ratio of 14bps, below Nordea's ten-year average of 16bps. Continued stabilisation was seen in Denmark and stable development is seen in Finland and Norway. Impaired loans ratio decreased to 162bps (last year 174bps) while credit exposures increased by 2.1% to EUR 498bn. Nordea's market risk-taking activities are primarily focused on the Nordic and European markets. The Group's market risk is mainly driven by interest rate risk. Market risk for the Group, as measured by VaR, was EUR 32m on average in 2015 (EUR 22m) in the trading book and was EUR 75m on average in 2015 (EUR 62m) in the banking book.

## Strong funding name maintained, high long-term funding activity and LCR compliant

In the funding and liquidity risk area, Nordea maintained its position as one of the strongest names. Nordea, by virtue of its well-recognised name and strong rating, was able to actively use all of its funding programmes during 2015. Approximately EUR 25bn was issued in long-term debt during 2015, excluding Danish covered bonds (last year EUR 22bn). Nordea has a solid liquidity coverage ratio (LCR), with LCR at year-end on Group level of 201%, in EUR 303% and in USD 188%.

## 2. Risk profile

Nordea's business model is well diversified and Credit Risk represents the largest risk category in terms of REA 84%.

### 2.1. Description of the Nordea Group

The Nordea Group is the largest financial services group in Northern Europe with a market capitalisation of approximately EUR 41bn, total assets of EUR 647bn and a CET1 capital ratio of 16.5%. The Group has leading positions within corporate and institutional banking as well as retail banking and private banking. It is also the leading provider of life and pension products in the Nordic countries.

With approximately 650 branch locations, call centres in all Nordic countries and highly competitive online and mobile banking platforms, the Nordea Group has the largest distribution network in the Nordic and Baltic Sea region. Nordea Group furthermore has the largest customer base of any financial services group in the Nordic region with approximately 10.2 million household customers and around 0.6 million corporate customers.

### 2.2. Key risks in Nordea's operations

Nordea has a well-diversified business model. Risks are spread over a number of countries, industries and customer types. Most of Nordea's risks originate within Wholesale and Retail Banking, representing close to 84% of the total risk exposure amount (REA). The remainder originates mainly from Group Corporate Centre.

Credit risk (including Credit Value Adjustment) is Nordea's dominant risk category representing approximately 84% of REA. In the income statement, credit risk is capitalised by a net interest income 11 times higher than net loan losses. In the risk appetite framework credit risk is managed by limits on concentration risk, probability of default, loan losses and expected loss.

Retail mortgages and corporate exposures currently represent 29% and 35% respectively of Nordea's total exposure. The housing markets are currently stable and loan losses are decreasing in all of Nordea's markets. Housing markets in Norway and Sweden are however sensitive

to changes in market conditions and may continue to be affected negatively by the extensive regulatory agenda with regards to Sweden and Norway.

In the corporate segment, Nordea's largest exposures in terms of REA are towards the real estate and shipping segments.

Operational risk is Nordea's second largest risk category representing 12% of REA. During 2015 losses due to operational risks were lower than expected and represented only a minor amount in comparison with profit and capital requirements for operational risk. In the risk appetite framework operational risk is managed by special attention to top operational risks, operational risk losses and reputational risk.

Market risk is the third largest risk category within Nordea, representing 5% of REA. Income derived from market risk positions counterbalanced the risks taken by a wide margin in 2015. Market risks are governed in the risk appetite framework by limits on market risk losses and market risk share of economic capital (EC).

Table 2.1 shows the distribution of exposure, REA, capital requirement (CAR) and EC by Business Area and risk type. For more information regarding EC, see section 11.2.

The ten most important and emerging risks are identified in the "Top 10 risk process". Representatives for all Business Areas participate in the process to identify, discuss and agree on mitigants for the top 10 risks. All risk categories are considered in the process, both financial and non-financial risks. For more information regarding non-financial risks, see Chapter 7.

### 2.3. Risk tolerance

Nordea currently has the following capital ratios: CET1 capital ratio 16.5%, tier 1 capital ratio 18.5% and total capital ratio 21.6%. These capital levels allow for growth according to the decided strategy as well as for risks developing within the limits set in the risk appetite framework (Section 3.1.2), while leaving a comfortable margin to the risk tolerance defined in the capital policy (Section 4.4).

**Table 2.1 Distribution of exposure, REA, capital requirement and EC in Business Areas, 31 December 2015**

	EURbn	Exposure	%	REA	CAR	%	EC	%
<b>Total Nordea Group</b>	Credit risk <sup>1)</sup>	498.0	100%	119.7	9.6	84%	17.6	71%
	Market risk			6.5	0.5	5%	1.5	6%
	Operational risk			17.0	1.4	12%	2.5	10%
	Nordea Life & Pension						1.8	7%
	Other <sup>2)</sup>						1.6	6%
	<b>Total, % of Nordea Group</b>	<b>498.0</b>	<b>100%</b>		<b>143.3</b>	<b>11.5</b>	<b>100%</b>	<b>25.0</b>
<b>Retail Banking</b>	Credit risk <sup>1)</sup>	273.4	100%	59.7	4.8	86%	9.8	74%
	Market risk						0.3	2%
	Operational risk			9.7	0.8	14%	1.6	12%
	Nordea Life & Pension						0.7	6%
	Other <sup>2)</sup>						0.9	7%
	<b>Total, % of Nordea Group</b>	<b>273.4</b>	<b>55%</b>		<b>69.4</b>	<b>5.6</b>	<b>48%</b>	<b>13.2</b>
<b>Wholesale Banking</b>	Credit risk <sup>1)</sup>	107.1	100%	42.3	3.4	82%	5.8	74%
	Market risk			4.2	0.3	8%	0.6	8%
	Operational risk			4.9	0.4	9%	0.7	9%
	Nordea Life & Pension						0.1	1%
	Other <sup>2)</sup>						1.2	15%
	<b>Total, % of Nordea Group</b>	<b>107.1</b>	<b>22%</b>		<b>51.4</b>	<b>4.1</b>	<b>36%</b>	<b>7.8</b>
<b>Wealth Management</b>	Credit risk <sup>1)</sup>	3.1	100%	4.2	0.3	74%	0.2	13%
	Market risk			0.0	0.0	0%	0.0	0%
	Operational risk			1.5	0.1	26%	0.1	6%
	Nordea Life & Pension						1.0	74%
	Other <sup>2)</sup>						0.1	6%
	<b>Total, % of Nordea Group</b>	<b>3.1</b>	<b>1%</b>		<b>5.7</b>	<b>0.5</b>	<b>4%</b>	<b>1.3</b>
<b>Group Corporate Center</b>	Credit risk <sup>1)</sup>	96.2	100%	4.9	0.4	60%	0.7	56%
	Market risk			2.3	0.2	28%	0.5	40%
	Operational risk			1.0	0.1	12%	0.1	11%
	Nordea Life & Pension						0.0	0%
	Other <sup>2)</sup>						-0.1	-7%
	<b>Total, % of Nordea Group</b>	<b>96.2</b>	<b>19%</b>		<b>8.2</b>	<b>0.7</b>	<b>6%</b>	<b>1.3</b>
<b>Group Functions and Other</b>	Credit risk <sup>1)</sup>	18.1	100%	8.6	0.7	100%	1.2	94%
	Market risk						0.0	0%
	Operational risk			0.0	0.0	0%	0.0	0%
	Nordea Life & Pension						0.0	0%
	Other <sup>2)</sup>						0.1	6%
	<b>Total, % of Nordea Group</b>	<b>18.1</b>	<b>4%</b>		<b>8.6</b>	<b>0.7</b>	<b>6%</b>	<b>1.2</b>

1) Includes CVA Risk

2) Capital deductions and internal allocations

# 3. Governance of risk and capital management

Management of risk, liquidity and capital are key success factors in the financial services industry. Nordea has defined clear risk, liquidity and capital management frameworks, including policies and instructions for different risk types, capital adequacy and capital structure.

## 3.1. Risk and capital management

The key principle for the management of risks in Nordea is the three lines of defence. The first line of defence is represented by the Business Areas and Group Functions responsible for their own daily risk management and for operating their business within applicable limits and in accordance with the framework for internal control.

Group Risk Management and Group Compliance is the second line of defence responsible for activities such as independently monitor, control and report issues related to key risks, including compliance with internal and external regulations.

Group Internal Audit, representing the third line of defence, performs audits and provides assurance on governance, risk management and internal control.

### 3.1.1. Risk and capital management principles and control

Risk and capital management in Nordea is governed by principles and procedures stated in charters, policies, instructions and guidelines in effect throughout the organisation. The Board of Directors and the CEO's principal policies and instructions defining authorities and key responsibilities for themselves and other units are outlined as Group Directives. The Group Directives form part of the internal control framework.

All legal entities within Nordea are subject to the same internal control and risk management environment through the organisation of the business.

Nordea furthermore monitors aggregated risks via specific committees, as well as through reporting to Group Executive Management (GEM), the Board of Directors and the local bank boards. More specifically, Nordea's risks and capital are monitored by the Risk Committee and the Asset and Liability Committee (ALCO) respectively.

#### 3.1.1.1. Board of Directors and Board Risk Committee

The Board of Directors has the ultimate responsibility for limiting and monitoring Nordea's risk exposures as well as for defining target capital ratios and deciding on the

risk appetite. Risk is measured and reported according to common principles and policies approved by the Board of Directors. The Board of Directors also decides on policies for credit risk, counterparty credit risk, market risk, liquidity risk, life insurance risk, operational risk and compliance risk, including capital policy, as well as the Internal Capital Adequacy Assessment Process (ICAAP) and the Internal Liquidity Adequacy Assessment Process (ILAAP). All policies are reviewed at least annually.

In the credit instructions, the Board of Directors decides on powers-to-act for major credit committees at different levels within the Business Areas. These authorisations vary for different decision-making levels, mainly in terms of size of limits but also depending on the internal risk categorisation of customers. The Board of Directors furthermore decides on the limits for market and liquidity risk in Nordea.

The Board Risk Committee assists the Board of Directors in fulfilling its oversight responsibilities concerning management and control of risk, risk frameworks as well as controls and processes associated with Nordea's operations. The Board Risk Committee met on 6 occasions during 2015.

#### 3.1.1.2. Responsibility of CEO and GEM and its committees

The Chief Executive Officer (CEO) has the overall responsibility for developing and maintaining effective risk, liquidity and capital management principles and control of Nordea.

The CEO and GEM regularly review reports on risk exposure and have established a number of committees for risk, liquidity and capital management.

ALCO, chaired by the Chief Operating Officer (COO), prepares issues of major importance concerning Nordea's financial operations and balance sheet either for decision by the CEO in GEM or for recommendation by the CEO in GEM for decision by the Board of Directors. Within their given mandate, ALCO also decides on certain issuances and capital injections for all wholly-owned legal entities within Nordea. ALCO has established sub-committees for its work and decision-making within specific risk areas.

The Risk Committee, chaired by the Chief Risk Officer (CRO), oversees the management and control of Nordea's risks on an aggregate level and evaluates the sufficiency of the risk frameworks, controls and processes associated with the various risks. The Risk Committee furthermore decides, within the scope of resolutions adopted by the Board of Directors, the allocation of market risk limits as well as liquidity risk limits to the risk-taking units. Unit heads allocate their respective limits within their units and may introduce more detailed limits and require other risk mitigating techniques such as stop-loss rules. The Risk Committee has established sub-committees for its work and for decision-making within specific risk areas. The Risk Committee met on 11 occasions during 2015.

The Group Executive Management Credit Committee (GEM CC) is chaired by the CEO and the Executive Credit Committee (ECC) is chaired by the CRO, while the Group Credit Committee Retail Banking (GCCR) and the Group Credit Committee Wholesale Banking (GCCW) are chaired by the Chief Credit Officer (CCO). These credit committees approve major internal credit risk limits constituting the maximum credit risk appetite on the customer in question. Individual credit decisions within approved internal credit risk limits are taken within the customer responsible units (CRUs). Internal credit risk limits are granted as individual limits for customers or consolidated customer groups as well as industry limits for certain defined industries.

### 3.1.1.3. Governance of Risk Management

Group Risk Management and Group Compliance is the second line of defence. The flow of risk related information from the business areas and the group functions to the Board of Directors passes through Risk Committee and Board Risk Committee (BRIC). Reporting from Group Compliance is presented directly to the Board of Directors as well as discussed in the Board Audit Committee (BAC).

**Figure 3.1 Governance of risk, liquidity and capital management**

#### Risk, liquidity and capital management governance structure



#### Risk, liquidity and capital management responsibilities



Group Risk Management is organised in divisions covering all risk types except compliance risk. The divisions are: Group Credit Risk, Group Credit & Financial Reporting Control, Group Market and Counterparty Credit Risk, Group Operational Risk, Recovery and Resolution Planning and Group Strategic Risk Management and Analysis. The flow of information starts with the divisions that monitor and analyse information on the respective risk type. The risks are presented and discussed in the Risk Committee and sub committees. Information on risk is then brought to BRIC where risk issues are being discussed and prepared before presented to Board of Directors.

Group Compliance is organised in divisions covering all compliance risk types, with compliance divisions allocated to each Business Area. The purpose of Group Compliance is to add value to the Group and its stakeholders by providing an independent view on compliance to rules and regulations applicable to the Group, and by contributing to an effective and efficient compliance risk management.

Figure 3.1 illustrates Nordea's governance structure of risk management.

### 3.1.2. Risk appetite

Risk appetite within Nordea is defined as the level and nature of risk that the bank is willing to take in pursuit of the articulated strategy on behalf of shareholders. Risk appetite is defined by constraints reflecting the views of shareholders, debt holders, regulators and other stakeholders.

The Board of Directors is ultimately responsible for the overall risk appetite of Nordea and for deciding on principles for how risk appetite should be managed. The Board Risk Committee assists the Board of Directors in fulfilling these responsibilities by reviewing the development of the risk profile in relation to risk appetite and making recommendations for changes to Nordea's risk appetite. Local bank boards are responsible for risk appetite in the Nordic sub-consolidated entities.

Nordea's risk appetite framework is based on explicit top-down risk appetite statements covering all key risks faced by Nordea. These statements, approved by the Board of Directors, collectively define the boundaries for Nordea's risk-taking activities, help identify areas with scope for additional risk taking, and set the basis for the risk reporting structure. Moreover, the framework supports management decision processes such as planning and target setting.

The risk appetite framework considers key risks relevant to Nordea's business activities and is on an aggregate level represented in terms of credit risk, market risk, operational risk, solvency, compliance/non-negotiable risks and liquidity risk. Figure 3.2 presents an overview of Nordea risk appetite measures.

The risk appetite framework includes the cascading of risk appetite levels to Business Areas and segments in terms of allocated risk level thresholds and operational risk limits.

Stress testing is an integral component within the framework. Stress tests ensure alignment of the scenarios used in the regulatory capital framework and the risk appetite framework, and therefore the planning and target setting process.

### 3.1.3. Monitoring and reporting

The “Policy for Internal Control and Risk Management in the Nordea Group” states that the management of risks includes all activities aiming at identifying, measuring, assessing, monitoring and controlling risks as well as measures to limit and mitigate the consequences of the risks. Management of risk is proactive, emphasising training and risk awareness. Nordea maintains a high standard of risk management by means of applying available techniques and methodologies to its needs.

The control environment is, among other things, based on the principles of segregation of duties and independence. Monitoring and reporting of risk is conducted on a daily basis for market risk, counterparty credit risk, liquidity risk and on a monthly and quarterly basis for credit risk, operational risk and overall capital adequacy.

Risk appetite reporting is presented quarterly to the Risk Committee, GEM, the Board Risk Committee and the Board of Directors.

Detailed risk information, covering all risks as well as capital adequacy, is regularly reported to the Risk Committee, GEM and the Board of Directors. In addition, the Board of Directors in each legal entity regularly receives local risk reporting.

**Figure 3.2 Overview of the risk appetite measures**

Risk type	Metric
Credit risk	Single customer concentration
	Industry concentration
	Geographic concentration
	Expected loss
	Loan loss
Market risk	Market risk share of economic capital
	Maximum economic market risk loss per quarter
Operational risk	Monitor top risks
	Operational risk loss
	Reputation, Non-financial impact
Solvency	Common equity tier 1 capital ratio
	Leverage ratio
Liquidity risk	Survival horizon
	Net Balance of Stable Funding
Compliance & non-negotiable risks	Regulatory requirements
	Internal policy and external regulatory breaches



## 4. Capital position

Nordea's own funds increased during 2015 following profit generation and issuance of Additional Tier 1 and Tier 2 instruments. CET1 capital, considered as capital of the highest quality, comprises 76% of Nordea's own funds.

### 4.1. Minimum capital requirements and REA

Table 4.1 presents an overview of Nordea's minimum capital requirements and REA at the end of 2015, split by risk type. The table includes information regarding approaches used for calculating REA. The internal ratings-based (IRB) approach is used to calculate 88% of the credit risk exposure amount.

Nordea's REA (excluding Basel I floor) decreased by EUR 2.2bn during 2015. This was mainly driven by improved credit quality, particularly in the corporate portfolio.

**Table 4.1 Minimum capital requirements and REA**

EURm	31 December 2015		31 December 2014	
	Minimum capital requirements	REA	Minimum capital requirements	REA
<b>Credit risk</b>	<b>9,358</b>	<b>116,978</b>	<b>9,522</b>	<b>119,029</b>
-of which counterparty credit risk	761	9,510	843	10,535
IRB	8,297	103,717	8,451	105,637
- of which corporate	5,630	70,371	5,743	71,792
- of which advanced	4,497	56,211	4,048	50,600
- of which foundation	1,133	14,160	1,695	21,192
- of which institutions	682	8,526	766	9,572
- of which retail	1,802	22,520	1,755	21,940
- of which secured by immovable property	994	12,421	879	10,981
- of which other retail	714	8,925	792	9,897
- of which SME	94	1,174	85	1,061
- of which other	183	2,300	187	2,333
Standardised	1,061	13,261	1,071	13,392
- of which central governments or central banks	40	504	57	717
- of which regional governments or local authorities	19	237	17	211
- of which public sector entities	3	32	2	20
- of which multilateral development banks	0	0		
- of which international organisations				
- of which institutions	23	282	27	338
- of which corporate	169	2,109	154	1,921
- of which retail	251	3,137	255	3,181
- of which secured by mortgages on immovable property	231	2,887	222	2,777
- of which in default	9	119	12	155
- of which associated with particularly high risk	59	741	53	666
- of which covered bonds				
- of which institutions and corporates with a short-term credit assessment				
- of which collective investments undertakings (CIU)				
- of which equity	209	2,617	195	2,442
- of which other items	48	596	77	964
<b>Credit Value Adjustment risk</b>	<b>140</b>	<b>1,751</b>	<b>185</b>	<b>2,308</b>
<b>Market risk</b>	<b>523</b>	<b>6,534</b>	<b>588</b>	<b>7,341</b>
- of which trading book, Internal Approach	239	2,990	312	3,898
- of which trading book, Standardised Approach <sup>1)</sup>	96	1,209	116	1,447
- of which banking book, Standardised Approach	187	2,335	160	1,996
<b>Operational risk</b>	<b>1,363</b>	<b>17,031</b>	<b>1,347</b>	<b>16,842</b>
Standardised	1,363	17,031	1,347	16,842
<b>Additional risk exposure amount due to Article 3 CRR</b>	<b>80</b>	<b>1,000</b>		
<b>Sub total</b>	<b>11,463</b>	<b>143,294</b>	<b>11,642</b>	<b>145,520</b>
Additional capital requirement due to adjustment for Basel I floor	6,283	78,533	5,995	74,938
<b>Total</b>	<b>17,746</b>	<b>221,827</b>	<b>17,637</b>	<b>220,458</b>

1) Restated for 2014.

Decreased exposures in the counterparty credit risk portfolio, primarily as a result of market movements and closed positions, further reduced REA. Market risk also contributed to a decrease in REA stemming from a decrease in stressed value-at-risk (VaR). On the other hand, the overall decrease in REA was partially countered by unfavourable foreign exchange effects – chiefly the result of the euro depreciation against the US dollar and Swedish Krona.

Table 4.2 shows the movements in REA (excl. Basel I floor) during the year.

#### 4.2. Buffer requirements

The capital buffers are expressed in relation to REA and represent additional capital to be held on top of the minimum regulatory requirements. Table 4.3 shows the current buffers and buffer levels applicable to Nordea. Table 4.4 details the institution-specific countercyclical buffer as of 31 December 2015. The future buffer requirements are provided in Table 12.1 in Chapter 12.

#### 4.3. Internal capital requirement and anticipated CET1 requirement

Nordea's Internal Capital Requirement (ICR) was EUR 15,217m at the end of the year. The ICR should be compared to the own funds, which was EUR 30,900m at the end of the year. The ICR is calculated based on a Pillar I plus Pillar II approach. For more detailed information about the ICR methodology, see Chapter 11.

In addition, supervisors require Nordea to hold capital for other risks which are identified and communicated as part of the Supervisory Review and Evaluation Process (SREP). The outcome of the 2015 SREP, which was communicated in October 2015, indicated that the CET1 requirement as of third quarter 2015 was 15.4%. In 2016 Nordea expects a CET1 requirement of approximately 16%. Figure

4.1 explains the composition of the CET1 ratio requirement. The combined buffer requirement consists of a 3% systemic risk buffer, a 2.5% capital conservation buffer and a countercyclical buffer of approximately 0.5% (as of year-end 2015 the countercyclical buffer was 0.4% and is expected to increase to 0.6% as of Q2 2016). For more information regarding the capital buffers see Chapter 12. The Pillar II other part mainly consists of the SFSA standardised benchmark models for pension risk, interest rate risk in the banking book and concentration risk as well as other Pillar II add-ons as disclosed by the SFSA in the quarterly reporting of the "Capital requirements of the Swedish banks".

**Table 4.2 Flow statement of REA, excl. Basel I floor  
EURbn**

<b>Total REA, 31 December 2014</b>		<b>145.5</b>
<b>Credit Risk factors</b>		<b>-1.6</b>
Book size (including derivatives)		-1.3
Book quality		-1.9
Model & Methodology changes		
Regulation		
Additional buffer, Article 3		1.0
Foreign currency translation effects		1.3
Other		-0.7
<b>Market Risk factors</b>		<b>-0.8</b>
Model & Methodology changes		
Regulation		
Movement in risk levels		-0.8
<b>Operational risk factors</b>		<b>0.2</b>
Changes in beta factors		
Income related changes		0.2
<b>Total REA, 31 December 2015</b>		<b>143.3</b>

**Table 4.3 Minimum capital requirements & buffers as of 31 December 2015**

Percent (%)	Minimum capital requirements	Capital buffers				Capital buffers total <sup>1)</sup>	Total requirement
		CCoB	CCyB	SII	SRB		
Common Equity Tier 1 capital	4.5	2.5	0.4	N/A	3.0	5.9	10.4
Tier 1 capital	6.0	2.5	0.4	N/A	3.0	5.9	11.9
Own funds	8.0	2.5	0.4	N/A	3.0	5.9	13.9

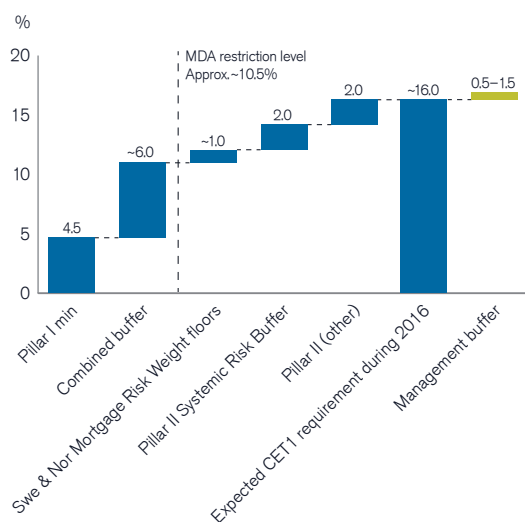
1) Only the maximum of the SRB and SII is used in the calculation of the total capital buffers.

**Table 4.4 Geographical distribution and amount of institution-specific countercyclical capital buffer (CCyB)**

EURm	Credit exposures relevant for CCyB <sup>1)</sup>	Own funds requirement weight	CCyB Rate	Amount of institution-specific CCyB	
Denmark	28,859	26%	0.0%	Total REA [EURm]	143,294
Finland	16,467	15%	0.0%	Weighted CCyB rate	0.4%
Norway	18,956	17%	1.0%	CCyB requirement [EURm]	545
Sweden	23,083	21%	1.0%		
Other	23,066	21%	0.0%		
<b>Total</b>	<b>110,432</b>	<b>100%</b>	<b>0.4%</b>		

1) Includes only exposures relevant for calculation of buffer requirement.

**Figure 4.1 CET1 ratio build-up (%)**



The Pillar II add-ons do not affect the maximum distributable amount (MDA) level at which automatic restrictions on distributions linked to the combined buffer requirement would come into effect. A formal decision on Pillar II has not been made. In accordance with the clarification from the Swedish FSA “EBA’s MDA opinion does not change Pillar II in Sweden” (Jan. 8, 2016), EBA’s opinion does not entail any changes to Swedish FSA’s process for assessing and determining Swedish banks’ Pillar II requirements. Specifically, the Swedish FSA stated that it intends to continue its practice of, in normal situations, not making a formal decision about the capital requirement under Pillar II. Currently the MDA level is 10.4% and it is expected to increase to 10.6% in Q2 2016 when the new countercyclical buffer rates in Sweden and Norway enter into force.

#### 4.4. Capital policy

The capital policy states that Nordea Group under normal business conditions should have capital ratios for CET1, tier 1 and total capital that exceed the capital requirement as communicated by the Swedish FSA. The policy states that Nordea will maintain a management buffer of 50-150bps above the CET1 requirement.

#### 4.5. Own funds

Own funds as of end 2015 was EUR 30.9bn, of which CET1 capital constituted EUR 23.6bn, Additional Tier 1 capital EUR 2.9bn and Tier 2 capital EUR 4.4bn. Nordea’s CET1 capital increased by EUR 0.8bn during 2015. The increase was due to profit generation as well as the removal of the transitional deduction of available for sale items. The increase was partly offset by an increased intangible assets deduction. Table 4.5 shows the movement in own funds during the year and Figure 4.2 displays the increase in the amount of own funds over the past 15 years.

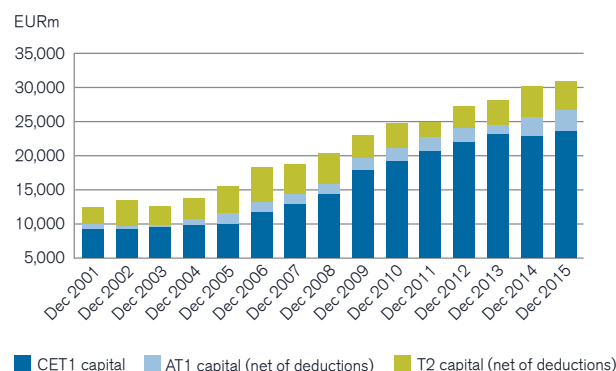
A bridge between IFRS equity and CET1 capital is

**Table 4.5 Flow statement of movements in own funds**

EURm	
<b>Common Equity Tier 1, 31 December 2014</b>	<b>22,821</b>
Profit attributable to owners of the parent	3,312
Dividend	-2,584
Change in goodwill and intangible assets	-282
Change in IRB provision shortfall deduction	47
Change in prudential filters	0
Change in unrealised gains on AFS	453
Other	-192
<b>Common Equity Tier 1, 31 December 2015</b>	<b>23,575</b>
<b>Additional Tier 1 capital, 31 December 2014</b>	<b>2,768</b>
Issued AT1 instruments	875
Redeemed AT1 instruments	-1,317
FX effect	166
Change in amounts that exceed the limit for AT1 grandfathering	447
Other adjustments	3
<b>Additional Tier 1 capital, 31 December 2015</b>	<b>2,941</b>
<b>Tier 1 capital, 31 December 2015</b>	<b>26,516</b>
<b>Tier 2 capital, 31 December 2014</b>	<b>4,461</b>
Issued T2 instruments	1,292
Redeemed T2 instruments	
FX effect	90
Change in Excess on the limit of AT1 grandfathered instruments	-447
Change in deduction due to significant investment	-996
Other adjustments	-15
<b>Tier 2 capital, 31 December 2015</b>	<b>4,384</b>
<b>Total own funds, 31 December 2015</b>	<b>30,900</b>

provided in Table 4.6 and the full reconciliation in Table A1 in the Appendix. For the own funds disclosure and the description of capital instruments main features in the format specified by Implementing Regulation (EU) No 1423/2013, refer to Tables A2 and A3.1-A3.3 in the Appendix. The full terms and conditions of Nordea’s various capital instruments can be found on [www.nordea.com](http://www.nordea.com).

**Figure 4.2 Development of own funds, 2001–2015**



**Table 4.6 Bridge between IFRS equity and CET1 capital**

EURm	31 Dec 2015	31 Dec 2014
<b>Balance sheet equity</b>	<b>31,032</b>	<b>29,836</b>
Valuation adjustment for non-CRR companies <sup>1)</sup>	-1,070	-772
<b>Subtotal</b>	<b>29,962</b>	<b>29,064</b>
Dividend <sup>2)</sup>	-2,584	-2,501
Goodwill	-1,869	-1,938
Intangible assets	-997	-646
Shortfall deduction	-297	-344
Pension deduction	-296	-33
Prudential filters	-284	-284
Transitional adjustments	0	-453
Other deductions	-59	-44
<b>Common Equity Tier 1 capital</b>	<b>23,575</b>	<b>22,821</b>

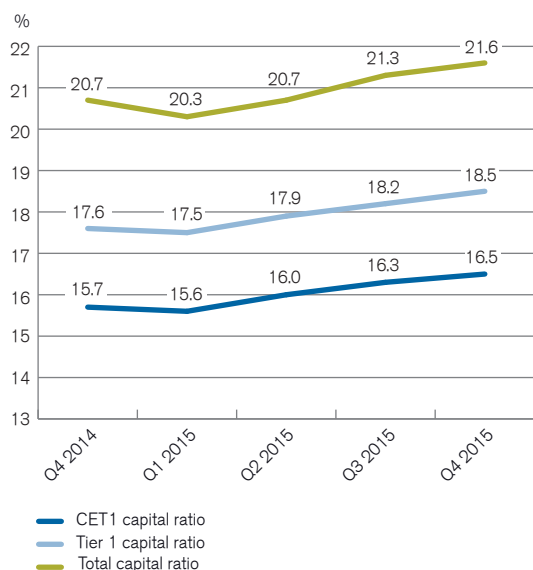
1) See Table A9 for an overview of companies included in the non-CRR group.  
2) Proposed dividend.

#### 4.6. Capital ratios and leverage ratio

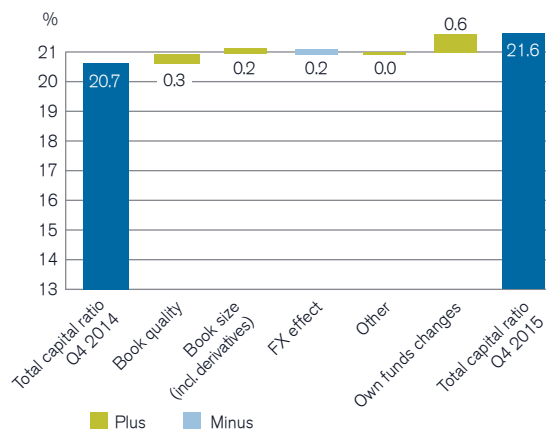
Figure 4.3 illustrates the quarterly development of capital adequacy ratios during 2015 while Figure 4.4 shows the drivers behind the development of the total capital ratio.

The leverage ratio calculated according to the CRR amounts to 4.6% as of end 2015 with leverage exposure of EUR 576bn as of end 2015. Q4 2014 leverage ratio and volumes were based on a three months average according to the Swedish FSA reporting process, however Q4 2015 is based on end of month figures. Details on leverage ratio exposure are provided in Appendix A4.1-A4.4.

**Figure 4.3 Development of key capital adequacy ratios, excl. Basel I floor**



**Figure 4.4 Drivers behind the development of the total capital ratio**



#### 4.7. Capital transferability and restriction

Nordea may transfer capital within its legal entities without material restrictions, subject to the general conditions for entities considered solvent with sufficient liquidity under local law and satisfying minimum capital adequacy requirements. International 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.

## 5. Credit risk

The overall credit quality in Nordea's portfolio is solid and continued to improve during 2015. Nordea's credit portfolio is well diversified both in terms of industry segments and geographies. The loan loss ratio decreased to 14 bps for the full year, due to improved conditions in Denmark, and is below the 10 year average of 16 bps.

### 5.1. Management, governance and measurement of credit risk

Credit risk is defined as the risk of loss if customers fail to fulfil their agreed obligations and the pledged collateral does not cover existing claims. It stems mainly from various forms of lending, but also from issued guarantees and documentary credits, such as letters of credit. Credit risk includes counterparty credit risk, transfer risk and settlement risk.

#### 5.1.1. Management of credit risk

Credits granted within Nordea shall conform to the common principles established. The fundamental principles are outlined in the Credit Policy and Strategy and Credit Instructions for the Nordea Group.

Nordea has specific Industry Credit Policies and Principles in place to monitor the distribution of the credit portfolio and to limit credit risk. Concentration risk in specific industries is monitored by industry monitoring 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 cyclical and/or volatility of the industry
- Special skills and knowledge required

Nordea currently has Industry Credit Policies in place for the following industries:

- Shipping, Oil and Offshore
- Energy
- Leveraged buy-out
- Financial institutions
- Commercial real estate

All Industry Credit Policies are approved annually by the Risk Committee and confirmed by BRIC. The Risk Committee can establish Industry Monitoring Boards and then decides upon the governance structure and role in the decision making process for these.

All Industry Credit Principles relevant for Nordea Group are approved annually by the Risk Committee's Credit Risk Subcommittee and confirmed by the Risk Committee.

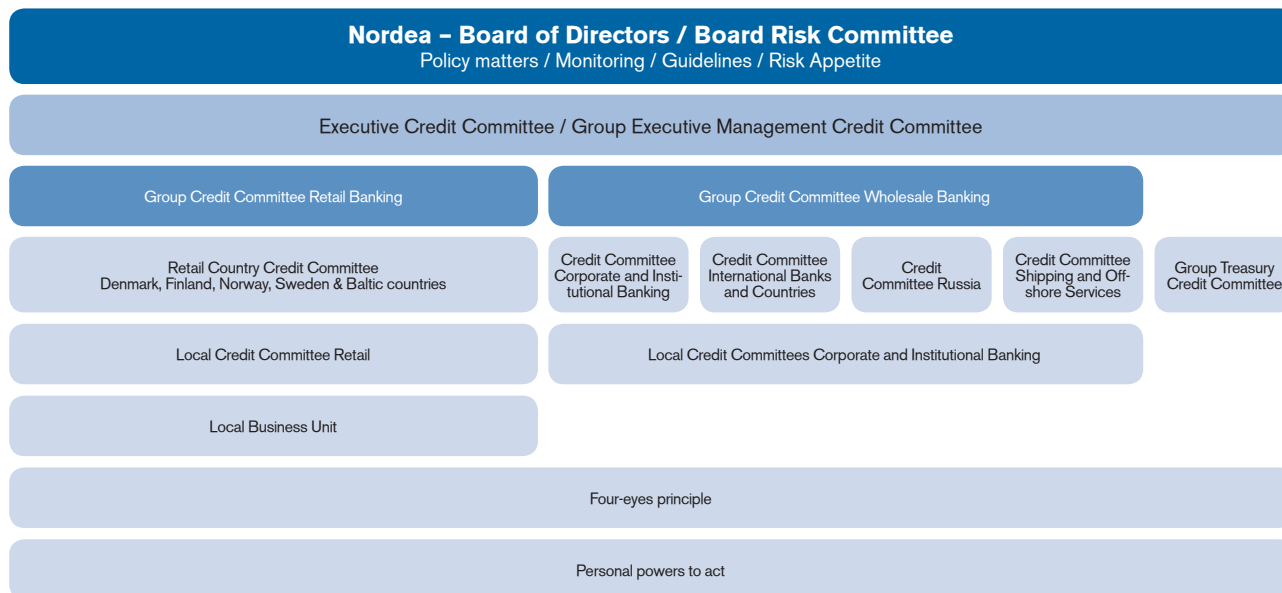
Internal credit risk limits for customers and customer groups are approved by decision-making bodies on various levels within Nordea, constituting the maximum credit risk appetite on the customer in question. Individual credit decisions within approved internal credit risk limits are taken within the customer responsible units (CRUs). The CRU continuously assesses customers' ability to fulfil their obligations and identifies deviations from agreed conditions and weaknesses in the customers' performance. In addition to building strong customer relationships and understanding each customer's financial position, monitoring of credit risk is based on available information about the customer and macroeconomic factors. Information such as late payments data, behavioural scoring and rating migration are important parameters in the internal monitoring process. If new information indicates the need, the CRU must reassess the rating and assess whether the customer's repayment ability is threatened. If it is considered unlikely that the customer will be able to repay his or her debt obligations in full and the situation cannot be satisfactorily remedied, the exposure must be tested for impairment.

