RISK AND CAPITAL MANAGEMENT 2018

Disclosure of financial information for SpareBank 1 SR-Bank Group

Contents

INTRODUCTION

Risk and capital management in SpareBank 1 SR-Bank intend to create financial and strategic added value

The purpose of risk and capital management in SpareBank 1 SR-Bank is to create financial and strategic added value through:

- having a good risk culture characterised by high awareness of risk management and the group's value base
- having a good understanding of the risks that generate earnings and losses
- to the greatest extent possible, pricing activities and products in line with underlying risk
- having satisfactory capital adequacy based on the chosen risk profile, while at the same time striving for optimal capital utilisation in the various business areas
- exploiting diversification effects
- avoiding that single events should seriously harm the Group's financial position

This document has been prepared to provide the market with the best possible information on SpareBank 1 SR-Bank's risk and capital management. It is also intended to satisfy the stipulated requirements concerning the disclosure of risk information in accordance with the Norwegian Capital Requirements Regulations. This document is updated each year with the exception of information on capital adequacy and the minimum regulatory capital requirements, which is updated quarterly. This information is updated in separate appendices. For information about the Group's remuneration scheme, see Note 22 of the Annual Report 2018.

THE YEAR 2018

SpareBank 1 SR-Bank aims to add strength to growth and development. A total assessment of the group's financial position indicates that it is well equipped to do so.

The Norwegian economy is experiencing growth, and unemployment has declined to a low level over the last two years, both on a country-wide basis and in South and Western Norway. The results of the business survey conducted for Oslo and South and Western Norway[1] show that surprisingly many companies expect better profitability in the coming year, and it appears that optimism in the companies is lifted by companies with activities in the oil, export and industry sectors. Expectations of a continued upswing and higher growth in the Norwegian economy for 2019 will continue to produce increased growth in the group's market areas.

SpareBank 1 SR-Bank meets the future head on, including by having established a separate business area for strategy, innovation and development. The Group invests in new technology and increases the focus on developing new products to ensure customers have the best products on the market. Geographic expansion, digitalisation and growth will provide the basis for transforming from a regional savings bank to a bank for the whole of Southern Norway.

SpareBank 1 SR-Bank delivered a strong result in 2018, with significant income growth, good cost control and lower losses. The Group also fulfilled all capital requirements as at 31 December 2018. The Pillar 2-requirement for SpareBank 1 SR-Bank has been set at 1.7 per cent with effect from 31 March 2019, down from 2.0 per cent fixed in 2016. Core tier 1 capital ratio is 14.7 per cent in 2018, and the target for 2019 is set at 14.6 per cent.

SpareBank 1 SR-Bank is not defined as a systemically important financial institution (SIFI) but is covered by the Financial Supervisory Authority's recommendation from 2018 that enterprises with a loan share of more than 10 per cent to the corporate market should be regarded as systemically important. It is expected that the Ministry of Finance will make a final clarification in the second quarter of 2019, and any SIFI requirement for SpareBank 1 SR-Bank will most likely be valid from the 2nd or 3rd quarter of 2020.

Credit risk accounts for a significant proportion of the group's risk exposure. SpareBank 1 SR-Bank's credit portfolio is regarded as well-diversified. Total lending growth in 2018 was 7.6 per cent. A clearly defined framework that sets limits on what is financed and on what conditions helps to maintain a robust portfolio.

Loans to retail customers account for 65 per cent of total loans (EAD)[2]. The quality of the retail market portfolio is considered very good and the potential for losses low. Most of the portfolio is secured by mortgages on real estate, and the loan-to-value ratio is generally moderate in relation to market value of the collateral.

The corporate market division accounts for 35 per cent of total loans (EAD) and its credit quality is considered good. The concentration risk exposure to major customers and individual industries has been reduced in the last few years, measured in terms of both tier 1 capital and operating profit. The group's largest sectoral concentration is in commercial property, which represents around 15 per cent of the total loan portfolio (EAD). The property portfolio intended for rental consists primarily of long-term leases with financially solid tenants. The vacancy rate is limited, and a significant proportion of the portfolio is interest rate-hedged.

Profitable lending growth, moderate write-downs on loans and financial liabilities, growth in other income and good cost control will contribute to achieving the Group's long-term goals of a minimum return on equity of 12 per cent. Solid earnings from a robust business model and capital optimisation means SpareBank 1 SR-Bank is well positioned to maintain a solid capital base, while ensuring good competitiveness and normalised dividends.

[1] Business survey published January 2019

[2] Including portfolio transferred to SpareBank 1 Boligkreditt AS and SR-Boligkreditt AS

SPAREBANK 1 SR-BANK ASA

SpareBank 1 SR-Bank is currently the leading financial group in the southwest of Norway

SpareBank 1 SR-Bank has been one of the most profitable banks in the Nordic region over the past fifteen to twenty years. The group's market area is South and Western Norway, and it has approximately 300,000 customers. There are 1,150 employees.

SpareBank 1 SR-Bank is a financial group with a complete product range in the retail market, corporate market and the public sector.

In addition to banking, the group has expertise in funding, foreign exchange advice, funds management, securities trading, insurance, real estate brokering and financial counselling. The group's head office is in Stavanger.

SpareBank 1 SR-Bank's goal is to be the customer's number one choice in Southern and Western Norway, and to boost growth and development in the region. This is achieved by being closer to people and businesses than the competitors. Being closer to people and businesses means knowing the people, businesses and markets in the region better. SpareBank 1 SR-Bank also wants to ensure it has a sustainable and profitable business model, with innovation, digitisation and cost efficiency as key strategic focus areas in the coming years.

An overview of the companies in the SpareBank 1 SR-Bank group is provided in the figure below.

Figure 1: Fully and partly owned companies in the SpareBank 1 SR-Bank group as of 31 December 2018

SPAREBANK 1 ALLIANCE

The SpareBank 1 Alliance is one of the largest providers of financial products and services in the Norwegian market.

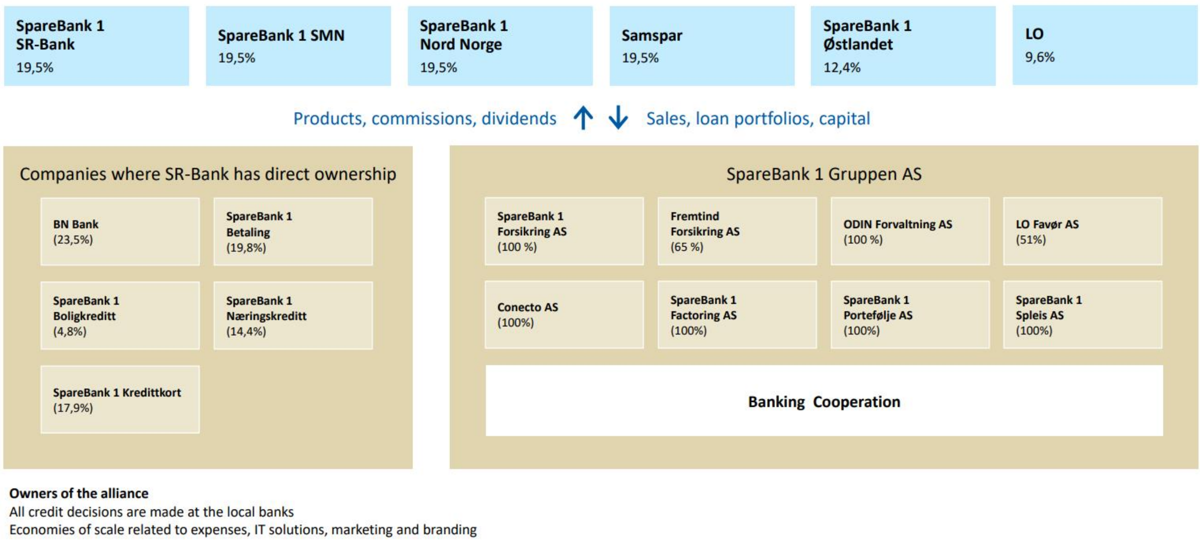
The SpareBank 1 Alliance is a banking and product alliance in which the SpareBank 1 banks in Norway cooperate through the jointly owned holding company SpareBank 1 Gruppen AS.

The independent banks in the alliance are SpareBank 1 SR-Bank, SpareBank 1 SMN, SpareBank 1 Nord-Norge, Sparebanken Østlandet, and Samarbeidende Sparebanker (Samspar). The banks in the SpareBank 1 Alliance distribute financial products from jointly owned companies and collaborate in key areas such as brands, work processes, skills development, IT operations, systems development and purchasing. The SpareBank 1 Alliance has entered into strategic agreements with the Norwegian Federation of Trade Unions (LO) and affiliated trade unions.

The SpareBank 1 Alliance's main goal is to ensure each bank's independence and regional affiliation through strong competitiveness, profitability and financial strength.

The product companies in the SpareBank 1 Alliance are owned by the banks through the holding company SpareBank 1 Gruppen AS. The figure below summarises the ownership structure of the SpareBank 1 Alliance.

Figure 2: SpareBank 1 Alliance as of 31 December 2018



CAPITAL REQUIREMENTS

SpareBank 1 SR-Bank has significantly strengthened its capital adequacy over the past years.

Capital Adequacy Requirements

Financial supervisory authorities regulate financial institutions in order to ensure they assess and handle risk in an effective and sound manner and at the same time are solid and robust enough to withstand fluctuations and shocks in the economy. The capital adequacy Requirements are one way doing this.

The capital adequacy requirements build on three pillars:

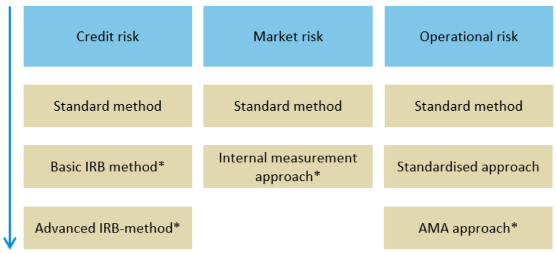
- **Pillar 1**: Quantitative minimum requirements for primary capital.
- **Pillar 2**: Requirements for risk management and internal control, including requirements for internal processes for assessment of risk exposure and capital needs (ICAAP). Under Pillar 2 the supervisory authorities may impose requirements for additional capital if they find that the other requirements do not adequately capture the underlying risk in the institution.
- **Pillar 3**: Requirements for reporting and disclosing financial information. The intention of the pillar is to enable the market to assess the financial institution's risk and capital management.

Primary capital

According to the Norwegian Public Limited Liability Companies Act, all companies must always have equity commensurate with the risk and scope of the activities of the company. In Pillar 1, the Capital Requirements Regulations define minimum requirements for the following risk types: credit, market, and operational risk.

The different methods for calculating the minimum primary capital requirements in Pillar 1 are presented in the figure below.

Figure 3: Alternative methods for calculating the minimum primary capital requirements



* The methods require the approval of the Financial Supervisory Authority of Norway

The minimum primary capital requirements (also known as regulatory capital) amount to 8 per cent of weighted balance (the basis for calculation). In principle, there are two different approaches to calculating the minimum primary capital requirements according to the capital adequacy regulations. The first approach is based on standardised rules, while the second one is based on the use of internal models (IRB). Using internal models, the regulatory minimum capital requirement is based on the bank's internal risk evaluations. Consequently, the statutory minimum capital adequacy requirement is more risk sensitive, such that the capital requirement corresponds more closely to the risk in the underlying portfolios or activities.

SpareBank 1 SR-Bank has permission to use internal models for calculating necessary requirements for capital on credit risk in both the retail (IRB mass market) and in the corporate market (advanced IRB method). This entails that internal models are used in calculating the risk parameters probability of default (PD), conversion factor (CF), used in determining exposure at default (EAD), and loss given default (LGD).

The formerly wholly owned subsidiary SpareBank 1 SR-Finans AS was merged into the parent bank SpareBank 1 SR-Bank ASA in 2017. The merged portfolio is reported on a regulatory basis in accordance with the standard method, while internally using the IRB method. SpareBank 1 SR-Bank intends to apply for permission to use advanced IRB for the merged portfolio of lease funding.

The IRB system includes all the models, work and decision processes, control mechanisms, IT systems and internal guidelines used in the measurement and management of credit risk. SpareBank 1 SR-Bank's objective with the IRB system is to provide a basis for sound risk management and ensure satisfactory capital adequacy according to the risk the group undertakes. The IRB system affects a substantial part of the group's operations, and since its implementation the system has helped improve the quality of risk management in SpareBank 1 SR-Bank considerably.

The internal measurement methods used for internal risk management are reviewed in the chapter on risk and capital management in SpareBank 1 SR-Bank. Regulatory calculations of risk exposure and capital requirements are calculated using the same systems and models that are used for internal risk management, but with individual differences in models and model parameters. The effect of these differences is illustrated in table 32 in the appendix.

The table below shows the main methods used by SpareBank 1 SR-Bank when calculating the minimum primary capital requirements for credit, market and operational risk.

Table 1: SpareBank 1 SR-Bank's methods for calculating minimum regulatory capital requirements

Type of risk	Portfolio	Regulatory method
Credit risk	States – parent bank	Standard method
	Institutions – parent bank	Standard method
	Housing cooperatives, clubs and associations – parent bank	Standard method
	Enterprises – parent bank	Advanced IRB
	Mass market – parent bank	IRB - Mass market
	Leasing, consumer financing and secured car loans	Standard method
	SpareBank 1 SR-Investering AS – subsidiary	Standard method
	SpareBank 1 SR-Forvaltning AS – subsidiary	Standard method
	Mass market - SpareBank 1 Boligkreditt AS	IRB - Mass market
	Mass market - SR-Boligkreditt AS	IRB - Mass market
	Enterprises – SpareBank 1 Næringskreditt AS	Standard method
	Enterprises – BN Bank AS	Advanced IRB
	Mass market – BN Bank AS	IRB - Mass market
Market risk	Equity risk – parent bank	Standard method
	Debt risk – parent bank	Standard method
	Currency risk – parent bank	Standard method
	Subsidiaries and part-owned companies	Standard method
Operational risk	SpareBank 1 SR-Bank including subsidiaries	Standardised approach
	Other part-owned companies	Standard method

Investments in other financial institutions as of 31 December 2018:

SpareBank 1 Gruppen	19.5 %
Sandnes Sparebank	15.1 %
SpareBank 1 Betaling	19.8 %

The bank differentiates between material assets that exceed 10 per cent and non-material assets in financial institutions. Investments that exceed 10 per cent of own common equity tier 1 capital after deductions are deducted from primary capital and the deductions are made in the same class of capital to which the instrument one owns belongs. Investments in common equity tier 1 instruments that are not deductible from primary capital are weighted 250 per cent in the basis for calculation.

Investments in associated companies as of 31 December 2018:

SpareBank 1 Boligkreditt AS [1)]	4.8 %
SpareBank 1 Næringskreditt AS	14.4 %
BN Bank ASA [1)]	24.2 %
SpareBank 1 Kredittkort AS	17.9 %

1) Including indirect assets

Investments in associated companies are accounted for according to the equity method in the Group and according to the acquisition method in the parent bank. The investments are treated identically for the purposes of determining the capital adequacy ratio except for the Group's investments in SpareBank 1 Boligkreditt AS, SpareBank 1 Næringskreditt AS, BN Bank AS and SpareBank 1 Kredittkort AS. Proportionate consolidation is carried out for the group's capital adequacy.

Combined buffer requirements

Basel III introduces requirements for combined buffer capital that exceed the minimum primary capital requirements. These are the capital conservation buffer, systemic risk buffer, countercyclical buffer and buffer for systemically important institutions.

Capital conservation buffer (2.5%): The requirement for a capital conservation buffer of 2.5 per cent of the bank's basis for calculation remains constant throughout all economic cycles. The purpose of this buffer is to ensure that banks build up capital in economic booms in order to prevent the capital falling below the minimum requirement in periods of recession.

Systemic risk buffer (3.0%): System risk is defined as the risk that financial instability will result in disruptions in the provision of financial services of a scope that could give significant negative effects for production and employment. The objective of the system risk buffer of 3 per cent is to dampen the negative effects of financial instability.

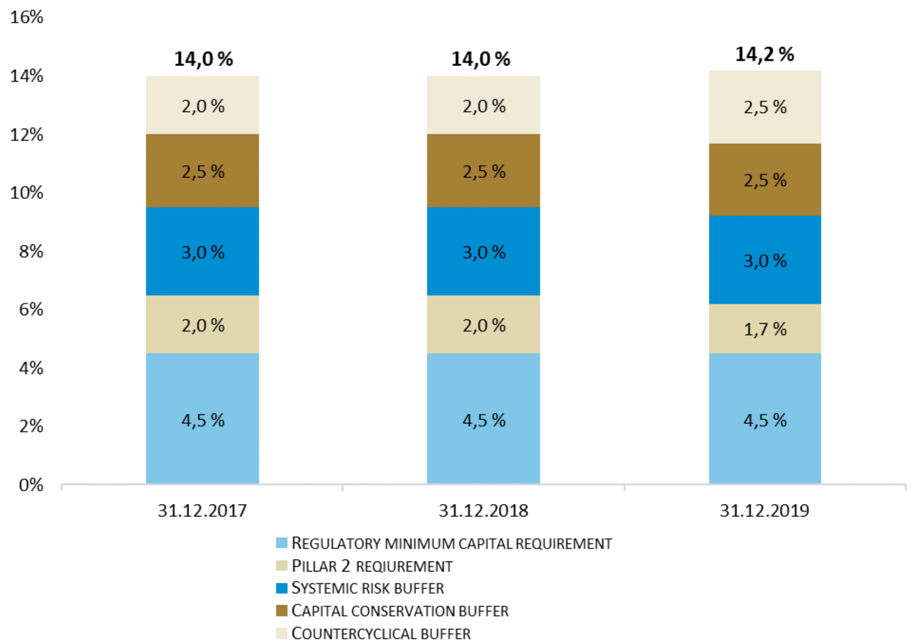
Countercyclical buffer (0-2.5%): The countercyclical capital buffer is set at 2.5 per cent effective from end 2019. The Ministry of Finance sets the level of the countercyclical buffer based on Norges Bank's advice, and the size of the buffer depends on the economic situation. The objective of the countercyclical buffer is to make the institutions even more solid and resistant to lending losses in a future recession and to reduce the risk that banks will reinforce a potential recession by reducing their lending.

Buffer for systemically important institutions (2.0%): Mortgage companies that are defined as systemically important by the Norwegian authorities will be subject to an extra buffer requirement of 2 per cent. In general, institutions with total assets of at least 10 per cent of mainland Norway's GDP, or at least a 5 per cent share of the market for loans, is defined as systemically important institutions. SpareBank 1 SR-Bank is not defined as systemically important. The Financial Supervisory Authority of Norway has however recommended that all undertakings that lend more than 10 per cent of their total lending to the corporate market in one or more defined regions should be regarded as systemically important. SpareBank 1 SR-Bank ASA is covered by this proposal. The proposed amendments to the regulations have been sent to the Ministry of Finance, which will make a final decision. The Ministry of Finance is not expected to make a final clarification until the second quarter of 2019, and the conclusion is uncertain. A possible SIFI requirement for SpareBank 1 SR-Bank will most likely be applicable from the 2nd or 3rd quarter of 2020.

Pillar 2 requirement (2.0%): The objective of the Pillar 2 requirement is to identify capital needs related to risks that are not entirely or at all covered by the capital requirements in Pillar 1. For SpareBank 1 SR-Bank, the Pillar 2 supplement will, with effect from 31 March 2019, be reduced from 2.0 per cent to 1.7 per cent.

