

**Capital adequacy and risk management  
(pillar 3)  
Nordea Bank Norge Group**



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# 1. Introduction

In the beginning of 2007, the new Capital Requirements Directive (CRD) came into effect as the common framework for implementing the Basel II framework in EU. The CRD is built on three pillars:

- Pillar 1 – requirements for the calculation of the Risk Weighted Amounts (RWA) and capital requirement
- Pillar 2 – rules for the Supervisory Review Process (SRP), including the Internal Capital Adequacy Assessment Process (ICAAP)
- Pillar 3 – rules for the disclosure of risk and capital management, including capital adequacy

Basel II is an international initiative with the purpose to implement a more risk sensitive framework for the assessment of risk for the calculation of regulatory capital, i.e. the minimum capital that the institution must hold. The intention is also to align the actual assessment of risk within the institutions with the assessment of the regulatory capital by allowing use of internal models. The CRD contains a detailed set of minimum requirements to assure the conceptual soundness and integrity of the internal assessment. The CRD will have a stepwise effect on the institutions through the transitional rules limiting the possible reduction of capital requirement. The full effect will occur after the transition rules period (January 2010).

## 1.1 Pillar 1

The new CRD is not changing the minimum required capital ratio of 8% compared to the previous regulation (Basel I). The changes are related to the definition and calculations of the RWA, which is the method used to measure the risk exposure of the reporting institution. The regulatory capital requirements are calculated using the following formula:

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$$\text{Minimum capital requirements} = \text{Capital base} / \text{RWA}$$

where,

$$\text{Minimum capital requirements} \geq 8\%$$


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The RWAs are calculated by using more sophisticated and risk sensitive methods than previously. Credit risk and market risk are two essential risk types like in Basel I, while operational risk is introduced as a new risk type in the CRD. The table 1 identifies the approaches available for calculating RWA in each risk type in accordance with the CRD:

**Table 1: Primary approaches in the CRD**

Approaches for reporting capital requirements		
Credit Risk	Market Risk	Operational Risk
(1) Standardised Approach	(1) Standardised Approach	(1) Basic Indicator Approach
(2) Foundation Internal Rating Based Approach (FIRB)	(2) Internal Models Approach	(2) Standardised Approach
(3) Advanced Internal Rating Based Approach (AIRB)		(3) Advanced Measurement Approach

Nordea is using both the standardised approach and the Foundation Internal Rating Based approach (FIRB) for calculation of credit risk. The standardised approach for calculating credit risk is close to the previous Basel I regulation, except an additional possibility to use external rating for the counterparties and wider use of financial collaterals. The RWA is set by multiplying the exposure with a risk weight factor dependent on the external rating and exposure class. Credit risk according to the Foundation Internal Rating Based approach (FIRB) is based on the internal rating and Probability of Default (PD) for each counterpart and fixed

estimates for Loss Given Default (LGD) and Credit Conversion Factors (CCF). For market risk, Nordea is using both the internal model approach, in which VaR models are applied, and the standardised approach. Nordea is using the standardised approach for operational risk.

In order to prevent large short-term effects on capital requirements, the regulators have introduced transitions rules (also known as capital floor) for all institutions implementing the new capital adequacy reporting. The transitional rules, in force 2007-2009, mark the lowest eligible capital base and relate directly to the capital requirements calculated under Basel I regulations. During 2007 the capital requirements should be no less than 95% of the capital requirements calculated under Basel I regulations. For 2008 and 2009 the amounts of capital requirements are allowed to be 90% and 80% respectively of the capital requirements calculated under Basel I regulations.

## 1.2 Pillar 2

Pillar 2, or the Supervisory Review Process (SRP), comprises two processes:

- the Internal Capital Adequacy Assessment Process (ICAAP) and
- the Supervisory Review and Evaluation Process (SREP).

The SRP is designed to ensure that institutions identify their material risk and allocate adequate capital, and employ sufficient management processes, to support such risk. The SRP also encourages institutions to develop and use better risk management techniques in monitoring and measuring risk in addition to the credit, market and operational risk in the CRD. The ICAAP allows banks to review their risk management policies and capital positions relative to the risk they undertake. Nordea builds its ICAAP around its Economic Capital framework to ensure that the institution has sufficient available capital to meet regulatory and internal capital requirements, even during periods of economic or financial stress. The ICAAP includes all components of Nordea's risk management, from daily risk management of material risk to the more strategic capital management of the entire Group and its legal entities. The SREP is the supervisor's review of Nordea's capital management and an assessment of Nordea's internal controls and governance.

Other risk types, which are not covered by the minimum capital requirements according to pillar 1, are liquidity risk, business risk, interest rate risk in the non-trading book and concentration risk. These are covered either by capital or risk management and mitigation processes under pillar 2.

## 1.3 Pillar 3

Pillar 3 sets the rules for the disclosure of capital and risk management. The Nordea Bank Norge ASA Group follows the Norwegian Financial Supervisory Authority's regulations on Capital Adequacy and the guidance Rundskriv 27/2007 on disclosure of financial information according to the regulations on capital adequacy, which are based on the CRD. Furthermore, the disclosures are made in accordance with Nordea's internal policy and instructions for disclosing information on capital adequacy in the Nordea Group.

In this report, Nordea discloses a description of the different risk types in its balance sheet as well as off-balance sheet risk and the management of the risk and capital in accordance with the pillar 3 rules. The presentation follows the structure below:

- Description of the Group structure and overall risk and capital management
- Regulatory capital requirements
- Credit risk, including exposure, RWA calculations, and loan losses
- Market risk
- Operational risk
- Off-balance, including risk in derivatives and securitisation
- Internal capital, including other risk types

- Capital adequacy conclusions, including a description of the capital base

Further details and disclosure of risk, liquidity and capital management are presented in the annual report in accordance with the international financial reporting standards, IFRS.

The pillar 3 disclosure is made for the Nordea Group and for the subgroups Nordea Bank Danmark Group, Nordea Bank Finland Group and Nordea Bank Norge Group as well as Nordea Bank Polska S.A. This report for the Nordea Bank Norge Group is presented on [www.nordea.com](http://www.nordea.com) and the key data on capital adequacy is presented in the annual report of the entity.

The full pillar 3 disclosure will be made annually and the periodic information will be published quarterly, included in the quarterly report for the entity. The format, frequency and content of the disclosures follow, to as large extent as possible with regards to the local legislation, a common setup in Nordea Group. Group Corporate Centre has stated the common principles in a policy and instructions for disclosing information on capital adequacy in the Nordea Group.

In this report, Nordea Bank Norge Group is defined as Nordea.

## 2. Risk and capital management in Nordea

In this chapter, the consolidation principles for the capital base within Nordea are described as well as the principles for management and control of risk and capital.

### 2.1 Nordea in the capital adequacy context

The financial statements are published quarterly and the consolidated financial statements include the accounts of the parent company Nordea Bank Norge ASA, with corporate registration number 911044110, and subsidiaries according to IAS 27. According to the requirements in the CRD, insurance companies and associated undertakings with financial operations are deducted from the capital base in the capital adequacy reporting (e.g. credit institutions or insurance companies where Nordea own 10% or more of the capital). However, due to requirements under Forskrift nr 121 om anvendelse av soliditetsregler på konsolidert basis m.v. datert 31.01. 2007, holdings in Eksportfinans ASA (Nordea holds 23% of voting power) are included in RWA and capital base with a proportional part. This is valid only in Nordea Bank Norge and is not included in the capital requirements of Nordea Group. Table 2 includes information of what undertakings that have been consolidated and deducted from the capital base.

**Table 2**  
**Specification over group undertakings consolidated/deducted from the Nordea Financial Group**

31 Dec 2007	Number of shares	Book value EURm	Voting power of holding %	Consolidation Domicile method
<i>Group undertakings included in the capital base</i>				
Norgeskreditt AS	15,336,269	255	100.0	Oslo purchase method
Nordea Finans Norge AS	63,000	16	100.0	Oslo purchase method
Christiania Forsikring AS	172,560	3	100.0	Oslo purchase method
Privatmeglerne AS	804	6	67.0	Oslo purchase method
Other companies		0		purchase method
<b>Total included in the capital base</b>		<b>280</b>		
<i>Investments in credit institutions deducted from the capital base</i>				
Viking Finance Company		2	13.5	Oslo
Other		1		
<b>Total investments in credit institutions deducted from the capital base</b>		<b>3</b>		

### 2.2 Risk and capital management

Nordea aims for overall balanced risk taking in order to enhance shareholder value. The Board of Directors of Nordea Group has the ultimate responsibility for deciding on limits for and monitoring the Nordea Group's risk exposure. The Board of Directors also has ultimate responsibility for setting the targets for the capital ratios in the Nordea Group. Risk in Nordea Group is measured and reported according to common principles and policies approved by the relevant Boards of Directors in the Nordea Group. The Boards of Directors decides on policies for credit, market, liquidity and operational risk management as well as the internal capital adequacy assessment process for the Nordea Group. All policies are reviewed at least annually.

#### *Roles and responsibilities*

Management of risk and capital is primarily done through the operating model to capture the risk in the most efficient and appropriate way. The two functions, Group Credit and Risk Control and Group Corporate Centre have the responsibility to develop, manage, monitoring and report risk and capital.

The Group Chief Risk Officer (CRO) is responsible for the credit, market, operational and liquidity risk management framework, for the development, validation and monitoring of the rating systems, the credit policy and strategy, the credit instructions as well as the credit approval process and credit control processes.

The Group Chief Financial Officer (CFO) is responsible for the capital planning process including capital adequacy reporting, Economic Capital and parameter estimation (i.e. Probability of Default and Loss Given Default) used for the calculation of RWA. The CFO is further responsible for liquidity and balance sheet management.

The Group Chief Executive Officer (CEO) and Group Executive Management (GEM) regularly review reports on risk exposures and have established the following committees for risk and capital management:

- The Asset and Liability Committee (ALCO), chaired by the CFO, prepares issues of major importance concerning the Group's financial operations, financial risk as well as capital management for decision by CEO in GEM.
- Capital Planning Forum, chaired by the CFO, monitors the development of the required (internal and regulatory) capital, the capital base and decides also upon capital planning activities.
- The Risk Committee, chaired by the CRO, monitors developments of risk on aggregated level. The CRO is also head of Group Credit and Risk Control.
- The Executive Credit Committee (ECC) and the Group Credit Committee (GCC), chaired by the CRO, decide on major credit risk limits and industry policies for the Group. Credit risk limits are granted as individual limits for customers or consolidated customer groups and as industry limits for certain defined industries.

Other credit risk limits, which are not decided by the ECC or the GCC, are determined by decision-making authorities on different levels in the organisation.

The Board of Directors and the Executive Management of Nordea Bank Norge is responsible for monitoring the activities of the various risk committees as they apply to Nordea Bank Norge and its subsidiaries.

### **2.2.1 Different risk types**

There are different risk types which are described more in detail below in accordance with how they are structured within CRD.

#### *Risk in pillar 1*

In pillar 1, which forms the base for the capital requirement, there are three risk types: credit, market and operational risk.