If credit weakness is identified in relation to a customer exposure, the exposure is assigned special attention in terms of more frequent reviewing. 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 CRU. Nordea has a project organisation approach for handling work-out credits for corporate customers and individual work-out teams are established for larger work-out cases. The credit organisation and other specialist units support CRUs in handling smaller work-out customers.

The follow-up of individual work-out cases is part of the quarterly credit risk review process. In this process the impairment of individual customers and collective impairment of customer groups is also assessed and the actions related to handling of work-out customers are reviewed and followed up.

The environmental risks of corporate customers are taken into account in the overall risk assessment through the Environmental Risk Assessment Tool. Social and political risks are taken into account by the Social and Political Risk Assessment Tool. Environmental Social Governance (ESG) risk assessment tools are moving towards a risk based approach to identify and focus our efforts on potential higher risk cases. For larger project finance transactions, Nordea has adopted the Equator Principles, a financial industry benchmark for determining, assessing and managing social and environmental risk in project financing. The Equator Principles are based on the policies and guidelines of the World Bank and the International Finance Corporation.

**Figure 5.1 Credit decision-making structure for main operations**



**5.1.1.1. Credit risk appetite**

Nordea’s risk appetite framework forms the basis for a holistic risk reporting structure and supports key decision processes such as strategy, planning and target setting.

The credit risk appetite statements are defined in terms of credit risk concentration (limits for single names, specific industries and geographies), long-term credit quality (expected loss), short-term credit quality (probability of default) and loan losses under plausible stress scenarios.

**5.1.1.2. Credit risk mitigation**

Credit risk mitigation is an inherent part of the credit decision process. In every credit decision and review, the valuation of collaterals is considered as well as the adequacy of covenants and other risk mitigations.

Pledging of collateral is the main credit risk mitigation technique. In corporate exposures, the main collateral types are real estate mortgages, floating charges and leasing objects. Collateral coverage is higher for exposures to financially weaker customers than for those who are financially strong.

Regarding large exposures, syndication of loans is the primary tool for managing concentration risk, while credit risk mitigation by the use of credit default swaps is applied to a limited extent.

Covenants in credit agreements are an important complement to 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.

With regards to the regulatory defined credit risk mitigation tools, Nordea uses techniques related to real estate,

vessels, financial collaterals, cash collaterals and floating charges. Nordea has permission to use the defined credit risk mitigation tools for AIRB and Retail IRB (RIRB) approaches that fulfils the minimum requirements both at the time of application as well as on an ongoing basis. Additional use of collaterals within these approaches for capital adequacy purposes must be notified or applied for.

For more information on collateral and its use in capital adequacy calculation, refer to section 5.7.

**5.1.2. Governance of credit risk**

Group Risk Management is responsible for the credit process framework and the credit risk management framework, consisting of policies, instructions and guidelines. Group Risk Management is also responsible for controlling and monitoring the quality of the credit portfolio and the credit process, and for ensuring that all incurred losses are covered by adequate allowances. Each division/unit is primarily responsible for managing the credit risks in its operations within applicable framework and limits, including identification, control and reporting.

During 2015, Nordea has re-organised the responsibilities within the IRB-arrangement, to strengthen the three lines of defence and improving the governance of the IRB system.

Within the powers-to-act granted by the Board of Directors, internal credit risk limits are approved by credit decision-making bodies on different levels in the organisation constituting the maximum credit risk appetite on the customer in question. Individual credit decisions within approved internal credit risk limit are taken by the CRU. The internal risk categorisation and exposure of the customer determine at what level the decision will be made

(see Figure 5.1). The Group Executive Management Credit Committee decides on proposals for the largest exposures and proposals related to major principle issues. Responsibility for the credit risk lies within each CRU.

### 5.1.3. Measurement of credit risk

Credit risk is measured, monitored and segmented in several dimensions. On-balance lending constitutes the major part of the credit portfolio and the basis for impaired loans and loan losses. Credit risk in lending is measured and presented as on-balance sheet loans as well as off-balance sheet potential claims on customers and counterparties net after allowances. Credit risk exposure also includes counterparty credit risk such as risk related to derivative contracts and securities financing. Nordea's loan portfolio is broken down by segment, industry and geography.

One way of assessing credit quality is through analysis of the distribution across rating grades for rated corporate customers and institutions, as well as the distribution across risk grades for scored retail customers.

## 5.2. 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 CRR. The main differences are outlined in this section to illustrate the link between the different reporting methods.

Original exposure is the exposure before taking into account substitution effects stemming from credit risk mitigation, credit conversion factors (CCFs) for off-balance sheet exposure and allowances within the standardised approach, while exposure is defined as exposure at default (EAD) for IRB exposure and exposure value for standardised exposure (unless otherwise stated). In accordance with the CRR, credit risk exposure is 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. reversed repurchase agreements and securities lending)
- Derivatives.

Items presented in the Annual Report 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).

Table 5.1 shows the link between the CRR credit risk exposure and items presented in the Annual Report.

### 5.2.1. On-balance sheet items

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

- Non CRR related items. Items not part of consolidated situation of CRR such as Life insurance operations (due to solvency regulation).
- Market risk related items in the trading book, such as certain interest-bearing securities and pledged instruments.
- Repos, derivatives and securities lending. These transactions are either included in the calculation of market risk in the trading book or reported as separate exposure types (derivatives or securities financing).
- Other, mainly allowances and intangible assets.

### 5.2.2. Off-balance sheet items

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

- Non CRR related items. Items not part of consolidated situation of CRR such as Life insurance operations (due to solvency regulation).
- 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.

### 5.2.3. Derivatives and securities financing

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

## 5.3. Credit risk approach

Nordea is approved by its supervisory authorities to use the IRB approach when calculating the capital requirements for the main part of the credit portfolio.

As of 2015 year end, Nordea used the Advanced IRB approach for corporate lending in the Nordic countries and in the International Units. The Retail IRB approach was used for the retail exposure classes in the main banks, the mortgage companies in Sweden, Denmark and Norway and in the Finnish Finance company. The Foundation IRB approach was used for institutional customers, corporate derivative and securities lending exposures and corporate exposures in the Nordic Finance companies. Nordea has also an approval to use the Foundation IRB approach in Nordea Bank Russia and the Baltic branches in Latvia, Lithuania and Estonia.

**Table 5.1 Specification of on-balance sheet and off-balance sheet items for the Nordea Group, 31 December 2015**

<b>EURm</b>	Balance sheet (accounting)	Items not according to CRR <sup>1)</sup>	Items related to market risk	Repos, derivatives, securities lending	Other	Original exposure	Exposure adjustment <sup>2)</sup>	Exposure
<b>On-balance sheet items</b>								
Cash and balances with central banks	35,500	0				35,500		35,500
Loans to central banks and credit institutions	24,183	-1,158		-8,618	2	14,409		14,409
Loans to the public	340,920	4,386	0	-39,527	-883	304,896	-1,042	303,854
Interest-bearing securities and pledged instruments	96,516	-21,080	-18,807			56,629		56,629
Derivatives	80,741	2,040		-82,781		0		0
Intangible assets	3,209	-343			-2,866			
Other assets and prepaid expenses	65,800	-34,869	-26,226		-421	4,283		4,283
<b>Total</b>	<b>646,868</b>	<b>-51,025</b>	<b>-45,032</b>	<b>-130,926</b>	<b>-4,168</b>	<b>415,717</b>		<b>414,675</b>
<b>Off-balance sheet items in the Annual Report</b>	Off-balance sheet (accounting)	Included in derivatives & sec fin	Items not according to CRR <sup>1)</sup>	Included in CRR off-balance				
Assets pledged as security for own liabilities	184,795	-21,338	-163,457					
Other assets pledged	9,038	0	-9,038					
Contingent liabilities	22,569	-28		22,541				
Commitments	74,663	-990	0	73,673				
<b>Total</b>	<b>291,066</b>	<b>-22,357</b>	<b>-172,495</b>	<b>96,214</b>				
<b>Off-balance sheet items in the CRR</b>				Included in CRR off-bal. (from AR)	Included in CRR (not in AR) <sup>3)</sup>	Original Exposure	Credit Conversion Factor, %	Exposure
Credit facilities				50,637	1,421	52,059	48%	24,760
Checking accounts				16,800	4,205	21,005	51%	10,786
Loan commitments				6,194	7,827	14,021	41%	5,692
Guarantees				21,012		21,012	43%	8,939
Other (leasing and documentary credits)				1,571	27	1,598	36%	568
<b>Total</b>				<b>96,214</b>	<b>13,481</b>	<b>109,695</b>		<b>50,746</b>
<b>Derivatives and securities financing</b>						Original Exposure	Exposure adjustment <sup>2)</sup>	Exposure
Derivatives						27,048	-291	26,757
Securities Financing Transactions & Long Settlement Transactions						5,699		5,699
<b>Total credit risk (CRR definition)</b>						<b>558,159</b>		<b>497,877</b>

1) On-balance sheet items and Off-balance sheet items in accounting which is not handled according to CRR.

2) The on-balance exposures have a CCF of 100% but can still have lower EAD due to provisions in the standardised approach, financial collateral in the standardised approach and residual value for leasing in the IRB approach, that are deducted from the original exposure when calculating EAD.

3) Off-balance exposures included in the CRR but not included in the Annual Report (AR), such as exposures related to undrawn credit facilities which are unconditionally cancellable as well as exposures against Nordea Life Group.



Other legal entities and exposure classes are reported according to the standardised approach. Nordea aims to continue the roll-out of the IRB approaches in the coming years. Acquisitions of new portfolios are treated under the standardised approach until approved for the IRB approach by the supervisory authorities.

#### 5.4. Development of exposure and REA

Table 5.2 shows original exposure, exposure, average risk weight, REA and the minimum capital requirements, distributed by exposure class.

During 2015, total credit risk exposures increased by 2.1% to EUR 498bn (EUR 488bn), the increase was mainly related to increased exposures towards central banks calculated under the standardised approach. In the IRB portfolio, decreased exposure in the IRB institution portfolio was mainly driven by reduced market values of derivatives as well as decreased on-balance sheet items. Increased exposure in the IRB corporate portfolio was mainly a result of increased off-balance sheet items, partly offset by a decrease in derivative exposures. Increased IRB retail exposures were driven primarily by increased on-balance sheet volumes.

Average risk weight in the IRB corporate exposure class decreased to 41% (42%) at year end 2015. The REA decrease of EUR 1.4bn down to EUR 70.4bn (EUR 71.8bn) was largely driven by the approval of the Advanced IRB in the International Units as well as favourable rating migration and portfolio composition changes. The average risk weight in the IRB Retail portfolio remained stable at 13% and REA increased by EUR 0.6bn. The average risk weight in the standardised portfolio decreased by 2 percentage points to 12% during the period.

An overview of original exposure, exposure, REA and minimum capital requirements split by exposure type is shown in Table 5.3, where the exposure for derivatives stems from counterparty credit risk.

#### 5.5. Credit risk exposure

##### 5.5.1. Exposure by exposure type

Table 5.4 shows original exposure split by exposure class and exposure type. As of year-end, nearly 80% of the total credit risk original exposure was calculated using the IRB approach. The main part is within the IRB corporate and IRB retail portfolios. The average quarterly original exposure split by exposure type and exposure class is shown in Table 5.5.

**Table 5.2 Minimum capital requirements for credit risk, split by exposure class, 31 December 2015**

EURm	Original exposure	Exposure	Average risk weight	REA	Minimum capital requirements
<b>IRB exposure classes</b>					
Institution	45,738	43,787	19%	8,526	682
Corporate	216,438	172,702	41%	70,371	5,630
– of which Advanced	182,657	142,810	39%	56,211	4,497
Retail	179,674	172,406	13%	22,520	1,802
– of which secured by immovable property	140,188	138,642	9%	12,421	994
– of which other retail	36,098	30,780	29%	8,925	714
– of which SME	3,388	2,984	39%	1,174	94
Other non-credit obligation assets	2,646	2,300	100%	2,300	184
<b>Total IRB approach</b>	<b>444,496</b>	<b>391,195</b>	<b>27%</b>	<b>103,717</b>	<b>8,297</b>
<b>Standardised exposure classes</b>					
Central governments and central banks	70,297	73,499	1%	504	40
Regional governments and local authorities	12,048	9,326	3%	237	19
Institution	4,637	4,644	6%	282	23
Corporate	6,047	2,111	100%	2,109	169
Retail	7,448	4,288	73%	3,137	251
Exposures secured by real estate	4,863	4,849	60%	2,887	231
Other <sup>1)</sup>	8,322	7,965	52%	4,105	328
<b>Total standardised approach</b>	<b>113,662</b>	<b>106,683</b>	<b>12%</b>	<b>13,261</b>	<b>1,061</b>
<b>Total</b>	<b>558,159</b>	<b>497,877</b>	<b>23%</b>	<b>116,978</b>	<b>9,358</b>

1) Includes exposure classes public sector entities, multilateral development banks, international organisations, exposures in default, exposures associated with particularly high risk, covered bonds, securitisation positions, institutions and corporates with a short-term credit assessment, collective investment undertakings (CIU), equity and other items.

### 5.5.2. Exposure by geography

Nordea is geographically well diversified and no market accounts for more than 25% of the total exposure. The exposures in Denmark and Sweden represent 25% and 24% of the total exposure in Nordea respectively, while Finland accounts for 16% and Norway 13%. For more details on geographical distribution of exposures illustrating Nordea's cross-border business model, see Appendix Tables A6-A7.

### 5.5.3. Exposure by industry

Table 5.6 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 is well diversified between industry groups, with real estate management and investment being the largest and together with other financial institutions accounts for 35% of total IRB corporate exposure. The corporate portfolio increase the most, in terms of corporate exposure relative industry group weightings between 2014 and 2015, within the industrial commercial services. The largest decrease occurred in consumer staples. Counterparties classified as other, public and organisations compose the main part of the retail exposure class and are mainly composed of retail portfolio (such as residential mortgages). Standardised approach exposures

**Table 5.3 Original exposure, exposure, REA and minimum capital requirements for credit risk, split by exposure type, 31 December 2015**

EURm	On-balance sheet items <sup>1)</sup>	Off-balance sheet items	Derivatives	Total	Total 2014
Original exposure	421,416	109,695	27,048	558,159	550,329
Exposure	420,374	50,746	26,757	497,877	487,570
REA	89,963	18,124	8,890	116,978	119,029
Minimum capital requirements	7,197	1,450	711	9,358	9,522
Average risk weight	21%	36%	33%	23%	24%

1) Includes securities financing.

**Table 5.4 Original exposure split by exposure class and exposure type, 31 December 2015**

EURm	On-balance sheet items	Off-balance sheet items	Securities financing	Derivatives	Total
<b>IRB exposure classes</b>					
Institution	35,268	3,138	1,601	5,732	45,738
Corporate	128,462	73,661	1,111	13,204	216,438
– of which Advanced	113,869	68,787			182,657
Retail	161,096	18,494	1	84	179,674
– of which secured by immovable property	134,380	5,809			140,188
– of which other retail	24,378	11,663	0	58	36,098
– of which SME	2,338	1,023	0	26	3,388
Other non-credit obligation assets	2,613	29		3	2,646
<b>Total IRB approach</b>	<b>327,439</b>	<b>95,322</b>	<b>2,713</b>	<b>19,022</b>	<b>444,496</b>
<b>Standardised exposure classes</b>					
Central governments and central banks	66,596	756	713	2,232	70,297
Regional governments and local authorities	4,824	5,037	0	2,186	12,048
Institution	85	2	1,734	2,816	4,637
Corporate	2,350	3,219		479	6,047
Retail	4,347	3,072		29	7,448
Exposures secured by real estate	3,021	1,842			4,863
Other <sup>1)</sup>	7,053	446	540	283	8,322
<b>Total standardised approach</b>	<b>88,277</b>	<b>14,373</b>	<b>2,987</b>	<b>8,025</b>	<b>113,662</b>
<b>Total original exposure</b>	<b>415,717</b>	<b>109,695</b>	<b>5,699</b>	<b>27,048</b>	<b>558,159</b>

1) Includes exposure classes public sector entities, multilateral development banks, international organisations, exposures in default, exposures associated with particularly high risk, covered bonds, securitisation positions, institutions and corporates with a short-term credit assessment, collective investment undertakings (CIU), equity and other items.

increased in total. The increase mostly occurred in other, public and organisations industry group. The largest relative increase occurred in industrial capital goods. The largest relative decrease compared to 2014 total figures occurred in the industry group IT software, hardware and services.

For further information on exposures split by industry, see Appendix Tables A6.1 and A7.

#### 5.5.4. Exposures by credit quality step

Nordea applies the standardised approach primarily for exposures to central and regional governments, central banks and equity holdings. The full list of exposure classes under standardised approach is provided in Table 4.1. 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. Nordea uses Standard & Poor's (S&P) as eligible rating agency. Table 5.7 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. Out of the exposure towards central governments and central banks of EUR 73.5bn, 99% was within the highest credit quality step. Table 5.7 also shows that for majority of standardised corporates the 100% risk weight is used.

The main contributor to exposure class Equity in Table 4.1 in terms of capital requirement is Nordea's equity holdings in the banking book. Holdings exceeding 10% of Nordea's CET1 capital are deducted from CET1 and hence not included in the minimum capital requirements. The exposure class Other items comprises primarily cash items and leasing exposures.

#### 5.5.5. 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. 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. Fur-

**Table 5.5 Average quarterly original exposure during 2015, split by exposure class and exposure type**

EURm	On-balance sheet items	Off-balance sheet items	Securities financing	Derivatives	Total
<b>IRB exposure classes</b>					
Institution	36,696	3,346	2,087	6,417	48,546
Corporate	131,123	72,641	1,236	14,341	219,341
– of which Advanced	113,467	65,590			179,056
Retail	160,041	19,582	2	103	179,728
– of which secured by immovable property	132,213	6,341			138,554
– of which other retail	25,474	12,208	1	76	37,759
– of which SME	2,354	1,033	0	27	3,415
Other non-credit obligation assets	2,561	46	1	3	2,611
<b>Total IRB approach</b>	<b>330,421</b>	<b>95,615</b>	<b>3,326</b>	<b>20,864</b>	<b>450,226</b>
<b>Standardised exposure classes</b>					
Central governments and central banks	69,139	879	1,109	2,353	73,481
Regional governments and local authorities	4,677	5,058	6	2,286	12,028
Institution	87	1	1,658	2,862	4,608
Corporate	2,370	3,263		353	5,986
Retail	4,363	3,174		37	7,574
Exposures secured by real estates	3,020	1,912			4,932
Other <sup>1)</sup>	7,309	452	334	356	8,450
<b>Total standardised approach</b>	<b>90,966</b>	<b>14,740</b>	<b>3,108</b>	<b>8,246</b>	<b>117,060</b>
<b>Total original exposure</b>	<b>421,388</b>	<b>110,355</b>	<b>6,433</b>	<b>29,110</b>	<b>567,286</b>

1) Includes exposure classes public sector entities, multilateral development banks, international organisations, exposures in default, exposures associated with particularly high risk, covered bonds, securitisation positions, institutions and corporates with a short-term credit assessment, collective investment undertakings (CIU), equity and other items.

**Table 5.6 Exposure split by industry group and by main exposure class, 31 December 2015**

EURm	IRB approach					Standardised approach				Total	Total 2014
	Institution	Corporate	– of which SME	Retail	Other non-credit obligation assets	Central governments and central banks	Regional government and local authorities	Other <sup>1)</sup>			
Construction and engineering		5,155	2,573	266				252	5,673	5,179	
Consumer durables (cars, appliances, etc.)		4,471	660	43				30	4,543	4,713	
Consumer staples (food, agriculture etc.)		13,201	8,398	181				303	13,685	14,447	
Energy (oil, gas, etc.)		4,334	360	2				1	4,337	4,745	
Health care and pharmaceuticals		1,899	583	76				36	2,010	2,141	
Industrial capital goods		4,885	631	22				24	4,931	4,250	
Industrial commercial services		15,478	4,046	342				334	16,154	14,413	
IT software, hardware and services		1,756	443	63				37	1,856	2,226	
Media and leisure		2,492	1,087	180				59	2,730	2,861	
Metals and mining materials		1,050	215	9				22	1,081	1,098	
Other financial institutions	43,787	16,027	3,149	62				7,292	67,167	68,383	
Other materials (chemical, building materials, etc.)		7,936	1,606	70				207	8,213	8,180	
Other, public and organisations		6,421	1,182	169,349	2,300	73,499	9,326	14,118	275,013	264,218	
Paper and forest materials		2,389	383	41				36	2,467	2,718	
Real estate management and investment		45,389	25,826	1,119				111	46,619	47,149	
Retail trade		12,292	3,709	393				360	13,045	13,378	
Shipping and offshore		13,045	818	7				13	13,065	12,160	
Telecommunication equipment		282	16	1				0	283	261	
Telecommunication operators		1,633	219	4				4	1,642	1,742	
Transportation		4,042	1,233	158				426	4,626	4,566	
Utilities (distribution and production)		8,527	1,587	18				192	8,737	8,742	
<b>Total exposure</b>	<b>43,787</b>	<b>172,702</b>	<b>58,726</b>	<b>172,406</b>	<b>2,300</b>	<b>73,499</b>	<b>9,326</b>	<b>23,858</b>	<b>497,877</b>		
<b>Total exposure 2014</b>	<b>47,494</b>	<b>171,841</b>	<b>60,258</b>	<b>167,440</b>	<b>2,343</b>	<b>66,668</b>	<b>8,884</b>	<b>22,898</b>		<b>487,570</b>	

1) Includes exposure classes public sector entities, multilateral development banks, international organisations, exposures in default, exposures associated with particularly high risk, covered bonds, securitisation positions, institutions and corporates with a short-term credit assessment, collective investment undertakings (CIU), equity and other items.

**Table 5.7 Standardised exposure classes, distributed by credit quality step**

Credit quality step	Standard & Poor's rating	Risk weight	Original exposure		Exposure	
			Dec 2015	Dec 2014	Dec 2015	Dec 2014
<b>EURm</b>						
<b>Central Governments or Central banks</b>						
1	AAA to AA-	0%	69,223	61,422	72,934	65,472
2	A+ to A-	20%	198	481	180	525
3	BBB+ to BBB-	50%	0	478	0	478
4 to 6 or blank	BB+ and below, or without rating	100-250%	876	691	385	193
<b>Total</b>			<b>70,297</b>	<b>63,072</b>	<b>73,499</b>	<b>66,668</b>
<b>Regional Governments or local authorities</b>						
1	AAA to AA- <sup>1)</sup>	0% - 20% <sup>1)</sup>	12,024	10,871	9,302	8,861
2	A+ to A-	50%	0	23	0	23
3 to 6 or blank	BBB+ and below, or without rating	100-250%	24		24	
<b>Total</b>			<b>12,048</b>	<b>10,894</b>	<b>9,326</b>	<b>8,884</b>
<b>Public sector entities</b>						
1	AAA to AA- <sup>1)</sup>	0% - 20% <sup>1)</sup>	1,700	1,598	1,444	1,552
2	A+ to A-	50%				
3 to 6 or blank	BBB+ and below, or without rating	100-250%				
<b>Total</b>			<b>1,700</b>	<b>1,598</b>	<b>1,444</b>	<b>1,552</b>
<b>Multilateral Developments Banks</b>						
1	AAA to AA- <sup>2)</sup>	0% - 20% <sup>2)</sup>	2,122	1,529	2,128	1,527
2	A+ to A-	50%				
3 to 6 or blank	BBB+ and below, or without rating	100-250%	34		0	
<b>Total</b>			<b>2,156</b>	<b>1,529</b>	<b>2,128</b>	<b>1,527</b>
<b>Institutions</b>						
1	AAA to AA-	20%	61	66	68	66
2	A+ to A-	50%	0	6	0	6
3 to 6 or blank	BBB+ and below, or without rating	100-150%	26	23	26	23
<b>Total</b>			<b>87</b>	<b>95</b>	<b>94</b>	<b>95</b>
<b>Corporates</b>						
1	AAA to AA-	20%				
2	A+ to A-	50%	0	0	0	0
3 to 4	BBB+ to BB-	100%	6,047	6,224	2,111	1,922
5 to 6 or blank	B+ and below, or without rating	150%				
<b>Total</b>			<b>6,047</b>	<b>6,224</b>	<b>2,111</b>	<b>1,922</b>

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.

thermore, Nordea may, within clearly defined risk limits, use derivatives to take open positions in its operations. Derivatives affect counterparty risk, market risk as well as operational- and liquidity risk.

Counterparty credit risk is subject to credit limits like other credit exposures and is treated accordingly.

#### 5.5.5.1. Pillar 1 method for counterparty credit risk

Nordea has approval from the FSAs in Sweden and Finland to use the internal model method (IMM) to calculate the regulatory counterparty credit risk exposures in accordance with the credit risk framework in the CRR. The method is used for FX and interest rate products which constitute the predominant share of the exposure.

Expected exposure is calculated for 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. Nordea uses a stressed calibration of the IMM for calculation of the CCR exposures.

Moreover, automatic identification procedures are in place to identify potential specific wrong-way risk (SWWR) (i.e. situations where the future exposure to a specific counterparty is positively correlated with the counterparty's probability of default due to the nature of the contracts with the counterparty). Under the IMM approach, exposure is calculated as a factor 1.4 times the effective expected positive exposure calculated one year ahead in time. At the end of 2015, the IMM part of the derivative exposure was EUR 21.5bn.

For the non-IMM approved part of the portfolio, Nordea uses the Current Exposure Method (CEM) for calculating the regulatory exposure, which basically is the sum of current 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 add-on factor, stipulated by the FSA, depends on contracts' underlying asset and time to maturity. At the end of 2015, the CEM part of the derivative exposure was EUR 5.3bn

Table 5.8 shows exposures as well as REA, split by exposure class and Table 5.9 presents the counterparty credit risk split by different types of counterparties. At the end of the year the current exposure net (after close-out netting and collateral reduction) was EUR 12.9bn. The decrease in exposure during 2015 was mainly driven by increasing long-term interest rates. Table 5.10 shows the notional and fair values of Nordea's credit derivatives.

#### 5.5.5.2. Counterparty credit risk for internal credit limit purposes

Counterparty credit risk for internal credit limit purposes is for the main part of the exposure calculated by using a simulation model, which is based on the 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 IMM is also used for internal capital allocation purposes.

In addition, 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. Thereby also general wrong-way risk (GWWR) is taken into account in the counterparty credit risk management, and identified cases of GWWR are reported to senior management.

The ten largest counterparties, measured on current exposure net, account for around 12% (10%) of the total current exposure net, and consist of a mix of financial institutions, corporate and public counterparties.

**Table 5.8 Counterparty credit risk exposures and REA split by exposure class**

EURm	31 December 2015		31 December 2014	
	Exposure	REA	Exposure	REA
Institution	7,336	2,358	8,681	2,777
Corporate	14,315	6,427	15,671	6,992
Retail	85	28	140	41
<b>Total IRB approach</b>	<b>21,735</b>	<b>8,813</b>	<b>24,493</b>	<b>9,810</b>
<b>Standardised exposure classes</b>				
Central government and central banks	2,945	71	4,049	98
Other	7,777	625	7,118	627
– of which cleared through CCPs	4,550	242	4,064	299
<b>Total standardised approach</b>	<b>10,722</b>	<b>696</b>	<b>11,167</b>	<b>725</b>
<b>Total</b>	<b>32,457</b>	<b>9,510</b>	<b>35,659</b>	<b>10,535</b>

Exposures include derivatives as well as securities financing transactions.

**Table 5.9 Counterparty credit risk exposures, split by type of counterparty**

EURm	31 December 2015		31 December 2014	
	Current exposure net	Exposure	Current exposure net	Exposure
<b>To central banks and credit institutions</b>	<b>1,141</b>	<b>8,668</b>	<b>1,645</b>	<b>9,351</b>
– of which credit institutions	1,039	8,121	1,275	8,197
– of which central banks	102	547	370	1,154
<b>To the public</b>	<b>11,802</b>	<b>23,789</b>	<b>13,807</b>	<b>26,308</b>
– of which corporate	11,227	22,768	13,339	25,470
Central counterparties	1,432	4,392	1,363	4,295
Construction and engineering	124	183	181	267
Consumer durables (cars, appliances, etc.)	432	689	376	585
Consumer staples (food, agriculture, etc.)	421	643	480	690
Energy (oil, gas, etc.)	29	81	32	492
Health care and pharmaceuticals	125	214	190	294
Industrial capital goods	277	514	312	562
Industrial commercial services, etc.	429	698	548	861
IT software, hardware and services	29	58	51	79
Media and leisure	84	134	186	284
Metals and mining materials	13	25	30	44
Other financial institutions	1,291	5,080	1,621	5,002
Other materials (chemical, building materials, etc.)	147	251	194	301
Other, public and organisations	1,622	2,731	2,224	3,687
Paper and forest materials	89	138	163	242
Real estate management and investment	2,450	3,404	3,033	4,183
Retail trade	205	391	261	408
Shipping and offshore	880	1,319	676	946
Telecommunication equipment	22	40	75	110
Telecommunication operators	41	79	62	191
Transportation	358	576	416	659
Utilities (distribution and production)	725	1,129	863	1,288
– of which public sector	575	1,020	469	838
<b>Total</b>	<b>12,943</b>	<b>32,457</b>	<b>15,452</b>	<b>35,659</b>

#### 5.5.5.3. CVA Risk Charge

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 amounts that are used in the advanced CVA risk charge calculation or CEM exposure amounts that are used in the standard CVA risk charge calculation. At the end of 2015, the total REA from CVA risk charge was EUR 1.7 bn.

#### 5.5.5.4. Mitigation of counterparty credit risk exposure

To reduce exposure towards single counterparties, Nordea employs some risk mitigation techniques. The most common is the use of 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 counterparties.

In addition, Nordea mitigates the exposure towards primarily banks, institutional counterparties and hedge funds by the use of financial collateral agreements, where collateral on daily basis is placed or received to cover the current exposure. The collateral is mainly cash (EUR, USD, DKK, SEK and NOK), but also government bonds and to a lesser extent mortgage bonds. Nordea's financial collateral agreements do not normally contain any trigger dependent features, e.g. rating triggers. A few agreements contain clauses that may require collateral postings in case of a downgrading; however, these would not impose any material impact on Nordea's liquidity and collateral preparedness. Separate credit guidelines are in place for handling financial collateral agreements. At the end of the year, Nordea had around 1,200 financial collateral agreements.

**Table 5.10 Notionals and fair values of credit derivatives. 31 December 2015**

EURm	Protection	
	Sold	Bought
<b>Notionals</b>		
Credit Derivatives		
– of which trading book	46,813	45,614
– of which single-name	8,668	9,152
– of which multi-name	38,145	36,462
– of which banking book		
<b>Total Notionals</b>	<b>46,813</b>	<b>45,614</b>
<b>Fair Values</b>		
Positive fair values	2,039	265
Negative fair values	396	1,892

**Figure 5.2 Mitigation of derivative exposures, 31 December 2015**

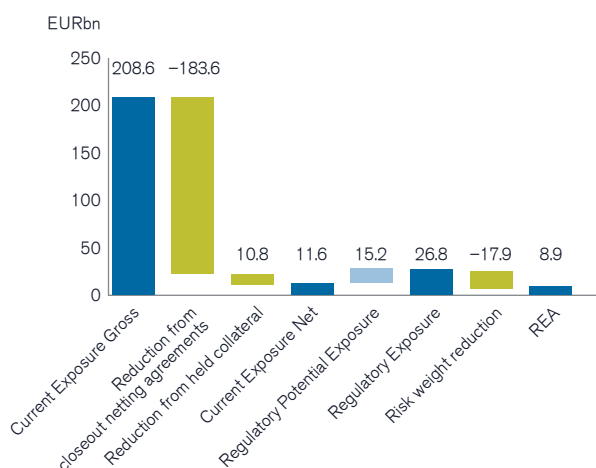


Figure 5.2 shows derivative exposures mitigated through closeout netting and collateral agreements. The effects of closeout netting and collateral agreements (including CCPs) are considerable, as the current exposure (gross) was reduced by 94% by application of such risk mitigation techniques.

Nordea also mitigates risks in some of the long-term derivative contracts by including a clause (break clause) that allow for the termination of the contract at a specific time.

Finally, in order to reduce bilateral counterparty credit risk, central counterparties (CCPs) are increasingly used for clearing of OTC derivatives. By the end of 2015 CCPs were mainly used by Nordea to clear interest rate derivatives and repo transactions. Nordea continues to assess the possibility to clear more derivative volumes through CCPs in order to further reduce bilateral counterparty credit risk.

#### 5.5.5.5. Settlement risk

Settlement risk is a type of credit 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 counterparty 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 counterparties is restricted by settlement risk limits. Each counterparty 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, and participant in, the global FX clearing system CLS (Continuous Linked Settlement), which eliminates the settlement risk of FX trades in those currencies and with those counterparties (mainly banks) that are eligible for CLS clearing.

For those counterparties and FX trades that are not eligible for CLS clearing, it is Nordea's policy to settle via inhouse accounts. Only against specific credit approval external settlement is allowed, and in those situations Nordea makes use of bilateral payment netting in order to reduce the exchanged amounts to the greatest extent possible.

## 5.6. Rating and scoring

### 5.6.1. Rating and scoring definition

The common denominator of the rating and scoring is the aim to predict defaults and rank customers according to their default risk. Rating and scoring 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 REA
- Calculation of economic capital and expected loss
- Monitoring and reporting of credit risk
- Performance measurement using the economic profit
- Collective impairment assessment

While rating is used for corporate and institution exposure, scoring is used for retail exposure.

#### 5.6.1.1. Rating

A rating is an estimate that reflects the risk of customer default. The rating scale in Nordea consists of 18 grades; from 6+ to 1– for non-defaulted customers and three grades from 0+ to 0– for defaulted customers. The default risk of each rating grade is quantified by a one-year PD. Rating grades 4– and better are comparable to investment grade as defined by rating agencies such as Moody's and Standard & Poor's (S&P). Rating grades 2+ and lower are considered as weak or critical, and require special attention due to financial difficulties.

The mapping of the internal ratings to S&P's rating scale, shown in Table 5.11, is based on a predefined set of criteria, such as comparison of default and risk definitions.



The mapping does not intend to indicate a fixed relationship between Nordea's internal rating grades and S&P's rating grades since the rating approaches differ.

Ratings are assigned in conjunction with credit proposals and the annual review of the customers, and are approved by the credit committees. However, a customer is down-graded as soon as new information indicates a need for it. The consistency and transparency of the ratings are ensured by the use of rating models. A rating model is a set of specified and distinct rating criteria which, given a set of customer characteristics, produces a rating. It is based on the predictability of customers' future performance based on their characteristics. The set of characteristics used in a rating model is called input factors, which together with the criteria for assigning a customer to a rating model, i.e. the rating model segmentation, are the fundamental parts of a rating model. Calculated rating is always based on the complete set of input factors required by the rating model. Typical input factors are:

- Financial factors
- Customer factors
- Qualitative factors

If the calculated rating is assessed to fail to predict the risk of default of the customer, specified override arguments or exception rules can be used within the model to adjust the calculated rating.

Nordea has different rating models for different customer types to better reflect the risk. Rating models have therefore been developed for several general as well as specific segments, such as real estate management, shipping, financial institutions and hedge funds. There are also risk rating frameworks for countries and project finance. Different methods ranging from statistical to purely expert-based, depending on the segment in question, have been used when developing the rating models. The models are largely based on an overall framework, in which financial factors are combined with qualitative factors as well as customer factors.

**Table 5.11 Indicative mapping between internal ratings and the S&P rating scale**

Rating	
Internal	Standard & Poor's
6+, 6, 6-	AAA to AA-
5+, 5, 5-	A+ to A-
4+, 4, 4-	BBB+ to BBB-
3+, 3, 3-	BB+ to BB-
2+, 2, 2-, 1+	B+ to B-
1, 1-	CCC
0+, 0, 0-	D

#### 5.6.1.2. Scoring

Models used in the Household portfolio and in the retail SME portfolio are based on scoring, which is a statistical technique used to predict the probability of customer default. In order to represent the scores, the risk grade scale used for scored customers in the retail portfolio consists of 18 grades; A+ to F- for non-defaulted customers and three grades from 0+ to 0- for defaulted customers.

Credit scoring models are based on statistical analyses of internal Nordea data. To predict the future performance of customers, certain characteristics are defined on the basis of the customer's previous performance, the products held as well as behavioural information. The models also take e.g. policy requirements and credit processes into account. The customers' credit risk behaviour scores and Risk Grades are recalculated on a monthly basis using the most recent data and customer information.

The models are used to support the business processes, the credit approval process and the risk management process, including monitoring of various portfolio risks. As a supplement to the scoring models, e.g. credit bureau information is used in the credit process.

The Nordea business approach towards customers is a customer level approach as opposed to a product-oriented approach. Thus the customer's behaviour on all accounts/products – including potential joint commitments – is taken into consideration in a credit approval assessment or in risk management. In Nordea the prediction of default results in a Risk Grade assigned at the customer level. Thus only one score covers all the Nordea Group exposure with the customer, ensuring that the resulting Risk Grade is assigned for all the customer's facilities in Nordea.

