# Pillar 3
# SpareBank 1 SMN
2016

SpareBank 1 SMN

# Contents

# 1. CAPITAL ADEQUACY FRAMEWORK

In order to ensure that financial institutions are solid and robust to fluctuations and shocks in the economy, financial institutions are regulated by financial authorities, inter alia with requirements on capital adequacy. The capital adequacy framework Basel I, which focused on minimum requirements for risk-weighted capital, was introduced in 1988. Weaknesses in Basel I led to the introduction of the EU's capital adequacy directive, Basel II, in Norway on 1 January 2007. Basel II was introduced as a continuation of and replacement for Basel I, with the purpose of strengthening stability in the financial system through improved risk management and control, more risk-sensitive capital requirements, closer supervision and more information to the market. Basel II builds on three pillars:

The capital adequacy framework is based on three pillars:

Pillar 1: Minimum requirements on own funds
Pillar 2: Assessment of overall capital need and supervisory review. Under Pillar 2 supervisory authorities can set requirements for Tier 2 capital if they consider that other capital requirements do not adequately capture the underlying risk in an institution
Pillar 3: Institutions' information disclosure. The disclosure requirement is intended to give the world at large further insight into the institution's risk profile, and by this means have a disciplining effect.

After the financial crisis in 2008 the EU Commission put forward a proposal for a new capital requirements directive in the EU: CRD IV. CRD IV builds on the international recommendations in the Basel III from the Basel Committee on the Banking Supervision, and contains inter alia tighter requirements on own funds and requirements on capital buffers. CRD IV entered into force for Norwegian credit institutions as from July 2014, with gradual introduction up to 1 July 2016. The minimum requirement on own funds from Basel I and II of 8 per cent is retained in CRD IV, but the requirements on own funds were tightened. Further, requirements for various capital buffers were introduced which go beyond this minimum requirement and which altogether constitute combined buffer requirements.

**Pillar 1**
The minimum capital requirement is 8 per cent of risk-weighted assets. The minimum capital requirement can be met by up to 2% Tier 2 capital and up to 1.5% in hybrid capital. SMN aims to meet the minimum requirements through maximum use of hybrid capital and Tier 2 capital.

Capital adequacy is measured as shown in the figure below.

$$\frac{\text{CET1 capital} + \text{other Tier 1 capital} + \text{Tier 2 capital}}{\text{Credit risk} + \text{Market risk} + \text{Operational risk} + \text{Basel I floor}} \geq 8\,\%$$

**Figure 1 – capital calculation**

The figure below shows the various methods banks can use to arrive at risk-weighted assets.

| Credit risk | Market risk | Operational risk |
|---|---|---|
| Standardised approach | Standardised approach | Basic indicator approach |
| IRB foundation approach*) | IRB approach*) | Standardised approach |
| IRB advanced approach*) | | Advanced measurement approach (AMA)*) |

*) Requires Finanstilsynet's approval

**Figure 2 - capital requirement models**

Banks with approval to use an Internal Rating Based Approach for credit risk base their statutory minimum capital requirement for credit risk on their own internal risk assessments. This makes for a more risk sensitive statutory minimum requirement which to a greater extent corresponds to the risk in the underlying portfolios.
In the case of the IRB Advanced Approach the risk parameters PD, CF and LGD are calculated using the Bank's own models. These parameters are used to calculate the capital requirement.

**Implementing the capital adequacy framework at SpareBank 1 SMN**
SpareBank 1 SMN has received permission from Finanstilsynet to apply an IRB approach to credit risk as from 2007.

SMN received permission to apply an AIRB approach to its corporate portfolio in February 2015.

The subsidiary SpareBank 1 SMN Finans AS has implemented PD-based credit models for portfolio monitoring and in 2011 also implemented PD models for use in the credit granting process. The company is building experience with the models, and plans a subsequent transition to the IRB approach, and the portfolio is therefore reported under the standardised approach until further notice. The company's main business is leasing and secured car loans. At year-end SpareBank 1 SMN Finans AS's risk weighted assets constituted 3.6% of risk-weighted assets for credit risk calculated under new capital adequacy rules for the Group.

The figure below shows the main approaches used by SpareBank 1 SMN to calculate capital requirements for credit, market and operational risk respectively.

| Risk type | Area | Approach |
|---|---|---|
| Credit risk | Sovereigns | Standardised approach |
| | Institutions | Standardised approach |
| | Housing cooperatives, clubs and associations | Standardised approach |
| | Companies – parent bank | Advanced IRB approach |
| | Retail market – parent bank | Retail IRB approach |
| | SpareBank 1 SMN Finans | Standardised approach |
| | SpareBank 1 SMN Invest | Standardised approach |
| | Allegro Forvaltning | Standardised approach |
| | Retail market – SpareBank 1 Boligkreditt AS | Retail IRB approach |
| | Companies – SpareBank 1 Næringskreditt AS | Standardised approach |
| | Companies – BN Bank AS | Advanced IRB approach |
| | Retail market – BN Bank AS | Retail IRB approach |
| Market risk | Equity risk – parent bank | Standardised approach |
| | Debt risk – parent bank | Standardised approach |
| | Foreign exchange risk – parent bank | Standardised approach |
| | Subsidiaries and other parts-owned companies | Standardised approach |
| Operational risk | Parent bank | Standardised approach |
| | Subsidiaries and associates | Basic indicator approach |

SpareBank 1 SMN has ownership interests in the following companies as at 31.12.2016:
SpareBank 1 Boligkreditt AS 19.1%
SpareBank 1 Næringskreditt AS 36.5%
BN Bank 33%

SpareBank 1 SMN's share of the capital requirement of these companies is consolidated into SpareBank 1 SMN's capital adequacy reporting based on the Group's ownership interest. SpareBank 1 SMN also owns 19.5% of SpareBank 1 Gruppen and 18.3% of SpareBank 1 Kredittkort. That part of the investment in these companies which exceeds 10% of CET1 capital is deductible from SpareBank 1 SMN's CET1 capital. That part of the investment which is included in CET1 capital carries a risk weight of 250%.

**Pillar 2 – Assessment of overall capital need and supervisory review**
Pillar 2 imposes requirements on the Bank's process for assessing its total capital in relation to risk profile and a strategy for maintaining its capital level, the Internal Capital Adequacy Assessment Process (ICAAP). ICAAP covers risk types not covered by Pillar 1, and must be forward looking. In addition, Pillar 2 defines Finanstilsynet's supervisory process.

The supervisory authorities review and evaluate the banks' internal assessment of capital need and strategies. They also monitor and ensure compliance with the capital requirements imposed by them. The supervisory process shall follow the requirements on the Supervisory Review and Evaluation Process (SREP), and may result in an individual Pillar 2 add-on. Finanstilsynet has published descriptions of the models and methods it uses in its determination of Pillar 2 add-ons[1]. Finanstilsynet defines in its approach that capital requirements related to the transitional rules constitute an independent requirement, which cannot be used to cover other risk types under Pillar 2.

**Pillar 3 – Disclosure requirements**
The reporting requirement under Pillar 3 is spelt out in the Capital Requirements Regulations part IX, chapters 45 and 46. The purpose of this pillar is to complement the minimum capital requirements under Pillar 1 and the supervisory review process under Pillar 2. Pillar 3 is designed to promote market discipline through requirements on the disclosure of information enabling the market, including analysts and investors, to assess the institution's risk management, risk measurement and capital adequacy.

The Basel Committee has published revised requirements for Pillar 3 reporting to be implemented by the end of 2016. The revised requirements have yet to be implemented in the EU.

SpareBank 1 SMN publishes supplementary analyses and data on a quarterly basis in "Supplementary Information".

*Combined buffer requirements*
In addition to the minimum own funds requirement of 8%, Norwegian banks are subject to combined buffer requirements to be met by CET1 capital. The buffer requirements are composed as follows:

- Requirement of a capital conservation buffer (2.5%)
- Requirement of a systemic risk buffer (3%)
- Requirement of a countercyclical buffer (0-2.5%)
- Requirement of a buffer for systemically important institutions (1-2%)

The requirement of a capital conservation buffer of 2.5% of the Bank's risk weighted assets applies throughout, and is designed to ensure that the banks build up capital in good times in order to prevent capital falling below the minimum requirement in downturns. The systemic risk buffer is intended to dampen long-term non-cyclical or macro risk.

System risk buffer (3 percent): Systemic risk can be defined as a risk of financial instability causing disruption in the supply of financial services of a scope that could have significant negative effects on production and employment. Systemic risk buffer of three percent will mitigate the negative effects of financial instability.

The countercyclical buffer aims to dampen the effects of cyclical variations by requiring institutions to build up extra buffer capital in periods of particularly strong credit growth. The assumption here is that this buffer will not be used for the purpose of fine-tuning macroeconomic management by Norges Bank, the central bank. The

[1] http://www.finanstilsynet.no/no/Artikkelarkiv/Rundskriv/2016/2_kvartal/Finanstilsynets-praksis-for-vurdering-av-risiko-og-kapitalbehov/

countercyclical capital buffer is 1.5% as from 30 June 2016. The level is set by the Ministry of Finance based on advice from Norges bank, and the size of the buffer depends on the cyclical situation. The purpose of the countercyclical capital buffer is to render institutions more solid and robust to loan losses in a future slump and to dampen the risk that banks will contribute to intensifying an economic downturn by reducing their lending. Increasing the countercyclical buffer is done with 12 months' notice. A reduction of the countercyclical buffer can be implemented immediately. The Ministry of Finance has decided that the countercyclical buffer is to be further increased to 2% with effect from 31.12.2017.

The buffer requirement for systemically important institutions (SIFIs) 2%. The buffer is designed to reduce the likelihood of difficulties where the wind-down of an institutions might involve financial instability and substantial disruptions in the real economy. Institutions defined as systemically important are in all essentials institutions with total assets representing at least 10% of Mainland Norway's GDP or a share of the lending market of at least 5%. SMN is not defined as systemically important.

Pillar 2
The intention of Pillar 2 is that it should capture the capital requirements for risks not or not fully covered by the capital requirements of Pillar 1. Banks should evaluate their risk and the associated capital adequacy, which will provide FSA basis for determining individual Pilar 2- requirements for banks. FSA has in 2016 established individual requirements of Pillar 2 addition for SMN. The FSA pillar 2 additionally was 2.1%.

Should the Bank breach the combined buffer requirements, a capital plan must be presented to FSA within five working days. The Bank can continue in business, but a breach will involve restrictions on the application of the profit for the year.

SpareBank 1 SMN aims for CET1 capital ratio of at least 14.5% as of 31 December 2016, given the known level of the countercyclical buffer. This provides a management buffer of 0.9% in relation to total pillar 1 requirements as pillar 2 as well.

*Introduction of a leverage ratio*
The introduction of a leverage ratio will act as a capital measure supplementary to the risk-weighted capital requirement. A leverage ratio can provide useful information on the risk weighting used, and will in the final instance be a backstop if very low risk weights are in use. Compared with a number of their international competitors, Norwegian banks have high risk weights and therefore lower reported capital adequacy. The authorities assume that publishing the high capital level of Norwegian banks could be useful.

The leveraged ratio requirement is set at 3% with effect from 30 June 2017. All banks shall in addition maintain a buffer of a further 2%. The requirement for SMN will accordingly be 5% from the date on which the amendment to the regulations enters into force.

At the end of 2016 the Group's leveraged ratio was 7.4%, up from 6.7% at the end of 2015. As at the end of 2016 the Board of Directors has not set a target for the leverage ratio.

The rules of consolidation for the capital adequacy framework are to be applied in the calculation of leverage ratios. In SMN's case this involves proportional consolidation of associates. In addition to on-balance sheet consolidation in the capital adequacy context, adjustments must be made for off-balance sheet items. At the end of 2016 the exposure measure for SMN was NOK 203.4bn.

Eligible tier 1 capital totalled NOK 15.069m.

**Quantitative liquidity requirements**
*Introduction of liquidity requirements (LCR)*
The requirements on financial institutions in terms of maintaining a liquidity buffer sufficient to survive periods of great stress are increasingly stringent. The LCR (Liquidity Coverage Ratio) largely resembles traditional liquidity indicators, but imposes strict requirements on what qualifies as liquid assets. The main eligible items are cash, government securities and highly liquid assets (in this case defined as covered bonds and well-rated industrial bonds). These assets are intended cover a net negative cash flow in a stressed period of 30 days. 'Stress' includes both on-balance sheet and off-balance sheet items.

*Introduction of requirements on long-term funding (NSFR)*
In the wake of the financial crisis there has been a growing focus on the maturity of the Bank's funding. The introduction of this key ratio aims to ensure that the Bank's asset side of the balance sheet is funded on a sufficiently long-term and stable basis, in this case defined as funding with maturities above one year. This requirement is expected to be introduced in 2018.

# 2. RISK AND CAPITAL MANAGEMENT AT SPAREBANK 1 SMN

SpareBank 1 SMN aims to maintain a moderate risk profile and to employ risk monitoring of such high quality that no single event will seriously impair the Bank's financial position. The Bank's risk profile is quantified through targets for rating, concentration, risk-adjusted return, probability of default, loss ratios, expected loss, necessary economic capital, regulatory capital adequacy and anticipated regulatory liquidity requirements.

The principles underlying SpareBank 1 SMN's risk management are laid down in the Bank's risk management policy. The Bank gives much emphasis to identifying, measuring, managing and following up central risks to ensure that the Group evolves in line with its adopted risk profile and strategies.

Risk management is intended to support the Group's strategic development and target attainment. The risk management regime is also designed to ensure financial stability and prudent asset management.
This will be achieved through:

- a strong organisation culture featuring a high level of risk-management awareness
- a sound understanding of the risks that drive earnings and risk costs, thereby creating an improved basis for decision-making
- striving for an optimal use of capital within the adopted business strategy
- avoiding unexpected negative events which could be detrimental to the Group's operations and reputation in the market.

The Group's risk is quantified by calculating expected loss and the risk-adjusted capital (economic capital) needed to meet unexpected losses. Expected loss is the amount which statistically can be expected to be lost in a 12-month period. Risk-adjusted capital is the volume of capital the Group considers it needs to meet the actual risk incurred by the Group. The Board of Directors has resolved that the risk-adjusted capital should cover 99.9% of all possible unexpected losses.

Statistical methods are employed to compute expected loss and risk-adjusted capital, but calculation none the less requires expert assessments in some cases. In the case of risk types where no recognised methods of calculating capital need are available, the Bank defines risk management limits to ensure that the likelihood of an event occurring is extremely low.

Return on risk-adjusted capital is one the key strategic profit measures in the internal management at SpareBank 1 SMN. It entails allocating capital to the business areas based on the estimated risk attending the business concerned, and continuous monitoring of return on capital. Calculation of risk-adjusted capital enables comparison of risk across risk groups and business areas. To this end the bank has introduced EVA calculations in order to follow the business areas' risk adjusted profitability. Risk is also monitored by measuring positions relative to quantitative risk limits and key portfolio risk limits.

The Group's overall risk exposure and risk trend are monitored through periodic risk reports to the Administration and the Board of Directors. Overall risk monitoring and reporting are carried out by Risk Management which is independent of the Group's business areas.

**RESPONSIBILITY FOR RISK MANAGEMENT AND CONTROL**

Risk management and control are part of SpareBank 1 SMN's corporate governance as described in the chapter on Corporate Governance in the annual report. The Group's control and management model aims for independence in risk reporting, with due emphasis given to responsibilities and roles in the day-to-day risk management.

SpareBank 1 SMN has for several years devoted substantial resources to developing effective risk management processes in order to identify, measure and manage risk.

In the risk and capital management process, organisation culture is the very foundation on which the other elements are built. SpareBank 1 SMN's organisation culture comprises management philosophy, managerial style and the people making up the organisation with their individual qualities such as integrity, values and ethical mindset. A deficient organisation culture cannot be compensated for by imposing other control and governance measures.

The Group attaches importance to a control and management structure that promotes targeted and independent management and control.


**Figure 2 - Roles and responsibilities in the risk management process**

The risk management process at SpareBank 1 SMN is split into the following functions:

- an executive function including both line (customer responsibility) and group staff (management/support/control))
- an independent monitoring function (Risk Management and Compliance)
- an independent confirmation function (internal audit function)

This control and management model is designed to ensure independence in decision-making and reporting, and responsibilities and roles in the day-to-day risk management are assigned particular importance. An important principle is that the risk management process is an integral part of the day-to-day business. The risk management and compliance function removes none of the responsibility of the profit centres for sound risk management.

An important basis for effective risk management is a strong risk culture that is characterised by a high awareness of risk and risk management throughout the Group. This requires each and every staff member to have a sound understanding of his/her activity and actions, and of the associated risks. The responsibility for risk management is shared between the Board of Directors, Group Management and line management.

The Bank's risk management process is grounded in overall risk management strategies adopted by the Board of Directors and in an assessment of the capital situation that defines risk appetite and economic capacity for risk exposure.

Further, risk management strategies are adopted for various risk types, as well as strategies for the respective business areas that translate risk appetite and ambitions into concrete targets.

Importance is attached to ensuring that the business and risk management strategies are well matched. Current developments in relation to business goal attainment are reported to the Board of Directors on a monthly basis via the Group CEO's scorecard, financial reporting and status reports from the business units. This forms the basis for Board's assessment of the respective units' target attainment.

The Board of Directors receives a quarterly risk and compliance report which enables it to ensure that the activities are being carried out within the risk profile adopted by the Board.

Further, the internal audit function confirms that the activities are in compliance with the framework for internal control that has been established, and that this framework is appropriate. The internal audit function meets with the Board of Directors' audit committee ahead of the Board's consideration in order to review findings and observations.

**Management systems**
The Bank has developed an application portfolio of management systems which has been distributed to all managers in the Bank.

Several of the management information systems are key to the reading, analysis, documentation, reporting and storage of information related to central parameters in the Group's IRB system, and to following up of improvement measures. The most important systems in this context are:

1. Balanced scorecard (BSC), developed for each division, which includes key indicators that are closely related to the IRB system – such as risk-adjusted return, high-risk share, credit quality and default

2. The portfolio management system (PorTo), which is the Group's system for reading and reporting key risk parameters related to lending activity, including:
    - Probability of default (PD)
    - Loss given default (LGD)
    - Exposure at default (EAD)
    - Expected loss (EL)
    - Unexpected loss (UL)
    - Risk adjusted return on risk adjusted capital (RARORAC)
    - Potential problem exposures

The portfolio management system also provides an overview over actual migration and data for validation and stress testing. The system is flexible, and it is a simple matter for the individual user to export data to a spreadsheet in order to conduct sensitivity analyses and what-if analyses of the portfolio concerned.

PorTo is also used as a starting point for budgeting and setting credit-strategy targets for the coming period.

3. The Risk and Information system (RIs), which is a database for follow-up of areas for improvement related to various main and sub-processes or central functions in the Group.

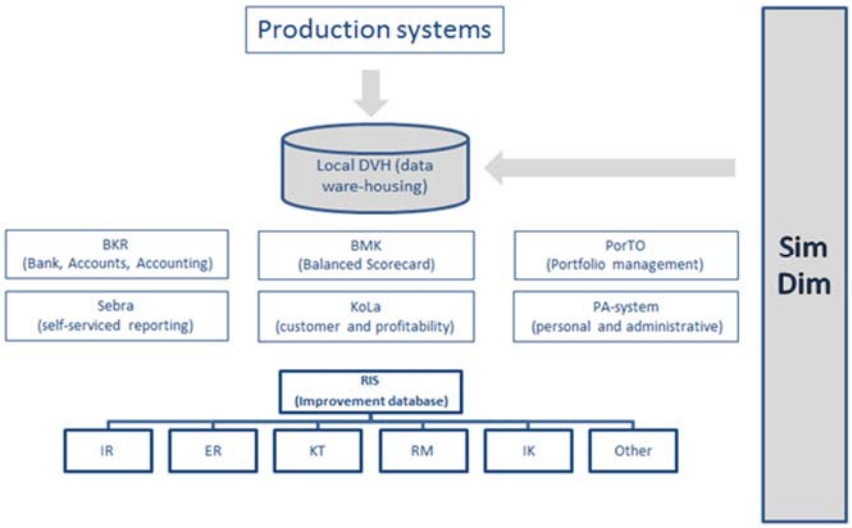



**Figure 3 - Overview of reporting systems**

The **Board of Directors** of SpareBank 1 SMN is responsible for overseeing that the Group's own funds are adequate in relation to the adopted risk profile and requirements set by the authorities.

The Group Board establishes the overarching objectives such as risk profile, return targets and the distribution of capital on the respective business areas. The Board also establishes overall limits, authorisations and guidelines for risk management within the Group, as well as all significant aspects of risk management models and decision-making processes.

The **Group CEO** is responsible for risk management. Hence the Group CEO is responsible for seeing to the implementation of effective risk management systems in the Group, and for the monitoring of risk exposure. The Group CEO is also responsible for delegating authorisations and for reporting to the Board.

The **Divisions** are responsible for the day-to-day risk management within their respective business areas, and they must at all times see to it that risk management and risk exposure are in compliance with the limits and overarching management principles established by the Board or the Group CEO.

**Risk Management** is organised independently of the business units and reports directly to the Group CEO. This division is responsible for the Group's risk models and for the further development of effective risk management systems. It is also responsible for independent risk assessment, risk reporting and for overall monitoring of risk within the Group.

The **Compliance function** is organised independently of the business units. This function identifies, assesses and makes recommendations, and monitors and reports within the regulatory framework governing SpareBank 1 SMN. The function is headed by the legal affairs director who reports to the Group CEO and Board of Directors.