The figure below shows the regulatory capital adequacy requirements applicable to SpareBank 1 SR-Bank. By the end of 2018, the formal requirement for common equity tier 1 ratio for non-systematically important institutions was 14.0 per cent. SpareBank 1 SR-Bank aims to keep a separate buffer of about 1 percentage point above the minimum requirement of 14.0 per cent. The Pillar 2 supplement is reduced to 1.7 per cent and countercyclical capital buffer is increased to 2.5 per cent in 2019. This gives a minimum requirement of 14.2 per cent at the end of 2019.

Figure 4: Regulatory capital adequacy requirements according to Pillar 1

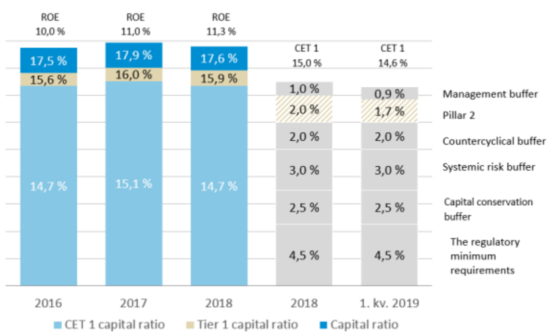


Actual capital adequacy

At the end of 2018, the common equity Tier 1 capital ratio of 14.7 per cent and the capital adequacy ratio were 17.6 per cent, compared with 15.1 and 17.9 per cent respectively at the end of 2017. These calculations include the transitional rule (the "Basel I floor") which says that the capital requirement using internal methods cannot be less than 80 per cent of the capital requirement determined by the Basel I regulations.

The reduction in the core Tier 1 capital ratio is due to an increased risk-weighted balance because of lending growth along with the introduction of new accounting rules in accordance with IFRS 9. Capital-raising measures and healthy lending growth have, on the other hand, limited the effect of these conditions.

Figure 5: Capital adequacy



The table below shows SpareBank 1 SR-Bank's fulfilment of the minimum requirements for common equity tier 1 capital, as well as the combined buffer requirements, at the end of 2018.

Table 2: SpareBank 1 SR-Bank fulfilment of the capital adequacy requirements by the end of 2018

	Current rate	31.12.2018	31.12.2017
Risk weighted assets		**130,869**	**120,160**
Common equity tier 1 capital requirement	*4.5%*	5,889	5,407
Buffer requirements			
Capital conservation buffer	*2.5%*	3,272	3,004
Systemic risk buffer	*3.0%*	3,926	3,605
Countercyclical buffer	*2.0%*	2,617	2,403
Total buffer requirements for common equity tier 1		**9,815**	**9,012**
Surplus common equity tier 1 after buffer requirements		3,564	3,670
Capital adequacy		**17.6 %**	**17.9 %**
of which core capital		15.9 %	16.0 %
of which supplementary capital		1.8 %	1.8 %
Common equity tier 1 ratio		14.7 %	15.1 %

Leverage ratio

In 2011, the Basel Committee suggested that, in addition to the stricter requirements for primary capital and combined buffer requirements, leverage ratio[3] should be introduced as a supplementary capital target for capital ratio based on the risk weighted basis for calculation. The proposal contained a minimum requirement of 3 per cent. The European Commission has, in line with the Basel Committee's recommendation, proposed the introduction of a 3 per cent minimum requirement from 2018.

The Ministry of Finance has set a minimum leverage ratio requirement that must be met from and including 30 June 2017.

The minimum leverage ratio requirement will be 3 per cent. All banks must also have a leverage ratio buffer of at least 2 per cent. Systemically important banks must have an additional leverage ratio buffer of at least 1 per cent.

The minimum leverage ratio requirement for SpareBank 1 SR-Bank is 5.0 per cent. SpareBank 1 SR-Bank had a leverage ratio of 7.7 per cent as at 31 December 2018, and thus well above the minimum requirements discussed and recommended internationally.

[3] Tier 1 capital as a proportion of the exposure target (including off-balance sheet exposure)

RISK AND CAPITAL MANAGEMENT IN SPAREBANK 1 SR-BANK

The core purpose of the banking industry is to create value by assuming deliberate and acceptable risk. SpareBank 1 SR-Bank therefore invests significant resources in the further development of risk management systems and processes that are in line with leading international practice.

Purpose

Risk and capital management in SpareBank 1 SR-bank shall create financial and strategic added value by:

- Having a strong risk culture characterised by a high awareness of risk management and the group's core values
- Having a good understanding of which risks drive earnings and losses
- Ensuring, insofar as it is possible, that activities and products are priced according to the underlying risk
- Having adequate solvency according to the chosen risk profile, as well as striving for optimal capital application within the various business areas
- Exploiting diversification effects
- Avoiding single events seriously harming the group's financial position

Overall risk exposure

SpareBank 1 SR-Bank is exposed to various types of risk, and the most important ones are:

- **Credit risk:** the risk of loss resulting from the customer's or counterparty's inability or unwillingness to fulfil their obligations
- **Market risk:** the risk of loss due to changes in observable market variables such as interest rates, foreign exchange rates and securities markets
- **Operational risk:** the risk of losses due to weak or inadequate internal processes or systems, human error or external incidents
- **Liquidity risk:** the risk that the group is unable to refinance its debt or does not have the ability to fund increases in assets without significant additional costs
- **Ownership risk:** the risk that SpareBank 1 SR-Bank bears if it suffers negative results from stakes in strategically owned companies and/or the needs to inject fresh capital into these companies. Owned companies are defined as companies in which SpareBank 1 SR-Bank has a significant stake and influence
- **Business risk:** the risk of unexpected income and cost variations due to changes in external factors such as market conditions or government regulations
- **Reputation risk:** the risk of a failure in earnings and access to capital because of lack of trust and reputation in the market, i.e. customers, counterparties, stock market and authorities
- **Strategic risk:** the risk of losses due to unsuccessful strategic decisions
- **Compliance risk:** the risk that the group incurs public sanctions/penalties or financial loss because of failure to comply with legislation and regulations
- **Concentration risk:** the risk of an accumulation of exposure to a single customer, industry or geographical area
- **Pension risk:** the risk of an increase in future pension liabilities
- **Climate risk:** the risk of direct and indirect losses due to climate-related conditions

One of the ways in which the group's risk is quantified is through the calculation of expected losses and risk-adjusted capital. Expected losses describe the amount that the group must expect statistically to lose during a 12-month period, while risk-adjusted capital describes how much capital the group believes it needs to cover the actual risk to which the group is exposed. Since it is impossible to fully protect against all losses, the group has stipulated that the risk-adjusted capital shall cover 99.9 per cent of potential unexpected losses.

The process of risk and capital management (ICAAP)

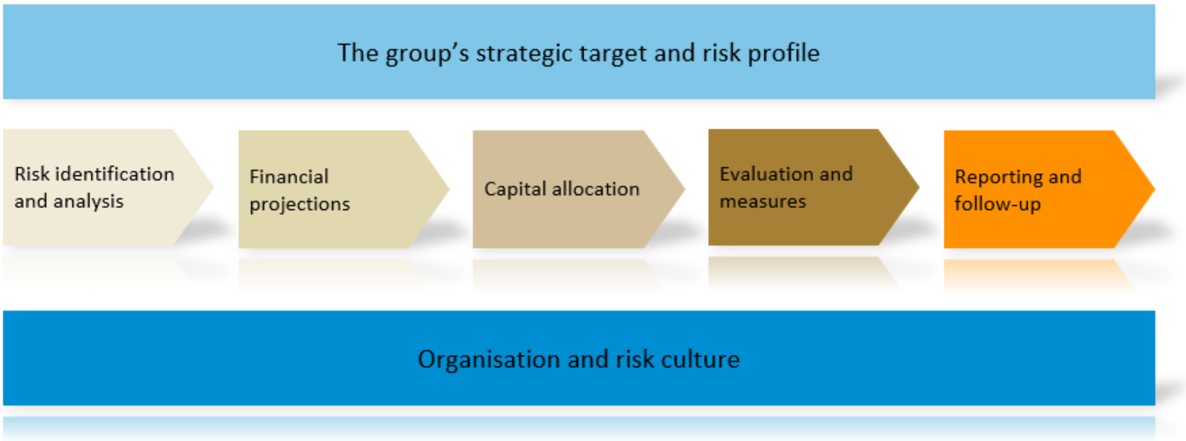
The purpose of the Policy for risk and capital management is to provide guidelines for the Group's overall attitudes and principles for risk and capital management, and to ensure that the Group has an efficient process for this. The policy shall furthermore ensure that the internal framework satisfies laws, regulations and best practices for good risk and capital management.

The process of risk and capital management in SpareBank 1 SR-Bank builds on the following main principles:

- The Group's framework for risk and capital management must be documented and based on best international practice
- The Group shall have a control and governance structure that promotes sound and independent management and control
- Risk and capital management must be an integral part of the Group's management and decision-making process
- Risk and capital management in the Group shall support the Group's strategic development and goal achievement, while ensuring financial stability and sound asset management
- The Group must have a good risk culture that is characterized by high awareness of risk and capital management
- The Board must at least annually assess the Group's desired risk profile
- SpareBank 1 SR-Bank shall have a risk appetite that provides sufficient buffer in relation to the group's risk capability, in which no single event should be capable of seriously harming the bank's financial position
- The risk identification process must be carried out regularly, be forward-looking and cover all significant risk areas
- The quantification of risk should be based on recognised methods and be sufficiently conservative so that any model weaknesses are properly considered
- Thorough analyses of the identified risks must be carried out to understand the impact of the risks on revenues, costs and losses
- Effective control and management measures for the individual risks must be established based on the risk analysis. Probability-reducing measures should be given priority over impact-reducing measures.
- The Group shall at least annually carry out a financial projection with a minimum duration of five years, and it shall at least cover an expected financial development as well as a period of serious economic downturn. The serious economic downturn must be strict but realistic.
- The return on regulatory capital should be one of the most important strategic performance targets in the internal management of SpareBank 1 SR-Bank. Risk-adjusted return shall be the basis for determining the credit strategic framework for EAD between BM and PM, respectively.
- The Group shall have a clear and periodic risk management and risk reporting
- The Group shall, as far as possible, praise activities and products in line with the underlying risk to ensure correct risk taking
- The Group shall prepare robust recovery plans to be able to handle critical situations to the best of their ability if they arise
- The Group must have clear definitions of the various types of risk

To ensure an effective and suitable process, the framework is based on different elements that reflect the way the board and management manage SpareBank 1 SR-Bank. The main elements are described in the figure below.

Figure 6: Main elements in the risk and capital management process in SpareBank 1 SR-Bank



The group's strategic target

The framework for management and control is based on the group's current strategic target.

Defining the risk profile

The board must, at least once a year, adopt the group's risk profile. SpareBank 1 SR-Bank defines its risk profile by first calculating the group's *capacity* to bear risk and secondly calculating its *willingness* to assume risk. Capacity and willingness to bear risk are defined by the group's results, solidity, liquidity and credit quality, and are set for both a normal business cycle and for a serious economic downturn.

The capacity to bear risk describes the maximum risk exposure the group can bear before it is forced into a possible recovery situation and needs to evaluate necessary recovery measures. The willingness to assume risk defines the group's maximum desired risk exposure from the perspective of its earnings and losses and given the defined risk capacity. The difference between the capacity and willingness to bear risk expresses the group's safety buffer in relation to ending up in a possible recovery situation. The willingness to assume risk should be significantly lower than the capacity to bear risk.

Risk identification and analysis

The process for risk identification is forward-looking and covers all the group's significant risk areas.

In areas where the effect of the established control and management measures is not considered satisfactory, improvement measures are implemented. Thorough analyses of the identified risks are conducted to understand their characteristics and the effect of established control and measurement measures.

Measures that reduce probability shall take precedence over measures that reduce consequences. Up-to-date documentation should be available for all the important parts of the group's business areas. This documentation should specify the control and management measures that have been established, levels of risk, and references to any instructions, authorities and specifications. An annual risk strategy is prepared each year based on these risk analysis. The strategy specifies acceptable levels of risk and targets for risk-adjusted returns.

Financial projections

Two financial projections are conducted, at least annually:

- Financial projection of expected financial development over the next five years
- Financial projection in a situation involving serious economic downturn over five years

Financial projection of expected financial development

The financial projection of expected financial development is based on SpareBank 1 SR-Bank's prognosis for the current period. This prognosis mirrors the group's strategic target, business plans, capital requirements and expected macroeconomic development over the coming years.

The purpose of the projection is to demonstrate how this will affect the group's financial development, including the return on equity, the funding situation and capital adequacy.

Financial projection of a serious economic downturn (stress test)

The purpose of the financial projection of a serious economic downturn is to:

- evaluate potential losses based on different economic scenarios
- evaluate the vulnerability of portfolios/activities
- increase the understanding of how a shock would affect the group's profitability, liquidity situation and capital adequacy
- evaluate potential losses based on different strategic possibilities
- identify weaknesses in the group's risk strategies and processes to help develop risk mitigation measures and prepare contingency plans

To assess the consequences of an economic downturn, SpareBank 1 SR-Bank largely focuses on those areas of the economy that affect financial development. These are primarily developments in credit demand, the stock market, the interest rate market, and credit risk. In addition to having an impact on the yield of the underlying assets, an economic downturn will also have an impact on customer savings habits.

Capital allocation

Risk-adjusted return is one of the most important strategic result measurements in SpareBank 1 SR-Bank. Risk-adjusted return is based on the calculation of risk-adjusted capital, which describes what level of capital the group must hold to cover an unexpected loss within a year. The calculation is made with a confidence level of 99.9 per cent.

This implies that capital is allocated to business areas in accordance with the calculated risk of the operation. Return on capital is continuously monitored.

Evaluation and measures

The abovementioned financial projections provide the executive management team and the board with sufficient understanding of the risk to make proper strategic choices and at the same time ensure that the group has an acceptable risk profile. Based on the analysis, SpareBank 1 SR-Bank develops capital plans to achieve a long-term and effective capital management and ensure that the group’s capital adequacy is acceptable, given the risk exposure and strategic targets.

SpareBank 1 SR-Bank has also prepared recovery plans to the extent possible be able to handle emergencies if they nevertheless arise. The recovery plans cover:

- Capital adequacy
- Liquidity risk
- Operational risk

Reporting and follow-up

SpareBank 1 SR-Bank’s overall risk exposure and risk trends are reported to the executive management team and the board in periodic risk reports.

The Risk Management Department performs general risk monitoring and reporting, and the department is independent of the different business units in the group; the department reports directly to the chief executive.

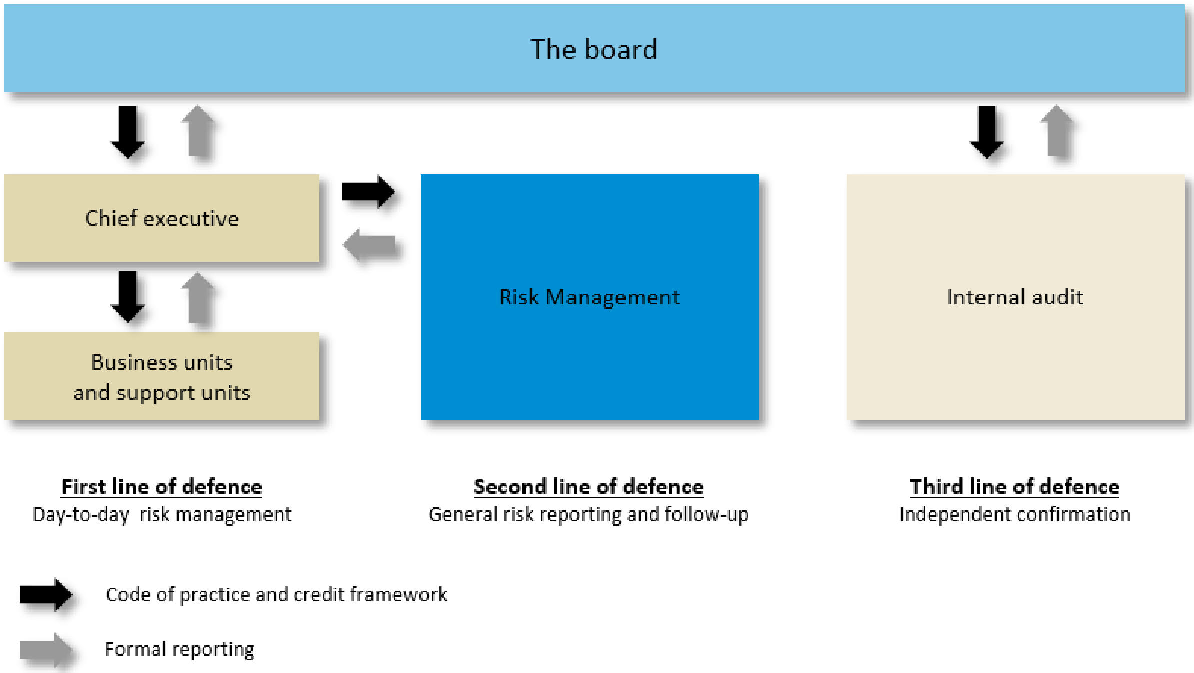
All managers are responsible for the day-to-day risk management within their area of responsibility and must continuously ensure that the risk exposure is within the limits set by the board or chief executive.

Organisation

SpareBank 1 SR-Bank values independence in management and control, and the responsibility is divided between different roles in the organisation. Through the general assembly, the shareholders execute the highest authority in SpareBank 1 SR-Bank.

The group values a control and management structure that encourages targeted and independent management and control.

Figure 7: The organisation of risk and capital management



The Board of SpareBank 1 SR-Bank is responsible for approving a sound risk profile, return targets, overall framework for risk and capital management including the IRB system and risk models in general. The Board is also responsible for approving risk limits and authorizations as well as the ICAAP (Internal Adequacy Assessment Process) with associated assessment of sound solvency and liquidity in relation to the Group's risk profile and regulatory requirements.

The board shall ensure that the framework for risk and capital management is sufficiently communicated and implemented throughout the group. The board shall further ensure that the framework is followed up with sufficient authority and resources.

The chief executive (CEO) is responsible for the overall risk management. This means that the CEO is responsible for ensuring that effective risk management systems are implemented in the Group and that risk exposure is monitored. The CEO is also responsible for delegating authorisations and reporting to the Board.

Managers of business areas and support areas are responsible for day-to-day risk management within their area of responsibility and must always ensure that the risk management and risk exposure comply with the limits and overarching management principles set by the board or chief executive.

The *Risk Management Department* is independent of the business units and reports directly to the chief executive. The Chief Risk Officer also has the opportunity, in individual cases, to report directly to the Board if extraordinary situations should require so. The department is responsible for the further development of the framework for risk and capital management, including risk models and risk management systems. The department is also responsible for following up and reporting on the risk exposure and framework utilisation.

The internal audit function ensures that the risk management process is result-oriented, effective and functions as intended. The group's internal audit function has been outsourced, and this ensures that the function has the required independence, competence and capacity. The internal audit function reports to the board. The internal audit function's reports and recommendations on improving the group's risk management are continuously reviewed in the group.

