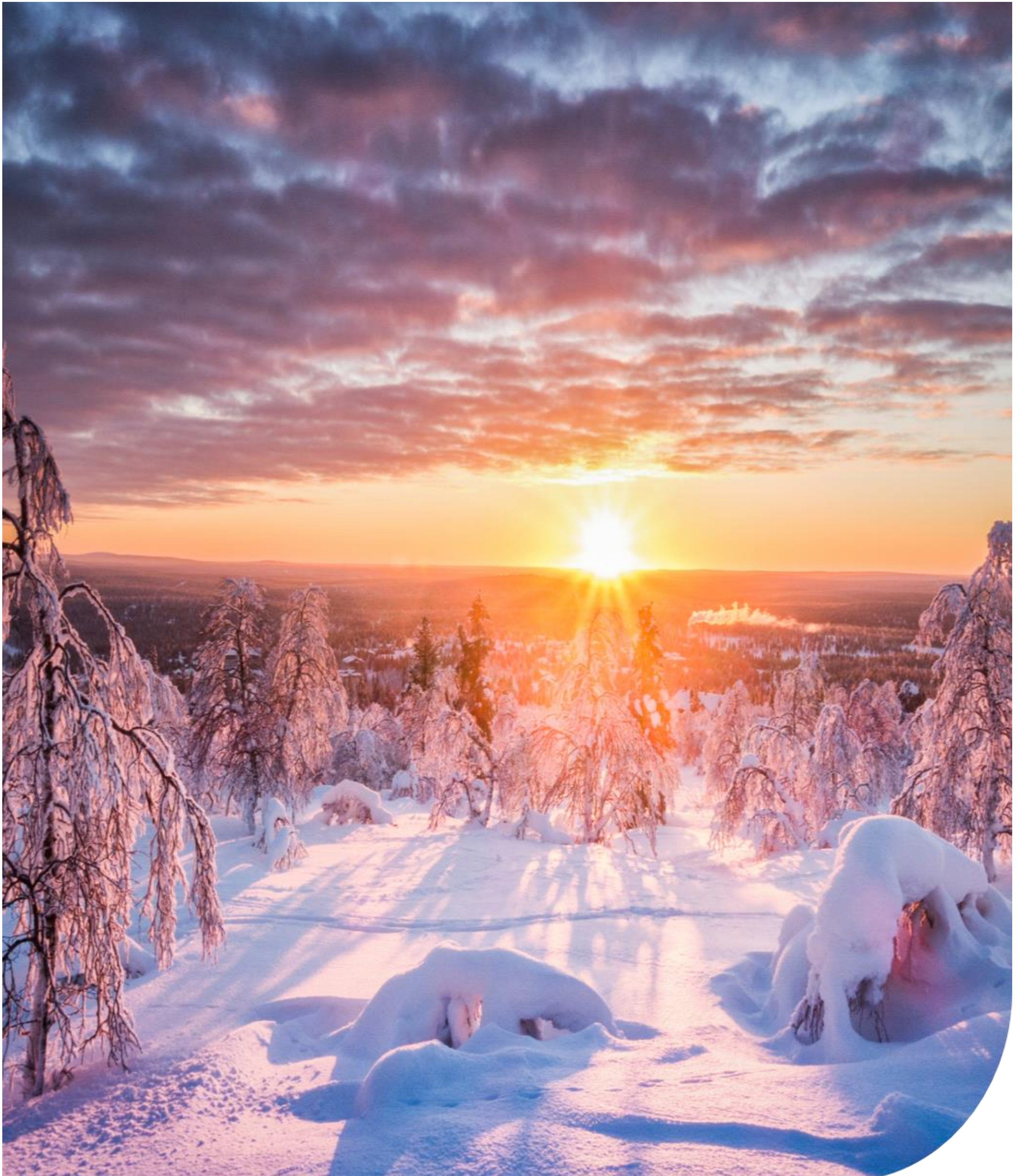
eika.

Pillar 3 - risk and capital 2018

Eika Boligkreditt AS



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1 INTRODUCTION

The main purpose of Eika Boligkreditt (**EBK**) is to ensure access for the local banks in the Eika Alliance (the owner banks) to long-term and competitive funding by issuing covered bonds. An important part of the company's business concept is to increase the competitiveness of the owner banks by improving their access to external funding in the Norwegian and international financial markets with regard to the length of loans, their terms and the depth of access. The object of the company's business is to reduce risk for the owner banks. At 31 December 2018, the owner banks had secured a total of NOK 82 billion in financing through EBK and had thereby reduced their need to obtain market financing on their own account by a corresponding amount.