**Credit Committees**. The Group has a central group credit committee and a credit committee for SMB clients. The credit committees are responsible for delivering an independent recommendation to the authorisation holder concerned. The recommendation:

- assesses loan and credit applications in accordance with the existing credit strategy, credit policy, lending regulations and credit processing procedures
- gives particular emphasis to identifying risk related to the individual application and to providing an independent credit risk assessment
- clarifies the consequences for the Group of the various risks involved

**Credit Support Unit.** This unit takes over dealings with customers who are clearly unable, or are highly likely to become unable, to service their debts unless action is taken beyond ordinary follow-up.

**Credit Watch Committee**. This committee's main focus is on exposures at risk. The committee deals with exposures defined on a centralised watch list, mainly in excess of NOK 50m.

**Validation Committee.** This committee reviews at least once yearly the validation of the Bank's IRB models. The committee also considers proposals for implementation of new and further developed versions of the Bank's IRB models. The committee submits recommendations to the Bank's board of directors, which adopts the final decision.

The **Balance Sheet Committee** is responsible for dealing with matters related to capital structure and liquidity risk, market risk, internal pricing of capital and compliance with limits established by the Board.

The **Internal Audit** is a tool at the disposal of the Board of Directors and the Administration which oversees that the risk management process is targeted, effective and functions as intended. The Group's internal audit is carried out by an external provider, thereby assuring the required independence, competence and capacity. The Internal Audit function reports to the Board of Directors. The Internal Audit function's reports and recommendations for improvements in the Group's risk management are gone through on a continuous basis.

The Internal Audit function reviews, regularly and at least annually, the IRB system, including the models underlying the calculation of risk parameters and the application of and compliance with the Capital Requirements Regulations. KPMG conducts the Group's internal audit.

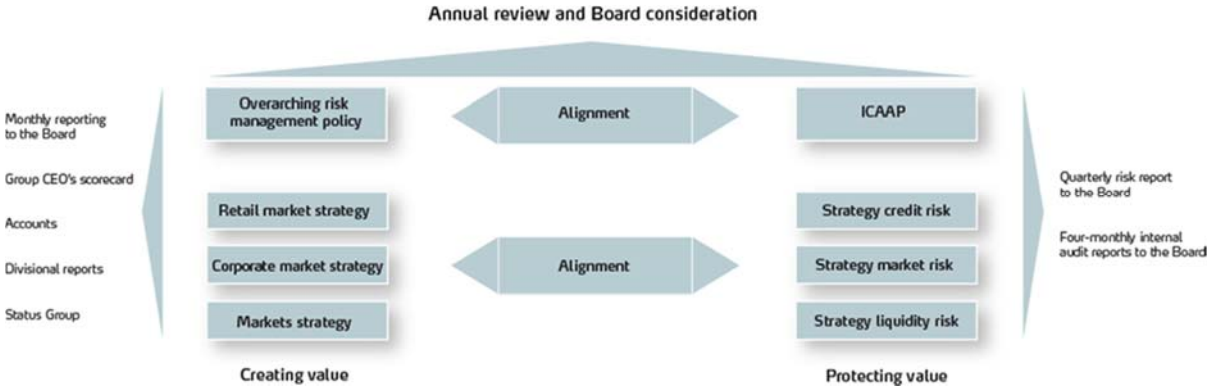



**Figure 4 - Overview of business strategies and risk strategies in context**

## CAPITAL MANAGEMENT

SpareBank 1 SMN applies a focused capital management process designed to assure:

- Effective capital procurement and capital application in relation to the Group's strategic objectives and adopted business strategy
- Competitive returns
- Satisfactory capital adequacy in relation to the chosen risk profile
- Competitive terms and good long-term access to capital market funding
- The Group's ability to maintain at minimum its present international ratings
- Utilisation of growth potentials in the Group's defined market area
- That no individual events can seriously impair the Group's financial position

A long-term objective of the adopted business strategy is to ensure that the risk-adjusted capital is as far as possible allocated to those areas that yield the highest risk-adjusted return.

Legislation imposes on SpareBank 1 SMN rules setting minimum requirements on capital adequacy and financial strength. The Committee of European Banking Supervisors (CEBS) has laid down guidelines for supervisory authorities' reviews of institutions' internal capital adequacy assessment process (ICAAP).

As an integral part of its risk management policy, SpareBank 1 SMN has established a capital allocation process (ICAAP) to ensure that the Bank at all times has sufficient own funds in relation to its chosen risk profile. The process also aims to ensure efficient and effective procurement and application of capital. The bank has drawn up a recovery plan for handling the capital and liquidity situation should the Group encounter every pressure on its CET1 capital adequacy, and in periods of turbulent financial markets. Measurements of KRIs (Key Risk Indicators) are made on a continuous basis in order to capture signals indicating that the bank is moving towards defined trigger levels. Potential measures are identified and quantified.

The capital management process must:

- be risk-driven and include all significant types of risk within the Group
- be an integral part of the business strategy, management process and decision-making structure
- be forward-looking and include stress testing
- be based on recognised and appropriate risk measurement methods and procedures
- be regularly reviewed, at least annually, by the Board

*Stress tests*

Key to the assessment of the Group's long-term capital need are a stress-testing process and models. The intention is to identify factors which may adversely affect the risk picture and capital adequacy. Stress testing is intended to cover all significant aspects of the risk picture, and includes an assessment of their significance for the Group's financial position.

The stress tests represent factors which could arise from time to time, and which SpareBank 1 SMN should make allowance for in the interest of long-term operation. The assessment and determination of necessary capital forms part of an overall risk assessment, together with an assessment of future growth plans and strategies.

The Group's stress test and scenario model is illustrated in the following figure:

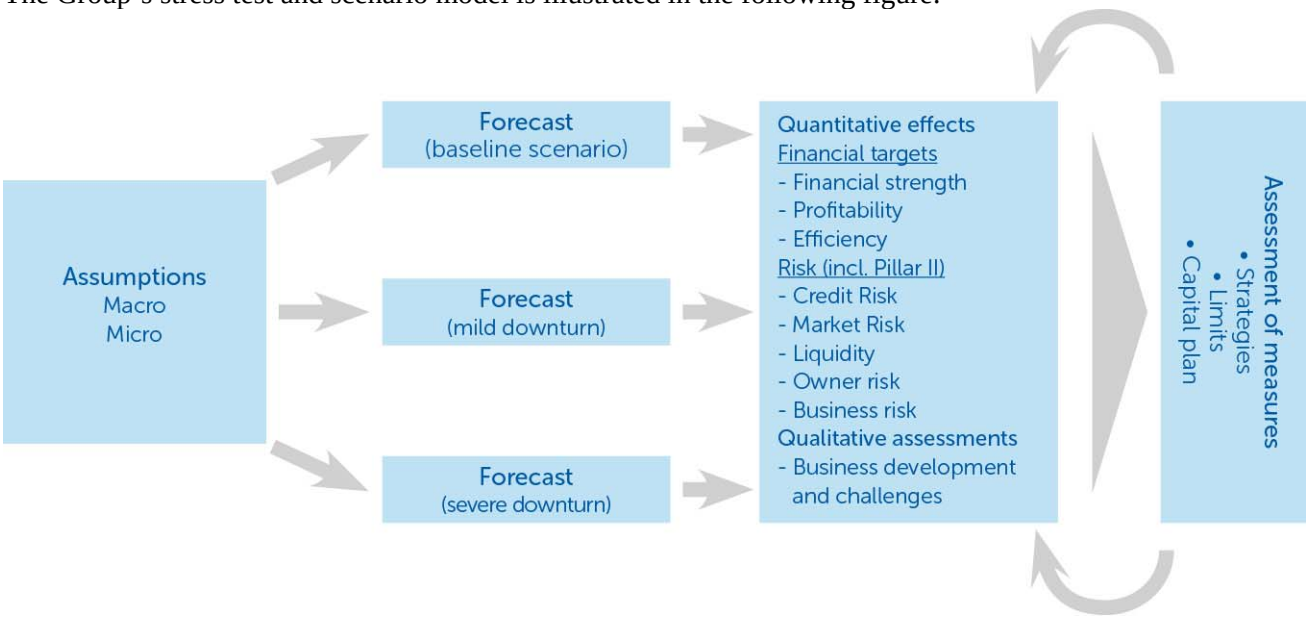



**Figure 5 - Structure – stress testing**

A substantial challenge is to define and translate the macro assumptions into business effects by assessing:

- the credit score models – assessment of migration and changes in probability of default, expected and unexpected loss
- financial strength and profitability – forecasts for normal development and various economic setbacks
- liquidity (funding) – challenges facing the Group and vulnerability to changes in funding level and to a general financial crisis, or unusual situations for the Bank
- the impact on the market and the competitive situation

*Description of scenarios*

In order to define the macro scenarios we use a simple macro model that sets a minimum requirement for consistency between the macro variables. The model shares many features with Norges Bank's macro models, but is considerably simpler in order to be operative in Excel. The model contains the following assumptions:

- The production gap is modelled as a function of historical production gap, real interest rate and a residual. Inflation is modelled as a function of historical inflation, production gap and a residual.
- The nominal money market rate is modelled as a function of the divergence between inflation and inflation target, production gap and a residual (Taylor rate)
- Unemployment is modelled as a function of historical unemployment along with the level of and change in the production gap.
- GDP growth is modelled as a function of the production gap and an assumption for potential growth.
- Operating income, operating expenses and operating profit are modelled as a function of GDP growth, inflation and level of production gap and a residual. The level of the production gap determines the trend in the margin, i.e. ratio between the growth rates for operating income and operating expenses.
- Finance costs are a simple function of nominal money market rate and a residual which for example takes account of changes in risk premiums.

This model is implemented in all macro scenarios when assessing effects on the balance sheet, profit/loss and risk, and is used in particular to estimate effects on credit risk. Other variables are determined to a larger degree by management judgement.

For the Bank it is important that the scenario and stress test for a severe economic setback should envisage severe – but possible – disturbances in the economy, thereby indicating how much *could* be lost, not necessarily how much probably *would* be lost. Hence they need not express changes we consider to be probable, since our assumptions make clear that all events take place simultaneously (correlation = 1).

As mentioned, effects of major crises are more a basis for illustrating the effect of possible tremors in the economy and their impact on the Bank's profitability and financial position. This provides a basis for management's discussions about measures that may need to be taken in the event of a major banking crisis.
For the authorities it is important that banks conduct scenarios and stress tests in order to reveal the robustness of the financial sector.

SpareBank 1 SMN regularly conducts economic projections with a three-year perspective via long-range forecasts.

**Reporting and follow-up**
An important element of effective risk management is monitoring of current risk exposure. All managers are responsible for day-to-day risk management within their area of responsibility, and they must at all times see to it that risk exposure is within the limits decided by the Board of Directors or CEO.

The Group's overall risk exposures and risk trend are monitored through periodic risk reports to the Administration and Board of Directors. Overarching risk monitoring and reporting are done by Risk Management which is independent of the business units in the Group.

Significant reporting to the Management Team and Board of Directors:

| Analysis/report | Recipient/ decision-maker | | Frequency | | | Comments |
|---|---|---|---|---|---|---|
| | Board of Directors | Group CEO | Yearly | Quarterly | Monthly | |
| Risk management policy – overarching | x | | x | | | Assessment and adjustment of the Bank's risk tolerance in various risk areas – credit, market, liquidity and operational risk |
| Risk strategy – credit, market and liquidity risk | x | | x | | | Assessment and adjustment of detailed targets and limits for credit, market and liquidity risk |
| ICAAP | x | | x | | | Assures that the Group has a process for assessing its total own funds in relation to risk profile. ICAAP also helps to determine a prudent target capital adequacy ratio and assure a prudent liquidity strategy. |
| Risk report | x | | | x | | Quarterly report of status and expected trend in Group risk profile. Also confirms compliance with and fulfilment of strategic targets and limits laid down in the Group's risk strategy. |
| Key figures report, risk | | x | | | x | Status and trend in relation to targets and limits for credit, market and liquidity risk. |
| Validation report | x | | x | | | Annual overview of quantitative and quantitative validation |
| Economic/financial report | x | | x | x | x | |
| Assessment of need for impairment write-down | | x | | x | | Minimum quarterly review of large and potential-problem exposures and portfolios to assess any need for impairment write-down – individual and collective. |

**Figure 7 – Significant reporting to the Management Team and Board of Directors**

**Risk areas**

SpareBank 1 SMN identifies and manages risk within the following risk areas:

- **Strategic risk:** Risk of earnings shortfall or failure to generate capital due to changes in framework conditions, poor business decisions, poor implementation of decisions or failure to adjust to changes in business framework conditions.
- **Credit risk:** Risk of loss resulting from the customer's inability or unwillingness to honour their obligations.
- **Market risk:** Risk of loss due to changes in observable market variables such as interest rates, exchange rates and securities markets.
- **Operational risk:** Risk of loss as a result of unsatisfactory or failing internal processes or systems, human error or external events. Operational risk includes legal risk, but not strategic risk or reputational risk.
- **Liquidity risk:** Risk that the Group will be unable to refinance its debt or unable to fund increases in assets.
- **Owner risk:** Risk of loss at subsidiaries, SpareBank 1 Gruppen and SpareBank 1 Boligkreditt is related to the risk that any of these companies incurs in their operations, as well as the risk of having to supply fresh capital to one or more of these companies.
- **Business risk:** Risk of shortfall in earnings and capital supply due to lack of diversification of the business base or lack of sufficient and permanent profitability, for example due to an excessively high cost-income rate.
- **Reputational risk:** Risk of shortfall in earnings and capital supply due to failing confidence and reputation in the market, i.e. among customers, counterparties, equity certificate holders and the authorities.
- **Compliance risk:** Risk of the Group incurring public sanctions or fines, financial loss or reputational impairment as a result of non-compliance with laws and/or regulations, standards or internal procedures.

# 3. REGULATORY CAPITAL ADEQUACY (PILLAR 1)

**Consolidation.** The table below shows the difference in the consolidation basis for consolidation pursuant to the accounting rules and consolidation for capital adequacy purposes.

| Investment in subsidiaries<br>Shares owned by the parent bank | Company's share capital (NOK thousands) | No. Of shares | Nominal value (NOK thousands) | Book value 31.12 | Voting entitlement |
|---|---|---|---|---|---|
| SpareBank 1 Finans Midt-Norge AS | 534.290 | 53.429 | 10,0 | 448 | 64,6 |
| SpareBank 1 SMN Invest AS | 457.280 | 457.280 | 1,0 | 739 | 100,0 |
| EiendomsMegler 1 Midt-Norge AS | 57.803 | 4.788 | 10,5 | 120 | 87,0 |
| SpareBank 1 SMN Kvartalet AS | 326.160 | 30.200 | 10,8 | 919 | 100,0 |
| SpareBank 1 Regnskapshuset SMN AS | 17.136 | 238 | 72,0 | 121 | 100,0 |
| Allegro Kapitalforvaltning ASA | 6.000 | 6.000 | 1,0 | 11 | 90,1 |
| SpareBank 1 Bygget Steinkjer AS | 6.100 | 100 | 61,0 | 53 | 100,0 |
| SpareBank 1 Bygget Trondheim AS | 94.236 | 100.000 | 0,9 | 75 | 100,0 |
| SpareBank 1 SMN Card Solutions AS | 200 | 2.000 | 0,1 | 9 | 100,0 |
| St. Olavs Plass 1 SMN AS | 10.000 | 100.000 | 0,1 | 75 | 100,0 |
| SpareBank 1 Bilplan AS | 5.769 | 41.206 | 0,1 | 9 | 100,0 |
| Jernbanegata 19 SMN AS | 1.000 | 1.000.000 | 0,1 | 13 | 100,0 |
| SpareBank 1 Markets AS | 378.347 | 2.265.553 | 167 | 363 | 73,5 |
| SMB Lab AS | 5.000 | 50.000 | 0 | 50 | 100,0 |
| **Shares owned by subsidiaries and sub-subsidiaries** | | | | | |
| Leksvik Regnskapskontor AS | | | | | 50,0 |
| GMA Invest AS | | | | | 100,0 |
| Sentrumsgården AS | | | | | 35,3 |
| Aqua Venture AS | | | | | 37,6 |
| Maritech Systems AS | | | | | 23,1 |
| Omega-3 Invest AS | | | | | 33,6 |
| Tjeldbergodden Utvikling AS | | | | | 23,0 |
| Grilstad Marina AS | | | | | 35,0 |
| Grilstad Energi AS | | | | | 30,0 |
| GMN 4 AS | | | | | 35,0 |
| GMN 51 AS | | | | | 30,0 |
| GMN 52 AS | | | | | 30,0 |
| GMN 53 AS | | | | | 30,0 |
| GMN 6 AS | | | | | 35,0 |
| SpareBank 1 Capital Markets | | | | | 100,0 |
| **Investments in joint ventures** | | | | | |
| SpareBank 1 Gruppen AS | | | | | 19,5 |
| SpareBank 1 Banksamarbeidet DA | | | | | 17,7 |
| Sparebank 1 Mobilbetaling AS | | | | | 19,7 |
| BN Bolig AS | | | | | 50,0 |
| **Investments in affiliates** | | | | | |
| BN Bank ASA | | | | | 33,0 |
| SpareBank1 Boligkreditt AS | | | | | 19,1 |
| SpareBank 1 Næringskreditt AS | | | | | 36,5 |
| SpareBank 1 Kredittkort AS | | | | | 18,3 |
| Bjerkeløkkja AS | | | | | 40,7 |
| **Investment in companies held for sale** | | | | | |
| Mavi XV AS | | | | | 100,0 |
| Mavi XI AS | | | | | 100,0 |
| Mavi XXIV AS | | | | | 100,0 |
| Mavi XXV AS | | | | | 100,0 |
| Mavi XXVI AS | | | | | 100,0 |
| Mavi XXVII AS | | | | | 100,0 |
| Mavi XXVIII AS | | | | | 100,0 |

**Table 1 - investments in subsidiaries and affiliates**

SpareBank 1 SMN considers it important for all units in the Group to be satisfactorily capitalised at all times. The Group's governing bodies have not set restrictions on the Board of Directors' opportunity to transfer capital between the parent bank and subsidiaries and among subsidiaries beyond those set by regulatory and other statutory provisions. Nor do the articles of association set such restrictions. For the same reason neither bank nor its subsidiaries enter into agreements restricting the Board of Directors' right to transfer capital as mentioned. This is true of funding agreements as well as agreements with suppliers and customers.

Against the above background there are equally no restrictions on the Board of Directors' opportunity to reallocate capital between the various business units in the parent bank. Transfer of capital between the companies is regulated by the ordinary framework legislation for these entities and for the financial services group.

As in the case of investments in the subsidiaries, the Group has a strategic interest in supporting the activities of BN Bank ASA, SpareBank 1 Næringskreditt AS, SpareBank 1 Boligkreditt AS, SpareBank 1 Gruppen AS. The Group is concerned that no agreements should be entered into or resolutions or the like adopted that entail a restriction on the owner banks' opportunity to transfer capital to these companies if this should prove necessary in order to achieve satisfactory capital adequacy and/or financial strength.

The Group assumes that it would not be practical to transfer capital other than ordinary dividend payments from these companies to the owner banks, and takes this as a basis for the Group's own risk profile. The owner banks' policy is to transfer the entire net profit, and thereafter carry out the necessary recapitalisation.