Committees:

The risk committee shall generally follow up the Group's risk exposure and framework for risk and capital management. The risk committee shall have the authority to investigate all activities and matters relating to the group's overall risk and may obtain information from any employee. All the Group's employees and shop stewards shall provide the information and assistance that the risk committee may request. The risk committee can implement any investigations it finds necessary to cover its tasks, including obtaining external advice and assistance. The risk committee answers to the board of SpareBank 1 SR-Bank for the execution of its tasks. The individual member has no special external responsibility in his role as a member of the risk committee. The board's responsibility and the individual board member's responsibility are not reduced because of the risk committee's activities.

The Risk and Capital Management Committee is responsible for the overall monitoring of the group's risk profile, funding, capital adequacy situation and the Group’s compliance with applicable laws and regulations. The committee also discusses draft versions of risk strategies, capital allocations, validation reports and recommends new risk models. The committee is chaired by the Executive Vice President Risk Management and is broadly composed of executive personnel from the business units and from risk and capital management.

The *Balance Committee* in SpareBank 1 SR-Bank provides advice on the operative management of the bank's balance sheet within the limits set by the board. The committee's main focus is monitoring and control of the factors that directly and/or indirectly affect the bank's funding capacity.

The credit committees are responsible for making independent recommendations to authority holders. When making their recommendations, the credit committees evaluate loan and credit applications based on the current credit strategy, credit policy guidelines, loan granting regulations, and credit review routines. The credit committees attach special importance to the identification of risk in relation to individual applications and carry out an independent assessment of credit risk, which clarifies the consequences for the bank of the various risks.

Risk culture

Risk culture means values and attitudes that are expressed through risk awareness, actions and ability for organisational learning. A good risk culture constitutes the foundation of good risk management and is a prerequisite for the full benefit of professional policies, procedures and models.

In cooperation with the University of Stavanger, the Group has therefore developed a framework that is used to carry out regular group-wide evaluations of risk culture. The results show that SpareBank 1 SR-Bank has a good risk culture where employees experience a clear organisation that supports and encourages ethical conduct, with a management that acts in accordance with the organisation's ethical guidelines. The results of the measurements provide good discussions in the group and increased awareness and insight into themes that are not usually discussed directly. The fact that such measurements are conducted is therefore considered to make an important contribution to creating a sound risk culture in the organisation.

CREDIT RISK

Credit risk is the risk of loss resulting from the customers or counterparty's inability or unwillingness to fulfil his obligations.

About credit risk

SpareBank 1 SR-Bank is primarily exposed to credit risk through its loan portfolios in the retail and corporate markets. The group is also exposed to credit risk through the liquidity portfolio. This portfolio mainly consists of low risk commercial paper and bonds that qualify for loans from Norges Bank.

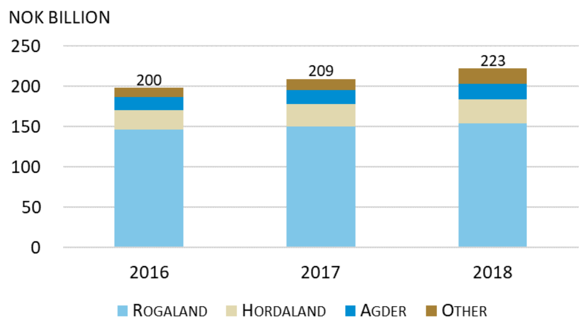
Development in credit risk

In describing credit risk in this paragraph, the following terms are used:

- Probability of default (PD) – the probability for default in a twelve-month period based on a long-term outcome[4]
- Exposure at default (EAD) – a calculated size that contains actual exposure and expected exposure for allocated, but not drawn limits at the time of default

SpareBank 1 SR-Bank has Southern and Western Norway as its primary geographic market area, with the largest presence in Rogaland, Hordaland and Agder. The figure below shows SpareBank 1 SR-Bank's exposure by geographic areas in December 2018. The exposure is shown for the parent bank and includes portfolios transferred to credit institutions. SpareBank 1 SR-Finans has been merged into SpareBank 1 SR-Bank from 1 January 2017 and lending volumes from SR-Finans are included in the figures starting with Q1 2017. This gives rise to a break in the history.

Figure 8: Exposure (EAD) by geographic market areas



Rogaland is the group's largest market area, and the exposure as of December 2018 is about NOK 154 billion. This represents 69 per cent of SpareBank 1 SR-Bank's total loan exposure. The exposure in Hordaland and Agder amounted to NOK 30 and 19 billion, respectively, in 2018.

SpareBank 1 SR-Bank's loan exposure consists of a well-diversified portfolio with both retail and corporate customers. The figure below shows the development in the loan portfolio over the last three years.

Figure 9: Exposure by customer segment

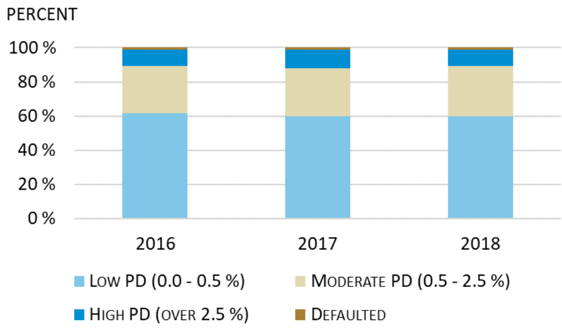
The largest share of the loan exposure in SpareBank 1 SR-Bank is aimed at retail customers, and loans are mainly financed by mortgages on real estate. Exposure to retail customers has increased from NOK 140 to 144 billion in 2018. 97 per cent of loan exposure in the retail market consists of loans that are smaller than NOK 10 million. Exposure to small and medium sized corporate customers has

[4] Long term outcome through a full loss cycle of 25 years

increased from NOK 49 to 53 billion in 2018. Credit exposure to large corporate customers has increased from NOK 20 to 25 billion in 2018. Large corporate customers are defined as single customers with exposure (EAD) larger than NOK 250 million.

A clearly defined framework that sets limitations on what is financed, and under which conditions, helps to ensure that the portfolio remains robust.

Figure 10: Loan portfolio by probability of default (PD)[5]



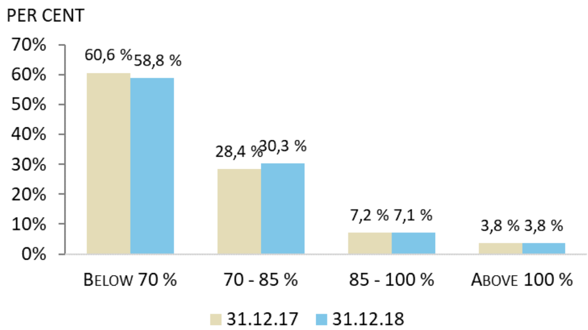
The share of loan exposure on customers with a probability of default (PD) lower than 0.5 per cent constitutes 60 per cent of the total loan portfolio in 2018. These are customers risk classified in default classes A, B or C. The share of the loan exposure with moderate PD was 29 per cent. These customers are risk classified in the default classes D, E or F.

SpareBank 1 SR-Bank has a considerable focus on following up commitments with PD higher than 2.5 per cent. As of December 2018, 10 per cent of the loan exposure to customers with PD is higher than 2.5 per cent. These customers are risk classified in default classes G, H and I. The exposure to non-performing customers amounts to 1.3 per cent of total lending exposure in the corporate market and the retail market as of December 2018.

The composition of the portfolio is based on a clearly defined strategy in which the growth and risk profile are managed, for example, through special credit strategy limits for concentration risk. The concentration risk has been significantly reduced in the last few years in line with the risk strategy guidelines set by the board. In particular, there has been a heavy focus on reducing the proportion of commitments with the potential to produce significant losses.

The figure below illustrates the development of the loan-to-value ratio in the retail market portfolio from 2017 to 2018. The calculation of loan-to-value ratio is based on the collateral's market value and is shown as total-distributed loan-to-value ratio. In the case of total-distributed loan-to-value ratio, the entire relevant loan is allocated to one and the same interval.

Figure 11: Loan-to-value ratio (LTV) retail market portfolio - total distributed (including portfolio transferred to SpareBank 1 Boligkreditt AS and SR-Boligkreditt AS)



The market value of housing in SpareBank 1 SR-Bank's market area has been weak in the last three years. This means that the proportion of loans within 70 per cent of assessed security values has decreased somewhat from 2017. The share of loans with loan-to-value ratios lower than 85 per cent is stable high. 89.1 per cent of the loan exposure at the end of 2018 is within 85 per cent of assessed security values, compared with 89.0 per cent the year before.

Managing credit risk

The overall credit strategy establishes that the group shall have a moderate risk profile. The credit risk is managed through limitations for granting credit, follow-up of commitments and portfolio management.

Credit risk management is based on the following main principles:

- The Group shall be among the leading in Norway in managing credit risk
- Particular emphasis should be placed on ensuring that the customers' activities comply with applicable laws and regulations, and that the business has a long-term perspective

[5] For retail customers, there are different requirements for a long-term outcome for probability of default (PD), internal and regulatory. The figure shows the loan portfolio with internal PD estimates

- The main focus of credit granting should be the customer's ability of debt servicing, and weak / lacking service capacity should not be compensated with good security
- The risk that arises from concentrating the lending activity against a single customer, industry or segment should be limited to avoid single events being able to seriously harm the Group's financial position

Credit culture

SpareBank 1 SR-Bank is one of the leading players in Norway within managing credit risk. This is achieved through local knowledge about the customer, the use of robust credit models and credit analyses, and by stipulating clear requirements concerning the employees' qualifications and attitudes where the ability to recognise risk and willingness to learn from experience is emphasised.

In credit appraisals, special importance is attached to whether the customer's activities comply with current laws and regulations, whether the customer's activities have a long-term perspective, and whether the customer has both the necessary ability to pay and robust equity given the nature of their activities. The process of granting credit involves a clear division of responsibilities where cooperation should ensure the best possible basis for making decisions, but where actual decisions about credit are made on an individual basis.

The ability to comply with our own guidelines and in this way avoid financing commitments that conflict with these is especially important. There is, therefore, a heavy focus on ensuring the credit staff's active use of, and compliance with, a framework for managing credit risk is in line with best practice in this area. Compliance is also specifically monitored by independent representatives of the corporate risk management team, both through ongoing participation in the various credit committees and through independent reporting from the work of the credit committees.

Credit strategy

The group's primary market areas for risk exposure are Rogaland, the Agder counties and Hordaland. The general credit strategy stipulates that the group shall have a moderate risk profile where no single event shall be capable of seriously harming the group's financial position.

The group's credit strategy consists of general credit strategy limits for ensuring a diversified portfolio and a satisfactory risk profile. This limits the probability of default, expected losses, risk-adjusted capital and how high the total loan exposure can be in the corporate market. Portfolios that have been, or are going to be, transferred from SpareBank 1 SR-Bank to the mortgage companies, SpareBank 1 Boligkreditt AS, SR-Boligkreditt AS and SpareBank 1 Næringskreditt AS, are included in the abovementioned credit strategic framework.

There are also specific limits for the corporate market for the maximum share of risk-adjusted capital for individual sectors, the group of major customers, and maximum exposure to high risk customers, respectively. Specific limits have also been established to limit the maximum loss from a single customer. A single customer in this context includes commitments with one or more counterparties, when specific influence or financial links between the companies imply that financial difficulties in one of the companies is likely to result in payment difficulties for one or more others. The framework has been established to secure a diversified portfolio within the corporate market.

The credit strategic framework has been established by the board and any breaches from it must, therefore, be presented to the board for approval. The Risk Management Department reports on the development of the strategic credit framework to the board every quarter.

Credit political guidelines

The group's credit policy guidelines stipulate minimum requirements that apply to all types of financing, except commitments granted as part of the exercise of special credit hedging authorities. In addition to the general credit policy guidelines, a set of more specific credit policy guidelines related to sectors or segments that can entail a special risk have been prepared. The credit policy guidelines are revised at least once a year and are approved by the chief executive and reported to the board.

Credit authority regulations

The board is responsible for the group's granting of loans and credit, but delegates the responsibility to the chief executive, within certain limits. The chief executive then delegates these responsibilities within his own authority. Delegated credit authority is linked to a commitment's probability of default and collateral value. The authorities are personal. This means that the credit committees do not have decision-making authority but make recommendations to the authority holder. If there are no recommendations from credit committee, the authorisation limits will be halved. In general, the authorities are ample if a commitment's expected loss and probability of default indicate a low risk, but they will be restricted progressively with increasing risk. The credit authority rules are reviewed annually, and changes are approved by the chief executive and reported to the board. However, this does not apply to changes in the chief executive's credit authority as this is approved by the board.

Credit review routines

The credit review routines regulate in detail all factors related to the granting of credit by the group and follow-up of commitments. The credit granting process provides a more detailed description of the customer and the purpose of the loan application, in addition to evaluations of the following:

- Owners and management
- Structure of financing
- Compliance with credit strategy and credit policy
- Whether the customer will have adequate earnings to service the current obligations, interest and instalments
- For how long and in what manner the customer can cover their current obligations, interest and instalments if their earnings fail
- Collateral and overall assessment of risk

Measuring credit risk

Continuous commitment and portfolio monitoring is carried out on existing commitments. The credit risk is followed up in general by means of the group's portfolio management systems, systems for early notification of key development trends (early warning) and systems for monitoring the quality of the actual credit granting process.

Portfolio management

SpareBank 1 SR-Bank's risk exposure is monitored via a general portfolio management system. The portfolio management system contains information on the risk at both the aggregate and detailed levels. This makes it possible to conduct efficient monitoring and management of the risk performance of the portfolio. All portfolio information is updated monthly, including updates of the customers' probability of default. The development of risk in the portfolios is followed up with special emphasis on the development of the risk classification (migration), expected losses, risk-adjusted capital and risk-adjusted return. Risk-adjusted capital reflects the actual risk exposure better than what the traditional focus on lending volume does.

Early warning

The group's *early warning* system makes it possible to continuously monitor customers' key risk drivers and acts as an important indicator of potential negative developments in default rates. Its purpose is to detect key trends in development at an early stage.

Some examples of risk drivers are:

- Short-term and repeated default
- Development in limit utilisation
- Development in number of instalment postponements
- Official announcements

Credit process surveillance

The group's systems for monitoring the credit approval process make it possible to monitor credit quality and the risk-adjusted return on new commitments continuously. The system can compare quality across departments, and enables early action if, for instance, a department's credit practice is developing in an undesired direction.

Risk classification system

The group utilises credit models for risk classification, risk pricing and portfolio management. The risk classification system is based on the risk parameters as shown in the figure below:

Figure 12: The risk classification system in SpareBank 1 SR-Bank

Probability of default (PD)	The customers are classified in default classes based on the probability of default over a 12 month period, based on a long-term outcome
Exposure at default (EAD)	This is an estimate that indicates the group's exposure to a customer at default
Loss given default (LGD)	This is an estimate of how much the group can potentially lose if the costumer defaults on his obligations
Expected loss (EL)	Describes the loss the group can statistically expect to lose on the loan portfolio during a 12-month period (long-term outcome) in a normal business cycle
Risk-adjusted capital (UL)	Describes how much capital the group needs to reserve as a buffer for future unexpected losses
Risk group	The customer is assigned a risk group based on the risk-adjusted capital on the commitment
Risk pricing	SpareBank 1 SR-Bank is committed to finding the proper price for each risk, and has developed a pricing model that calculates a price given the commitment's risk

1) Probability of default (PD)

Customers are classified in default classes based on the probability of default over a twelve-month period, based on a long-term outcome through a full loss cycle[6].

A commitment is considered to be in default if:

1) A claim has been due for more than 90 days and the amount is over NOK 1,000, or

2) The bank has reason to assume that the debtor is unable to repay (in full) in accordance with his obligations:

- The bank makes write-downs due to impaired creditworthiness.
- The bank sells a claim at a discount because of impaired creditworthiness.
- As a result of payment problems by the counterparty the bank grants a postponement of payment or new credit for payment of the instalment or agrees changes to the interest rate or other terms and conditions of the agreement.
- The counterparty is subject to debt settlement, bankruptcy or public administration proceedings, or voluntary debt negotiations have been initiated.
- The bank assumes due to other reasons that the obligation will not be fulfilled.

The probability of default is calculated based on historical series of data for financial key figures related to earnings and deterioration, as well as based on non-financial criteria such as conduct and age. Nine default classes (A – I) are used to classify the customers according to the probability of default. The group has two additional default classes (J and K) for customers with defaulted and/or written-down commitments.

SpareBank 1 SR-Bank focuses on stable and predictable credit granting and capitalisation over time, and the group therefore develops the models for calculating the probability of default based on a 'Through the Cycle' approach. This also corresponds with the approach behind the rating methods in the most renowned rating companies.

Besides predicting the long-term outcomes of probability of default regardless of the economic situation, the models must also manage to rate the customers based on risk (from the lowest probability of default to the highest probability of default) based on the current economic situation. This is important for predicting which customers may experience problems in the next twelve months. To achieve this, the model must also

[6] Long term outcome through a full loss cycle, consisting of four periods with normal business cycle and one period with an economic downturn

include variables that identify changes in the economic cycles.

SpareBank 1 SR-Bank calculates the long-term outcome for probability of default based on a full loss cycle lasting about twenty-five years, which consist of four periods with a normal economic situation and one period with a sharp economic downturn. Our own, representative historic default data is used as the data basis for the calculation.

Definitions of the individual default classes are shown in the table below. The table also shows the correlation between classification in the largest external ratings agencies and the classification used in SpareBank 1 SR-Bank.

Table 3: Definition of default classes and the correlation between classification in SpareBank 1 SR-Bank and in the largest external rating agencies

Default class	Lower limit for default	Upper limit for default	Rating scale Moody's	Rating scale Standard & Poor and Fitch
A	0.00%	0.10%	AAA - A-	Aaa - A3
B	0.10%	0.25%	BBB+ - BBB	Baa1 - Baa2
C	0.25%	0.50%	BBB-	Baa3
D	0.50%	0.75%	BB+	Ba1
E	0.75%	1.25%	BB	Ba2
F	1.25%	2.50%	BB-	Ba3
G	2.50%	5.00%	B+	B1
H	5.00%	10.00%	B	B2
I	10.00%	40.00%	B- - CCC/C	B3 - Caa3/C

2) Exposure at default (EAD)

Exposure at default (EAD) is defined as the exposure the bank has to a customer at the time of default. The conversion factor (CF) defines the extent the unutilised credit limit is expected to be drawn on upon default. Unutilised credit in this regard is defined as the remaining disposable limit one year prior to default.

For allocated, but not drawn upon limits for corporate market customers there is a drawing of 100 per cent (1). Granted, but not drawn upon limits for retail market customers have a conversion factor of 1, i.e. 100 per cent drawing upon default is assumed. For the corporate market, approved but not drawn upon facilities are multiplied by a conversion factor that varies between 60-90 per cent, depending on the customer's probability of default. The conversion factor for guarantees is a parameter set by the authorities and is set at 1 for loan guarantees and 0.5 for and other guarantees.

3) Loss given default

Loss given default describes how much the group could potentially lose if the customer defaults on their obligations. The model presents estimates that predict the degree of loss in an economic downturn. The valuation takes in account the value of underlying securities, the degree of recovery of unsecured loans, the degree of recovery before realisation and the costs the group has in recovering defaulted commitments.

Seven classes are used (1–7) for classifying commitments in relation to loss given default. Definitions of these classes are illustrated in the table below.