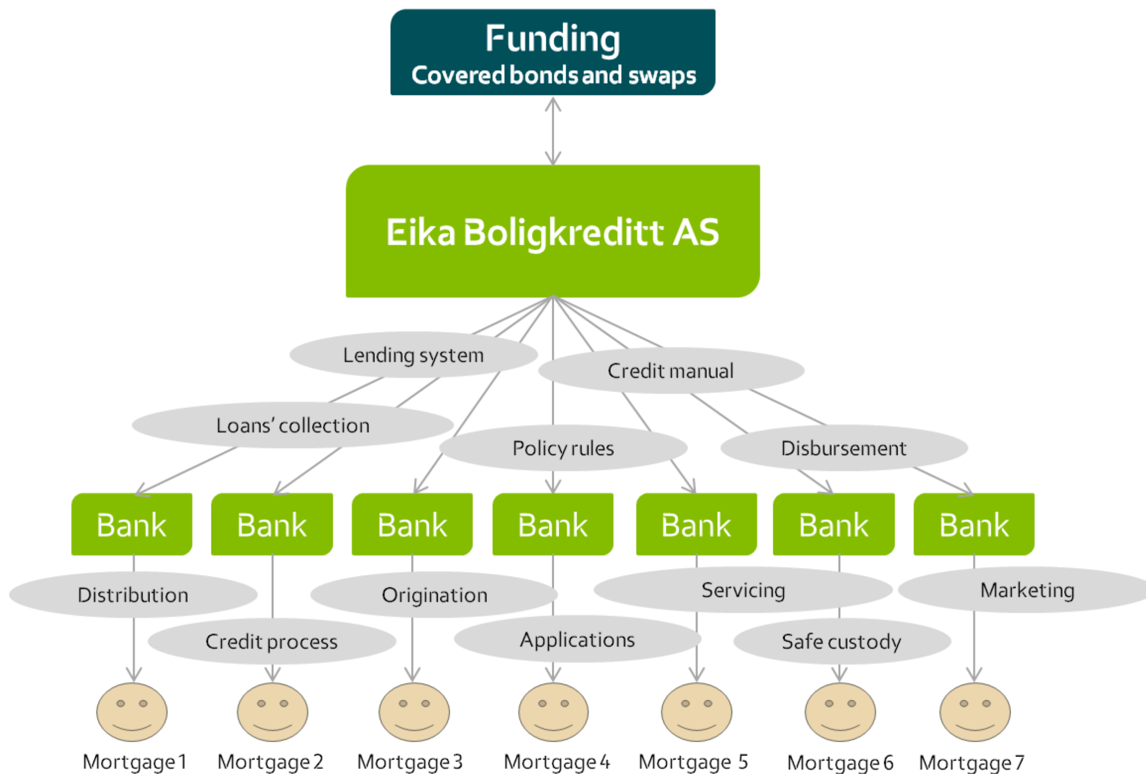
EBK is licensed as a credit institution and entitled to raise loans in the market through the issuance of covered bonds. Norwegian regulations for covered bonds were adopted in 2007, and this type of bond has become an important source of financing for the lending activities of banks and credit institutions. Concentrating funding activities relating to covered bonds in EBK has secured the owner banks a player in the bond market which possess the necessary qualifications to achieve competitive terms for borrowing both in Norway and internationally.

2 COMPANY STRUCTURE AND OPERATIONS

A mechanism for providing the company with support from the owner banks has been established, which comprises the obligations resting on the owner banks to provide the company with liquidity and capital as and when required. The owner banks exercise a dynamic ownership of EBK. This will ensure an annual adjustment of the shareholding of the individual bank and OBOS so that it corresponds to the owner bank's share of the residential mortgage portfolio in EBK.