This scoring method ensures that the customer level design supports the business process and risk management practise in Nordea.

Scorecards are tailored to country specific variations, reflecting that product features, customer behaviour, the country specific macro-economic development, debt collection process and national legislation all influence the credit risk and thus the prediction of default. There are different scorecards to score the Household and SME portfolios respectively.

The split between Household and SME is based on differences in predictors, reflecting that these portfolios are subject to separate credit decision processes. To strengthen model performance further the portfolio is segmented into smaller sub-populations and a scorecard is developed for each segment. Selection of the sub-populations is based on the likelihood that the resulting sub-populations will be best served by different scorecards.

The common approach in Nordea for segmentation into sub-populations is based upon the product combinations (the products held by the customer). For each product certain characteristics are defined on the basis of the cus-

customer's previous performance, the products held as well as behavioural information. The characteristics also take e.g. policy requirements and credit processes into account.

Nordea scorecards for customers in the retail portfolio are segmented in accordance with the principle stated below:

- Country
- Household / SME customers
- Product combination (mortgage, revolving credits, other retail exposure)
- Delinquency (depending on volumes)

Delinquency concerns the customers that are not compliant with the product specific terms and conditions.

### 5.6.2. Rating and risk grade distribution

The credit quality was slightly improved in the corporate credit portfolio as well as in the scoring portfolio in 2015. 31% of the number of corporate customers migrated upwards (28%) while 9% were down-rated (21%). Exposure-wise, 24% (24%) of the corporate customer exposure migrated upwards while 18% (16%) was down-rated. 86% (84%) of the corporate exposure were rated 4- or higher, with an average rating for this portfolio of 4-. Institutions and retail customers on the other hand exhibit a distribution that is biased towards the higher rating grades. 92% (91%) of the retail exposures is scored C- or higher, which indicates a probability of default of 1% or lower. Impaired loans are not included in the rating/scoring distributions.

The overall credit quality improvement was reflected in average PD of each portfolio in a different way. Average PD for IRB Corporate portfolio decreased from 0.59% to 0.58% mainly due to increased volumes in higher rating grades due to positive migration. In IRB Retail portfolio, the average PD decreased from 0.85% to 0.79% mainly due to decreased volumes in scoring grades with high average PD. Finally, the average PD in the IRB institution portfolio slightly increased, from 0.10% to 0.11%.

Table 5.12 shows on-balance, off-balance, EAD and average risk weights for exposures where IRB models are used. Table 5.13 shows PD and LGD of IRB exposure classes distributed on geographical dimension. For detailed information on risk grade distributions, refer to Appendix Tables A8.1-A8.4.

### 5.6.3. Rating and scoring migration

The rating and risk grade distribution changes mainly due to three factors:

- Changes in rating/risk grade for existing customers (pure migration).
- Different rating/risk grade distribution of new customers and customers leaving Nordea, compared to the rating/risk grade distribution of existing customers during the comparison period.
- Increased or decreased exposure per rating/risk grade to existing customers.

Rating migration is affected by macroeconomic development, industry sector developments, changes in business opportunities and changes to customers' financial situation and other company-specific factors. Risk grade migration is among other things affected by macroeconomic development and the customers' repayment capacity.

The REA changes due to rating/risk grade migration, reflecting the impact of pro-cyclicality in the Pillar I capital requirement calculations of the IRB approaches.

Migration in the corporate and retail portfolio remain relatively stable, having approximately 43% (40%) and 54% (55%) of exposure respectively migrated either up or down.

Out of the total exposure in the institution portfolio approximately 21% (15%) migrated up or down during the year.

On an overall level, migration had a positive impact on credit risk REA and reduced credit risk REA by approximately 0.2%. This calculation does not take into account the changes in exposure distribution nor rating distribution of lost and new customers or customers who defaulted during the year.

## 5.7. Collateral

Collateral management principles are governed through the Collateral Valuation Guideline owned by Group Credit Risk. There is a strong relationship between the data used for collateral management and data used in calculating the capital requirements. The resulting parameters combined with certain qualitative aspects reflect the level of risk assessed by Nordea.

### 5.7.1. Valuation principles of collateral

A conservative approach with long-term market values taking volatility into account is used as valuation principle for collateral when defining the maximum collateral ratio. Valuation and hence eligibility of collaterals is based on the following principles:

- Market value is assessed; markets must be liquid, public prices must be available and the collateral is expected to be liquidated within a reasonable time frame.
- A reduction of the collateral value is to be considered if the type, location or character (such as deterioration and obsolescence) of the asset indicates uncertainty regarding the sustainability of the market value. Assessment of the collateral value also reflects the previously experienced volatility of market.
- Forced sale principle: assessment of market value or the collateral value must reflect that realisation of collaterals in a distressed situation is initiated by Nordea.
- 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.

A common way to analyse the value of the collateral is to measure the loan-to-value (LTV) ratio, i.e. the credit extended divided by the market value of the collateral pledged. In Table 5.14, retail mortgage exposures are

**Table 5.12 On-balance, off-balance, EAD and average risk weights for exposures where IRB models are used, 31 December 2015**

<b>EURm</b>	On-balance exposure	Off-balance exposure	Exposure <sup>1)</sup>	– of which off-balance	Exposure-weighted average risk weight (%)
<b>Corporate, foundation IRB:</b>	<b>14,593</b>	<b>4,874</b>	<b>29,892</b>	<b>1,016</b>	<b>47.4</b>
– of which rating grades 6	1,189	123	4,383	22	16.0
– of which rating grades 5	4,122	1,354	9,293	328	31.0
– of which rating grades 4	5,884	1,934	11,512	481	56.0
– of which rating grades 3	1,935	928	2,928	147	86.2
– of which rating grades 2	299	110	679	5	157.4
– of which rating grades 1	45	25	50	1	176.3
– of which unrated	634	294	401	14	111.0
– of which defaulted	486	106	645	17	
<b>Corporate, advanced IRB:</b>	<b>113,869</b>	<b>68,787</b>	<b>142,810</b>	<b>32,922</b>	<b>39.4</b>
– of which rating grades 6	13,538	5,272	14,899	2,560	9.0
– of which rating grades 5	25,041	27,249	37,945	13,238	23.2
– of which rating grades 4	51,887	28,684	64,343	13,745	39.3
– of which rating grades 3	13,741	5,345	16,030	2,612	58.6
– of which rating grades 2	3,168	1,091	3,154	468	102.8
– of which rating grades 1	420	90	421	32	128.5
– of which unrated	1,748	532	1,903	267	91.0
– of which defaulted	4,328	523	4,115		143.5
<b>Institutions, foundation IRB:</b>	<b>35,268</b>	<b>3,138</b>	<b>43,787</b>	<b>1,083</b>	<b>19.5</b>
– of which rating grades 6	12,274	547	14,318	327	9.7
– of which rating grades 5	22,223	826	27,292	268	20.5
– of which rating grades 4	461	1,149	1,725	370	55.3
– of which rating grades 3	194	211	291	57	112.0
– of which rating grades 2	67	111	69	23	183.2
– of which rating grades 1	1	7	4	3	242.9
– of which unrated	43	287	83	35	139.9
– of which defaulted	4		4		
<b>Retail, of which secured by immovable property:</b>	<b>135,484</b>	<b>5,999</b>	<b>139,859</b>	<b>4,375</b>	<b>9.1</b>
– of which scoring grades A	84,190	4,825	87,768	3,578	3.5
– of which scoring grades B	30,652	762	31,214	561	8.1
– of which scoring grades C	12,617	259	12,775	158	16.0
– of which scoring grades D	3,903	100	3,957	55	30.8
– of which scoring grades E	1,725	39	1,741	16	62.9
– of which scoring grades F	822	6	825	3	86.4
– of which not scored	43	2	45	1	31.0
– of which defaulted	1,532	5	1,536	4	133.5
<b>Retail, of which other retail:</b>	<b>25,612</b>	<b>12,495</b>	<b>32,546</b>	<b>8,048</b>	<b>30.2</b>
– of which scoring grades A	6,756	6,636	10,850	4,271	9.1
– of which scoring grades B	6,396	2,953	8,040	1,918	19.1
– of which scoring grades C	4,091	1,484	4,790	994	31.4
– of which scoring grades D	2,862	751	3,144	487	37.7
– of which scoring grades E	2,702	298	2,821	186	40.6
– of which scoring grades F	1,802	128	1,810	81	54.7
– of which not scored	101	111	135	33	46.0
– of which defaulted	902	135	956	77	251.1
<b>Other non credit-obligation assets</b>	<b>2,613</b>	<b>29</b>	<b>2,300</b>	<b>13</b>	<b>100</b>

Standardised exposure classes, incl. equity exposures, items representing securitisation positions, central governments and central banks are not included in the table. Retail splits include SMEs.

1) Includes EAD for on-balance, off-balance, derivatives and securities financing.

**Table 5.13 Exposure weighted average PD and LGD, IRB exposure classes (excl. defaulted exposures), 31 December 2015**

Percent (%)	Denmark		Finland		Norway		Sweden		Baltic countries		Russia		USA		Other	
	PD	LGD	PD	LGD	PD	LGD	PD	LGD	PD	LGD	PD	LGD	PD	LGD	PD	LGD
Institution	0.09	12.2	0.12	26.1	0.05	15.5	0.06	15.9	0.32	45.0	0.80	45.0	0.08	45.0	0.19	41.6
Corporate	0.59	28.9	0.72	29.8	0.73	30.7	0.43	29.7	0.43	40.6	0.39	41.9	0.29	33.3	0.58	33.8
– of which AIRB	0.61	26.8	0.71	27.7	0.71	28.1	0.43	27.2	0.32	34.7	0.55	35.8	0.30	32.8	0.63	32.0
Retail	0.80	20.4	1.55	14.7	0.64	21.1	0.31	13.8	2.92	40.4	3.23	37.0	1.82	34.7	2.53	36.5
– of which secured by immovable property	0.65	15.9	0.62	11.0	0.54	19.4	0.20	10.9								
– of which other retail	1.31	38.7	3.89	22.6	1.07	30.2	0.98	34.2								
– of which SME	2.50	27.2	2.96	26.5	2.86	38.2	2.25	25.3	2.92	40.4	3.23	37.0	1.82	34.7	2.53	36.5
Other non-credit obligation assets	2.29	44.3	2.24	41.2	1.86	40.1	2.39	44.3	2.50	45.0			2.50	45.0	2.50	44.9
<b>Total exposure-weighted IRB</b>	<b>0.62</b>	<b>22.6</b>	<b>1.21</b>	<b>20.8</b>	<b>0.64</b>	<b>25.3</b>	<b>0.36</b>	<b>20.4</b>	<b>0.45</b>	<b>40.6</b>	<b>0.41</b>	<b>42.0</b>	<b>0.20</b>	<b>38.7</b>	<b>0.44</b>	<b>36.6</b>

**Table 5.14 Loan-to-value distribution, retail mortgage exposure, on-balance**

EURbn	31 Dec 2015		31 Dec 2014	
	Exposure	%	Exposure	%
<50%	105.3	78.4	98.2	76.9
50–70%	21.4	16.0	20.8	16.3
70–80%	5.1	3.8	5.4	4.3
80–90%	1.7	1.3	2.1	1.6
>90%	0.8	0.6	1.1	0.9
<b>Total</b>	<b>134.4</b>	<b>100</b>	<b>127.7</b>	<b>100</b>

The exposure is continuously distributed by LTV buckets. For example, an exposure of 540 with an LTV of 54% is distributed 500 to the <50% bucket and 40 to the 50–70% bucket.

distributed by LTV range up to the top LTV bucket based on the LTV ratio. In 2015, the retail mortgage exposure remained stable including the LTV bucket representing LTV below 50%.

## 5.7.2. Collateral in capital requirements calculation

### 5.7.2.1. Guarantees and credit derivatives

The guarantees used as credit risk mitigation are to a large extent issued by central and regional governments in the Nordic countries. Banks and insurance companies are also important guarantors of credit risk.

Only eligible providers of guarantees and credit derivatives can be recognised in the standardised and IRB approaches for credit risk. All central governments, regional governments and institutions are eligible as well as some multinational development banks and international organisations. Corporate guarantees that have a credit assessment by an ECAI, or cases where institutions calculate REA and expected loss amount under the IRB approach and are internally rated by the institutions, are eligible.

Central governments and municipalities guarantee approximately 52% of the total guaranteed exposure. Exposure guaranteed by these guarantors has an average risk weight of 0%. 46% of total guaranteed exposure is guaranteed by corporates. The remainder is guaranteed by institutions.

Credit derivatives are only used as credit risk protection to a very limited extent since the credit portfolio is considered to be well diversified.

Table 5.15 shows the exposure secured by eligible collateral, guarantees and credit derivatives, split by exposure class. At the end of the year, approximately 43% (41%) of the total exposure was secured by eligible collateral. The corresponding figure for the IRB portfolio was 53% (50%). The relative share of collateralised exposure remains stable.

### 5.7.2.2. Collateral distribution

Table 5.16 presents the distribution of collateral used in the capital adequacy calculation process. The table shows that the residential real estate constitutes a major share of eligible collateral. Real estate collateral in general is not concentrated in any particular region within the Nordic and Baltic countries. The proportion of each collateral category on total eligible collateral remained relatively stable in 2015, with a slight increase in other physical collateral, consisting primarily of ships.

### 5.7.2.3. Loss Given Default

For the AIRB Corporate and IRB Retail exposures Nordea uses own estimates of LGD in line with the CRR. The estimates are based on an internal model and divided into pools of collateral based on historical loss data. In 2015, Nordea started to use own LGD estimates also for International Units due to the AIRB approval.

**Table 5.15 Exposure secured by collateral, guarantees and credit derivatives, split by exposure class, 31 December 2015**

EURm	Original exposure	Exposure	– of which secured by guarantees and credit derivatives	– of which secured by collateral	Average weighted LGD	Average weighted LGD 2014
<b>IRB exposure classes</b>						
Institution	45,738	43,787	144	608	23.7%	25.4%
Corporate	216,438	172,702	11,551	66,778	30.8%	31.5%
– of which Advanced	182,657	142,810	10,777	61,299	28.2%	27.4%
Retail	179,674	172,406	1,995	138,524	17.2%	17.2%
– of which secured by immovable property	140,188	138,642	251	135,577	13.8%	13.3%
– of which other retail	36,098	30,780	1,480	1,388	31.4%	31.4%
– of which SME	3,388	2,984	263	1,559	28.1%	27.6%
Other non-credit obligation assets	2,646	2,300	16	52	n.a.	n.a.
<b>Total IRB approach</b>	<b>444,496</b>	<b>391,195</b>	<b>13,706</b>	<b>205,962</b>		
<b>Total IRB approach 2014</b>	<b>446,023</b>	<b>389,119</b>	<b>14,241</b>	<b>195,206</b>		
<b>Standardised exposure classes</b>						
Central government and central banks	70,297	73,499	488			
Regional governments and local authorities	12,048	9,326	63			
Institution	4,637	4,644	0	0		
Corporate	6,047	2,111		833		
Retail	7,448	4,288	60	133		
Exposures secured by real estate	4,863	4,849		4,849		
Other <sup>1)</sup>	8,322	7,965	36	0		
<b>Total standardised approach</b>	<b>113,662</b>	<b>106,683</b>	<b>647</b>	<b>5,816</b>		
<b>Total standardised approach 2014</b>	<b>104,306</b>	<b>98,451</b>	<b>555</b>	<b>5,566</b>		

<sup>1)</sup> Includes exposure classes public sector entities, multilateral development banks, international organisations, exposures in default, exposures associated with particularly high risk, covered bonds, securitisation positions, institutions and corporates with a short-term credit assessment, collective investment undertakings (CIU), equity and other items.

Under the FIRB approach, LGD estimates are predefined by the CRR. Real estate collateral is associated with an LGD of 35%, other physical collateral with an LGD of 40% and the LGD value for unsecured senior exposure is 45%.

Overall, average LGD in IRB Corporate and Institution portfolio decreased slightly to 31% (32%) and 24% (25%) respectively while the average LGD in IRB Retail remained stable at 17%.

## 5.8. Other regulatory parameters

### 5.8.1. Maturity

Exposure split by remaining maturity is presented in Table 5.17. In the institution portfolio, the distribution of exposures in regards to maturity changed during 2015. The largest part of the exposures is concentrated in maturity bucket 1-3 years, whereas in 2014 the long term maturity of > 5 years prevailed. Distribution of exposures in the remaining portfolios remained stable.

### 5.8.2. Credit Conversion Factor (CCF)

Off-balance exposures are converted to on-balance equivalents through the application of a CCF between 0%

**Table 5.16 Distribution of collateral, IRB portfolios**

Percent (%)	31 Dec 2015	31 Dec 2014
Financial collateral	1.3%	1.4%
Receivables	0.8%	0.9%
Residential real estate	71.8%	71.9%
Commercial real estate	17.4%	17.5%
Other physical collateral	8.7%	8.3%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>

and 100%. The CCF is set depending on the calculation approach, product type and whether the commitments are unconditionally cancellable or not.

For the AIRB Corporate and IRB Retail portfolio an internal CCF model is used. Apart from the product type, there are two additional explanatory variables for IRB Retail: customer type and country in which the reporting is made. The CCF is based on internal estimates of the expected total exposure at the time of default. The average CCF is presented in Table 5.18.

**Table 5.17 Exposure split by residual maturity, 31 december 2015**

EURm	< 1 year	1–3 years	3–5 years	> 5 years	Total exposure
<b>IRB exposure classes</b>					
Institution	7,868	15,186	6,831	13,901	43,787
Corporate	42,027	32,599	33,755	64,322	172,702
– of which Advanced	39,998	29,067	30,507	43,238	142,810
Retail	2,689	5,394	5,692	158,632	172,406
– of which secured by immovable property	1,575	3,182	3,383	130,502	138,642
– of which other retail	864	1,770	1,880	26,265	30,780
– of which SME	250	442	428	1,864	2,984
Other non-credit obligation assets	283	1,614	262	141	2,300
<b>Total IRB approach</b>	<b>52,867</b>	<b>54,793</b>	<b>46,539</b>	<b>236,996</b>	<b>391,195</b>

**Standardised exposure classes**

Central government and central banks	11,107	9,520	4,808	48,064	73,499
Regional governments and local authorities	2,144	1,511	834	4,838	9,326
Institution	1,947	221	221	2,255	4,644
Corporate	118	535	742	716	2,111
Retail	317	832	1,033	2,106	4,288
Exposures secured by real estate	19	147	56	4,627	4,849
Other <sup>1)</sup>	1,171	1,601	1,605	3,588	7,965
<b>Total standardised approach</b>	<b>16,823</b>	<b>14,368</b>	<b>9,298</b>	<b>66,194</b>	<b>106,683</b>
<b>Total</b>	<b>69,691</b>	<b>69,160</b>	<b>55,837</b>	<b>303,189</b>	<b>497,877</b>

1) Includes exposure classes public sector entities, multilateral development banks, international organisations, exposures in default, exposures associated with particularly high risk, covered bonds, securitisation positions, institutions and corporates with a short-term credit assessment, collective investment undertakings (CIU), equity and other items.

**Table 5.18 Average credit conversion factor and off-balance sheet exposure split by IRB exposure class, 31 December 2015**

EURm	Exposure after substitution effects <sup>1)</sup>	Exposure	CCF	CCF 2014
Institution	3,231	1,083	34%	30%
Corporate	72,657	33,938	47%	43%
– of which Advanced	67,782	32,922	49%	45%
Retail	18,438	12,423	67%	64%
– of which secured by immovable property	5,809	4,262	73%	69%
– of which other retail	11,611	7,478	64%	61%
– of which SME	1,019	682	67%	63%
<b>Total</b>	<b>94,326</b>	<b>47,443</b>		

1) Exposure after substitution effects is the original exposure after taking credit risk mitigation techniques, such as guarantees and credit derivatives, into account.

### 5.9. Credit risk models validation and parameter estimation

Nordea has re-organised the responsibility and governance of the IRB set-up, to align with regulatory requirements. These mainly relate to a strengthening of the three lines of defence and improving the governance of the IRB system. As part of this re-organisation, a new unit responsible for validations has been created in the second line of defence which is fully independent from the unit responsible for model development.

Nordea's validation process aims at ensuring and improving the performance of models, procedures and systems and at ensuring the accuracy of the parameters.

The rating and scoring models are validated annually and the validation includes both a quantitative and a qualitative validation. The quantitative validation includes statistical tests of the models' discriminatory power, i.e. the models' ability to distinguish default risk on a relative basis, and cardinal accuracy, i.e. the ability to predict default levels. The rating models Nordea uses for exposure classes corporate and institution exhibits characteristics of both through-the-cycle (TTC) and point-in-time (PIT) rating philosophies, whereas the retail portfolio scoring models are closer to PIT. A point-in-time (PIT) rating system uses all currently available obligor-specific and aggregate information to assign obligors to risk buckets. All obligors within a risk grade share roughly the same unstressed PD, and an obligor's rating is expected to change rapidly as its economic prospects change. A through-the-cycle (TTC) rating system uses static and dynamic obligor characteristics but tends not to adjust ratings in response to changes in macroeconomic conditions. 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.

The PD, LGD and CCF parameters are based on internal data and validated annually. The validation includes both a quantitative and a qualitative validation. The quantitative validation includes statistical tests to ensure that the estimates are still valid when new data is added.

The estimation process is linked to the validation since the estimates used for the PD scale are based on Nordea's actual default frequency (ADF).

The PD estimation, and hence the validation, takes into account that the rating models used for corporate and institution customers have a higher degree of TTC than the scoring models used for retail customers.

The PD estimates are based on the long-term default experience and adjusted by adding a margin of conservatism between the average PD and the average ADF. This margin consists of two parts, one that compensates for statistical uncertainty whereas the other constitutes a business cycle adjustment of the rating and scoring models.

Table 5.19 shows the PD and actual default frequency (ADF), calculated as the customer-weighted long-term default frequency for the corporate and institution portfolio.

The PD and actual default frequency (ADF) for the Retail portfolio is based on last validation year due to the PIT methodology used for the model calibration. The PDs and ADFs are presented by the same segmentation used in Nordea's internal validation.

Table 5.20 shows estimated and realised LGD, CCF and EAD for IRB exposures. LGD measures the net present value of the nominal loss including costs caused by a customer's default. CCF is a statistical multiplier used to predict the EAD by predicting the drawdown of the off-balance exposure. Nordea's CCF estimates are based on internal data regarding drawings prior to default. Realised LGD and CCF values for the retail portfolio are based on a minimum of 7 default years and a 3 years' work-out period. For the corporate portfolio the averages are also based on at least 7 years of data. The estimated values include a downturn add-on and a safety margin, hence the difference between estimated and realised values.

Table 5.21 displays the comparison between EL and actual losses. Regulatory EL follows the calculation rules defined in the CRR whereas internal EL is calculated using the definition in the Value Creation Framework (VCF, see section 11.2), in which defaulted exposure receive 0% EL and the internal LGD and CCF estimates for corporate and institution exposure are used. As follows from the definitions, Regulatory EL is an estimate for 1 year Gross loss and Internal EL is calibrated towards Net loss. The figures represent full-year outcomes.

**Table 5.19 Obligor-weighted PD vs. ADF, 2015**

	Average PD	Average ADF
Retail	1.40%	1.07%
– of which SME	3.55%	2.69%
Corporate & Institution	1.45%	1.27%

**Table 5.20 Exposure-weighted estimated vs. realised LGD & EAD & CCF for the corporate and retail IRB portfolios, 2015<sup>1)</sup>**

	Estimated	Realised average
Retail LGD	17.2% <sup>2)</sup>	9.8%
Retail CCF	55.8%	49.5%
Retail EAD <sup>3)</sup> , EURm	253	182
Corporate LGD	31.1% <sup>2)</sup>	14.3%
Corporate CCF	60.4%	53.9%
Corporate EAD <sup>3)</sup> , EURm	241	147

1) Figures provided for 2015.

2) Defaulted customers not included.

3) Only for exposures with an off-balance part.

N.B. Realised avg. EAD does not include post-default drawings.

**Table 5.21 Expected loss vs. gross loss and net loss**

EURm	Retail household		Corporate <sup>1)</sup>	Institution	Government	Total
	Mortgage	Other				
<b>2015</b>						
Regulatory EL	-100	-168	-295	-20	0	-585
Internal EL	-49	-117	-222	-13	-2	-407
Gross loss	-127	-331	-877	-1	0	-1,336
Net loss	-49	-95	-345	10	0	-479
<b>2014</b>						
Regulatory EL	-98	-104	-322	-37	0	-561
Internal EL	-40	-106	-247	-39	-1	-442
Gross loss	-138	-329	-752	-69	0	-1,288
Net loss	-79	-115	-298	-42	0	-534
<b>2013</b>						
Regulatory EL	-87	-109	-426	-12	0	-637
Internal EL	-39	-116	-265	-10	-1	-438
Gross loss	-165	-294	-870	-84	0	-1,412
Net loss	-88	-126	-474	-73	0	-761

1) Includes retail SME.

The internal EL ratio used for calculating risk-adjusted profit was on average 11.4bps of EAD, excluding sovereign and institution exposure classes. This value is calculated as the average of quarterly results for the year. EL in relation to total lending for the same portfolios, as of end 2015, was 11.2bps.

EL will vary over time due to changes in the rating and the collateral coverage distributions. The average long-term net loss is however expected to be in line with the average internal EL.

## 5.10. Loan portfolio, impaired loans and loan losses

### 5.10.1. Loan portfolio

Nordea's lending to the public decreased by 2% to EUR 341bn during 2015 (EUR 348bn). The overall decrease is attributable to a decrease of 6% in the corporate portfolio and an increase of 3% in the household portfolio. Lending to the public sector decreased 10%. The portion of lending to corporate customers decreased to 52% (54%) while the share of total lending to household customers increased to 46% (44%) and public sector was stable at 2% (2%). Development of total lending is included further in Table 5.25.

Lending to the public distributed by borrower domicile is geographically well diversified with no market accounting for more than 28% of lending. Lending to Baltic customers constitutes 2.5% (2.4%) and the shipping industry 3.1% (2.9%) of lending to the public. For a further breakdown of the loan portfolio by geography refer to the Annual Report.

#### 5.10.1.1. Corporate lending

Corporate lending decreased by 6% to EUR 178bn (EUR 188bn). The sector that increased the most in 2015 was Financial institutions, while Consumer staples and

Reverse repurchase agreements decreased the most. In terms of concentration, the three largest industries account for approximately 20% (20%) of total lending.

The real estate portfolio, shown in Table 5.22, predominantly consists of relatively large and financially strong companies, with 83% (87%) of the lending in rating grades 4- and higher. There is a higher level of collateral coverage for the real estate portfolio than for other corporate customers. 35% or EUR 14.8bn of lending to the real estate industry is to companies located in Sweden and approximately 34% is to companies involved mainly in residential real estate.

Nordea's shipping portfolio, shown in Table 5.23, is well diversified by type of vessel, has a focus on large and financially robust industrial players and exhibits strong credit quality, with an average rating of 4-. Nordea is a leading bank to the global shipping and offshore industry with strong brand recognition and a world leading loan syndication franchise. Reflecting Nordea's global customer strategy, there is an even distribution between Nordic and non-Nordic customers. The approach to the industry remains unchanged with conservative terms and a counter-cyclical lending policy.

Loans to shipping and offshore industry increased slightly to EUR 10.5 (EUR 10.0bn) during the year.

The distribution of loans to corporates by size of loans, shown in Table 5.24, shows a high degree of diversification. Approximately 66% (73%) of corporate lending represents loans up to EUR 50m per customer.

#### 5.10.1.2. Lending to household customers

In 2015 lending to household customers increased by 3% to EUR 158bn (EUR 154bn). Mortgage loans increased to EUR 130bn (126bn) and consumer loans were stable



**Table 5.22 Loans to the real estate management industry, split by geography**

EURbn	31 December 2015		31 December 2014	
	Loans	%	Loans	%
Denmark	8.6	20.5	8.7	20.5
Finland	8.0	19.2	7.8	18.5
Norway	8.3	20.0	9.1	21.6
Sweden	14.8	35.4	14.4	34.0
Baltic countries	1.3	3.1	1.3	3.1
Russia	0.7	1.7	0.7	1.6
Other	0.0	0.1	0.3	0.7
<b>Total</b>	<b>41.8</b>	<b>100%</b>	<b>42.2</b>	<b>100%</b>

**Table 5.23 Loans to the shipping and offshore industry, split by segment**

EURbn	31 December 2015		31 December 2014	
	Loans	%	Loans	%
Bulk carriers	1.6	15.1	1.5	14.7
Product tankers	0.8	8.0	0.8	8.4
Crude tankers	1.3	12.3	1.2	11.8
Chemical tankers	0.6	5.9	0.6	6.5
Gas tankers	1.7	16.3	1.2	11.9
Other shipping	1.9	18.3	2.0	19.7
Offshore and oil services	2.5	24.1	2.7	26.9
<b>Total</b>	<b>10.5</b>	<b>100.0%</b>	<b>10.0</b>	<b>100%</b>

**Table 5.24 Loans to corporate customers, split by size of loan**

Loan size, EURm	31 December 2015		31 December 2014	
	Loans, EURbn	%	Loans, EURbn	%
0 – 10	74.8	42.2	89.5	47.5
10 – 50	42.0	23.7	47.7	25.3
50 – 100	20.1	11.3	19.3	10.2
100 – 250	23.4	13.2	20.7	11.0
250 – 500	8.3	4.7	7.1	3.8
500 –	8.8	5.0	4.1	2.2
<b>Total</b>	<b>177.5</b>	<b>100%</b>	<b>188.3</b>	<b>100%</b>

at EUR 28bn. The proportion of mortgage loans of total household loans was unchanged at 82%, of which the Nordic market accounted for 98%.

## 5.10.2. Impairment

### 5.10.2.1. Definition and methodology of impairment

Throughout the process of identifying and mitigating credit impairments, Nordea continuously reviews the quality of credit exposures. Weak and 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. A need for provisioning is recognised if there is objective evidence, based on loss events and observable data that a negative impact is likely on the customer's expected future

cash flow to the extent that full repayment is unlikely (pledged collaterals taken into account). Non-significant customers can be treated as groups with a reserve belonging to a group of individually identified customers.

Exposures with provision are considered as impaired. 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 collaterals. Nordea recognises only specific credit risk adjustments (SCRA). SCRA comprise individually and collectively assessed provisions. SCRA during the year is referred to as loan losses while SCRA in the balance sheet is referred to as allowances. Impaired exposures can be either performing or non-performing.

Exposures that are past due more than 90 days is automatically regarded as defaulted, and reported as non-performing and impaired or not impaired depending on the deemed loss potential. If a customer recovers from being in default, the customer is seen as cured. Typically this situation occurs if the customer succeeds in creating balance in financials. In order to be cured it is decisive that the recovery includes the customer's total liabilities in Nordea and elsewhere, that a satisfactory repayment plan is established and that the recovery is assessed as maintaining.

Forbearance is negotiated terms or restructuring due to the borrowers' financial stress. The intention with granting forbearance for a limited period of time is to ensure full repayment of the outstanding debt. Examples of negotiated terms are changes in amortization 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. Forborne rated customers without impairment charges are fully covered by either collateral and/or the net present value of future cash flows. For more information on forbearance, refer to Annual Report Note G46.

Nordea's impairment testing is based on a two-step procedure with both individual and collective assessment to ensure that all incurred losses are accounted for up to and including each balance sheet day. Impairment losses recognised for a group of loans represent an interim step pending the identification of impairment losses for an individual customer.

Collective impairment testing is performed for groups of customers not identified individually as impaired. The purpose of collective loan loss reserves is to account for value reductions in the performing credit portfolio due to loss events that have occurred. Nordea's model for collective provisions uses a statistical model as a baseline for assessing the amount of provisions needed for the parts of Nordea's portfolios that are not individually assessed. The Collective provisioning model is based on migration of rated and scored customers in the credit portfolio. The assessment of collective impairment is built on an incurred loss concept, where the credit quality of each exposure is related to its initial credit quality. If the credit quality has deteriorated, collective provisions corresponding to a true and fair assessment of the expected loss is calculated by the model. Moreover, defaulted customers without individual provisions are also collectively assessed. The output of the model is complemented with an expert based analysis process to ensure adequate provisioning. The model is executed quarterly and the output is a result of a bottom-up calculation from sub-exposure level, taking the latest portfolio development into account. Collective impairment is assessed quarterly for each legal unit.

#### 5.10.2.2. Impaired loans

In Table 5.25-5.26 impaired loans, loan losses and allowances are distributed and stated according to the International Financial Reporting Standard (IFRS) as in the Annual Report, which differs somewhat from the CRR (refer to section 5.2).

Impaired loans gross decreased by 7% during the year to reach EUR 5,960m. This corresponds to 162bps (174bps) of total loans. 62% (64%) of impaired loans gross are performing and 38% (36%) are non-performing. The decrease in impaired loans was mainly related to the industries Paper and forest materials and Real estate management and investment. The industries with the largest increases in impaired loans were Other materials and Consumer staples.

Impaired loans net, after allowances for individually assessed impaired loans, decreased to EUR 3,747m (EUR 4,096m), corresponding to 102bps of total loans. Allowances for individually assessed loans decreased slightly to EUR 2,213m (EUR 2,329m), and allowances for collectively assessed loans increased slightly to EUR 451m (EUR 420m). The ratio of individual allowances for impaired loans decreased to 37% (36%), while total allowances in relation to impaired loans was slightly higher at 45% (43%).

Table 5.26 shows impaired loans split by geography and industry. A recovery is on a solid track in the Danish economy. Consumer spending is again a key growth engine driven by increased purchasing power, a high level of consumer confidence, large financial savings and a supportive trend in the housing market. Prices in the Danish housing market continue to rise, but with major regional differences. Exports remain adversely affected by the trade sanctions against Russia. Especially, agricultural products are under pressure within milk and pig products.

The expected recovery of the Finnish economy will be slower than earlier forecasted. Exports to Russia have decreased significantly in 2015 due to economic sanctions and the weak Russian economy. Consumer confidence is below the long-term average and growth of private consumption is limited. Prices on the housing market have remained quite stable.

The Norwegian economy is slowing down, and the prospects have weakened as a result of the new downturn in the oil price.

#### 5.10.3. Loan losses

Tables 5.27 and 5.28 show the changes in the allowance accounts as well as the specification of loan losses per customer type. Total net loan losses decreased to EUR 479m in 2015 (EUR 534m). The corresponding loan loss ratio, measured as a proportion of loans to the public, decreased to 14bps (15bps). The development of loan losses over time is shown in Figure 5.3.

**Table 5.25 Loans, impaired loans, allowances and provisioning ratios, split by customer type, 31 December 2015**

EURm	Loans after allowances 2014 <sup>1)</sup>	Loans after allowances 2015	Impaired loans before allowances	Impaired loans in % of loans	Allowances for collectively assessed loans	Individual allowances	Total provisioning ratio
<b>To central banks and credit institutions</b>	<b>19,175</b>	<b>24,183</b>			<b>2</b>		
– of which central banks	6,958	13,224					
– of which credit institutions	12,217	10,959			2		
<b>To the public</b>	<b>348,085</b>	<b>340,920</b>	<b>5,960</b>	<b>1.73</b>	<b>449</b>	<b>2,213</b>	<b>45%</b>
– of which corporate	188,290	177,542	3,860	2.15	295	1,736	53%
Construction and engineering	4,653	4,613	194	4.13	7	80	45%
Consumer durables (cars, appliances, etc.)	2,792	2,272	149	6.28	18	78	64%
Consumer staples (food, agriculture, etc.)	12,235	11,515	906	7.65	46	283	36%
Energy (oil, gas, etc.)	3,534	3,035	2	0.06	2	2	
Financial institutions	13,085	17,013	334	1.94	3	204	62%
Health care and pharmaceuticals	1,621	1,781	23	1.27	1	8	41%
Industrial capital goods	2,163	1,932	77	3.86	17	47	83%
Industrial commercial services, etc.	12,291	12,517	394	3.09	18	215	59%
IT software, hardware and services	1,897	1,609	74	4.49	2	39	54%
Media and leisure	2,782	2,467	70	2.79	3	30	47%
Metals, and mining materials	879	836	60	6.88	1	34	59%
Other materials (chemical, building materials, etc.)	6,638	6,087	329	5.27	12	148	49%
Other, public and organisations	3,607	4,938	56	1.11	22	55	138%
Paper and forest materials	1,866	1,629	30	1.83	3	24	89%
Real estate management and investment	42,238	41,811	605	1.44	54	191	40%
Retail trade	10,256	9,584	362	3.70	20	175	54%
Reversed repurchase agreements to corporates	44,508	32,274		0.00			
Shipping and offshore	9,957	10,510	110	1.04	58	64	111%
Telecommunication equipment	37	79	1	1.33	0	1	64%
Telecommunication operators	1,248	1,242	8	0.62	1	27	351%
Transportation	3,981	3,601	71	1.96	6	28	47%
Utilities (distribution and production)	6,023	6,200	5	0.08	2	4	124%
– of which household	153,985	158,150	2,101	1.32	154	477	30%
Mortgage financing	125,931	130,232	1,060	0.81	46	109	15%
Consumer financing	28,054	27,919	1,040	3.66	107	368	46%
– of which public sector	5,810	5,228	0	0.00		0	
<b>Total loans</b>	<b>367,260</b>	<b>365,103</b>	<b>5,960</b>	<b>1.62</b>	<b>451</b>	<b>2,213</b>	<b>45%</b>
– of which loans in the life insurance operations	326	1,156					

Provisions for off-balance sheet items for 2015 were EUR 0m for credit institutions and EUR 65m for lending to the public.  
1) Excluding discontinued operations in Poland.