- Credit risk is the risk of loss if counterparts of Nordea fail to fulfil their agreed obligations and that the pledged collateral does not cover Nordea's claims. The credit risk in Nordea arises mainly from various forms of lending but also from guarantees and documentary credits, such as letters of credit. Furthermore, credit risk includes counterparty risk which is the risk that Nordea's counterpart in a foreign exchange, interest rate, commodity, equity or credit derivative contract defaults prior to maturity of the contract and Nordea at that time has a claim on the counterpart. In Nordea, quantification of credit risk was initially developed in Nordea as part of the Economic Capital framework. The measurement of credit risk is based on the parameters; PD, LGD and CCF.
- Market risk is the risk of loss in the market value of portfolios and financial instruments, also known as market price risk, as a result of movements in financial market variables. The market price risk exposure in Nordea relates primarily to interest rates and equity prices and to a lesser degree to foreign exchange rates and commodity

prices. For all other activities, the basic principle is that market risk is eliminated by matching assets, liabilities and off-balance sheet items. Nordea uses Value at Risk model (VaR model) for calculating RWA for general market risk for equities, interest rates and foreign exchange in the trading books, while the standardised approach is used for calculating specific risk for the market risk capital requirements.

- Operational risk is defined as the risk of direct or indirect loss, or damaged reputation resulting from inadequate or failed internal processes, from people and systems, or from external events. Legal and compliance risk as well as crime risk, project risk and process risk, including IT risk, constitute the main sub-categories to operational risk.

### *Risk in pillar 2*

In pillar 2 other risk types are measured and assessed. Nordea manages and measures these risk types although they are not included in the calculation of the minimum capital requirements. In Nordea's calculation of internal capital (Economic Capital) most of the pillar 2 risk is included. Examples of pillar 2 risk types are liquidity risk, business risk, interest rate risk in the non-trading book and concentration 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. The liquidity risk management focuses on both short-term liquidity risk and long-term structural liquidity risk. Nordea's liquidity risk management includes a business continuity plan and stress testing for liquidity management. In order to measure the exposure, a number of liquidity risk measures have been developed.
- Business risk represents the earnings volatility inherent in all business due to the uncertainty of revenues and costs due to changes in the economic and competitive environment. Business risk is calculated based on the observed volatility in historical profit and loss that is attributed to business risk.
- Interest rate risk in the non-trading book consists of exposures deriving from the balance sheet (mainly lending to public and deposits from public). The interest rate risk inherent in the non-trading book is measured in several ways on a daily basis and in accordance with the Financial Supervisory Authorities' requirements.
- The market risk in Nordea's investment portfolios includes equity, interest rate, and foreign exchange risk and is included as market risk in Nordea's EC framework.
- Pension risk is included in market risk EC and includes equity, interest rate and foreign exchange risk in Nordea's internally-defined pension plans.
- Real estate risk consists of Nordea's exposure to owned and leased properties and is included in Nordea's market risk EC.
- Concentration risk is 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. Concentration risk is captured in Nordea's EC framework through the use of a credit risk portfolio model which considers industry, geography and single-name concentrations in the credit portfolio.

### **2.2.2 Monitoring and reporting**

The control environment in Nordea is based on the principles of independence and separation of duties. Monitoring and reporting of risk is conducted on a daily basis for market and liquidity risk, on a monthly or quarterly basis for credit risk and on a quarterly basis for operational risk.

Risk reporting is regularly made to Group Executive Management and to the relevant Board of Directors in the Nordea Group. The Board of Directors receives internal risk reporting which covers both market, credit and liquidity risk per main legal entity. Within the credit risk reporting different aspects such as credit migration, current probability of default and stress testing are included.



The internal capital reporting includes all types of risk and is distributed regularly to the Capital Planning Forum.

### 3. Regulatory capital requirements (pillar 1)

This chapter describes the regulatory capital requirements in Nordea. The risk types included are based on pillar 1 in the CRD and contain credit risk, market risk and operational risk.

In table 3, an overview of the capital requirements and the RWA as of December 2007 divided on the different risk types is presented. The credit risk comprises 93% of the risk in Nordea. Operational risk accounts for 5% of the capital requirements and market risk comprises 2% of the capital requirements. The low capital requirement for market risk is positively effected by the fact that Nordea has received approval by the Financial Supervisory Authorities to use the internal models approach for market risk.

The table also includes information about the approach used for calculation of the capital requirements. Out of the total capital requirements for credit risk, 61% of the exposures have been calculated with the IRB approach, 39% with the standardised approach.

Furthermore in table 3, the capital requirements for credit risk, market risk and operational risk are adjusted with EUR 877m due to the transition rules (known as the capital floor). In 2007, the capital requirements could not be lower than 95% of the capital requirements calculated under Basel I regulations. The corresponding floors for 2008 and 2009 are 90% and 80% respectively.

**Table 3**  
**Capital requirements and RWA, 31 December 2007**

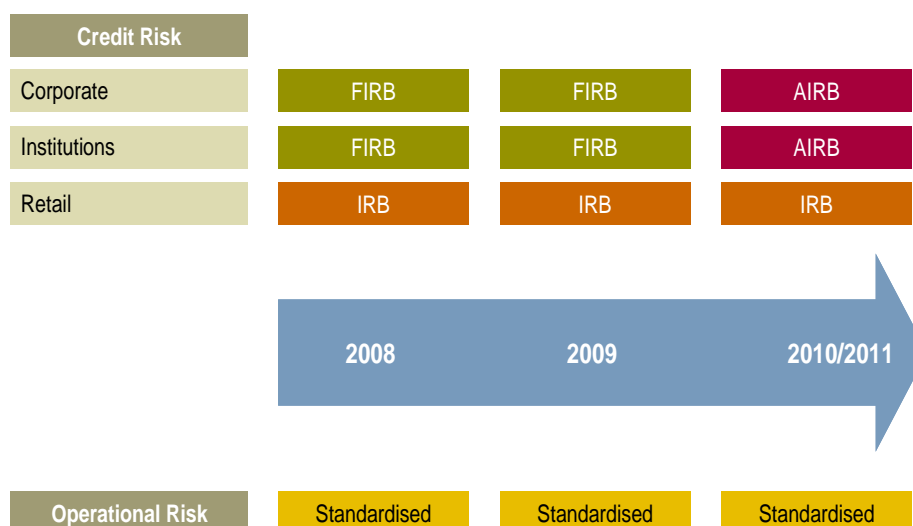
EURm	2007	
	Capital requirement	Basel II RWA
<b>Credit risk</b>	<b>2,255</b>	<b>28,181</b>
IRB foundation	1,375	17,185
of which corporate	1,297	16,204
of which institutions	69	867
of which other	9	114
Standardised	880	10,996
of which retail	651	8,123
of which sovereign	3	44
of which other <sup>1</sup>	226	2,829
Basel I reporting entities	-	-
<b>Market risk</b>	<b>52</b>	<b>655</b>
of which trading book, VaR	8	101
of which trading book, non-VaR	44	553
of which FX, non-VaR	0	1
<b>Operational risk</b>	<b>125</b>	<b>1,557</b>
Standardised	125	1,557
<b>Sub total</b>	<b>2,432</b>	<b>30,393</b>
<b>Adjustment for transition rules</b>		
Additional capital requirement according to transition rules	877	10,968
<b>Total</b>	<b>3,309</b>	<b>41,361</b>

<sup>1</sup> includes associated companies with EUR 94m in capital requirements

### 3.1 Capital requirements for credit risk

In June 2007, Nordea received approval by the Financial Supervisory Authorities to use FIRB approach for corporate and institution portfolios except for foreign branches and subsidiaries. Nordea aims to gradually implement the IRB approach for the retail portfolio and other portfolios before end 2009, see figure 1. The standardised approach will continue to be used for smaller portfolios and new portfolios for which approved internal models are not yet in place.

Figure 1: Roll out plan



#### 3.1.1 Capital requirements by exposure class

In the IRB and the standardised approaches, the regulatory capital requirements for credit risk are calculated using the following formula:

---


$$\text{Capital requirements} = \text{RWA} * 8\%$$

where,

$$\text{RWA} = \text{Risk weight} * \text{EAD}$$


---

In table 4, the exposure, Exposure at Default (EAD), average risk weight percentage (RW%), RWA and capital requirement, are distributed by exposure class, which serves as the basis for the reporting of capital requirements. There are seven exposure classes for the IRB approach and fifteen classes for the standardised approach. In this report the IRB exposure classes that Nordea has been approved for are presented. For the remaining portfolios the standardised approach exposure classes are used. Nordea has chosen to merge some exposure classes due to low exposures in these classes and to make the information easier to read. In table 4, sovereign exposures are split mainly into two exposure classes, central government/central banks and regional governments/local authorities. Retail exposures are split into two exposures classes, retail and exposures secured by real estates.

The definitions of exposure classes in the standardised approach differ from the classification in accordance with the IRB approach. Some exposure classes are derived from the type of counterparty while others are based on the asset type, product type, collateral type or exposure size. The exposure value of an on-balance sheet exposure in the IRB approach is measured gross of value adjustments such as provisioning. The exposure at default (EAD) for the on-balance sheet items, derivative contracts and securities financing transactions is 100% of the original exposure. Off-balance sheet exposures are converted into EAD using credit conversion factors (CCF). For further details, see chapter 4.

The risk weight is calculated as RWA divided by EAD for IRB exposures. For exposures in the standardised approach, the risk weight is given by the Financial Supervisory Authorities.

For details of calculation of RWA, see chapter 4.3. The principles for the calculation of RWA for credit risk differ between the exposure classes.

**Table 4**  
**Capital requirement for credit risk, 31 December 2007**

EURm	Exposure	EAD	Average risk weight	RWA	Capital requirement
<b>IRB exposure classes</b>					
Institutions	4,185	4,047	21%	867	69
Corporate	34,280	30,845	53%	16,204	1,297
Other non-credit obligation assets	214	114	100%	114	9
<b>Total IRB approach</b>	<b>38,679</b>	<b>35,006</b>	<b>49%</b>	<b>17,185</b>	<b>1,375</b>
<b>Standardised exposure classes</b>					
Central government and central banks	1,968	1,912	0%	0	0
Regional governments and local authorities	412	218	20%	44	3
Retail	4,264	3,014	75%	2,260	182
Exposures secured by real estates	18,265	16,749	35%	5,863	469
Other <sup>1</sup>	8,512	8,384	34%	2,829	226
<b>Total standardised approach</b>	<b>33,421</b>	<b>30,277</b>	<b>36%</b>	<b>10,996</b>	<b>880</b>
Basel I reporting entities	-	-	-	-	-
<b>Total</b>	<b>72,100</b>	<b>65,283</b>	<b>43%</b>	<b>28,181</b>	<b>2,255</b>

<sup>1</sup> Administrative bodies and non-commercial undertakings, multilateral development banks, institutions standardised, corporate standardised, past due items, short-term claims, covered bonds, and other items

## 3.2 Capital requirements for market risk

Nordea uses its own internal Value-at-Risk (VaR) model to calculate capital requirements for large parts of the trading book (operationally defined as positions in Nordea Markets). The model covers interest rate risk, equity risk and foreign exchange risk (see chapter 5).

The VaR model is based on the empirical behaviour of market variables and takes into account the diversification effect of the various types of risks. In Nordea's opinion, the VaR model therefore gives a more accurate picture of the risk in the trading book than the fixed risk weight in the standardised approach in the CRD, which nevertheless remains the basis for calculating capital adequacy for part of the portfolio ('non-VaR' in table 5).

As seen in table 5, the largest contribution to the non-VaR capital requirement is interest rate risk. More precisely, it is related to specific interest rate risk for positions not covered by the internal VaR model (see chapter 5).

The main part of the market risk required capital presented in table 5 is related to business in Nordea Markets. Of the EUR 655m in market risk RWA, approximately EUR 654m covers Nordea Markets as only EUR 1m includes FX risk in the banking book.

The capital requirement for FX risk in the banking book is calculated using the standardised approach and is available in table 5.