## Own funds

The table below shows the composition of tier 1 capital and own funds for the Parent Bank and the Group at end-2016

| Own funds | Group | Parent |
|---|---|---|
| Equity certificates | 2.597 | 2.597 |
| - Treasury equity certificates | -4 | - |
| Premium reserve | 895 | 895 |
| Equalisation reserve | 4.484 | 4.487 |
| Ownerless capital | 4.498 | 4.498 |
| Allocated to dividend | 389 | 389 |
| Allocated to gifts | 220 | 220 |
| Unrealised gains reserve | 139 | 126 |
| Other equity capital | 1.656 | - |
| Minority interests | 425 | - |
| **Total book equity** | **15.299** | **13.212** |
| Deferred tax, goodwill and other intangible assets | -741 | -470 |
| Share of unrealised gains reserve in affiliates | 117 | - |
| Deduction for allocations to dividend and gifts | -609 | -609 |
| Minority interests booked in other equity | -425 | - |
| Minority interests eligible for inclusion in CET1 capital | 220 | - |
| Overfunding of pension liability | - | - |
| Value adjustments resulting from prudent valuation requirements | -48 | -29 |
| Positive value of adjusted expected loss under IRB approach | -248 | -190 |
| Direct, indirect and synthetic investments in financial sector companie | -337 | - |
| Total CET1 capital | **13.228** | **11.914** |
| Hybrid capital | 1.358 | 950 |
| Direct, indirect and synthetic investments in financial sector companie | 483 | 483 |
| **Total tier 1 equity capital** | **15.069** | **13.347** |
| | | |
| **Capital additional to tier 1 equity** | | |
| Own funds | 1.698 | 1.000 |
| Subordinated debt covered by transitional provisions | 673 | 673 |
| Direct, indirect and synthetic investments in financial sector companie | -256 | -256 |
| **Total additional capital** | **2.115** | **1.417** |
| **Net own funds** | **17.184** | **14.764** |

**Table 2 - composition of own funds**

**Regulatory capital requirements at 31.12.2016**

The companies making up the SpareBank 1 SMN Group are listed in Table 1. The table below shows the minimum regulatory requirement on own funds.

| Minimum requirements on own funds, Basel II | Group | Parent |
|---|---|---|
| Specialised lending | 1.206 | 1.065 |
| Other corporate exposures | 1.102 | 1.064 |
| Retail SMB exposures | 1.602 | 1.128 |
| Retail mortgage exposures | 166 | 156 |
| Other retail exposures | 74 | 71 |
| Equity capital positions | 3 | 1.223 |
| **Total credit risk, IRB** | **4.153** | **4.707** |
| Debt risk | 36 | 35 |
| Equity risk | 5 | - |
| Currency risk | 1 | - |
| Operational risk | 479 | 334 |
| Exposures measured using standardised approach | 1.772 | 898 |
| CVA risk | 84 | 51 |
| Transitional arrangement | 574 | - |
| **Minimum requirement on own funds** | **7.103** | **6.025** |
| Risk weighted assets | 88.788 | 75.325 |
| Minimum requirement on CET1 capital, 4.5% | 3.995 | 3.390 |
| Buffer requirements | | |
| Capital conservation buffer, 2.5% | 2.220 | 1.883 |
| Systemic risk buffer, 3.0% | 2.664 | 2.260 |
| Countercyclical buffer, 1.5% | 1.332 | 1.130 |
| Total buffer requirements on CET1 capital | 6.215 | 5.273 |
| Available CET1 capital after buffer requirements | 3.017 | 3.251 |
| Capital adequacy | | |
| CET1 capital ratio | 14,9 % | 15,8 % |
| tier 1 capital ratio | 17,0 % | 17,7 % |
| total capital ratio | 19,4 % | 19,6 % |
| unweighted core capital ratio | 7,4 % | 9,5 % |

**Table 3 - regulatory capital adequacy at 31.12.16**

The minimum requirement on own funds is NOK 7,157m,

At the end of 2016 the Group's CET1 capital ratio was 14.9% (13.6%), the tier 1 capital ratio was 17.0% (15.6%) and the total capital ratio was 19.4% (18.3%). The Group has planned for a CET1 ratio of at least 15% by 31.12.2017, given the currently known level of the countercyclical buffer.

| **Subordinated debt and hybrid capital** (NOK million) | **Group** | **Parent** |
|---|---|---|
| **Dated:** | | |
| 2022 3 month Nibor + 2.75% (Call 2017) | 1 000 | 1 000 |
| 2036 fixed rate 2.94%, JPY (Call 2018) * | 662 | 662 |
| 2026 Spb1 Finans Midt-Norge AS 16/26 | 43 | 0 |
| Premium/discount/market value | 22 | 22 |
| Currency agio dated | 9 | 9 |
| Accrued interest | 2 | 2 |
| **Total dated** | **1 737** | **1 695** |
| | | |
| **Perpetual non-call:** | | |
| Perpetual non-call 3 month Nibor + 0.85% (Call 2016) | 0 | 0 |
| **Total perpetual non-call** | **0** | **0** |
| | | |
| **Hybrid equity:** | | |
| Hybrid capital10/99, fixed rate 8.25% NOK (Call 2020)* | 350 | 350 |
| Hybrid capital 10/99, floating rate NOK (Call 2020) | 100 | 100 |
| Hybrid capital 13/99, floating rate NOK (Call 2018) | 500 | 500 |
| Hybrid capital 13/99, floating rate NOK (Call 2018) | 450 | 450 |
| Discount perpetual hybrid equity | 33 | 33 |
| Accrued interest | 12 | 12 |
| **Sum fondsobligasjonslån** | **1 445** | **1 445** |
| | | |
| **Total subordinated loan capital and hybrid equity** | **3 182** | **3 140** |
| | | |
| Average rate NOK | 4,8 % | 4,8 % |
| Average rate YEN | 4,2 % | 4,2 % |

1) Fixed rate financing converted to floating rate using interest rate swaps

**Table 4 – composition of subordinated debt and hybrid capital at 31.12.16**

The following chapters give a closer account of SpareBank 1 SMN's framework for and management of credit, market and operational risk respectively.

## 3.1 Credit risk

Credit risk is the risk of loss due to customers or counterparties being unable or unwilling to meet their obligations to the group. The bank's organization and framework for credit risk management is adapted to the Basel Committee's "Sound Practices for the Management of Credit Risk" and Finanstilsynet module for managing and controlling credit risk.

Credit risk in lending operations are the Group's biggest risk area. Group incurs exposure to credit risk through lending and leasing products to retail and corporate clients and through the activities of the Bank's Capital Markets and Treasury.

Through its annual credit strategy specifies the board the bank's risk appetite by establishing objectives and limits for the Bank's credit portfolio.

The bank's credit strategy and credit policy are derived from the bank's main strategy and contains guidelines for risk profile, including maximum expected loss (EL) respectively and the Retail Market, maximum portfolio default probability (PD) and maximum economic and regulatory capital (UL) allocated to credit operations.

Concentration risk is managed by:

- limitation of the size of loans and loss on individual loans
- limits for maximum exposure and the use of economic capital within lines

- framework for regulatory calculation for the Retail and Commercial
- requirements for maximum exposure, credit quality and number of exposures over ten percent of regulatory capital.

Compliance with credit strategy and limits adopted continuously monitored by the risk management department and reported quarterly to the Board.

### 3.1.1 Management of credit risk

*Credit strategy*
The Group's primary market area is Mid-Norway consisting of North and South Trøndelag and Møre and Romsdal. The Group also operates in parts of Sogn og Fjordane.

The group intends to maintain a moderate risk profile in the segments in which it operates. Credit strategy limits curb exposure to individual lines of business and clients, and set a ceiling for loss risk per client. Further, the credit strategy sets limits for growth and use of capital within the various market areas.

The credit strategy and limits are established by the Board of Directors on an annual basis.

*Credit policy*
The credit policy rules describe limits to, and what is acceptable within given areas in the credit assessment. In addition to the credit policy rules, a document has been drawn up describing guidelines for lending to corporate clients. These guidelines indicate recommended levels and limits in various areas, in contrast to the credit policy rules where specific authorisations are needed in order to diverge from them. The credit policy rules are revised at least once per year and are approved by the CEO, who duly informs the Board of Directors.

*Authorisations*
The Board of Directors are responsible for the Group's granting of loans and credit, but delegate – subject to certain limits – credit authorisations to the CEO, who within his own authorisations can delegate the credit authorisations to others. The delegated credit authorisations are linked to an exposure's probability of default and collateral value and apply to grouped clients at parent bank level. The authorisations are personal. This means that the credit committees do not have decision-taking authority, but make a recommendation to the authorisation holder. For some levels of position the authorisation limit will be reduced by 50% if a recommendation from a credit committee is not available. In general the authorisations are substantial if an exposure's probability of default and loss ratio indicate low risk, whereas authorisations are progressively tightened with increasing risk. The lending regulations are reviewed on an annual basis, and changes are approved by the CEO with a briefing to the Board of Directors. However this does not apply to changes in the CEO's credit authorisations or where the changes entail a significant change in risk, since these are approved by the Board of Directors.

*Credit procedures*
The credit manual regulates in detail all matters related to the Group's lending and exposure monitoring. The credit manual provides a closer description of the customer and the purpose of the loan application, and assessments of matters related to:

- Owners and management
- Funding structure
- Observance of credit strategy and credit policy
- Earnings – will the customer have sufficient earnings ahead to service ongoing commitments, interest and instalment payments?
- Absorption – if earnings fail, for how long and by what means can the client meet commitments, interest payment and principal payments?
- Collateral items and overall risk assessment

### 3.1.2 Measurement of credit risk

Credit risk in the portfolio is monitored on an ongoing basis. This is done through monthly reclassifications of each individual customer in which the bank's IRB-approved risk models are utilised. In addition, the bank has

established early warning systems for early identification of undesired risk build-up at portfolio or single customer level. The bank monitors and reports breaches of credit strategy and credit policy in matters dealt with by the Group Credit Committee, and the results are reported to each meeting of the Board of Directors.

*Portfolio management*
The Group performs a monthly reclassifications of all customers whereby updated information of significance for calculating credit risk is obtained and utilised in our credit models. The portfolio management system can thus each month present updated estimates for customers' probability of default, loss ratios and expected losses. Based on this, capital needs and risk-adjusted return are calculated. Both internal and regulatory calculations are included in this reclassification, and are made available to customer offices, managers and the risk management function. Credit risk information concerning individual customers can readily be aggregated at the desired level, for example division, segment, portfolio or bank level.

*Early warning*
The Group has established a number of processes and reports to enable early identification of changes in credit risk with consequences in terms of default and loss ratio. Examples of the Group's early warning process:

- Reporting of brief non-performance (0-90 days)
- Reporting of utilisation of flexi-loan limits and of overdraft facilities
- Reporting of development in and breach of covenants
- Reporting of developments in exposures with forbearance
- Monitoring of announcements (bankruptcies, compulsory winding up orders, mergers, demergers etc)
- Monthly bankruptcy statistics, by industry and region
- Monthly follow-up of changes in capital use and analysis of causes

*Credit process monitoring*
The Group's systems for monitoring the credit granting process makes possible ongoing follow-up of the credit quality of, and risk-adjusted return on, new exposures. A credit granting record is downloaded on a monthly basis supplemented with relevant risk and earnings information. The system is well suited to comparisons of quality across divisions, and enables an early response if for example individual divisions show an undesired development in their ongoing credit practices.

### 3.1.3 The risk classification system

The Group has developed its own models for calculating credit risk. The models are approved for use in regulatory calculations: advanced IRB approach. For some of the models the Group has a different calibration level for internal and regulatory calculations (PD and LGD for retail entities, PD for corporates).
The Group's risk classification system consists of the following models:

| | |
|---|---|
| PD | The model calculates the probability of a client going into default in the course of the next 12 months |
| EAD | The model calculates the size of a customer exposure at a future default date |
| LGD | The model calculates how much of the exposure to the customer will be lost to the bank if the customer goes into default |
| EL | The model calculates what statistically can be expected to be lost on a customer in the next 12 months based on PD, EAD and LGD |
| UL | The model calculates what equity bank must hold in order to cover an expected loss on a customer, calculated as all possible losses within a 99.9 % confidence level |
| Risk class | Customers are assigned to risk classes based on PD |
| Risk group | Customers are assigned to risk groups based on risk class |
| Collateral class | Customers are assigned to collateral classes based on collateral cover |

*PD*
The Group's PD model computes the likelihood of a customer going into default in the next 12 months. A default is defined as

- 90 days overdrawn / arrears in excess of NOK 1,000 in the period
- One or more external records of the following type: debt composition, voluntary or compulsory; opening of bankruptcy proceedings or notice of public composition with creditors
- One or more bankruptcy records of the following types: internally registered bankruptcy, opening of bankruptcy proceedings or notice of bankruptcy
- The bank has confirmed losses or made an individually assessed write-down (loss provision)

PD is calculated based on information about the individual customer. Customers are grouped into four categories: Earnings, Financial Position, Behaviour and Age. Based on calculated PD, each customer is assigned to a risk class and risk group according to the following scale:

| PD | Risk class | Risk group | Moody's |
|---|---|---|---|
| < 0,1 % | A | Lowest risk | AAA – A3 |
| 0,10 % - 0,25 % | B | Lowest risk | Baa1 – Baa2 |
| 0,25 % - 0,50 % | C | Lowest risk | Baa3 |
| 0,50 % - 0,75 % | D | Low risk | Ba1 |
| 0,75 % - 1,25 % | E | Low risk | Ba2 |
| 1,25 % - 2,50 % | F | Medium risk | |
| 2,50 % - 5,0 % | G | Medium risk | Ba2 – B1 |
| 5,0 % - 10,0 % | H | High risk | B1 – B2 |
| 10,0 % - 30,0 % | I | Highest risk | B3 – Caa3 |
| Defaulted | J | Defaulted and written down | |
| Written down | K | Defaulted and written down | |

A PD model is generally described in terms of its PIT or TTC characteristics. A model with pronounced PIT (Point in Time) characteristics will rapidly capture changes in the underlying risk and present these as fluctuations in the probability of default. This feature ensures that information on changes in risk in the portfolio are rapidly available. On the other hand, a model with clear-cut TTC (Through the Cycle) characteristics will be more 'sluggish' and stable in its estimates. Such a model is well-suited to calculating the long-term level of probability of default and capital charges. It is difficult to calculate a model's exact PIT or TTC level, but through migration analysis we have arrived at the conclusion that the group's PD models have roughly the same presence of PIT as TTC characteristics.

A PD model has two purposes: to rank customers by risk of default, and to provide a conservative estimate of the default rate (level). When calibrating the model the Group starts out from a long-term outcome of the default rate under normal economic conditions, and corrects for an expected increase in economic contractions.

*EAD*
The Group's EAD model (Exposure at Default) calculates the exposure to the customer at a future default date. The model utilises a conversion factor (CF) which defines how large a portion of the undrawn down limit that is expected to be drawn down by the default date.

The undrawn down portion of limits for retail customers has a conversion factor equal to 1, i.e. a 100% increase is assumed in the event of default. For corporate clients the undrawn down limit is multiplied by a conversion factor that varies between 60 and 90 per cent, depending on the client's probability of default. The conversion factor for guarantees is a parameter established by the authorities and is set at 1 for loan guarantees and 0.5 for contract guarantees and other guarantees.

*LGD*
The Group's model for calculating LGD (Loss Given Default) uses the value of collaterals as the chief explanatory variable. Besides collateral values, estimates of incomings beyond realisation of collateral, the assumed rate of recovery of customers in default and estimated costs of collection are explanatory variables in the model. Whereas the PD model provides estimates as an expression of an average through different economic cycles, the LGD model provides estimates of loss ratios we can expect in economic contractions. This means that most of the time the estimates will be well above the loss ratios actually observed. The Group uses the following classification to rank customers by LGD.

| Estimated LGD | LGD class |
|---|---|
| < 10 % | 1 |
| 10 % - 20 % | 2 |
| 20 % - 30 % | 3 |
| 30 % - 40 % | 4 |
| 40 % - 50 % | 5 |
| 50 % - 60 % | 6 |
| > 60 % | 7 |

*Expected loss - EL*
Expected loss is calculated by multiplying PD, EAD and LGD.

*Unexpected loss – UL*
Unexpected loss, or capital charges, denotes the equity capital needed by the bank to back each exposure and to cover any loss that may arise within a confidence level of 99.9%. Expected loss that has already been calculated is deducted. This uncertainty regarding the possible loss level there is from one customer to the next, and depends inter alia on type of customer, loan term, collateral cover and stable servicing ability. The method used by the Group to calculate capital charges is set out in the Capital Requirements Regulations both for internal and regulatory calculations.

*Risk pricing*
All credits in SpareBank 1 SMN's portfolio are priced in relation to the exposure' risk in the sense that higher risk entails a higher price. The main elements included in this assessment are the customer's overall net interest income, other incomes, expected losses, estimated operating expenses, capital lock-in and the bank's required rate of return. Expected loss, operating expenses and capital lock-in will be affected by assessed risk posed by the customer/exposure. The risk assessments are based in the same main components as in the Group's risk classification system in terms of assessment of debt servicing ability and collateral cover. Whether the price can in the final instance be defended will however also be determined by the pricing applied by important competitors and by strategic considerations.

SpareBank 1 SMN has a pricing model that takes into account these elements and calculates the return relative to the return requirement / EVA (Economic Value Added). The Bank also monitors the profitability of each customer by gathering and analyzing historical data monthly. In profitability opinions contained the same elements as described above.

### 3.1.4 Collaterals and other risk-mitigating measures

SpareBank 1 SMN makes use of collateral to reduce credit risk in each individual exposure. For corporates, use is made various types of covenants in credit agreements in cases where this is appropriate. Use of covenants gives the bank assurance that the company will hold prudent levels of, for example, liquidity and equity, or that the company will abide by applicable laws and regulations that govern its business.

For personal customers mortgages are mainly granted on real property (residential). Corporate borrowings are secured on various types of collateral.

The Group determines the realisation value of furnished collaterals against the background of statistical data over time, and expert assessments in cases where statistical data are not sufficiently reliable. Realisation values are fixed so as to reflect, on a conservative assessment, the presumed realisation value in an economic downturn.

In the personal market the market value of real property is determined either by using the purchase sum shown in the contract, a broker's estimate or valuation estimates from Eiendomdverdi (residential property only). Eiendomsverdi is an information and analysis tool giving access to estimated market values of properties in Norway. In the personal market, collateral is rarely objects other than real property.

In the corporate market collateral values of commercial properties are calculated using the yield method, where the basis is the present value of expected net cash flows associated with the property. Yield reflects the return an investor would demand when investing in the property and is influenced inter alia by factors such as the property's location and type, duration of leases, tenants' financial position, regulatory risk and the expected long-term risk-free interest rate. The realisation value of the collaterals furnished is determined by reducing the market value by a factor that varies in accordance with the collateral object's characteristics.

The reduction factors for all types of collateral are set against the background of value falls to be expected in a severe economic downturn.

### 3.1.5 Validation

The bank's risk management unit conducts validation and further development of the risk management system on a continuous basis. Each year a substantial report is prepared that provides the board of directors with a basis on which to consider whether the risk management system (the IRB system) has sufficient quality, that the models give proper estimates and that the system is well integrated in the Group's credit work.

Validation is performed to ensure:

- that the IRB system is geared to the portfolio to which it is applied
- that the IRB system that measures what it is intended to measure
- that the IRB system is well integrated in the Group's credit activity
- that the Group is compliant with the capital requirements regulations

Validation comprises two main components:

1. Quantitative validation
   Validation to ensure that the models for probability of default, exposure and loss ratio have good ranking ability (where relevant) and provide conservative estimates in relation to observed levels. This component also assesses the models' suitability for the portfolios to which they are applied.
2. Qualitative validation
   Validation to ensure that the IRB system is well integrated in the credit activity by models being in use and recommendations being complied with. Checks are made to ensure that procedures, policies and regulations are complied with. The qualitative validation also provides useful information where the statistical basis for quantitative validation is limited.

An overview of the Group's models is shown in the table below:

| Category | Segment | PD model internal | PD model regulatory | EAD model | LGD model |
|---|---|---|---|---|---|
| Retail | Residential property | PD PM A | PD PM A | CF = 1 | LGD PM |
| | Other | PD PM B | PD PM B | CF = 1 | LGD PM |
| Corporate | Commercial property | PD Property lease | PD CM 1 | EAD CM | LGD CM |
| | Others with accounting obligation | PD CM 1-7 | PD CM 1-7 | EAD CM | LGD CM |

| | | | | | |
|---|---|---|---|---|---|
| | Companies without accounting obligation | PD CM 8 | Standardised | EAD CM | LGD CM |
| | Newly established companies | PD CM 9 | Standardised | EAD CM | LGD CM |

Upon validation the models are assessed in terms of data quality, ranking ability and calibration level.

*Data quality*
The models used to estimate probability of default, exposure at default and loss given default have been developed based on data from the period 1994 to 2012 from the banks in the SpareBank 1 Alliance.

The underlying data are subjected to thorough, continuous quality assurance, and an annual validation is performed to ensure that they are representative for the current portfolio of SpareBank 1 SMN. Validation of the underlying data also shows that they are compliant with the requirements of the Capital Requirements Regulations. Satisfactory safety margins have been established where this considered necessary in view of the uncertainty attending the data.

As and when the models are used the underlying data are continuously expanded for calibration of levels.

*Ranking ability*
Upon validation of the PD model, the model's ability to rank customers by probability of default is measured. Given good ranking ability, it will be seen that defaulted customers (before default occurs) consistently have a higher probability of default than customers who do not go into default. It is also important to check that ranking ability is maintained through different cyclical situations.

The EAD model's states the degree to which the model is able to rank customers based on actually observed CFs (conversion factors). For retail customers where the CF is set at 1 for all customers, ranking ability is of course not an issue.

For the LGD model we compare estimated and observed LGD (loss ratio) for the various LGD classes, and check that customers in the weakest LGD classes consistently have higher observed LGD than customers in the best LGD classes.

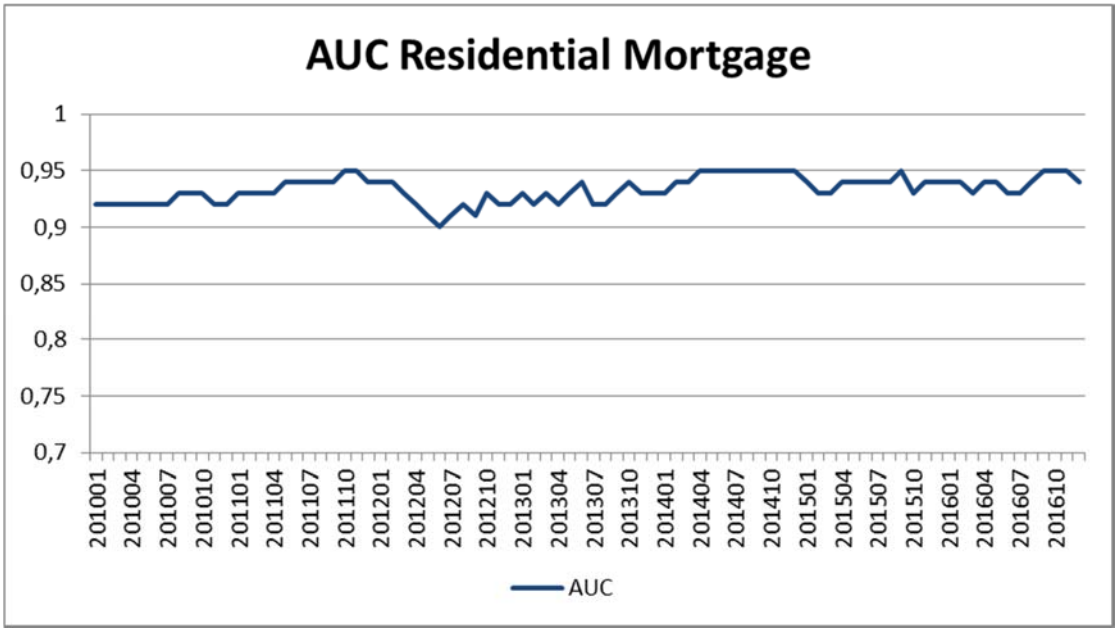
*Calibration level*
The PD model is intended to give a prudent and conservative estimate of a default. According to the Capital Requirements Regulations the estimate should be calibrated against a long-term outcome of the default. In the validation we must therefore assess the estimates against the observations in light of the prevailing economic situation. Based on the validation results it may be relevant to adjust the calibration level.