EUR 336m (EUR 340m) of net loan losses related to corporate customers (incl. EUR 10m positive net loan losses in Credit Institutions), EUR 143m (EUR 194m) related to household customers. Within corporates the main losses were in the industries Consumer durables, in Consumer staples and in Retail trade. The major share of loan losses in the household sector was in Denmark.

Collective provisions were EUR 28m in 2015 compared to provisions of EUR 4m in 2014.

Table 5.29 shows loans past due 6 days or more that are not considered impaired, split by corporate and household customers. Past due is defined as a loan payment that has not been made as of its due date. Past due loans to corporate customers, not considered impaired, were at end of 2015 EUR 962m, up from EUR 628m one year ago, and past due loans for household customers increased to EUR 1,620m (EUR 1,258m).

**Table 5.26 Impaired loans gross and allowances split by geography and industry, 31 December 2015**

<b>EURm</b>	Total 2014 <sup>1)</sup>	Total 2015	Denmark	Finland	Norway	Sweden	Baltic countries	Russia	Allowances	Total provisioning ratio
<b>To the public</b>										
– of which corporate	4,430	3,860	2,190	805	319	284	251	12	2,031	53%
Construction and engineering	201	194	131	27	17	7	13		87	45%
Consumer durables (cars, appliances, etc.)	194	149	34	18	56	28	1	12	96	64%
Consumer staples (food, agriculture, etc.)	861	906	834	48	6	3	14		329	36%
Energy (oil, gas, etc.)	2	2	0	2					4	
Financial institutions	284	334	228	27	79	0			207	62%
Health care and pharmaceuticals	32	23	16	7	0	0			9	41%
Industrial capital goods	109	77	14	42	0	20			64	83%
Industrial commercial services, etc.	411	394	146	97	32	100	20		234	59%
IT software, hardware and services	88	74	32	39	2	0			40	54%
Media and leisure	104	70	33	22	3	12	0		33	47%
Metals, and mining materials	66	60	1	26	29	1	3		35	59%
Other materials (chemical, building materials, etc.)	282	329	21	266	17	10	15		160	49%
Other, public and organisations	98	56	39	0		0	16		77	138%
Paper and forest materials	142	30	7	1	1	21	0		27	89%
Real estate management and investment	761	605	348	52	37	10	158		245	40%
Retail trade	448	362	209	96	6	42	9		195	54%
Reversed repurchase agreements to corporates										
Shipping and offshore	180	110	48	20	21	21			122	111%
Telecommunication equipment	3	1	0	1					1	64%
Telecommunication operators	88	8	1	2	4	2			28	351%
Transportation	69	71	44	10	9	7	1		34	47%
Utilities (distribution and production)	9	5	3	0	1	0			6	124%
– of which household	1,995	2,101	1,004	661	145	143	110	9	631	30%
Mortgage financing	1,000	1,060	535	220	118	70	84	6	156	15%
Consumer financing	995	1,040	470	441	27	74	26	3	475	46%
– of which public sector		0			0				0	
<b>Total impaired loans</b>	<b>6,425</b>	<b>5,960</b>	<b>3,194</b>	<b>1,466</b>	<b>464</b>	<b>427</b>	<b>361</b>	<b>21</b>		
Past due loans	1,886	2,582	654	810	738	195	145	5		
Allowances	2,747	2,662	1,269	627	309	256	161	32	2,662	
<b>Total provisioning ratio</b>	<b>43%</b>	<b>45%</b>	<b>40%</b>	<b>43%</b>	<b>67%</b>	<b>60%</b>	<b>45%</b>	<b>150%</b>		

1) Excluding discontinued operations in Poland.

**Table 5.27 Reconciliation of allowance accounts for impaired loans**

EURm	Specific credit risk adjustments		Total
	Individually assessed	Collectively assessed	
<b>Opening balance, 1 Jan 2015</b>	-2,329	-420	-2,749
Changes through the income statement	-342	-38	-380
– of which Provisions	-818	-256	-1,074
– of which Reversals	476	218	694
Allowances used to cover write-offs	448		448
Currency translation differences	10	8	18
<b>Closing balance, 31 Dec 2015</b>	<b>-2,213</b>	<b>-451</b>	<b>-2,664</b>

For loan losses directly recognised through the income statement (not affecting the allowance accounts), refer to the note "Net loan losses" in the Annual Report.

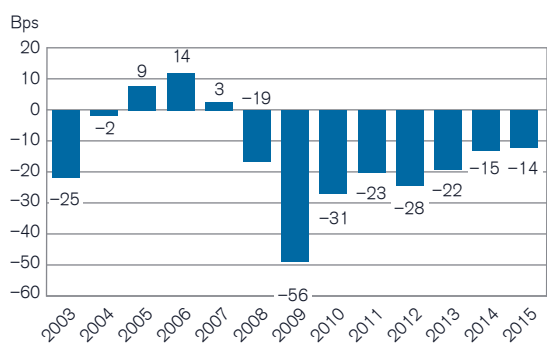
**Table 5.28 Loan losses, split by customer type, 2015**

EURm	New provisions and write-offs	Reversals and recoveries	Net loan losses	Loan loss ratio bps
<b>To central banks and credit institutions</b>	<b>-1</b>	<b>10</b>	<b>10</b>	
– of which central banks				
– of which credit institutions	-1	10	10	
<b>To the public</b>	<b>-1,334</b>	<b>845</b>	<b>-489</b>	<b>14</b>
– of which corporate	-877	531	-345	19
Construction and engineering	-41	39	-3	6
Consumer durables (cars, appliances, etc.)	-77	4	-73	323
Consumer staples (food, agriculture, etc.)	-151	80	-71	62
Energy (oil, gas, etc.)	-1	2	1	
Financial institutions	-41	20	-21	12
Health care and pharmaceuticals	-4	3	-1	4
Industrial capital goods	-33	17	-16	81
Industrial commercial services, etc.	-82	39	-44	35
IT software, hardware and services	-12	9	-3	16
Media and leisure	-17	18	1	
Metals, and mining materials	-9	3	-6	75
Other materials (chemical, building materials, etc.)	-69	38	-31	51
Other, public and organisations	-46	27	-19	38
Paper and forest materials	-9	10	1	
Real estate management and investment	-91	105	14	
Retail trade	-111	64	-47	49
Reversed repurchase agreements				
Shipping and offshore	-46	37	-8	8
Telecommunication equipment	0	1	1	
Telecommunication operators	-22	5	-17	133
Transportation	-12	8	-4	12
Utilities (distribution and production)	-3	3	0	
– of which household	-457	314	-144	9
Mortgage financing	-127	78	-49	4
Consumer financing	-331	236	-95	34
– of which public sector				
<b>Total</b>	<b>-1,335</b>	<b>855</b>	<b>-479</b>	<b>13</b>

**Table 5.29 Past due loans, not impaired**

EURm	31 December 2015		31 December 2014	
	Corporate customers	Household customers	Corporate customers	Household customers
6 – 30 days	653	1,058	375	838
31 – 60 days	153	250	125	222
61 – 90 days	37	89	70	99
>90 days	118	223	58	99
<b>Total</b>	<b>962</b>	<b>1,620</b>	<b>628</b>	<b>1,258</b>
Past due loans, not impaired, divided by loans to the public after allowances, %	0.54	1.02	0.33	0.82

**Figure 5.3 Annualised net loan loss ratio**



## 6. Market risk

The market risk taking activities of Nordea are primarily focused on the Nordic and European markets. The total market risk for the Nordea trading book, as measured by VaR, was EUR 32m on average in 2015, compared to EUR 22m in 2014 and EUR 33m at the end of 2015. The total market risk, measured by VaR, is primarily driven by interest rate risk.

### 6.1. Management, governance and measurement of market risk

Market risk is defined as the risk of value loss in Nordea's holdings and transactions as a result of changes in market rates and parameters that affect market value (i.e. changes to interest rates, credit spreads, FX rates, equity prices, commodity prices and option volatilities).

#### 6.1.1. Management of market risk

Nordea's market risk management operates under the three lines of defence principle as follows:

- The business areas are responsible for adhering to the market risk framework as set out by the second line of defence.
- Group Market and Counterparty Credit Risk (GMCCR) is responsible for setting out the market risk framework and measuring, monitoring, controlling and reporting the risk as the second line of defence.
- Group Internal Audit performs audits and provides additional assurances to stakeholders on the adequacy of internal controls and risk management processes, constituting the third line of defence.

Nordea Markets and Group Treasury and Asset Liability Management (TALM) are the key contributors to market risk in Nordea. Nordea Markets is responsible for the customer-driven trading activities; TALM is responsible for short term funding activities and investments for Nordea's own account, for asset and liability management, liquidity portfolios pledge/collateral account portfolios as well as all other banking activities. These business areas are responsible for managing the risk under the framework (principally through limits) as set by the Board of Directors and cascaded to the various business areas by Group Risk Management through the Group Risk Committee.

GMCCR, a division of Group Risk Management, is an independent unit which is responsible for the measurement, monitoring, control and reporting of market risk in

Nordea. It ensures that only approved products are traded within the set limits.

Nordea derives parts of its earnings by taking and managing market risks, and the aim is to adequately manage and control the market risk exposures in adherence with the market risk appetite of Nordea. To appropriately manage market risk in Nordea the following policies, processes and strategies are employed:

- There is a comprehensive policy framework, in which responsibilities and objectives are explicitly outlined and in which the risk appetite is clearly defined.
- There are clearly defined risk mandates, in terms of limits and restrictions on which instruments may be traded and by whom.
- There is a strategy to hedge risks (or use alternative methods of mitigation) as limit utilisation approaches a certain elevated level. All hedges are monitored within the market risk framework.
- There is a framework for approval of traded financial instruments and valuation methods that require an elaborate analysis and documentation of the instruments' features and risk factors.
- There is a proactive approach to information sharing between trading and risk control.
- There is a framework for timely reporting to senior management on market risk. The CRO receives reporting on Nordea's consolidated market risk daily, whereas GEM, the Board of Directors and associated risk committees receive reports monthly.

#### 6.1.1.1. Market risk appetite

The market risk appetite in Nordea is expressed through risk appetite statements issued by the Board of Directors. The market risk appetite statements are defined in terms of market risk share of economic capital and maximum economic market risk loss per quarter.

For more information on the risk appetite framework in Nordea, see section 3.1.2.

#### 6.1.2. Governance of market risk

Group Risk Management has the responsibility for the development and maintenance of the Group-wide market risk framework. The framework defines common management principles and policies for market risk management within Nordea. These principles and policies are approved by the Board of Directors and have been approved by local bank boards of the separate legal entities. The same reporting and control processes are applied for market risk exposures in both the trading and banking books, on Group level as well as in the separate legal entities.

#### 6.1.3. Measurement and reporting of market risk

As there is no single risk measure that captures all aspects of market risk, Nordea uses several risk measures including Value-at-Risk (VaR), stressed VaR, stress testing, sensitivities, scenario simulation and other non-statistical risk measures such as basis point values, net open FX positions and option key risk sensitivities. In addition, simulation-

based models are used to capture the default and migration risks from corporate debt, credit derivatives, and correlation products in the trading book. These models are the Incremental Risk Measure (IRM) and the Comprehensive Risk Measure (CRM).

VaR and stressed VaR are reported to senior management on a daily basis while IRM and CRM are reported weekly. Monthly reports of these figures along with stress test results are reported to the Board of Directors.

#### 6.1.3.1. Value-at-Risk

Nordea calculates VaR using historical simulation. The current portfolio is revaluated using the daily changes in market prices and parameters observed during the last 500 trading days, thus generating a distribution of 499 returns based on empirical data. From this distribution, the expected shortfall method is used to calculate a VaR figure, meaning that the VaR figure is based on the average of the worst outcomes from the distribution. The one-day VaR figure is subsequently scaled to a 10-day figure. The 10-day VaR figure is used to limit and measure market risk both in the trading book and in the banking book.

Separate VaR figures are calculated for interest rate, credit spread, foreign exchange rate and equity risks. The total VaR includes all these risk categories and allows for diversification among them. The VaR figures include both linear positions and options. The model has been calibrated to generate a 99% VaR figure. This means that the 10-day VaR figure can be interpreted as the loss that will be exceeded in one of a hundred 10-day trading periods.

It is important to note that while every effort is made to make the VaR model as realistic as possible, all VaR models are based on assumptions and approximations that have significant effect on the risk figures produced. While historical simulation has the advantage of not being dependent on a specific assumption regarding the distribution of returns, it should be noted that the historical observations of the market variables that are used as input may not give an adequate description of the behaviour of these variables in the future. The choice of the time period used is also important. While using a longer time period may enhance the model's predictive properties and lead to reduced cyclicity, using a shorter time period increases the model's responsiveness to sudden changes in the volatility of financial markets. Nordea's choice to use the last 500 days of historical data has thus been made with the aim to strike a balance between the pros and cons of using longer or shorter time series in the calculation of VaR.

#### 6.1.3.2. Stressed VaR

Stressed VaR is calculated using a similar methodology as used for the calculation of the ordinary VaR measure. However, whereas the ordinary VaR model 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. Since the relevant period with stressed

markets will depend on the positions currently held in the portfolio, the level of stressed VaR in relation to the ordinary VaR is monitored continuously. Further analysis may be conducted if deemed necessary, which may lead to a change of the period. The specific period to be used is, at least, evaluated once every year.

#### 6.1.3.3. Incremental Risk Measure (IRM)

The IRM measures the risk of losses due to credit migration or default of issuers of tradable corporate debt or credit derivatives held in the trading book. Nordea's IRM model is based on Monte Carlo simulations and measures risk at a 99.9% probability level based on the predetermined regulatory one-year liquidity horizon.

#### 6.1.3.4. Comprehensive Risk Measure (CRM)

The CRM measures the total risk related to positions in credit correlation products. This includes the risk of losses due to credit migration or default of issuers of tradable corporate debt and other risk factors specifically relevant for correlation products. Nordea's CRM model is also based on Monte Carlo simulations and measures risk at a 99.9% probability level based on the predetermined regulatory one-year liquidity horizon.

#### 6.1.3.5. Stress testing

Stress tests are important tools and are integrated into the market risk management framework. Stress tests are used to estimate the possible losses that may occur under extreme, but plausible, market conditions. The main types of stress tests utilised include:

- Subjective stress tests, where the portfolios are exposed to scenarios for financial developments that are deemed particularly relevant at a particular time. These scenarios are inspired by the financial, macroeconomic or geopolitical situation, or the current composition of the portfolio or a particular sub-portfolio.
- Sensitivity tests, where rates, spreads, prices, and/or volatilities are shifted markedly to emphasise exposure to situations where historical correlations fail to hold.
- A sensitivity measure, where the potential loss stemming from a sudden default of an issuer of a bond or the underlying in a credit default swap is measured.
- Reverse stress tests, which assess and try to identify the type of events that could lead to losses equal to or greater than a predefined level.

Subjective stress tests and sensitivity tests are conducted monthly for the consolidated risk across the banking book and trading book across the different sub-portfolios. Reversed stress tests are conducted monthly for the trading book.

While these stress tests measure the risk over a shorter time horizon, market risk is also a part of Nordea's comprehensive firm-wide ICAAP stress test, which measures the risk over a three-year horizon (see section 11.3).



## 6.2. Market risk for the Nordea banking book

The market risk for the Nordea banking book is presented in Table 6.1. Total banking book VaR was EUR 77m (EUR 43m) at the end of 2015. The total market risk in the banking book is primarily driven by interest rate risk. Interest rate VaR was EUR 76m (EUR 37m).

## 6.3. Capital requirements for market risk in the trading book (Pillar I)

Market risk in the CRR context contains two categories: general risk and specific risk. General risk is related to changes in overall market prices and specific risk is related to price changes for specific issuers. When calculating the capital requirements for market risk, using the internal model approach; general risk is based on VaR with an additional capital charge for stressed VaR; whereas specific risk is based on equity VaR and credit spread VaR, with an additional capital charge for incremental risk and comprehensive risk for interest rate risk-bearing positions. Table 6.2 shows the market risk in the trading book.

Nordea uses the internal model approach to calculate the market risk capital requirements for the predominant part of the trading book. However, for specific interest rate risk relating mainly to mortgage bonds, equity risk relating to structured equity derivatives, fund-linked derivatives and for commodity risk, the market risk capital requirements are calculated using the standardised approach. The use of the internal model approach in Nordea's legal entities is shown in Table 6.3. In addition to positions in the trading book, market risk capital requirements also cover FX risk in the banking book.

By the end of the year, REA and capital requirements for market risk were EUR 6,534m (EUR 7,341m) and EUR 523m (EUR 588m) respectively as shown in Table 6.4. The reduction in REA is mainly explained by decreased trading book risk using the internal model approach where stressed VaR and incremental risk measure were the main drivers. The overall reduction in REA is offset by the negative impact of foreign exchange risk in the banking book.

**Table 6.1 Market risk for the banking book, 31 December 2015**

EURm	Measure	31 Dec 2015	2015 high	2015 low	2015 avg	31 Dec 2014
Total risk	VaR	77.2	97.6	47.9	75.1	43.0
– Interest rate risk	VaR	76.1	87.3	41.2	67.0	37.1
– Equity risk	VaR	3.3	6.4	0.6	2.7	10.1
– Credit spread risk	VaR	3.2	11.4	2.6	5.0	13.0
– Foreign exchange risk	VaR	3.3	34.4	2.0	14.8	6.8
Diversification effect		10%	30%	9%	20%	36%

**Table 6.2 Market risk for the trading book, 31 December 2015**

EURm	Measure	31 Dec 2015	2015 high	2015 low	2015 avg	31 Dec 2014
Total risk	VaR	32.9	70.8	13.4	31.7	25.4
– Interest rate risk	VaR	32.4	65.8	11.4	27.5	19.5
– Equity risk	VaR	6.8	13.6	3.6	6.2	7.2
– Credit spread risk	VaR	5.6	11.0	4.2	7.1	6.8
– Foreign exchange risk	VaR	3.7	20.9	2.0	7.4	3.0
Diversification effect		32%	62%	20%	41%	31%
Total stressed VaR	sVaR	21.3	60.5	16.4	33.1	40.8
Incremental Risk Measure		20.3	68.9	20.3	41.5	50.9
Comprehensive Risk Measure		25.2	59.7	12.5	27.1	32.5

**Table 6.3 Methods for calculating capital requirements, 31 December 2015**

	Interest rate risk		Equity risk		FX risk
	General	Specific	General	Specific	
Nordea Group	IA	IA <sup>1)</sup>	IA	IA <sup>1)</sup>	IA
Nordea Bank Denmark	IA	SA	IA	SA	IA
Nordea Bank Finland	IA	IA <sup>1)</sup>	IA	IA <sup>1)</sup>	IA
Nordea Bank Norge	IA	SA	IA	SA	IA

IA: internal model approach, SA: standardised approach.

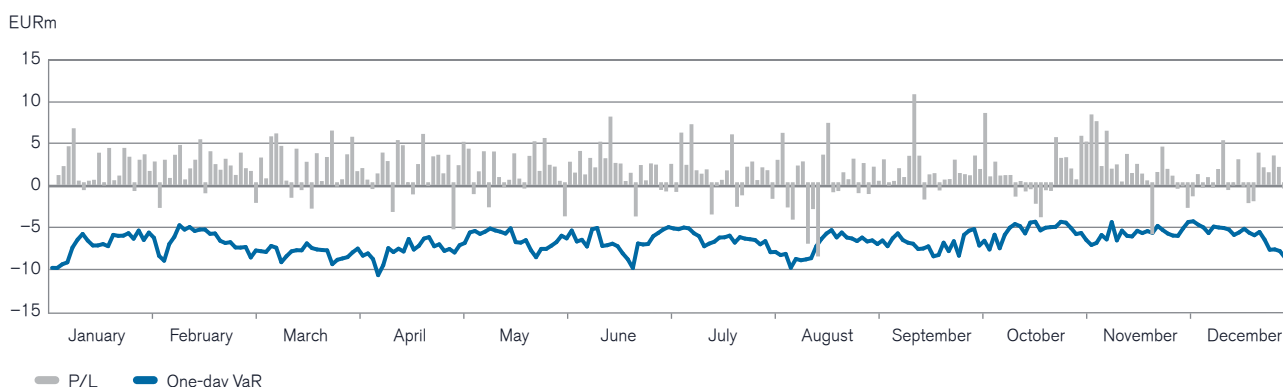
1) For specific interest rate risk relating mainly to bonds, equity risk relating to structured equity derivatives and fund-linked derivatives and for commodity risk, the market risk capital requirements are calculated using the standardised approach.

**Table 6.4 REA and minimum capital requirements for market risk, 31 December 2015**

EURm	Trading book, IA		Trading book, SA		Banking book, SA		Total	
	REA	Minimum capital requirement	REA	Minimum capital requirement	REA	Minimum capital requirement	REA	Minimum capital requirement
Interest rate risk and other <sup>1)</sup>	1,193	96	966	77			2,159	173
Equity risk	353	28	220	17			573	45
Foreign exchange risk	209	17			2,335	187	2,544	204
Commodity risk			22	2			22	2
Settlement risk			1	0			1	0
Diversification effect	-644	-52					-644	-52
Stressed Value-at-Risk	1,046	84					1,046	84
Incremental Risk Measure	381	30					381	30
Comprehensive Risk Measure	452	36					452	36
<b>Total</b>	<b>2,990</b>	<b>239</b>	<b>1,209</b>	<b>96</b>	<b>2,335</b>	<b>187</b>	<b>6,534</b>	<b>523</b>

1) Interest rate risk column Trading book IA includes both general and specific interest rate risk which is elsewhere referred to as interest rate VaR and credit spread VaR.

**Figure 6.1 Back-test of VaR for the trading book 2015:  
Profit/loss (actual, excluding commissions) against one-day VaR**



### 6.3.1. Back-testing and validation of risk models

Back-testing of the VaR models is conducted daily in accordance with the guidelines laid out by the Article 366 of the CRR. Back-tests are conducted using both hypothetical profit/loss and actual profit/loss (hypothetical profit/loss is the profit/loss that would have been realised if the positions in the portfolio had been held constant during the following trading day). The profit/loss is in the back-test compared to one-day VaR figures. Figure 6.1 shows the VaR back-test of the trading book for 2015.

The models used in the calculation of the IRM and the CRM are validated through an assessment of the quantitative and qualitative reasonableness of the various data being modelled (distribution of defaults and credit migrations, dynamics of credit spreads, recovery rates and correlations, etc.). The input parameters are evaluated annually through a range of methods including sensitivity tests and scenario analysis.

### 6.4. Interest rate risk in the banking book

Interest rate risk in the banking book is monitored daily by measuring and monitoring VaR in the banking book and by controlling interest rate sensitivities, which measure the immediate effects of interest rate changes on the economic values of assets, liabilities and off-balance sheet items. At the end of the year, interest rate VaR in the banking book was EUR 76m (EUR 37m). Table 6.5 shows the net effect on economic values of a parallel shift in rates of up to 100bps.

#### 6.4.1. Structural market risks

Structural FX risk arises from translation risk on investments in subsidiaries and associated enterprises denominated in foreign currencies. Generally, Nordea hedges investments by matched funding, although exceptions may be made in markets where matched funding is impossible to obtain, or can be obtained only at an excessive cost.

Earnings and cost streams generated in foreign currencies or from foreign branches generate an FX exposure, which for the individual Nordea companies is handled in each company's FX position. Currency translation differences in Nordea's equity are generally the difference of equity and goodwill in foreign currency less net investment hedges and tax.

In addition to the immediate change in market value of Nordea's assets and liabilities that could be caused by a change in financial market variables, a change in interest rates could also affect the net interest income over time. This is structural interest income risk (SIIR) discussed further below.

#### 6.4.2. Structural Interest Income Risk (SIIR)

SIIR is the amount by which Nordea's accumulated net interest income would change during the next 12 months if all interest rates were to change by one percentage point. Scenario reference rates are floored at zero.

SIIR reflects the mismatches in the balance sheet items and the off-balance sheet items when the interest rate repricing periods, volumes or reference rates of assets, liabilities and derivatives do not correspond exactly.

Nordea's SIIR management is based on policy statements resulting in different SIIR measures and organisational procedures.

Policy statements focus on optimising financial structure, balanced risk taking and reliable earnings growth, identification of all significant sources of SIIR, measurement under stressful market conditions and adequate public information.

#### 6.4.3. SIIR measurement methods

Nordea's SIIR is measured through dynamic simulations by calculating several net interest income scenarios and comparing the difference between these scenarios. Several interest rate scenarios are applied, but the basic measures for SIIR are the two scenarios (increasing rates and decreasing rates). These scenarios measure the effect on Nordea's net interest income for a 12 month period of a one percentage point change in all interest rates as shown in Table 6.6, which also covers repricing gaps over 12 months. The balance sheet is assumed to be constant over time, however main elements of customer behaviour and Nordea's decision-making process concerning own rates are taken into account.

#### 6.4.4. SIIR analysis

At the end of the year, the SIIR for increasing market rates was EUR 384m (EUR 384m) and the SIIR for decreasing market rates was EUR 13m (EUR -160m). Currency split for the SIIR figures is displayed in Table 6.7.

#### 6.5. Equity risk in the banking book

Table 6.8 shows equity holdings in the banking book split by the intention of the holding. All equities in the table are carried at fair value. The portfolio of illiquid alternative investments is included with a fair value of EUR 553m (EUR 448m), of which private equity funds EUR 186m, hedge funds EUR 137m, credit funds EUR 160m and seed-money investments EUR 70m. All four types of investments are spread over a number of funds.

#### 6.6. Other market risks in Nordea

Market risk on Nordea's account also arises from the Nordea-sponsored defined benefit pension plans for employees (pension risk) and from the investment of policyholders' money with guaranteed minimum yields in Nordea Life & Pensions (NLP). These risks are further described Chapters 10 and 11.

#### 6.7. Determination of fair value of financial instruments

Fair value is defined in IFRS 13. The methodology is disclosed in the Annual Report note G39 together with an overview of fair value of Nordea's assets and liabilities by valuation method.

Table 6.9 shows the fair values of Nordea's assets and liabilities split by fair value hierarchy.

#### 6.8. Compliance with requirements applicable to exposure in the trading book

Article 105 of the CRR outlines requirements for systems and controls in relation to prudent valuation of positions in financial instruments. The specific requirements for additional valuation adjustments (AVAs) to fair value have been further clarified in the Commission delegated regulation (EU) 2016/101 with regard to regulatory technical standards (RTS) for prudent valuation under Article 105(14), which was published in the Official Journal on 28 January 2016 to be applicable from 17 February 2016. Nordea complies in all aspects with these requirements and uses the core approach as described in the RTS in order to calculate AVAs for market price uncertainty, close-out costs, model risk, unearned credit spreads, investing and funding costs, concentrated positions, future administrative costs, early termination costs and operational risk. In accordance with the RTS, AVAs are applied to all positions in Nordea accounted for at fair value, both in the trading book and banking book.

The CRR introduces requirements for clearly defined policies and procedures for determining which positions to include in the trading book for the purposes of calculating the capital requirements. Group Risk Executive Management has issued instructions on this topic which clearly define which positions to include in the trading book.

**Table 6.5 Interest rate sensitivities for the banking book, instantaneous interest rate movements, 31 December 2015**

EURm	+100bp	+50bp	-50bp	-100bp
EUR	-39.1	-20.4	22.1	39.5
DKK	-79.8	-39.0	34.1	62.8
SEK	-89.7	-45.0	42.9	86.3
NOK	-60.9	-30.4	30.4	60.9
USD	20.9	9.7	-5.0	4.2
RUB	-2.4	-1.2	1.2	2.4
<b>Total</b>	<b>-250.8</b>	<b>-126.2</b>	<b>125.7</b>	<b>256.0</b>

The totals are netted and include currencies not specified. In accordance with an analysis of account holder behaviour, a portion of non-maturing deposit accounts are assumed to be fixed term.

**Table 6.6 Repricing gap analysis, scenario of a one percentage point increase in all interest rates, 31 December 2015**

EURm	Group balance sheet	Interest rate fixing period						Non-repricing	Total
		Within 3 months	3-6 months	6-12 months	1-2 years	2-5 years	>5 years		
Interest-bearing assets	416,421	288,989	21,983	21,953	20,535	40,820	22,140	0	416,421
Non-interest bearing assets	230,447	0	0	0	0	0	0	230,447	230,447
<b>Total assets</b>	<b>646,868</b>	<b>288,989</b>	<b>21,983</b>	<b>21,953</b>	<b>20,535</b>	<b>40,820</b>	<b>22,140</b>	<b>230,447</b>	<b>646,868</b>
Interest-bearing liabilities	360,170	215,849	24,552	10,591	21,811	49,847	37,518	0	360,170
Non-interest bearing liabilities	286,699	0	0	0	0	0	0	286,699	286,699
<b>Total liabilities and equity</b>	<b>646,868</b>	<b>215,849</b>	<b>24,552</b>	<b>10,591</b>	<b>21,811</b>	<b>49,847</b>	<b>37,518</b>	<b>286,699</b>	<b>646,868</b>
<b>Off-balance sheet items, net</b>		<b>-33,311</b>	<b>4,428</b>	<b>-658</b>	<b>4,293</b>	<b>11,761</b>	<b>13,869</b>		
<b>Exposure</b>		<b>39,829</b>	<b>1,860</b>	<b>10,704</b>	<b>3,017</b>	<b>2,734</b>	<b>-1,509</b>	<b>-56,252</b>	
<b>Cumulative exposure</b>			<b>41,689</b>	<b>52,393</b>	<b>55,409</b>	<b>58,143</b>	<b>56,634</b>	<b>382</b>	

**SIIR impact of increasing interest rates for the year 2016**

Impact <sup>1)</sup>	349	9	27
Cumulative SIIR impact	349	357	384

1) Impact is calculated based on +100bps change on exposure.

**Table 6.7. Structural interest income risk, split by currency, 31 December 2015**

EURm	+100bp	-100bp
DKK	117.7	12.6
EUR	130.0	17.1
NOK	133.3	-165.5
SEK	244.4	14.5
USD	-133.6	129.8
OTH	-108.0	4.7
<b>Total</b>	<b>383.8</b>	<b>13.2</b>

The totals are netted and include currencies not specified. In accordance with an analysis of account holder behaviour, a portion of non-maturing deposit accounts are assumed to be fixed term. Reference rates of downward scenarios are floored at zero.

**Table 6.8 Equity holdings in the banking book, 31 December 2015**

EURm	Book value	Fair value	Unrealised gains/losses <sup>3)</sup>	Realised gains/losses <sup>3)</sup>	Capital requirement
Investment portfolio <sup>1)</sup>	549	549	50	8	44
Other <sup>2)</sup>	119	119	6	2	10
<b>Total</b>	<b>668</b>	<b>668</b>	<b>56</b>	<b>10</b>	<b>54</b>

1) Of which listed equity holdings, Book value EUR 44m.

2) Of which listed equity holdings, Book value EUR 92m.

3) Result for 2015.

**Table 6.9 Assets and liabilities held at fair value, by fair value hierarchy categorisation, excl. NLP, 31 December 2015**

EURm	Quoted prices in active markets for same instrument (Level 1)	Valuation technique using observable data (Level 2)	Valuation technique using non-observable data (Level 3)	Total
<b>Assets at fair value on the balance sheet</b>				
Loans to central banks		5,129		5,129
Loans to credit institutions		3,510		3,510
Loans to the public		89,044		89,044
Interest-bearing securities	36,993	37,467	205	74,665
Shares	6,401	303	666	7,370
Derivatives	211	78,843	1,655	80,709
Investment property			70	70
Other assets		14,697		14,697
Prepaid expenses and accrued income				
<b>Total</b>	<b>43,605</b>	<b>228,993</b>	<b>2,596</b>	<b>275,194</b>
<b>Liabilities at fair value on the balance sheet</b>				
Deposits by credit institutions		17,259		17,259
Deposits and borrowings from the public		18,985		18,985
Liabilities to policyholders				0
Debt securities in issue	46,229	6,885		53,114
Derivatives	242	77,586	1,524	79,352
Other liabilities	6,909	13,056		19,965
Accrued expenses and prepaid income				
<b>Total</b>	<b>53,380</b>	<b>133,771</b>	<b>1,524</b>	<b>188,675</b>

# 7. Operational and Compliance risk

## Operational risk is inherent in all activities performed in Nordea.

### 7.1. Management, governance and measurement of operational and compliance risk

Operational risk means the risk of direct or indirect loss, or damaged reputation, resulting from inadequate or failed internal processes, or from people, systems or external events. Regarding capital requirements, operational risk also covers legal risk and compliance risk.

Operational risk is inherent in all activities within the organisation, in outsourced activities and in all interactions with external parties.

The Group Operational Risk (GOR) is responsible for developing and maintaining the framework for managing operational risks and for supporting the line organisation in their implementation of the framework. GOR establishes and maintains adequate policies and procedures for operational risk, including high-level ones for legal risk management. On Group level, the unit also independently monitors, assesses and reports the risks as well as the adequacy and effectiveness of the operational risk management framework on a regular basis and at least once a year. The reporting is done to the Group Executive Management (GEM) and the Group Board or relevant Group Board committee.

Compliance risk is defined as the risk to fail to comply with laws, regulations, rules and prescribed practices and ethical standards, governing Nordea's activities in any jurisdiction, which could result in material financial or reputational loss to the Group, regulatory remarks or sanctions.

The purpose of Group Compliance is to add value to the Group and its stakeholders by providing an independent view on compliance to rules and regulations applicable to the Group, and by contributing to an effective and efficient compliance risk management. The independent view is based to a great extent on conducted monitoring activities. Furthermore, Group Compliance also advises and provides guidance to the first line on ways to effectively and efficiently handle compliance obligations.

Group Compliance is organised in order to conduct all compliance activities under its responsibilities covering all parts of Nordea. In 2015, further increased focus on compliance led to accelerated strengthening of the general compliance framework. Initiatives are targeted both at reinforcing regulatory implementation capability in the first line, and strengthening Group Compliance to ensure

the second line role is executed in accordance with regulatory and internal requirements.

The supervisory authorities have during 2015 conducted ongoing investigations with regards to Nordea's compliance in several areas, e.g. investment advice and AML. The outcome of some investigations is pending and it cannot be excluded that these investigations could lead to criticism or sanctions.

#### 7.1.1. Management and measurement of risk

Nordea Operational Risk Policy forms part of the risk management and internal control framework and sets out the general principles for operational risk management. Management of operational risks is proactive, emphasising training and risk awareness.

Operational risks are monitored through regular risk assessment procedures and a systematic, quality and risk focused change management. The development of new products, services, activities as well as processes and systems is risk assessed. Identified risk elements and consequences of risk events are mitigated with, inter alia, business continuity plans as well as Group Crisis Management and Communication plans ensuring a good contingency preparedness in all business plans and crisis management structures.

Nordea uses external risk transfer in the form of insurance, including reinsurance, to cover certain aspects of crime risk and professional liability, including the liability of directors and officers. Nordea furthermore uses insurance for travel, property and general liability purposes.

In the spring of 2015 Nordea received a warning and a SEK 50 million fine from the Swedish Financial Supervisory Authority for insufficient processes to counteract money laundering and terrorist financing. Although Nordea had taken thorough measures in the past few years to strengthen this area, the fine indicated that Nordea had to reassess the complexity and the resources needed to meet all requirements. Specifically addressing the deficiencies in this area, Nordea established a Financial Crime Change Programme, which is a holistic approach to developing a group-wide and sustainable standard for the prevention of financial crime.

The operational risk appetite is defined through risk appetite statements issued by the Board of Directors. The operational risk appetite statements are defined in terms of top risks as well as financial and non-financial consequences. The non-negotiable risks are defined as regulatory requirements as well as breaches of internal policy and external regulations.

## 7.1.2. Key processes

### 7.1.2.1. Operational Risk Assessment process

The Operational Risk Assessment process includes the risk and control self-assessment (RCSA) and the scenario analysis, and puts focus both on the risks on a divisional and unit level, threatening its daily activities, and on the risks which could cause extreme financial losses or other significant impacts to Nordea as well as ensuring fulfilment of requirements specified in Group Directives. The results are used as input to the annual Group Operational and Compliance Risk Map.

Risks are identified both through top-down division management involvement and through bottom-up analysis of results obtained from control questions as well as existing information from operational risk processes, such as incident reporting, scenario analysis, quality and risk analyses as well as product approvals. Upon identification of risks, the estimated impact of risk materialisation is assessed and mitigating actions are identified.