**Table 5**  
**Capital requirements for market risk, 31 December 2007**

EURm	Trading book, VaR		Trading book, non-VaR		Banking book, non-VaR		Total	
	RWA	Capital requirement	RWA	Capital requirement	RWA	Capital requirement	RWA	Capital requirement
Interest rate risk	75	6	523	42			598	48
Equity risk	63	5	30	2			93	7
Foreign exchange risk	0	0			1	0	1	0
Commodity risk			0	0			0	0
Diversification effect	-37	-3					-37	-3
<b>Total</b>	<b>101</b>	<b>8</b>	<b>553</b>	<b>44</b>	<b>1</b>	<b>0</b>	<b>655</b>	<b>52</b>

### 3.3 Capital requirements for operational risk

The capital requirement for operational risk is in Nordea calculated according to the standardised approach, in which all of the institution's activities are divided into eight standardised business lines: corporate finance, trading & sales, retail banking, commercial banking, payment & settlement, agency services, asset management and retail brokerage.

The total capital requirement for operational risk is calculated as the sum of the capital requirements for each of the business lines for each entity. The risk for each business line is the beta coefficient multiplied by gross income. The beta coefficients differ between business lines and are in the range of 12% to 18%.

The capital requirement for operational risk amounts to EUR 125m.

## 4. Credit risk (pillar 1)

In this chapter, the credit risk and its components are described with respect to:

- The exposure classes used in the calculations of RWA and capital requirement are defined and explained.
- The information about exposures is disclosed and presented from several aspects, split by exposure classes, geography and industry.
- The approaches and methods used in the RWA calculations are presented including information about credit risk mitigation and Nordea's internal rating system.
- The information about impaired loans and loan losses is disclosed.

### 4.1 Exposure classes

Nordea has a diversified credit portfolio, which can be divided into the exposure classes defined by the CRD. The basis for calculation of the EAD in the RWA formula is the division of exposure classes. Nordea has received approval to use the FIRB approach for the exposure classes: institution, corporate and other non-credit obligation assets. For the remaining exposure classes Nordea used the standardised approach in 2007.

#### 4.1.1 *FIRB exposure classes*

##### *Institutions exposures*

Exposures to credit institutions and investment firms are classified as exposures to institutions. In addition, exposures to regional governments, local authorities and multilateral development banks are classified as exposures to institutions if they are not treated as exposures to sovereigns<sup>1</sup> according to regulations issued by the authorities.

##### *Corporate exposures*

Exposures that are not assigned to any of the other exposure classes are classified as corporate exposures. The corporate exposure class contains exposures that are rated in accordance to Nordea's internal guidelines.

##### *Other non-credit obligation assets*

Assets that do not require any performance from any counterparty are classified as non credit-obligation assets.

#### 4.1.2 *Standardised exposure classes*

##### *Central governments and central banks*

Exposures to central governments and central banks are, subject to national discretion, treated with low risk if the counterparty is within European Economic Area (EEA) member states.

##### *Regional governments and local authorities*

Exposures to regional governments and local authorities are included in this exposure class.

##### *Retail exposures*

Exposures to small and medium sized entities and to private individuals are included in the retail exposure class and defined in accordance to Nordea's internal guidelines for scoring.

<sup>1</sup> Sovereigns include central governments, central banks, regional governments, local authorities and other public sector entities.

### *Exposures secured by real estate*

Exposures that are secured by mortgages on residential real estate are included in this exposure class. National options exist for commercial real estates, which result in that the risk weights differ between the Nordic countries.

### *Other*

- Exposures to administrative bodies and non-commercial undertakings, multilateral development banks, international organisations, institutions and corporate.
- Past due items. Items that are past due for more than 90 days.
- Short-term claims. Short-term exposures to institutions and corporate for which a short-term credit assessment by a nominated rating agency is available, are assigned a risk weight in accordance with a six step mapping scale made by the Financial Supervisory Authorities.
- Other items:
  1. Tangible assets, prepayments and accrued income where no counterpart can be determined, holding of equity etc
  2. Cash and gold
  3. Asset sale, repurchase agreements and outright forward purchases

### *Securitisations*

Nordea has not securitised assets from its ordinary lending portfolio (banking book). For details about securitisation activities in Nordea, see chapter 7.

## **4.2 Information about exposure**

The credit risk exposure presented in this report differs in some areas from the credit risk exposure in Nordea's financial reporting in the annual report.

The credit risk exposure in the pillar 3 reporting is distributed by exposure class, where each exposure class is distributed into the following different exposure types:

- On-balance sheet items
- Off-balance sheet items (e g guarantees and unutilised amounts of credit facilities)
- Securities financing (e g repurchase agreements)
- Derivative contracts

In Nordea's external financial reporting in the annual report, the credit risk exposure includes:

- On-balance sheet items: loans and receivables to credit institutions and loans and receivables to the public (e g reversed repurchase agreements)
- Off-balance sheet items (e g guarantees and unutilised amounts of credit facilities)
- Counterparty risk in derivative contracts
- Credit risk in treasury bills and interest-bearing securities

The main differences and the effect on comparisons between the exposures are:

- The exposure distributions by industry and by geography are in the pillar 3 reporting presented for the entire credit exposure, whereas in the financial reporting, these distributions are presented for loans and receivables to the public (lending), being the main part of the on-balance-sheet exposure.
- Treasury bills and interest-bearing securities are in the pillar 3 reporting partly included in the RWAs for market risk, whereas in the financial reporting, these are included in the credit risk exposure.
- Reversed repurchase agreements are in the pillar 3 reporting included as a separate exposure type, whereas in the financial reporting, these are included in the on-balance-sheet item loans and receivables to the public (corporate/institutions).

- Loans and receivables to the public (corporate) in the financial reporting consist of the on-balance-sheet exposure in both the corporate exposure class and a smaller part of the retail exposure class (non-rated SMEs) in the pillar 3 reporting.
- Equity holdings related to insurance operations are included in the annual report, but not in the pillar 3 reporting since the insurance operations are deducted from the capital base.
- Intangible assets and deferred taxes are deducted from the capital base and therefore not included in the RWA calculations. In the financial reporting these items are included in the balance sheet.

#### 4.2.1 Information about exposure type by exposure class

In table 6, the exposures are split by exposure classes and exposure types as of December 2007. The table is split between exposure classes subject to the FIRB approach and exposure classes subject to the standardised approach.

**Table 6**  
Exposure classes split by exposure type, 31 December 2007

EURm	On-balance sheet items	Off-balance sheet items	Securities financing	Derivatives	Total exposure
<b>IRB exposure classes</b>					
Institutions	3,576	502	6	101	4,185
Corporate	22,689	11,458	128	5	34,280
Other non-credit obligation assets	214	0			214
<b>Total IRB approach</b>	<b>26,479</b>	<b>11,960</b>	<b>134</b>	<b>106</b>	<b>38,679</b>
<b>Standardised exposure classes</b>					
Central governments and central banks	1,886	82		0	1,968
Regional governments and local authorities	135	277			412
Retail	2,964	1,298		2	4,264
Exposures secured by real estates	16,742	1,523			18,265
Other <sup>1</sup>	7,807	592		113	8,512
<b>Total standardised approach</b>	<b>29,534</b>	<b>3,772</b>	<b>0</b>	<b>115</b>	<b>33,421</b>

<sup>1</sup> Administrative bodies and non-commercial undertakings, multilateral development banks, institutions standardised, corporate standardised, past due items, short term claims, covered bonds, and other items

In table 7, the exposures are presented as an average during the previous time period. In comparison to table 6, the average exposure during 2007 is lower than the exposure at year end 2007.

**Table 7**  
Exposure classes split by exposure type, Average exposure<sup>2</sup> during 2007

EURm	On-balance sheet items	Off-balance sheet items	Securities financing	Derivatives	Total exposure
<b>IRB exposure classes</b>					
Institutions	3,963	371	7	189	4,530
Corporate	22,565	10,489	163	20	33,237
Other non-credit obligation assets	135	2		8	145
<b>Total IRB approach</b>	<b>26,663</b>	<b>10,862</b>	<b>170</b>	<b>217</b>	<b>37,912</b>
<b>Standardised exposure classes</b>					
Central governments and central banks	643	52		0	695
Regional governments and local authorities	168	221			389
Retail	3,976	1,114		2	5,092
Exposures secured by real estates	15,911	904			16,815
Other <sup>1</sup>	5,090	385	13	151	5,639
<b>Total standardised approach</b>	<b>25,788</b>	<b>2,676</b>	<b>13</b>	<b>153</b>	<b>28,630</b>

<sup>1</sup> Administrative bodies and non-commercial undertakings, multilateral development banks, institutions standardised, corporate standardised, past due items, short term claims, covered bonds, and other items

<sup>2</sup> The exposures are calculated based on the average for period end of each quarter. Nordea started reporting in Q2 2007 and the average exposures are based on data from Q2, Q3 and Q4



#### 4.2.2 Information about exposure by geography (per exposure class)

In table 8, the exposures are split by main geographical areas and exposure classes based on where the credit risk is referable.

**Table 8**  
**Exposure split by geography and exposure classes, 31 December 2007**

EURm	Institutions	Corporate	Central governments and central banks	Regional governments and local authorities	Retail	Exposures secured by real estates	Other <sup>1</sup>	Basel I reporting entities
Nordic countries	4,185	34,280	1,968	412	4,264	18,265	7,699	0
of which Denmark	0	0	0	0	0	0	0	0
of which Finland	0	0	0	0	0	0	0	0
of which Norway	4,185	34,280	1,968	412	4,264	18,265	7,699	0
of which Sweden	0	0	0	0	0	0	0	0
Baltic countries	0	0	0	0	0	0	0	0
Poland	0	0	0	0	0	0	0	0
Russia	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	1,027	0
<b>Total exposure</b>	<b>4,185</b>	<b>34,280</b>	<b>1,968</b>	<b>412</b>	<b>4,264</b>	<b>18,265</b>	<b>8,726</b>	<b>0</b>

<sup>1</sup> Administrative bodies and non-commercial undertakings, multilateral development banks, institutions standardised, corporate standardised, past due items, short term claims, covered bonds, and other items. From F IRB other non-credit obligation assets.

#### 4.2.3 Information about exposure by industry

In table 9, the exposures are split by important industry groups, based on NACE codes, for the corporate exposure class. The main exposures in the corporate portfolio relate to Real Estate management and investment, Shipping and offshore and Industrial commercial services. These industries comprise 64% of the total exposure for the portfolio. The Real Estate management and investment portfolio is the largest industry in Nordea's lending portfolio with EUR 9,542 m.

**Table 9**  
**Corporate exposure split by industry group, 31 December 2007**

EURm	Exposure
Construction and engineering	797
Consumer durables (cars, appliances etc)	552
Consumer staples (food, agriculture etc)	1,827
Energy (oil, gas etc)	936
Health care and pharmaceuticals	163
Industrial capital goods	468
Industrial commercial services	8,357
IT software, hardware and services	102
Media and leisure	795
Metals and mining materials	67
Paper and forest materials	276
Real estate management and investment	9,542
Retail trade	1,699
Shipping and offshore	4,151
Telecommunication equipment	14
Telecommunication operators	259
Transportation	884
Utilities (distribution and production)	1,524
Other financial companies	0
Other materials (chemical, building materials etc)	545
Other, public and organisations	66
Other	1,256
<b>Total exposure</b>	<b>34,280</b>

#### 4.2.4 Information about exposure by maturity

Maturity (M) is in Nordea set to standard values in the RWA calculation formula based on the estimates set by the Financial Supervisory Authorities. The M parameter is set to 2.5 years for the exposure types on balance, off-balance and derivatives. For the exposure type securities financing transactions the M parameter is set to 0.5 years.