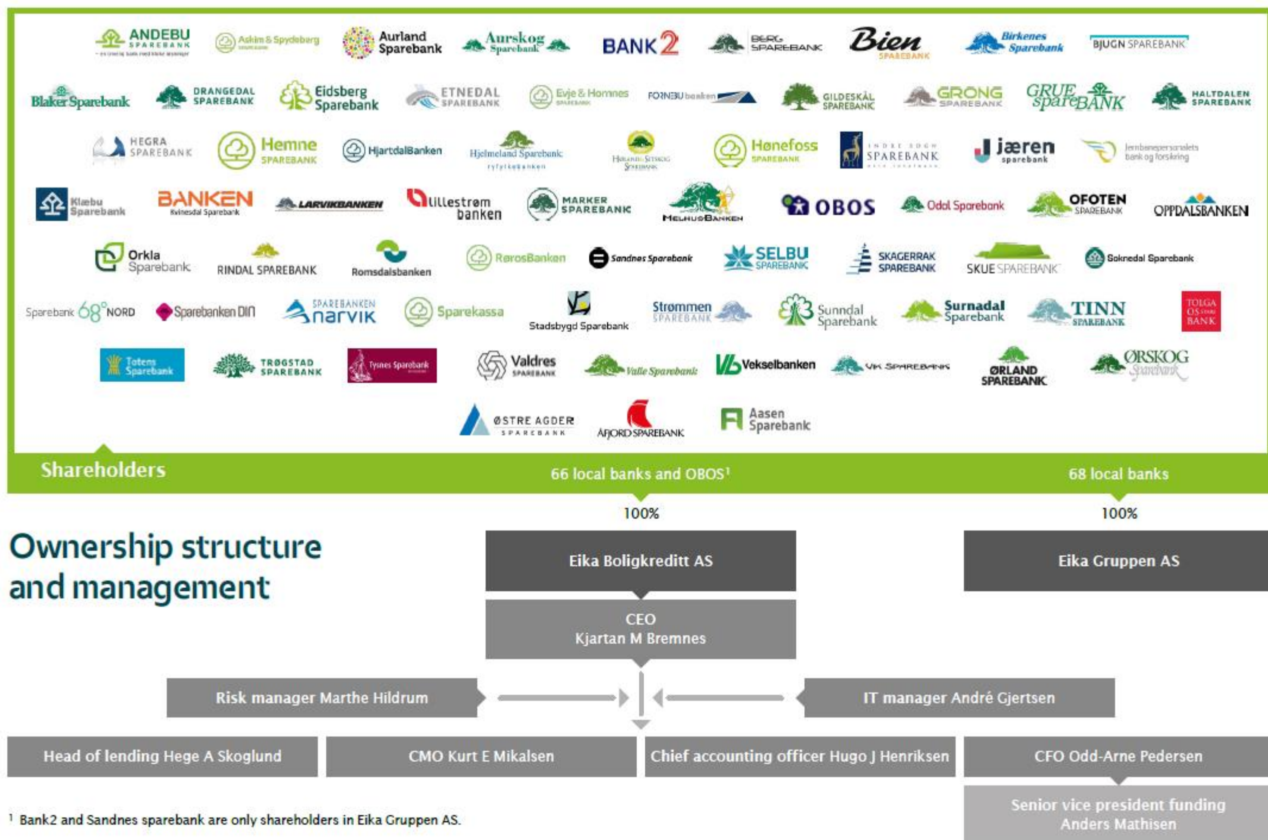
For EBK to be active as an issuer in both Norwegian and international financial markets, its covered bonds must have an international rating. An international rating from Moody's Investors Service (**Moody's**) gives EBK the opportunity to diversify its financing and to obtain funding at the best terms available in the market. The owner banks are prevented from issuing covered bonds directly but, through EBK, they can nevertheless access very favourable financing and maintain their competitiveness in relation to large Norwegian and international banks.

Figure 1 The company's area of operation



The owner banks are EBK's local representatives as distributors. They make all the arrangements related to providing residential mortgages. That includes processing mortgage applications, establishing the loan, amending existing mortgages and borrowing, and so forth. As a result, a residential mortgage transferred to EBK will be wholly perceived by the mortgagee as one taken out with the owner bank, because it will always be the mortgagee's point of contact for the mortgage. EBK is responsible in the mortgage process for operating the IT system, credit policy and disbursals.

Figure 2 Ownership structure in the Eika Alliance



EBK is organised in five departments:

- lending
- funding and investment
- marketing
- accounting and back office
- risk management and compliance.