The RCSA aims to verify whether Nordea adequately fulfils the legal and regulatory requirements as specified in the Nordea Group directives as well as that a sufficient level of internal control exists within Nordea.

The Group-wide scenario analysis puts focus on extreme operational risks, so called tail events. The objective is to challenge and extend Nordea's present understanding of its operational risk landscape by focusing on risks which could cause extreme financial losses or other significant impacts to Nordea.

### 7.1.2.2. Incident reporting

Incidents and security weaknesses are immediately handled in order to minimise damage. Upon detection of an incident, handling of the incident has first priority. Unit managers are responsible for the proper handling, documentation and reporting of incidents. Incident reporting is a Group-wide process which is performed in the operational and compliance risk system by the risk officers and compliance officers in order to ensure consistent quality in the process. Nordea's operational risk library is used for categorising all incidents and the taxonomy reflects the Operational Risk data eXchange Association's (ORX) reporting requirements.

Aggregated incident information is included in regular risk reports to the Risk Committee, Group Executive Management, the Board Risk Committee and the Board of Directors. Key observations are included in the Group Operational and Compliance Risk Map.

Figure 7.1 shows incidents reported over the last five years (2010–2015) distributed according to Nordea's operational risk library.

**Figure 7.1 Distribution of incidents reported, 2010–2015**



### 7.1.2.3. Other processes

Nordea has developed more task-specific risk management processes in some key areas, as for example business continuity and crisis management. Business continuity management covers the broad scope from the procedures for handling incidents via escalation procedures to crisis management on Group level. As most service chains are supported by IT, applications, disaster recovery plans for technical infrastructure and IT systems are an essential part of business continuity management in Nordea. For the coming years focus will be on successfully deploying the business continuity and crisis management framework, testing and exercising, training and increasing awareness, and integrating business continuity and crisis management as part of daily business.

The Change Approval process captures all material changes in a unified and disciplined manner. It is applicable to new or materially altered products, services, markets, processes, IT systems and major changes to the operations and organisation.

The quality and risk analysis (QRA) is used to analyse risk and quality aspects related to material changes on a case by case basis, for example new programmes, significant changes to organisations, processes and systems. The QRA is performed in order to limit new risks and to ensure disciplined change management. It aims at documented decision-making regarding risk and quality aspects connected to changes, explicit responsibility for decisions and actions taken, and a systematic follow up. Conducting a QRA is mandatory as part of the product approval process and mandatory to use when a change/development is run within a programme or project.

The risk and compliance awareness programmes, one targeting senior management and Board of Directors and one Group-wide programme, will continue during 2016 with updated existing modules as well as launch of new topics. Both programmes are mandatory and aim at setting the tone at the top and at increasing the awareness of operational and compliance risk-related threats and

challenges throughout the organisation. The module Prevent manipulation caused by Social Engineering will be part of the Group-wide programme 2016. Most modules as part of the senior management programme are being updated during 2016.

#### *7.1.2.4. Key report - The Group Operational and Compliance Risk Map*

The results from the Operational Risk Assessment process, including the identification of top risks, represent the main input to the Group Operational and Compliance Risk Map. The report presents Nordea's overall risk picture, trends and challenges for operational risk and the operational risk management framework. The report gives a risk overview for each of the Business Areas in Nordea together with more detailed information on individual risks. The report is used as input to Nordea's annual planning process in order to ensure adequate resource allocation to the planned mitigating actions. Mitigating

actions and the top risks are followed up on a quarterly basis within the risk appetite framework with detailed descriptions of current status. The Group Operational and Compliance Risk Map is submitted to the Risk Committee, Group Executive Management, the Board Risk Committee and the Board of Directors on an annual basis.

#### **7.2. Minimum capital requirements for operational risk**

Nordea's capital requirement for operational risk is calculated according to the standardised approach. In this approach the institution's activities are divided into eight standardised business lines and the gross income for each business line is multiplied by a predefined beta coefficient.

Nordea's capital requirement for operational risk for 2015 amounted to EUR 1,363m (EUR 1,347m). The capital requirement for operational risk is calculated on a yearly basis.



## 8. Securitisation and credit derivatives

Nordea's role in securitisation has been limited to that of being a sponsor of various schemes together with some limited trading on credit derivatives. Nordea has not participated in securitisation as originator and hence has not transferred loans or their risk outside of Nordea.

### 8.1. Introduction to securitisation and credit derivatives trading

The CRR defines securitisation as a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranching, 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 special purpose entity (SPE), which in turn issues securities backed by these assets. In synthetic securitisation, ownership of these assets does not change, however the credit risk is still transferred to the investor through the use of credit derivatives.

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

Nordea has to date not acted as originator in securitisations. However, Nordea has sponsored various securitisation schemes that are described in the following section. Nordea is also acting as an intermediary in the credit derivatives market, especially in Nordic names. In addition to becoming exposed to the credit risk of a single entity, credit derivatives 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 in the CDO tranche. Because hedging CDO tranches 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. The market risk created by Nordea's correlation trading is described in further detail in section 8.2.

### 8.2. 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. At year-end 2015, Nordea is sponsoring the SPEs presented in Table 8.1.

The decision to sponsor these SPEs has been made by senior management. The SPEs are monitored centrally to ensure appropriate purpose and governance. Nordea's role in these transactions has included acting as arranger, account bank, swap/FX counterparty, administrator, calculation agent and/or Commercial Paper dealer.

In accordance with IFRS, Nordea does not consolidate SPEs' assets and liabilities beyond its control. In determining whether Nordea controls an SPE or not, Nordea makes judgements about risks and rewards from the SPE and assesses its ability to make operational decisions for the SPE. Nordea consolidates all SPEs where it retains the majority of the risks and rewards. For the SPEs that are not consolidated, the rationale is that Nordea does not have any significant risks or rewards on these assets and liabilities.

The SPEs in Table 8.1 are not consolidated for capital adequacy purposes. Instead, loans and loan commitments to the SPEs are included in the banking book and capital requirements are calculated in accordance with the rules described in Chapter 5. Bonds and notes issued by the SPE and held by Nordea as well as credit derivative transactions between Nordea and the SPE 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 current exposure method.

#### 8.2.1. Entities issuing structured credit products

Depending on investor demand, Nordea can provide investors with an opportunity to invest in different types of structured credit products such as structured credit-linked notes (CLNs) and collateralised mortgage obligations.

Kalmar Structured Finance A/S (Kalmar) was established to allow customers to invest in structured products in the global credit markets. Nordea sells protection in the credit derivative market by entering into a portfolio CDO. At the same time, Nordea purchases protection under similar terms from Kalmar which issues CLNs to investors. This means investors bear the credit risk of the underlying portfolio. In case of credit losses in the underlying portfolio the collateral given by the investors in connection with the CLN is reduced. There were no notional outstanding CLNs in this category at year-end 2015.

**Table 8.1 Special purpose entities where Nordea is the sponsor, 31 December 2015**

EURm		Duration	Accounting treatment	Book	Nordea's investment <sup>1)</sup>	Total assets
Viking ABCP Conduit	Receivables Securitisation	< 5 years	Consolidated	Banking	1,018	1,072
AR Finance 11	Receivables Securitisation	< 5 years	Consolidated	Banking	93	95
<b>Total</b>					<b>1,111</b>	<b>1,167</b>

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

### 8.2.2. Securitisations of customer assets

Viking ABCP Conduit (Viking) and the AR Finance 11 Conduit were established with the purpose of supporting trade receivable or accounts payable securitisations to core Nordic customers. The SPEs purchase trade receivables (the only asset class purchased) and fund the purchases either by issuing commercial paper via the established asset-backed commercial paper (ABCP) programme or by drawing on the liquidity facilities. Nordea provided liquidity facilities of maximum EUR 1,455m (EUR 1,520m) at year-end out of which EUR 1,135m (EUR 1,177m) had been utilised. Nordea books utilised liquidity facilities in the banking book at amortized cost in accordance with IAS 39.

Nordea's risks are limited to its holding of commercial paper issued by the SPEs and to the drawings under the liquidity facilities provided by Nordea to the SPEs. First loss protection is provided by the originators of the assets and/or from additional external credit enhancement such as the purchase of credit protection from a credit insurance policy, depending on the nature of the SPE and the quality of the purchased assets. When deciding if Nordea should arrange a new transaction, and in providing the liquidity facilities, Nordea uses the same approach as if it was to provide liquidity directly to the underlying customer.

Nordea uses S&P's model for evaluating the risk of the underlying assets (trade receivables) in these types of transactions. Furthermore, the Viking ABCP program is rated A1 by S&P's and P1 by Moody's, respectively.

There was no outstanding commercial paper issue at year-end 2015. The liquidity facilities results in an REA of EUR 350m (EUR 408m), which is included within the credit risk framework of Nordea's banking book.

### 8.3. Credit derivatives trading

Nordea acts as an intermediary in the credit derivatives market, especially 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 marked to market or

marked 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 relates 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.

Table 8.2 lists the outstanding notional of CDOs at the end of 2015, split by bought and sold positions.

CDO valuations are subject to fair value adjustments for model risk. These fair value adjustments are recognised in the income statement. The credit derivative portfolio is part of Nordea Bank Finland Plc.

The risk positions in correlation trading are integrated in Nordea's consolidated market risk management and are as such subject to:

- Limits, including VaR, jump-to-default and correlation risk limits
- The product and transaction approval process

The capital requirement for the comprehensive risk charge specific to the correlation book amounted to EUR 36.2m (EUR 37.4m) as of end 2015 for both Nordea Bank Finland and the consolidated situation of Nordea.

**Table 8.2 Collateralised debt obligations (CDOs) – Exposure (excl. NLP)<sup>1)</sup>, 31 December 2015**

Notionals EURm	Bought protection	Sold protection
CDOs, gross	788	1,854
Hedged exposures	754	754
<b>CDOs, net<sup>2)</sup></b>	<b>34<sup>3)</sup></b>	<b>1,100<sup>4)</sup></b>
Of which:		
– Equity	3	74
– Mezzanine	10	539
– Senior	21	487

1) First-to-default swaps are not classified as CDOs and are therefore not included in the table. Net bought protection amounts to EUR 15m (EUR 47m) and net sold protection to EUR 64m (EUR 46m). Both bought and sold protection are, to the predominant part, investment grade.

2) Net exposure disregards exposure where bought and sold tranches are completely identical in terms of reference pool attachment, detachment, maturity and currency.

3) Of which investment grade EUR 0m (EUR 54m) and sub-investment grade EUR 34m (EUR 145m).

4) Of which investment grade EUR 538m (EUR 394m), sub-investment grade EUR 562m (EUR 293m) and not rated EUR 0m (EUR 0m).

## 9. Liquidity risk and funding

During 2015, Nordea continued to benefit from its focus on prudent liquidity risk management, in terms of maintaining a diversified and strong funding base. Nordea retained access to all relevant financial markets and was able to actively use all of its funding programmes. Nordea issued approximately EUR 25bn in long-term debt, excluding subordinated debt and covered bonds issued by Nordea Kredit, of which EUR 14bn in the Swedish, Finnish and Norwegian markets for covered bonds.

### 9.1. Management, governance and measurement of liquidity risk

Liquidity risk is the risk of being able to meet liquidity commitments only at increased cost or, ultimately, being unable to meet obligations as they fall due.

#### 9.1.1. Management of liquidity risk

Nordea's liquidity management and strategy is based on policy statements resulting in various liquidity risk measures, limits and organisational procedures.

Policy statements stipulate that Nordea's liquidity management reflects a conservative attitude towards liquidity risk. Nordea strives to diversify its sources of funding and seeks to establish and maintain relationships with investors in order to ensure market access. A broad and diversified funding structure is reflected by the strong presence in Nordea's domestic markets in the form of a strong and stable retail customer base and the variety of funding programmes. Funding programmes are both short-term (US commercial paper, European commercial paper, commercial paper, Certificates of Deposits) and long-term (covered bonds, European medium-term notes, medium-term notes) and cover a range of currencies.

In Table 9.1 Nordea's funding sources are presented. At the end of the year, the total volume utilised under short-term programmes was EUR 49.3bn (EUR 53.1bn) with the average maturity being 0.3 (0.3) years. The total volume under long-term programmes was EUR 152.6bn (EUR 141.2bn) with the average maturity being 6.0 (6.4) years. Tables 9.2, 9.3 and Figure 9.1 show the balance sheet decomposed by currency and maturity.

Nordea's liquidity risk management includes stress testing and a business continuity plan for liquidity management. Stress testing is defined as the evaluation of potential effects on a bank's liquidity situation under a set of exceptional but plausible events. The stress testing framework also includes survival horizon metrics (see section

**Table 9.1 Funding sources, 31 December 2015**

Liability type	Interest rate base	Average maturity (years)	EURm
Deposits by credit institutions			
– shorter than 3 months	Euribor, etc.	0.0	36,210
– longer than 3 months	Euribor, etc.	0.5	7,999
Deposits and borrowings from the public			
– Deposits on demand	Administrative	0.0	144,774
– Other deposits	Euribor, etc.	0.2	48,568
Debt securities in issue			
– Certificates of deposits	Euribor, etc.	0.3	26,018
– Commercial papers	Euribor, etc.	0.2	23,243
– Mortgage covered bond loans	Fixed rate, market-based	7.3	106,746
– Other bond loans	Fixed rate, market-based	3.1	45,930
Derivatives		n.a.	79,505
Other non-interest bearing items		n.a.	32,152
Subordinated debentures			
– Dated subordinated debenture loans	Fixed rate, market-based	6.5	5,940
– Undated and other subordinated debenture loans	Fixed rate, market-based	n.a.	3,260
Equity			31,032
<b>Total</b>			<b>591,377</b>
Liabilities to policyholders			55,491
<b>Total, including life insurance operations</b>			<b>646,868</b>

**Table 9.2 Assets and liabilities split by currency, 31 December 2015**

EURbn	EUR	DKK	NOK	SEK	USD	Other	Not distributed	Total
Cash and balances with central banks	10.1	7.6	1.2	2.2	27.4	0.4		48.7
Loans to the public	89.0	86.6	46.1	92.1	22.7	4.3		340.9
Loans to credit institutions	4.8	1.0	0.1	1.8	0.7	2.4		11.0
Interest-bearing securities including treasury bills	22.3	15.9	6.4	19.8	11.9	0.4	19.8	96.5
Derivatives	50.4	6.0	2.5	5.7	11.3	4.8		80.7
Other assets							69.0	69.0
<b>Total assets</b>	<b>176.5</b>	<b>117.1</b>	<b>56.3</b>	<b>121.7</b>	<b>74.1</b>	<b>12.3</b>	<b>88.8</b>	<b>646.9</b>
Deposits and borrowings from the public	59.7	41.8	21.3	46.8	19.8	3.9		193.3
Deposits by credit institutions	15.8	2.7	2.9	4.3	15.5	3.1		44.2
Debt securities in issue	45.4	46.7	7.7	36.2	41.6	24.1		201.9
– of which CDs & CPs	6.1			0.4	28.1	14.6		49.3
– of which covered bonds	21.1	45.8	6.6	31.0	0.9	1.2		106.7
– of which other bonds	18.2	0.9	1.1	4.8	12.6	8.3		45.9
Subordinated liabilities	4.0		0.2	0.7	3.9	0.4		9.2
Derivatives	48.1	6.4	4.3	7.4	9.4	3.9		79.5
Other liabilities							87.6	87.6
Equity	15.6	5.9	6.5	2.4		0.7		31.0
<b>Total liabilities and equity</b>	<b>188.5</b>	<b>103.4</b>	<b>42.8</b>	<b>98.0</b>	<b>90.4</b>	<b>36.1</b>	<b>87.6</b>	<b>646.9</b>
Position not reported on the balance sheet	12.0	-12.5	-12.0	-23.8	16.2	24.4		
Net position, currencies		1.2	1.5	-0.1	-0.1	0.6		

9.1.3), which represents a combined liquidity risk scenario (idiosyncratic and market-wide stress).

#### 9.1.1.1. Liquidity risk appetite

The Board of Directors defines the liquidity risk appetite by setting limits for the liquidity risk measures applied by Nordea. The most central measure is survival horizon, which defines the risk appetite by setting the minimum survival of one month under institution-specific and market-wide stress scenarios with limited mitigation actions.

#### 9.1.2. Governance of liquidity risk

TALM is responsible for pursuing Nordea's liquidity strategy, managing liquidity and for compliance with Group-wide liquidity risk limits set by the Board of Directors and the Risk Committee. TALM, together with GMCCR, develops the liquidity management and risk frameworks, which consist of policies, instructions and guidelines as well as defines the principles for pricing liquidity risk.

#### 9.1.3. Measurement of liquidity risk

The liquidity risk management focuses on both short-term liquidity risk and long-term structural liquidity risk.

In order to manage short-term funding positions, Nordea measures the funding gap risk, which expresses the expected maximum accumulated need for raising liquidity in the course of the next 30 days. Cash flows from both on-balance sheet and off-balance sheet items are included. Funding gap risk is measured and limited for each currency and as a figure for all currencies combined. The limit for all currencies combined is set by the Board of Directors.

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 minimum level is set by the Board of Directors. The liquidity buffer consists of central bank eligible high-grade liquid securities that can be readily sold or used as collateral in funding operations.

Since 2011, the survival horizon metric is being used. The metric is composed of the liquidity buffer and funding gap risk cash flows, and includes expected behavioural cash flows from contingent liquidity drivers. Survival horizon defines the short-term liquidity risk appetite of Nordea and expresses the excess liquidity after a 30-day period without access to market funding.

**Table 9.3 Maturity analysis for assets and liabilities, 31 December 2015**

EURbn	<1 month	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	46.4	0.5	1.9						48.7
Loans to the public	64.9	14.1	27.2	24.5	58.1	42.6	109.5		340.9
– of which repos	25.4	3.1	3.1	0.7					32.3
Loans to credit institutions	6.4	1.0	0.7	0.8	1.7	0.3			11.0
– of which repos	2.1	0.9	0.5						3.4
Interest-bearing securities including treasury bills	76.7							19.8	96.5
Derivatives								80.7	80.7
Other assets								69.0	69.0
<b>Total assets</b>	<b>194.4</b>	<b>15.6</b>	<b>29.8</b>	<b>25.3</b>	<b>59.9</b>	<b>42.9</b>	<b>109.5</b>	<b>169.6</b>	<b>646.9</b>
Deposits and borrowings from the public	24.2	8.0	10.0	1.4	0.3	0.1		149.3	193.3
– of which repos	7.2	1.8	0.4						9.4
Deposits by credit institutions	30.9	5.3	7.8	0.1					44.2
– of which repos	10.9	2.8	3.4						17.2
Debt securities in issue	10.0	29.0	34.3	31.5	58.6	17.1	21.5		201.9
– of which CDs & CPs	8.1	26.7	12.4	1.8	0.2				49.3
– of which covered bonds	1.7	0.4	17.5	18.8	38.0	9.0	21.5		106.7
– of which other bonds	0.2	1.9	4.4	10.9	20.4	8.1			45.9
Subordinated liabilities					1.1	4.9		3.3	9.2
Derivatives								79.5	79.5
Other liabilities								87.6	87.6
Equity								31.0	31.0
<b>Total liabilities and equity</b>	<b>65.1</b>	<b>42.4</b>	<b>52.0</b>	<b>33.1</b>	<b>60.0</b>	<b>22.1</b>	<b>21.5</b>	<b>350.7</b>	<b>646.9</b>

Maturity analysis is based on both contractual and behavioural information of remaining maturity of items. Amortisation is included in the time bucket corresponding to the estimated cash flow date. Time bucket 'Not specified' includes items which are lacking specific timing of cash flows.

**Table 9.4 Net balance of stable funding, 31 December 2015**

Stable liabilities and equity	EURbn
Tier 1 and tier 2 capital	30.0
Secured/unsecured borrowing > 1Y	126.2
Stable retail deposits	30.2
Less stable retail deposits	51.5
Wholesale deposits < 1Y	85.0
<b>Total stable liabilities</b>	<b>322.7</b>
<b>Stable assets</b>	
Wholesale and retail loans > 1Y	237.8
Long-term lending to banks and financial companies	4.8
Other illiquid assets	14.8
<b>Total stable assets</b>	<b>257.4</b>
<b>Off-balance sheet items</b>	<b>2.3</b>
<b>Net balance of stable funding (NBSF)</b>	<b>63.0</b>

The Board of Directors has set the limit for minimum survival without access to market funding to 30 days.

Since 2013 the Liquidity Coverage Ratio (LCR) according to Swedish FSA is being used. The Board of Directors has set the limit for minimum LCR level. Nordea is LCR compliant in all currencies combined and separately in USD and EUR according to Swedish rules. Nordea is also compliant with EBA Delegated Act LCR, which came into force in October 2015.

The structural liquidity risk of Nordea is measured and limited by the Board of Directors through the net balance of stable funding (NBSF), which is defined as the difference between stable liabilities and stable assets. These liabilities primarily comprise retail deposits, bank deposits and bonds with a remaining term to maturity of more than 12 months, as well as shareholders' equity, while stable assets primarily comprise retail loans, other loans with a remaining term to maturity longer than 12 months and committed facilities. The CEO in GEM has set as a target that the NBSF should always be positive, which means that stable assets must be funded by stable liabilities. NBSF is shown in Table 9.4.

**Figure 9.1 Maturity of assets and liabilities, split by currency, 31 December 2015**



**Table 9.5 Liquidity buffer split by type of asset and currency, 31 December 2015**

Type of asset	Currency distribution, market values in EURm				Total
	SEK	EUR	USD	Other CCY	
Cash and balances with central banks	2,208	10,110	27,877	8,528	48,723
Balances with other banks	0	1	96	3	100
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks <sup>2)</sup>	3,947	8,069	6,615	2,215	20,846
Securities issued or guaranteed by municipalities or other public sector entities <sup>2)</sup>	1,982	802	1,931	357	5,072
Covered bonds issued by other bank or financial institute <sup>2)</sup>	7,062	6,629	761	11,166	25,617
Covered bonds issued by the own bank or related unit <sup>2)</sup>	0	672	0	1,310	1,982
Securities issued by non-financial corporates <sup>2)</sup>	0	197	0	2	199
Securities issued by financial corporates, excluding covered bonds <sup>2)</sup>	154	122	1,364	24	1,664
All other eligible and unencumbered securities <sup>3)</sup>	0	0	0	0	0
<b>Total liquidity buffer<sup>1)</sup></b>	<b>15,353</b>	<b>26,603</b>	<b>38,643</b>	<b>23,604</b>	<b>104,203</b>
Adjustments to Nordea's official buffer: Eligible but encumbered securities (+), cash and balances with other banks/central banks (-), central banks haircuts (-)	-2,610	-10,483	-28,334	-3,119	-44,547
<b>Total liquidity buffer (Nordea definition)</b>	<b>12,742</b>	<b>16,120</b>	<b>10,309</b>	<b>20,484</b>	<b>59,656</b>

1) According to Swedish Bankers' Association's definition 2011-10-07.

2) 0 – 20% risk weight.

3) All other eligible and unencumbered securities held by Group Treasury.

**Table 9.6 Historical quarterly development of the liquidity buffer, 31 December 2015**

EURbn						
Type of asset	Q4/15	Q3/15	Q2/15	Q1/15	Q4/14	Q3/14
Cash and balances with central banks	48.7	58.8	54.0	50.4	38.0	34.7
Balances with other banks	0.1	0.0	0.1	0.3	0.0	0.7
Securities issued or guaranteed by sovereigns, central banks or multilateral development banks <sup>2)</sup>	20.8	18.9	16.8	17.8	18.3	17.5
Securities issued or guaranteed by municipalities or other public sector entities <sup>2)</sup>	5.1	5.1	4.9	4.7	3.9	4.4
Covered bonds issued by other bank or financial institute <sup>2)</sup>	25.6	27.3	27.4	25.3	27.5	28.0
Covered bonds issued by the own bank or related unit <sup>2)</sup>	2.0	4.7	5.6	4.4	6.1	3.8
Securities issued by non-financial corporates <sup>2)</sup>	0.2	0.2	0.2	0.2	0.2	0.2
Securities issued by financial corporates, excluding covered bonds <sup>2)</sup>	1.7	2.8	2.9	3.1	5.1	3.1
All other eligible and unencumbered securities <sup>3)</sup>	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total liquidity buffer<sup>1)</sup></b>	<b>104.2</b>	<b>117.8</b>	<b>111.9</b>	<b>106.2</b>	<b>99.1</b>	<b>92.3</b>
Adjustments to Nordea's official buffer:						
Cash and balances with other banks/central banks (-), central bank haircuts(-)	-44.5	-53.2	-52.8	-39.8	-31.8	-30.8
<b>Total liquidity buffer (Nordea definition)</b>	<b>59.7</b>	<b>64.6</b>	<b>59.1</b>	<b>66.4</b>	<b>67.3</b>	<b>61.6</b>

1) According to Swedish Bankers' Association's definition 2011-10-07.

2) 0 – 20% risk weight.

3) All other eligible and unencumbered securities held by Group Treasury.

**Table 9.7 LCR sub-components, 31 December 2015**

EURbn	Combined		USD		EUR	
	After factors	Before factors	After factors	Before factors	After factors	Before factors
Liquid assets level 1	73.6	73.6	36.4	36.4	16.9	16.9
Liquid assets level 2	31.9	37.5	1.2	1.4	7.7	9.1
Cap on level 2	0.0	0.0	0.0	0.0	0.0	0.0
<b>A. Liquid assets total</b>	<b>105.4</b>	<b>111.1</b>	<b>37.6</b>	<b>37.8</b>	<b>24.6</b>	<b>26</b>
Customer deposits	45.2	172.5	9.3	17.1	11.1	51.7
Market borrowing <sup>1)</sup>	51	51.6	15.9	15.9	18.7	18.8
Other cash outflows <sup>2)</sup>	39.2	79.6	1.2	8.3	2.6	14.9
<b>B. Cash outflows total</b>	<b>135.4</b>	<b>303.8</b>	<b>26.4</b>	<b>41.3</b>	<b>32.5</b>	<b>85.4</b>
Lending to non-financial customers	9.4	18.7	1.2	2.3	2.6	5.2
Other cash inflows	73.6	75.4	5.2	5.6	37	37.7
Limit on inflows	0.0	0.0	0.0	0.0	-15.2	0.0
<b>C. Cash inflows total</b>	<b>83</b>	<b>94.1</b>	<b>6.4</b>	<b>7.9</b>	<b>24.4</b>	<b>43</b>
<b>Liquidity Coverage Ratio [A/(B - C)]</b>	<b>201%</b>		<b>188%</b>		<b>303%</b>	

1) Corresponds to Chapter 4, Articles 10 – 13 in Swedish LCR regulation, containing e.g. portion of corporate deposits, market funding, repos and other secured funding.  
 2) Corresponds to Chapter 4, Articles 14 – 25, containing e.g. unutilised credit and liquidity facilities, collateral need for derivatives and derivative outflows.

## 9.2. Liquidity risk and funding analysis

Nordea's liquidity buffer is highly liquid, consisting only of securities eligible for pledging with the central bank as shown in Table 9.5.

The short-term liquidity risk remained at low/moderate levels throughout 2015. The average funding gap risk, i.e. the average expected need for raising liquidity in the course of the next 30 days, was EUR +20.4bn (EUR +11.0bn).

Table 9.6 shows the quarterly development of the liquidity buffer. Measured daily, the liquidity buffer ranged between EUR 54.6 – 82.3bn (EUR 59.5 – 67.3bn) throughout 2015, with an average buffer size of EUR 61.9bn (EUR 62.5bn).

Survival horizon was in the range of EUR 40.6 – 55.8bn (EUR 42.1 – 54.7bn) throughout the year with an average of EUR 48.4bn (EUR 46.9bn).

At the end of the year, the Liquidity Coverage Ratio (LCR) for Nordea according to Swedish rules was 201% (149%) with a yearly average of 134%. Corresponding LCR

in EUR was 303% (307%) and in USD 188% (169%), with yearly averages of 191% and 145%, respectively. Table 9.7 shows that liquid assets exceed the net cash outflows during 30 days in stressed conditions for all currencies combined as well as in EUR and USD separately.

The LCR according to EBA Delegated Act was 161% at the end of the year.

The target of maintaining a positive NBSF was comfortably achieved throughout 2015 with a yearly average of EUR 55.0bn (EUR 51.1bn).

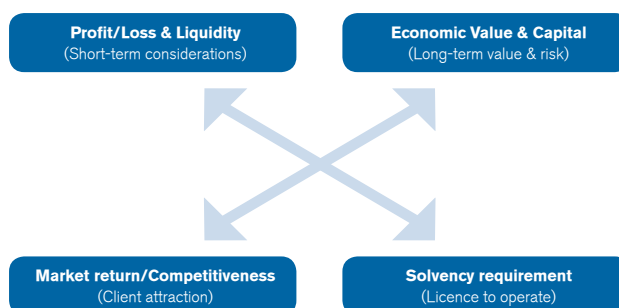
For disclosures according to the EBA Implementing Technical Standards on asset encumbrance, refer to Appendix Table A5. In addition to encumbered assets the framework also includes figures on received collateral. According to the EBA definition, an asset shall be treated as encumbered if it has been 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.



# 10. Risk and capital in the life and pensions operation

The nature of life insurance leads Nordea Life & Pensions (NLP) to take risks that are quite different to those faced in the banking operations. The main risks in Nordea Group's life and pensions operations are market risks and life insurance risks.

Figure 10.1 The ALM square



## 10.1. Risk management system and governance

### 10.1.1. Risk management at NLP

NLP's risk management function is responsible for developing a consistent and coherent risk management system and control framework across NLP. This comprises strategies, processes and reporting procedures necessary to consistently identify, measure, monitor, manage and report on risk and its capital implications at the individual and aggregate level in accordance with the Group Directives. This is implemented through the following governing documents for the management of risk and capital at NLP: NLP Risk Management Strategy, NLP Risk Appetite Framework and the NLP Framework for Policies and Charters. These governing documents are organisationally embedded through the key risk and capital processes, regular reports to key stakeholders and additional instructions and documentation.

The risk management function is headed by the NLP Group CRO and anchored in the local entities through the local CROs. The NLP Group CRO is overall responsible for the risk management as well as capital management insofar as modelling, assessments and monitoring at the NLP Group level. Local CROs, reporting to the local CEOs and Group CRO, are overall responsible for risk management as well as capital management insofar as modelling, assessments and monitoring at the local entity level.

### 10.1.2. Framework for strategic risk & capital decisions

The Asset Liability Management (ALM) square is central to the implementation of NLP's risk framework as it sets out the different areas of consideration that should be balanced when making risk and capital related decisions at NLP, taking the NLP Risk Appetite Framework (RAF) into account, including additional risk lines and limits. Considerations to be taken into account include competitiveness, legal requirements and short-term versus long-term profitability. The prioritisation of the four elements of the ALM square in risk and capital decision making will depend on the specific market and financial position of the relevant local entity company. The ALM square is illustrated in Figure 10.1.

Table 10.1 Assets and liabilities of Nordea Life & Pensions

	31 Dec 2015 EURm	31 Dec 2014 EURm
<b>Assets</b>		
Investment properties	3,085	3,127
Shares	30,167	26,016
Alternative investments	3,217	2,805
Debt securities – At fair value	17,704	17,785
Bonds pledged as collateral	3,971	2,711
Debt securities – Held to maturity	2,092	1,854
Deposits and treasury bills	2,445	3,222
Other financial assets	4,060	4,324
Other assets	934	1,304
<b>Total assets</b>	<b>67,675</b>	<b>63,148</b>
<b>Liabilities and equity</b>		
Traditional provisions	19,081	19,705
Collective bonus potential	3,984	3,732
Unit-linked provisions	12,236	11,026
Investment contracts	19,545	16,741
Other insurance provisions	645	640
Other financial liabilities	8,127	8,211
Other liabilities	749	1,098
Shareholders' equity	1,803	1,489
Subordinated loans	1,505	506
<b>Total liabilities and equity</b>	<b>67,675</b>	<b>63,148</b>

Table 10.1 shows NLP's assets and liabilities as of 31 December 2015 on an IFRS basis. The development of assets and liabilities is determined predominantly by in- and outflows of insurance premiums, claims and investment returns.

## 10.2. Key risks in the life and pensions operation

The major risks that NLP is exposed to are market risk and life & health insurance risks.

### 10.2.1. Financial risks

NLP takes on financial risk both through investments in products with embedded guarantees and investments in market return products where policyholders have been promised a guaranteed benefit or an absolute return

under these portfolios. NLP carries the risk of fulfilling these guarantees to policyholders. Financial risk also arises from the investment of the shareholders' equity.

Financial risk includes market risks such as interest rate risk, equity risk and property risk as well as credit risk and liquidity risk. The risks are mainly measured by exposure measurement on investment assets, Value-at-Risk analysis, sensitivity analysis and stress tests and are generally controlled through monitoring and reporting on limits

**Table 10.2 Market risk and life and health insurance risks**

Sensitivities EURm	31 Dec 2015		31 Dec 2014	
	Effect on policyholders	Effect on Nordea Group's account	Effect on policyholders	Effect on Nordea Group's account
Mortality – increased living with 1 year	28	-21	68	-53
Mortality – decreased living with 1 year	-7	5	-1	1
Disability – 10% increase	14	-11	28	-21
Disability – 10% decrease	-9	7	-16	12
50 bp increase in interest rates	-817	0	-915	-8
50 bp decrease in interest rates	872	-1	1,002	5
12% decrease in all share prices	-1,479	-3	-1,684	-2
8% decrease in property value	-237	-2	-240	-1
8% loss on counterparts	-25	0	-32	0

\*+\* means that policyholders' liabilities or Nordea Group's account (profit/equity) increase. \*- means that policyholders' liabilities or Nordea Group's account (profit/equity) decrease.

**Table 10.3 Investment return, traditional life insurance**

EURm	31 Dec 2015		31 Dec 2014	
	AUM	Investment return	AUM	Investment return
Interest-bearing securities and deposits	15,915	0.1%	16,933	12.7%
Shares	7,091	2.1%	7,698	6.8%
Alternative investments	2,716	9.0%	2,799	18.1%
Investment property	2,757	5.1%	2,972	5.9%
<b>Total return</b>	<b>28,479</b>	<b>1.9%</b>	<b>30,402</b>	<b>11.4%</b>

**Table 10.4 Insurance provisions (technical provisions) and provision on investment contracts divided into guarantee levels (technical interest rates)**

31 Dec 2015							
EURm	none	0%	0–2%	2–3%	3–4%	>4%	Total liabilities
Technical provision	28,356	2,340	7,666	4,820	3,996	3,684	50,862
31 Dec 2014							
EURm	none	0%	0–2%	2–3%	3–4%	>4%	Total liabilities
Technical provision	24,194	2,236	7,854	5,391	3,966	3,830	47,471

### 10.2.2. Market risk

The market risk arises at NLP mainly due to the mismatch between assets and liabilities and the sensitivity of the values of these assets and liabilities to changes in the level or in the volatility of the market prices or rates. In addition, NLP is exposed to market risk through the investment of the shareholders' equity. The market risk (risk on P/L, solvency ratios and financial buffer) is monitored on a continuous basis and is reported weekly to senior management in the Nordea Group.

For the Nordea Group, the market risk exposure from NLP is defined as the P/L risk resulting from the mismatch between assets and liabilities and is measured with the following methodologies:

- Market scenario-based risk method: Measures the market risk under defined scenarios taking account of the movement in assets and liabilities.
- VaR market risk method: measures the market risk from the investment of equity capital and subordinated funding separated from policyholders' assets.

Table 10.2 shows the effect on policyholders and Nordea Group's own account from market risks. The sensitivity to market movements in interest rates has a minor effect on Nordea Group's own account due to the current level of financial buffers.

### 10.2.3. Market risk and Asset Liability Management

The market risk is mitigated through liability driven investment where appropriate, aiming at reducing the asset-liability mismatch, while at the same time creating an investment return enabling NLP to meet any guarantees offered and meet the customer's expectations.

The figures in Table 10.3 represent the traditional business for the consolidated life companies. The assets under management (AUM) are affected by the investment return and the in- and outflows of business. Due to all time low interest rate environment and volatile equity markets the total investment return for 2015 reached 1.9% for the traditional business in total.

Table 10.4 shows the insurance provisions and provisions on investment contracts divided into guarantee levels. For policies with a guarantee, the average embedded guarantee for 2015 is unchanged compared to 2014 at 2.2%. Strong sales of market return products (no guarantees) in 2015 increased technical provisions with 'no guarantees' by 17%.

**Table 10.5 Solvency I Capital/Ratio**

EURm	31 Dec 2015	31 Dec 2014
Tier 1 capital	1,892	1,692
Tier 2 capital	617	487
<b>Solvency capital</b>	<b>2,509</b>	<b>2,179</b>
Less: Solvency requirement	-1,234	-1,135
<b>Solvency balance</b>	<b>1,276</b>	<b>1,044</b>
<b>Solvency ratio</b>	<b>203%</b>	<b>192%</b>

### 10.2.4. Life and health insurance risk

The life and health insurance risk is the risk of unexpected losses due to changes in the level, trend or volatility of mortality rates, longevity rates, disability rates and surrender/lapse risks. Life & health insurance risks are primarily controlled using actuarial methods, i.e. through tariffs, rules for acceptance of customers, reinsurance contracts, stress testing and setting up adequate provisions for risks. The sensitivity on the financial accounts from some of these risks is shown in Table 10.2.