Table 4: Definition of loss given default (collateral class)

LGD class	LGD interval
1	Until 10%
2	<10%, 20%]
3	<20%, 30%]
4	<30%, 40%]
5	<40%, 50%]
6	<50%, 60%]
7	Over 60%

4) Expected loss (EL)

Expected loss describes the loss the group can statistically expect to experience on the loan portfolio during a twelve-month period, based on a long-term outcome through a full loss cycle. Expected losses are calculated based on the probability of default, exposure at default and loss given default.

5) Risk-adjusted capital (UL)

There are many factors that affect the group's losses on loans and credits. The expected loss is based on uncertain magnitudes, where the uncertainty is largely related to the characteristics of the commitments. On well-secured loans, the uncertainty is limited, while the uncertainty is relatively large with less well-secured loans and with customers with an unstable ability to fulfil their obligations.

To take account of this uncertainty, a value for unexpected loss, or risk-adjusted capital, (UL) is calculated on all commitments. In this regard, SpareBank 1 SR-Bank uses the reference model for unexpected loss as set out in the Capital Requirements Regulations. The sum of unexpected losses for all commitments provides an estimate of how much the group could lose more than the expected loss.

Risk-adjusted capital describes how much capital the group believes it needs to cover the actual risk that the group has assumed. As it is impossible to fully protect against all losses, the group has stipulated that the risk-adjusted capital must cover all possible unexpected losses based on a stipulated confidence level of 99.9 per cent.

A commitment is risk classified in a risk group from lowest to highest risk, depending on the risk-adjusted capital. The risk groups are defined as shown in the table below.

Table 5: Definition of risk groups

	RISK-ADJUSTED CAPITAL (UL)% OF EAD	
RISK GROUP	**Lower limit**	**Upper limit**
LOWEST	0.0%	1.6%
LOW	1.6%	4.0%
MEDIUM	4.0%	8.0%
HIGH	8.0%	12.0%
HIGHEST	12.0%	99.99%

6) Risk pricing –RARORAC (Risk Adjusted Return on Risk Adjusted Capital)

SpareBank 1 SR-Bank focuses on pricing risk correctly. This means that high risk commitments are priced higher than low risk commitments. The general level of risk pricing will, however, also depend on the group's general return targets and an assessment of the competition situation. SpareBank 1 SR-Bank therefore uses models that calculate the correct risk price that should be taken into consideration when pricing the expected losses and return on risk-adjusted capital. The risk pricing model uses the same main components as in the groups risk classification system as the basis. The model is based on a standard risk adjusted return on risk adjusted capital (RARORAC) model for measuring risk-adjusted return.

The pricing model is primarily used for granting and renewing credit, as well as calculating the customer's price and measuring and monitoring profitability.

Collateral and other risk mitigation measures

SpareBank 1 SR-Bank uses collateral to reduce the credit risk in each commitment. For corporations, different types of conditions and terms are also specified in most credit agreements. Use of terms gives the bank assurance that the company keeps proper levels of liquidity and equity, or that the company complies with applicable laws and regulations related to its services.

In the retail market, the collateral is primarily real estate (housing). Several different types of collateral are accepted in the corporate market. This is shown in the table below.

Table 6: Main types of collateral

Type of collateral	Retail market	Corporate market
Real property	X	X
Land	X	X
Securities	X	X
Guarantees	X	X
Machinery and plant		X
Vessels		X
Motor vehicles/construction machines		X
Inventories		X
Agricultural chattels		X
Trade receivables		X
Deposits	X	X

The group establishes the realisation value of posted collateral based on statistical data over time, as well as expert evaluations in cases where the statistical date is insufficient. The realisation value is set to give a conservative evaluation that reflects presumed realisation value in an economic downturn.

Monetary claims in the form of deposit accounts with credit institutions may be pledged for the benefit of the credit institution. In consumer relations such pledge must be established by a written contract, and the pledge may only cover deposits that are in a unique account created in connection with the agreement.

In the retail market the market value of real estate is stipulated either by utilising the purchase price according to the contract, a broker valuation/appraisal or value estimates from Eiendomsverdi (applies only to residential properties. Eiendomsverdi is an information and analysis tool that provides access to an estimated market value for properties in Norway. Value estimates from Eiendomsverdi may be utilised in accordance with internal procedures if the property is located in a well-functioning residential market and if there is little uncertainty with regard to the value estimate. The realisation value on real estate is established based on the market value of the property and reduces this value by a reduction factor that depends on the type of property. In the retail market, assets other than real property are used as collateral to a limited extent.

In the corporate market, the value of commercial properties is calculated using the yield method, where the value is the present value of the expected cash flow to the property. Yield reflects the return an investor can demand when investing in a property and is affected by factors such as the property's location and nature, duration of the lease, tenants' solidity, regulatory risks, and the anticipated long-term, risk-free interest rate. The realisation value of the collateral is determined based on the market value, which is reduced by a factor that varies with the property's characteristics.

The reduction factors for all types of collateral are set based on the fall in value that must be expected in a sharp economic downturn.

Validation

The group continuously develops and tests the risk management system and the credit granting process to ensure that it is of high quality over time. The work is summarised in an annual validation report that provides a basis for the board of SpareBank 1 SR-Bank to determine whether the risk management system (IRB system) is well integrated within the organisation and whether it calculates the level of risk and capital requirements satisfactorily.

The IRB system is described in the chapter on capital requirements.

The aim of the validation process is to ensure that:

- The IRB system is customised to the portfolios on which it is used
- The assumptions the IRB system builds on are reasonable
- The IRB system measures what it is meant to measure
- The IRB system is well integrated in the organisation, and that it is a central part of the risk management and decision making in the bank
- SpareBank 1 SR-Bank complies with the Capital Requirement Regulations

The validation process can be divided into four main areas:

Quantitative validation: Quantitative validation is intended to ensure that the estimates used for the probability of default, exposure at default and loss given default are always of adequately good quality.

Qualitative validation: The quantitative validation is supplemented by more qualitative assessments in the form of meetings with the bank's own expert group and with customer advisers. Using qualitative measuring methods ensures all processes, control mechanisms, and routines are fully validated, and it also contributes valuable input in relation to further developing the current models. Qualitative validation also provides supplementary information in those cases where the capture of statistical data is limited.

Application: Verification should show whether the system for managing and measuring credit risk is well integrated in the organisation, and if it represents a key part of the group's risk management and decision-making.

Compliance with the Capital Requirements Regulations: The review is intended to ensure that SpareBank 1 SR-Bank complies with the Capital Requirements Regulations.

The table below shows the models used by SpareBank 1 SR-Bank in the regulatory IRB reporting, as of end 2018.

Table 7: Risk models used in regulatory reporting, 2018

Commitment category	**Segment**	**PD model**	**EAD model**	**LGD model**
Mass Market (Retail Market) Housing	Mortgage customers with internal history of behaviour	RM score card A	CF = 1	LGD RM
Mass Market (Retail Market) Other	Other retail customers with internal history of behaviour	RM score card B	KF = 1	LGD RM
Businesses (Corporate Market)	Companies that have delivered public accounting	CM sector 1-7	EAD CM	LGD CM
	Companies that do not provide public accounting	Stencil core	EAD CM	LGD CM
	Newly established companies	Stencil score	EAD CM	LGD CM

SpareBank 1 SR-Bank is continuously striving to refine its IRB system and focuses heavily on the development of models. New models are initially used in internal risk management to acquire sufficient experience and data to conduct a validation. If its use and validation provide satisfactory results, an application for regulatory use of the model will be submitted. The table below provides an overview over models that so far are only being used in internal risk management.

Table 8: PD models used in the internal risk management

Commitment category	Segment	PD model
Mass Market (Retail Market)	New retail customers without internal history of behaviour	RM New customers
Businesses (Corporate Market, CM)	Commercial properties for rent	PD Commercial rent
	Large corporate customers	Rating based PD model
	Companies that do not provide public accounting	CM Sector 8
	Newly established companies	CM Sector 9

In the validation, the different models are assessed based on four criteria: data quality, ranking ability, level and stability in the estimates.

Data quality

The models used for estimating probability of default (PD), exposure at default (EAD), and loss given default (LGD) were developed based on data from the period 1994-2012 from the banks in the SpareBank 1 Alliance.

The data is subject to thorough, continuous quality assurance and an annual validation process is conducted to ensure that it is representative of the current portfolio in SpareBank 1 SR-Bank. Validating the data also shows that it complies with the requirements concerning data that are stipulated in the Capital Requirements Regulations. Proper safety margins have been established where deemed necessary due to the uncertainty in the data.

Discrimination power

The model's ability to rank the customers is primarily measured by means of the area under curve (AUC) method.

The discrimination power of the model that estimates the customers' PD expresses the model's ability to rank the customers from the highest actual PD to the lowest PD.

The discrimination power of the model that estimates EAD will show the degree to which the model manages to rank the customers from those with the highest conversion factor (CF) to the lowest CF. Validation of the model for corporate customers is conducted annually. Exposure on retail market customers has a fixed conversion factor of one for all customers.

The discrimination power of the model for calculating LGD is validated by analysing estimated and actual losses in the various LGD classes, measured by median, unweighted and weighted average.

The extent to which the model can differentiate between customers with the highest expected losses (EL) and the lowest EL in relation to geographic exposure is also validated.

Level

In the Capital Requirements Regulations, it is assumed that estimated PD will predict long-term outcome through a full loss cycle. This means that the level of default will be overestimated in booms and normal economic situations, while in periods of serious recession the level of defaults will be underestimated. An assessment is made of whether the difference between actual level of default and estimated level of default is justifiable, given the economic situation. Stress tests are conducted to show that the economic properties of the model satisfy the requirements of the Capital Requirements Regulations.

For CF and LGD, the Capital Requirements Regulations assume that model estimates can predict the framework utilisation (CF) and losses in the event of serious economic downturns. This means that the conversion factor and loss estimates must always be higher than observed values in normal economic situations. Each element in the LGD model, including recovery, the reduction factors used for collateral values, proportion of unsecured exposure recovered, and unsecured exposure and recovery costs, undergoes validation.

The level of expected loss (EL) is assessed against the level of actual costs recognised in the accounts, both on an overall level and by geographic area. As with the estimated PD, EL should predict long-term outcome through a full business cycle.

Furthermore, stress tests are conducted on all parameters to validate that the complies with the Capital Requirements Regulations.

Stability in the estimates

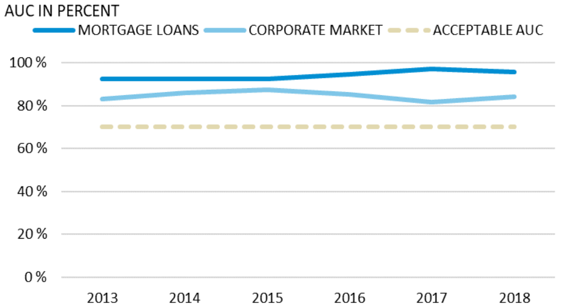
Every risk parameter is validated to establish their stability over time, independent of the economic situation. In validating the PD model, the validation is conducted by analysing migration over a twelve-month period, and over time.

Comparison of risk parameters and actual outcome

In this paragraph, an outtake of the validation results for the PD, EAD and LGD models for the IRB portfolio in SpareBank 1 SR-Bank is presented.

PD models

Figure 13: Discrimination power PD models



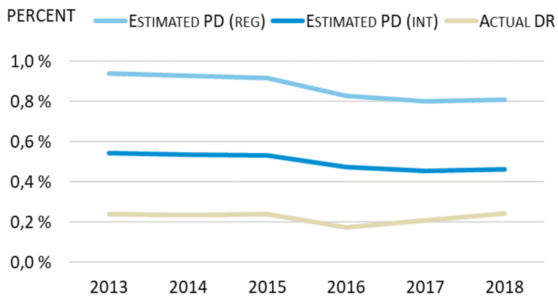
The PD model on mortgage loans has a very high and stable ranking ability, which means that the model can rank the customers from the ones with highest to lowest actual probability of default. Validation on different segments also demonstrates its good ranking ability. The PD model for corporate customers has a high and stable ranking ability for the portfolio, while its ranking ability may be somewhat lower for validation in different sub-portfolios. This applies to larger customers and certain types of sector. Therefore specific PD models have been developed for these segments.

In 2014, the Norwegian FSA passed a new methodology for regulatory calculation of probability of default (PD) and loss given default (LGD) for mortgage loans. The new methodology for calculating the probability of default includes four periods of a normal business cycle and one period with an economic downturn. The level of default in the economic downturn must be fixed ad 3.5 per cent each year, regardless of the underlying portfolio quality and loss history. Furthermore, a safety margin is attributed to the PD estimates to prevent a level of PD below 0.2 per cent. SpareBank 1 SR-Bank has taken the regulation into account and implemented new, regulatory levels for PD and LGD.

However, SpareBank 1 SR-Bank finds that the new methodology for regulatory calculation of probability of default in an economic downturn significantly overestimates the risk in the underlying portfolio. This entails an overestimation of the PD through a full loss cycle. Internally, SpareBank 1 SR-Bank uses lower PD estimates that reflect the underlying risk in the portfolio to a greater degree. Using the internal estimates provides more risk sensitive risk weightings and better encourages sound risk management.

In section 11-2 (1) in the Capital Requirements Regulations it is assumed that the probability of default (PD) should predict a long-term outcome through a full loss cycle. This means that the PD estimates must be relatively stable over time, as well as through a business cycle. The figure below shows the average estimated unweighted probability of default (PD), both internally and regulatory, compared with the average actual default rate in the years 2013-2018.

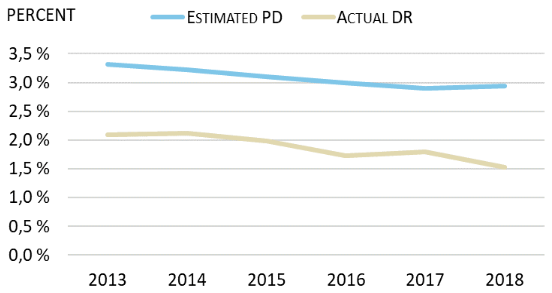
Figure 14: Comparison of unweighted estimated PD with actual DR – mortgage loans (regulatory and internal)



The figure shows that actual default (DR) is significantly lower than both the internally and regulatory estimated default (PD) over the whole period. In compliance with applicable regulations, the regulatory estimate is a significant overestimation of the default rate.

For corporations, the internal and regulatory calibrations are consistent with each other. The figure below shows the average unweighted estimated and actual default rate for the corporate portfolio.

Figure 15: Comparison of unweighted estimated PD and actual DR – corporate market



As the figure shows, estimated probability of default (PD) is significantly higher than actual default (DR) over the entire period. The PD-level is in line with the desired cyclical properties of the model.

Every customer with a credit exposure in SpareBank 1 SR-Bank is risk classified at least annually by updating accounting or tax assessment data. Furthermore, the customers are scored monthly, based on information on internal and external behaviour. The figures below show the annual migration of the retail and corporate customers, respectively. Migration is the proportion of customers who change default class during a twelve-month period.

Figure 16: Annual migration – mortgage loans

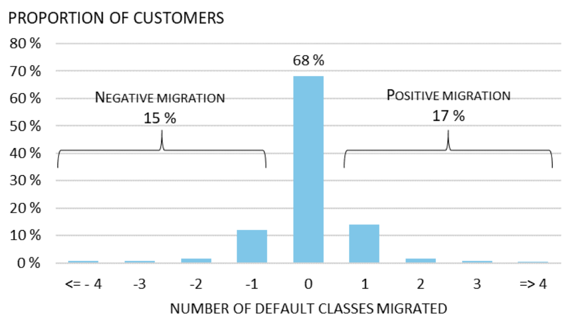
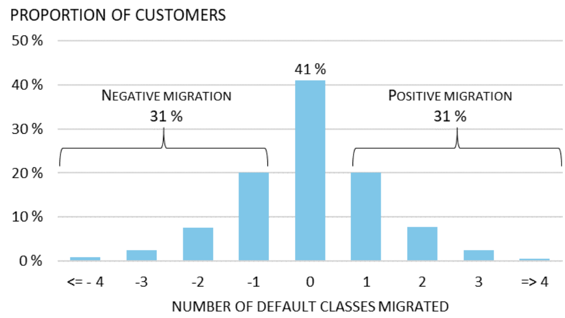


Figure 17: Annual migration - corporate market

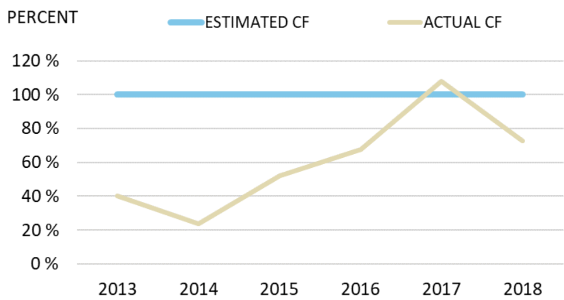


Stability in the PD estimates is the leading indicator of a model's cyclical properties. The proportion of stable customers in 2018 was 68 per cent for mortgage loans and 41 per cent for the corporate market.

EAD models

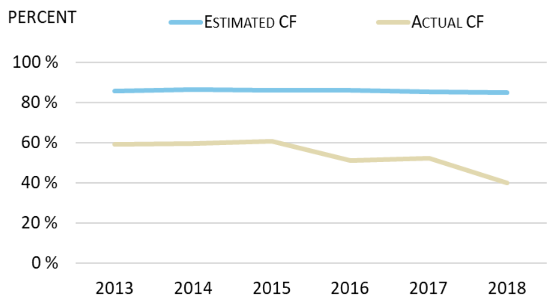
Validation is made as to whether the model estimates can predict the utilisation of limits (CF) by a serious downturn. This means that there should be a sufficient margin between estimated and observed values in normal economic conditions.

Figure 18: Comparison of estimated and actual conversion factor (CF) – mortgage loans (limit loans)



For all the mortgage loan customers with credit loans, the conversion factor is a fixed parameter. The average actual conversion factor is 60 per cent during the period, and significantly lower than the set parameter of 100 per cent.

Figure 19: Comparison of estimated and actual conversion factor (CF) – corporate market



A separate model has been developed for the corporate market that estimates conversion factors based on risk classification and type of commitment. Average estimated conversion factor is 86 per cent, and higher than average actual conversion factor at 54 per cent.

LGD models

The new methodology for regulatory calculation of loss given default (LGD) for mortgage loans entails a minimum LGD of 20 per cent, regardless of the underlying quality in the portfolio or historic losses. Internally, SpareBank 1 SR-Bank's own estimates for degree of loss based on internal data with empirical evidence and that is representative of the bank's portfolio are used.

For the corporate market, the internal and regulatory estimates for LGD are consistent with each other. The figures below show the comparison of estimated and actual loss rate on defaulted customers, both in the retail and corporate markets. The loss rate is measured in per cent and weighted relative to the exposure (EAD) on the defaulted commitments.

As of 2017, LGD is validated per default year, against earlier per year of realisation. This means that calculated LGD deviates somewhat from previous years' reporting. Validation of LGD for 2018 was being prepared by publication of Pillar 3, and the figures below therefore show estimated and actual loss ratio for the period 2013-2017.