#### 4.2.5 Information about equity holdings

In the exposure class other items, Nordea's equity holdings outside the trading book are included.

In table 10, the exposure of Nordea's equity holdings outside the trading book are shown in groups based on the intention of the holding. In the Investment portfolio holdings in private equity funds are included with EUR 0m. Book value equals fair value for all the equities shown in the table. The evidence of published price quotations in an active market is the best evidence of fair value and when they exist they are used to measure financial assets and financial liabilities. Nordea predominantly uses published quotations to establish fair value for shares.

**Table 10**  
Equity holding outside trading book, 31 December 2007

EURm	Book value	Fair value	Fair value of listed shares	Quoted share value	Unrealized gains/loss	Realized gains/losses period YTD	Capital requirement
Investment portfolio	13	13	-	-	-	-	1
Other	7	7	-	-	-	-	1
<b>Total</b>	<b>20</b>	<b>20</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>

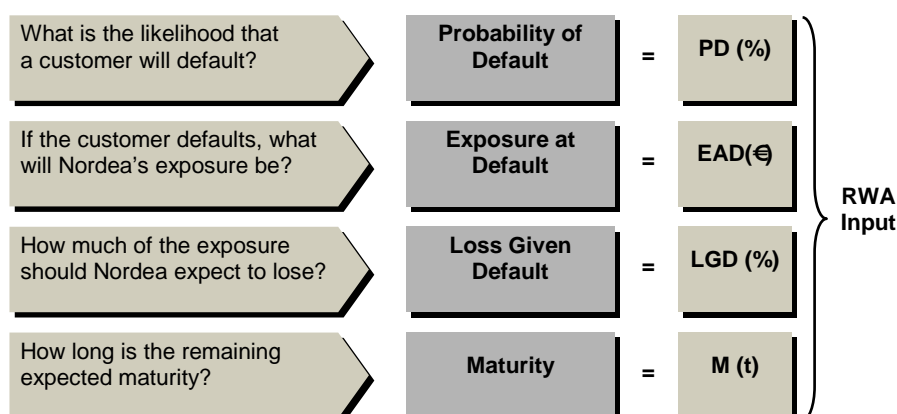
### 4.3 Calculation of RWA

The RWA calculations in Nordea differ between the exposure classes depending on the approach Nordea uses. Nordea is an IRB institution, meaning that it has received approvals to calculate the credit risk by using the IRB approach. However, during the roll-out time the standardised approach are used not only for the sovereign and retail portfolios but also for some other portfolios. The following section describes the principles for calculating RWA with the FIRB and the standardised approach respectively.

#### 4.3.1 Calculation of RWA with the FIRB approach

The FIRB approach measures credit risk using sophisticated formulas with internal input of Probability of Defaults (PD) and inputs fixed by Financial Supervisory Authorities for Loss Given Default (LGD), Exposure at Default (EAD) and Maturity (M). The parameters are illustrated in figure 2:

**Figure 2: Key parameters in the RWA calculation**



In the following section, the parameter PD and the rating system, which is closely linked to the estimation of PD, are described in more detail.

### Rating system

The internal rating system comprises all of the methods, models, processes, controls, data collection and IT systems that support the assignment of ratings to corporate customers, bank counterparts as well as sovereigns<sup>2</sup>, and the quantification of the PD estimates. The control environment in Nordea is based on the principles of separation of duties and independence. The control mechanism for models and methods are applied both to estimation and validation activities. Procedures are documented and regularly reviewed. Group Internal Audit reviews the validation yearly.

The rating system is used as an integrated part of the risk management and decision making process in Nordea and is therefore used for more purposes than calculating RWA. The ratings, for instance, and the associated PDs are central in:

- the credit approval process
- calculation of Economic Capital and Expected Loss (EL)
- monitoring and reporting of credit risk
- performance measurement using the economic profit framework

A rating is an estimate that exclusively reflects the quantification of the repayment capacity of the customer, i.e. the risk of customer default. The rating scale in Nordea consists of 18 grades from 6+ to 1- for non-defaulted customers and 3 grades from 0+ to 0- for defaulted customers. Grades 2+ to 1- are considered as weak, and require special attention.

The repayment capacity of each grade is quantified by the one-year PD. For each grade, the long-term average actual default frequency (ADF), which is defined as the number of customers that defaulted during a defined period divided by the number of customers that could have defaulted during the same period, is used for the assignment of PD. The default definition used for the estimation of PD is in accordance with the CRD definition. The PDs should reflect the long term average ADF, but since the number of years of available internal data still is limited, a margin is added. This margin adjusts for that the available time is captured during a benign economic cycle and that the number of observations are limited.

In table 11, the exposure is distributed on a condensed rating scale, where the 18 rating grades are grouped three by three and condensed to 6 grades. The PD and the average risk weight are exposure weighted. The risk weight is a function of PD and the lower the PD the lower the risk weight. In the table 11, the average risk weight is weighted by EAD. Approximately 99.8% of institution exposure and 80% of the corporate exposures are in the three highest rating grades. Exposures categorised as being in default and non-obligation assets are not included in the figures in the table.

**Table 11**  
**Exposure split by rating grade, 31 December 2007**

EURm	Institution			Corporate		
	Average weighted PD	Exposure	Average risk weight	Average weighted PD	Exposure	Average risk weight
6	0.03%	3,005	16%	0.04%	994	15%
5	0.10%	939	30%	0.11%	9,136	30%
4	0.21%	205	44%	0.35%	16,905	52%
3	1.24%	7	101%	1.16%	6,565	82%
2	5.23%	0	158%	4.48%	178	124%
1	12.43%	0	219%	15.87%	26	202%

Ratings are normally assigned in conjunction with credit proposals or at the annual review of the customers, and approved by the credit committees. The consistency and transparency of

<sup>2</sup> Sovereigns include central governments, central banks, regional governments, local authorities and other public sector entities.

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 a customers characteristics produces a rating. It is based on the possibility to predict the future performance of customers on the basis of their characteristics.

Nordea has decided upon a differentiation of rating models in order to better reflect the risk involved for customers with different characteristics. Hence, rating models have been developed for a number of general as well as specific segments e g real estate management and shipping. Different methods ranging from purely statistical to expert based, depending of the segment in question, have been used when developing the rating models. The models are in general based on an overall framework, in which financial and quantitative factors are combined with qualitative factors. Examples of financial factors are profitability measures such as return on capital employed and debt service measures such as debt to earnings before interest, taxes, depreciations and amortisations (EBITDA). Examples of qualitative factors to be assessed in the rating process are management and strategy.

#### *Estimation and validation*

Nordea has established an internal validation process in accordance with the CRD requirements with the purpose of ensuring and improving the performance of Nordea's models, procedures and systems and to ensure the accuracy of the PD estimates.

The rating models are validated annually and the validation includes both a quantitative and a qualitative validation. The quantitative validation includes statistical tests of the rating models' discriminatory power, i e the ability to distinguish default risk on a relative basis, and cardinal accuracy, i e the ability to predict the level of defaults.

The PDs are validated semi annually and tested with respect to their ability over time to predict the ADFs. For example, the tests are performed to ensure:

- sufficient differentiation between strong and weak customers
- over time not significantly lower or higher average ADF than the corresponding PD
- sufficient margin between PD and ADF, which is expected to decrease over time

The validation performed in 2007 shows that the rating models as well as PDs are fulfilling the overall requirements. Some smaller adjustments have been proposed following the annual process for updates of models and parameters and will be implemented in 2008.

#### *Comparison of Expected Loss and actual net loss*

In table 12, the EL is compared to the actual net losses. The EL has been calculated using the definition from the Economic Capital framework, in which defaulted exposures receive 0% EL. The EL is calculated as the average of the end of quarter figures in 2007. The net loss is the full year 2007 outcome. Further, the customer segments are not perfectly matching the exposure classes used in the RWA calculations, but that has no significant impact on the figures.

Note that the EL will vary over time as a consequence of that the rating and the security coverage distributions migrate with the business cycle. This manifests that Nordea's rating models are neither perfectly through the cycle nor perfectly point in time. The implications are that the EL calculated at the top of the business cycle not will represent the EL over a full business cycle and that migrations will not explain the full variation in actual losses. It is expected that the average long term net loss will match the average EL over time. The figures for 2007 evidence that the net losses are significantly lower than what should be expected on average due to the strong credit cycle. The fact that net losses is negative is due to the reversals and recoveries from previous years as well as low new provisions, which limits the use of

this figure as an indicator of the model's performance looking at only one year of data. However, when including a long time series, e.g. the last five years, a similar conclusion can be drawn. More important is that Nordea has received approval for using the internal rating models for corporate and institutions by showing compliance with the minimum requirements, among others showing that there is a sufficient margin between the PDs and the ADFs.

**Table 12**  
**Net loss and Expected loss by customer segment, 31 December 2007**

EURm	Net loss	EL
Household	8	13
Corporate	-21	46
Public sector	0	0
<b>Total</b>	<b>-13</b>	<b>59</b>

#### *Relation between internal and external ratings*

The table 13 shows the mapping from the internal rating scale to the Standard & Poor's rating scale, using condensed scales.

**Table 13**  
**Indicative mapping between internal rating and Standard & Poor's**

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

The mapping of the internal ratings to the Standard & Poor's rating scale is based on an assessment using a predefined set of criteria, such as comparison of default and risk definition, developed during the application to use the FIRB approach. The mapping does not intend to reflect that there is a fixed relationship between Nordea's internal rating grades and Standard & Poor's rating grades since the rating approaches differ. On a customer level the mapping does not always hold and, moreover, the mapping may change over time.

#### **4.3.2 Calculation of RWA with the standardised approach**

The standardised approach measures credit risk pursuant to fixed risk weight and is the least sophisticated capital calculations. The application of risk weight in standardised approach is given by Financial Supervisory Authorities and is based on the exposure class to which the exposure is assigned. In calculating RWA with the standardised approach external rating may be used as an alternative to use the fixed risk weight. The external ratings must come from eligible external rating agencies.

#### *Central government and central banks*

Subject to national discretion, the risk weight of 0% is, for the majority of these exposures, applied in Nordea.

Nordea uses Standard & Poor's as eligible rating agency. The external rating is converted to the credit quality step (the mapping is defined by the Financial Supervisory Authorities), which corresponds to a fixed risk weight. In table 14, the central government and central banks exposures distributed by the credit quality steps is available. The exposure in the table is after credit risk mitigation, but the effect of credit risk mitigation is minor. It can be con-

cluded that all of the exposure towards central governments and central banks is within the highest credit quality step, which results in no RWA for these exposures.

Table 14

Exposures to central governments and central banks,  
31 December 2007

EURm Standard & Poor's rating	Credit quality step	Risk weight	Exposure
AAA to AA-	1	0%	1,968
A+ to A-	2	20%	0
BBB+ to BBB- BB+ and below, or without rating	3 4 to 6 or blank	50% 100-150%	0 0
<b>Total</b>			<b>1,968</b>

#### *Regional governments and local authorities*

Exposures to regional governments and local authorities are treated as exposures to the central government in whose jurisdiction they are established, with the exception of Norway, where a risk weight of 20% is applied.

#### *Retail exposures*

Retail exposures are assigned a risk weight of 75%.