## 10.3. Capital management and solvency position

### 10.3.1. Solvency capital and solvency ratio

The solvency ratio on the current regulatory basis (Solvency I) as of end of 2015 is 203% with a solvency balance of EUR 1,276m. The improvement of EUR 232m in the solvency balance on the 2015 figure was mainly driven by an increase in solvency capital of EUR 330m, due to retained earnings and issuance of subordinated debt from Nordea Bank AB to Nordea Life Holding AB. The consolidated solvency position for Nordea Life Holding AB is shown in Table 10.5.

### 10.3.2. Solvency ratio on the Solvency II basis

Solvency II came into force on 1 January 2016, and the opening balance will be submitted to the Swedish FSA in mid May 2016. NLP is expected to enter into Solvency II with a solvency ratio above 150%.

### 10.3.3. Economic capital

NLP's economic capital is included in the Nordea Group economic capital, described in section 11.2. Economic capital is measured and reported to Group Risk Management and Group Executive Management quarterly.

### 10.3.4 Market Consistent Embedded Value (MCEV)

The MCEV approach is used to quantify the net present value of the dividend stream arising from the in-force business consistently with the price that these future dividend streams could achieve in an arms-length commercial transaction.

During 2015, there was no change to the overall level of MCEV for the life and pension operation. The development by country is shown in Table 10.6 and in Table 10.7. The main drivers behind the development were the con-

tinuous inflow of profitable new business and higher than expected earnings during the year, particularly for NLP Finland and NLP Sweden. This has offset the unfavourable effect of the decrease in interest rates experienced during the year. New business sales during 2015 contributed EUR 270m.

The MCEV sensitivities are illustrated in Table 10.8. The sensitivity to interest rate movements varies between countries due to differences in local accounting rules.

**Table 10.6 MCEV development**

EURm	31 Dec 2015			31 Dec 2014		
	Traditional	Unit-linked	Total	Traditional	Unit-linked	Total
Denmark	554	311	865	869	291	1,160
Finland	669	1,209	1,878	722	1,093	1,815
Norway	665	385	1,049	682	421	1,102
Poland	0	71	71	0	86	86
Sweden	108	786	895	71	524	595
<b>Total</b>	<b>1,996</b>	<b>2,762</b>	<b>4,758</b>	<b>2,343</b>	<b>2,415</b>	<b>4,758</b>

**Table 10.7 MCEV movement analysis**

EURm	MCEV 2014 Q4	New business	Financial effects	Expected earnings	Other	FX effect	MCEV 2015 Q4
Denmark	1,160	21	-186	12	-141	-1	865
Finland	1,815	92	-11	59	-77	0	1,878
Norway	1,102	26	-22	45	-88	-15	1,049
Poland	86	0	-3	3	-17	0	71
Sweden	595	130	0	19	129	22	895
<b>Total</b>	<b>4,758</b>	<b>270</b>	<b>-221</b>	<b>137</b>	<b>-193</b>	<b>6</b>	<b>4,758</b>

**Table 10.8 MCEV sensitivity analysis**

Assumption change	Scenario	Denmark	Finland	Norway	Poland	Sweden	Total
Yield curve change	IntRates -100bp	-32.9%	-0.9%	-14.1%	-27.7%	5.2%	-9.3%
	IntRates -50bp	-15.3%	-0.4%	-5.0%	-12.9%	2.5%	-4.0%
	IntRates +50bp	14.0%	0.2%	2.4%	10.3%	-2.5%	3.1%
	IntRates +100bp	26.9%	0.4%	3.5%	19.4%	-5.0%	5.6%
Equity return 1st year	EquityReturn +10%	4.2%	4.5%	3.0%	13.4%	4.6%	4.3%
	EquityReturn -10%	-4.4%	-4.5%	-3.4%	-13.4%	-4.6%	-4.4%
Admin costs (relative change)	AdminCost +10%	-5.3%	-0.8%	-2.5%	-2.4%	-2.9%	-2.5%
	AdminCost -10%	5.2%	0.8%	2.5%	2.4%	2.9%	2.5%
Surrender rates (relative change)	Surrender +10%	2.0%	-2.0%	-1.2%	-0.2%	-2.8%	-1.2%
	Surrender -10%	-2.1%	2.2%	1.3%	0.2%	3.0%	1.3%
Pay-up rates (relative change)	Lapse +10%	-1.4%	-0.1%	-1.1%	0.0%	-1.5%	-0.8%
	Lapse -10%	1.5%	0.1%	1.2%	0.0%	1.7%	0.9%

### 10.3.5 Development of financial buffers

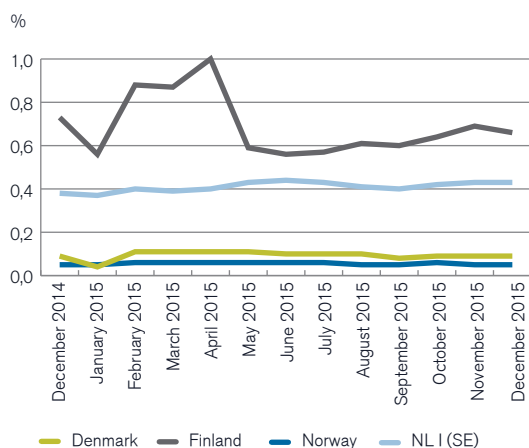
For policyholders, the financial buffers express the potential for receiving a bonus on top of the guarantees within the Traditional portfolio. For shareholders, the financial buffers are important as they offer a P/L protection against insufficient investment returns. For NLP, a moderate financial buffer level is a prerequisite in order to achieve a stable P/L due to the mostly fee-based business models. At low financial buffer levels, risk increases and higher P/L volatility can be expected.

The Finnish financial buffers were reduced during 2015 as shown in Table 10.9 and Figure 10.2. This was due to the fact that the market value adjustment of traditional insurance contracts in Finland is now split between traditional insurance contracts and other insurance contracts. Allowing for this change, there was little overall change in the level of financial buffers.

**Table 10.9 Financial buffers**

EURm	Financial buffers		% of guaranteed liabilities	
	31 Dec 2015	31 Dec 2014	31 Dec 2015	31 Dec 2014
Denmark	1,142	1,221	9.0%	8.9%
Norway	235	260	5.0%	5.4%
Sweden	1,175	1,096	42.7%	37.6%
Finland	1,433	1,156	66.1%	73.4%
<b>Total</b>	<b>3,984</b>	<b>3,732</b>	<b>17.9%</b>	<b>16.2%</b>

**Figure 10.2 Financial buffers compared to insurance provisions, rolling 12 months**



# 11. ICAAP and internal capital requirement

The Internal Capital Adequacy Assessment Process (ICAAP) aims to ensure that Nordea keeps sufficient available capital to cover all risks taken over a foreseeable future, including during periods of stress. The level of capital needs to be adequate from an internal and regulatory perspective, as well as for market participants.

## 11.1. ICAAP

The purpose of the ICAAP is to review the management, mitigation and measurement of material risks within the business environment in order 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 a regular basis and on an 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 requirements for the Nordea Group and its legal entities are regularly monitored by TALM. The current capital situation and forecasts are reported to ALCO, Risk Committee, GEM and the Board of Directors. Capital requirements and capital adequacy are thoroughly reviewed and documented annually in Nordea's ICAAP report, which is ultimately decided and signed off by the Board of Directors.

### 11.1.1. Capital planning and capital policy

The capital planning process is intended to ensure that Nordea and its legal entities have sufficient capital to meet minimum regulatory requirements, support its credit rating, growth and strategic options. The process includes forecasts of the capital requirement, the available capital as well as the impact of new regulations. The capital planning is based on key components of Nordea's Rolling Financial Forecast (RFF), 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

the Nordea Group and its legal entities. An active capital planning process ensures that Nordea is prepared to make necessary capital arrangements regardless of the state of the economy, the introduction of new capital adequacy regulations and to accommodate strategic and business objectives.

Nordea's capital policy determines target capitalisation levels in Nordea. Nordea reviewed its capital policy in light of new regulatory proposals and market perception in Q4 2015. The current capital position and capital policy are described in Chapter 4.

### 11.1.2. Internal capital requirement (ICR) methodology

The internal capital requirement is calculated based on a Pillar I plus Pillar II approach. This methodology uses the Pillar I capital requirements for credit risk, market risk and operational risk as outlined in the CRR as the starting point for its risk assessment.

In Pillar II, risks not included in the CRR are considered, specifically concentration risk, interest rate risk in the banking book, market risk in internal defined pension plans and real estate risk. For each of these risks, Nordea uses internal capital models to define the capital requirement.

- The following risk types are included under Pillar II:
- *Interest rate risk* in the banking book consists of exposures deriving from the balance sheet (mainly lending to public and deposits from public) and from TALM's investment and liquidity portfolios. The interest rate risk is measured in several ways on a daily basis and in accordance with the financial supervisory authorities' requirements. Monitoring of the interest rate risk in the banking book is done daily by controlling interest rate sensitivities, which measure the immediate effects of interest rate changes on the fair values of assets, liabilities and off-balance sheet items. Pillar II market risk for interest rate risk in the banking book is calculated based on daily VaR figures.
  - *Pension risk* is included in the market risk framework and includes equity risk, interest rate risk and FX risk in the Nordea-sponsored defined benefit pension plans. The risk is incorporated in the market risk by including both the asset and liability sides of the pension plans in the Group's VaR calculations and is reported separately in the Pillar II market risk.
  - *Real estate risk* in Pillar II is market risk associated with Nordea's own real estate buildings.
  - *Concentration risk* is measured as a Pillar II risk and represents the credit risk related to the degree of diversification in the credit portfolio, i.e. the risk inherent in doing business with large customers or not being equally exposed across industries and regions. Pillar I credit risk calculations assume a fully diversified international bank. Nordea's exposures are well diversified but not to the same extent as a benchmark model fully diversified international bank. The purpose of the concentration risk capital requirement add-on is to capture this difference.

- *Temporary capital add-ons*: As part of the ICAAP Nordea identifies risks not previously captured in Pillar I or Pillar II on an ongoing basis. When new risks are identified a temporarily capital buffer within Pillar II is included in the ICR. The temporary capital add-ons may later be incorporated into Pillar I, permanently into Pillar II or discontinued depending on nature of the risk.

Liquidity risk is a Pillar II risk but it is only partly covered in the capital framework since it is mitigated through active management of liquidity as defined by the Nordea liquidity risk management framework. The liquidity risk management focuses on both short-term liquidity risk and long-term structural liquidity risk and are governed by measures such as the liquidity coverage ratio and structural liquidity measures.

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 global and local shock scenarios. The results of the stress tests are considered in Nordea's internal capital requirement as buffers for economic stress. By considering the stress test results in the assessment of internal capital requirements, the pro-cyclical effects inherent in the risk-adjusted capital calculations of the economic capital and IRB approaches are addressed.

The rationales for using the chosen Pillar I plus Pillar II approach are the following:

- The risk-based nature in the approach, with 80% of the Pillar I capital requirements calculated by internal models, capture the inherent risks within Nordea's different asset classes.
- The approach combines models specified in the regulation with Nordea specific parameters and data in internal models assessed and approved by the supervisors. Hence, it allows Nordea to use scrutinized models based on best regulatory practice yet tailored with the specific risk profiles known for the individual Nordea portfolios.
- In addition to the assessment of Pillar I risks Nordea assesses risks not captured by the Pillar I framework.
- In parallel to the risk based Pillar I plus Pillar II approach Nordea use other analysis measures such as Basel I floor, large exposures and leverage ratio to understand and compare the nature of the risks within Nordea.

### 11.1.3. FSA capital add-ons under Pillar II

In addition to the regulatory minimum capital requirements, the FSA requires Nordea to hold capital under Pillar II to cover additional risks, not covered in Pillar I

Included in Pillar II are the risk weight floors in Sweden and Norway. Nordea needs to hold CET1 capital under Pillar II amounting to approximately EUR 1.4bn for its Swedish and Norwegian mortgage portfolios. This corresponds to a CET1 capital ratio impact of approximately 1%.

Nordea furthermore needs to hold additional CET1 capital equivalent to 2% of REA due to systemic risk.

During 2015 the Swedish FSA communicated its capital requirement for additional standardised models for additional risks within Pillar II, covering concentration risk, interest rate risk in the banking book and risks in defined pension plans. In addition, as part of the Supervisory Review and Evaluation Process (SREP), Nordea received increased requirements mainly related to inadequate second line of defence and its involvement in the governance of the IRB system and modelling. The SREP also resulted in an add-on for operational risk from inspections relating to IT and key processes.

Taking the Pillar I as well as the full Pillar II add-ons into account, Nordea expects a CET1 capital requirement of approximately 16% in 2016.

The Swedish FSA has stated that there, under normal circumstances, will be no formal decision on Pillar II capital requirements. The Pillar II requirement will thus not affect the level where the automatic restrictions on distribution will come into effect (the MDA level).

### 11.2. Economic capital (EC)

Economic Capital 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 in order to enhance performance management and ensure shareholder value creation.

Nordea's EC model is based on the same risk components as the ICAAP where Pillar II risks close the gap between the total capital requirement and the Pillar I capital requirement (REA). EC has been aligned to CET1 capitalisation requirements according to the CRR.

In addition to the risk types featured in the ICAAP, the EC framework also includes the following items:

- Risks in the insurance business (EC is thus calculated for the legal group whereas the ICAAP covers only Nordea Bank AB on the basis of its consolidated situation).

- Certain capital deductions where allocation keys have been agreed upon.
- FSA capital add-ons under Pillar II

The EC covers the following risk types:

- Credit risk
- Market risk
- Operational risk
- Nordea Life & Pension
- Other, comprising Intangibles, IRB provisions shortfall and Prudent valuation

Refer to Table 2.1 for distribution of EC across risk types and business areas.

Going forward, changes to the EC will mainly be driven by changes to the risk types featured in the ICAAP and continuous efforts to reduce the gap between legal equity and EC, i.e. the inclusion of further capital deductions.

As of end 2015, the total EC of Nordea equals EUR 25.0bn (EUR 23.8bn, restated). Notably, credit risk accounts for 71% of the total EC. Credit risk increased by EUR 0.9bn in 2015, of which EUR 0.8bn corresponds to the increased Pillar II requirement for the mortgage risk weight floors in Sweden and Norway. Additional capital is held to cover for risk regarding sovereign exposures in Pillar II, increasing EC by EUR 0.1bn. Market risk within Pillar I has decreased during 2015 where an increase in the banking book FX has been offset by a decrease in the trading book. The effect from no longer having business risk as a part of the framework decreases EC by EUR 0.5bn. Capital deductions have increased by EUR 0.3bn mainly from an increase in intangible assets which is somewhat offset by a decrease in shortfall and prudent valuation.

### 11.3. Stress testing governance and framework

Stress testing governance and framework are important due to the vital role of capital for Nordea's management and profitability. Thus an adequate governance structure is required for the stress testing process. Key responsibilities include GEM and the legal entity boards' engagement in the ICAAP stress testing. In addition the Asset and Liability Committee/Risk Committee review in detail the stress test performed and potential implications for future capital.

Capital adequacy stress testing is carried out at least annually during the first quarter, using end-of-year data. Ad hoc stress testing may be carried out throughout the

year when necessary. In order to determine the adequacy of capital for the Nordea Group throughout the scenarios, key financial targets, which are stated in Nordea's capital policy, are also considered.

The key measure 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 drop in 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 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.

#### 11.3.1. Stress tests performed

During 2015, Nordea performed internal stress tests in order to evaluate general effects of an economic downturn scenario as well as effects for specifically identified segments or high risk areas. The Nordea Group has also been subject to stress tests and capital review exercises performed by financial supervisors and central banks. 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 in order to determine how severe unexpected changes in the business and macro environment will affect the capital need. 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.

In addition to the firm-wide stress tests which cover all major risks, Nordea performs ad hoc stress tests and sensitivity analyses of various risk parameters and risk factors on a need-by-need basis.

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 (see Chapters 6 and 9 for further details).

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

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



**Table 11.1 Parameters in the annual stress test**

Parameter	Impact
Volumes	Lending volumes are dependent on lending growth specified in the scenario and on inflow to default and loss provisions. Deposit volumes are given directly by the RFF.
Margins	Corporate lending margins are country and rating specific and therefore sensitive to rating migrations. Retail margins are country specific and split by mortgage lending and other lending. Defaulted (but performing) customers are assigned a lower margin. Deposit margins are given by the RFF.
Net interest income	Net interest income figures are adjusted according to the change in volume and margins for deposits and lending, as well as increased funding cost (see below).
Funding cost	Changes in funding costs are derived from the assumption of Nordea being down-rated. The increases funding cost, due to a lower rating, reduces net interest income.
Net fee and commission income	Net fee and commission income is calculated according to product mix. Commission income is assumed to follow market movements and is adjusted according to changes in the stock index, whereas other items are adjusted according to changes in GDP.
Operating expenses	Operating expenses are assumed to be constant except for variable salary expenses, which are adjusted according to changes in net profit the previous year.
Loan losses	Loan losses are calculated based on a bottom-up, EL-based model. The EL-calculations are carried out on stressed rating distributions, stressed point in time PD curves and stressed LGD values (see below). The model covers both collective and specific provisions. The loan loss model consists of two components that cover losses related to (i) a general macroeconomic scenario and (ii) industry specific and idiosyncratic loss events.
P/L effect of Operational- and Market Risk	Stressed losses related to operational risk and market risk are calculated using assumed loss distributions and correlations between the risk types.
Rating/Scoring migration	For corporate customers, rating migrations are calculated on customer level based on stressing their financial statements for each year and scenario. For retail and bank customers, rating/scoring migrations are calculated based on central macro-economic variables per year and scenario.
Probability of default	Stressed PD values are calculated on customer level based on the stressed rating/scoring migrations (see above). For loan loss calculations point in time PDs are used. The point in time PDs are dependent on the severity of the macroeconomic scenario. In addition the PDs contain an add-on factor to reflect industry specific and idiosyncratic risk.
Collateral values	The collateral coverage is stressed by moving parts of the exposure from secured to unsecured, resulting in an increase in average weighted LGD.
Risk exposure amount (REA)	Credit risk REA is calculated on customer/exposure level based on stressed PDs and LGDs. REA is also dependent on changes in volumes (EAD) which are a function of lending growth and inflow to default.

- Scenario development and translation
- Calculation
- Analysis and reporting.

These steps are described further in the sections following.

### 11.3.2. Scenario development and translation

The annual ICAAP stress test is based on three-year macroeconomic scenarios for the Nordic and Baltic countries, Russia and other major economies. The scenarios are designed to replicate shocks that are particularly relevant in the current macroeconomic environment. Stress scenarios are designed by economists in the Nordea Economic Research division in each Nordic country. Nordea also uses its rolling financial forecast for complementary assumptions of the baseline scenario.

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 the effect of them in capital planning.

After a scenario is developed, the effects on risk drivers are translated and new financial parameters are simulated. Advanced models in combination with expert judgment from Business Areas are used in order to determine the effect of the scenario.

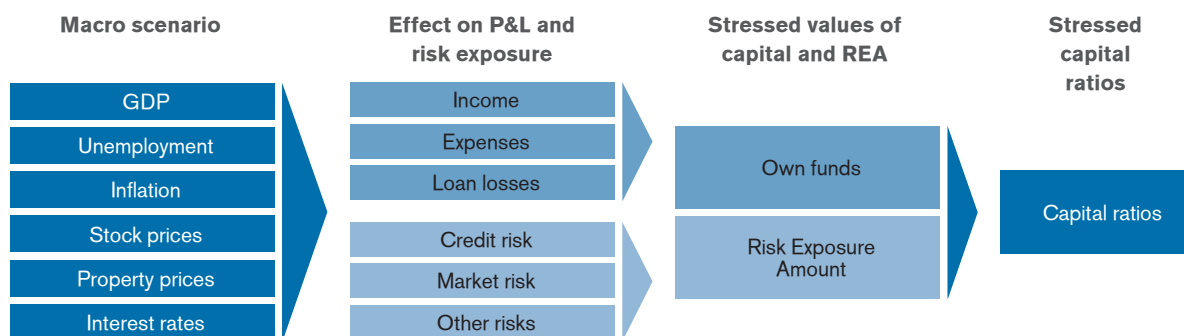
As an example, in the annual stress test, the scenario is translated into impacts on the parameters listed in Table 11.1.

### 11.3.3. Calculation

The stressed figures and parameters from the scenario are used to calculate the effects on the regulatory capital requirements and the financial statements. The regulatory capital is calculated for the credit risk, market risk and operational risk according to the CRR with regards to the IRB approaches used. 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, net fee and commission income, are also calculated. The resulting impact on net profit after dividend are used to calculate the effect on the own funds components. Own funds are set in relation to the stressed risk exposure

**Figure 11.1 Calculation process**



amount in order to calculate the effect on capital ratios during a stress scenario. Figure 11.1 shows the calculation process used in the stress test framework.

#### 11.3.4. Analysis and reporting

The first level of reporting in Nordea is the ALCO and the Risk Committee, which review the details of the stress tests and implications on future capital need. The results, showing the implications of the stress tests on the adequacy of existing capital are distributed to GEM and the Board of Directors. A similar governance process is used for the subgroups and legal entities.

The results of the stress tests support senior management's understanding of the implications of the current

capital strategy given potential market shocks. Based on this information senior management is able to ensure that Nordea holds enough capital against the impact of potential economic downturns and other stress events. Business Area involvement in defining and assessing the stress tests is seen as important in order to increase the risk awareness throughout the organisation and the understanding of the relation between capital requirements and exposure to material risks.

The outcome of the stress tests demonstrates how Nordea's loan losses and capital ratios will change during a stress scenario. The outcomes are then analysed in order to decide the capital need during a downturn period in order to ensure that Nordea remains well capitalised.

# 12. Regulatory development

The changes for financial institutions in the regulatory area related to capital and risk are extensive. In addition to the on-going regulatory updates of the capital adequacy framework, other related regulations are also emerging.

## 12.1 Current regulatory framework for capital adequacy

The Capital Requirements Directive IV (CRD IV) and Capital Requirements Regulation (CRR) for the European financial market entered into force 1 January 2014. The Regulation became applicable in all EU countries 1 January 2014 while the Directive was implemented through national law within all EU member states during 2014, through national processes. In Norway the CRD IV/CRR is yet to be agreed within the EEA.

### 12.1.1. Regulatory minimum capital requirements

The CRR includes a revised definition of own funds, increasing the quality of capital, hence creating better loss absorbing capacity. The CRR also increases the requirements for capital of better quality. The CRR requires banks to comply with the following minimum capital ratios:

- Common equity tier 1 capital ratio of 4.5%
- Tier 1 capital ratio of 6%
- Capital ratio of 8%.

### 12.1.2. Capital buffers

CRD IV introduced a number of capital buffer requirements. The capital buffer requirements are expressed in relation to REA to be covered by CET1 capital and represent additional capital to be held on top of minimum reg-

ulatory requirements. The levels and the phasing-in of the buffer requirements are subject to national discretion.

The mandatory buffers introduced are the capital conservation buffer of 2.5%, the countercyclical capital buffer and the buffer for globally systemically important institutions (G-SII) of 1-3.5%. The institution specific countercyclical capital buffer will, under normal circumstances, be in the range of 0-2.5%, depending on the buffer rate in the countries where the institution has their exposures. In addition, CRD IV allows for a systemic risk buffer (SRB) to be added as well as a buffer for other systemically important institutions (O-SIIs). These buffers should be seen in conjunction with the other buffers and should also be met with CET1 capital. The O-SII buffer can be set up to 2% and the SRB can be set up to 3% for a banks all exposures and up to 5% for a banks domestic exposures. These buffers are together to be seen as a combined buffer. The combined buffer requirement is the sum of the capital conservation buffer, the countercyclical capital buffer 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 these buffer requirements will restrict banks' capital distribution, such as the payment of dividends.

### 12.1.3. Risk exposure amount (REA)

For banks calculating REA according to the IRB approach, the transitional floor (Basel I floor) states that minimum own funds cannot be less than 80% of minimum own funds as calculated under Basel I. The CRR extends these transitional rules until 31 December 2017.

### 12.1.4. Nordic implementation

Many of the changes in the CRD IV/CRR are still being gradually phased-in. However, the CRR also opens up for local regulators to phase in certain requirements faster.

**Table 12.1 Expected regulatory minimum requirements and combined buffer requirements**

Percent (%)	2015	2016	2017	2018	2019	2020
CET1	4.5	4.5	4.5	4.5	4.5	4.5
T1	6.0	6.0	6.0	6.0	6.0	6.0
T2	8.0	8.0	8.0	8.0	8.0	8.0
Combined buffer requirement	5.9	6.1	6.2	6.2	6.2	6.2
- of which CCoB	2.5	2.5	2.5	2.5	2.5	2.5
- of which CCyB	0.4	0.6	0.7	0.7	0.7	0.7
- of which SIFI/SRB	3.0	3.0	3.0	3.0	3.0	3.0
<b>Total Own funds requirement excl. Pillar II</b>	<b>13.9</b>	<b>14.1</b>	<b>14.2</b>	<b>14.2</b>	<b>14.2</b>	<b>14.2</b>

#### 12.1.4.1. Denmark

According to the CRR local authorities have the option to phase-in the new requirements. This option has been used by the Danish FSA in a number of cases. The capital conservation buffer will be phased-in from 2016 to 2019 and the countercyclical capital buffer is phased-in from 2015 to 2019, however the countercyclical buffer has been decided to be set to 0%. In addition to this, a systemic risk buffer requirement for systemically important institutions is phased-in between 2015 and 2019. Nordea Bank Danmark (together with five other institutions) has been identified as systemically important and will be subject to a 2% systemic risk buffer requirement when fully phased-in. In addition to this there is also a possible Pillar II requirement that is set on an individual basis. Finally a number of transition rules are relevant for Nordea Bank Denmark. The shortfall deduction will in the period from 2014 to 2019 step wise be changed from a deduction 50/50 in CET1 and tier 2 to a 100% deduction in CET1. Transition rules regarding unrealised gain and losses and deduction for defined pension assets included in CET1 are also implemented.

#### 12.1.4.2. Finland

In Finland the capital conservation buffer was set to 2.5% from 1 January 2015. The countercyclical capital buffer was also applicable from 1 January 2015. In its role as macroprudential authority, the Board of the Finnish FSA has, however, decided not to impose the countercyclical buffer in the quarterly macroprudential decisions made in 2015. On 6 June the macroprudential authority identified Nordea Bank Finland as one of four other systemically important institutions (O-SIIs) and imposed an O-SII buffer of 2% to be held as of 7 January 2016. On 22 December 2015, the Board of Finnish FSA stated that it will start to investigate the possibilities to increase the risk weights of mortgage loan portfolios. Discussions related to implementation of systemic risk buffer in Finnish legislation are continuing.

#### 12.1.4.3. Norway

In Norway, the CRD IV/CRR and associated regulatory standards are not yet incorporated in the EEA agreement. The latest official progress related to the incorporation of CRD IV/CRR in the EEA agreement was published 14 October 2014, where the Finance Ministers from Iceland, Liechtenstein, Norway and the European Union announced that a solution had been found on the incorporation of the EU Regulations establishing the European Supervisory Authorities into the EEA Agreement. A Proposition will need an approval with a three quarter majority in the Norwegian Parliament but has not yet been published. However, main provisions from the CRD IV/CRR rules have been introduced in the Norwegian regulation as well as national regulations. A major deviation to CRD IV/CRR is that the Basel I floor related to REA is not

removed and that the capital requirement to the SME segment is not implemented, as well as several other technical rules.

The minimum capital requirements are harmonised with a CET1 capital ratio of 4.5%, a Tier 1 ratio of 6% and a total capital ratio of 8%. In addition, a capital conservation buffer of 2.5% CET1 and a systemic risk buffer of 3% CET1 apply. The current countercyclical capital buffer of 1% will be increased to 1.5% from 30 June 2016. Furthermore, the Ministry of Finance maintained its decision, in June 2015, that Nordea Bank Norge, together with two other banks, are considered as systemically important institutions and must therefore hold an additional buffer of 1% from 1 July 2015, to be increased to 2% from 1 July 2016. The buffer requirement is the same for the three institutions and applies on all levels. In July 2014, the Financial Supervisory Authority issued a new guideline regarding supervisory practices introducing additional national adjustments to PD and LGD to the IRB models to mortgages in Norway, with effect from first quarter 2015.

#### 12.1.4.4. Sweden

As communicated by Swedish authorities already in 2011 the CET1 requirement for the four large Swedish banks are set to 12% from 2015. This has been achieved by setting the capital conservation buffer to 2.5% and by setting the SRB to 3% from 2015. In addition there has been an additional SRB requirement of 2% within Pillar II from September 2014. On top of this the Swedish FSA decided to set the countercyclical capital buffer to 1% from 13 September 2015 and that this shall be increased to 1.5% from 27 June 2016. On 5 February the Swedish FSA also published a consultation on a suggestion to increase the countercyclical capital buffer rate to 2% from 19 March 2017. The decision on a potential increase is to be taken on 14 March 2016. Finally there is also Pillar II add-ons for other risks and for the risk weight floor for residential mortgages that is set to 25%. For the other risks the Swedish FSA published, on 11 May 2015, the final memo describing the methods the SFSA will use for assessing the capital adequacy requirements within SREP for three different risk types. The risk types are credit related concentration risk, interest rate risk in the banking book (IRRBB) and pension risk. On 25 November 2015 the SFSA published the actual values for the capital need in Pillar II for the ten largest Swedish banks and credit institutions. The publication is to be made quarterly and the SFSA previously published a standardised value of 1.5% CET1 capital which was not bank specific.

On 22 June 2015 the Swedish FSA announced that Nordea, on group level, was identified as a G-SII. In addition to this Nordea was, on 13 October, identified as an O-SII. The buffer requirements for the O-SII and G-SII are to be met with CET1 capital and applicable from 1 January 2016. However, neither the G-SII buffer (1%) nor the O-SII buffer (2%) will increase Nordea's buffer requirement since Nordea is already obliged to hold a systemic risk buffer (SRB) of 3%. According to the legislation the higher of G-SII or O-SII and the SRB should be applicable.

## 12.2 Updates on Basel III and the CRD IV/CRR

Basel III and the CRD IV/CRR are at various stages of regulatory implementation and there are still a number of updates currently on-going.

### 12.2.1. Proposal on revised capital floor (Basel I floor)

On 22 December 2014 the Basel Committee on Banking Supervision (BCBS) published a consultative document on the design of a permanent floor, replacing the Basel I (transitional) floor applicable today. The BCBS proposal is that the floor should be based on the revised standardised approaches for credit-, market- and operational risks. The intention from the BCBS is to finalise the design and calibration of the floor by end-2016.

### 12.2.2. Revised standardised approach for credit risk

On 10 December 2015 the BCBS published a second consultative paper on the revision of the standardised approach for credit risk. The proposal differs in several ways from the initial proposal published in December 2014. The previous proposal removed all references to external credit ratings and assigned risk weights based on a limited number of alternative risk drivers. The new proposal reintroduces the use of ratings for exposures to banks and corporates. The intention from the BCBS is to finalise the work by end-2016.

### 12.2.3. Fundamental review of the trading book

On 14 January 2016 the BCBS published the revised market risk framework, "Minimum capital requirements for market risk". The key features of the framework includes a revised boundary, revised internal models, revised standardised approach, 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 framework enters into force on 1 January 2019.

Included as a part of the revised market risk framework is also the revision of the CVA risk framework where the BCBS published a consultative document on the review on 1 July 2015. The objectives of the review are to ensure that all important drivers of CVA risk and CVA hedges are covered in the framework, to align the framework with various accounting regimes and to ensure consistency with the revised market risk framework. The proposal includes an internal models approach and a standardised approach for CVA risk. The intention from the BCBS is that the revised CVA framework is to be finalised in mid-2016.

### 12.2.4. Revision to the simpler approaches for operational risk

On 6 October 2014 the BCBS published a consultative document on the revision of the simpler approaches for operational risk. It has been stated that there will be a sec-

ond consultation on this during 2016 together with major changes to the advanced approach for operational risk (AMA).

### 12.2.5. Leverage ratio

The CRR introduced a non-risk based measure, the leverage ratio, in order to limit an excessive build-up of leverage on credit institutions' balance sheets in an attempt to contain the cyclical nature of lending. The impact of the ratio is being monitored by the supervisory authorities with an aim to migrate to a binding measure in 2018, based on appropriate review and calibration. The leverage ratio will be calculated as the Tier 1 capital divided by the exposure (on-balance and off-balance sheet exposures, with adjustments for certain items such as derivatives and securities financing transactions).

On 17 January 2015 a revised version of the calculation of the leverage ratio was published in the Official Journal entering into force the day after. The revised version is an update of the CRR to be more in line with the BCBS leverage ratio framework from January 2014.

On 15 June 2015 EBA published the final reporting requirement for leverage ratio as well as the final disclosure requirement. End 2015 both requirement is not published in the Official Journal in order to enter into force.

The BCBS has stated that the calibration of the leverage ratio will be finalised during 2016 in order to implement it as a Pillar I requirement by 1 January 2018. In a statement on 11 January 2016 it was stated that the leverage ratio will be based on a Tier 1 definition and should comprise a minimum level of 3% with the possibility to set additional requirement on globally systemically important banks (G-SIBs).

### 12.2.6. Liquidity regulations

The objective of the liquidity reform is to improve the banking sector's ability to absorb liquidity shocks arising from financial and economic stress, thus reducing the risk of spill-over from the financial sector to the real economy. In the CRD IV/CRR two new quantitative liquidity standards have been introduced: liquidity coverage ratio (LCR) and net stable funding ratio (NSFR).

LCR requires that a bank shall hold liquidity buffers which are adequate to face imbalance between liquidity inflows and outflows under gravely stressed conditions over a period of 30 days. The LCR rules entered into force on 1 October 2015 with phase-in of 60% in 2015, 70% in 2016, 80% in 2017 and 100% in 2018. The Swedish FSA implemented a tougher LCR requirement already in the beginning of 2013 (all currencies combined, but also separately for USD and EUR). Locally in Denmark and Norway the regulators have implemented faster phase-in by requiring 100% compliance already in 2015. In these coun-

tries there are also plans to implement LCR by significant currencies.

NSFR requires that a bank shall ensure that long term obligations are adequately met with a diversity of stable funding instruments under both normal and stressed conditions. CRD IV/CRR does not contain detailed rules for NSFR. BCBS published detailed proposals for NSFR in 2010. After further revisions, BCBS published the final standard on NSFR in October 2014 to be applied from 1 January 2018. Within the EU, the EBA published, on 15 December 2015, a report on the impact assessment and calibration of the NSFR, recommending the introduction of the NSFR in the EU to ensure stable funding structures. Hereafter, by December 2016 the European Commission shall submit a legislative proposal to the European Parliament and the Council on how to ensure that banks use NSFR.

#### **12.2.7. Bank Recovery and Resolution Directive (BRRD)**

The Banking Recovery and Resolution Directive (BRRD) were published in the Official Journal in June 2014. The BRRD outlines the tools and powers available to the relevant authorities in the EU, which are aimed at both preventing bank defaults as well as handling banks in crises, while maintaining financial stability. The BRRD require banks to draw up recovery plans to describe the measures they would take in order to remain viable if their financial situation is considerably weakened. The BRRD also sets the minimum requirement for own funds and eligible liabilities (MREL) for all EU banks. In November 2014, the EBA published a technical standard describing the calculation of the MREL requirement. The EBA technical standard is expected to be adopted by the EU Commission in early 2016 and will be applied for all EU banks during 2016.

The BRRD needs to be transposed into national legislation before being applicable. In Denmark the legislation implementing BRRD was approved in March 2015. In addition to implementing BRRD, the legislation also includes a capital buffer for mortgage institutes. The buffer will be 2% of the accounting value of mortgage loan (unweighted amount) with a phase in period from 2016 to 2020, starting with 0.6% from 15 June 2016. The buffer will be on the top of other capital requirements, capital buffers and Pillar II add-ons. The buffer has to be covered by Tier 1 or Tier 2 instruments or unsecured senior debts, which fulfil certain criteria. In Finland the national imple-

mentation of BRRD was finalised by 1 January 2015 while the legislation in Sweden is expected to be in force by February 2016. In Norway the BRRD is not yet incorporated in the EEA agreement, but the intention is to implement national legislation that resembles the BRRD.

In November 2015 the Financial Stability Board (FSB) published the final standards on the total loss absorbing capacity (TLAC). The TLAC is intended to ensure adequate availability of loss-absorbing capacity for global systemic banks in resolution, similar to the MREL. The TLAC requirement will not be applied before 2019.