Figure 20: Comparison of estimated and actual weighted LGD for defaulted loans – mortgage loans (internal and regulatory)

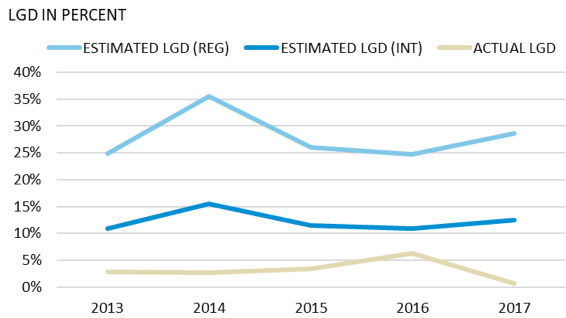
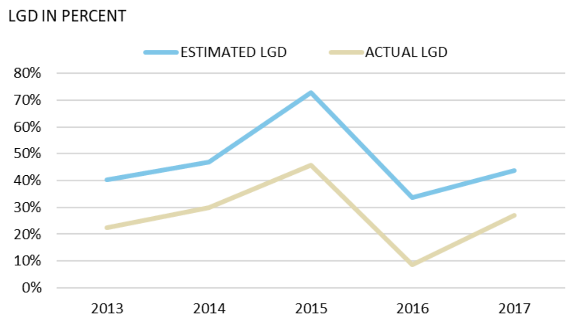


Figure 21: Comparison of estimated an actual weighted LGD for defaulted loans – corporate market



The figures show that actual loss rate is lower than estimated loss rate, for both mortgage loans and the corporate market. Few defaults mean the loss rate of a single customer has the potential to have a large impact on the actual loss rate. This is especially seen in cases with corporate customers.

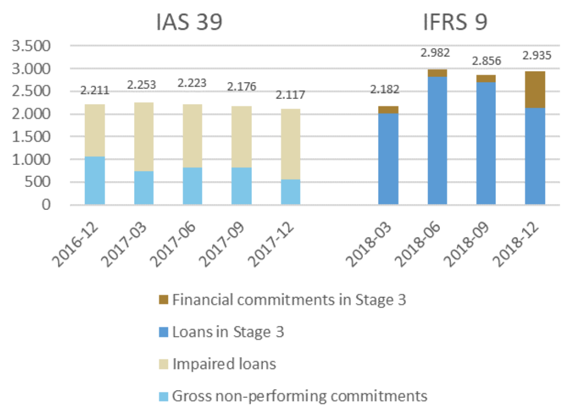
Default and impairment

SpareBank 1 SR-Bank continuously evaluates the quality of the credit portfolio, both on an overall level and on a customer level. Customers in default in the form of an overdraft or arrears are monitored and followed up at an early stage. This ensures that any necessary measures are implemented quickly.

Close follow-up of customers and preventive work are important tools for maintaining a good risk profile in the Group's loan portfolio to reduce future write-downs.

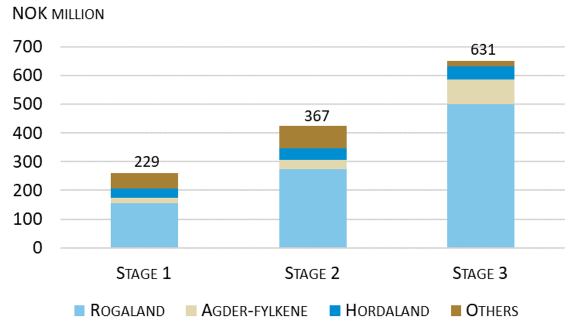
IFRS 9 has replaced IAS 39 as of 1 January 2018. Under IFRS 9, the Group's loans and financial liabilities are grouped into three groups; Stage 1, Stage 2, and Stage 3, where Stage 3 is used for loans with a significant increase in credit risk since being granted and have objective evidence of a loss on the balance sheet date. For these loans and financial liabilities, provision shall be made for the expected loss over the lifetime.

Figure 22: Development in gross loans and financial liabilities defined as Stage 3



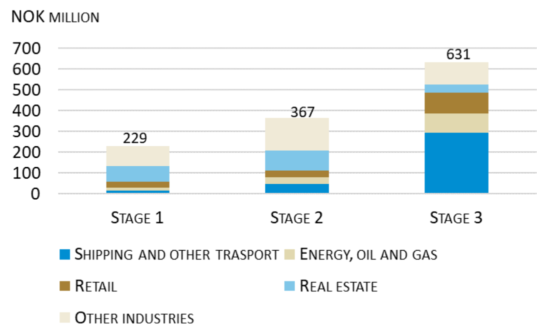
Gross loans and financial liabilities defined as Stage 3 amounted to NOK 2,935 million at the end of 2018.

Figure 23: Distribution of expected credit losses on level and geography



The total expected credit loss at the end of 2018 was NOK 1,334 million, of which NOK 928 million in Rogaland.

Figure 24: Distribution of expected credit losses on segments



Shipping and other transport was the industry with the most expected credit loss in Stage 3 with NOK 293 million, while Property had the most expected credit loss in Stage 1 and Stage 2 with NOK 74 and 95 million, respectively.

MARKET RISK

Market risk is a collective term that comprises the risk of loss due to changes in market prices. Securities risk, currency risk, interest rate risk, spread risk, risk associated with own holdings and/or use of equity in syndicates, as well as guarantees for the full subscription of offerings are included in market risk.

About market risk

Risk strategy

Market risk in SpareBank 1 SR-Bank primarily relates to the group's investments in securities, including equities and bonds. Furthermore, the group is somewhat exposed to market risk through trading activities in interest rate and currency markets, as well as from activities that underpin ordinary funding and lending activities. The group's exposure to market risk is deemed moderate.

The risk strategy and the associated specification of the necessary risk limits, reporting procedures and authorities must be reviewed and approved by the group's board at least once a year.

Authorities, guidelines and routines

The limits set by the board relating to SpareBank 1 SR-Bank Markets and Treasury are delegated by the chief executive to named people.

SpareBank 1 SR-Bank Markets' guidelines and routines are well described in SJEKK, the bank's system for process and routine descriptions. SJEKK continuously updates the processing steps and routines so that the last valid version is always available. Compliance with the routines by the people involved in managing and controlling market risk is satisfactory.

The group's market risk is measured and monitored based on fixed limits. The responsibility for continuous position reconciliation and measurement of the group's market risk exposure lies with the middle office in SpareBank 1 SR-Bank Markets. The risk manager for market and funding risk is responsible for maintaining continuous control of risk measurements and independent risk reporting, both internally and externally.

Market risk, including spread risk for bonds and securities

Price risk is the risk of losses that arise following changes in the value of the group's commercial paper, bonds and equity instruments. The risk associated with a fall in value for the bond portfolios, including both systematic and unsystematic, is quantified by calculations based on the Financial Supervisory Authority of Norway's stress test model for insurance companies. The method is generally based on Solvency II (the QIS5 specifications).

The liquidity portfolio's total holding amounts to NOK 29,1 billion[7]. The portfolio in SpareBank 1 SR-Bank Markets amounts to NOK 0.3 billion[8]. The table below provides an overview of exposure by asset class.

Table 9: Fair value of the bond portfolio (NOK million)

Sub-portfolio	4th Qtr. 2018	3rd Qtr. 2018	2nd Qtr. 2018	1st Qtr. 2018
Treasury	**29,117**	**29,208**	**29,241**	**28,630**
Norwegian state/municipality	0	0	711	420
OMF/Covered Bond	19,940	19,080	19,185	19,757
Foreign guarantees	9,159	10,110	9,327	8,435
Norwegian bank/finance	18	18	18	18
SR-Bank Markets	**320**	**319**	**311**	**347**
Norwegian bank/finance	85	95	78	95
Industry/other	235	224	232	253

Risk-adjusted capital associated with other market risk is measured and followed-up in accordance with the Value-at-Risk (VaR) principle. The VaR model covers the group's interest rate and currency

[7] Of which NOK 6,0 billion is measured at amortized cost and is therefore not exposed to market risk.

[8] Includes hybrid capital (fund bonds) classified as equity

risk, as well as the securities risk associated with the group's investments in equities, units and other equity investments.

Market risk is reported under credit and counterparty risk in accordance with the standard method.

Bond portfolio

Risk profile and portfolio performance

The group has two different portfolios consisting of bonds and commercial paper – the liquidity portfolio and trading portfolio, respectively. The respective portfolios are governed by separate management mandates.

Liquidity portfolio (managed by Treasury)

The liquidity portfolio consists of interest-bearing securities that either satisfies the requirements for depositing with Norges Bank, the LCR regulations or uncommitted credit facilities, as well as exposure on companies within the SpareBank 1 alliance. The size of the portfolio will always depend on the group's balance sheet and thereby the need for liquid assets. At the end of 208, the value of the combined liquidity portfolio totals NOK 29,1 billion.

In accordance with the group's internal guidelines, securities that do not satisfy internal requirements entail a credit risk governed by special processing rules.

Trading portfolio (managed by SpareBank 1 SR-Bank Markets)

The trading portfolio consists of financially oriented investments in interest-bearing securities[9]. The current limit for such investments is NOK 1 billion. All investments in the trading portfolio that do not satisfy the criteria for uncommitted credit lines stipulated by the board of directors shall be subject to ordinary credit processing. At the end of 2018 the trading portfolio includes investments in 31 companies valued at NOK 320 million.

The trading portfolio does not have any structured bonds (CDOs, etc.) or other types of financial instruments.

The tables below provide a summary of SpareBank 1 SR-Bank's exposure to bonds in the different portfolios:

[9] Includes hybrid capital (mutual fund bonds), classified as equity

Table 10: Securities exposure, bonds and securities

Risk classes for bonds and commercial paper – total

Risk category	Rating	Market value NOK million	Total %
Very low risk	AAA, AA+, AA and AA-	29,099	98.8 %
Low risk	A+, A and A-	0	0.0 %
Moderate risk	BBB+, BBB and BBB-	59	0.2 %
High risk	BB+, BB and BB-	137	0.5 %
Very high risk	B+ and lower	142	0.5 %
Total		**29,437**	**100.0 %**

Risk classes – Treasury

Risk category	Rating	Market value NOK million	Treasury %
Very low risk	AAA, AA+, AA and AA-	29,099	99.9 %
Low risk	A+, A and A-	0	0.0 %
Moderate risk	BBB+, BBB and BBB-	18	0.1 %
High risk	BB+, BB and BB-	0	0 %
Very high risk	B+ and lower	0	0 %
Total		**29,117**	**100.0 %**

Risk classes – SpareBank 1 SR-Bank Markets

Risk category	Rating	Market value NOK mill	Trading %
Very low risk	AAA, AA+, AA and AA-	0	0 %
Low risk	A+, A and A-	0	0 %
Moderate risk	BBB+, BBB and BBB-	41	12.9 %
High risk	BB+, BB and BB-	137	42.7 %
Very high risk	B+ and lower	142	44.4 %
Total		**320**	**100.0 %**

Interest rate risk

Interest rate risk arises because the group's assets and liabilities can be subject to different fixed rate periods. Interest rate instrument trading must always comply with the adopted limits and authorities. The group's limits define quantitative targets for the maximum potential loss. The commercial risk is quantified and monitored continuously.

The group's general limits for interest rate risk define the maximum loss from a 1 percentage point change in interest rates. The maximum loss following a 1 percentage change in interest rates totals NOK 85 million with NOK 35 million of the total balance in SpareBank 1 SR-Bank Markets and NOK 50 million of the total balance in Treasury.

The total currency position cannot exceed the interest rate risk limit in NOK.

Table 11: Sub-limits within the different maturity bonds

Maturity bond	Limit SR-Bank Markets	Treasury limit
0 – 3 months	NOK 20 million	NOK 50 million
3 – 6 months	NOK 20 million	NOK 50 million
6 – 9 months	NOK 10 million	NOK 50 million
9 months – 1 year	NOK 10 million	NOK 50 million
1 year – 18 months	NOK 10 million	NOK 20 million
18 – 24 months	NOK 15 million	NOK 15 million
Each year (1-10)	NOK 30 million	NOK 15 million
10 years or more	NOK 30 million	NOK 10 million

The table below shows the total interest rate risk by the end of the last four quarters.

Table 12: Effect on earnings of a positive parallel shift in the yield curve of one percentage point (NOK million)

Interest rate risk	0-6 months	6-12 months	1-5 years	> 5 years	Total
4th Qtr. 2018	-18	0	-0	0	**-18**
3rd Qtr. 2018	-17	3	-1	1	**-14**
2nd Qtr. 2018	-16	1	-8	-12	**-34**
1st Qtr. 2018	-14	3	-12	-7	**-29**

Foreign exchange risk

Currency rate risk is the risk of loss due to fluctuations in foreign exchange rates. The group measures currency risk of net positions in the different currencies in which the group is exposed. The group has prepared limits for the net exposure to each individual currency, and limits for the aggregate net currency exposure. The overnight price risk for spot trading in foreign currencies shall not exceed NOK 100 million for each individual currency, and NOK 175 million in aggregate.

The table below shows the net foreign currency exposure including financial derivatives at the end of the last four quarters.

Table 13: Foreign currency exposure including financial derivatives (NOK million)

Currency	4th Qtr. 2018	3rd Qtr. 2018	2nd Qtr. 2018	1st Qtr. 2018
EUR	-96	35	3	-16
USD	0	0	4	2
CHF	-27	1	0	-1
GBP	0	0	-1	0
SEK	-2	1	-1	-2
Other	-46	22	2	0

Securities risk, shares[10]

Shares, units and other equity interests are classified within the categories of fair value and available for sale. Securities that can be measured reliably and are reported internally at fair value are classified as fair value through profit and loss. Other shares are classified as available for sale.

The table below provides a summary of the group's shareholdings at the end of the last four quarters.

Table 14: The group's share portfolio at fair value at the end of the year (NOK million)

Balance sheet classification	4th Qtr. 2018	3rd Qtr. 2018	2nd Qtr. 2018	1st Qtr. 2018
Shares, units etc.	783	757	670	644

[10] Does not include hybrid capital (mutual fund bonds) classified as equity

OPERATIONAL RISK

Operational risk is the risk of loss due to weak or inadequate internal processes or systems, human errors or external incidents[11].

Management of operational risk

SpareBank 1 SR-Bank aims to have a moderate risk profile for operational risk with a good balance of trust and control that ensures efficiency, while not exposing the Group to unnecessary risk. This is achieved through a good risk culture in the organisation, continuous learning from unwanted incidents and the development of leading methods for identifying and quantifying risk.

Risk strategy and limits on operational risk exposure are set annually and approved by the board. The individual managers are responsible of ensuring that the unit they lead is subject to adequate management and control given the limits, and that operational risk is managed in accordance with the strategy and guidelines defined for SpareBank 1 SR-Bank. The Risk Management Department is responsible for supporting and challenging the risk owners, and for ensuring that the group has a good framework for the identification, reporting and follow-up of operational risk.

Measuring operational risk

SpareBank 1 SR-Bank calculates and keeps regulatory capital related to operational risk in accordance with the standardised approach. However, as this method is based on historical income and does not take business-specific factors and established controls into account, it is deemed to provide an inadequate indication of the actual exposure to operational risk. In order to gain insight into what actually drives operational risk within business processes and thereby measure risk exposure, a total review of the group's operational risk exposure is conducted at least annually. In this process, potential risk scenarios and their associated probabilities and consequences are analysed with extensive involvement by business process owners and technical experts. The resulting estimated exposure to operational risk is input in the group's management accounts to calculate the business unit's risk-adjusted return. Thus, any measure carried out to reduce the estimated operational risk exposure, will translate into improved risk-adjusted return for relevant business units. This encourages active risk management.

The group’s insurance arrangements have a major impact on the potential financial consequences of operational risks. For all identified risks with a potential financial consequence of more than NOK 10 million, an individual assessment of expected insurance coverage is conducted.

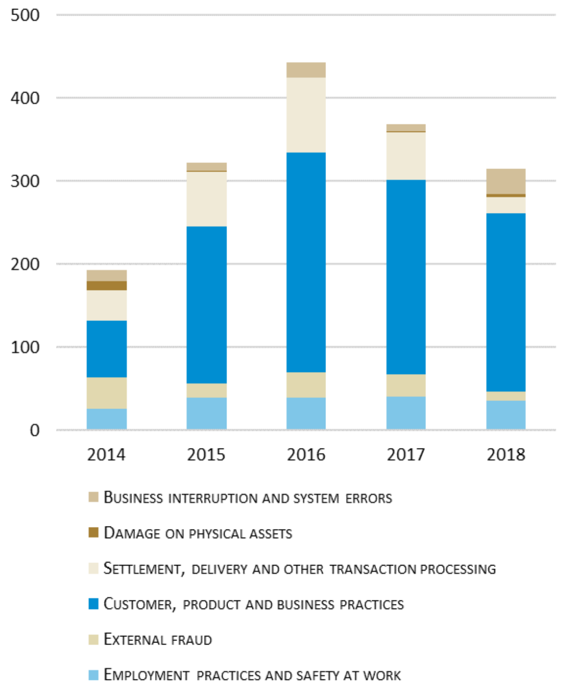
Development in operational risk

Through periodic mapping and updating of the risk picture, SpareBank 1 SR-Bank has identified operational risks with significant loss potential. As a result, targeted risk mitigation actions have been implemented which have kept the overall level of potential loss at a stable level. This is achieved through targeted measures against risk drivers, to reduce the probability of identified risks to occur, as well as measures to reduce the consequences if they do. Implemented measures are mainly related to changes in procedures, stricter amount limits, improvement of system controls and targeted collection of additional insurances.

Unwanted incidents that occur in the group are registered and followed up to avoid repetition. It is important that as many of the incidents that occur as possible are registered since they provide valuable input for risk evaluations and provide a basis for continuous operational learning and improvement. The figure below shows the number of registered incidents in 2014 through 2018.

[11] Legal risk is included in operational risk, but not strategic risk and reputation risk, which are assessed separately.

Figure 25: Registered, undesired incidents by Basel categories



The increased number of registered incidents from 2014 to 2016 is mainly attributable to improved reporting culture and upgraded system support from 2015. In recent years there has been a reduction in the number of registered incidents, but the number is still roughly on the same level as in 2015. The reduction is mainly due to fewer events related to settlement, delivery and other transaction processing, as well as in the category of customer, products and business practices. The total loss from registered unwanted incidents in 2018 amounted to NOK 15 million, compared with NOK 5 million in 2017.

LIQUIDITY RISK

Liquidity risk is the risk that the group is unable to refinance its debt or is unable to finance an increase in assets.

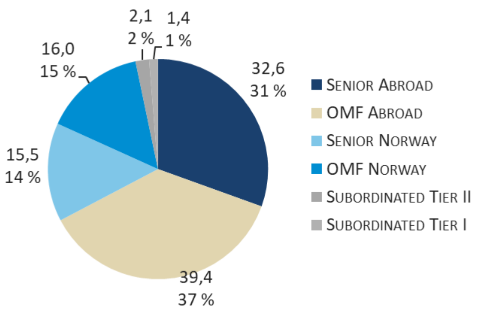
About liquidity risk

The bank's framework for managing liquidity risk shall reflect the bank's risk profile. Liquidity risk shall be low.

Management and measurement of liquidity risk

Liquidity risk is managed and measured by means of several measurement methods, as no method alone can be used to quantity this type of risk. The methods include limits for the maximum refunding need for various maturities, key balance sheet figures, survivability targets in a normal situation, assuming the capital markets are closed and the short-term liquidity measure LCR. Furthermore, internal stress tests are conducted to determine the bank's ability to survive under various scenarios, including a serious bank or market specific crisis. The results of the stress tests are included in the information on which the group's liquidity strategy and recovery plan[12] for a liquidity crisis are based.