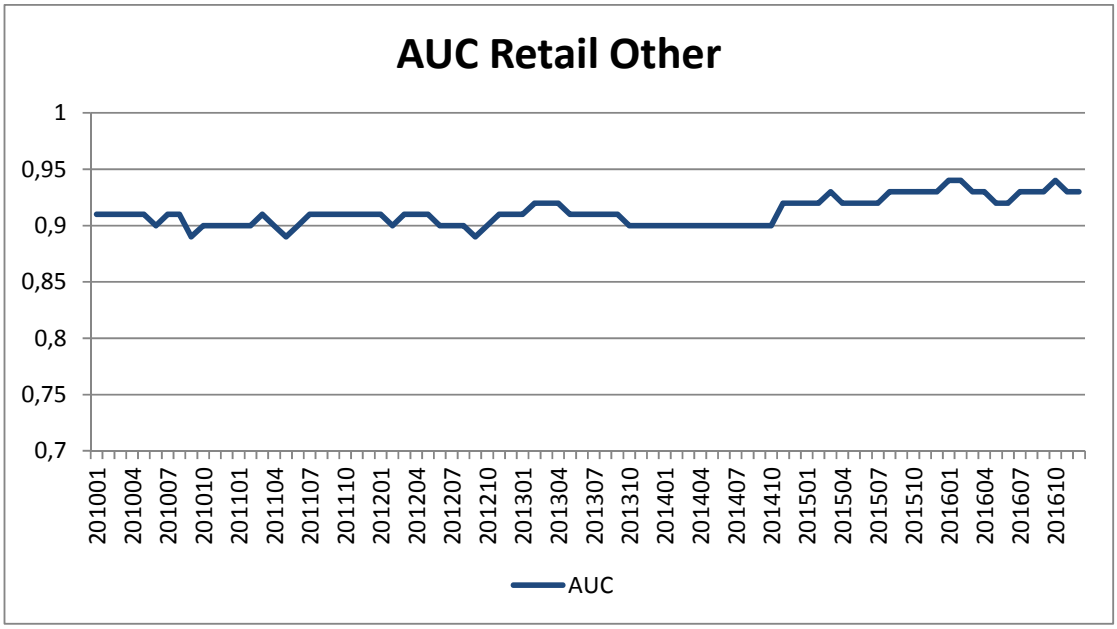
Both the EAD and the LGD model are designed to provide estimates given an economic contraction. This means that estimates under normal conditions will be well above observed values. This also makes it more challenging to make safe assessments if observed security margins are sufficient. Validation is also carried out for various parameters included in the LGD model (recovery rate, reduction factors per type of object, amount recovered in excess of collateral realisation, and collection costs).

The Group also views estimates of expected loss against observed losses to ensure that our models are sufficiently conservatively calibrated.

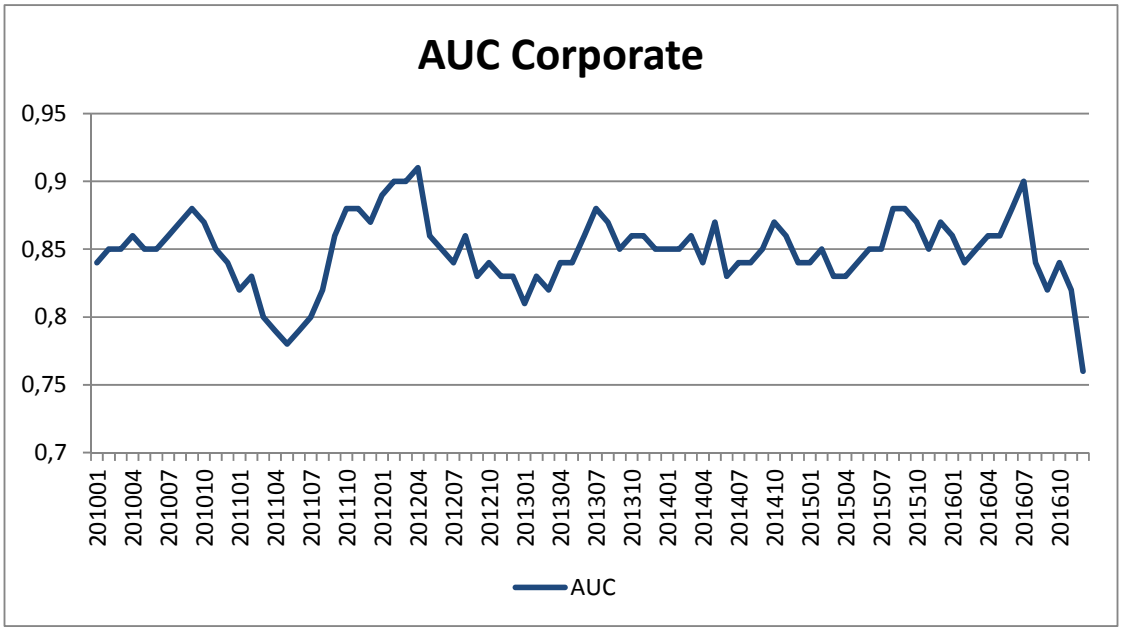
*Results*
This section presents overall results from the validation of the bank's IRB models as at 31.12.2016. The work on validation is ongoing in connection with the publication of the Pillar 3 report, and several of the analyses carried out can therefore not be presented at this time. This applies among others to the LGD validation, where we only show results from last year's validation report.

*PD*
The PD models' ranking ability measure by AUC is shown in the graphs below.



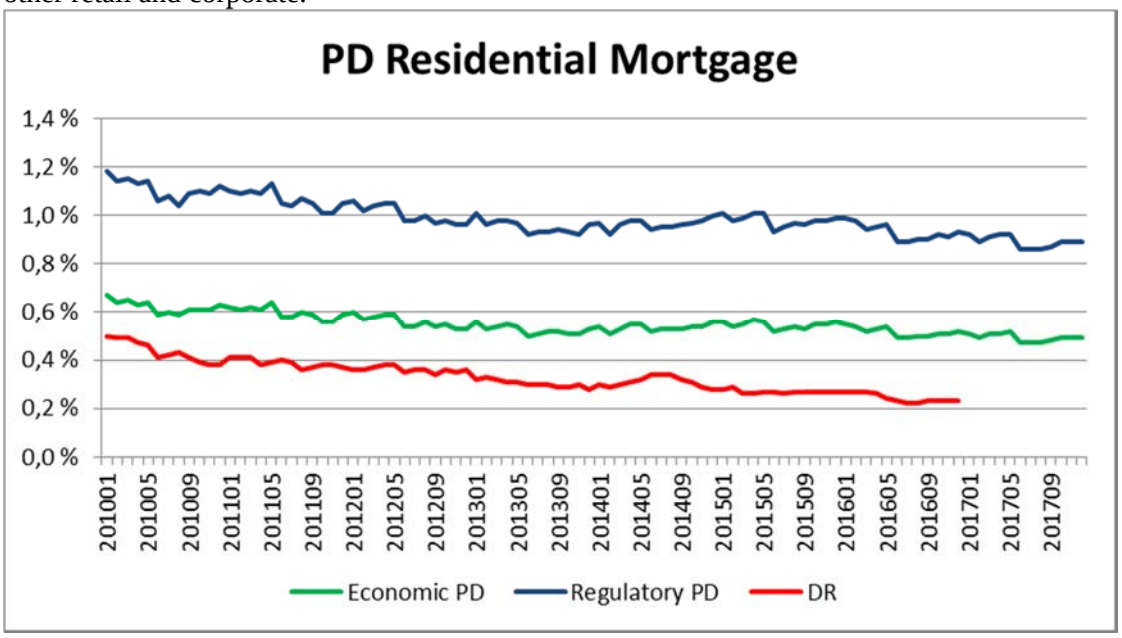



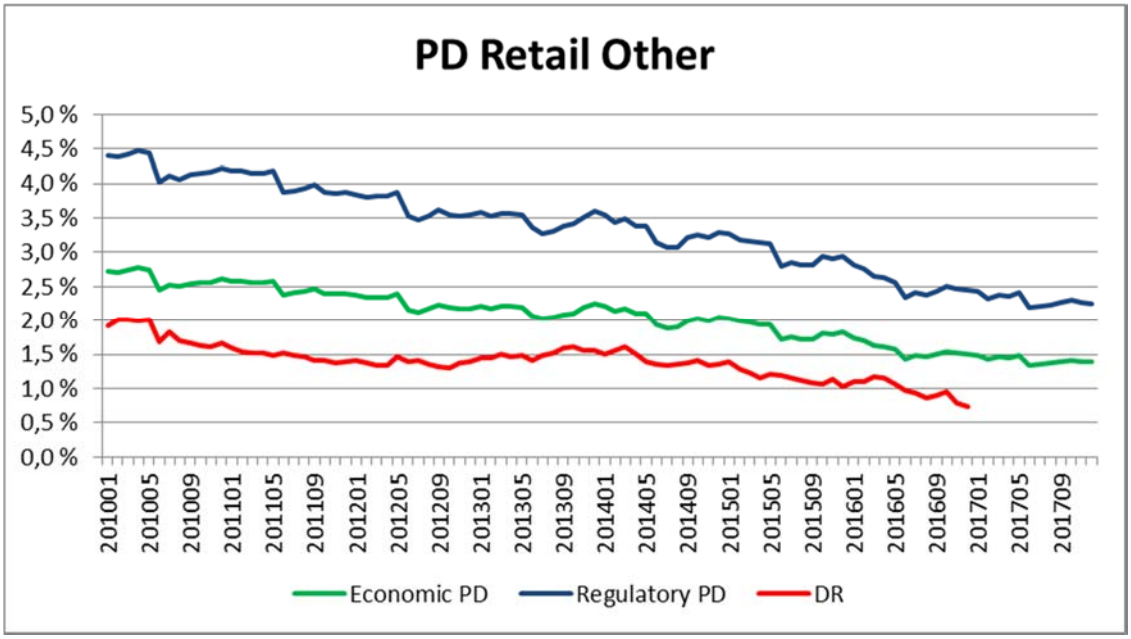

The ranking ability of the PD models applied to retail customers is very high and stable over time. The AUC level is well above what is regarded as an acceptable level: 70%.




The ranking ability of the PD models applied to corporates is somewhat more prone to fluctuation. This is due to a smaller population and few defaults. Even so, we see that the ranking ability is high, and well above the minimum requirement of 70%.

The graphs below show estimates and observed values for the default rate for, respectively, residential mortgages, other retail and corporate.



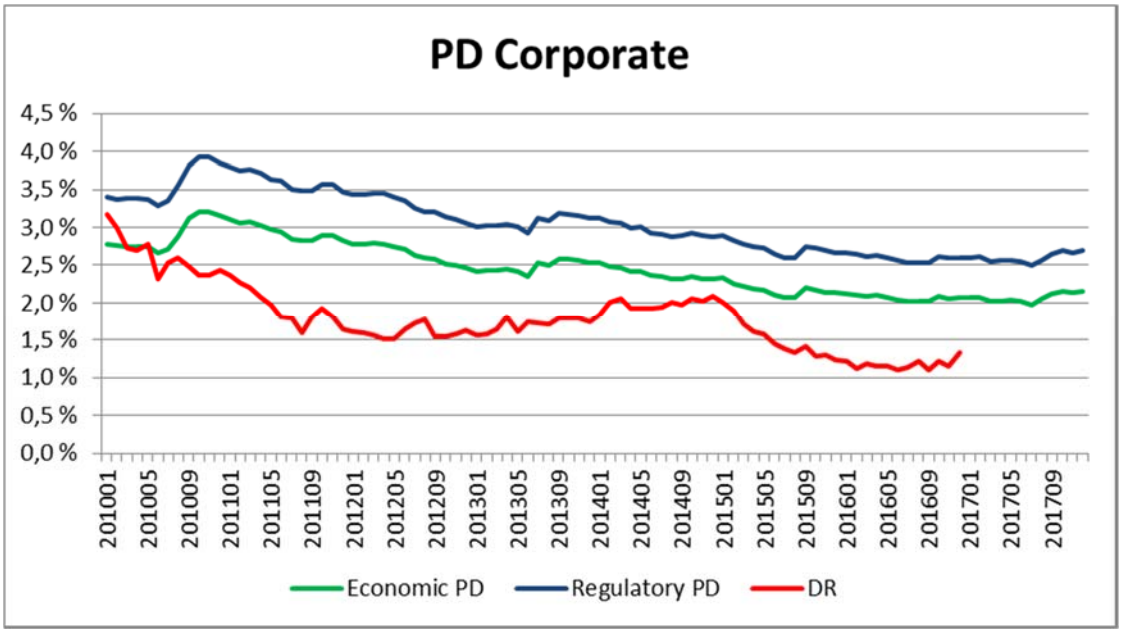



In 2014 the banks were instructed to calibrate the level of their PD models for residential loans against a proportional correlation of default rates in a normal economic situation and an economic downturn. The latter should be set at 3.5% and weighted at 20%. The default rate in a normal situation is an average of the bank's own observations. In addition, no customers could be assigned a PD lower than 0.2%. SpareBank 1 SMN has taken the requirements on board, and calibrated regulatory PD accordingly.

SpareBank 1 SMN considers however that the parameter values applied in this methodology do not give a correct picture of the risk present in the residential loan portfolio. In our internal (economic) PD estimates we have accordingly applied the same methodology, but a lower estimate for crisis DR and weighting of the latter. Further, minimum PD is omitted. The same methodology and discrepancy are utilised for other retail loans. As a result of this the Group has differing estimates in regulatory and economic terms for the default rate in the retail segment.

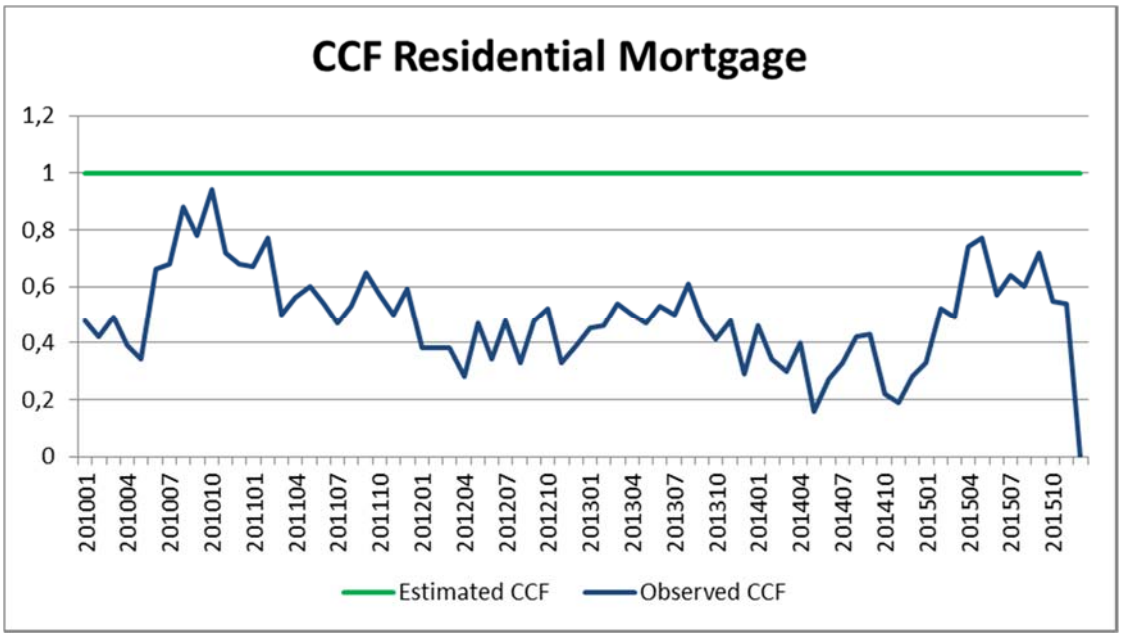
The default rate for residential loans and other retail loans is significantly overestimated throughout the period.

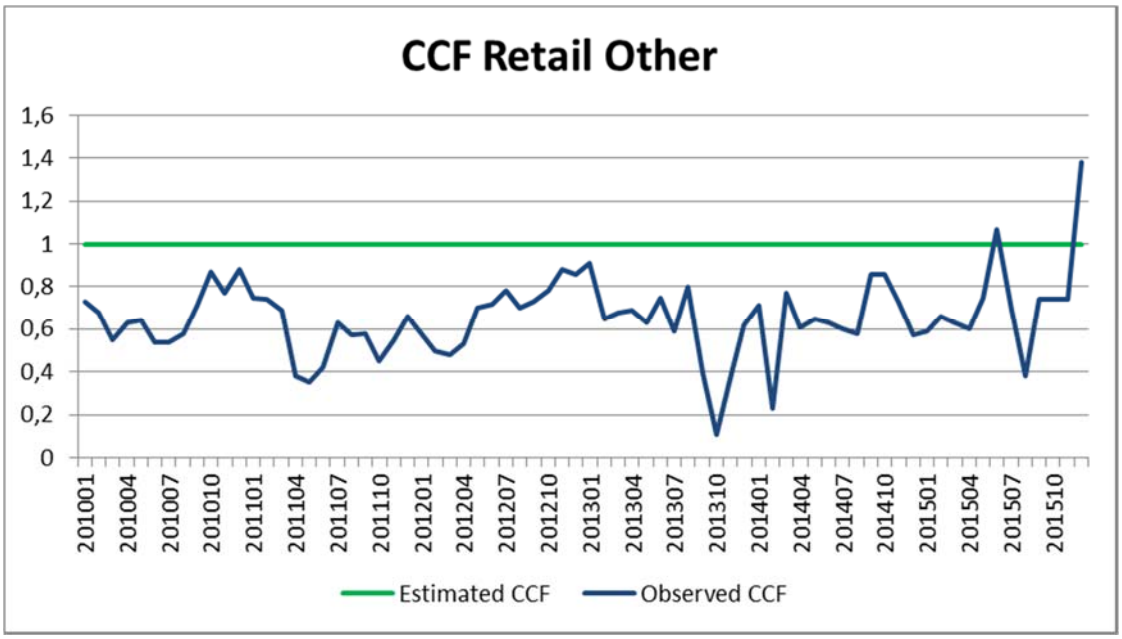
The graft below presents the estimated and the observed default rate for corporates. Here too we have discrepancies between regulatory and internal estimates. Regulatory levels stem from the initial IRB approval, whereas internal estimates have adopted a method for calibration of PD for residential mortgages (see above), but with other values for the parameters used as crisis PD with associated weighting.



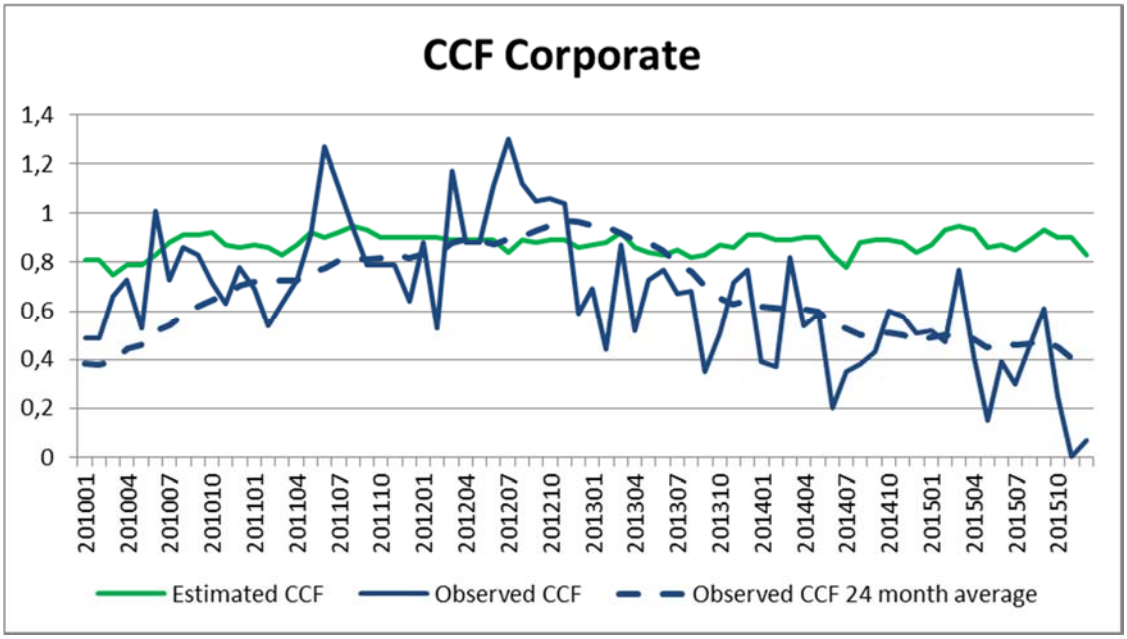
*EAD*

The charts below show estimated and observed CFs for, respectively, residential mortgages and other retail loans in the Group. The wide variations in the observations are due to the fact that we've measure monthly, and that there are few observations per month. The consistent trend is that CFs are substantially overestimated. This is how it should be, since the estimates should reflect an economic contraction according to the Capital Requirements Regulations.