#### **12.2.8. Bank structural reform**

The European Commission published a proposal for Bank Structural Reform in January 2014. The Commission proposal to ban proprietary trading and separate certain trading activities based on supervisory assessment was discussed both in the European Parliament and in the Council during 2015, where the Council reached a general approach but where a final agreement has not yet been reached within the Parliament. It is expected that the negotiations in the Trilogue will start during 2016. Time for finalisation and possible implementation is still unclear.

#### **12.2.9. Solvency II**

Solvency II enters into force from 1 January 2016. Solvency II is a principles-based forward-looking risk-based solvency regime. It aims to ensure that the risk ownership is anchored with executive management and the Board of Directors and to ensure that the risk management and governance is embedded into business operations and strategic planning.

There is still some uncertainty around parts of the legislation, with the European Parliament extending the scrutiny period for amendments to the Delegated Acts until March 2016.

#### **12.2.10. Accounting standards**

Nordea's accounting policies, which follow IFRS, are under change. Nordea's assessment is that the most important changes are related to Financial Instruments (IFRS 9) and Insurance Contracts (IFRS 4), although other changes might also have an impact on Nordea. IFRS 9 will become mandatory from 2018 if endorsed in the EU. The finalisation dates and effective date for the amended IFRS 4 is still pending.

# List of abbreviations

ABCP	Asset-backed commercial paper	GEM CC	Group Executive Management Credit Committee
ADF	Actual Default Frequency	GICS	Global Industries Classification Standard
AIRB	Advanced Internal Ratings Based approach	GMCCR	Group Market and Counterparty Credit Risk
ALCO	Asset and Liability Committee	GWWR	General Wrong- Way Risk
ALM	Asset and Liability Management	IAS	International Accounting Standard
AML	Anti-money laundering	ICAAP	Internal Capital Adequacy Assessment Process
AR	Annual Report	ICR	Internal capital requirement
AT1	Additional Tier 1	IFRS	International Financial Reporting Standard
AUM	Assets under management	IMM	Internal Model Method
AVA	Additional valuation adjustments	IRB	Internal Ratings Based approach
BCBS	Basel Committee on Banking Supervision	IRM	Incremental Risk Measure
BRRD	Banking Recovery and Resolution Directive	LCR	Liquidity Coverage Ratio
CCF	Credit Conversion Factor	LGD	Loss given default
CCO	Chief Credit Officer	LTV	Loan-to-value
CCoB	Capital conservation buffer	MCEV	Market-Consistent Embedded Value
CCP	Central Counterparties	MDA	Maximum distributable amount
CCR	Counterparty Credit Risk	MREL	Minimum requirement for own funds and eligible liabilities
CCY	Currency	NBSF	Net balance of stable funding
CCyB	Countercyclical capital conservation buffer	NLP	Nordea Life & Pensions
CDO	Collateralised debt obligation	NSFR	Net stable funding ratio
CEM	Current Exposure Method	O-SII	Other systemically important institutions
CET1	Common equity tier 1	OTC	Over-the-counter
CEO	Chief Executive Officer	ORX	Operational Riskdata eXchange Association
CFO	Chief Financial Officer	P/L	Profit and loss
CLN	Credit-linked notes	PD	Probability of default
CLS	Continuous Linked Settlement	PIT	Point-in-time
CRD	The EU's Capital Requirements Directive	QRA	Quality and Risk Analysis
CRM	Comprehensive Risk Measure	RCSA	Risk and Control Self-Assessment
CRO	Chief Risk Officer	REA	Risk exposure amount
CRR	The EU's Capital Requirements Regulation-	RFF	Rolling Financial Forecast
CRU	Customer Responsible Unit	RIRB	Retail Internal Ratings Based approach
CVA	Credit valuation adjustment	RTS	Regulatory Technical Standard
EAD	Exposure at default	S&P	Standard & Poor's
EBA	European Banking Authority	SA	Standardised approach
EC	Economic capital	SII	Systemically important institution
ECB	European Central Bank	SIIR	Structural Interest Income Risk
ECC	Executive Credit Committee	SME	Small and medium-sized enterprises
EL	Expected loss	SPE	Special Purpose Entity
EU	European Union	SRB	Systemic Risk Buffer
FIRB	Foundation Internal Rating Based approach	SREP	Supervisory Review and Evaluation Process
FSA	Financial Supervisory Authority	SWWR	Specific Wrong-Way risk
FSB	Financial Stability Board	sVaR	Stressed Value-at-Risk
FX	Foreign exchange	T2	Tier 2
G-SII	Global systemically important institutions	TALM	Group Treasury & ALM
GCCR	Group Credit Committee Retail Banking	TLAC	Total Loss Absorbing Capacity
GDP	Gross Domestic Product	TTC	Through-the-cycle
GCCW	Group Credit Committee Wholesale Banking	VaR	Value-at-Risk
GEM	Group Executive Management	VCF	Value Creation Framework

# Appendix A

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**Table A1 Mapping of own funds to the balance sheet, 31 December 2015**

<b>Assets (EURm)</b>	Nordea Group	Non-CRR companies	Nordea Banking group	Row in transitional own funds template (Table A2)
Intangible assets	3,209	343	2,866	
– of which: Goodwill and other intangible assets	-3,209	-343	-2,866	8
Deferred tax assets	76	9	67	
– of which: Deferred tax assets that rely on future profitability excluding those arising from temporary differences	9	9		10
Retirement benefit assets	377		377	
– of which: Retirement benefit assets net of tax	-296		-296	15
<b>Liabilities (EURm)</b>				
Deferred tax liabilities	1,028	213	815	
– of which: Deductible deferred tax liabilities associated with deferred tax assets that rely on future profitability and do not arise from temporary differences	18		18	10
Subordinated liabilities	9,200	0	9,200	
– of which: AT1 Capital instruments and the related share premium accounts	2,241		2,241	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	729		729	33.47
– of which: Direct and indirect holdings by an institution of own AT1 Instruments	-30		-30	37
– of which: T2 Capital instruments and the related share premium accounts	5,870		5,870	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	76		76	47
– of which: Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-61		-61	52
<b>Equity (EURm)</b>				
Share capital	4,050	0	4,050	1
Share premium reserve	1,080		1,080	
– of which: Capital instruments and the related share premium accounts	1,080		1,080	1
– of which: Retained earnings		0	0	2
Other reserves	-1,188	-10	-1,178	
– of which: Retained earnings	-1,116	-1	-1,114	2
– of which: Accumulated other comprehensive income	-72	-8	-64	3
– of which: Fair value reserves related to gains or losses on cash flow hedges	-71		-71	11
Retained earnings net of proposed dividend	27,089	1,080	26,009	
– of which: Profit/loss for the year	1,077	350	727	5a
– of which: Retained earnings	23,434	730	22,703	2
– of which: Direct holdings by an institution of own CET1 instruments (negative amount)	-6		-6	16

1) If CA4 1.2 > CA4 2.2.1 then CA4 1.2 – CA4 2.2.1 to row 10.

2) 80% to row 33, col A & 20% col C & 20% row 47, col A.

**Table A2 Transitional own funds, EURm, 31 December 2015**

		(A) amount at disclosure date	(B) regulation (EU) no 575/2013 article reference	(C) amounts subject to pre-regulation (EU) no 575/2013 treatment or prescribed residual amount of regulation (EU) no 575/2013
<b>Common Equity Tier 1 capital: instruments and reserves</b>				
1	Capital instruments and the related share premium accounts	5,130	26 (1), 27, 28, 29, EBA list 26 (3)	
	of which: Share capital	4,050	EBA list 26 (3)	
2	Retained earnings	21,589	26 (1) (c)	
3	Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	-64	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	727	26 (2)	
6	<b>Common Equity Tier 1 (CET1) capital before regulatory adjustments</b>	<b>27,382</b>		
<b>Common Equity Tier 1 (CET1) capital: regulatory adjustments</b>				
7	Additional value adjustments (negative amount)	-258	34, 105	
8	Intangible assets (net of related tax liability) (negative amount)	-2,866	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)		36 (1) (c), 38, 472 (5)	
11	Fair value reserves related to gains or losses on cash flow hedges	-71	33 (a)	
12	Negative amounts resulting from the calculation of expected loss amounts	-297	36 (1) (d), 40, 159, 472 (6)	
13	Any increase in equity that result from securitised assets (negative amount)	0	32 (1)	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-12	33 (b)	
15	Defined-benefit pension fund assets (negative amount)	-296	36 (1) (e), 41, 472 (7)	
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	-7	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 artificially inflate 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)	0
19	Direct, indirect and synthetic holdings 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)	0
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 amounts)		36 (1) (k) (ii) 243 (1) (b) 244 (1) (b) 258	
20d	of which: free deliveries (negative amount)		36 (1) (k) (iii), 379 (3)	

**Table A2 cont.**

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	467	
	Of which: ...filter for unrealised loss 1	467	68
	Of which: ...filter for unrealised loss 2		
	Of which: ...filter for unrealised gain 1	468	283
	Of which: ...filter for unrealised gain 2		
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	<b>Total regulatory adjustments to Common equity Tier 1 (CET1)</b>	<b>-3,807</b>	
29	<b>Common Equity Tier 1 (CET1) capital</b>	<b>23,575</b>	
<b>Additional Tier 1 (AT1) capital: instruments</b>			
30	Capital instruments and the related share premium accounts	2,241	51, 52
31	of which: classifies as equity under applicable accounting standards		
32	of which: classified as liabilities under applicable accounting standards		
33	Amount of qualifying items referred to in article 484 (4) and the related share premium accounts subject to phase out from AT1	729	486 (3)
	Public sector capital injections grandfathered until 1 January 2018	N/A	486 (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	<b>Additional Tier 1 (AT1) capital before regulatory adjustments</b>	<b>2,970</b>	
<b>Additional Tier 1 (AT1) capital: regulatory adjustments</b>			
37	Direct and indirect holdings by an institution of own AT1 Instruments (negative amount)	-30	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)		

**Table A2 cont.**

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), 472 (9), 472 (10) (a), 472 (11) (a)
	Of which items to be detailed line by line, e.g. Material net interim losses, intangibles, shortfall of provisions to expected losses etc	
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)	56 (e)
43	<b>Total regulatory adjustments to Additional Tier 1 (AT1) capital</b>	<b>-30</b>
44	<b>Additional Tier 1 (AT1) capital</b>	<b>2,941</b>
45	<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>26,516</b>
<b>Tier 2 (T2) capital: instruments and provisions</b>		
46	Capital instruments and the related share premium accounts	5,870
47	Amount of qualifying items referred to in article 484 (5) and the related share premium accounts subject to phase out from T2	76 486 (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	62 (c) & (d)
51	<b>Tier 2 (T2) capital before regulatory adjustments</b>	<b>5,946</b>
<b>Tier 2 (T2) capital: regulatory adjustments</b>		
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	63 (b) (i), 66 (a), 67, -61 477 (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)	-1,501 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)	

**Table A2 cont.**

56a	Residual amounts deducted from Tier 2 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 Of which items to be detailed line by line, e.g. Material net interim losses, intangibles, shortfall of provisions to expected losses etc	472, 472(3)(a), 472 (4), 472 (6), 472 (8), 472 (9), 472 (10) (a), 472 (11) (a)
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 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	475, 475 (2) (a), 475 (3), 475 (4) (a)
56c	Amount to be deducted from or added to Tier 2 capital with regard to additional filters and deductions required pre CRR Of which: ...possible filter for unrealised losses Of which: ...possible filter for unrealised gains Of which: ...	467, 468, 481 467 468 481
57	<b>Total regulatory adjustments to Tier 2 (T2) capital</b>	<b>-1,562</b>
58	<b>Tier 2 (T2) capital</b>	<b>4,384</b>
59	<b>Total capital (TC = T1 + T2)</b>	<b>30,900</b>
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 575/2013 residual amounts) (items to be detailed line by line, e.g. Deferred tax assets that rely on future profitability net of related tax liability, indirect holdings of own CET1, etc) Of which: ...items not deducted from AT1 items (Regulation (EU) No 575/2013 residual 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 sector entities, etc) Items not deducted from T2 items (Regulation (EU) No 575/2013 residual 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)	472, 472 (5), 472 (8) (b), 472 (10) (b), 472 (11) (b)  475, 475 (2) (b), 475 (2) (c), 275 (4) (b)  477, 477 (2) (b), 477 (2) (c), 477 (4) (b)
60	<b>Total risk weighted assets</b>	<b>143,294</b>
<b>Capital ratios and buffers</b>		
61	Common Equity Tier 1 (as a percentage of risk exposure amount)	16.5% 92 (2) (a), 465
62	Tier 1 (as a percentage of risk exposure amount)	18.5% 92 (2) (b), 465
63	Total capital (as a percentage of risk exposure amount)	21.6% 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)	5.9% CRD 128, 129, 130
65	of which: capital conservation buffer requirement	2.5%
66	of which: countercyclical buffer requirement	0.4%
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)	12.0% CRD 128
69	[non relevant in EU regulation]	NA
70	[non relevant in EU regulation]	NA
71	[non relevant in EU regulation]	NA

**Table A2 cont.**

**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)	36 (1) (h), 45, 46, 472 (10) 56 (c), 59, 60, 475 (4) 189 66 (c), 69, 70, 477 (4)
73	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 (amount below 10% threshold and net of eligible short positions)	36 (1) (i), 45, 48, 470, 954 472 (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)	36 (1) (c), 38, 48, 470, 472 (5) 0

**Applicable caps on the inclusion of provisions in Tier 2**

76	Credit risk adjustments included in T2 in respect of exposures subject to standardized 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)	103,717 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	0 484 (3), 486 (2) & (5)
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	0 484 (3), 486 (2) & (5)
82	Current cap on AT1 instruments subject to phase out arrangements	1,379 484 (4), 486 (3) & (5)
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	0 484 (4), 486 (3) & (5)
84	Current cap on T2 instruments subject to phase out arrangements	668 484 (5), 486 (4) & (5)
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	0 484 (5), 486 (4) & (5)

**Table A3.1 Capital instruments' main features template<sup>1)</sup> – Common Equity Tier 1, 31 December 2015**

1	Issuer	Nordea Bank AB (publ)
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	SE0000427361
3	Governing laws of the instrument	Swedish
<i>Regulatory treatment</i>		
4	Transitional CRR rules	Common Equity Tier 1
5	Post-transitional CRR rules	Common Equity Tier 1
6	Eligible at solo/(sub-) consolidated/ solo & sub-)consolidated	Solo & consolidated Share capital as published in Regulation (EU) No 575/2013 article 28
7	Instrument type (types to be specified by each jurisdiction)	EUR 4,050m
8	Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	EUR 4,049,951,919
9	Nominal amount of instrument	N/A
9a	Issue price	N/A
9b	Redemption price	N/A
10	Accounting classification	Shareholders' equity
11	Original date of issuance	N/A
12	Perpetual or dated	Perpetual
13	Original maturity date	No maturity
14	Issuer call subject to prior supervisory approval	No
15	Optional call date, contingent call dates and redemption amount	N/A
16	Subsequent call dates, if applicable	N/A
<i>Coupons / dividends</i>		
17	Fixed or floating dividend / coupon	N/A
18	Coupon rate and any related index	N/A
19	Existence of a dividend stopper	N/A
20a	Fully discretionary, partially discretionary or mandatory (in terms of pricing)	Fully discretionary
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary
21	Existence of a step up or other incentive to redeem	N/A
22	Noncumulative or cumulative	N/A
23	Convertible or non-convertible	N/A
24	If convertible, conversion triggers	N/A
25	In convertible, fully or partially	N/A
26	If convertible, conversion rate	N/A
27	In convertible, mandatory or optional conversion	N/A
28	If convertible, specify instrument type convertible into	N/A
29	If convertible, specify issuer of instrument it converts into	N/A
30	Write-down features	N/A
31	If write-down, write-down trigger(s)	N/A
32	If write-down, full or partial	N/A
33	If write-down, permanent or temporary	N/A
34	If temporary write-down, description of write-up mechanism	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Additional Tier 1
36	Non-complaint transitioned features	No
37	If yes, specify non-compliant features	N/A

1) 'N/A' inserted if the question is not applicable

**Table A3.2 Capital instruments' main features template<sup>1)</sup> – Additional Tier 1, 31 December 2015**

	AT1:1	AT1:2	AT1:3	AT1:4	AT1:5	AT1:6	AT1:7	AT1:8
1	Issuer	Nordea Bank AB (publ) XS0200688256	Nordea Bank AB (publ) W5795#AA7	Nordea Bank AB (publ) US5557CAM55/ US65557DAM39	Nordea Bank AB (publ) US6557CAN39/ US65557DAL55	Nordea Bank AB (publ) XS1202091325	Nordea Bank AB (publ) XS1202091671	Nordea Bank AB (publ) XS1202090947
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)							
3	Governing law(s) of the instrument	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law
<b>Regulatory treatment</b>								
4	Transitional CRR rules	Additional Tier 1	Additional Tier 1	Additional Tier 1	Additional Tier 1	Additional Tier 1	Additional Tier 1	Additional Tier 1
5	Post-transitional CRR rules	Ineligible	Ineligible	Additional Tier 1	Additional Tier 1	Additional Tier 1	Additional Tier 1	Additional Tier 1
6	Eligible at solo/(sub-)consolidated/ solo & (sub-)consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated
7	Instrument type (types to be specified by each jurisdiction)	Additional Tier 1 (grandfathered) as published in Regulation (EU) No 575/2013 article 484.4	Additional Tier 1 (grandfathered) as published in Regulation (EU) No 575/2013 article 484.4	Additional Tier 1 as published in Regulation (EU) No 575/2013 article 52	Additional Tier 1 as published in Regulation (EU) No 575/2013 article 52	Additional Tier 1 as published in Regulation (EU) No 575/2013 article 52	Additional Tier 1 as published in Regulation (EU) No 575/2013 article 52	Additional Tier 1 as published in Regulation (EU) No 575/2013 article 52
8	Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	EUR 500m	EUR 76m	EUR 912m	EUR 455m	EUR 243m	EUR 129m	EUR 502m
9	Nominal amount of instrument	EUR 500m	JPY 20,000m / EUR 153m	JPY 10,000m / EUR 76m	USD 1,000m / EUR 919m	SEK 2,250m / EUR 245m	NOK 1,250m / EUR 130m	USD 550m / EUR 505m
9a	Issue price	100 per cent	100 per cent	100 per cent	100 per cent	100 per cent	100 per cent	100 per cent
9b	Redemption price	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount
10	Accounting classification	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost
11	Original date of issuance	17-Sep-2004	04-Mar-2005	12-Oct-2005	23-Sep-2014	12-Mar-2015	12-Mar-2015	12-Mar-2015
12	Perpetual or dated	Perpetual	Perpetual	Perpetual	Perpetual	Perpetual	Perpetual	Perpetual
13	Original maturity date	No maturity	No maturity	No maturity	No maturity	No maturity	No maturity	No maturity
14	Issuer call subject to prior supervisory approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	Optional call date, contingent call dates, and redemption price	17-Sep-2009 In addition tax/regulatory call 100 per cent of nominal amount	4-Mar-2035 In addition tax/regulatory call 100 per cent of nominal amount	12-Oct-2035 In addition tax/regulatory call 100 per cent of nominal amount	23-Sep-2019 In addition tax/regulatory call 100 per cent of nominal amount	23-Sep-2024 In addition tax/regulatory call 100 per cent of nominal amount	12-Mar-2020 In addition tax/regulatory call 100 per cent of nominal amount	13-Sep-2021 In addition tax/regulatory call 100 per cent of nominal amount
16	Subsequent call dates, if applicable	17-Mar and 17-Sep each year after first call date	4-Mar and 4-Sep each year after first call date	12-Apr and 12-Oct each year after first call date	23-Mar and 23-Sep each year after first call date	12-Mar, 12-Jun, 12-Sep and 12-Dec each year after first call date	12-Mar, 12-Jun, 12-Sep and 12-Dec each year after first call date	13-Sep each year after first call date
<b>Coupons / dividends</b>								
17	Fixed or floating dividend/coupon	Floating	Fixed to floating	Fixed to floating	Fixed	Floating	Floating	Fixed



**Table A3.2, cont.**

	AT1:1	AT1:2	AT1:3	AT1:4	AT1:5	AT1:6	AT1:7	AT1:8
18	Coupon rate and any related index	Floating 10-year CMS +0.05 per cent per annum subject to 8 per cent cap	Fixed USD 3.75 per cent per annum, until first call date, thereafter floating 6-month JPY deposit +1.22 per cent per annum	Fixed USD 3.84 per cent per annum, until first call date, thereafter floating 6-month JPY deposit +1.40 per cent per annum	Fixed 550 per cent per annum, until first call date, thereafter fixed 5-year mid swap +3.563 per cent per annum	Floating 3-month STIBOR +3.10 per cent per annum	Floating 3-month NIBOR +3.10 per cent per annum	Fixed 5.25 per cent per annum, until first call date, thereafter fixed 5-year mid swap +3.244 per cent per annum
19	Existence of a dividend stopper	Yes	Yes	Yes	No	No	No	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Partially discretionary Dividend stopper	Partially discretionary Dividend stopper	Partially discretionary Dividend stopper	Fully discretionary	Fully discretionary	Fully discretionary	Fully discretionary
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Partially discretionary	Partially discretionary	Fully discretionary	Fully discretionary	Fully discretionary	Fully discretionary	Fully discretionary
21	Existence of step up or other incentive to redeem	No	Yes	Yes	No	No	No	No
22	Non-cumulative or cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible
24	If convertible, conversion triggers	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25	In convertible, fully or partially	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26	If convertible, conversion rate	N/A	N/A	N/A	N/A	N/A	N/A	N/A
27	In convertible, mandatory or optional conversion	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28	If convertible, specify instrument type convertible into	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29	If convertible, specify issuer of instrument it converts into	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30	Write-down features	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31	If write-down, write-down trigger (s)	To avoid liquidation	To avoid liquidation	To avoid liquidation	Group CET1 ratio 8 per cent Issuer CET1 ratio 5,125 per cent	Group CET1 ratio 8 per cent Issuer CET1 ratio 5,125 per cent	Group CET1 ratio 8 per cent Issuer CET1 ratio 5,125 per cent	Group CET1 ratio 8 per cent Issuer CET1 ratio 5,125 per cent
32	If write-down, full or partial	Fully or Partially	Fully or Partially	Fully or Partially	Fully or Partially	Fully or Partially	Fully or Partially	Fully or Partially
33	If write-down, permanent or temporary	Temporary	Temporary	Temporary	Temporary	Temporary	Temporary	Temporary
34	If temporary write-down, description of write-up mechanism	Shareholders resolution regarding reconversion and reinstatement made out of available distributable funds	Shareholders resolution regarding reconversion and reinstatement made out of available distributable funds	Shareholders resolution regarding reconversion and reinstatement made out of available distributable funds	Fully discretionary, if a positive net profit of both Issuer and Group	Fully discretionary, if a positive net profit of both Issuer and Group	Fully discretionary, if a positive net profit of both Issuer and Group	Fully discretionary, if a positive net profit of both Issuer and Group
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
36	Non-compliant transitioned features	Yes	Yes	Yes	No	No	No	No
37	If yes, specify non-compliant features	No specified trigger level, dividend stopper	No specified trigger level, step-up, dividend stopper	No specified trigger level, step-up, dividend stopper	N/A	N/A	N/A	N/A

1) N/A inserted if the question is not applicable

**Table A3.3 Capital instruments' main features template<sup>1)</sup> – Tier 2, 31 December 2015**

	Tier 2:1	Tier 2:2	Tier 2:3	Tier 2:4	Tier 2:5	Tier 2:6	Tier 2:7	Tier 2:8	Tier 2:9	Tier 2:10	Tier 2: 11
1 Issuer	Nordea Bank Norge ASA	Nordea Bank Finland PLC	Nordea Bank AB (publ)	Nordea Bank AB (publ)	Nordea Bank AB (publ)	Nordea Bank AB (publ)	Nordea Bank AB (publ)	Nordea Bank AB (publ)	Nordea Bank AB (publ)	Nordea Bank AB (publ)	Nordea Bank AB (publ)
2 Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	GB0001961928	N/A	XSO497179035	XSO544654162	US65557FAA49/ US65557HAA05	XSO743689993	US65557FAD87/ US65557HAD44	XS1292434146	XS1292433767	N/A	XS1317439559
3 Governing law(s) of the instrument	Governed by English law, except for the subordination provisions which are governed by Norwegian law	Governed by English law, except for the subordination provisions which are governed by Finnish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by the laws of the State of New York, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by the laws of the State of New York, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law	Governed by English law, except for the subordination provisions which are governed by Swedish law
<b>Regulatory treatment</b>											
4 Transitional CRR rules	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
5 Post-transitional CRR rules	Tier 2	Ineligible	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2	Tier 2
6 Eligible at solo/(sub-) consolidated/solo & (sub-)consolidated	Solo, sub-consolidated & consolidated	Solo, sub-consolidated & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated	Solo & consolidated
7 Instrument type (types to be specified by each jurisdiction)	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 (grandfathered) as published in Regulation (EU) No 575/2013 article 484.5	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 as published in Regulation (EU) No 575/2013 article 63	Tier 2 as published in Regulation (EU) No 575/2013 article 63
8 Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	EUR 184m	EUR 76m	EUR 845m (84.5 per cent of Nominal amount, <5 yrs to maturity)	EUR 747m	EUR 1,142m	EUR 749m	EUR 911m	EUR 185m	EUR 250m	EUR 114m	EUR 743m
9 Nominal amount of instrument	USD 200m / EUR 184m	JPY 10,000m / EUR 76m	EUR 1,000m	EUR 750m	USD 1,250m / EUR 1,148m	EUR 750m	USD 1,000m / EUR 919m	SEK 1,700m / EUR 185m	SEK 2,300m / EUR 250m	JPY 15,000m / EUR 114m	EUR 750m
9a Issue price	100 per cent	100 per cent	99.810 per cent	99.699 per cent	99.508 per cent	99.803 per cent	99.364 per cent	100 per cent	100 per cent	100 per cent	99.434 per cent
9b Redemption price	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount
10 Accounting classification	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost
11 Original date of issuance, restructuring date if applicable	04-Nov-1986	22-Aug-2001	26-Mar-2010	29-Sep-2010	13-May-2011	15-Feb-2012	21-Sep-2012	17-Sep-2015	17-Sep-2015	06-Oct-2015	10-Nov-2015
12 Perpetual or dated	Perpetual	Perpetual	Dated	Dated	Dated	Dated	Dated	Dated	Dated	Dated	Dated
13 Original maturity date	No maturity	No maturity	26-Mar-2020	29-Mar-2021	13-May-2021	15-Feb-2022	21-Sep-2022	17-Sep-2025	17-Sep-2025	06-Oct-2025	10-Nov-2025
14 Issuer call subject to prior supervisory approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**Table A3.3, cont.**

	Tier 2:1	Tier 2:2	Tier 2:3	Tier 2:4	Tier 2:5	Tier 2:6	Tier 2:7	Tier 2:8	Tier 2:9	Tier 2:10	Tier 2:11
15	Optional call date, contingent call dates, and redemption price	18-Nov-1991 In addition tax call 100 per cent of nominal amount	Tax/regulatory call 100 per cent of nominal amount	Tax call 100 per cent of nominal amount	Tax call 100 per cent of nominal amount	15-Feb-2017 In addition tax call 100 per cent of nominal amount	Tax/regulatory call 100 per cent of nominal amount	17-Sep-2020 In addition tax/regulatory call 100 per cent of nominal amount	17-Sep-2020 In addition tax/regulatory call 100 per cent of nominal amount	Tax/regulatory call 100 per cent of nominal amount	10-Nov-2020 In addition tax/regulatory call 100 per cent of nominal amount
16	Subsequent call dates, if applicable	18-May and 18-Nov each year after first call date	26-Feb and 26-Aug each year after first call date	N/A	N/A	N/A	N/A	17-Mar, 17-Jun, 17-Sep and 17-Dec each year after first call date	17-Sep each year after first call date	N/A	10-Nov each year after first call date
<i>Coupons / dividends</i>											
17	Fixed or floating dividend/coupon	Floating	Fixed to floating	Fixed	Fixed	Fixed	Fixed	Floating	Fixed	Fixed	Fixed
18	Coupon rate and any related index	Floating 6-month USD +0.1875 per cent per annum	Fixed USD 4.51 per cent per annum to call date, thereafter floating rate equivalent to 6-month JPY Deposit +2.00 per cent per annum	4.50%	4.875%	Fixed 4.625 per cent per annum (equivalent to Euro Swap Rate +3.15 per cent per annum) to call date, thereafter reset fixed rate to Euro Swap Rate +3.15 per cent per annum	4.25%	Floating 3-month STIBOR +1.5 per cent per annum	Fixed 1.935 per cent per annum, until first call date, thereafter fixed 5-year mid swap +1.5 per cent per annum	1.16%	Fixed 1.875 per cent per annum, until first call date, thereafter fixed 5-year mid swap +1.7 per cent per annum
19	Existence of a dividend stopper	No	No	No	No	No	No	No	No	No	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Partially discretionary	Partially discretionary	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Partially discretionary	Partially discretionary	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
21	Existence of step up or other incentive to redeem	No	Yes	No	No	No	No	No	No	No	No
22	Non-cumulative or cumulative	Cumulative	Cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible
24	If convertible, conversion triggers	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25	In convertible, fully or partially	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26	If convertible, conversion rate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
27	In convertible, mandatory or optional conversion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28	If convertible, specify instrument type convertible into	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Table A3.3, cont.**

	Tier 2:1	Tier 2:2	Tier 2:3	Tier 2:4	Tier 2:5	Tier 2:6	Tier 2:7	Tier 2:8	Tier 2:9	Tier 2:10	Tier 2:11
29 If convertible, specify issuer of instrument it converts into	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30 Write-down features	No	No	No	No	No	No	No	No	No	No	No
31 If write-down, write-down trigger(s)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
32 If write-down, full or partial	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33 If write-down, permanent or temporary	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
34 If temporary write-down, description of write-up mechanism	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
35 Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Senior debt	Senior debt	Senior debt	Senior debt	Senior debt	Senior debt	Senior debt	Senior debt	Senior debt	Senior debt	Senior debt
36 Non-compliant transitioned features	No	Yes	No	No	No	No	No	No	No	No	No
37 If yes, specify non-compliant features	N/A	Step-up	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1) N/A inserted if the question is not applicable

**Table A4.1 LRSum: Summary reconciliation of accounting assets and leverage ratio exposures,  
31 December 2015, EURm**

	Applicable Amounts	
1	Total assets as per published financial statements	646,868
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-51,025
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	-56,186
5	Adjustments for securities financing transactions "SFTs"	-2,979
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	42,744
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	-3,106
<b>8</b>	<b>Total leverage ratio exposure</b>	<b>576,317</b>

**Table A4.2 LRCom: Leverage ratio common disclosure, EURm**

		CRR leverage ratio exposures
<b>On-balance sheet exposures (excluding derivatives and SFTs)</b>		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	464,917
2	(Asset amounts deducted in determining Tier 1 capital)	-3,106
<b>3</b>	<b>Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)</b>	<b>461,811</b>
<b>Derivative exposures</b>		
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	11,845
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	26,735
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)	-15,494
8	(Exempted CCP leg of client-cleared trade exposures)	
9	Adjusted effective notional amount of written credit derivatives	45,388
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-41,877
<b>11</b>	<b>Total derivative exposures (sum of lines 4 to 10)</b>	<b>26,596</b>
<b>Securities financing transaction exposures</b>		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	58,088
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	-13,414
14	Counterparty credit risk exposure for SFT assets	492
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)	
<b>16</b>	<b>Total securities financing transaction exposures (sum of lines 12 to 15a)</b>	<b>45,166</b>
<b>Other off-balance sheet exposures</b>		
17	Off-balance sheet exposures at gross notional amount	109,695
18	(Adjustments for conversion to credit equivalent amounts)	-66,951
19	Other off-balance sheet exposures (sum of lines 17 to 18)	42,744
<b>Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)</b>		
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))	
<b>Capital and total exposures</b>		
<b>20</b>	<b>Tier 1 capital</b>	<b>26,516</b>
<b>21</b>	<b>Total leverage ratio exposures (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)</b>	<b>576,317</b>
<b>Leverage ratio</b>		
<b>22</b>	<b>Leverage ratio</b>	<b>4.6%</b>
<b>Choice on transitional arrangements and amount of derecognised fiduciary items</b>		
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	

**Table A4.3 LRSpl: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures), EURm**

		CRR leverage ratio exposures
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	464,917
EU-2	Trading book exposures	48,533
EU-3	Banking book exposures, of which:	416,384
EU-4	Covered bonds	28,591
EU-5	Exposures treated as sovereigns	64,763
EU-6	Exposures to regional governments, MDB, international organisations and PSE NOT treated as sovereigns	8,047
EU-7	Institutions	8,591
EU-8	Secured by mortgages of immovable properties	136,961
EU-9	Retail exposures	29,132
EU-10	Corporate	125,772
EU-11	Exposures in default	5,031
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	9,496

**Table A4.4 LRQua: Free format text boxes for disclosure on qualitative items**

1	Description of the processes used to manage the risk of excessive leverage.	Nordea has policies and processes in place for the identification, management and monitoring of the risk of excessive leverage. The leverage ratio is also part of Nordea's risk appetite framework.
2	Description of the factors that had an impact on the leverage Ratio during the period to which the disclosed leverage Ratio refers.	<p>The leverage ratio has improved 30 basis points (0,3%) from Q4 2014.</p> <p>The leverage ratio in Q4 2014 is calculated accordingly to the CRR prior to the delegated act. In 2015, the leverage ratio is calculated according to the CRR post the delegated act. The main changes were the treatment of SFTs, derivatives and off balance sheet transactions. Additionally, the former utilises a three month average calculation whilst the latter an end of quarter calculation.</p> <p>During the period, the leverage ratio benefited from an increase in Tier 1 Capital as well as a reduction in exposure.</p>

**Table A5 Disclosure on asset encumbrance, EURm, as of 31 December 2015**

**Template A-Assets**

	Carrying amount of encumbered assets 010	Fair value of encumbered assets 040	Carrying amount of unencumbered assets 060	Fair value of unencumbered assets 090
<b>010 Assets of the reporting institution</b>	150,690		445,153	
030 Equity instruments	1,402	1,402	5,967	5,967
040 Debt securities	11,264	11,264	64,164	64,167
120 Other assets	25,812		83,404	

**Template B-Collateral received**

	Fair value of encumbered collateral received or own debt securities issued 010	Fair value of collateral received or own debt securities issued available for encumbrance 040
<b>130 Collateral received by the reporting institution</b>	29,162	48,666
150 Equity instruments		729
160 Debt securities	29,162	25,038
230 Other collateral received		9,478
<b>240 Own debt securities issued other than own covered bonds or ABSs</b>		4

**Template C-Encumbered assets/collateral received and associated liabilities**

	Matching liabilities, contingent liabilities or securities lent 010	Assets, collateral re- ceived and own debt securities issued other than covered bonds and ABSs encumbered 030
<b>010 Carrying amount of selected financial liabilities</b>	<b>179,207</b>	<b>178,381</b>

**D - Information on importance of encumbrance**

The main source of encumbrance for Nordea is covered bond issuance programs where the required overcollateralization levels are defined according to the relevant statutory regimes. Other contributors to encumbrance are derivatives and repos where the activity is concentrated to Finland. Historically, the evolution of asset encumbrance for Nordea has been stable over time which illustrates the fact that the asset encumbrance for Nordea is a reflection of a structural phenomenon of the Scandinavian financial markets and savings behavior. Major part of the unencumbered assets are loans and the rest are equity instruments, debt securities and other assets.