Figure 26: Composition of the group's securities borrowing as of 31 December 2018 (NOK billion and percent) [13]



The liquidity reserve is NOK 30.4 billion, and the group has an additional NOK 24.4 billion representing mortgage loans ready to be transferred for OMF funding. The liquidity situation for SpareBank 1 SR-Bank is satisfactory.

The liquidity buffer indicates a survival period of 20 months at the end of 2018 without access to external funding. During the next twelve months, debt corresponding to NOK 11.6 billion will be refinanced.

Deposits from customers represent the group's most important source of funding. For the group as a whole, the volume of deposits increased by NOK 3.4 billion (3.5 per cent) to 98.8 billion in 2018. The deposit coverage ratio has decreased from 51.0 per cent in 2017 to 49.0 per cent in 2018.

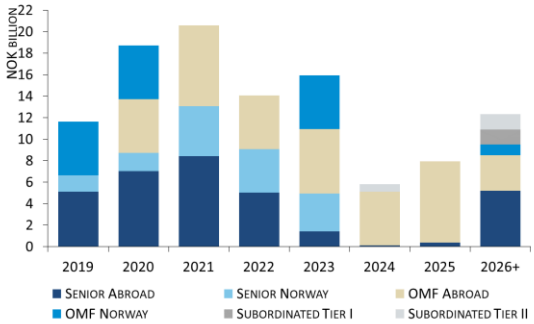
SR-Boligkreditt AS is a wholly owned subsidiary, established in the second quarter of 2015. The aim of the company is to buy mortgages from SpareBank 1 SR-Bank, which is financed by issuing covered bonds. Through SR-Boligkreditt AS, SpareBank 1 SR-Bank can diversify and optimise its funding. Mortgage loans transferred to SR-Boligkreditt AS amounted to NOK 58.8 billion by the end of 2018, while mortgage loans transferred to SpareBank 1 Boligkreditt AS amounted to NOK 8.9 billion. Loans in SpareBank 1 Næringskreditt AS total approximately NOK 0.4 billion.

The figure below illustrates the maturity structure for the funding portfolio at the end of 2018.

[12] The group recovery plan also serves as the group's contingency plan, cf. regulations on prudent liquidity management § 6

[13] Excluding SpareBank 1 Boligkreditt and Næringskreditt

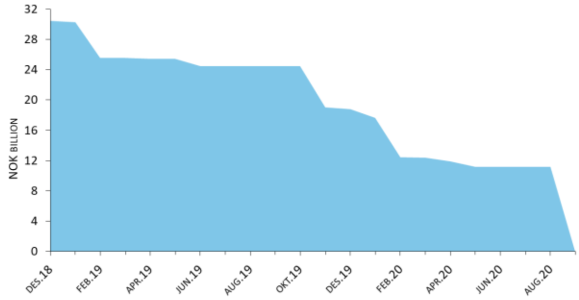
Figure 27: The funding portfolio's maturity structure as of 31 December 2018



The average remaining term to maturity in the portfolio of senior bond funding was 3.8 years[14] at the end of 2018.

A sensitivity analysis that measures the group's ability to survive in the event of closed capital markets is prepared monthly. The primary objective of the analysis is to measure whether the funding risk is in accordance with the definition of targets for liquidity management, which specify that SpareBank 1 SR-Bank must be able to survive for a minimum twelve months without external access to liquidity in a normal situation. The analysis is based on different scenarios. In the basis scenario, the growth in net funding needs is set at zero, i.e. the relationship between deposits and loans are kept constant.

Figure 28: Sensitivity analysis of the funding risk – basis scenario



As the basis scenario assumes that access to external funding is unavailable, new lending can only be funded by instalments from and the maturity of the existing loan portfolios. In such a situation, the group's liquidity buffer ensures the ability to survive to the end of September 2020. The liquidity buffer consists of cash and very secure interest-bearing securities. The group's liquidity target, LCR (liquidity coverage ratio), was 167 per cent at the end of 2018.

[14] Based on «first call»

OWNERSHIP RISK

Ownership risk is the risk that SpareBank 1 SR-Bank will incur a negative result from stakes in strategically owned companies and/or need to inject fresh capital into these companies. Owned companies are defined as companies in which SpareBank 1 SR-Bank has a significant stake and influence.

Management of ownership risk

SpareBank 1 SR-Bank heavily focuses on management and control in companies in which the bank has full or partial ownership. In companies that are part-owned, either through direct ownership by SpareBank 1 SR-Bank or indirectly through ownership of 19.5 per cent of SpareBank 1 Gruppen, SpareBank 1 SR-Bank, as the largest bank in the alliance, is represented as a board member in all companies of significant importance.

All follow-up of ownership interests is performed under the group's chief financial officer. All reporting from the individual companies and questions regarding capital increases etc. are reported here. A good supply of information is assured through active participation in the board of directors of several the part-owned companies, which safeguards SpareBank 1 SR-Bank's ownership interests. In cases of importance to SpareBank 1 SR-Bank's other operations, the individual board chairman/member will submit the matter for a plenary discussion by the group's executive management team.

The group's board stipulates risk limits and the allocation of equity to the individual companies annually. This is based on a framework for the assessment of risk.

About ownership risk

The ownership risk varies from company to company, depending on the company's operations and the inherent risk, as well as SpareBank 1 SR-Bank's stake. The figure below shows the Bank's wholly owned and partly owned companies as at 31 December 2018.

Figure 29: Wholly and partly owned companies as at 31 December 2018

BUSINESS RISK

Business risk is the risk of unexpected fluctuations in incomes and costs resulting from changes in external circumstances, such as the market situation or government regulation.

The group has developed a well-diversified income base over a long period of time, and this means that any reduction in the individual product groups or customer segments will not have significant consequences over time.

Over time, the group has developed cost-effective operations in combination with a continuous development of competence and expansion of the operations regarding the range of products and geography. SpareBank 1 SR-Bank has systematically focused on the value chain philosophy and development of products and services for several years.

REPUTATION RISK

Reputation risk is the risk of a failure in earnings and access to capital due to a lack of trust and damage to reputation in the market, i.e. in relation to customers, counterparties, stock markets and authorities.

The group has established an information department that is represented in the group’s executive management team. Dedicated employees are responsible for handling all communications in social media, and information management is included in the group’s contingency plan, which is distributed to all employees.

SpareBank 1 SR-Bank has also implemented an internal process for identifying and evaluating the group's overall reputation risk situation. A full review and survey of the reputation risks to which the group is exposed are conducted regularly and at least semi-annually. Changes in the risk situation are also registered.

Reputation risk is identified and sorted according to:

- Direct management cost (firefighting)
- Impact on departure of existing customers
- Impact on influx of new customers
- Potential for the Group's concessions may come under consideration and thus indirectly affect market value and financing capacity
- If certain events would result in revealing attitudes and actions that deviate significantly from the Group communicated values

The group continuously monitors its reputation, both through day-to-day media monitoring and evaluation, as well as continuously monitoring discussions in different social channels. The continuous day-to-day evaluations are carried out as objectively as possible. Members of the group’s executive management team and other key personnel receive daily media reports.

STRATEGIC RISK

Strategic risk is the risk of loss due to failed strategic decisions.

SpareBank 1 SR-Bank annually conducts a strategy process that involves the board of directors, key personnel, departments and subsidiaries. The result of this process is a strategic presentation of goals for the following three years, with an associated business plan and plan of action. The business plan clearly shows the priorities the group has made for the period based on scenarios and the competition and market situation. The business plan and plan of action are more detailed for the next year.

The group's executive management team conducts monthly and four-monthly evaluations of the group's achievements and strategic direction. The evaluation also assesses relevant new initiatives and measures that must be implemented based on changes in assumptions or the market situation. Strategic work is therefore flexible in its approach and can safeguard both short-term and long-term goals.

COMPLIANCE RISK

Compliance risk is the risk that the group incurs public sanctions/penalties or financial loss due to failure to comply with legislation and regulations.

The compliance function at SpareBank 1 SR-Bank is an independent function that ensures that the laws, regulations, standards and recommendations that regulate our operations, and are laid down by government agencies or other institutions or associations, are implemented and complied with.

Compliance policy

The group's compliance policy is adopted by the board and describes the main principles for responsibility and organisation. The group stresses the importance of good processes to ensure compliance with the current laws and regulations. Effective tools for achieving this include:

- Clear values that are clearly communicated and understood throughout the organisation.
- A process that detects, communicates, and implements changes in legislation and regulations.
- A process to monitor and report compliance with legislation and regulations.

Management of compliance risk

SpareBank 1 SR-Bank is managed through the compliance framework as set out in the Bank's compliance policy, which ensures that the Group does not incur public sanctions / fines or financial losses due to non-implementation and compliance with laws and regulations. The Group's compliance policy is adopted by the Board and describes the main principles of responsibility and organisation.

SpareBank 1 SR-Bank is committed to having good processes to ensure compliance with applicable laws and regulations. Focus areas are ongoing follow-up of compliance with applicable regulations and ensuring that the Group has the best adaptation to future regulatory changes.

The group's compliance function is performed by the Compliance Department, which is organised independently of the business units. The department bears overall responsibility for the framework, follow-up and reporting on compliance. Subsidiaries and the investment firm have designated compliance managers when this is required. The designated compliance manager for the group's investment firm is responsible for ensuring that the bank's activities relating to the provision of investment services always comply with the regulations for securities trading.

The group's managers have an operational responsibility for practical implementation and compliance with laws and regulations. All employees are responsible for ensuring that they comply and understand the laws and regulations on a day-to-day basis.

ABBREVIATIONS AND DEFINITIONS

An explanation of abbreviations used in Pillar 3 is given in the table below.

Abbreviation	Explanation
IRB	Internal Rating Based
PD	Probability of Default
DR	Default Rate
EAD	Exposure at Default
CF	Conversion Factor (proportion of unutilised credit facility which is expected to have been drawn upon default)
LGD	Loss Given Default
RM	Retail market
CM	Corporate Market

A commitment is considered to be in default if:

- A claim is overdue by more than 90 days and the amount is over NOK 1,000, or
- When the bank has reason to believe that there is a chance that the debtor is unable to (fully) repay according to their obligations:
    - The bank makes an impairment attributable to poorer creditworthiness
    - The bank claims a loss due to poorer creditworthiness
    - Due to payment problems with the counterpart, the bank grants a postponement of payment or new credit to payment by term, or comes to an agreement of changes in the interest rate or other conditions
    - An opening of debt negotiations, bankruptcy or public administration with the counterparty is requested, or voluntary debt negotiations have been initiated
    - For any other reasons, the bank presumes that the obligations will not be fulfilled

FIGURE OVERVIEW

TABLE OVERVIEW

APPENDIX

Consolidation basis

Table 15: Consolidation basis

Subsidiaries **As at 31/12/2018**	**Number of shares**	**Book value**	**Voting rights**	**Consolidation method**
Wholly consolidated companies				
EiendomsMegler 1 SR-Eiendom AS	150	97,205	100 %	Acquisition method
FinStart Nordic AS	6,700	340,725	100 %	Acquisition method
SR-Forvaltning AS	6,000	29,018	100 %	Acquisition method
Regnskapshuset SR AS	9,000	80,125	100 %	Acquisition method
Rygir Industrier AS konsern	90,000	144,490	100 %	Acquisition method
Finansparken Bjergsted AS	8,000	433,016	100 %	Acquisition method
SR-Boligkreditt AS	5,000,000	5,000,150	100 %	Acquisition method
Bjergsted Terrasse AS	3,000,000	3,000	100 %	Acquisition method
Total		**6,127,729**		

Subsidiaries **As at 31/12/2017**	**Number of shares**	**Book value**	**Voting rights**	**Consolidation method**
Wholly consolidated companies				
EiendomsMegler 1 SR-Eiendom AS	150	97,205	100 %	Acquisition method
FinStart Nordic AS	4,700	224,225	100 %	Acquisition method
SR-Forvaltning AS	6,000	29,018	100 %	Acquisition method
Regnskapshuset SR AS	9,000	80,125	100 %	Acquisition method
Rygir Industrier AS konsern	90,000	164,382	100 %	Acquisition method
Finansparken Bjergsted AS	8,000	258,016	100 %	Acquisition method
SR-Boligkreditt AS	4,000,000	4,000,150	100 %	Acquisition method
Total		**4,853,121**		

Method of consolidation is the same for accounting purposes and capital adequacy purposes.

Subsidiaries using the standard method

Amounts in NOK million	**31/12/2018** **SR-Forvaltning**	31/12/2017
Net regulatory capital	**19**	19
Minimum regulatory capital requirements	**91**	83
Capital ratio %	**21.19**	23.29

Subsidiaries using the IRB method

Amounts in NOK million	**31/12/2018** **SR-Boligkreditt**	31/12/2017
Net regulatory capital	**5,187**	3,934
Minimum regulatory capital requirements	**24,392**	16,925
Capital ratio %	**21.27**	23.24

Investments in associated companies and joint ventures

Investments in associated companies are accounted for according to the equity method in the group and according to the acquisition method in the parent bank. The investments are treated identically for the purposes of determining the capital adequacy ratio except for the group's investments in SpareBank 1 Boligkreditt AS, SpareBank 1 Næringskreditt AS, BN Bank AS and SpareBank 1 Kredittkort AS. Proportionate consolidation is carried out for the group's capital adequacy.

Investments in joint ventures are recognised in the group using the equity method and in accordance with the acquisition method in the parent bank. The investments were treated equally for capital adequacy purposes.

Table 16: Investments in associated companies and joint ventures

Amounts in NOK 1,000	**Ownership percentage [1)] 31/12/2018**	**Capital requirements [2)] 31/12/2018**	**Capital adequacy percentage 31/12/2018**	Ownership percentage [1)] 31/12/2017	Capital requirements[2)] 31/12/2017	Capital adequacy percentage 31/12/2017
SpareBank 1 Boligkreditt AS [1)]	4.8	3,674	16,76	9.5	7,093	16.68
SpareBank 1 Næringskreditt AS	14.4	1,592	18,37	19.2	1,971	22.87
BN Bank ASA [1)]	24.2	4,561	22,15	24.2	3,247	29.57
SpareBank 1 Kredittkort AS	17.9	926	22,01	17.9	894	24.30

1) Including indirect assets, as of Q1 2018, we only have indirect holdings in BN Bank.
2) SpareBank 1 SR-Bank’s share

SpareBank 1 Boligkreditt AS and BN Bank AS use the IRB approach in its capital adequacy reporting. SpareBank 1 Næringskreditt AS uses the standard approach for reporting capital adequacy.

Regulatory capital

The bank differentiates between material assets >10% and non-material assets in financial institutions. Investments that exceed 10% of own common equity tier 1 capital after deductions are deducted from primary capital and the deductions are made in the same class of capital to which the instrument one owns belongs. Investments in common equity tier 1 instruments that are not deductible from primary capital are weighted 250% in the basis for calculation.

Table 17: Regulatory capital in other financial institutions

Amounts in NOK million	**Ownership percentage 31/12/2018**	**Book value 31/12/2018**	Ownership percentage 31/12/2017	Book value 31/12/2017
SpareBank 1 Gruppen	19.5 %	1,665	19.5 %	1,677
Sandnes Sparebank	15.1 %	192	15.1 %	191
SpareBank 1 Betaling	19.8 %	130	19.7 %	63
Visa		77		60
Other financial institutions		85		102
Total		**2,149**		2,093

Table 18: Regulatory capital

Regulatory capital, including core capital and supplementary capital, as well as relevant supplements, deductions and limitations.

Total minimum common equity Tier 1 capital ratio requirement, including countercyclical capital buffer and Pilar 2 premiums, was 14.0% per 31/12/2018 for SpareBank 1 SR Bank. The common equity Tier capital requirement consists of the common capital requirement of 4.5 per cent, conservation buffer of 2.5 per cent, systemic risk buffer of 3.0 per cent and countercyclical buffer of 2.0 per cent. In addition, the Norwegian FSA has established an individual Pillar 2 requirement of 2.0 per cent.

Group (Amounts in NOK million)	**31/12/2018**	31/12/2017
Share capital	**6,394**	6,394
Share premium reserve	**1,587**	1,587
Allocated dividend	**1,151**	1,087
Fund for unrealised gains	**60**	43
Hybrid capital	**550**	150
Other equity	**11,843**	10,628
Total recorded equity	**21,585**	19,889
Core (Tier 1) capital		
Deferred tax, goodwill and other intangible assets	**-114**	-116
Deduction for allocated dividend	**-1,151**	-1,087
Deduction in expected losses IRB less loss provisions	**-334**	-337
Hybrid capital not to be included in core (Tier 1) capital	**-550**	-150
Deduction for significant investments in other financial institutions	**-**	-72
Deduction for non-material investments in other financial institutions	**-129**	-
Value adjustments due to the requirements for prudent valuation	**-39**	-38
Total core (Tier 1) capital	**19,268**	18,089
Hybrid capital	**677**	392
Hybrid Tier 1 bond [1)]	**798**	797
Total core (Tier 1) capital	**20,743**	19,278
Supplementary (Tier 2) capital in excess of core (Tier 1) capital		
Non-perpetual subordinated capital	**2,338**	2,254
Deduction for investments in other financial institutions	**-43**	-43
Total supplementary (Tier 2) capital	**2,295**	2,211
Net regulatory capital	**23,038**	21,489

[1)] Terms and conditions are presented in the table "Subordinated loan capital and hybrid Tier 1 bonds"

Risk weighted assets	**31/12/2018**	31/12/2017
Credit risk and counterparty credit risk	**113,128**	103,088
Credit value adjustment risk (CVA)	**891**	933
Operational risk	**7,902**	7,430
Capital adequacy requirements related to transitional arrangements	**8,948**	8,709
Risk weighted assets	**130,869**	120,160
Common equity Tier 1 capital requirement 4.5 %	**5,889**	5,407
Buffer requirements		
Capital conservation buffer 2.5 %	**3,272**	3,004
Systemic risk buffer 3 %	**3,926**	3,605
Countercyclical buffer 2 %	**2,617**	2,403
Combined buffer requirement	**9,815**	9,012
Surplus CET1	**3,564**	3,670
Capital adequacy	**17.60 %**	17.88 %
Of which core capital	**15.85 %**	16.04 %
Of which supplementary capital	**1.75 %**	1.84 %
Common equity tier 1 ratio	**14.72 %**	15.05 %
Unweighted Tier 1 capital	**7.68 %**	7.37 %

Risk-weighted balance for credit risk

Table 19: Risk weighted balance for credit risk, by commitment categories and sub-categories

		Commitments 31/12/2018	**Commitments EAD 31/12/2018**	**Risk weighted assets Consolidated 31/12/2018**	Risk weighted assets Consolidated 31/12/2017
Enterprises	Specialised enterprises*	42,699	40,948	24,477	21,916
	SME enterprises	30,241	27,475	23,699	19,220
	Other enterprises	10,588	8,758	8,023	6,868
Mass market	Mass market SME	5,950	5,947	1,334	1,303
	Commitments with mortgage on real estate	135,230	135,222	28,592	27,026
	Other mass market commitments	5,168	5,158	2,153	1,942
Risk weighted assets credit risk - IRB		**229.875**	**223,508**	**88,278**	78,275
Governments		4,769		35	51
Local and regional governments, public authorities		4,612		93	140
Institutions		11,662		1,368	1,865
Enterprises		12,309		9,661	9,474
Mass market		11,864		4,490	3,884
Covered bonds		21,275		2,218	2,686
Equity positions		2,474		5,196	5,036
Other assets		2,193		1,789	1,678
Risk weighted assets credit risk - standard method		**71.157**		**24,850**	24,813
Total risk weighted assets credit risk				**113,128**	103,088

Minimum regulatory capital requirements for operational risk according to the standardised approach[15]

Table 20: Risk weighted balance for credit risk, by commitment categories and sub-categories

2018	**Consolidated**	**SpareBank 1 Boligkreditt**	**SpareBank 1 Næringskreditt**	**BN Bank**	**SpareBank 1 Kredittkort**
Banking services for mass market customers	3,826				
Banking services for corporate customers	3,632				
Payment and settlement services	-64				
Proportion of operational risk consolidated company	508	38	31	275	164
Total	**7,902**	**38**	**31**	**275**	**164**

[15] SpareBank 1 SR-Bank group uses the standardised approach. Other companies use the basic approach.