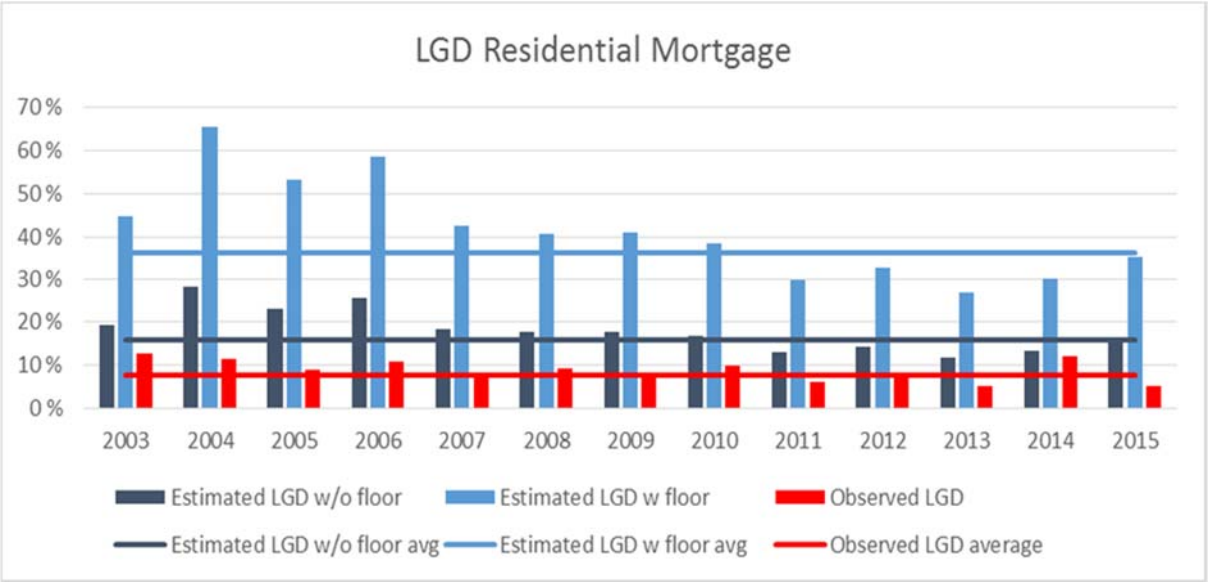

For corporates, CFs are estimated using a model based on risk class and exposure type. After a period in which estimates and observations were at about the same level, we have in recent years seen the steadily increasing overestimation of CFs for corporates.




*LGD*

For residential mortgages, the banks are required to estimate a regulatory LGD of a minimum of 20% at portfolio level. In addition, Finanstilsynet has presented a reference model for calculation of LGD at portfolio level. The latter represents a floor for LGD at portfolio level, if this is higher than 20%.

Internally SpareBank 1 SMN uses the same LGD model as regulatory, but without the floors which have been introduced as regulatory. We therefore have differing LGD estimates for residential mortgages for internal and regulatory purposes. Even without the required floors, the graph below shows that LGD is substantially overestimated. This is also in keeping with the regulations' requirement that the LGD estimate should be calibrated against an economic contraction.




For corporate clients the same modern and level are applied in internal and regulatory calculations. The bank is required apply a safety margin of 25% of the LGD estimates for corporates, and the graft below shows estimates both with and without this margin. Regardless of estimate we see that LGD is substantially overestimated.

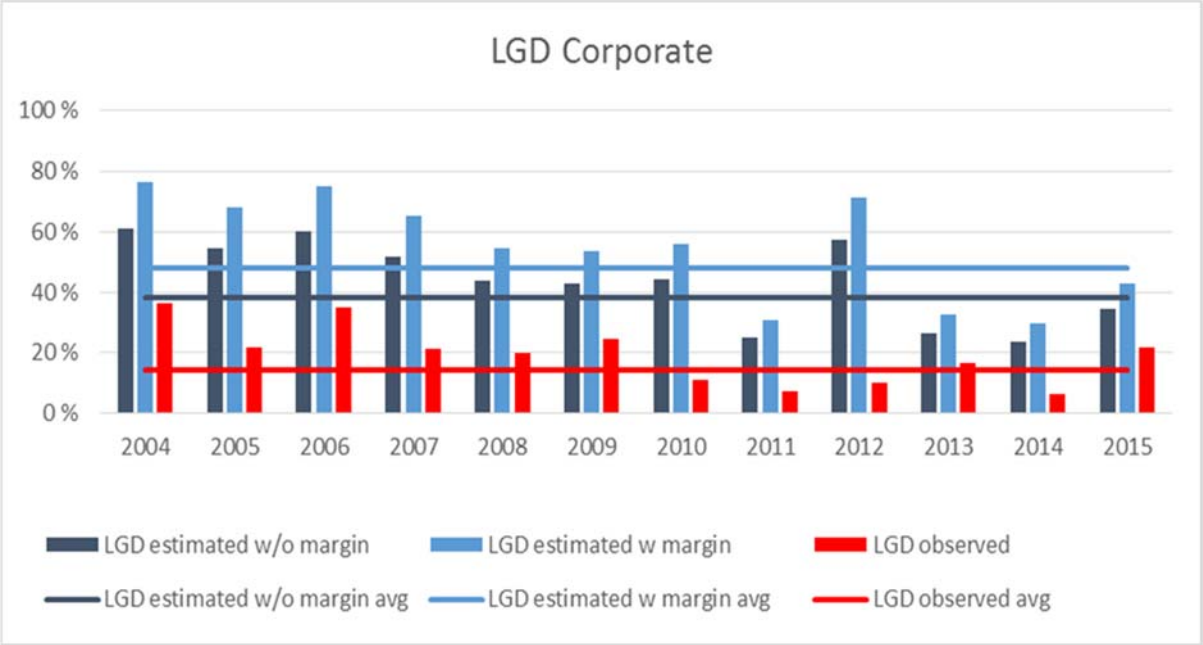



**Table 5 - Exposures by geographical area:**

| Gross loans by sector and industry | Gross loans | Exposures | Defaults and write-downs | Ind. write-downs | Net defaults and write-downs |
|---|---|---|---|---|---|
| Wage earners etc | 56.260 | 58.789 | 157 | 21 | 136 |
| Public administration | 288 | 1.186 | 0 | 0 | 0 |
| Agriculture, forestry, fisheries and hunting | 10.499 | 11.537 | 29 | 10 | 19 |
| Sea farming industries | 1.985 | 2.641 | 0 | 0 | 0 |
| Manufacturing and mining | 2.985 | 4.576 | 43 | 18 | 25 |
| Construction, power and water supply | 3.532 | 6.058 | 31 | 12 | 19 |
| Retail trade, hotels and restaurants | 2.510 | 3.907 | 27 | 23 | 4 |
| Maritime sector | 4.983 | 6.536 | 1.310 | 519 | 791 |
| Property management | 11.675 | 12.804 | 46 | 0 | 46 |
| Business services | 2.072 | 3.558 | 24 | 23 | 1 |
| Transport and other services provision | 3.836 | 4.831 | 27 | 5 | 22 |
| Other sectors | 1.700 | 2.683 | 0 | 2 | -2 |
| **Total gross loans by sector and industry** | **102.325** | **119.106** | **1.694** | **632** | 1.062 |
| Individually assessed write-downs | 632 | 632 | | | |
| Collectively assessed write-downs | 339 | 339 | | | |
| Total after write-downs | 101.354 | 118.135 | | | |
| Average | 97.430 | 114.864 | | | |

**Table 6 - Exposures by maturity**

| Gross loans by geographical area | Gross loans | Exposures | Defaults and write-downs | Ind. write-downs | Net defaults and write-downs |
|---|---|---|---|---|---|
| South Trøndelag | 38.086 | 46.155 | 91 | 24 | 67 |
| North Trøndelag | 26.126 | 29.206 | 166 | 44 | 122 |
| Møre and Romsdal | 21.930 | 26.130 | 1.395 | 558 | 837 |
| Sogn og Fjordane | 889 | 920 | 4 | 0 | 4 |
| Nordland | 1.031 | 1.146 | 4 | 0 | 4 |
| Oslo | 4.788 | 5.539 | 8 | 2 | 6 |
| Rest of Norway | 6.998 | 7.348 | 21 | 3 | 18 |
| Other countries | 2.476 | 2.664 | 6 | 0 | 6 |
| **Total gross loans by geographical area** | **102.325** | **119.106** | **1.694** | **632** | **1.062** |
| Individually assessed write-downs | 632 | 173 | | | |
| Collectively assessed write-downs | 339 | 295 | | | |
| Total after write-downs | 101.354 | 118.638 | | | |
| Average | 97.430 | 114.864 | | | |

**Table 7 - Past due exposures**

| (NOKm) | Up to 30 days | 31 – 60 days | 61 – 90 days | Over 90 days | Total |
|---|---|---|---|---|---|
| Loans and claims on customers | | | | | |
| - Retail | 946 | 244 | 61 | 130 | **1.381** |
| - Corporate | 139 | 38 | 6 | 33 | **216** |
| **Total** | **1085** | **282** | **67** | **163** | **1597** |

**Table 8 - Write-downs on loans and guarantees**

| Loan losses | RM | CM | Total |
|---|---|---|---|
| Period's change in individually assessed write-downs | - | 454 | **454** |
| + Period's change in collectively assessed write downs | 4 | (42) | **(38)** |
| + Confirmed losses on loans previously written down | 8 | 36 | **44** |
| + Confirmed losses on loans not previously written down | 14 | 50 | **64** |
| - Incomings on previously written down loans, guarantees etc. | 6 | 3 | **9** |
| **Total losses on loans and guarantees** | **21** | **495** | **516** |

| | 2016 | | |
|---|---|---|---|
| **Individually assessed write downs** | **RM** | **CM** | **Total** |
| Individual write downs to cover loss on loans, guarantees etc. at 01.01. | 31 | 153 | **184** |
| - Confirmed losses in the period on loans, guarantees etc. not previously subject to individual write down | 8 | 36 | **44** |
| - Reversal of previous years' write downs | 3 | 36 | **39** |
| + Increase in write downs of loans not previously subject to individual write down | 2 | 6 | **8** |
| + Write downs of loans not previously subject to individual write down | 4 | 523 | **528** |
| **Individual write downs to cover loss on loans, guarantees etc. at 31.12** | **27** | **611** | **638** |

| | 2016 | | |
|---|---|---|---|
| **Collective write downs** | **RM** | **CM** | **Total** |
| Collective write downs to cover loss on loans, guarantees at 01.01 | 96 | 281 | 376 |
| Period's collectively assessed write down to cover loss on loans, guarantees etc. | 4 | (42) | (38) |
| **Collectively assessed write down to cover loss on loans and guarantees at 31.12** | **96** | **239** | **339** |

**Table 9 - Losses on loans and guarantees by customer group**

| Losses by sector and industry | 2016 |
|---|---|
| Agriculture, forestry, fisheries, huntingand fish farming | 6 |
| Industry and mining | 16 |
| Construction, power and water supply | 7 |
| Retail trade, hotels and restaurants | 9 |
| Other transport and communication | 494 |
| Financing, property management and business services | 16 |
| Other countries and sectors | 1 |
| Retail market | 4 |
| Collectively assessed write down, corporate | -42 |
| Collectively assessed write down, retail | 4 |
| **Losses on loans to customers** | **516** |

**Table 10 - Individually assessed write-downs for exposures where IRB approach is used**

| Category and sub-category | | Written down 12.16 | Written down 12.15 |
|---|---|---|---|
| Retail market exposures | | | |
| | Exposures secured on real property | 10 | 12 |
| | Retail market – SMBs | 3 | 3 |
| | Other retail market exposures | 10 | 22 |
| | | 23 | 37 |
| Companies: | | | |
| | Companies | 563 | 108 |
| | Companies, specialised lending | 25 | 16 |
| | | 587 | 124 |
| Total | | 610 | 161 |

All exposures subject to individually assessed write down are assigned to risk category K, and individually assessed losses booked in 2016 are therefore invariably assigned to this risk category.

**Table 11 - Total EAD for each exposure category where the IRB approach is used**

| **Parent bank** | **EAD** | |
|---|---|---|
| **Category and sub-category** | **31.12.2016** | **31.12.2015** |
| Retail market exposures | | |
| Exposures secured on real property | 53.021 | 47.376 |
| Retail market – SMBs | 6.247 | 5.994 |
| Other retail market exposures | 2.049 | 1.056 |
| | 61.317 | 54.427 |
| Companies: | | |
| Other companies | 18.285 | 18.519 |
| Companies, specialised lending | 24.322 | 24.475 |
| | 42.607 | 42.994 |
| Equity capital positions | 5.527 | 5.437 |
| Total EAD IRB | 109.451 | 102.857 |

| **Group** | **EAD** | |
|---|---|---|
| **Category and sub-category** | **31.12.2016** | **31.12.2015** |
| Retail market exposures | | |
| Exposures secured on real property | 95.921 | 89.406 |
| Retail market – SMBs | 6.964 | 6.679 |
| Other mass market exposures | 2.122 | 1.113 |
| | 105.008 | 97.199 |
| Companies: | | |
| Other companies | 19.070 | 21.618 |
| Companies, specialised lending | 26.064 | 29.720 |
| | 45.134 | 51.338 |
| Equity capital positions | - | 3 |
| Total EAD IRB | 150.141 | 148.540 |

## Table 12 - Data per risk class for exposures where IRB approach used

## Parent bank

Parent bank

Specialized corporate

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | - | | - | | | | | - | | |
| B | 985.174 | 61.808 | 0,2 % | 204.034 | 20,7 % | 411 | 0,0 % | 175.394 | 17,8 % | 0,2 % | 1.020.978 | 63,3 % | 0,0 % |
| C | 5.595.477 | 510.404 | 0,4 % | 1.945.788 | 34,8 % | 5.451 | 0,1 % | 1.387.518 | 24,8 % | 0,4 % | 5.847.215 | 67,0 % | 0,0 % |
| D | 2.442.885 | 259.679 | 0,6 % | 1.093.873 | 44,8 % | 3.517 | 0,1 % | 618.544 | 25,3 % | 0,6 % | 2.661.265 | 54,3 % | 0,5 % |
| E | 4.939.713 | 534.708 | 0,9 % | 2.757.490 | 55,8 % | 12.964 | 0,3 % | 1.474.161 | 29,8 % | 1,0 % | 5.134.904 | 73,3 % | 0,0 % |
| F | 5.462.915 | 1.123.197 | 1,8 % | 2.958.011 | 54,1 % | 24.537 | 0,4 % | 1.373.453 | 25,1 % | 1,7 % | 5.860.527 | 73,9 % | 0,4 % |
| G | 3.023.084 | 466.878 | 3,6 % | 2.169.231 | 71,8 % | 29.115 | 1,0 % | 800.883 | 26,5 % | 3,7 % | 3.245.458 | 67,7 % | 0,9 % |
| H | 1.499.357 | 442.532 | 7,1 % | 1.501.391 | 100,1 % | 34.838 | 2,3 % | 482.076 | 32,2 % | 7,0 % | 1.587.577 | 83,4 % | 0,9 % |
| I | 287.178 | 9.456 | 20,8 % | 506.059 | 176,2 % | 24.436 | 8,5 % | 108.711 | 37,9 % | 18,8 % | 288.675 | 86,3 % | 9,5 % |
| J | 16.221 | 657 | 100,0 % | 3.216 | 19,8 % | 2.898 | 17,9 % | 2.898 | 17,9 % | 100,0 % | 16.878 | 50,0 % | |
| K | 70.417 | 2.891 | 100,0 % | 172.757 | 245,3 % | 23.927 | 34,0 % | - | 0,0 % | 100,0 % | 71.520 | 72,4 % | |
| Total | 24.322.421 | 3.412.210 | | 13.311.851 | 54,7 % | 162.094 | 0,7 % | 6.423.636 | 26,4 % | | 25.734.998 | 70,7 % | 0,7 % |

SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | | | | | | | | | | |
| B | 295.510 | 102.740 | 0,2 % | 78.866 | 26,7 % | 179 | 0,1 % | 79.749 | 27,0 % | 0,2 % | 354.517 | 63,5 % | 0,0 % |
| C | 1.773.059 | 641.213 | 0,4 % | 506.546 | 28,6 % | 1.431 | 0,1 % | 391.650 | 22,1 % | 0,4 % | 2.045.256 | 70,2 % | 0,7 % |
| D | 1.776.196 | 649.264 | 0,6 % | 679.095 | 38,2 % | 2.559 | 0,1 % | 411.163 | 23,1 % | 0,6 % | 1.951.828 | 78,7 % | 0,6 % |
| E | 1.677.334 | 382.554 | 1,0 % | 969.366 | 57,8 % | 5.001 | 0,3 % | 525.718 | 31,3 % | 1,0 % | 1.887.060 | 64,6 % | 0,3 % |
| F | 3.224.498 | 506.031 | 1,8 % | 2.308.278 | 71,6 % | 18.925 | 0,6 % | 1.009.816 | 31,3 % | 1,7 % | 3.387.840 | 75,6 % | 0,8 % |
| G | 2.799.468 | 427.599 | 3,6 % | 3.423.147 | 122,3 % | 45.279 | 1,6 % | 1.300.021 | 46,4 % | 3,6 % | 2.910.264 | 79,4 % | 1,1 % |
| H | 666.461 | 99.348 | 7,0 % | 837.977 | 125,7 % | 18.884 | 2,8 % | 277.274 | 41,6 % | 7,3 % | 706.020 | 71,5 % | 3,8 % |
| I | 274.767 | 45.254 | 15,9 % | 441.391 | 160,6 % | 16.555 | 6,0 % | 112.052 | 40,8 % | 16,1 % | 303.261 | 61,4 % | 13,2 % |
| J | 4.285 | 805 | 100,0 % | 598 | 14,0 % | 1.551 | 36,2 % | 1.551 | 36,2 % | 100,0 % | 5.089 | 50,0 % | |
| K | 724.890 | 11.429 | 100,0 % | 452.619 | 62,4 % | 280.577 | 38,7 % | 280 | 0,0 % | 100,0 % | 730.475 | 67,2 % | |
| Total | 13.216.469 | 2.866.237 | | 9.697.883 | 73,4 % | 390.940 | 3,0 % | 4.109.275 | 31,1 % | | 14.281.610 | 72,9 % | 1,5 % |

Other corporate

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | - | | - | | | | | | | |
| B | | | 0,2 % | - | | - | | | | 0,2 % | | | 0,0 % |
| C | 325.655 | 84.800 | 0,3 % | 113.251 | 34,8 % | 306 | 0,1 % | 77.557 | 23,8 % | 0,3 % | 382.455 | 59,9 % | 16,7 % |
| D | 470.972 | 165.825 | 0,6 % | 206.803 | 43,9 % | 564 | 0,1 % | 94.678 | 20,1 % | 0,6 % | 472.297 | 99,2 % | 40,0 % |
| E | 674.417 | 251.513 | 1,1 % | 600.777 | 89,1 % | 2.810 | 0,4 % | 331.175 | 49,1 % | 1,1 % | 851.280 | 58,7 % | 0,0 % |
| F | 1.095.783 | 202.042 | 1,9 % | 1.038.129 | 94,7 % | 7.150 | 0,7 % | 423.976 | 38,7 % | 1,9 % | 1.180.794 | 70,4 % | 0,0 % |
| G | 438.631 | 115.331 | 3,3 % | 296.249 | 67,5 % | 4.005 | 0,9 % | 97.025 | 22,1 % | 3,3 % | 499.749 | 65,4 % | 0,0 % |
| H | 1.147.141 | 287.756 | 5,0 % | 770.550 | 67,2 % | 12.239 | 1,1 % | 208.086 | 18,1 % | 5,0 % | 1.298.406 | 65,5 % | 0,0 % |
| I | 248 | 79 | 13,0 % | 245 | 98,8 % | 8 | 3,4 % | 48 | 19,2 % | 13,0 % | 257 | 90,0 % | 0,0 % |
| J | | | | | | | | | | | | | |
| K | 915.829 | 252.896 | 100,0 % | 573.222 | 62,6 % | 280.150 | 30,6 % | - | 0,0 % | | 915.829 | | |
| Total | 5.068.676 | 1.360.242 | | 3.599.226 | 71,0 % | 307.234 | 6,1 % | 1.232.545 | 21,2 % | | 5.601.068 | 71,9 % | 7,5 % |

Mass market real property, no SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | - | - | | - | | - | | | | | - | | |
| B | 14.581.483 | 1.838.214 | 0,2 % | 1.248.479 | 8,6 % | 5.926 | 0,0 % | 2.861.424 | 19,6 % | 0,2 % | 14.581.927 | 100,0 % | 0,0 % |
| C | 16.157.072 | 233.973 | 0,4 % | 2.673.632 | 16,5 % | 14.910 | 0,1 % | 4.019.117 | 24,9 % | 0,4 % | 16.157.691 | 99,7 % | 0,0 % |
| D | 9.280.958 | 38.820 | 0,6 % | 2.360.809 | 25,4 % | 15.201 | 0,2 % | 2.488.631 | 26,8 % | 0,6 % | 9.280.996 | 99,9 % | 0,0 % |
| E | 6.592.052 | 10.534 | 0,9 % | 2.338.255 | 35,5 % | 17.284 | 0,3 % | 1.841.766 | 27,9 % | 0,9 % | 6.592.178 | 98,8 % | 0,1 % |
| F | 2.748.467 | 12.912 | 1,7 % | 1.432.505 | 52,1 % | 12.973 | 0,5 % | 780.926 | 28,4 % | 1,7 % | 2.748.467 | 100,0 % | 0,5 % |
| G | 1.411.930 | 5.045 | 3,6 % | 1.089.891 | 77,2 % | 13.500 | 1,0 % | 375.585 | 26,6 % | 3,6 % | 1.411.930 | 100,0 % | 0,5 % |
| H | 914.357 | 906 | 6,9 % | 1.051.197 | 115,0 % | 17.932 | 2,0 % | 258.132 | 28,2 % | 6,9 % | 914.357 | 100,0 % | 1,7 % |
| I | 1.174.518 | 1.562 | 23,5 % | 1.782.535 | 151,8 % | 73.218 | 6,2 % | 311.064 | 26,5 % | 23,5 % | 1.174.518 | 100,0 % | 9,2 % |
| J | 115.454 | 15 | 100,0 % | 26.252 | 22,7 % | 27.438 | 23,8 % | 27.438 | 23,8 % | 100,0 % | 115.454 | 100,0 % | |
| K | 44.622 | 70 | 100,0 % | 96.196 | 215,6 % | 8.059 | 18,1 % | 8.059 | 18,1 % | 100,0 % | 44.622 | | |
| Total | 53.020.914 | 2.142.050 | | 14.099.751 | 26,6 % | 206.441 | 0,4 % | 12.972.143 | 20,7 % | | 53.022.140 | 99,9 % | 0,3 % |