**Table A6.1 IRB Exposure at Default, split by geography and industry, 31 December 2015**

EURm	Denmark	Finland	Norway	Sweden	Baltic countries	Russia	United States	Other	Total 2015	Total 2014
<b>IRB Corporate</b>	<b>43,733</b>	<b>27,069</b>	<b>29,216</b>	<b>38,977</b>	<b>4,412</b>	<b>4,238</b>	<b>2,379</b>	<b>22,678</b>	<b>172,702</b>	<b>171,841</b>
Construction and engineering	706	777	2,138	1,167	270	5	1	92	5,155	4,664
Consumer durables (cars, appliances, etc.)	324	566	1,841	1,075	52	27	376	210	4,471	4,638
Consumer staples (food, agriculture etc.)	8,662	1,144	1,795	772	198	15	24	591	13,201	14,017
Energy (oil, gas, etc.)	15	85	610	242	136	1,015	165	2,066	4,334	4,742
Health care and pharmaceuticals	521	418	210	534	17	3	49	147	1,899	2,031
Industrial capital goods	922	1,278	301	1,035	9	1	568	771	4,885	4,213
Industrial commercial services	4,981	2,010	1,990	4,878	280	28	55	1,256	15,478	13,759
IT software, hardware and services	363	357	176	369	2	14	248	227	1,756	2,132
Media and leisure	581	527	424	780	41	1	0	138	2,492	2,630
Metals and mining materials	38	190	170	229	12	245	2	164	1,050	1,070
Other financial institutions	5,353	1,961	1,560	3,471	112	11	193	3,367	16,027	15,665
Other materials (chemical, building materials, etc.)	603	1,834	715	1,589	152	2,233	90	720	7,936	7,932
Other, public and organisations	2,536	688	585	1,423	199	0	128	360	5,918	5,634
Paper and forest materials	233	1,289	50	443	48	2	137	186	2,389	2,639
Real estate management and investment	9,981	7,642	9,179	15,930	1,353	114	29	1,162	45,389	45,996
Retail trade	4,029	2,240	1,378	2,468	560	18	236	1,363	12,292	12,645
Shipping and offshore	1,136	206	2,859	249	83		27	8,484	13,045	12,151
Telecommunication equipment	6	151	2	117	0		0	5	282	259
Telecommunication operators	222	337	416	342	11	34	50	221	1,633	1,734
Transportation	576	936	943	754	399	161	0	273	4,042	4,025
Utilities (distribution and production)	1,894	2,316	1,853	1,100	451	308	1	605	8,527	8,663
Other	50	116	23	11	28	1	1	271	502	604
<b>IRB Institutions</b>	<b>15,229</b>	<b>546</b>	<b>4,618</b>	<b>8,298</b>	<b>2</b>	<b>130</b>	<b>2,022</b>	<b>12,941</b>	<b>43,787</b>	<b>47,494</b>
Banks	11,386	294	436	2,616	1	130	1,711	11,372	27,947	35,098
Other	3,843	252	4,182	5,682	1	0	312	1,569	15,840	12,396
<b>IRB Retail</b>	<b>51,098</b>	<b>39,885</b>	<b>27,419</b>	<b>53,968</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>32</b>	<b>172,406</b>	<b>167,440</b>
SME	429	1,738	340	441	1	0	3	32	2,984	2,924
Secured by immovable property	40,469	27,880	23,378	46,915					138,642	131,285
Other Retail	10,199	10,267	3,702	6,612					30,780	33,231
<b>IRB Other</b>	<b>446</b>	<b>116</b>	<b>321</b>	<b>1,373</b>	<b>37</b>		<b>1</b>	<b>6</b>	<b>2,300</b>	<b>2,343</b>
<b>Total</b>	<b>110,505</b>	<b>67,615</b>	<b>61,574</b>	<b>102,615</b>	<b>4,452</b>	<b>4,369</b>	<b>4,405</b>	<b>35,658</b>	<b>391,195</b>	<b>389,119</b>
- of which AIRB	38,881	23,182	24,588	33,117	239	1,348	2,282	19,173	142,810	128,621
<b>Total 2014</b>	<b>113,447</b>	<b>65,835</b>	<b>62,971</b>	<b>98,412</b>	<b>4,850</b>	<b>4,847</b>	<b>3,377</b>	<b>35,379</b>		<b>389,119</b>

**Table A6.2 IRB REA, split by geography and industry, 31 December 2015**

<b>EURm</b>	Denmark	Finland	Norway	Sweden	Baltic countries	Russia	United States	Other	Total 2015	Total 2014
<b>IRB Corporate</b>	<b>17,445</b>	<b>9,766</b>	<b>13,088</b>	<b>14,153</b>	<b>1,885</b>	<b>1,976</b>	<b>790</b>	<b>11,267</b>	<b>70,371</b>	<b>71,792</b>
Construction and engineering	405	397	856	504	129	5	1	41	2,338	2,284
Consumer durables (cars, appliances, etc.)	140	249	1,599	778	21	9	128	136	3,060	2,661
Consumer staples (food, agriculture etc.)	3,791	468	716	276	97	9	6	245	5,607	6,428
Energy (oil, gas, etc.)	2	22	383	159	70	319	54	1,070	2,079	1,788
Health care and pharmaceuticals	149	238	109	325	5	1	12	60	899	848
Industrial capital goods	349	493	144	432	6	1	177	357	1,959	1,978
Industrial commercial services	2,177	899	1,112	2,195	151	29	21	708	7,291	6,698
IT software, hardware and services	133	129	86	128	1	11	45	62	595	743
Media and leisure	232	191	182	292	14	1	0	51	962	1,037
Metals and mining materials	18	87	54	92	7	140	1	85	482	413
Other financial institutions	1,879	525	604	1,022	51	4	41	1,034	5,160	5,324
Other materials (chemical, building materials, etc.)	331	1,055	304	948	74	1,128	64	273	4,176	4,268
Other, public and organisations	1,063	208	430	983	140	0	60	326	3,210	2,971
Paper and forest materials	116	517	27	175	20	1	65	107	1,028	1,143
Real estate management and investment	3,379	1,923	2,998	3,554	494	109	10	542	13,007	14,540
Retail trade	1,742	1,110	743	1,216	285	12	63	579	5,750	6,083
Shipping and offshore	481	87	1,710	120	23		9	4,889	7,319	7,351
Telecommunication equipment	3	53	1	34	0		0	2	92	94
Telecommunication operators	96	92	151	102	4	13	33	105	596	638
Transportation	223	441	342	346	138	104	0	162	1,755	1,722
Utilities (distribution and production)	708	554	510	460	145	80	0	368	2,824	2,544
Other	30	31	28	13	12	1	1	65	180	238
<b>IRB Institutions</b>	<b>1,492</b>	<b>136</b>	<b>407</b>	<b>871</b>	<b>1</b>	<b>145</b>	<b>703</b>	<b>4,771</b>	<b>8,526</b>	<b>9,572</b>
Banks	1,081	46	59	293	0	145	572	4,195	6,391	7,949
Other	411	90	348	578	1	0	131	576	2,135	1,623
<b>IRB Retail</b>	<b>9,042</b>	<b>6,201</b>	<b>3,811</b>	<b>3,448</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>16</b>	<b>22,520</b>	<b>21,940</b>
SME	162	691	187	116	1	0	1	16	1,174	1,061
Secured by immovable property	5,266	2,498	2,849	1,807					12,421	10,981
Other Retail	3,614	3,011	775	1,525					8,925	9,897
<b>IRB Other</b>	<b>446</b>	<b>116</b>	<b>321</b>	<b>1,373</b>	<b>37</b>		<b>1</b>	<b>6</b>	<b>2,300</b>	<b>2,333</b>
<b>Total</b>	<b>28,426</b>	<b>16,218</b>	<b>17,626</b>	<b>19,845</b>	<b>1,923</b>	<b>2,121</b>	<b>1,496</b>	<b>16,060</b>	<b>103,717</b>	<b>105,637</b>
- of which AIRB	15,411	7,958	10,463	11,421	131	597	751	9,479	56,211	50,600
<b>Total 2014</b>	<b>29,823</b>	<b>16,191</b>	<b>17,113</b>	<b>20,614</b>	<b>2,175</b>	<b>2,051</b>	<b>1,492</b>	<b>16,178</b>		<b>105,637</b>

**Table A6.3 Probability of Default, split by geography and industry, 31 December 2015**

Percent (%)	Denmark	Finland	Norway	Sweden	Baltic countries	Russia	United States	Other	Total 2015	Total 2014
<b>IRB Corporate</b>	<b>0.59</b>	<b>0.72</b>	<b>0.73</b>	<b>0.43</b>	<b>0.43</b>	<b>0.40</b>	<b>0.29</b>	<b>0.58</b>	<b>0.58</b>	<b>0.59</b>
Construction and engineering	0.92	1.49	0.52	0.59	0.36	1.16	1.85	0.29	0.72	0.89
Consumer durables (cars, appliances, etc.)	0.62	0.88	3.06	0.60	0.36	0.35	0.32	2.60	1.74	0.69
Consumer staples (food, agriculture etc.)	1.06	0.90	0.33	0.32	0.58	0.32	0.20	0.58	0.86	0.85
Energy (oil, gas, etc.)	0.09	0.12	0.80	1.89	0.21	0.16	0.12	0.63	0.57	0.31
Health care and pharmaceuticals	0.36	1.42	0.92	0.46	0.14	0.07	0.16	0.23	0.66	0.47
Industrial capital goods	0.50	0.48	0.49	0.36	0.63	0.16	0.23	0.27	0.39	0.54
Industrial commercial services	0.50	0.90	0.95	0.45	0.39	1.23	0.21	0.85	0.62	0.72
IT software, hardware and services	0.51	0.83	0.51	0.41	0.48	0.56	0.16	0.27	0.47	0.41
Media and leisure	0.66	1.55	0.65	0.48	0.25	0.25	0.55	0.40	0.77	0.78
Metals and mining materials	0.66	0.69	0.28	0.24	0.44	1.57	0.16	0.36	0.69	0.36
Other financial institutions	0.34	0.31	0.30	0.23	0.24	0.16	0.08	0.28	0.29	0.37
Other materials (chemical, building materials, etc.)	1.05	1.62	0.43	0.74	0.51	0.32	0.97	0.31	0.76	0.90
Other, public and organisations	0.48	0.38	1.13	1.08	1.19	0.28	0.48	0.76	0.72	0.58
Paper and forest materials	1.22	0.28	0.51	0.33	0.30	0.27	0.59	0.36	0.41	0.46
Real estate management and investment	0.48	0.60	0.51	0.27	0.52	2.21	0.53	0.62	0.44	0.52
Retail trade	0.64	1.16	1.15	0.85	0.43	1.20	0.20	0.27	0.77	0.78
Shipping and offshore	0.40	0.37	0.79	1.07	0.27		0.32	0.74	0.72	0.68
Telecommunication equipment	0.54	0.36	0.15	0.11	0.67		0.33	0.24	0.26	0.27
Telecommunication operators	0.24	0.20	0.50	0.23	0.18	0.14	1.01	0.46	0.35	0.31
Transportation	0.46	0.93	0.37	0.59	0.23	0.39	0.35	0.45	0.55	0.53
Utilities (distribution and production)	0.15	0.15	0.14	0.31	0.22	0.07	0.06	0.75	0.21	0.24
Other	1.54	0.11	2.20	2.07	0.26	0.43	2.50	0.27	0.49	0.49
<b>IRB Institutions</b>	<b>0.09</b>	<b>0.12</b>	<b>0.05</b>	<b>0.06</b>	<b>0.32</b>	<b>0.80</b>	<b>0.08</b>	<b>0.19</b>	<b>0.11</b>	<b>0.10</b>
Banks	0.08	0.11	0.08	0.06	0.09	0.80	0.07	0.19	0.12	0.11
Other	0.12	0.13	0.05	0.06	0.52	0.81	0.11	0.18	0.09	0.08
<b>IRB Retail</b>	<b>0.80</b>	<b>1.55</b>	<b>0.64</b>	<b>0.31</b>	<b>2.92</b>	<b>3.23</b>	<b>1.82</b>	<b>2.53</b>	<b>0.79</b>	<b>0.85</b>
SME	2.50	2.96	2.86	2.25	2.92	3.23	1.82	2.53	2.77	2.79
Secured by immovable property	0.65	0.62	0.54	0.20					0.47	0.45
Other Retail	1.31	3.89	1.07	0.98					2.07	2.31
<b>IRB Other</b>	<b>2.29</b>	<b>2.24</b>	<b>1.86</b>	<b>2.39</b>	<b>2.50</b>		<b>2.50</b>	<b>2.50</b>	<b>2.30</b>	<b>2.32</b>
<b>Total</b>	<b>0.62</b>	<b>1.21</b>	<b>0.64</b>	<b>0.36</b>	<b>0.45</b>	<b>0.41</b>	<b>0.20</b>	<b>0.44</b>	<b>0.63</b>	<b>0.65</b>
- of which AIRB	0.61	0.71	0.71	0.43	0.32	0.55	0.30	0.63	0.60	0.63
<b>Total 2014</b>	<b>0.74</b>	<b>1.24</b>	<b>0.51</b>	<b>0.40</b>	<b>0.50</b>	<b>0.25</b>	<b>0.27</b>	<b>0.37</b>	<b>0.00</b>	<b>0.65</b>

**Table A6.4 Loss Given Default, split by geography and industry, 31 December 2015**

<b>Percent (%)</b>	Denmark	Finland	Norway	Sweden	Baltic countries	Russia	United States	Other	Total 2015	Total 2014
<b>IRB Corporate</b>	<b>28.9</b>	<b>29.8</b>	<b>30.7</b>	<b>29.7</b>	<b>40.6</b>	<b>42.0</b>	<b>33.3</b>	<b>33.8</b>	<b>30.8</b>	<b>31.6</b>
Construction and engineering	29.5	32.6	29.4	36.7	42.7	44.8	37.8	37.7	32.4	32.6
Consumer durables (cars, appliances, etc.)	30.1	31.2	35.2	33.7	40.7	45.0	32.8	31.2	33.7	33.8
Consumer staples (food, agriculture etc.)	25.4	29.0	31.9	32.0	40.7	45.0	31.1	31.9	27.7	28.7
Energy (oil, gas, etc.)	37.1	37.2	36.6	33.8	37.9	40.4	39.8	34.8	36.6	36.8
Health care and pharmaceuticals	35.1	31.6	32.4	36.1	41.0	44.8	37.0	37.1	34.6	35.7
Industrial capital goods	31.8	32.9	35.6	36.8	41.2	34.1	34.4	36.5	34.5	35.8
Industrial commercial services	30.8	30.3	32.2	32.0	39.8	44.9	31.4	32.7	31.6	32.4
IT software, hardware and services	30.2	31.0	30.8	32.6	38.8	45.0	29.0	29.8	30.8	32.8
Media and leisure	24.9	26.4	28.1	29.6	36.3	45.0	45.0	28.0	27.6	28.1
Metals and mining materials	34.7	36.5	33.9	37.5	41.8	38.8	45.0	37.4	37.1	36.1
Other financial institutions	33.5	29.7	35.2	34.1	43.7	45.0	30.4	32.3	33.1	34.6
Other materials (chemical, building materials, etc.)	31.8	33.0	36.0	33.6	42.6	42.5	34.0	37.0	36.7	37.4
Other, public and organisations	31.4	38.7	37.0	34.0	45.0	13.1	37.8	32.6	34.1	35.5
Paper and forest materials	27.3	37.4	34.5	34.8	40.9	37.1	35.2	37.2	35.8	34.5
Real estate management and investment	23.8	22.5	24.7	24.0	38.0	38.5	22.6	32.7	24.5	25.2
Retail trade	31.0	30.1	32.0	32.2	43.4	43.6	31.6	36.3	32.4	32.0
Shipping and offshore	38.2	33.0	33.4	32.6	32.3		34.3	32.9	33.5	36.8
Telecommunication equipment	28.9	29.9	29.1	33.9	36.8		29.7	29.3	31.6	36.4
Telecommunication operators	29.6	29.2	29.9	30.2	43.7	42.3	29.1	31.7	30.4	31.2
Transportation	35.4	37.3	33.9	36.8	40.6	43.4	36.6	34.5	36.5	37.3
Utilities (distribution and production)	32.3	37.1	37.3	38.2	41.8	45.0	37.1	39.3	36.9	35.1
Other	29.0	37.1	36.4	42.7	43.3	44.9	41.6	44.1	40.6	41.8
<b>IRB Institutions</b>	<b>12.2</b>	<b>26.1</b>	<b>15.5</b>	<b>15.9</b>	<b>45.0</b>	<b>45.0</b>	<b>45.0</b>	<b>41.6</b>	<b>23.7</b>	<b>25.4</b>
Banks	12.0	17.4	20.2	19.3	45.0	45.0	45.0	42.2	27.3	28.0
Other	12.8	36.3	15.0	14.3	45.0	45.0	45.0	37.2	17.3	18.1
<b>IRB Retail</b>	<b>20.4</b>	<b>14.7</b>	<b>21.1</b>	<b>13.8</b>	<b>40.4</b>	<b>37.0</b>	<b>34.7</b>	<b>36.5</b>	<b>17.1</b>	<b>17.1</b>
SME	27.2	26.5	38.2	25.3	40.4	37.0	34.7	36.5	27.9	27.4
Secured by immovable property	15.9	11.0	19.4	10.9					13.8	13.3
Other Retail	38.7	22.6	30.2	34.2					31.3	31.3
<b>IRB Other</b>	<b>44.3</b>	<b>41.2</b>	<b>40.1</b>	<b>44.3</b>	<b>45.0</b>		<b>45.0</b>	<b>44.9</b>	<b>43.6</b>	<b>45.3</b>
<b>Total</b>	<b>22.6</b>	<b>20.8</b>	<b>25.3</b>	<b>20.4</b>	<b>40.6</b>	<b>42.0</b>	<b>38.7</b>	<b>36.6</b>	<b>24.0</b>	<b>24.6</b>
- of which AIRB	26.8	27.7	28.1	27.2	34.7	35.8	32.8	32.0	28.2	27.4
<b>Total 2014</b>	<b>22.4</b>	<b>20.7</b>	<b>25.4</b>	<b>21.5</b>	<b>41.2</b>	<b>41.4</b>	<b>43.4</b>	<b>39.8</b>	<b>0.0</b>	<b>24.6</b>

**Table A7 Standardised exposure split by exposure class and by geography, 31 December 2015**

<b>EURm</b>	Nordic countries	- of which Denmark	- of which Finland	- of which Norway	- of which Sweden	Baltic countries	Russia	USA	Other <sup>1)</sup>	Total	Total 2014
Central governments and central banks	30,316	9,845	10,611	2,012	7,848	195	210	33,961	8,817	73,499	66,668
Regional governments and local authorities	9,153	1,863	1,403	966	4,921	132	24		17	9,326	8,884
Institution	621	0	0	17	604	4	26	0	3,994	4,644	4,159
Corporate	116	91	4	6	15	956	33	2	1,005	2,111	1,922
Retail	3,149	863	1	894	1,391	1,002	15	2	120	4,288	4,296
Exposures secured by real estate	0				0	2,312	247	0	2,290	4,849	4,718
Other <sup>1)</sup>	3,670	696	1,289	621	1,064	148	113	199	3,835	7,965	7,803
<b>Total standardised approach</b>	<b>47,025</b>	<b>13,358</b>	<b>13,308</b>	<b>4,516</b>	<b>15,843</b>	<b>4,749</b>	<b>669</b>	<b>34,163</b>	<b>20,077</b>	<b>106,683</b>	
<b>Total standardised approach 2014</b>	<b>46,672</b>	<b>12,943</b>	<b>16,928</b>	<b>4,849</b>	<b>11,952</b>	<b>5,573</b>	<b>1,014</b>	<b>28,661</b>	<b>16,531</b>		<b>98,451</b>

1) Includes exposure classes public sector entities, multilateral development banks, international organisations, exposures in default, exposures associated with particularly high risk, covered bonds, securitisation positions, institutions and corporates with a short-term credit assessment, collective investment undertakings (CIU), equity and other items.

**Table A8.1 Exposure towards IRB institution, distributed by rating grade**

EURm Rating grade	31 December 2015					31 December 2014				
	PD scale	Original exposure	Exposure	Exposure (%)	Average risk weight	PD scale	Original exposure	Exposure	Exposure (%)	Average risk weight
6+	0.03%	5,054	5,064	100.2	6%	0.03%	5,841	5,568	95.3	7%
6	0.03%	1,631	1,563	95.8	10%	0.03%	2,262	2,238	98.9	11%
6-	0.05%	7,729	7,691	99.5	12%	0.05%	8,009	7,840	97.9	14%
5+	0.07%	17,969	17,693	98.5	14%	0.07%	19,460	19,171	98.5	16%
5	0.10%	3,217	3,062	95.2	26%	0.10%	3,316	3,135	94.6	25%
5-	0.16%	6,657	6,537	98.2	36%	0.16%	7,726	7,636	98.8	33%
4+	0.25%	1,665	1,170	70.2	40%	0.25%	1,599	939	58.7	47%
4	0.35%	245	126	51.6	70%	0.35%	601	367	61.0	73%
4-	0.55%	594	429	72.2	93%	0.55%	484	322	66.6	94%
3+	0.81%	329	217	65.8	108%	0.81%	190	95	50.1	101%
3	1.25%	44	29	66.8	114%	1.25%	64	38	59.4	115%
3-	2.31%	75	45	59.7	131%	2.31%	69	32	47.0	137%
2+	6.40%	47	13	27.4	177%	6.40%	43	14	31.4	183%
2	7.06%	92	50	54.3	182%	7.06%	32	5	16.3	181%
2-	9.86%	42	6	15.1	204%	9.86%	127	15	12.2	204%
1+	14.79%	7	4	52.2	235%	14.79%	9	2	27.3	240%
1	20.71%	0	0	62.0	254%	20.71%	1	0	50.0	288%
1-	26.93%	1	0	44.7	293%	26.93%	0	0	15.2	263%
Defaulted	100.00%	4	4	100.0	0% <sup>1)</sup>	100.00%	0	0		0%
	<b>0,11%<sup>2)</sup></b>	<b>45,403</b>	<b>43,704</b>	<b>96.3</b>	<b>19%</b>	<b>0,10%<sup>2)</sup></b>	<b>49,835</b>	<b>47,420</b>	<b>95.2</b>	<b>20%</b>

1) FIRB exposures are assigned a risk weight of zero when in default, in accordance with the CRR.

2) Exposure-weighted PD.

**Table A8.2 Exposure towards IRB corporate, distributed by rating grade**

EURm Rating grade	31 December 2015						31 December 2014					
	PD scale	Original exposure	Exposure	- of which AIRB	Expo- sure (%)	Average risk weight	PD scale	Original exposure	Exposure	- of which AIRB	Exposure (%)	Average risk weight
6+	0.03%	10,440	8,130	6,849	77.9	9%	0.03%	8,564	6,114	4,924	71.4	11%
6	0.03%	6,694	6,045	4,475	90.3	10%	0.03%	5,896	5,120	3,184	86.8	11%
6-	0.05%	6,118	5,107	3,575	83.5	13%	0.05%	7,764	6,414	3,738	82.6	15%
5+	0.07%	13,098	9,930	7,297	75.8	19%	0.07%	13,963	10,334	6,713	74.0	20%
5	0.10%	20,369	15,377	12,634	75.5	22%	0.10%	20,073	15,371	11,668	76.6	22%
5-	0.16%	28,816	21,931	18,014	76.1	29%	0.16%	25,531	19,167	13,839	75.1	29%
4+	0.25%	34,217	27,563	22,822	80.6	36%	0.25%	30,529	24,396	16,952	79.9	37%
4	0.35%	35,649	28,552	24,182	80.1	42%	0.35%	35,983	28,761	22,670	79.9	43%
4-	0.55%	23,633	19,740	17,339	83.5	49%	0.55%	28,850	23,318	18,272	80.8	52%
3+	0.81%	12,537	10,353	8,840	82.6	59%	0.81%	14,656	12,039	9,681	82.1	59%
3	1.25%	6,503	5,447	4,473	83.8	66%	1.25%	7,936	6,213	4,969	78.3	65%
3-	2.31%	3,834	3,158	2,716	82.4	70%	2.31%	5,077	4,137	3,588	81.5	67%
2+	6.40%	3,232	2,478	1,965	76.7	114%	6.40%	3,252	2,500	2,061	76.9	111%
2	7.06%	1,267	867	769	68.4	105%	7.06%	1,091	863	730	79.1	102%
2-	9.86%	593	489	420	82.4	115%	9.86%	339	270	200	79.7	101%
1+	14.79%	302	253	231	83.6	130%	14.79%	371	209	156	56.4	121%
1	20.71%	179	149	138	83.6	144%	20.71%	185	165	155	89.4	137%
1-	26.93%	105	70	52	66.5	125%	26.93%	80	44	23	55.2	169%
Defaulted	100.00%	5,615	4,760	4,115	84.8	124%	100.00%	5,558	4,725	3,901	85.0	107%
	<b>3.33%<sup>1)</sup></b>	<b>213,201</b>	<b>170,398</b>	<b>140,907</b>	<b>79.9</b>	<b>40%</b>	<b>3.46%<sup>1)</sup></b>	<b>215,698</b>	<b>170,162</b>	<b>127,424</b>	<b>78.9</b>	<b>41%</b>

1) Exposure-weighted PD.

**Table A8.3 Exposure towards IRB retail, distributed by risk grade**

EURm Risk grade	31 December 2015					31 December 2014				
	PD scale	Original exposure	Exposure	Exposure (%)	Average risk weight	PD scale	Original exposure	Exposure	Exposure (%)	Average risk weight
A+	0.08%	60,721	58,643	96.6	3%	0.08%	63,759	61,017	95.7	3%
A	0.11%	21,818	20,811	95.4	5%	0.11%	19,324	18,419	95.3	5%
A-	0.16%	19,887	19,164	96.4	6%	0.16%	17,169	16,489	96.0	6%
B+	0.22%	16,192	15,598	96.3	8%	0.22%	14,847	14,307	96.4	8%
B	0.31%	13,416	12,907	96.2	11%	0.31%	12,749	12,267	96.2	10%
B-	0.43%	11,183	10,748	96.1	13%	0.43%	10,773	10,345	96.0	13%
C+	0.60%	8,113	7,773	95.8	17%	0.60%	7,269	6,947	95.6	16%
C	0.84%	5,083	4,802	94.5	21%	0.84%	5,903	5,607	95.0	21%
C-	1.17%	5,271	4,990	94.7	25%	1.17%	4,912	4,647	94.6	24%
D+	1.64%	3,144	2,934	93.3	30%	1.64%	3,206	3,008	93.8	29%
D	2.30%	2,366	2,204	93.1	35%	2.30%	2,462	2,295	93.2	35%
D-	3.20%	2,112	1,963	92.9	38%	3.20%	2,185	2,021	92.5	37%
E+	4.47%	2,043	1,932	94.5	47%	4.47%	1,945	1,828	94.0	45%
E	6.30%	2,170	2,105	97.0	53%	6.30%	2,313	2,240	96.9	49%
E-	8.79%	561	526	93.8	44%	8.79%	561	523	93.2	42%
F+	12.28%	443	414	93.6	48%	12.28%	426	395	92.6	46%
F	17.19%	1,189	1,152	96.8	71%	17.19%	423	397	93.9	54%
F-	28.02%	1,127	1,069	94.8	65%	24.04%	2,181	2,090	95.8	68%
Defaulted	100.00%	2,574	2,491	96.8	179%	100.00%	2,552	2,472	96.8	179%
	<b>2.23%<sup>1)</sup></b>	<b>179,415</b>	<b>172,227</b>	<b>96.0</b>	<b>13%</b>	<b>2.32%<sup>1)</sup></b>	<b>174 961</b>	<b>167 314</b>	<b>95.6</b>	<b>13%</b>

1) Exposure-weighted PD.

**Table A8.4 Exposure towards IRB retail sub-exposure classes, distributed by risk grade**

EURm Risk grade	31 December 2015				31 December 2014			
	PD scale	Secured by immovable property	Other retail	SME	PD scale	Secured by immovable property	Other retail	SME
A+	0.08%	53,306	5,321	15	0.08%	54,668	6,332	17
A	0.11%	18,089	2,666	56	0.11%	15,543	2,767	109
A-	0.16%	16,074	2,840	251	0.16%	13,505	2,812	172
B+	0.22%	12,740	2,743	115	0.22%	11,385	2,798	123
B	0.31%	10,096	2,728	83	0.31%	9,387	2,786	93
B-	0.43%	8,172	2,495	81	0.43%	7,614	2,601	130
C+	0.60%	5,697	1,886	190	0.60%	4,939	1,787	221
C	0.84%	3,190	1,262	350	0.84%	3,696	1,572	339
C-	1.17%	3,475	1,111	405	1.17%	3,120	1,161	367
D+	1.64%	1,792	827	315	1.64%	1,840	891	276
D	2.30%	1,313	651	240	2.30%	1,305	756	235
D-	3.20%	622	1,151	190	3.20%	606	1,230	185
E+	4.47%	697	1,076	159	4.47%	616	1,063	150
E	6.30%	946	1,039	120	6.30%	940	1,184	116
E-	8.79%	81	368	77	8.79%	58	391	74
F+	12.28%	57	309	49	12.28%	42	303	50
F	17.19%	390	719	43	17.19%	46	325	27
F-	24.04%	360	657	52	24.04%	559	1,445	86
Defaulted	100.00%	1,503	855	133	100.00%	1,381	976	115
		<b>138,601</b>	<b>30,702</b>	<b>2,924</b>		<b>131,250</b>	<b>33,181</b>	<b>2,883</b>

**Table A9 Specification of undertakings, 31 December 2015**

Owner	Company name	Voting power of holding, %	Domicile	Consolidation method
<b>Nordea Bank AB (publ)</b>	<b>Nordea Bank Finland Plc</b>	<b>100</b>	<b>Finland</b>	<b>Purchase method</b>
Nordea Bank Finland Plc	Nordea Finance Finland Ltd	100	Finland	Purchase method
Nordea Finance Finland Ltd	Tukirahoitus Oy	100	Finland	Purchase method
	Nordea Finance Estonia Ltd	100	Estonia	Purchase method
	Nordea Finance Latvia Ltd	100	Latvia	Purchase method
	Nordea Finance Lithuania Ltd	100	Lithuania	Purchase method
	NF Fleet Oy	20	Finland	Equity method
Nordea Finance Estonia Ltd	ALD Automotive Eesti AS	25	Estonia	Equity method
Nordea Finance Latvia Ltd	ALD Automotive SIA	25	Latvia	Equity method
Nordea Finance Lithuania Ltd	UAB ALD Automotive	25	Lithuania	Equity method
<b>Nordea Bank AB (publ)</b>	<b>Nordea Bank Norge ASA</b>	<b>100</b>	<b>Norway</b>	<b>Purchase method</b>
Nordea Bank Norge ASA	Nordea Eiendoms kreditt AS	100	Norway	Purchase method
	Nordea Finans Norge AS	100	Norway	Purchase method
	Eksportfinans ASA	23	Norway	Equity method
	Nordea Utvikling AS	100	Norway	Purchase method
Nordea Finans Norge AS	NF Fleet AS	20	Norway	Equity method
Nordea Utvikling AS	Tomteutvikling Norge AS	100	Norway	Purchase method
<b>Nordea Bank AB (publ)</b>	<b>Nordea Bank Danmark A/S</b>	<b>100</b>	<b>Denmark</b>	<b>Purchase method</b>
Nordea Bank Danmark A/S	LR-Realkredit A/S	39	Denmark	Equity method
	Nordea Finans Danmark A/S	100	Denmark	Purchase method
	Nordea Kredit Realkreditaktieselskab	100	Denmark	Purchase method
	NJK1 ApS	100	Denmark	Purchase method
	Bankernas Kontantservice A/S	20	Denmark	Equity method
	Fiona Asset Company A/S	100	Denmark	Purchase method
	Ejendomsselskabet Axelborg I/S	34	Denmark	Equity method
Nordea Finans Danmark A/S	NF Fleet A/S	20	Denmark	Equity method
	K/S UL 677	100	Denmark	Purchase method
	K/S UL 678	100	Denmark	Purchase method
	BH Finance K/S	100	Denmark	Purchase method
	NAMIT 10 K/S	100	Denmark	Purchase method
Fiona Asset Company A/S	Ejendomsselskabet Vestre Stationsvej 7, Odense A/S	100	Denmark	Purchase method
<b>Nordea Bank AB (publ)</b>	<b>OOO Promyshlennaya Kompaniya Vestkon</b>	<b>100</b>	<b>Russia</b>	<b>Purchase method</b>
OOO Promyshlennaya Kompaniya Vestkon / Nordea Bank AB (publ)	Join Stock Company Nordea Bank	100	Russia	Purchase method
Join Stock Company Nordea Bank	Nordea Leasing LLC	100	Russia	Purchase method
<b>Nordea Bank AB (publ)</b>	<b>Nordea Hypotek AB (publ)</b>	<b>100</b>	<b>Sweden</b>	<b>Purchase method</b>
	Nordea Finans Sverige AB (publ)	100	Sweden	Purchase method
	Nordea Investment Management AB	100	Sweden	Purchase method
	BDB Bankernas Depå AB	20	Sweden	Equity method
	BAB Bankernas Automatbolag AB	20	Sweden	Equity method
	Getswish AB	20	Sweden	Equity method
	Nordea Funds Ltd	100	Finland	Purchase method



**Table A9 cont.**

	SIA Promano Lat	100	Latvia	Purchase method
	Promano LIT, UAB	100	Lithuania	Purchase method
	Promano Est Oü	100	Estonia	Purchase method
	SIA Realm	100	Latvia	Purchase method
	Nordea IT Polska Sp. z.o.o.	100	Poland	Purchase method
Nordea Investment Management AB	Nordea Investment Management North America Inc	100	USA	Purchase method
	Nordea Investment Management AG	100	Germany	Purchase method
Nordea Investment Funds S.A.	Nordea Funds Service Germany GmbH	100	Germany	Purchase method
Nordea Finans Sweden, Finland, Norway and Denmark	NF Techfleet AB	20	Sweden	Equity method
<b>Nordea Bank AB (publ) / Nordea Investment Management AB</b>	<b>Nordea Bank S.A.</b>	<b>100</b>	<b>Luxembourg</b>	<b>Purchase method</b>
Nordea Bank S.A.	Nordea Investment Funds S.A.	100	Luxembourg	Purchase method

**Entities not included in the consolidation**

Nordea Life Holding AB including related subsidiaries and participations	Matis	Privatmegleren AS
Agro & Ferm A/S	Myyrmäen Autopaikotus Oy	PWM Global PE III ApS
Automatia Pankkiautomaatit Oy	NF Fleet AB	Realia Holding Oy
Axcel IKU Invest A/S	Nordea Do Brasil Representações LTDA	Relacom Management AB
BAAS 2012 K/S	Nordea Ejendomsforvaltning A/S	Securus Oy
Bankomatcentralen AB	Nordea Ejendomsinvestering A/S	SIA Baltik Īpašums
City 10 K/S	Nordea Essendropsgate Eiendomsforvaltning AS	SIA Lidosta RE
Danbolig A/S	Nordea Funds Service Germany GmbH	SIA TRIOLETA
DT Finance K/S	Nordea Global Trade Services Limited	Siniheinä Kiinteistö Oy
E-nettet Holding A/S	Nordea Hästen Fastighetsförvaltning AB	Storfjordsambandet ASA
Fast Ab Herttonäs Billhus	Nordea Nordic Baltic 1 AB	Structured Finance Servicer A/S
First Card AS	Nordea Private Equity Holding A/S	Suomen Luotto-osuuskunta
Fleggaard Busleasing	Nordea Private Equity I A/S	Suomen Sviittiasunnot Oy
Haritun Huolto Oy	Nordea Private Equity II - EU Mezz A/S	Svenska e-fakturabolaget AB
Kaarenritva	Nordea Private Equity II - EU MM Buyout A/S	Swipp Holding APS
Kellokosken Tehtaat	Nordea Private Equity II - Global A/S	Sysisara Kiinteistö Oy
Kiinteistö Oy Tampereen Kirkkokatu 7	Nordea Private Equity III - GLOBAL A/S	Tide Leasing 2012 K/S
Koy Levytie 6	Nordea Putten Fastighetsförvaltning AB	UAB Recurso
Koy Raahen Tiiranpesä	Nordea Securities Holding (U.K.) Ltd	UL International ApS
Koy Tulppatie 7	Nordea Securities UK Ltd	UL Transfer Aps
Lanvin	Nordea Vallila Fastighetsförvaltning Ab	Upplýsningscentralen UC AB
LB12 K/S	Nordic Baltic Holding (NBH) AB	Uus-Sadama 11 OÜ
Liesikujan Autopaikat Oy	PK Properties Int'l Corp	
Mastonkulma Kiinteistö Oy	PMA-Yhtymä Oy	
	Porin Sokos Koy	

**Table A10 Risk disclosures location index**

	Capital and Risk Management report		Annual Report		Nordea.com <sup>1)</sup>
	Main document	Appendix	Board of Directors' report	Appendix	
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<b>End of year results</b>					
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Business segment results	p 5		p 8–20, p 30–32	G2	
Development of REA	p10, 17, 41	A6.2	p 43		
Development of Own funds	p11–12		p 44		
Capital ratios	p12	A2	p 44	G37	Interim disclosure
Leverage ratio	p12	A4.1–4.4		G37	
<b>Capital requirements parameters</b>					
Credit Risk	p 26–29	A6.1–6.4			
Counterparty Credit Risk	p 22				
Market Risk	p 40–42		p 38–39	G37	
Operational & Compliance Risk	p 48				
<b>Parameter validation</b>					
Credit Risk	p 31–32				
Market Risk	p 42				
<b>Frameworks</b>					
<b>Risk Governance &amp; Management</b>					
General	p 6–7		p 33, p 46–52		
Credit Risk	p 13–14		p 35		
Counterparty Credit Risk	p 22–23				
Market Risk	p 39		p 38–39		
Operational & Compliance Risk	p 46		p 40		
Liquidity Risk	p 51–52		p 41		
Life and pensions operations	p 57				
<b>Risk mitigation</b>					
Credit Risk	p 14, 26, 28		p 34		
Counterparty Credit Risk	p 23–24				
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<b>Capital management</b>					
Minimum capital and buffer requirements	p 9–10		p 42		Interim disclosure
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Capital policy	p 11				
ICAAP & Capital planning	p 62–66			G37	
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<b>Systematic importance indicators</b>					
					G-SIB
<b>Remuneration</b>					
			p 53–56	G7	Remuneration

1) Locate the disclosures at nordea.com by inserting the key word provided in the this table into the webpage search field.