#### *Exposures secured by real estate*

Exposures secured by mortgages on residential real estate are assigned a risk weight of 35%. The risk weight is only reduced for the part of the exposure that is fully secured. Exposures that are secured by commercial real estate are subject to national discretions and the regulations differ between the Nordic countries.

#### *Other*

- Exposures to administrative bodies and non-commercial undertakings (such as public sector entities) are, subject to decision by the local authority, assigned a risk weight of 0% to 100%.
- Exposures to named multilateral development banks are assigned a risk weight of 0%. Other multilateral development banks are assigned a risk weight according to the methods used for exposures to institutions.
- Exposures to named international organisations are assigned a risk weight of 0%. Other international organisations are assigned a risk weight of 100%.
- Exposures to institutions are assigned a risk weight depending on the external rating, by an eligible rating agency, of the central government in the jurisdiction of the institution. In Poland, the risk weight of the exposure is determined according to the external rating of the institution. Specific rules also determine how to treat an exposure where no rating by an eligible rating agency exists. Therefore, the risk weights can differ from 0% to 150% for these exposures.
- Exposures to corporate rated by eligible rating agency are assigned a risk weight from 20% to 150%. Exposures without external rating are assigned a risk weight of 100%.
- Past due items. The unsecured part of any past due item are assigned a risk weight of 150% if value adjustments (allowances) are less than 20% and 100% if value adjustments (allowances) are no less than 20% of the unsecured part. The part of the past due items that are secured by residential real estate property are assigned a risk weight of 100% or 50% depending on the size of the value adjustment (above or below 20%) and national regulations.
- Short-term claims. Exposures reported as short-term claims receive a risk weight based on the short term external rating of the institution.
- Other items

1. Tangible assets and holdings of equity are assigned a risk weight of 100%.
2. Cash are assigned a 0% risk weight.

#### 4.3.3 Credit risk mitigation

RWA, expected loss and exposures are reduced by the recognition of credit risk mitigation techniques. Only certain types of collateral and some issuers of guarantees are eligible for capital requirement purposes. Furthermore the collateral management process and the terms in the collateral agreements have to fulfil the minimum requirements (such as procedures for monitoring of market values, insurance and legal certainty) in the capital adequacy regulations. Collateral items and guarantees which can be used in the credit risk mitigation in the capital requirement are called eligible collateral.

The reduction of the capital requirements is calculated in three ways, depending of the type of credit risk mitigation technique:

1. Adjusted exposure amount. Nordea uses the comprehensive method for financial collateral such as cash, bonds and stocks. The exposure amount is adjusted with regards to the financial collateral. The size of the adjustment depends on the volatility of the collateral and the exposure. Nordea uses volatility adjustments specified by the Financial Supervisory Authorities (supervisory haircuts).
2. Adjusted PD (substitution of PD). The substitution method is used for guarantees, which implies that the PD is substituted. This means that the credit risk in respect of the customer is substituted by the credit risk of the guarantor and the risk is thereby reduced. Hence, an exposure fully guaranteed will be assigned the same capital requirement as if the loan was initially granted to the guarantor rather than the customer. The PD value of exposures is adjusted if the capital requirement for both the customer and the guarantor is calculated according to the IRB approach.
3. Adjusted LGD. The LGD value is reduced for the part of the exposures in the IRB approach (i.e. to large corporate and institutions) that is fully collateralised with real estates (commercial and residential), other physical collateral or receivables. The size of the LGD adjustment is stipulated by the CRD in the FIRB approach.

#### *Description of the main types of risk mitigation in Nordea*

Nordea uses a wide variety of risk mitigation techniques in several different markets which contribute to risk diversification and credit protection. The different credit risk mitigation techniques such as collateral, guarantees, netting agreements and covenants are used to reduce the credit risk. All credit mitigation activities are not recognised for capital adequacy purposes since they are not defined as eligible as credit risk mitigation, i.e. covenants. Loan documentations and similar agreements can include covenants such as financial ratios that the debtor has to comply with. Covenants are not taken into account in the calculations of regulatory capital. Another example is receivables. Receivables with an original maturity of more than one year are not eligible for credit risk mitigation in the capital adequacy reporting. A third example is assets that could not be sold in a liquid market. Such assets could be pledged but are not assigned any value in Nordea's credit process, nor in the regulatory capital calculations.

In table 15, the exposure per exposure class secured by eligible collateral, guarantees and credit derivatives are available. The table present a split between exposure classes subject to the FIRB approach and exposure classes subject to the standardised approach. Currently, 37% of the corporate exposures are secured by collateral, but this is expected to increase in accordance with Nordea's implementation plan., e.g. increase the sourcing of eligible collateral items. This will in turn have impact on the relative distributions.

**Table 15**  
**Exposure secured by collaterals, guarantees and credit derivatives, 31 December 2007**

EURm	Exposure	of which secured by guarantees and credit derivatives	of which secured by collateral
<b>IRB exposure classes</b>			
Institutions	4,185	1	48
Corporate	34,280	63	12,801
Other non-credit obligation assets	214	0	0
<b>Total IRB approach</b>	<b>38,679</b>	<b>64</b>	<b>12,849</b>
<b>Standardised exposure classes</b>			
Central government and central banks	1,968	0	0
Regional governments and local authorities	412	0	0
Retail	4,264	0	0
Exposures secured by real estates	18,265	4	18,265
Other <sup>1</sup>	8,512	2	0
<b>Total standardised approach</b>	<b>33,421</b>	<b>6</b>	<b>18,265</b>

<sup>1</sup> Administrative bodies and non-commercial undertakings, multilateral development banks, institutions standardised, corporate standardised, past due items, short term claims, covered bonds, and other items

### *Guarantees and credit derivatives*

The guarantees used as credit risk mitigation in Nordea are largely issued by central and regional governments in the Nordic countries. Banks and insurance companies are also important guarantors of credit risk. Corporate guarantees are limited to those that have an internal rating 5 or higher.

Only eligible providers of guarantees and credit derivatives can be recognised in the standardised and FIRB approach for credit risk. All central governments, regional governments and institutions are eligible. Some multinational development banks and international organisations are also eligible. Guarantees issued by corporate entities can only be taken into account if their rating corresponds to A- (Standard & Poor's rating scale) or better.

Nordea uses credit derivatives as credit risk protection only to a very limited extent since Nordea considers the credit portfolio to be well diversified.

### *Collateral*

The use of collateral for credit risk mitigation and valuation of collateral is based on Nordea's credit policy and strategy as well as credit instructions. Furthermore, local instructions ensure that national legislation and practice are taken into account.

In general, lending is based on the customer's repayment capacity and not the collateral value. The policy in Nordea is to seek the best possible collateral position through pledge/ mortgage on assets and other types of support. However, collateral is considered the secondary alternative if the repayment capacity proves inadequate.

Real estate is commonly used as collateral for credit risk mitigation purposes. There is no major concentration of real estate collateral. Other physical collateral consist mainly of ships. In table 16, the distribution of items of collateral used in the capital adequacy calculation process is available. The distribution shows that real estate is the major part of the eligible collateral items. Nordea will continue to include more collateral in accordance with the implementation plan which in turn will have impact on the relative distribution.



**Table 16**  
**Collateral concentration, 31 December 2007**

Other Physical Collateral	12.8%
Receivables	8.9%
Residential Real Estate	58.7%
Commercial Real Estate	18.4%
Financial Collateral	1.1%

#### *Valuation principles of collaterals*

The valuation principle for collateral is regarded as a conservative approach taken long-term market value and volatility into account when defining the maximum collateral ratio.

Valuation and hence eligibility 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 timeframe.
- 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 experienced volatility of market values in the past.
- Forced sale principle; assessment of market value or the collateral value must reflect that realisation of a collateral 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.

#### *Collateral policy and documentation*

Local instructions emphasise that national practice and routines are timely and prudent in order to ensure that collaterals are in control of Nordea and that the loan and pledge agreement as well as the collaterals are legally enforceable. Thus Nordea holds the right to liquidate collateral in event of the obligor's financial distress and Nordea can claim and control cash proceeds from a liquidation process.

Nordea uses to a large extent national standard loan and pledge agreements, ensuring legal enforceability.

#### *Types of collateral commonly accepted by Nordea*

Internal instructions include both general instructions such as presented above and more detailed instructions for the collateral types accepted the most:

- Residential Real Estate, Commercial Real Estate and Land. Acceptance focuses on Nordea's core markets.
- Machinery and Equipment, Vehicles, Vessels, Aircrafts and Trains
- Inventory, Receivables (trade debtors) and assets pledged under floating charge
- Financial collaterals; listed shares, listed bonds and other specific securities accepted
- Deposits
- Guarantees and Letters of Support
- Insurance Policies (Capital assurance with surrender value)

For each type, more specific instructions are added to the general valuation principle. A specific maximum collateral ratio is thus assessed for each type. Restrictions for acceptance refer in general to assessment of the collateral value rather than the use of the collateral for credit risk mitigation as such.

#### *The credit decision process and handling of collateral*

In the process of approving credits, collateral are taking into account, including cases when the collateral is not eligible for credit risk mitigation in the capital adequacy reporting.

Nordea monitors the credit risk in a more detailed process for annual reviews of commitment, risk and collaterals used for credit risk mitigation. Furthermore, for special mentioned and risk-classified customers, a more detailed review takes place to ensure valuation and legal enforceability and concerning Nordea's business and credit strategies towards the customer or customer group.

#### 4.4 Information about impaired loans and loan losses

The responsibility for credit risk lies with the customer responsible unit, which on an ongoing basis assesses the customers' ability to fulfil their obligations and identifies deviations from agreed conditions and potential weaknesses in customer's performance. Based on past due reports with late payments, the customer responsible unit must also assess whether it is an indication of that the customer's repayment ability is threatened. If it is considered unlikely that the customer will be able to repay its debt obligations (principal, interest or fees) in full, and the situation cannot be satisfactorily remedied, the exposure is regarded as default. Exposures that have been past due more than 90 days are automatically regarded as in default, and reported as impaired and non-performing.

If credit weakness is identified in relation to a customer exposure, such exposure is assigned special attention in terms of review of the risk. In addition to continuous monitoring, an action plan is established outlining how to minimise a potential credit loss. If necessary, a special team is set up to support the customer responsible unit.

In the process to identify indication of impairment, Nordea pursues a continuous process to review the financial status of the credit exposures. Weak and impaired exposures are closely and continuously 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.

An exposure is impaired, and a provision is recognised, if there is objective evidence, based on loss events or observable data, that there is impact on the customer's future cash flow to the extent that full repayment is unlikely, collateral included. The size of the provision is equal to the estimated loss considering the discounted value of the future cash flow and the value of pledged collateral. Impaired exposures can be either performing or non-performing. Impaired exposures are treated as in default when determining default probability.

In addition to individual impairment testing of all individually significant customers, collective impairment testing must be performed for groups of customers not considered found to be impaired on individual level.

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

##### 4.4.1 Disclosure of exposures, impaired loans and loan losses

In the tables below impaired loans, loan losses and allowances are distributed and stated according to IFRS as in the annual report. The tables in this section follow the segmentation used in the annual report.

In table 17, impaired loans to corporate customers are distributed by industry.

**Table 17**  
**Impaired loans split by industry for corporate, 31 December 2007**

EURm	Impaired loans Gross	of which non-performing
Real estate management	8	1
Construction	9	4
Agriculture and fishing	7	5
Transport	2	1
Shipping	1	1
Trade and services	13	7
Manufacturing	10	5
Financial operations		
Renting, consulting and other company services	19	7
Other	5	3
<b>Total</b>	<b>74</b>	<b>34</b>

In table 18, impaired loans are distributed by geography. Out of total impaired loans of EUR 116m, EUR 74m is related to the corporate portfolio.