Mass market other, no SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | | | | | | | | | | |
| B | 415.981 | 128.574 | 0,2 % | 90.987 | 21,9 % | 429 | 0,1 % | 206.771 | 49,7 % | 0,2 % | 416.189 | 99,8 % | 0,0 % |
| C | 508.473 | 50.146 | 0,4 % | 161.782 | 31,8 % | 946 | 0,2 % | 253.833 | 49,9 % | 0,4 % | 508.528 | 99,9 % | 0,0 % |
| D | 358.087 | 31.926 | 0,6 % | 154.237 | 43,1 % | 1.118 | 0,3 % | 180.541 | 50,4 % | 0,6 % | 358.112 | 99,9 % | 0,0 % |
| E | 342.737 | 28.715 | 1,0 % | 179.060 | 52,2 % | 1.623 | 0,5 % | 170.433 | 49,7 % | 1,0 % | 342.757 | 99,9 % | 0,1 % |
| F | 179.254 | 15.720 | 1,7 % | 117.312 | 65,4 % | 1.541 | 0,9 % | 90.639 | 50,6 % | 1,8 % | 179.254 | 100,0 % | 0,8 % |
| G | 119.041 | 2.148 | 3,6 % | 88.617 | 74,4 % | 2.115 | 1,8 % | 58.762 | 49,4 % | 3,5 % | 119.090 | 97,8 % | 0,8 % |
| H | 57.269 | 538 | 7,0 % | 46.375 | 81,0 % | 1.968 | 3,4 % | 28.352 | 49,5 % | 6,7 % | 57.269 | 100,0 % | 2,8 % |
| I | 44.225 | 867 | 21,8 % | 51.053 | 115,4 % | 4.863 | 11,0 % | 22.290 | 50,4 % | 20,4 % | 44.258 | 96,3 % | 9,1 % |
| J | 10.647 | 94 | 100,0 % | 129 | 1,2 % | 5.423 | 50,9 % | 5.423 | 50,9 % | 100,0 % | 10.647 | 100,0 % | |
| K | 13.039 | 10 | 100,0 % | 1.405 | 10,8 % | 9.589 | 73,5 % | 9.589 | 73,5 % | 100,0 % | 13.039 | 100,0 % | |
| Total | 2.048.753 | 258.738 | | 890.957 | 43,5 % | 29.615 | 1,4 % | 1.026.634 | 50,1 % | | 2.049.143 | 99,8 % | 0,7 % |

Mass market real property, SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | - | - | | - | | - | | | | | - | | |
| B | 2.096.133 | 375.024 | 0,2 % | 187.474 | 8,9 % | 888 | 0,0 % | 432.316 | 20,6 % | 0,2 % | 2.099.250 | 99,2 % | 0,0 % |
| C | 1.298.028 | 57.623 | 0,4 % | 229.383 | 17,7 % | 1.273 | 0,1 % | 348.898 | 26,9 % | 0,4 % | 1.298.846 | 98,6 % | 0,2 % |
| D | 779.214 | 17.435 | 0,6 % | 190.666 | 24,5 % | 1.230 | 0,2 % | 200.329 | 25,7 % | 0,6 % | 779.539 | 98,2 % | 0,0 % |
| E | 678.909 | 7.805 | 1,0 % | 270.557 | 39,9 % | 2.014 | 0,3 % | 210.261 | 31,0 % | 1,0 % | 679.238 | 96,0 % | 0,4 % |
| F | 376.414 | 6.264 | 1,7 % | 214.889 | 57,1 % | 1.954 | 0,5 % | 116.429 | 30,9 % | 1,7 % | 376.452 | 99,4 % | 0,6 % |
| G | 210.385 | 3.416 | 3,5 % | 171.866 | 81,7 % | 2.072 | 1,0 % | 61.152 | 29,1 % | 3,6 % | 210.660 | 92,6 % | 0,0 % |
| H | 169.050 | 4.692 | 7,5 % | 224.905 | 133,0 % | 3.998 | 2,4 % | 53.168 | 31,5 % | 7,1 % | 169.375 | 93,5 % | 4,1 % |
| I | 163.167 | 1.800 | 23,5 % | 276.194 | 169,3 % | 10.795 | 6,6 % | 48.476 | 29,7 % | 23,8 % | 163.235 | 96,3 % | 8,9 % |
| J | 9.072 | - | 100,0 % | 342 | 3,8 % | 1.909 | 21,0 % | 1.909 | 21,0 % | 100,0 % | 9.072 | | |
| K | 6.591 | - | 100,0 % | 10.847 | 164,6 % | 2.325 | 35,3 % | 2.325 | 35,3 % | 100,0 % | 6.591 | | |
| Total | 5.786.962 | 474.060 | | 1.777.122 | 30,7 % | 28.457 | 0,5 % | 1.475.263 | 25,5 % | | 5.792.258 | 98,9 % | 0,4 % |

Mass market other, SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | | | | | | | | | | |
| B | 134.964 | 45.433 | 0,2 % | 25.921 | 19,2 % | 122 | 0,1 % | 59.292 | 43,9 % | 0,2 % | 135.911 | 98,0 % | 0,0 % |
| C | 87.566 | 30.751 | 0,4 % | 24.911 | 28,4 % | 144 | 0,2 % | 39.851 | 45,5 % | 0,4 % | 87.840 | 99,1 % | 0,3 % |
| D | 64.295 | 19.763 | 0,6 % | 23.769 | 37,0 % | 171 | 0,3 % | 27.995 | 43,5 % | 0,6 % | 64.695 | 98,0 % | 0,0 % |
| E | 70.615 | 13.876 | 0,9 % | 30.447 | 43,1 % | 268 | 0,4 % | 29.654 | 42,0 % | 0,9 % | 70.992 | 97,3 % | 0,0 % |
| F | 38.052 | 5.306 | 1,8 % | 21.225 | 55,8 % | 290 | 0,8 % | 16.101 | 42,3 % | 1,8 % | 38.421 | 93,5 % | 0,0 % |
| G | 20.752 | 1.260 | 3,6 % | 14.732 | 71,0 % | 355 | 1,7 % | 9.790 | 47,2 % | 3,8 % | 20.771 | 98,5 % | 0,0 % |
| H | 15.781 | 820 | 6,7 % | 12.686 | 80,4 % | 521 | 3,3 % | 7.817 | 49,5 % | 6,4 % | 15.929 | 84,8 % | 2,6 % |
| I | 20.439 | 936 | 29,9 % | 21.316 | 104,3 % | 2.442 | 11,9 % | 8.250 | 40,4 % | 23,8 % | 20.608 | 84,7 % | 6,8 % |
| J | 610 | 48 | 100,0 % | - | 0,0 % | 363 | 59,6 % | 363 | 59,6 % | 100,0 % | 623 | 79,2 % | |
| K | 6.538 | - | 100,0 % | - | 0,0 % | 2.988 | 45,7 % | 2.988 | 45,7 % | 100,0 % | 6.538 | | |
| Total | 459.612 | 118.192 | | 175.008 | 38,1 % | 7.665 | 1,7 % | 202.103 | 44,0 % | | 462.328 | 97,8 % | 0,5 % |

# Group

Group

Specialized corporate

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 535.735 | 332 | 0,1 % | 75.929 | 14,2 % | 145 | 0,0 % | 111.325 | 20,8 % | 0,1 % | 535.735 | 100,0 % | 2,1 % |
| B | 1.118.513 | 61.808 | 0,3 % | 285.133 | 25,5 % | 696 | 0,1 % | 240.069 | 21,5 % | 0,2 % | 1.154.317 | 63,3 % | 0,0 % |
| C | 5.807.474 | 510.404 | 0,4 % | 2.017.415 | 34,7 % | 5.737 | 0,1 % | 1.430.770 | 24,6 % | 0,4 % | 6.059.213 | 67,0 % | 0,0 % |
| D | 2.744.981 | 259.679 | 0,7 % | 1.246.695 | 45,4 % | 4.535 | 0,2 % | 695.703 | 25,3 % | 0,7 % | 2.963.361 | 54,3 % | 0,5 % |
| E | 5.320.900 | 611.704 | 1,0 % | 2.955.850 | 55,6 % | 14.644 | 0,3 % | 1.569.640 | 29,5 % | 1,0 % | 5.516.091 | 75,8 % | 0,0 % |
| F | 5.632.513 | 1.129.707 | 1,8 % | 3.086.234 | 54,8 % | 25.763 | 0,5 % | 1.429.173 | 25,4 % | 1,8 % | 6.030.125 | 74,0 % | 1,0 % |
| G | 3.309.155 | 466.878 | 3,6 % | 2.495.461 | 75,4 % | 33.345 | 1,0 % | 921.038 | 27,8 % | 3,7 % | 3.531.529 | 67,7 % | 1,3 % |
| H | 1.543.180 | 442.532 | 7,0 % | 1.532.745 | 99,3 % | 35.518 | 2,3 % | 493.110 | 32,0 % | 7,0 % | 1.631.399 | 83,4 % | 3,1 % |
| I | 376.473 | 9.823 | 18,5 % | 570.788 | 151,6 % | 26.466 | 7,0 % | 126.455 | 33,6 % | 17,1 % | 377.970 | 86,8 % | 11,4 % |
| J | 16.221 | 657 | 100,0 % | 3.216 | 19,8 % | 2.898 | 17,9 % | 2.898 | 17,9 % | 100,0 % | 16.878 | 50,0 % | |
| K | 195.013 | 3.194 | 100,0 % | 807.024 | 413,8 % | 36.730 | 18,8 % | 63.378 | 32,5 % | 100,0 % | 196.115 | 74,3 % | |
| Total | 26.064.422 | 3.496.386 | | 15.000.562 | 57,6 % | 186.331 | 0,7 % | 6.972.235 | 26,8 % | | 27.476.998 | 71,2 % | 1,1 % |

SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | - | - | | - | | - | | | | | - | | |
| B | 295.510 | 102.740 | 0,2 % | 78.866 | 26,7 % | 179 | 0,1 % | 79.749 | 27,0 % | 0,2 % | 354.517 | 63,5 % | 0,0 % |
| C | 1.773.059 | 641.213 | 0,4 % | 506.546 | 28,6 % | 1.431 | 0,1 % | 391.650 | 22,1 % | 0,4 % | 2.045.256 | 70,2 % | 0,7 % |
| D | 1.776.196 | 649.264 | 0,6 % | 679.095 | 38,2 % | 2.559 | 0,1 % | 411.163 | 23,1 % | 0,6 % | 1.953.851 | 78,5 % | 0,6 % |
| E | 1.677.334 | 382.554 | 1,0 % | 969.366 | 57,8 % | 5.001 | 0,3 % | 525.718 | 31,3 % | 1,0 % | 1.887.060 | 64,6 % | 0,3 % |
| F | 3.224.498 | 506.031 | 1,8 % | 2.308.278 | 71,6 % | 18.925 | 0,6 % | 1.009.816 | 31,3 % | 1,7 % | 3.387.840 | 75,6 % | 0,8 % |
| G | 2.799.468 | 427.599 | 3,6 % | 3.423.147 | 122,3 % | 45.279 | 1,6 % | 1.300.021 | 46,4 % | 3,6 % | 2.910.264 | 79,4 % | 1,1 % |
| H | 666.461 | 99.348 | 7,0 % | 837.977 | 125,7 % | 18.884 | 2,8 % | 277.274 | 41,6 % | 7,3 % | 706.020 | 71,5 % | 3,8 % |
| I | 274.767 | 45.254 | 15,9 % | 441.391 | 160,6 % | 16.555 | 6,0 % | 112.052 | 40,8 % | 16,1 % | 303.261 | 61,4 % | 13,2 % |
| J | 4.285 | 805 | 100,0 % | 598 | 14,0 % | 1.551 | 36,2 % | 1.551 | 36,2 % | 100,0 % | 5.089 | 50,0 % | |
| K | 724.890 | 11.429 | 100,0 % | 452.619 | 62,4 % | 280.577 | 38,7 % | 280 | 0,0 % | 100,0 % | 730.475 | 67,2 % | |
| Total | 13.216.469 | 2.866.237 | | 9.697.883 | 73,4 % | 390.940 | 3,0 % | 4.109.275 | 31,1 % | | 14.283.634 | 72,9 % | 1,5 % |

Other corporate

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 13.227 | - | 0,1 % | 1.828 | 13,8 % | 3 | 0,0 % | - | | | 13.227 | | 0,0 % |
| B | 23.981 | - | 0,4 % | 5.117 | 21,3 % | 18 | 0,1 % | 4.196 | 17,5 % | 0,0 % | 23.981 | 100,0 % | 0,0 % |
| C | 333.468 | 84.800 | 0,4 % | 115.004 | 34,5 % | 313 | 0,1 % | 78.600 | 23,6 % | 0,3 % | 390.268 | 59,9 % | 9,5 % |
| D | 548.257 | 177.357 | 0,7 % | 249.329 | 45,5 % | 820 | 0,1 % | 113.677 | 20,7 % | 0,7 % | 549.582 | 99,3 % | 13,3 % |
| E | 800.424 | 251.677 | 1,0 % | 697.316 | 87,1 % | 3.652 | 0,5 % | 378.983 | 47,3 % | 1,2 % | 977.288 | 58,7 % | 0,0 % |
| F | 1.202.821 | 202.042 | 1,8 % | 1.090.676 | 90,7 % | 7.691 | 0,6 % | 448.570 | 37,3 % | 1,9 % | 1.287.833 | 70,4 % | 0,0 % |
| G | 821.530 | 115.331 | 3,9 % | 496.039 | 60,4 % | 6.708 | 0,8 % | 173.795 | 21,2 % | 3,4 % | 882.649 | 65,4 % | 0,0 % |
| H | 1.150.001 | 287.756 | 6,0 % | 773.761 | 67,3 % | 12.291 | 1,1 % | 208.935 | 18,2 % | 5,0 % | 1.301.266 | 65,5 % | 0,0 % |
| I | 56.750 | 79 | 11,5 % | 74.845 | 131,9 % | 1.796 | 3,2 % | 15.669 | 27,6 % | 11,4 % | 56.759 | 90,0 % | 0,0 % |
| J | - | - | | - | | - | | - | | | - | | |
| K | 915.829 | 252.896 | 100,0 % | 573.222 | 62,6 % | 280.150 | 30,6 % | - | 0,0 % | | 915.829 | | |
| Total | 5.853.062 | 1.371.938 | | 4.075.309 | 69,6 % | 313.439 | 5,4 % | 1.422.425 | 21,2 % | | 6.385.454 | 72,0 % | 3,2 % |

Mass market real property, no SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 988.404 | 261.133 | 0,2 % | 63.149 | 6,4 % | 300 | 0,0 % | 143.954 | 14,6 % | 0,2 % | 988.404 | 100,0 % | 0,0 % |
| B | 29.398.008 | 4.330.353 | 0,2 % | 2.118.137 | 7,2 % | 10.142 | 0,0 % | 4.772.955 | 16,2 % | 0,2 % | 29.398.452 | 100,0 % | 0,0 % |
| C | 27.327.242 | 524.557 | 0,4 % | 3.832.873 | 14,0 % | 21.528 | 0,1 % | 5.687.704 | 20,8 % | 0,4 % | 27.327.862 | 99,9 % | 0,1 % |
| D | 16.376.383 | 79.761 | 0,6 % | 3.501.316 | 21,4 % | 22.764 | 0,1 % | 3.628.458 | 22,2 % | 0,6 % | 16.376.420 | 100,0 % | 0,1 % |
| E | 11.898.505 | 28.658 | 1,0 % | 3.461.682 | 29,1 % | 25.808 | 0,2 % | 2.692.713 | 22,6 % | 1,0 % | 11.898.631 | 99,6 % | 0,2 % |
| F | 4.781.061 | 18.825 | 1,7 % | 2.008.133 | 42,0 % | 18.141 | 0,4 % | 1.098.882 | 23,0 % | 1,7 % | 4.781.061 | 100,0 % | 0,4 % |
| G | 2.052.983 | 6.856 | 3,6 % | 1.395.769 | 68,0 % | 17.257 | 0,8 % | 482.155 | 23,5 % | 3,6 % | 2.052.983 | 100,0 % | 0,6 % |
| H | 1.289.175 | 2.916 | 7,0 % | 1.302.406 | 101,0 % | 22.218 | 1,7 % | 319.712 | 24,8 % | 6,9 % | 1.289.175 | 100,0 % | 1,6 % |
| I | 1.631.737 | 1.801 | 23,1 % | 2.208.350 | 135,3 % | 90.225 | 5,5 % | 385.446 | 23,6 % | 23,2 % | 1.631.737 | 100,0 % | 7,5 % |
| J | 128.562 | 339 | 100,0 % | 27.408 | 21,3 % | 29.567 | 23,0 % | 29.567 | 23,0 % | 100,0 % | 128.562 | 100,0 % | |
| K | 49.194 | 124 | 100,0 % | 100.724 | 204,7 % | 8.095 | 16,5 % | 8.135 | 16,5 % | 100,0 % | 49.194 | | |
| Total | 95.921.254 | 5.255.324 | | 20.019.946 | 20,9 % | 266.045 | 0,3 % | 19.249.681 | 20,7 % | | 95.922.480 | 100,0 % | 0,2 % |

Mass market other, no SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | - | - | | - | | - | | | | | - | | |
| B | 431.574 | 136.730 | 0,2 % | 94.476 | 21,9 % | 445 | 0,1 % | 214.688 | 49,7 % | 0,2 % | 431.782 | 99,8 % | 0,0 % |
| C | 521.581 | 52.886 | 0,4 % | 165.938 | 31,8 % | 970 | 0,2 % | 260.296 | 49,9 % | 0,4 % | 521.637 | 99,9 % | 0,0 % |
| D | 367.861 | 33.603 | 0,6 % | 158.522 | 43,1 % | 1.149 | 0,3 % | 185.531 | 50,4 % | 0,6 % | 367.886 | 99,9 % | 0,0 % |
| E | 357.193 | 35.431 | 1,0 % | 186.698 | 52,3 % | 1.691 | 0,5 % | 177.814 | 49,8 % | 1,0 % | 357.212 | 99,9 % | 0,1 % |
| F | 190.080 | 19.387 | 1,7 % | 124.525 | 65,5 % | 1.637 | 0,9 % | 96.167 | 50,6 % | 1,8 % | 190.080 | 100,0 % | 0,8 % |
| G | 125.553 | 2.608 | 3,6 % | 93.527 | 74,5 % | 2.228 | 1,8 % | 62.028 | 49,4 % | 3,5 % | 125.602 | 98,2 % | 0,8 % |
| H | 60.100 | 545 | 7,0 % | 48.741 | 81,1 % | 2.070 | 3,4 % | 29.798 | 49,6 % | 6,6 % | 60.100 | 100,0 % | 2,8 % |
| I | 44.698 | 867 | 21,7 % | 51.546 | 115,3 % | 4.898 | 11,0 % | 22.531 | 50,4 % | 20,5 % | 44.731 | 96,3 % | 9,1 % |
| J | 10.716 | 94 | 100,0 % | 129 | 1,2 % | 5.458 | 50,9 % | 5.458 | 50,9 % | 100,0 % | 10.716 | 100,0 % | |
| K | 13.039 | 10 | 100,0 % | 1.405 | 10,8 % | 9.589 | 73,5 % | 9.589 | 73,5 % | 100,0 % | 13.039 | 100,0 % | |
| Total | 2.122.395 | 282.161 | | 925.507 | 43,6 % | 30.136 | 1,4 % | 1.063.901 | 50,1 % | | 2.122.784 | 99,9 % | 0,6 % |