2017	Consolidated	SpareBank 1 Boligkreditt	SpareBank 1 Næringskreditt	BN Bank	SpareBank 1 Kredittkort
Banking services for mass market customers	3,759				
Banking services for corporate customers	3,406				
Payment and settlement services	-245				
Proportion of operational risk consolidated company	510	70	52	256	132
Total	**7,430**	**70**	**52**	**256**	**132**

The risk-weighted balance sheet for operational risk is calculated as a percentage of average earnings for each business unit for the last three years. Banking services for the mass market 12 per cent, banking services for the corporate market 15 cent and for other services 18 per cent.

Subordinated loan capital and hybrid tier 1 bonds

Subordinated loan capital and hybrid Tier 1 bonds (hybrids) in foreign currencies are included in the Group's total currency position so that there is no currency risk associated with the loans. Of a total of NOK 2,951 million in subordinated loan capital, NOK 798 million counts as core (Tier 1) capital and NOK 2,097 million as non-perpetual subordinated capital. Capitalised costs associated with borrowing are reflected in the calculation of amortised cost.

Table 21: Subordinated loan capital and hybrid tier 1 bonds

Hovedstol	Betingelser	Maturity	First maturity date	2018	2017
Non-perpetual					
NOK 700	3 mnd Nibor + 1.45 % p.a.	2029	2024	**703**	301
NOK 625	3 mnd Nibor + 1.52 % p.a.	2028	**-**	**628**	627
NOK 500	3 mnd Nibor + 1.80 % p.a.	-	-	**-**	500
EUR 300	6 mnd Euribor + 1.45 % p.a.	2028	2023	**300**	-
NOK 50	3 mnd Nibor + 1.725 % p.a.	2030	-	**498**	492
Total non-perpetual				**2,129**	1,920
Hybrid tier 1 bonds					
NOK 684	9.35 % p.a. until 09/12/2019, then 3 mnd Nibor + 5.75 % p.a.		2019	**706**	728
NOK 116	3 mnd Nibor + 4.75 % p.a. until 9.12.2019, then Nibor + 5.75 % p.a.		2019	**116**	116
Total hybrids				**822**	844
Total subordinated loan capital				**2,764**	2,646

Commitments by geographic area

Table 22: Commitment amount for each type of commitment, divided into geographic areas before deductions for write-downs.

2018	**Gross loans**	**Unutilised credit**	**Guarantees**	**Total**
Rogaland	124,680	15,026	6,248	145,954
Agder	16,994	2,048	852	19,894
Hordaland	28,013	3,376	1,404	32,793
Other	22,418	2,702	1,123	26,243
Total gross commitments, customers	**192,105**	**23,152**	**9,627**	**224,884**

2017	Gross loans	Unutilised credit	Guarantees	Total
Rogaland	117,331	15,250	5,997	138,578
Agder	15,848	2,088	822	18,758
Hordaland	26,651	3,608	1,517	31,776
Other	12,724	1,766	784	15,274
Total gross commitments, customers	**172,554**	**22,712**	**9,120**	**204,386**

Commitments by type of commitment

Table 23: Total commitment size, by type of commitment

2018	**Commitment amount**	**Average commitment amount**
Enterprises	97,820	92,436
Mass market	127,064	122,199
Gross commitments, customers	**224,884**	**214,635**
Individual write-downs	-1,227	-933
Write-down of financial commitments	-107	-393
Net commitments, customers	**223,550**	**213,310**
Governments (Norges Bank)	717	462
Institutions	1,696	1,652
Total commitment amount	**225,963**	**215,424**

2017	**Commitment amount**	**Average commitment amount**
Enterprises	87,052	87,052
Mass market	117,334	117,334
Gross commitments, customers	**204,386**	**204,386**
Individual write-downs	-639	-639
Write-downs for groups of loans	-678	-678
Write-down of guarantees	-13	-13
Net commitments, customers	**203,056**	**203,056**
Governments (Norges Bank)	207	207
Institutions	1,608	1,608
Total commitment amount	**204,871**	**204,871**

Commitments by customer groups

Table 24: Commitment amount for each type of commitment, broken down by sectors before deductions for write-downs

2018	**Gross loans**	**Unutilised credit and guarantees**	**Total**
Agriculture/forestry	5,183	777	5,960
Fisheries/fish farming	1,709	208	1,917
Building and construction	4,074	1,728	5,802
Industry	3,037	1,950	4,987
Power and water supply	683	95	778
Wholesale and retail trade, hotels and restaurants	3,249	1,679	4,928
Shipping and other transport	12,162	3,484	15,646
Real estate	31,713	3,193	34,906
Service sector	12,142	3,005	15,147
Energy, oil and gas	3,134	2,492	5,626
Public sector and financial services	1,896	982	2,878
Net group accounts currency	(756)		-756
Not allocated (added value fixed interest lending)	-	-	0
Total for enterprises	**78,226**	**19,593**	**97,819**
Mass market	113,879	13,186	127,065
Total gross commitments, customers	**192,105**	**32,779**	**224,884**

2017	Gross loans	Unutilised credit and guarantees	Total
Agriculture/forestry	4,833	2,660	7,493
Fisheries/fish farming	860	574	1,434
Mining operations and extraction	4,876	4,951	9,827
Industry	3,632	168	3,800
Power and water supply/building and construction	3,666	2,919	6,585
Wholesale and retail trade, hotels and restaurants	2,984	1,432	4,416
Overseas shipping, pipeline transport and other transport	10,015	2,181	12,196
Property management	27,041	345	27,386
Service sector	8,428	2,064	10,492
Public sector and financial services	1,869	1,554	3,423
Net group accounts currency	(399)	399	0
Not allocated (added value fixed interest lending)	450	(450)	0
Total for enterprises	**68,255**	**18,797**	**87,052**
Mass market	104,299	13,035	117,334
Total gross commitments, customers	**172,554**	**31,832**	**204,386**

Commitment broken down by remaining maturity

Table 25: Commitment amount for each type of commitment broken down by remaining maturity

2018	Upon request	< 1 year	1–5 years	More than 5 years	Total
Gross loans	35,343	6,478	41,742	108,542	192,105
Unutilised credit	23,152				23,152
Guarantees	29	2,364	5,482	1,752	9,627
Total gross commitments, customers	**58,524**	**8,842**	**47,224**	**110,294**	**224,884**
Governments (Norges Bank)	130	587	-	-	717
Institutions	782	896	0	18	1,696

2017	Upon request	< 1 year	1–5 years	More than 5 years	Total
Gross loans	19,763	10,077	36,608	106,106	172,554
Unutilised credit	22,712				22,712
Guarantees	83	2,391	5,419	1,227	9,120
Total gross commitments, customers	**42,558**	**12,468**	**42,027**	**107,333**	**204,386**
Governments (Norges Bank)	194	13	-	-	207
Institutions	0	730	860	18	1,608

Capitalised write-downs on loans and financial liabilities

Table 26: Capitalised write-downs on loans and financial liabilities, broken down by customer group

31/12/2018 (According to IFRS 9) **Amounts in NOK million**	Stage 1	Stage 2	Stage 3
Agriculture/forestry	2	4	5
Fisheries/fish farming	3	1	0
Energy, oil and gas	16	34	95
Industry	11	27	20
Building and construction	8	22	8
Power and water supply	1	2	0
Wholesale and retail trade, hotels and restaurants	13	32	16
Shipping and other transport	16	47	293
Real estate	74	95	38
Service sector	59	72	56
Public sector and financial services	0	0	0
Total for enterprises	**203**	**336**	**531**
Mass market	26	31	100
Total	**229**	**367**	**631**

31/12/2017 (According to IAS 39)	Total commitment amount			
Amounts in NOK million	Doubtful	In default	Individual write-downs	Value changes recognised during the period
Agriculture/forestry	10	7	4	4
Fisheries/fish farming	0	0	0	0
Mining operations and extraction	0	0	0	0
Industry	89	9	28	1
Power and water supply/building and construction	5	14	7	-3
Wholesale and retail trade, hotels and restaurants	50	24	30	15
Overseas shipping, pipeline transport and other transport	745	8	318	188
Property management	233	37	89	33
Service sector	351	201	89	251
Public sector and financial services	0	0	0	0
Total for enterprises	**1,483**	**300**	**565**	**489**
Transferred from write-downs on groups of loans	0	0	0	0
Mass market	79	255	87	54
Total	**1,562**	**555**	**652**	**543**

Table 27: Capitalised write-downs on loans and financial liabilities

Total losses	Stage 1	Stage 2	Stage 3	Total
Balance 01/01/2018	234	472	717	1.423
Changes 01/01 - 31/12/2018				
Transfered to (from) Stage 1	-149	144	5	-
Transfered to (from) Stage 2	11	-16	5	-
Transfered to (from) Stage 3	-	5	-5	-
Net new measurement of write-downs	123	-62	-25	36
New issued or purchased loans	102	53	4	159
Deducted loans	-61	-172	-22	-255
Changes without dectuction	-	-	-	-
Actual losses	-	-	460	460
Recorded losses already written down	-	-	-397	-397
Changes in model/risk-parameters	-	-	-	-
Other changes	-	-	-92	-92
Balance 31/12/2018	260	424	650	1.334

Table 28: Capitalised write-downs on loans and financial liabilities, broken down by geographical area

According to IFRS 9

2018	Stage 1	Stage 2	Stage 3
Rogaland	155	273	500
Agder	19	32	85
Hordaland	33	42	47
Other	53	77	18
Total	**260**	**424**	**650**

According to IAS39

	Total commitment amount		Individual write-downs
2017	**Doubtful**	**In default**	
Rogaland	818	398	264
Agder	121	44	48
Hordaland	501	69	214
Other	122	44	113
Total	**1,562**	**555**	**639**

Write-downs on loans

Table 29: Reconciliation of changes in changes in value and write-downs

2018 (IFRS 9)

Write-downs on loans and financial commitments	01/01/2018	Change in write-downs on loans	Change in write-downs on financial commitments	Total 31/12/2018
Write-downs by amortized cost - Corporates	1,236	-48	-20	1,168
Write-downs by amortized cost - Retail	187	-21	-	166
Fair value loans	-	-	-	-
Total write-downs on loans and financial commitments	1,423	-69	-20	**1,334**
Of which				
Write-downs on loans	1,296	-69	-	1,227
Financial commitments - write-downs on guarantees, unused credit and commited loans	127	-	-20	107
Total write-downs on loans and financial commitments	1,423	-69	-20	**1,334**

2017	Opening balance	Write-down amount recognised	Amount set aside for or reversed from estimated losses	Closing balance
Individual write-downs	590	152	201	639
Write-downs on groups of loans	676		2	678
Specified provisions for losses, guarantees	5		8	13
Total	**1.271**	**152**	**211**	**1.330**

Exposure of portfolios in which the IRB approach is used

The reporting has changed somewhat compared with previous years, and as of 2018, it has been more adapted to new reporting in accordance with EBA / GL / 2016/11 (Template 21 - EU CR6).

Table 30: Distribution by risk classes in which the IRB approach is used

2018

Commitment category	Risk grade	EAD	Weighted average PD	Weighted average LGD	RWA	Average riskweight	Expected loss
SME	A	0	-		0	0	0
SME	B	350.536	0,22	15,30	57.227	16,3 %	119
SME	C	3.594.060	0,34	27,94	1.188.380	33,1 %	3.336
SME	D	2.514.023	0,63	29,30	1.123.313	44,7 %	4.628
SME	E	3.550.015	0,97	30,14	1.919.830	54,1 %	10.520
SME	F	4.777.921	1,83	35,02	3.508.766	73,4 %	30.959
SME	G	8.764.316	3,60	41,50	9.627.385	109,8 %	131.595
SME	H	1.790.799	7,01	39,21	2.148.299	120,0 %	50.342
SME	I	752.057	15,00	47,90	1.511.540	201,0 %	53.562
SME	J	5.494	100,00	88,65	1.367	24,9 %	4.871
SME	K	1.374.933	100,00	0,03	2.612.140	190,0 %	280.425
SME	**Subtotal**	**27.474.153**	**7,59**	**33,64**	**23.698.245**	**86,3 %**	**570.356**
Specialised enterprises	A	0	-	-	0		0
Specialised enterprises	B	1.129.107	0,17	22,19	232.474	20,6 %	443
Specialised enterprises	C	7.596.885	0,39	27,12	2.763.358	36,4 %	8.195
Specialised enterprises	D	5.018.348	0,62	27,39	2.279.109	45,4 %	8.507
Specialised enterprises	E	6.526.573	0,99	25,67	3.055.564	46,8 %	16.593
Specialised enterprises	F	11.118.504	1,79	29,28	7.068.047	63,6 %	58.594
Specialised enterprises	G	6.311.200	3,80	30,75	4.898.315	77,6 %	73.069
Specialised enterprises	H	2.425.754	6,59	39,71	2.991.779	123,3 %	62.476
Specialised enterprises	I	638.323	16,09	36,63	939.378	147,2 %	38.704
Specialised enterprises	J	41.141	100,00	19,35	1	0,0 %	7.961
Specialised enterprises	K	142.026	100,00	14,29	249.261	175,5 %	43.704
Specialised enterprises	**Subtotal**	**40.947.858**	**2,47**	**28,78**	**24.477.285**	59,8 %	**318.244**
Other corporates	A	0			0		0
Other corporates	B	267.290	0,23	20,41	62.776	23,5 %	124
Other corporates	C	546.426	0,32	27,97	188.354	34,5 %	499
Other corporates	D	123.888	0,60	33,97	61.415	49,6 %	268
Other corporates	E	2.782.694	0,92	35,42	2.091.313	75,2 %	8.485
Other corporates	F	1.898.236	1,78	32,49	1.566.985	82,5 %	11.188
Other corporates	G	2.041.234	3,57	37,94	2.404.644	117,8 %	27.833
Other corporates	H	3.303	6,07	21,16	1.872	56,7 %	42
Other corporates	I	36.809	10,23	13,86	25.220	68,5 %	522
Other corporates	J	0	0	0	0	0	0
Other corporates	K	1.058.594	100,00	0,00	1.620.159	153,0 %	200.000

Other corporates	**Subtotal**	**8.758.473**	**13,68**	**30,05**	**8.022.738**	**91,6 %**	**248.962**
Retail SME	A	0			0		0
Retail SME	B	1.893.363	0,21	16,77	138.271	7,3 %	656
Retail SME	C	1.479.001	0,36	21,03	201.489	13,6 %	1.113
Retail SME	D	906.552	0,61	21,94	187.724	20,7 %	1.206
Retail SME	E	767.226	0,97	22,74	228.321	29,8 %	1.714
Retail SME	F	482.311	1,68	21,86	195.536	40,5 %	1.780
Retail SME	G	107.274	3,46	18,84	57.522	53,6 %	701
Retail SME	H	110.322	6,70	18,49	81.653	74,0 %	1.363
Retail SME	I	181.973	23,32	21,66	225.133	123,7 %	9.128
Retail SME	J	5.386	100,00	24,33	324	6,0 %	1.310
Retail SME	K	13.136	100,00	24,38	18.008	137,1 %	3.203
Retail SME	**Subtotal**	**5.946.545**	**1,72**	**20,04**	**1.333.980**	**22,4 %**	**22.174**
Retail pledged real estate	A	0	-	0	0	0	0
Retail pledged real estate	B	42.146.556	0,21	17,38	3.196.267	7,6 %	15.173
Retail pledged real estate	C	36.253.191	0,37	21,69	5.206.580	14,4 %	28.993
Retail pledged real estate	D	24.538.038	0,61	24,02	5.622.292	22,9 %	36.292
Retail pledged real estate	E	20.490.475	0,94	25,18	6.571.074	32,1 %	48.658
Retail pledged real estate	F	6.967.360	1,62	24,74	3.109.452	44,6 %	27.877
Retail pledged real estate	G	1.585.008	3,50	23,08	1.047.288	66,1 %	12.863
Retail pledged real estate	H	1.262.250	7,17	22,80	1.193.096	94,5 %	20.819
Retail pledged real estate	I	1.632.978	23,43	24,31	2.285.925	140,0 %	93.692
Retail pledged real estate	J	175.813	100,00	23,95	32.661	18,6 %	42.110
Retail pledged real estate	K	169.945	100,00	22,70	327.540	192,7 %	38.584
Retail pledged real estate	**Subtotal**	**135.221.613**	**1,15**	**21,51**	**28.592.175**	**21,1 %**	**365.061**
Other retail	A	0			0		0
Other retail	B	1.042.491	0,21	49,98	229.621	22,0 %	1.084
Other retail	C	1.403.250	0,37	50,35	450.754	32,1 %	2.642
Other retail	D	1.000.362	0,61	50,40	428.411	42,8 %	3.091
Other retail	E	970.053	0,94	50,74	515.002	53,1 %	4.645
Other retail	F	394.663	1,68	49,94	254.331	64,4 %	3.308
Other retail	G	153.626	3,51	50,11	115.573	75,2 %	2.699
Other retail	H	66.740	7,13	49,54	54.320	81,4 %	2.361
Other retail	I	79.270	23,13	49,51	93.191	117,6 %	9.096
Other retail	J	10.616	100,00	51,30	36	0,3 %	5.447
Other retail	K	37.280	100,00	87,18	12.003	32,2 %	32.496
Other retail	**Subtotal**	**5.158.350**	**2,05**	**50,56**	**2.153.241**	**41,7 %**	**66.868**
Total (all portfolios)		**223.506.992**	**2,71**	**25,30**	**88.277.665**	**39,5 %**	**1.591.666**