**Table 18**  
**Impaired loans split by geography to the public<sup>1</sup>, 31 December 2007**

EURm	Impaired loans Gross	of which non-performing
Nordic countries	116	76
of which Denmark	1	1
of which Finland	0	0
of which Norway	115	75
of which Sweden	0	0
Baltic countries	0	0
Poland	0	0
Russia		
Other		
<b>Total</b>	<b>116</b>	<b>76</b>

<sup>1</sup> Public includes Corporate and Personal customers as well as the Public sector

Table 19 shows the specification of the loan loss according to the income statement in the annual report, as well the changes in the allowance accounts in the balance sheet.

**Table 19**  
**Loan losses**

EURm	2007
<b>Loan losses divided by class, net</b>	
Loans and receivables to credit institutions	0
of which write-offs and provisions	-1
of which reversals and recoveries	1
Loans and receivables to the public	14
of which write-offs and provisions	-35
of which reversals and recoveries	49
Off-balance sheet items	-1
of which write-offs and provisions	-4
of which reversals and recoveries	3
<b>Total loan losses</b>	<b>13</b>
<b>Specification of loan losses</b>	
Changes of allowance accounts in the balance sheet	8
of which loans and receivables	9
of which off-balance sheet items	-1
Changes directly recognised in the income statement	5
of which realised loan losses	-3
of which realised recoveries	8
<b>Total loan losses</b>	<b>13</b>

Table 20 is split by categories used in the annual report of Nordea. Figures are shown in relation to lending.

**Table 20**  
**Impaired loans to the public and to credit institutions, 31 December 2007**

EURm	Credit institutions	Corporate customers <sup>1</sup>	Personal customers	Total
Impaired loans, gross, individually assessed	0	74	47	121
Allowances for individually assessed loans	0	36	23	59
Impaired loans, net, individually assessed	0	38	23	61
Allowances / impaired loans, gross, individually assessed (%)	0%	48.7%	50.4%	49.4%
Impaired loans, gross, individually assessed /lending (%)	0%	0.3%	0.3%	0.3%
Allowances for collectively assessed loans	0	21	28	49
Total allowances (individually and collectively)/lending (%)	0%	0.2%	0.3%	0.2%

<sup>1</sup> Corporate customers includes Public sector in Loans and receivables to the public

Table 21 shows the changes in the allowance accounts in the balance sheet.

**Table 21**  
**Reconciliation of allowance accounts for impaired loans**

EURm	Individually assessed	Collectively assessed	Total
<b>Opening balance, 1 Jan 2007</b>	<b>-69</b>	<b>-65</b>	<b>-134</b>
Provisions	-23	-12	-35
Reversals	19	27	46
Allowances used to cover write-offs	13	0	13
Currency translation differences	0	0	0
<b>Closing balance, 31 Dec 2007</b>	<b>-59</b>	<b>-50</b>	<b>-109</b>

## 5. Market risk (pillar 1)

In this chapter, the methods used for measurement of market risk are described. Nordea uses both the internal models approach and the standardised approach to capture the market risk capital requirement in the trading book. Market risk in the CRD context contains two types of risk measurements: general risk and specific risk. General risk is risk related to changes in the overall market prices while specific risk is related to price changes for the specific issuer.

### 5.1 Internal model (VaR)

Nordea uses its own internal Value-at-Risk-model (VaR-model) to calculate capital requirements for the trading books, operationally defined as positions owned by Nordea Markets, for:

- Interest rate risk (general risk)
- Equity risk (linear positions only, general risk only)
- Foreign exchange risk (general risk)

#### 5.1.1 The model

Nordea's universal VaR model is a 10-day, 99% confidentiality model, which uses the expected shortfall approach (sometimes referred to as *tVaR*, for tail-VaR) and is based on historical simulation. The "square root of ten" rule is applied to scale 1-day VaR figures to 10-day figures. The model is identical to the one used internally in the organisation to limit and measure market risk at all levels.

#### 5.1.2 Back testing

Back testing is conducted daily in accordance with the guidelines given by the Basel Committee on Banking Supervision.

For interest rate risk, separate tests of general and specific risk are carried out. In the trading book, hypothetical (simulated) profit/loss (p/l) is used in the test for capture of general risk, while at global trading book level 1-day VaR is held against both hypothetical and actual p/l. In the test for capture of specific risk, 1-day VaR is also held against both actual and hypothetical p/l for the global credit trading desk.

For equity risk, a joint test of general and specific risk is conducted. In the trading book, hypothetical p/l is used, while at global trading book level, 1-day VaR is held against both hypothetical and actual p/l.

Total 1-day VaR (comprising all risk categories) is also held against both hypothetical and actual p/l.

### 5.2 Standardised approach

As described above, not all positions are covered by the approved VaR model, instead these have to be calculated following the standardised approach. Capital requirement for these positions are calculated according to the CRD.

The main part of the standardised approach contribution to market risk capital is specific interest rate risk. In the standardised approach, specific interest rate risk is calculated through a maturity based method with different risk capital charge factors depending on category and time to maturity. For contribution to Nordea Group level, the exposures in Nordea (e.g. Nordea Bank Norge Group) is covered by the Internal Models Approach (VaR) for specific interest rate risk from January 2008.

The current approved equity risk VaR model does not capture non-linear equity risk, instead the standardised approach is used for such positions. In the standardised approach equity positions receives a capital charge factor depending on the position's quality and liquidity.

FX risk outside the trading book is not covered by the VaR model and is also calculated using the standardised approach.

### 5.3 Stress tests

Stress tests are conducted daily for Nordea (for the trading and the banking book consolidated). The main types of stress tests include:

1. Historical stress tests, which include selected historical episodes, and exposing the current portfolio to the most unfavourable developments in financial markets since 1993. The calculations for historical episode scenarios use simplified assumptions.
2. Subjective stress tests, where the portfolios are exposed to scenarios for financial developments that are deemed particularly relevant at a particular time. The scenarios are reflected by the financial, the macroeconomic or geopolitical situation, or the current composition of the portfolio.
3. Sensitivity tests are conducted on interest rates, and include tests where rates, spreads and/or volatilities are shifted markedly. The sensitivities are measured both gross and net. The gross figures shedding light on exposure to situations where normal relationships between financial variables fail to hold.

### 5.4 Compliance with requirements applicable to exposures in the trading book

Annex VII, Part B of the European Parliament and Council Directive 200/49/EG of June 2006 on the capital requirements for investment firms and credit institutions outlines the requirements for systems and controls to provide prudent and reliable valuation estimates. Nordea complies in all material aspects with these requirements. Overall valuation principles are governed by policies and instructions applicable for the Nordea Group and independent Group staffs are responsible for the valuation process. The local risk control organisations in the individual business units are responsible for performing valuation controls in accordance to the policies and instructions applicable for the Nordea Group. The quality control framework is assessed by relevant group functions as well as by Group Internal Audit on an ongoing basis.

The setup for valuation adjustments in Nordea is designed to be compliant with the requirements in IAS39. Requirements in the annex not supported by IAS 39 are therefore not implemented. Nordea incorporates counterparty risk in OTC derivatives, bid/ask spreads and where judged relevant, also model risk.

## 6. Operational risk (pillar 1)

In this chapter, the management of operational risk is described.

Operational risks is inherent in all activities within the organisation, in outsourced activities and in all interaction with external parties. Solid internal control and quality management, consisting of a risk-management framework, leadership and skilled personnel, is the key to successful operational risk management.

The main processes for managing operational risks are an ongoing monitoring through self-assessment and the documenting and registering of incidents and quality deficiencies. The analysis of operational risk-related events, potential risk indicators and other early-warning signals are in focus when developing the processes.

The mitigating techniques consist of business continuity plans together with crisis management preparedness and a broad insurance cover for handling major incidents. Mitigation efforts target reliability and continuity in the value chains rather than focusing on single units in the organisation. Special emphasis is put on quality and risk analysis in change management and product development.

An annual report on the quality of Internal Control in Nordea is submitted to the Board of Directors, incorporating all main issues on financial and operational risk. Each customer area, product area and group function is primarily responsible for managing its own operational risk. Group Credit and Risk Control develops and maintains a framework for identifying, assessing, monitoring and controlling operational risks and supports the line organisation in implementing the framework.

Information security, physical security and crime prevention are important components when managing operational risks. To cover this broad scope, the Group Security function as well as the Group Compliance function is included in Group Credit and Risk Control, and close co-operation is maintained with Group IT and Group Legal.

The techniques and processes for managing operational risks are structured around the risk sources as described in the definition of operational risk. This approach improves the comparability of risk profiles in different customer areas, product areas and Group functions as well as and globally throughout the organisation. It also supports the focus on limiting and mitigating measures in relation to the sources, rather than the symptoms.

As described in chapter 3.3 the capital requirement for operational risk is in Nordea calculated according to the standardised approach, in which all of the institution's activities are divided into eight standardised business lines and the total capital requirement for operational risk is calculated as the sum of the capital requirements for each of the business lines for each entity. The risk for each business line is the beta coefficient multiplied by the average of the gross income where the beta coefficients differ between business lines and are in the range of 12% to 18%. The operational risk is updated on a yearly basis.

## 7. Off-balance and securitisation (included in pillar 1)

In this chapter, Nordea discloses information about off-balance with focus on derivatives and securitisation.

Off-balance sheet items are divided into two different exposure types in accordance with calculation of credit risk RWA in the CRD:

1. Off-balance sheet items:  
Main categories of off-balance sheet items are guarantees, credit commitments and unutilised portion of approved credit facilities.
2. Derivatives:  
Financial instruments that derive their value from underlying interest rates, currencies, equities, credit spreads or commodity prices. Derivatives do not only result in counterparty risk measured within the credit risk RWA but also affect the market risk (see section 7.1).

For the different off-balance exposure types mentioned above, there are different possible values for the calculation base. For the off-balance items, the nominal value of the guarantee is applied with a credit conversion factor (CCF) for calculating the exposure at default (EAD). The CCF factor is 50% or 100% depending of the type of guarantee, i.e. lowering the risk weight compared with the same exposure on balance. Credit commitments and unutilised amounts are the part of the external commitment that has not been utilized. This amount forms the calculation base for which a credit conversion factor (CCF) is used for calculating the EAD. The CCF factor is multiplied with the calculation base and is 0%, 20%, 50%, 75% or 100% depending of approach, product type and whether the unutilized amounts are unconditionally cancellable or not. For derivatives it is a combination of the market value and the nominal amount.

The overall capital requirements for these items are available in Table 22, where the figures for derivatives stem from counterparty risk. It can be concluded that although off-balance items have large exposure amounts, the effect on RWA is reduced due to the use of CCF in the calculation of EAD.

**Table 22**  
**Exposure, RWA and capital requirements by exposure type, 31 December 2007**

EURm	On-balance sheet items <sup>1</sup>	Off-balance sheet items	Derivatives	Total
Exposure	56,147	15,732	221	<b>72,100</b>
EAD	55,961	9,101	221	<b>65,283</b>
RWA	23,883	4,256	42	<b>28,181</b>
Capital requirement	1,912	340	3	<b>2,255</b>
Average risk weight	43%	47%	19%	<b>43%</b>

<sup>1</sup> On-balance sheet items includes Securities financing

Off-balance sheet exposures can be found both in the banking book and in the trading book. The majority of derivatives are found in the trading book.