Mass market real property, SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | - | - | | - | | - | | | | | - | | |
| B | 2.321.936 | 406.585 | 0,2 % | 200.468 | 8,6 % | 949 | 0,0 % | 462.153 | 19,9 % | 0,2 % | 2.325.054 | 99,2 % | 0,0 % |
| C | 1.472.695 | 62.719 | 0,4 % | 245.407 | 16,7 % | 1.362 | 0,1 % | 373.723 | 25,4 % | 0,4 % | 1.473.513 | 98,7 % | 0,2 % |
| D | 874.382 | 18.463 | 0,6 % | 204.697 | 23,4 % | 1.320 | 0,2 % | 215.057 | 24,6 % | 0,6 % | 874.707 | 98,3 % | 0,0 % |
| E | 774.934 | 8.487 | 1,0 % | 289.937 | 37,4 % | 2.158 | 0,3 % | 225.383 | 29,1 % | 1,0 % | 775.264 | 96,3 % | 0,4 % |
| F | 435.581 | 6.485 | 1,7 % | 231.779 | 53,2 % | 2.107 | 0,5 % | 125.585 | 28,8 % | 1,7 % | 435.619 | 99,4 % | 0,6 % |
| G | 234.477 | 3.505 | 3,4 % | 181.491 | 77,4 % | 2.188 | 0,9 % | 64.571 | 27,5 % | 3,6 % | 234.751 | 92,7 % | 0,0 % |
| H | 185.828 | 5.071 | 7,5 % | 235.070 | 126,5 % | 4.175 | 2,2 % | 55.616 | 29,9 % | 7,1 % | 186.153 | 94,0 % | 4,0 % |
| I | 186.905 | 1.847 | 23,3 % | 297.460 | 159,2 % | 11.585 | 6,2 % | 52.193 | 27,9 % | 23,7 % | 186.974 | 96,4 % | 9,6 % |
| J | 9.515 | - | 100,0 % | 1.133 | 11,9 % | 2.007 | 21,1 % | 2.007 | 21,1 % | 100,0 % | 9.515 | | |
| K | 6.961 | 10 | 100,0 % | 11.067 | 159,0 % | 2.325 | 33,4 % | 2.325 | 33,4 % | 100,0 % | 6.961 | 100,0 % | |
| Total | 6.503.214 | 513.171 | | 1.898.509 | 29,2 % | 30.176 | 0,5 % | 1.578.614 | 24,3 % | | 6.508.510 | 99,0 % | 0,4 % |

Mass market other, SME

| | EAD | EAD off balance | Weighted PD | Calculation | Risk weight | EL | EL % | LGD | LGD % | Weighted PD 12 | Engagem. before CI | Weighted CF | DR% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | - | - | | - | | - | | | | | - | | |
| B | 136.065 | 45.433 | 0,2 % | 26.220 | 19,3 % | 123 | 0,1 % | 59.948 | 44,1 % | 0,2 % | 137.012 | 98,0 % | 0,0 % |
| C | 87.566 | 30.751 | 0,4 % | 24.911 | 28,4 % | 144 | 0,2 % | 39.851 | 45,5 % | 0,4 % | 87.840 | 99,1 % | 0,3 % |
| D | 64.295 | 19.763 | 0,6 % | 23.769 | 37,0 % | 171 | 0,3 % | 27.995 | 43,5 % | 0,6 % | 64.695 | 98,0 % | 0,0 % |
| E | 70.615 | 13.876 | 0,9 % | 30.447 | 43,1 % | 268 | 0,4 % | 29.654 | 42,0 % | 0,9 % | 70.992 | 97,3 % | 0,0 % |
| F | 38.052 | 5.306 | 1,8 % | 21.225 | 55,8 % | 290 | 0,8 % | 16.101 | 42,3 % | 1,8 % | 38.421 | 93,5 % | 0,0 % |
| G | 20.752 | 1.260 | 3,6 % | 14.732 | 71,0 % | 355 | 1,7 % | 9.790 | 47,2 % | 3,8 % | 20.771 | 98,5 % | 0,0 % |
| H | 15.781 | 820 | 6,7 % | 12.686 | 80,4 % | 521 | 3,3 % | 7.817 | 49,5 % | 6,4 % | 15.929 | 84,8 % | 2,6 % |
| I | 20.439 | 936 | 29,9 % | 21.316 | 104,3 % | 2.442 | 11,9 % | 8.250 | 40,4 % | 23,8 % | 20.608 | 84,7 % | 6,8 % |
| J | 610 | 48 | 100,0 % | - | 0,0 % | 363 | 59,6 % | 363 | 59,6 % | 100,0 % | 623 | 79,2 % | |
| K | 6.538 | - | 100,0 % | - | 0,0 % | 2.988 | 45,7 % | 2.988 | 45,7 % | 100,0 % | 6.538 | | |
| Total | 460.713 | 118.192 | | 175.307 | 38,1 % | 7.667 | 1,7 % | 202.759 | 44,0 % | | 463.428 | 97,8 % | 0,5 % |

Predicted PD and observed default rates (DR) are averages based on number of exposures and are not volume weighted. Predicted PD expresses estimated the probability of default for exposures not in default at the start of the measuring period.

An exposure to a retail customer where the realisation value of the dwelling is assessed to be below 30% of the customer's loan is categorised not as an exposure secured on real property but as "other retail market".

## 3.2 Market risk

Market risk is a generic term for the risk of loss resulting from changes in observable rates or prices on financial instruments – in particular changes in share prices, fixed income rates (including credit spreads) and exchange rates.

Market risk also includes the risk of loss due to changes in the price of financial derivatives such as futures, options, and financial derivatives based on items other than securities – for example commodities.

Market risk arises at SpareBank 1 SMN primarily in connection with the Bank's investments in bonds, short-term money market paper and shares, and as a result of activities designed to underpin banking operations such as funding along with fixed income and currency trading.

Market risk is controlled through day-to-day monitoring of risk exposures against limits set by the Board of Directors and through ongoing analyses of outstanding positions. Risk Management reports monthly to the Board of Directors on the position regarding compliance with the limits set by the Board. Detailed limits apply to investments in shares, bonds and positions in the fixed income and currency markets.

The Group defines limits on exposure to equity instruments using stress tests based on Finanstilsynet's scenarios. The limits are reviewed at least once a year and are adopted yearly by the Bank's Board of Directors. Finanstilsynet's models for market and credit risk are used to compute the Bank's market risk. These models stress test the Bank's market risk based on traditional risk measures with an addition for the risk factors risk diversification and market liquidity. The risk factors are reviewed on a quarterly basis.

Market risk is stress tested and reported monthly to the board of directors.

Equity risk is the risk of loss on positions as a result of changes in share prices. This risk is linked to positions in equity instruments, including derivatives with equity instruments as the underlying. Equity risk is regarded as moderate.

Interest rate risk is the risk of loss due to changes in interest rates in financial markets. Interest rate risk arises mainly on fixed interest loans and funding in fixed interest securities. The risk on all interest rate positions can be viewed in terms of the change in value of interest rate instruments resulting from a rate change of 1 basis point. The Group utilises analyses showing the effect of this change for various maturity bands, with separate limits applying to interest rate exposure within each maturity band in addition to a separate limit for aggregate interest rate risk.

Interest rate lock-ins on the Group's instruments are essentially short, and the Group's interest rate risk is low to moderate.

Exchange rate risk is the risk of loss arising from changes in exchange rates. The Group measures exchange rate risk with a basis in net positions in the various currencies. The limits on exchange rate risk are expressed as limits on the maximum aggregate currency position and on the maximum position in the individual currency. Exchange rate risk is regarded as low.

Spread risk is the risk of losses arising as a result of changes in market value/realistic value of bonds as a consequence of increased risk add-ons in the pricing of these bonds. Credit risk in the bond portfolio is managed with a basis in an evaluation of the respective issuers. In addition, the bank has a separate limit for overall spread

risk for all bonds. The bank calculates spread risk based on Finanstilsynet's module for market and credit risk, where the overall loss potential is the sum of loss potentials calculated for each individual credit risk exposure. The loss potential for the individual credit exposure is calculated with a basis in rating and duration. Bond risk is considered to be moderate.

## 3.3 Liquidity risk

Liquidity risk is the risk that the Group will be unable to honour its obligations and/or finance increases in assets without incurring extra costs in the form of falling values of assets which must be realised, or in the form of extra costly funding.

**Management**
The Bank's Finance Division is responsible for the Group's funding and liquidity management. Compliance with limits is monitored by Risk Management which reports the status to the Board of Directors on a monthly basis. The Group manages its liquidity on an overall basis since the Finance Division is responsible for funding both the Bank and the subsidiaries.

Liquidity risk management is based in the Group's overall liquidity strategy which reflects the Group's moderate risk profile. As part of the strategy, a preparedness plan has been drawn up to handle the liquidity situation in periods of capital market turbulence with Bank-specific and industry-related crisis outcomes and a combination of these. Liquidity management includes stress tests which simulate the liquidity effect of various market events. The results of such testing form a part of the basis for the preparedness plan developed for the Group's liquidity management regime.

**Risk measurement**
The Bank's Board of Directors reviews the liquidity strategy annually and establishes a framework that promotes a long-term perspective and balance in liquidity procurement. The Bank's overall aim is to ensure its ability to survive for 12 months of ordinary operation with moderate growth without fresh external funding.

The Bank's most important source of finance is customer deposits. The Bank mitigates its liquidity risk by diversifying funding across a variety of markets, funding sources and instruments, and by use of long-term funding. Too high a concentration of maturities increases refinancing vulnerability. This risk is curbed through defined limits. The Bank is rated by Moody's and Fitch Ratings as an element in assuring access to funding at acceptable prices in the market. The bank uses SpareBank 1 Boligkreditt as an important funding source for the bank's residential financing. The bank will continue to do so ahead because SpareBank 1 Boligkreditt has a good rating, is a frequent issuer and has proven itself capable of bringing in new funding in demanding market situations where smaller institutions may face greater challenges.

SpareBank 1 SMN's liquidity position is satisfactory. The Bank's liquidity is measured regularly against the liquidity indicator for a reference portfolio defined by Finanstilsynet. The Bank's liquidity strategy specifies a maximum deviation against this portfolio. The Bank stayed within this limit throughout 2016.

The Ministry of Finance established new quantitative requirements for liquidity reserves on 25 November 2015. The LCR requirement entails that institutions shall at all times have in place a liquidity reserve of at least 100 per cent, in other words the holding of liquid assets shall at least match net liquidity outflow in a given stress period of 30 calendar days. The bank can phase in the LCR requirement with 80 per cent as from 31 December 2016 and 100 per cent as from 31 December 2017.

## Portfolio information

**Table 13 - Minimum own funds requirement in respect of market risk, including position risk, counterparty risk, settlement risk, foreign exchange risk and commodity risk**

| | Consolidated | Parent bank |
|---|---|---|
| **Position risk** | **41** | **35** |
| Equity instruments | 5 | 0 |
| Debt instruments | 36 | 35 |
| Units in securities funds | 0 | 0 |
| Derivatives | 0 | 0 |
| Credit derivatives | 0 | 0 |
| Issues | 0 | 0 |
| **Counterparty risk (in trading portfolio)** | | |
| **Settlement risk** | | |
| of which 5-15 days | 0 | 0 |
| of which 16-30 days | 0 | 0 |
| of which 31-45 days | 0 | 0 |
| of which > 45 days | 0 | 0 |
| **Foreign exchange risk** | 1 | 0 |
| **Commodity risk** | | |
| **Total** | **42** | **35** |

Equity capital positions outside the trading portfolio:

**Table 14 - Information on investments by purpose**

| (NOK million) | 2016 | 2015 | 2014 |
|---|---|---|---|
| **At fair value through profit/loss** | **1482** | **1377** | **673** |
| Listed | 1109 | 803 | 199 |
| Unlisted | 373 | 574 | 474 |
| | | | |
| **Available for sale** | **60** | **40** | **35** |
| Listed | 0 | 0 | 0 |
| Unlisted | 60 | 108 | 35 |
| | | | |
| **Business held for sale - of which Shares** | | | |
| Unlisted | 15 | 15 | |
| **Total shares and units** | **1542** | **1417** | **708** |

**Table 15 - Overview of counterparty risk for derivatives**

| | | Fair value | |
|---|---|---|---|
| **Total foreign exchange and contract amount** | **Contract amount** | **Assets** | **Liabilities** |
| Total interest rate derivatives | 660.684 | 6.443 | -5.545 |
| Total foreign exchange derivatives | 23.679 | 1.159 | -512 |
| **Total** | **684.363** | **7.602** | **-6.057** |

## 3.4 Operational risk

Operational risk is the risk of loss as a result of unsatisfactory or failing internal processes, systems, human error or external events. Examples of the foregoing include errors on the part of employees, flaws in products, processes or systems, or losses incurred by the Bank as a result of fraud, fire or natural damage.

Operational risk is a risk category that captures the bulk of costs associated with quality failings in the Bank's ongoing business.

SpareBank 1 SMN has adopted a policy specifically for the management of operational risk. The policy guides the Bank's overarching stance on the management of operational risk, and is designed to ensure that such risk is managed in an effective and appropriate manner. Operational risk must be low, and its management aims to ensure that the risk of undesired loss is reduced.

Identification, management and control of operational risk are an integral aspect of executive responsibility at all levels in SpareBank 1 SMN. Executives' most important aids in this respect are professional insight and managerial expertise along with action plans, control procedures and good monitoring systems. A systematic focus on risk assessment also promotes knowledge and awareness of improvements needed in one's entity. Any flaws found are reported to appropriate levels of the organisation.

SpareBank 1 SMN attaches importance to authorisation structures, good descriptions of procedures and clear definition of responsibilities in supply contracts between the respective divisions as elements of a framework for handling operational risk.

The Board of Directors is kept abreast of the operational risk position through quarterly risk reports, and the annual internal control reporting. In addition the Board of Directors receives each year from the Internal Audit an independent assessment of the Group's risk and of whether the internal control system functions in an appropriate and satisfactory manner.

A system of registration and follow-up is used in the effort to ensure continuous improvement across all SpareBank 1 SMN's business activity. This system promotes a better structure and follow-up of risk, events and areas needing improvement. Together with the reporting carried out, this system constitutes an important experience base with respect to operational risk. All operational events which could potentially entail loss or where losses have arisen are recorded in the base. Improvement measures are considered and set in train where appropriate.

The Group has a broad-based insurance programme designed to capture significant portions of losses incurred as a result of major events and disasters. Various liability and crime insurances have been taken out, along with property and contents insurances, with a view to such events. Several types of personal insurance have also been taken out. These highly cost-effective policies are primarily intended to cover major loss events.

The following figure shows operational loss events recorded in 2016 broken down on applicable Basel categories:

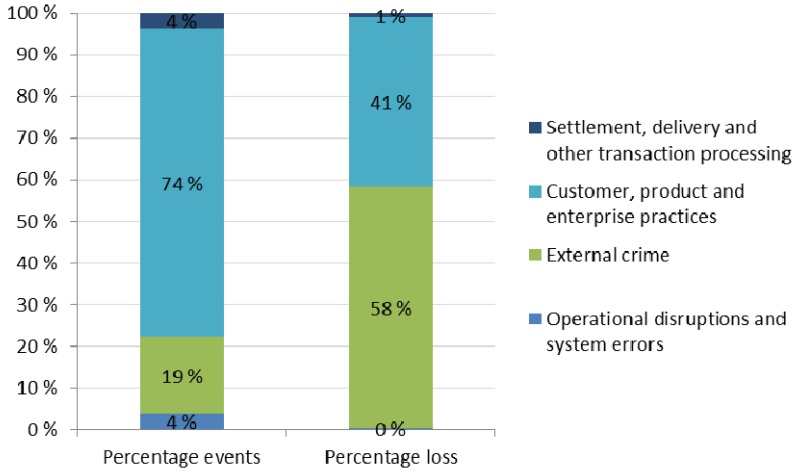



**Figure 8 – Undesired events recorded in 2016 broken down on Basel categories**

Undesired events recorded in 2016 show that the highest proportion of loss events is in the category *Customer, product and enterprise practices*, while the category *External fraud* has the highest proportion in terms of book losses in NOK.

The figure below shows the distribution of actual operational losses at SpareBank 1 SMN broken down on various intervals in the period 2012 to 2016. The figure shows that the bulk of operational loss events are small, and that about 75 per cent of them are below NOK 10,000.

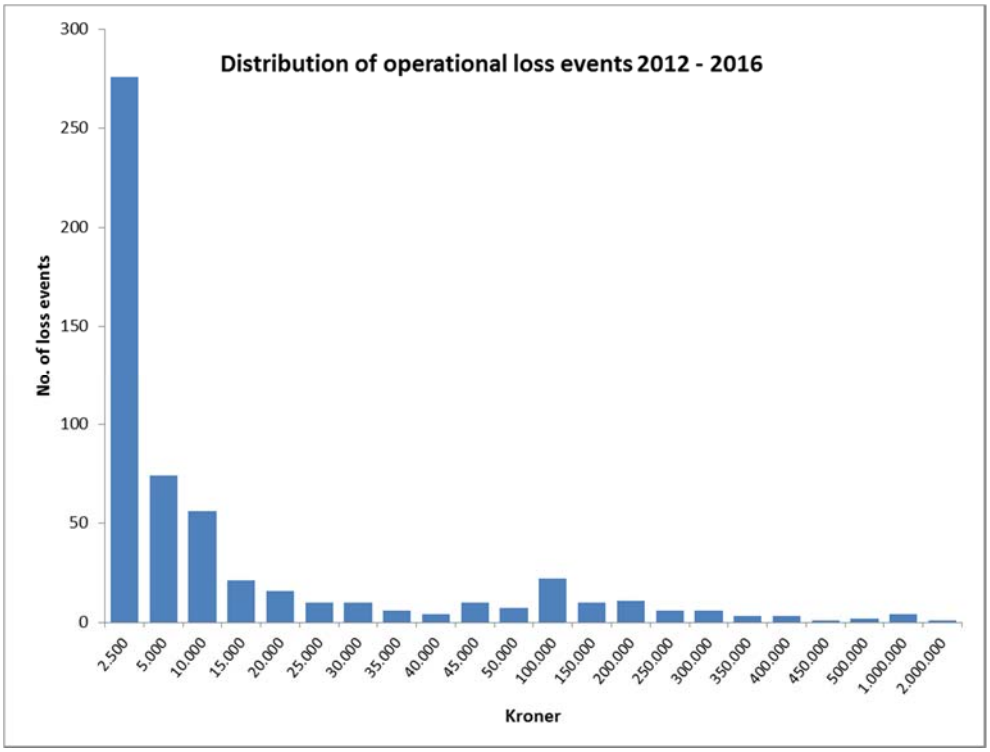



**Figure 9 – Distribution of operational loss events in the period 2012 - 2016**

***Compliance risk***

Compliance risk is the risk of failure to comply with the rules regulating the business. A consequence of non-compliance may be that SpareBank 1 SMN incurs public sanctions, financial loss or loss of reputation.

The compliance function is organised independently of the business units. This function identifies, assesses and makes recommendations, and monitors and reports within regulatory frameworks applying to SpareBank 1 SMN. The function is headed by the legal affairs director who reports to the group CEO and the board of directors.

**Compliance risk in 2016**

There is growing regulatory control over the financial sector and a focus on compliance. SpareBank 1 SMN is continuing the anti-money laundering project launched in 2015 whose goal is good-quality risk analyses and operationalisation of activity linked to work on measures in the organisation to combat money-laundering and financing of terrorism. A clear-up programme for the existing customer base along with training of employees, as well as an assessment of systems support are important parts of the project. In addition, a separate function has been established with responsibility for operationalisation of AML in the business areas.

Prioritised areas ahead in addition to AML include safeguarding customers' personal data (under the Personal Data Act) at a time when technological development and increased competition from actors outside the financial industry call for relevant initiatives targeting the customer across several channels.

**Management and measurement of compliance risk**

SpareBank 1 SMN's compliance policy is adopted by the board of directors and describes main principles in terms of responsibility and organisation. Compliance risk across the group should be low.

The group will comply with applicable rules for the business that is carried on. A risk-based approach to the discharge of the compliance function is geared to overall strategy, range of products and services, and the scope of the activity.

The group's compliance function has an overall responsibility for following up on compliance risk by means of preventative and controlling measures. The annual plan shows planned activities. The responsible manager reports quarterly to the group CEO and the Board of Directors.

The group management is operatively responsible for ensuring that all activities within their units are carried on in accordance with applicable rules and shall document this on an ongoing basis. Managers shall see to it that employees have the necessary knowledge and confidence to carry out their tasks within the bounds of applicable rules. All staff are responsible for everyday compliance.

All business areas and support functions, along with subsidiaries, are required to promote compliance by operationalising compliance policy and identified compliance risks adopted by the Board of Directors. The function for monitoring compliance with anti-money laundering measures is specifically at tended to through the establishment of a position responsible for operationalising AML.

The individual responsible for compliance is responsible for reporting compliance risk and any breaches of laws or regulations under which SpareBank 1 SMN operates.

# 4. ECONOMIC CAPITAL (PILLAR 2)

## 4.1 Summay

Economic capital refers to the amount of capital the Group considers it needs to cover the actual risk the Group has incurred. Since it is impossible to guard against all losses, the Group has determined that its economic capital should cover 99.9% of possible unexpected losses over a one-year horizon. For owner risk in SpareBank 1 Gruppen, however, a confidence level of 99.5% is applied which is in keeping with the requirement expected under the Solvency II regime currently being developed.

While statistical methods are employed to calculate economic capital, calculation none the less requires qualitative assessments in some instances.

The following table shows the distribution of economic capital on the respective risk groups with a basis in risk exposure as of 31.12.16. At year-end economic capital is calculated for credit, market, operational, owner and business risk (including strategic risk).

The calculations are done with a basis in internal risk assessments, and accordingly do not build on the Pillar-1-plus approach applied by Finanstilsynet in its SREP.