2017	Default class	Total EAD	Total unutilised facility	Average risk weight	Average loss given default	Average conversion factor
SME enterprises						
	A	0	0	0.0 %	0.0 %	0.0 %
	B	355	38	33.4 %	31.6 %	96.0 %
	C	3,944	545	38.7 %	29.3 %	90.5 %
	D	2,770	707	48.8 %	31.7 %	88.4 %
	E	3,548	844	60.4 %	31.3 %	92.4 %
	F	4,757	932	73.9 %	34.7 %	93.2 %
	G	5,324	868	107.7 %	40.7 %	87.2 %
	H	1,610	455	129.6 %	42.5 %	84.3 %
	I	969	118	188.5 %	43.3 %	96.6 %
	J	17	3	15.2 %	73.7 %	85.3 %
	K	1,055	150	86.5 %	0.0 %	99.6 %
Total SME enterprises		**24,348**	**4,662**	**78.9 %**		**90.5 %**
Specialised enterprises						
	A	105	9	10.8 %	18.5 %	93.8 %
	B	1,144	259	25.4 %	28.7 %	87.0 %
	C	3,722	188	37.2 %	28.7 %	98.5 %
	D	5,355	274	46.4 %	28.4 %	97.0 %
	E	9,119	1,015	50.3 %	26.9 %	90.4 %
	F	5,941	567	64.1 %	30.3 %	97.7 %
	G	6,844	835	88.8 %	33.5 %	97.8 %
	H	1,495	148	103.5 %	34.6 %	98.5 %
	I	887	22	153.9 %	37.6 %	98.2 %
	J	81	0	10.7 %	48.6 %	99.9 %
	K	329	5	106.5 %	7.3 %	99.3 %
Total specialised enterprises		**35,022**	**3,321**	**62.6 %**		**95.3 %**
Other enterprises						
	A	0	0	0.0 %	0.0 %	0.0 %
	B	34	0	29.9 %	0.0 %	100.0 %
	C	252	14	24.8 %	1.1 %	99.4 %
	D	204	106	63.4 %	23.1 %	73.8 %
	E	2,460	453	70.7 %	6.0 %	88.2 %
	F	2,703	980	79.7 %	11.1 %	74.5 %
	G	1,784	244	112.2 %	5.0 %	88.2 %
	H	285	195	205.4 %	41.8 %	60.1 %
	I	130	100	142.9 %	22.9 %	48.8 %
	J	0	0	0.0 %	0.0 %	0.0 %
	K	143	0	0.0 %	0.0 %	0.0 %
Total other enterprises		**7,996**	**2,092**	**85.9 %**		**80.9 %**
SME mass market with mortgage on real estate						
	A	0	0	0.0 %	0.0 %	0.0 %
	B	1,917	603	7.4 %	17.1 %	99.9 %
	C	1,574	121	12.9 %	19.7 %	100.0 %
	D	794	15	21.3 %	22.3 %	100.0 %
	E	703	7	28.4 %	21.9 %	99.9 %
	F	498	5	39.6 %	21.6 %	100.0 %
	G	146	1	60.2 %	21.9 %	99.9 %
	H	111	1	89.4 %	21.8 %	99.8 %
	I	150	0	120.6 %	21.0 %	99.9 %
	J	11	0	3.5 %	14.5 %	99.2 %
	K	18	0	123.4 %	32.4 %	100.0 %
Total SME mass market, real estate		**5,921**	**753**	**22.0 %**		**99.9 %**
Mass market with mortgage on real estate						
	A	0	0	0.0 %	0.0 %	0.0 %

	B	41,461	11,726	7.3 %	16.8 %	100.0 %
	C	35,339	1,417	14.0 %	21.2 %	100.0 %
	D	23,709	177	22.3 %	23.3 %	100.0 %
	E	19,134	62	30.9 %	24.2 %	100.0 %
	F	7,228	19	43.4 %	24.0 %	100.0 %
	G	1,613	7	69.5 %	24.4 %	100.0 %
	H	1,132	8	96.1 %	23.5 %	100.0 %
	I	1,589	1	132.9 %	23.3 %	100.0 %
	J	182	0	40.6 %	23.2 %	100.0 %
	K	173	1	168.5 %	22.1 %	100.0 %
Total mass market, real estate		**131,561**	**13,419**	**20.5 %**		**100.0 %**
Other mass market	A	0	0	0.0 %	0.0 %	0.0 %
	B	879	448	21.6 %	48.9 %	99.7 %
	C	1,231	291	31.6 %	49.5 %	99.8 %
	D	926	84	42.7 %	50.2 %	99.8 %
	E	765	34	52.7 %	50.1 %	99.7 %
	F	453	49	64.0 %	49.9 %	99.9 %
	G	139	4	76.1 %	50.8 %	99.8 %
	H	56	2	80.4 %	49.2 %	99.7 %
	I	104	2	115.4 %	49.7 %	99.7 %
	J	9	0	0.1 %	49.9 %	100.0 %
	K	30	0	11.8 %	84.6 %	99.9 %
Total other mass market		**4,593**	**913**	**42.3 %**		**99.8 %**

Comparison of the risk parameters with the actual outcomes

The tables below show the average estimated and actual default for the portfolio for the period from 2008 through 2018. Estimated default (PD) is based on the long-term outcome for the probability of default through a full loss cycle. The default percentage is defined as the total number of customers who are, or have been, in default within a twelve-month period, seen in relation with the total number of customers in the portfolio. This means that a customer in default with a small loan commitment is weighted just as much as a customer in default with a large loan commitment.

Table 31: IRB level of default – PD models (unweighted)

Mass market with mortgage on real estate

Year	Predicted	Observed
2008	0.79 %	0.41 %
2009	0.88 %	0.43 %
2010	1.07 %	0.42 %
2011	1.05 %	0.32 %
2012	0.96 %	0.26 %
2013	0.94 %	0.24 %
2014	0.93 %	0.24 %
2015	0.92 %	0.24 %
2016	0.83 %	0.18 %
2017	0.80 %	0.21 %
2018	0.81 %	0.25 %
Average	*0.91 %*	*0.29 %*

Other mass market

Year	Predicted	Observed
2008	3.64 %	2.00 %
2009	3.91 %	2.58 %
2010	4.29 %	2.66 %
2011	3.78 %	1.91 %
2012	3.38 %	1.43 %
2013	3.12 %	1.57 %
2014	3.01 %	1.53 %
2015	2.76 %	1.32 %
2016	2.39 %	0.84 %
2017	2.18 %	1.01 %
2018	2.23 %	1.22 %
Average	*3.15 %*	*1.64 %*

Enterprises

Year	Predicted	Observed
2008	2.92 %	1.78 %
2009	2.99 %	2.82 %
2010	3.38 %	2.71 %
2011	3.65 %	2.40 %
2012	3.44 %	1.90 %
2013	3.32 %	2.09 %
2014	3.22 %	2.12 %
2015	3.10 %	1.98 %
2016	3.00 %	1.73 %
2017	2.90 %	1.80 %
2018	2.93 %	1.53 %
Average	*3.17 %*	*2.08 %*

Table 32: IRB default level - PD by default class (unweighted)

Mass market with mortgage on real estate	Predicted 2018	Observed 2018	Predicted 2008-2018	Observed 2008-2018
A	0.00 %	0.00 %	0.00 %	0.00 %
B	0.20 %	0.00 %	0.21 %	0.02 %
C	0.36 %	0.03 %	0.36 %	0.06 %
D	0.61 %	0.07 %	0.61 %	0.09 %
E	0.94 %	0.16 %	0.95 %	0.22 %
F	1.64 %	0.48 %	1.67 %	0.51 %
G	3.51 %	1.36 %	3.49 %	1.29 %
H	7.11 %	3.10 %	7.02 %	2.93 %
I	22.84 %	12.44 %	22.28 %	10.69 %
Total mass market with mortgage on real estate	**0.81 %**	**0.25 %**	**0.91 %**	**0.29 %**

Other mass market	Predicted 2018	Observed 2018	Predicted 2008-2018	Observed 2008-2018
A	0.00 %	0.00 %	0.00 %	0.00 %
B	0.00 %	0.00 %	0.25 %	0.00 %
C	0.41 %	0.00 %	0.41 %	0.01 %
D	0.61 %	0.16 %	0.61 %	0.08 %
E	0.96 %	0.17 %	0.97 %	0.22 %
F	1.75 %	1.17 %	1.76 %	0.79 %
G	3.50 %	2.34 %	3.49 %	1.86 %
H	7.07 %	5.31 %	6.96 %	3.88 %
I	23.96 %	14.76 %	22.53 %	13.42 %
Total other mass market	**2.23 %**	**1.22 %**	**3.15 %**	**1.64 %**

	Predicted	Observed	Predicted	Observed

Enterprises	2018	2018	2008-2018	2008-2018
A	0.09 %	0.00 %	0.08 %	0.00 %
B	0.22 %	0.00 %	0.22 %	0.02 %
C	0.37 %	0.13 %	0.37 %	0.10 %
D	0.62 %	0.21 %	0.62 %	0.25 %
E	0.98 %	0.35 %	0.98 %	0.58 %
F	1.77 %	1.00 %	1.78 %	1.11 %
G	3.55 %	1.69 %	3.55 %	2.21 %
H	7.07 %	2.66 %	7.03 %	3.80 %
I	15.50 %	10.36 %	16.04 %	12.40 %
Total enterprises	**2.93 %**	**1.53 %**	**3.17 %**	**2.08 %**

Weighted IRB default is defined as the total commitment that is or has been in default, compared to the total exposure (EAD). Thus, weighted default takes the size of the loan commitment into account. The table below shows the average estimated and actual weighted default for the portfolio for the period from 2008 through 2018.

Table 33: IRB default level – PD model (EAD-weighted)

Mass market with mortgage on real estate

Year	Predicted	Observed
2008	0.94 %	0.54 %
2009	1.08 %	0.61 %
2010	1.31 %	0.61 %
2011	1.27 %	0.48 %
2012	1.13 %	0.38 %
2013	1.08 %	0.28 %
2014	1.08 %	0.38 %
2015	1.07 %	0.27 %
2016	0.94 %	0.24 %
2017	0.89 %	0.22 %
2018	0.91 %	0.26 %
Gjennomsnitt	*1.06 %*	*0.39 %*

Other mass market

Year	Predicted	Observed
2008	3.11 %	0.95 %
2009	3.58 %	3.95 %
2010	4.10 %	1.27 %
2011	4.09 %	1.11 %
2012	3.72 %	0.96 %
2013	3.41 %	0.80 %
2014	3.38 %	1.22 %
2015	2.92 %	1.01 %
2016	2.89 %	0.47 %
2017	2.66 %	1.04 %
2018	2.59 %	0.74 %
Gjennomsnitt	*3.31 %*	*1.23 %*

Enterprises

Year	Predicted	Observed
2008	2.60 %	2.73 %
2009	2.66 %	3.43 %
2010	2.91 %	1.40 %
2011	2.94 %	1.25 %
2012	2.65 %	1.71 %
2013	2.63 %	1.28 %
2014	2.38 %	1.74 %
2015	2.20 %	0.82 %
2016	2.09 %	1.64 %
2017	2.12 %	1.46 %
2017	2.12 %	1.46 %
Average	*2.50 %*	*1.75 %*

As of 2017, LGD is validated per default year, against earlier per year of realization. This means that calculated LGD deviates somewhat from previous years' reporting. Validation of LGD for 2018 was being prepared by publication of Pillar 3.

Table 34: IRB loss given default for defaulted loans – LGD (unweighted)

Portfolio	Predicted LGD 2017	Observed LGD 2017	Predicted LGD 2007-2017	Observed LGD 2007-2017
Mass market with mortgage on real estate	26.9 %	0.6 %	31.6 %	5.5 %
Other mass market	53.6 %	33.7 %	54.8 %	32.0 %
Enterprises	43.9 %	27.7 %	52.1 %	28.2 %

Internally estimated unweighted LGD for mass market with mortgage on real estate (without regulatory minimums) is 11.8 per cent in 2017 and 13.9 per cent in the years 2007-2017.

Table 35: IRB loss given default for defaulted loans – LGD (EAD-weighted)

Portfolio	Predicted LGD 2017	Observed LGD 2017	Predicted LGD 2007-2017	Observed LGD 2007-2017
Mass market with mortgage on real estate	28.6 %	0.6 %	32.6 %	3.5 %
Other mass market	40.2 %	37.5 %	53.3 %	26.4 %
Enterprises	43.8 %	26.9 %	46.3 %	21.1 %

Internally estimated EAD-weighted LGD for mass market with mortgage on real estate (without regulatory minimums) is 12.5 per cent in 2017 and 14.4 per cent in the years 2007-2017.

Expected loss describes the loss the group can statistically expect to experience on the loan portfolio during a twelve-month period, based on a long-term outcome through a full loss cycle. Expected losses are calculated based on the probability of default, exposure at default and loss given default. The table below shows the average expected loss and actual net recognised losses for total mass market and enterprises for the last three years.

Table 36: IRB expected losses (EL) compared to actual net recognised losses

Mass market in total

Year	Predicted	Observed
2016	0.28 %	0.02 %
2017	0.26 %	0.04 %
2018	0.29 %	0.01 %

Enterprises

Year	Predicted	Observed
2016	1.11 %	0.78 %
2017	1.38 %	0.68 %
2018	1.59 %	0.45 %

Total commitment amount and share secured by mortgage (IRB)

Table 37: Total commitment amount (in NOK million) and percentage secured by mortgage, broken down by commitment categories (IRB)

	2018		2017	
Commitment category	**Commitment amount**	**Of which secured by mortgage on real estate** [1]	Commitment amount	Of which secured by mortgage on real estate [1]
Enterprises				
Specialised enterprises	42,699	56 %	36,734	55 %
SME enterprises	30,241	17 %	26,904	17 %
Other enterprises	10,588	6 %	9,887	6 %
Mass market				
Mass market with mortgage on real estate	135.230	88 %	131.570	88 %
SME mass market with mortgage on real estate	5.950	85 %	5.924	85 %
Other mass market	5,168	5 % [2]	4,603	4 % [2]
Total	**229,875**		215,622	

[1] Percentage of total commitment with such security in relation to total commitment for the relevant commitment category

[2] A commitment for a mass market customer in which the realisation value of the home is deemed to be less than 30% of the customer's commitment is not classified as a commitment with real estate, but as other mass market.

SpareBank 1 SR-Bank has no pledged security that results in a reduced commitment amount.

Actual value changes

Table 38: The actual changes in value for the individual commitment category and development from previous periods (IRB)

Amounts in NOK million	**Value 31/12/2018**	**Change in value in 2018 (%)**	**Value 31/12/2017**	**Change in value in 2017 (%)**
Mass market commitments	**146.348**	**3,0 %**	**142.097**	2,8 %
– of which mass market SME	**5.950**	**0,4 %**	**5.924**	6,5 %
– of which commitments with mortgage on real estate	**135.230**	**2,8 %**	**131.570**	2,8 %
– of which other mass market commitments	**5.168**	**12,3 %**	**4.603**	-1,4 %
Specialist lending	**42.699**	**16,2 %**	**36.734**	8,9 %
SME enterprises	**30.241**	**12,4 %**	**26.904**	-1,6 %
Other enterprises	**10.588**	**7,1 %**	**9.887**	-12,6 %
Total	**229.875**	**6,6 %**	**215.622**	**2,4 %**

Amounts in NOK million	**Value 31/12/2016**	**Change in value in 2016 (%)**	**Value 31/12/2015**
Mass market commitments	138.242	1,7 %	135.879
– of which mass market SME	5.563	-3,1 %	5.739
– of which commitments with mortgage on real estate	128.013	0,0 %	128.069
– of which other mass market commitments	4.666	125,3 %	2.071
Specialist lending	33.738	-11,3 %	38.057
SME enterprises	27.353	-0,9 %	27.604
Other enterprises	11.308	-4,0 %	11.775
Total	**210.641**	**13,4 %**	**185.711**

Investments

Shares and other interests are either classified at fair value through profit and loss or as available for sale. Changes in fair value after the opening balance are recognised as income from financial investments.

Table 39: Investments (equity positions outside the trading portfolio) by purpose

	Investments	**31/12/2018**	31/12/2017
Financial investments at fair value through profit and loss	HitecVision Asset Solutions LP	39	37
	HitecVision Private Equity IV LP	21	15
	SR-PE-Feeder III KS	33	24
	SR PE Feeder IV AS	19	13
	Optimarin AS	24	24
	Monner AS	38	23
	Offshore Merchant Partners Asset Yield Fund LP	28	14
	Boost AI AS	47	0
	Other financial investments	102	59
Total financial investments at fair value through profit and loss		**351**	209
Strategic investments at fair value through profit and loss	SpareBank 1 Markets	20	20
	Visa Norge IFS	77	
	Other strategic investments	8	
Total strategic investments at fair value through profit and loss		**105**	20
Strategic investments available for sale	Visa Norge IFS		60
	Other strategic investments		2
Total strategic investments available for sale		**0**	62
Total		**456**	291

Shares and other interests are either classified at fair value through profit and loss or as available for sale. Changes in fair value after the opening balance are recognised as income from financial investments.

Table 40: Overview of book value and fair value, gains and losses

2018	Book value	Fair value	Total realised gains or losses	Unrealised gains or losses	Amount included in core capital or supplementary capital
Financial investments at fair value through profit and loss	351	351	0	53	0
Strategic investments at fair value through profit and loss	105	105	4	60	0
Strategic investments available for sale					
Total	**456**	**456**	**4**	**113**	**0**

2017	Book value	Fair value	Total realised gains or losses	Unrealised gains or losses	Amount included in core capital or supplementary capital
Financial investments at fair value through profit and loss	209	209	-15	-18	0
Strategic investments at fair value through profit and loss*	20	20	19	-17	-17
Strategic investments available for sale	62	62	0	60	60
Total	**291**	**291**	**4**	**25**	**43**

Table 41: Summary of type and value of listed shares, unlisted shares in diversified portfolios and other commitments

Amounts in NOK million	**Value 2018**	Value 2017
Unlisted	**456**	229
Traded on an exchange	**0**	0
Other	**0**	62
Total	**456**	291

Table 42: Summary of counterparty risk for derivatives etc. outside the trading portfolio

Amounts in NOK million	**Nominal value**	**Risk weighted assets 2018 1)**	Risk weighted assets 2017 1)
Interest rate and currency instruments	222,246	1,427	1,655
Credit value adjustment risk (CVA)		892	933
Total financial derivatives	**222,246**	**2,319**	2,588

1) The risk-weighted balance sheet is calculated using the standard method.

Interest rate risk

The group's general limits for interest rate risk define the maximum loss from a one percentage point change in interest rates. The maximum loss following a one percentage point change in interest rates totals NOK 85 million with NOK 35 million of the total balance in Trading and NOK 50 million of the total balance in Treasury.

Table 43: The effect on earnings of a positive parallel shift in the yield curve of one percentage point at the end of the last two years if all financial instruments were measured at fair value

Amounts in NOK million	**31/12/2018**	31/12/2017
Certificates and bonds	**-42**	-45
Fixed-rate loans to customers	**-24**	-16
Other loans and deposits	**-90**	-83
Debt due to issue of securities	**129**	121
Other	**9**	1
Total interest-rate risk	**-18**	-22
Maturity		
0 - 3 months	**-21**	-11
3 - 6 months	**3**	0
6 - 9 months	**1**	-3
9 - 12 months	**-1**	2
12 - 18 months	**1**	-1
18 - 24 months	**4**	-2
2 - 10 yr	**-6**	-7
10 yr +	**1**	0
Total interest-rate risk	**-18**	-22
Currency		
NOK	**0**	17
EUR	**-13**	-27
USD	**0**	-11
CHF	**-1**	-1
Øvrige	**-4**	0
Total interest-rate risk	**-18**	-22

Other appendices

The tables presented in this chapter are also available in a separate appendix (excel), which is updated quarterly. In addition, the appendix contains the following tables:

- The most important agreement terms and conditions for capital instruments (sheet 28)
- Composition of primary capital (sheet 29)
- Relationship between primary capital in the financial statements and the primary capital that is calculated for capital adequacy purposes (sheet 30)
- Calculation of unweighted tier 1 capital ratio (leverage ratio) (sheet 31)
- Public disclosure of information about SpareBank 1 SR-Banks compliance with the requirements for countercyclical capital buffer (sheet 32)