### 7.1 Risk in derivatives

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 com-



commodity prices. The derivative contracts are often OTC-traded, i.e. the terms connected to the specific contract are agreed upon on individual terms with the counterpart.

### 7.1.1 General information about derivatives

Nordea enters into derivative contracts based on customer demand, both directly and in order to hedge positions that arise through such activities. Nordea, through Group Treasury also uses interest rate swaps and other derivatives in its hedging activities of the assets and liabilities on the balance sheet. Furthermore, Nordea may, within clearly defined restrictions, use derivatives to take open positions in its operations. Derivatives affect counterparty risk and market risk as well as operational risk.

#### *Specific information about credit derivatives transactions*

Table 23 lists the total outstanding volumes of credit derivatives end 2007, split into bought and sold positions. In the Nordea Group, the credit derivative portfolio is referable to Nordea Bank Finland Group and subsequently, Nordea (e.g. Nordea Bank Norge Group) does not have any credit derivatives exposures.

**Table 23**

**Credit derivatives volumes, 31 December 2007**

Instrument	EURm	
	Total Gross Notional Sold	Total Gross Notional Bought
Credit default swaps	-	-
Basket credit derivatives	-	-
<b>Total</b>	-	-

### 7.1.2 Counterparty risk

Counterparty risk is the risk that Nordea's counterpart in a FX, interest, commodity, equity or credit derivative contract defaults prior to maturity of the contract and that Nordea at that time has a claim on the counterpart. Counterparty risk in Nordea is subject to credit limits like other credit exposures and is treated accordingly. Counterparty risk arises mainly in the trading book, but also in the banking book due to hedging of external funding.

#### *Pillar 1 method for counterparty risk*

Nordea uses the mark-to-market method to calculate the EAD for counterparty risk in accordance with the credit risk framework in CRD, i.e. the sum of current exposure (replacement cost) and potential future exposure. The potential future exposure is an estimate, which reflects possible changes in the market value of the individual contract during the remaining lifetime, and is measured as the notional principal amount multiplied by a risk weight. The size of the risk weight depends on the contract's remaining lifetime and the underlying asset. Netting of potential future exposures on contracts within the same legally enforceable netting agreement is done as a function of the gross potential future exposure of all the contracts and the quotient between the net current exposure and the gross current exposure.

In table 24, the EAD as well as the RWA and capital requirement split on the exposure classes are available. As stated above, EAD equals the sum of current exposure and potential future exposure and as of December 2007 the potential future exposure is the major part of the EAD.

**Table 24**

**Counterparty risk exposures<sup>1</sup>, 31 December 2007**

EURm	EAD	RWA	Capital requirement
Central government and central banks	0	0	0
Institutions	101	15	1
Corporate	5	4	0
Other	115	23	2
<b>Total</b>	<b>221</b>	<b>42</b>	<b>3</b>

<sup>1</sup> Exposure after closeout netting and collateral agreements

### *Internal capital and internal credit limits*

Counterparty risk for internal credit limit purposes are calculated by using a similar method to the pillar 1 method, but somewhat different riskweights and netting principles for calculation of the potential future exposure are applied. As of December 2007, the current net exposure was EUR 23.2m and the potential future exposure was EUR 204.2m in the internal counterparty risk framework.

For internal capital purposes (Economic Capital framework), the significant part of the counterparty risk exposure is calculated using a method referred to as Expected Positive Exposure. For the remaining part of the exposure, the method is similar to the method used for internal credit risk limits.

On traded OTC contracts, Nordea performs fair value adjustments to the counterparty risk exposures on portfolio level, which means that the market value of the contracts is adjusted to account for credit risk.

### *Mitigation of counterparty risk exposure*

To reduce the exposure towards single counterparties, risk mitigation techniques are widely used in Nordea. The most common is the use of closeout netting agreements, which allow the bank to net positive and negative replacement values of contracts under the agreement in the event of default of the counterparty. In addition, Nordea also mitigates the exposure towards large banks, hedge funds and institutional counterparties by an increasing use of financial collateral agreements, where collateral on regular – typically daily - basis is placed or received to cover the current exposure. The collateral is largely cash (EUR, USD, DKK, SEK and NOK), but also government bonds and to a lesser extent mortgage bonds are accepted.

In table 25, information of how the counterparty risk exposure is reduced with risk mitigation techniques are available. As of December 2007, Nordea Bank Norge had 15 financial collateral agreements. The effects of closeout netting and collateral agreements are considerable, as 40% of the current exposure (gross) was eliminated by the use of these risk mitigation techniques.

**Table 25**  
**Mitigation of counterparty risk exposure due to closeout netting and collateral agreements,**  
**31 December 2007**

EURm	Current Exposure (gross)	Reduction from closeout netting agreements	Reduction from held collateral	Current Exposure (net)
<b>Total</b>	<b>40</b>	<b>12</b>	<b>4</b>	<b>23</b>

Nordea's financial collateral agreements do typically not contain any trigger dependent features, for example rating triggers. For a few agreements the minimum exposure level for further posting of collateral will be lowered in case of a downgrading. Separate credit guidelines are in place for handling of the financial collateral agreements.

Finally, Nordea also uses a risk mitigation technique based upon a condition in some of the long-term derivative contracts, which gives Nordea the option to terminate a contract at a specific point of time or upon the occurrence of specified credit related events.

### **7.1.3 Market risk**

For all categories of derivatives, it applies that the market risk stemming from the derivative contracts is an integral part of Nordea's general set-up for managing market risk. A prime

purpose of derivatives is to hedge market risk from on balance sheet items. Therefore, when measuring Nordea's market risk, no distinction is made between risk from on-balance sheet items and derivatives. The RWA for market risk therefore contains risk stemming from derivatives, including credit derivatives. See chapter 5 for further description of Nordea market risk models and chapter 3 for RWA and capital requirement for market risk in Nordea.

## 7.2 Information about securitisation

According to the CRD, banks have securitisation positions whenever exposed to transactions where payments depend on the performance of an underlying pool of exposures and a subordination structure ("tranche structure") exists for determination of losses from the same pool. Under this broad definition, securitisation positions can arise at least in four ways, where the two first categories are securitizations in conjunction with lending to customers:

1. Banks originating securitisations by selling away the risk and return of some assets in their balance sheet. Nordea has not securitised assets from its ordinary lending portfolio (banking book).
2. Banks setting up special purpose entities ("SPEs"), which buy assets such as trade receivables from the bank's customers. SPEs issue short-term debt to fund these purchases and in many cases banks provide liquidity facilities. Nordea (e.g. Nordea Bank Norge Group) has not established any SPEs for this purpose.

The other two categories of securitisation include investor driven products:

3. Banks arranging structured credit derivative transactions ("CDOs") in order to allow their customers to invest in new asset classes. SPEs in this business receive funds from investors and invest them in collateral assets. Nordea has not established any SPEs as these credit instruments are managed mainly in Nordea Bank Finland Group and Nordea Bank Denmark Group.
4. Banks arranging structured bonds transactions like Collateralised Mortgage Obligations ("CMOs") in order to meet specific customer preferences in terms of credit risk, interest rate risk, prepayment risk, maturity etc. A SPE purchases a pool of existing bonds (like mortgage bonds) and reallocates the risk through tranching a similar bond issue (CMOs). Nordea has not established any SPEs as these credit instruments are managed mainly in Nordea Bank Denmark Group.

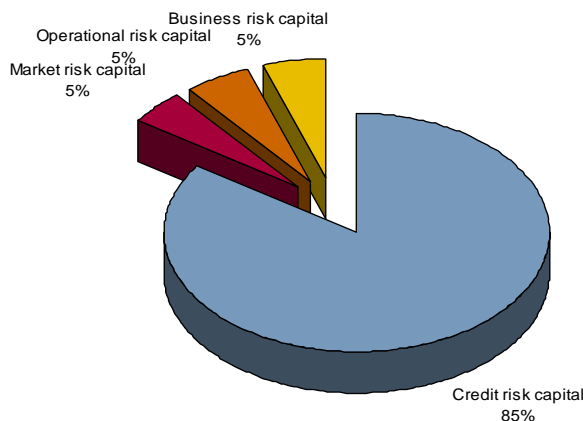
## 8. Internal capital including other risk types

Nordea manages and measures other risk types not included in the RWA calculations. These are covered in the internal model for capital allocation (the Economic Capital model), which is used within the ICAAP. This chapter describes Economic Capital and some of these other risk types. The ICAAP is described in chapter 9.

### 8.1 Economic capital

Figure 3 shows the composition of Economic Capital per risk type as of end year 2007. Total Economic Capital at the end of December 2007 is calculated as EUR 1.7 bn.

**Figure 3**  
**Economic Capital distributed by risk type, 31 December 2007**



Nordea calculates Economic Capital for the following major risk types: credit risk, market risk, operational risk and business risk. Additionally, the Economic Capital models explicitly account for interest rate risk in the banking book, market risk in the investment portfolio, risk in Nordea's internal defined benefit plans, real estate risk and concentration risk. Nordea uses VaR and/or simulation modelling to determine capital requirements for interest rate risk in the banking book, market risk in treasury, risk in Nordea's internal defined benefit plans and real estate risk. Note that the Economic Capital framework is developed using a Nordea Group perspective, i.e. not on a stand alone basis.

The primary differences between Economic Capital and the CRD are:

- In Economic Capital, the confidence level for all risk types is 99.97%, versus 99.9% in CRD.
- Credit risk (including counterparty risk) for corporate, institutions and retail exposures is calculated using Nordea's internal estimates of LGD and EAD, rather than the regulatory values in the FIRB approach.
- Exposures calculated using the standardised approach according to CRD are calculated on the basis of internal models in the Economic Capital framework, though the models have not yet been approved by the Financial Supervisory Authorities for use in the regulatory calculations.
- Concentration risk is also captured via the use of an internal credit risk portfolio model.

Economic Capital includes business risk to account for the residual volatility in historical profit and loss time series after adjustments for market, operational and credit risk. Unlike pillar 1 regulatory capital, Economic Capital accounts for group-level diversification benefits in Nordea's varied operations.

## 8.2 Interest rate risk for positions outside the trading book

Interest rate risk in the non-trading book consists of exposures deriving from the balance sheet (mainly lending to public and deposits from public) and from hedging the equity capital. The interest rate risk in the non-trading book is the major part of the structural interest income risk (SIIR). SIIR is the amount Nordea's accumulated net interest income would change during the next 12 months if all interest rates change by one percentage point.

The underlying interest rate exposure is calculated using the contractual maturity dates or the next re-pricing dates (if earlier than maturity date) of all interest sensitive assets, liabilities and off-balance sheet items. This is also applied to lending, where no prepayment adjustments are made. A major part of non-maturity accounts has a short-term repricing structure and therefore treated accordingly. However, a portion of these accounts is considered longer-term due to their behaviour.

The interest rate risk inherent in the non-trading book is measured on several ways on daily basis. Table 26 shows the sensitivity by currency of the exposures outside the trading book for a 200 bp parallel shift change in rates at the end of 2007. This test in terms of parallel shift is stipulated by the Financial Supervisory Authorities and is conducted in order to determine that the risk level is kept below the limit specified by the Financial Supervisory Authorities; otherwise Nordea has to take corrective actions. Nordea's interest rate risk inherent in the non-trading book was in 2007 within stipulated limits.