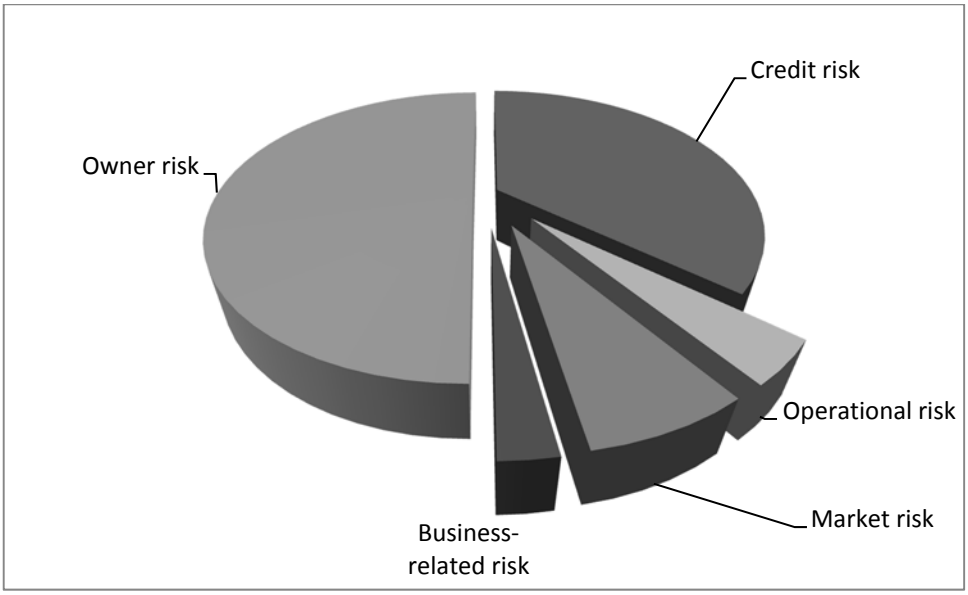


**Figure 10 - application of economic capital by risk area**

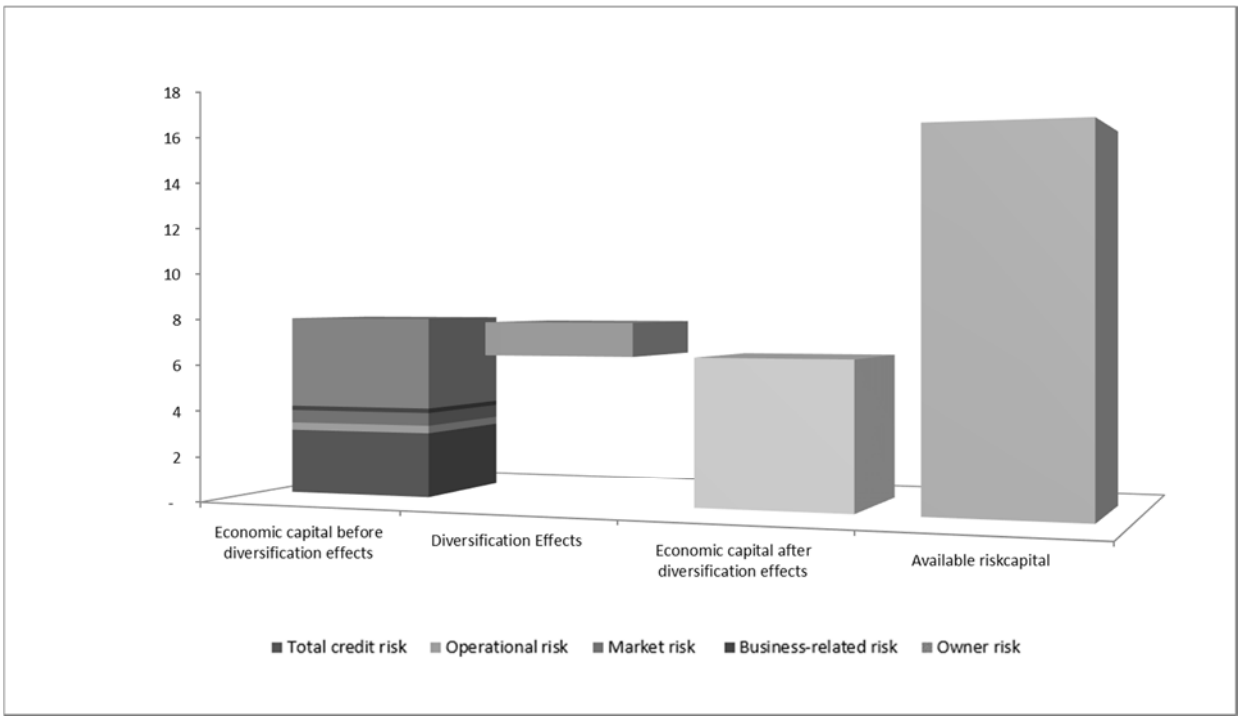
A significant portion of capital employed at SMN is devoted to owner risk. The following figure shows owner risk distributed on the respective risk groups. Credit risk accounts for the bulk of risk exposure. SMN is indirectly exposed to credit risk via BN Bank ASA, SpareBank 1 Gruppen, Bank 1 Oslo, SpareBank 1 Boligkreditt and SpareBank 1 Næringskreditt.

Market risk is a further significant risk type which is chiefly incurred through exposures via the subsidiaries SMN Invest and SpareBank 1 SMN Markets, and via SpareBank 1 Gruppen.

**Figure 11 - owner risk by risk type**

The following figure shows economic capital at 31.12.16. In addition a comparison has been made of the need for economic capital against actual equity capital adjusted for goodwill and hybrid capital as of 31.12.16.

**Figure 12 - need for economic capital relative to available equity capital**




The total need for economic capital at 31.12.16 is calculated at NOK 8.0bn before diversification effects. When account is taken of diversification effects between risk groups, the need for economic capital is calculated at NOK 6.4bn. The diversification effect shows the risk-mitigating effect the Group achieves by operating in several risk areas which cannot be expected to inflict unexpected losses simultaneously.

Available loss-absorbing capital including hybrid capital totalled NOK 16.1bn at year-end.

In the following chapters SpareBank 1 SMN gives a closer account of (a) the risk management framework for the various types of risk not covered by the Pillar 1 minimum requirements on own funds and of (b) the calculation of economic capital for credit, market and operational risk where it deviates from the regulatory calculations.

## 4.2 Credit risk

**Management and control**

Management and control of credit risk are further described in chapter 3.1.

**Model description and application**
The Group uses in all essentials the same models and approaches when calculating economic capital as when calculating minimum requirements on own funds. The main differences are described in chapter 5.

**Economic capital**
Economic capital against credit risk forms part of the Group's process for assessing economic capital under Pillar 2.

## 4.3 Market risk

**Management and control**
Management and control of credit risk are further described in chapter 3.2.

**Model description and application**
The Group reports regulatory capital (Pillar 1) using the standardised approach for market risk. Economic capital is calculated for interest rate, exchange rate and securities risk incurred by SpareBank 1 SMN. The calculation is

based on stress tests which start out from a scenario of major market disruption. Measurement of economic capital is an important tool with a view to internal budget framing and capital allocation.

The measurements of economic capital deviate not only in model terms, but also in portfolio terms, from the regulatory calculations. This is partly because the internal measurements of economic capital include interest rate risk outside the trading portfolio, which is not subject to the standardised approach's minimum capital requirements.

The table below illustrates the profit/loss effect of stress testing conducted at full utilisation of limits. Risk activities related to trading in currencies, fixed income and securities are conducted within the adopted limits, authorisations and credit lines to counterparties in effect at all times. SpareBank 1 SMN has moderate interest rate risk, and only on a very limited scale actively assumes interest rate risk in its trading activities. The aim is to generate revenues to the greatest possible degree in the form of customer margins. This is with a view to assuring the greatest possible earnings stability and safety.

**Table 16 - Limits on market risk**

| Main limit | Market stress | Estimated profit effect (NOKm) |
|---|---|---|
| Currency exposure | 10-20% change | 12 |
| Interest rate exposure | 200 bpv parallel shift | 112 |
| Spread risk | Up to 4pp risk premium mark-up | 300 |
| Equity risk limit | 30-48% value fall | 441 |

**Economic capital**
Economic capital for market risk forms part of the Group's process for assessing economic capital under Pillar 2.

## 4.4 Operational risk

**Management and control**
Management and control of operational risk receive closer attention in chapter 3.4.

**Economic capital**
Capital for operational risk forms part of the Group's process for assessing economic capital under Pillar 2. The capital need is calculated using the standardised approach for the parent bank and the basic indicator approach for subsidiaries. The Group will set aside additional capital for operational risk to take account of any shortfall in the quality of management and control at SMN.

## 4.5 Liquidity risk

**Management and control**
Management and control of liquidity risk is further described in chapter 3.3

**Diversification and maturities**
The figures below illustrate the diversification of the Group's funding sources and markets as of 31.12.2016.

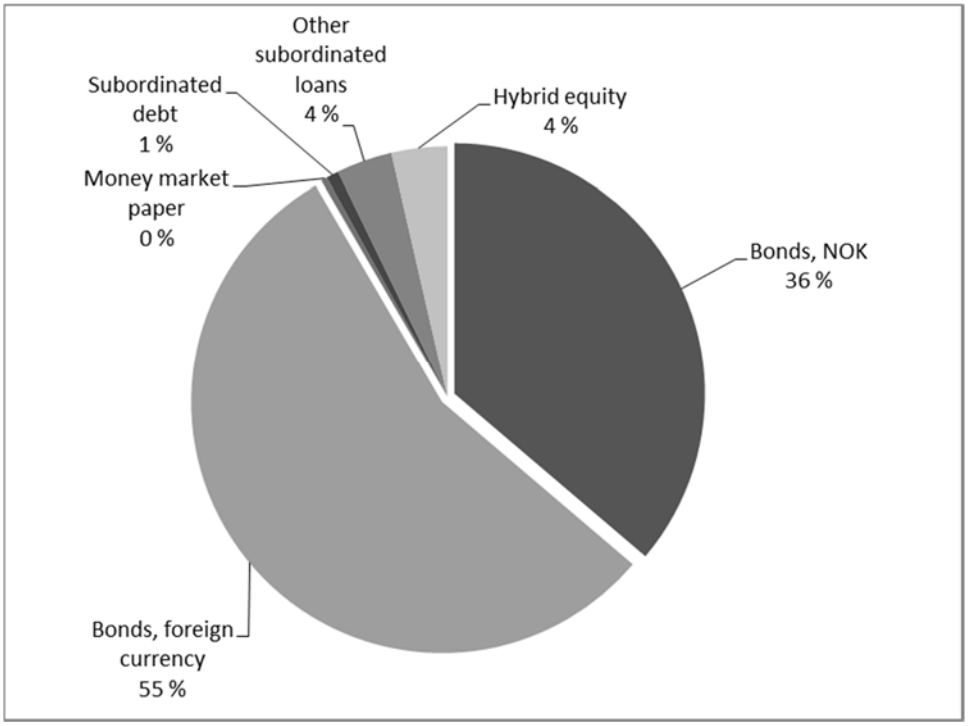



**Figure 13 - Composition of money market funding**

Funding via the Euro Medium Term Note (EMTN) program accounts for 55% of total funding. This category comprises both open offers and private placings.

The Group's LCR (liquidity coverage ratio) was 129% and the NSFR (net stable funding ratio) was 136% at year-end in 2016.

The figure below illustrates the funding portfolio's maturity structure as from end-2016.

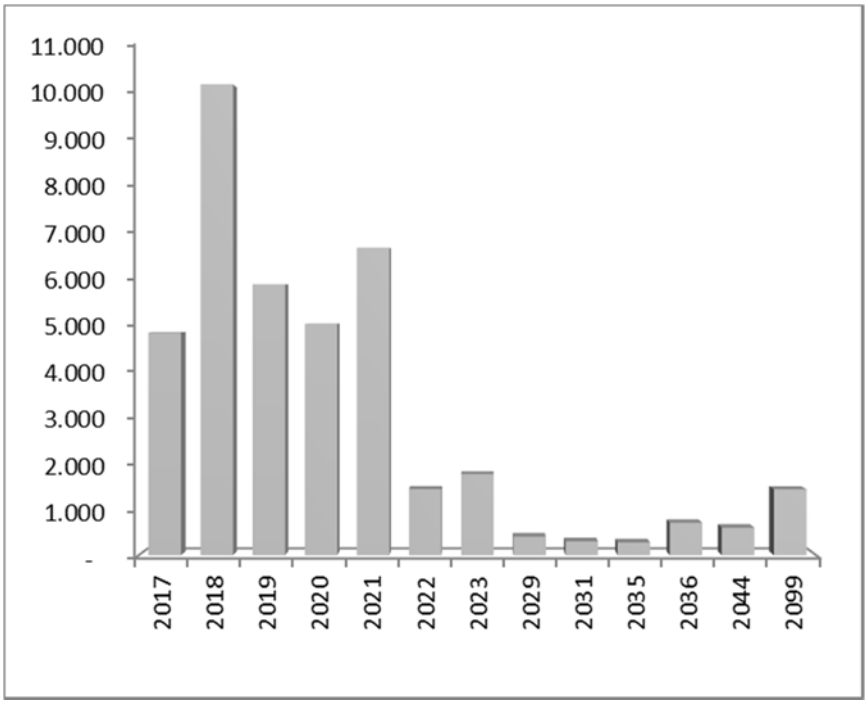



**Figure 14 - maturity profile, funding (figures in NOKbn)**

**Economic capital**

The Bank does not hold economic capital for liquidity risk.

## 4.6 Owner risk

**Definition**
Owner risk is the risk that SpareBank 1 SMN will incur negative results on its holdings in strategically owned companies and/or will need to supply fresh equity to those companies. The companies concerned are defined in this context as companies in which SpareBank 1 SMN has a significant owner interest and influence. SpareBank 1 SMN incurs owner risk essentially through its stake in SpareBank 1 Gruppen, BN Bank ASA, SpareBank 1 Næringskreditt AS, SpareBank 1 Boligkreditt AS and SpareBank 1 Kredittkort.

**Management and control**
The SpareBank 1 banks operate a collaborative alliance and develop product companies through a jointly owned holding company – SpareBank 1 Gruppen AS. SpareBank 1 Gruppen is owned by SpareBank 1 SMN, SpareBank 1 Nord-Norge, SpareBank 1 SR-Bank, Sparebanken Hedmark, Samarbeidende Sparebanker AS (20 savings banks in southeast and western Norway), and the Norwegian Confederation of Trade Unions and affiliated unions. SpareBank 1 SMN has a 19.5% stake in SpareBank 1 Gruppen.

SpareBank 1 Gruppen also has administrative responsibility for collaborative processes within the SpareBank 1 Alliance in which technology, brand-building, competence, shared processes / exploitation of best practice and procurement are at centre stage. The Alliance is also engaged in development work through three competence centres for training (in Tromsø), cash management (in Trondheim) and credit models (in Stavanger).

Meetings of the Board of Directors of SpareBank 1 Gruppen are attended by the CEOs of the owner banks SpareBank 1 SMN, SpareBank 1 Nord-Norge, SpareBank 1 SR-Bank, Sparebanken Hedmark and Samarbeidende Sparebanker AS. The owner banks' managing directors are also members of Alliance's governing body. SpareBank 1 Boligkreditt AS is a residential mortgage company operating under licence granted by Finanstilsynet. It is owned by the savings banks making up the SpareBank 1 Alliance, and was founded on 18 August 2005. Each savings bank's stake in SpareBank 1 Boligkreditt is based on its proportion of all loans transferred to that company. In 2016 SpareBank 1 SMN's stake was 19.0%, and SpareBank 1 SMN is represented on the Board of Directors, Supervisory Board and the General Meeting respectively.

**Method for calculating economic capital**
SpareBank 1 SMN calculates economic capital for owner risk in SpareBank 1 Gruppen with a basis in SpareBank 1 Gruppen's own capital assessment process and assessments of economic capital.

Calculation of economic capital for owner risk for other affiliates is done with a basis in those companies' internal capital assessment process. Figure 12 shows the composition of owner risk at the end of 2016.

**Economic capital**
Calculation of economic capital for owner risk forms part of the Group's process for assessing economic capital under Pillar 2.

## 4.7 Business risk

**Definition**
Business risk is the risk of unexpected income and cost fluctuations arising from factors other than credit risk, market risk and operational risk. This risk can arise in a variety of business or product segments and may be caused by cyclical fluctuations and changing customer behaviour.

**Management and control**
Business risk is managed through strategic analyses of external market situations and possible changes in framework conditions. The Group is concerned to develop a well-diversified income base, so that any failure in individual product groups or customer segments will not have significant consequences.

SpareBank 1 SMN is well placed to meet new challenges. The Group has for many years demonstrated considerable ability and will to adapt. The Group has over time developed cost-effective operations combined with continuous competence enhancement and business expansion in terms of product range and geographical

reach. SpareBank 1 SMN has for several years given systematic emphasis to value chain thinking in its development of products and services.

**Method for calculating economic capital**
Calculation of economic capital starts out from the volatility of that portion of SpareBank 1 SMN's revenues and expenses to which capital is not allocated through other risk categories. The volatility is calculated taking into account elements such as possible change in customer behavior resulting from a severe economic setback, change in the competitive situation, or product innovation.

**Economic capital**
Economic capital for business risk forms part of the Group's process for assessing economic capital under Pillar 2.

## 4.8 Strategic risk

**Definition**
Strategic risk is the risk of impaired earnings and capital generation due to changes in framework conditions, poor business decisions, poor implementation of decisions or failure to adapt to changes in the business operating climate.

**Management and control**
SpareBank 1 SMN has each year a strategy process involving the board of directors, management team and the divisions. A key aspect of the strategy process is to evaluate the Group's strengths, weaknesses, threats faced and potentials. The process culminates with a strategic vision for the next three years with an associated business plan. The Group management team performs a monthly and quarterly evaluation of the Group's performance and strategic direction. The board of directors also carries out a periodic review of strategic direction and the strategic vision.

Changes in the risk picture due to regulatory changes in framework conditions are monitored on an ongoing basis.

**Method for calculating economic capital**
SpareBank 1 SMN calculates economic capital based on a risk analysis of the Group's strategic risk picture with associated scenario analyses.

**Economic capital**
Economic capital for strategic risk forms part of the Group's process for assessing economic capital under Pillar 2.

# 5. COMPARISON OF REGULATORY AND ECONOMIC CAPITAL NEED

The following graph compares minimum requirements on own funds (Pillar 1) and the need for economic capital (Pillar 2). The main reason for differences between the two pillars is also explained.

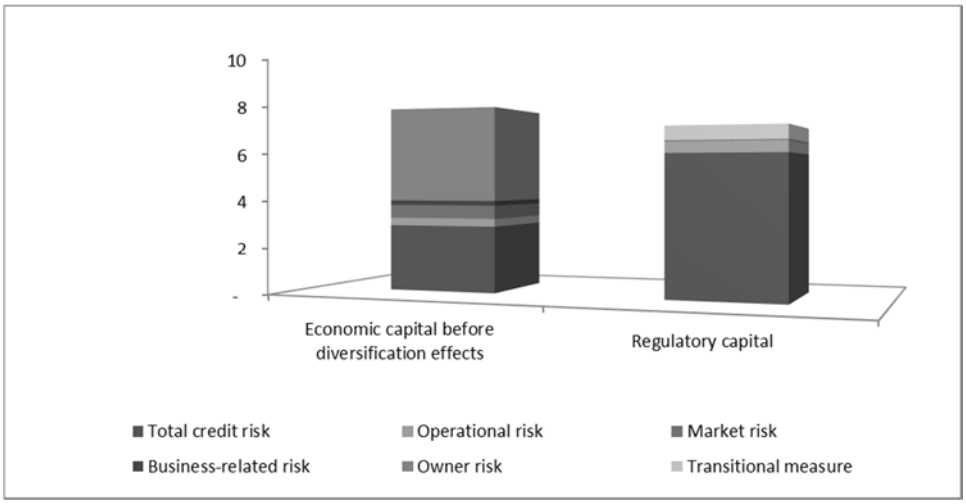



**Figure 15 - comparison of economic and regulatory capital need**

The main differences between economic capital (Pillar 2) before diversification effects of NOK 8.0bn and minimum requirements on own funds (Pillar 1) of NOK 7.6bn (before transitional measure) are due mainly to:

- *Credit risk:*
  - *PD:* In the calculation of economic and regulatory capital need, the PD for the individual counterparty is employed. Due to special requirements on safety margins, the level of the regulatory PD is higher than the economic PD.
  - *LGD:* For IRB exposures to the retail market a 20% LGD floor is defined, causing average LGD to be higher for regulatory purposes than is indicated by the Bank's internal models.
  - The Group fixes the realisable value of furnished collaterals in the light of experience gained over time and such that, based on a conservative assessment, these reflect the assumed realisable value in an economic setback. SpareBank 1 SMN's internal estimates for Loss Given Default are significantly lower than the standardised values set by the authorities.
  - Concentration risk: The IRB framework premises that the loan portfolios are so well diversified that no individual exposure in isolation will affect risk in the portfolio. While this premise is credible in relation to exposures to the retail segment, the corporate market portfolio has concentrations both in terms of major exposures and in terms of sectoral composition. The Bank's calculation of the need for economic capital accordingly takes account of concentration risk associated with size and line of business.
- *Owner risk:* Economic capital of NOK 4.0bn is calculated (Pillar 2) for owner risk in affiliates. In the calculation of the minimum own funds requirement (Pillar 1), the capital requirements at BN Bank, SpareBank 1 Boligkreditt and SpareBank 1 Næringskreditt are consolidated on a proportional basis. The stakes in SpareBank 1 Gruppen and SpareBank 1 Kredittkort are deducted at 100% from the Group's CET1 capital for that portion which exceeds 10% of the Group's CET1 capital. That portion of the stake that is not deducted from the CET1 capital is given a risk weight of 250%.
- *Business risk (including strategic risk):* Economic capital is calculated (Pillar 2) for business risk (incl. strategic risk), whereas business risk is not a risk category in its own right where calculation of the minimum own funds requirement is concerned.
- *Diversification effects*: Diversification effects arise because different asset classes / risk types are not perfectly correlated. As a result the overall capital need is lower than the sum of capital needs for each individual risk category. The Bank takes account of these effects in its assessment of necessary economic capital. The diversification effects are based on observed correlations which are then adjusted to take account of the risk of stronger correlation in an economic downturn.