**Table 26**  
Interest rate risk in non-trading book, 31 December 2007  
EURm

Currency <sup>1)</sup>	Shock 1 (+ 200 bp)	
	Decline in earnings	Increase in earnings
EUR	34	
SEK	1	
NOK		0
USD	17	
DKK	21	
Other	6	
<b>Total</b>	<b>79</b>	<b>0</b>

<sup>1)</sup> Breakdown by currency only as relevant

## 8.3 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.

Nordea's liquidity management is based on policy statements resulting in different 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 the sources of funding and seeks to establish and maintain relationships with investors in order to manage the market access. Nordea publishes adequate information on the liquidity situation to remain trustworthy at all times.

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 the liquidity situation under a set of exceptional but plausible events. The stress test should iden-

tify events or influences that could affect the funding need or the funding price and seek to quantify the potential effects. The purpose of stress tests is to supplement the normal liquidity risk measurement and confirm that the Business Continuity Plan is adequate in stressful events, and that the Business Continuity Plan properly describes procedures for handling a liquidity crisis with minimal damage to Nordea.

Group Treasury is responsible for managing liquidity in Nordea and for compliance with the group-wide limits from the Board of Directors and CEO in GEM.

Liquidity risk management focuses on both short-term liquidity risk and long-term structural liquidity risk. In order to measure the exposure on both horizons, a number of liquidity risk measures have been developed covering all material sources of liquidity risk. For example, in order to avoid short-term funding pressure, Nordea measures the funding gap risk, expressed as the expected maximum accumulated need for raising liquidity in the course of the next 14 days. The structural liquidity risk of Nordea is measured and limited by the net balance of stable funding, which is defined as the difference between stable liabilities and stable assets.

## 8.4 Other risk types

Business risk represents the earnings volatility inherent in all businesses due to the uncertainty of revenues and costs due to changes in the economic and competitive environment. The main risk drivers are reputation risk, strategic risk and indirect effects as structural interest income risk. Business risk is calculated based on the residual volatility in historical profit and loss time series after adjustments for market, operational and credit risk.

Concentration risk is the credit risk stemming from not having a well-diversified credit portfolio, i.e. the risk inherent in doing business with large customers or being overexposed in particular industries or regions. Through the use of a credit risk portfolio model which considers exposures by industry and geography, the concentration risk can be identified. As Nordea calibrates the Economic Capital credit risk formulas to the results of its portfolio model estimation, the industry or region concentration impact is allocated pro rata over the entire portfolio. Additionally, Nordea's Economic Capital credit risk formulas consider exposure to large customers by applying a single-name concentration add-on.

## 9. Capital adequacy conclusions

Nordea strives to attain efficient use of capital with the focus on achieving profitability targets and optimizing risk and return to the shareholders.

### 9.1 Capital ratios

The transition phase of the new CRD creates a need to manage the institution using a variety of capital measurements and capital ratios. The table 27 shows that the regulatory transition rules comprise a floor on Nordea's capital requirement when compared to the pillar 1 minimum requirements. This difference will fluctuate through the transition period as the floor gradually decreases and Nordea receives approval for internal ratings-based models for its retail portfolio and other portfolios. At present, this difference is EUR 10.9bn expressed as RWA and EUR 0.9bn expressed as regulatory capital requirement. Nordea aims at a tier 1 capital ratio above 6.5%. At the end of 2007 Nordea's tier 1 capital ratio was 6.6%, compared to 6,3% at the end of 2006. The capital ratio was 8,9% at the end of 2007 and 8,5% at the end of 2006. These ratios are also dependent on the CRD transition and Nordea will maintain its target capital levels through dividend and share-buy-back policy as well as through subordinated capital management.

In addition to regulatory requirements, Nordea has internal capital requirements based on the Economic Capital framework.

**Table 27**  
**Capital adequacy ratios, EURbn**

	31 Dec 2007
RWA with transition rules	41.4
RWA Basel II (pillar 1) before transition rules	30.4
Regulatory Capital requirement with transition rules	3.3
Economic Capital	1.7
Capital base	3.7
Tier 1 capital	2.7
Tier 1 ratio with transition rules (%)	6.6%
Tier 1 ratio before transition rules (%)	8.9%
Capital ratio with transition rules (%)	8.9%
Capital ratio before transition rules (%)	12.0%
Capital base / Regulatory Capital requirement before transition rules (%)	150,7%
Capital base / Economic Capital (%)	218,5%

### 9.2 Strategies and methods for maintaining the capital adequacy

Nordea's ability to maintain minimum capital requirements is reviewed regularly by the Capital Planning Forum (CPF). The CPF, headed by the CFO, was established in August 2004 as the forum responsible for coordinating capital planning activities within the Group, including regulatory, internal and available capital. Additionally, the CPF and its members review future capital requirements in the assessment of annual dividends, share repurchases, external and internal debt and capital injection decisions. The CPF considers information on key regulatory developments, market trends for subordinated debt and hybrid instruments and reviews the capital situation in the Nordea Group and in key legal entities. In the CPF the CFO decides, within the mandate given by the Board of Directors, on issuance of subordinated debt and hybrid capital instruments. Meetings are held at least quarterly and on request by the CFO.

### 9.2.1 ICAAP

Pillar 2 in the CRD, or the Supervisory Review Process (SRP), covers two main processes: the Internal Capital Adequacy Assessment Process (ICAAP) and the Supervisory Review and Evaluation Process (SREP). The purpose of the ICAAP is for each institution to review the management, mitigation and measurement of material risks to assess the adequacy of internal capital and to determine an internal capital requirement reflecting the risk appetite of the institution. The purpose of the SREP is to ensure that institutions have adequate capital to support all the risks in their businesses and to encourage institutions to develop and use better risk management techniques in monitoring and measuring risks.

In 2007, Nordea's tier 1 capital and capital base exceeded the regulatory minimum requirements outlined in the CRD. Considering the results of capital adequacy stress testing, capital forecasting and growth expectations, Nordea's capital target is 6.5% for tier 1 capital.

Nordea uses its internal capital models, Economic Capital, when considering internal capital requirements with and without market stress. As a number of pillar 2 risks exist within Nordea's current Economic Capital framework - interest rate risk in the banking book, market risk in treasury's investment portfolios, risk in Nordea's internal defined benefit plans, real estate risk, concentration risk, counterparty risk and business risk - Nordea uses its existing internal capital measurements as the basis for any additional capital buffers, subject to the judgement of the aforementioned third parties. Nordea considers the results of its capital adequacy stress testing, along with EC and RWA forecasts, to determine its internal capital requirement and to ensure that the bank is adequately capitalised in stress scenarios reflecting Nordea's risk appetite. The impact of stress testing on Nordea's capital policy increases as additional parts of the portfolio begin to use IRB models and, thus, become more sensitive to customer credit ratings, collateral valuations and other capital parameters during changes in the economic cycle or periods of economic stress.

Nordea's policy is to ensure that the capital base exceeds the internal capital requirement. Remaining buffers are expected to be reduced via dividends and/or share buy-backs as the regulatory requirement is reduced with the implementation of IRB models and removal of CRD transition rules and capital floors.

## 9.3 Capital base and conditions for items to be included in the capital base

A summary of items included in the capital base is available in table 28. Capital base (referred to as own funds in the CRD) is the sum of tier 1 capital and tier 2 capital after deductions. Tier 1 capital is defined as capital of the same or close to the character of paid-up capital and eligible reserves. Profit may only be included after external audit and after deduction of proposed dividend. Goodwill, other intangible assets and deferred tax assets are deducted from tier 1. Tier 2 capital includes two different types of subordinated loan capital, perpetual loans and dated loans. The total tier 2 amount may not exceed tier 1 and dated tier 2 loans may not exceed half the amount of tier 1. The limits are set after deductions. Such deductions are investment in insurance and other financial companies. Half the amount should be deducted from tier 1 capital and the remaining half from the sum of tier 1 and tier 2.

Nordea's calculation of capital base is in accordance with the CRD and the Norwegian legislation. The differences between expected loss and provision made for the related exposures are adjusted for in the capital base. The negative difference (when EL is larger than provision) is included in the capital base as shortfall. According to the rules in CRD the shortfall amount shall be deducted from the capital base and be divided into both tier 1 capital and tier 2 capital.



Generally, within the Nordea Group, it is possible to transfer capital within its legal entities without material restrictions. International transfers of capital between Nordea's legal entities are possible with the acceptance of the local regulator.

As of end year 2007, Nordea holds EUR 0,7bn in Dated Subordinated Debenture Loans and EUR 0,3bn in Undated Subordinated Debenture Loans.

**Table 28**

**Summary of items included in capital base**

EURm	31 Dec 2007
Calculation of total capital base	
<b>Tier 1 capital</b>	
Paid up capital	484
Share premium	120
<b>Eligible capital</b>	<b>604</b>
Reserves	1,898
Minority interests	0
Income (positive/negative) from current year	356
<b>Eligible reserves</b>	<b>2,254</b>
<b>Tier 1 capital (before hybrid capital and deductions)</b>	<b>2,858</b>
<b>Hybrid capital loans subject to limits</b>	<b>0</b>
Proposed/actual dividend	0
Deferred tax assets	-142
Intangible assets	-33
Deductions for investments in credit institutions (50%)	-2
IRB provisions excess (+) / shortfall (-) <sup>1</sup>	-26
Other items, net	59
<b>Deductions from Tier 1 capital</b>	<b>-144</b>
<b>Tier 1 capital (net after deduction)</b>	<b>2,714</b>
- of which hybrid capital	0
<b>Tier 2 capital</b>	
Securities of indeterminate dur. and other instr.	327
Subordinate loan capital	652
Other additional own funds	
<b>Tier 2 capital (before deductions)</b>	<b>979</b>
Hold in cr and fin inst. amount more th 10% ca	-2
Participations hold in insurance undert., reinsurance	
IRB provisions excess (+) / shortfall (-) <sup>1</sup>	-26
Other deduction	
<b>Deductions from Tier 2 capital</b>	<b>-28</b>
<b>Tier 2 capital ( net after deductions)</b>	<b>951</b>
<b>Capital base</b>	<b>3,665</b>

<sup>1</sup> The term provision is used in the CRD when defining the basis for shortfall/provision excess. In Nordea, the terminology allowances are used when referring to the same treatment.

## 10. List of abbreviations

ADF	Actual Default Frequency
AIRB	Advanced Internal Rating Based approach
ALCO	Asset and Liability Committee
CCF	Credit Conversion Factor
CDO	Collateralised Debt Obligation
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CPF	Capital Planning Forum
CRD	EU's Capital Requirements Directive
CRO	Chief Risk Officer
EBITDA	Earnings before Interest, Tax, Depreciation and Amortisation (of goodwill or other intangible assets)
ECC	Executive Credit Committee
EEA	European Economic Area
EAD	Exposure at Default
EC	Economic Capital
EL	Expected Loss
EU	European Union
FFFS	Finansinspektionens Författningssamling (The Swedish financial supervisory authorities's directive)
FIRB	Foundation Internal Rating Based approach
FX	Foreign Exchange
GCC	Group Credit Committee
GEM	Group Executive Management
IAS	International Accounting Standard
ICAAP	Internal Capital Adequacy Assessment Process
IFRS	International Financial Reporting Standard
IRB	Internal Rating Based approach
LGD	Loss Given Default
M	Maturity
n'th default	The default of the order n (1, 2, 3...or n) in a portfolio (in the context of a credit default instrument)
OTC	Over The Counter (derivatives)
PD	Probability of Default
RW%	Risk weight
RWA	Risk weighted Amount
S&P	Standard & Poor's
SRP	Supervisory Review Process
SREP	Supervisory Review and Evaluation Process
SIIR	Structural Interest Income Risk
SME	Small and Medium-sized Enterprises
SPV	Special Purpose Vehicle
VaR	Value at Risk