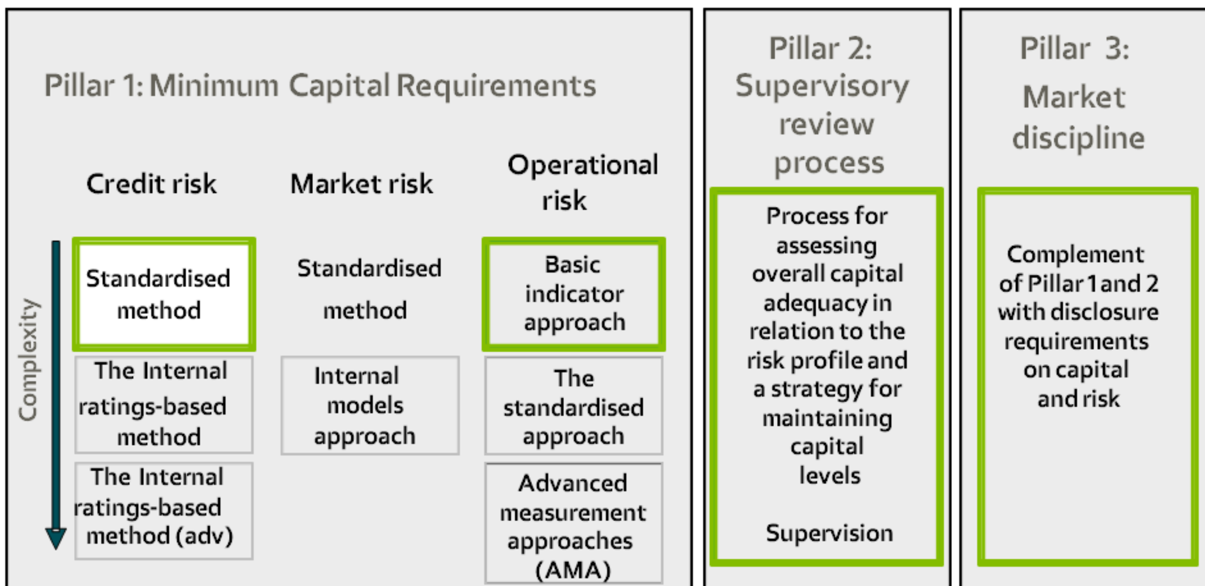
Company staffing at 31 December 2018 was the equivalent of 19.8 work-years. In addition, services are provided by Eika Gruppen in such areas as human resources, payroll, legal affairs, accounting and marketing. EBK's IT platform is also supplied by Eika Gruppen.

3 CAPITAL ADEQUACY STANDARDS

The Norwegian regulations for capital adequacy build on standards for calculating capital adequacy established by the Bank for International Settlements (BIS). The purpose of the capital requirement regulations is to strengthen the stability of the financial system through

- more risk-sensitive capital requirements
- better risk management and control
- closer supervision
- more information to the market.

Figure 3 Basel II pillars



When calculating capital requirements, the company utilises the standardised method for credit risk and the basic indicator method with regard to operational risk. This means that the calculation of capital requirements for these risks accords with the categories and risk weighting rules in the capital requirement regulations.

PILLAR 1

Pillar 1 addresses minimum capital adequacy requirements related to credit, market and operational risk. It also covers capital adequacy related to the creditworthiness of counterparties to derivatives – ie, the risk of credit valuation adjustment (CVA risk).

PILLAR 2

Pillar 2 addresses a process for assessing EBK's total assets in relation to its risk profile, including the capital requirement for risks not covered by Pillar 1. This capital requirement is assessed on the basis of two main elements – intrinsic risks based on the risk level viewed in a 12-month perspective, and the capital requirement viewed in a forward-looking perspective as the basis for the company's capital targets. The Financial Supervisory Authority of Norway (FSA) issued a decision on EBK's Pillar 2 requirement on 4 September 2018.[1] An extract from and summary of the content in this decision is presented below.

> *Eika Boligkreditt must have assets over and above the minimum and buffer requirements corresponding to at least 0.5 per cent of the calculation basis (Pillar 2 requirement) for risks which the enterprise is exposed to and which are not, or only partly, covered by Pillar 1. The Pillar 2 requirement must be covered by core tier 1 capital.*

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[1] The FCA's decision can be found here (in Norwegian only): https://www.finanstilsynet.no/offentliggjoring-av-finanstilsynets-vedtak-om-pilar-2-krav-for-enkeltbanker/vedtak-om-kapitalbehov-i-eika-boligkreditt-as/

The Pillar 2 requirement is enterprise-specific and will vary between banks and credit institutions in accordance with the risk in each enterprise.

PILLAR 3

Pillar 3 is intended to supplement the minimum requirements in Pillar 1 and the regulatory follow-up specified in Pillar 2. It will help to enhance market discipline through requirements for the publication of information which make it possible for the market, including analysts and investors, to assess the institution's risk profile and capitalisation as well as its management and control. The publication requirements are particularly important when players can make greater use of their own systems and methods for calculating their capital requirement.

The capital requirement and targets are assessed on the basis of the international Basel II and Basel III regulations on capital adequacy as specified in the Act on Financial Institutions and the capital requirement regulations. Pursuant to section 13, sub-section 6 of the Act on Financial Institutions, a financial institution must at all times have a primary capital (tier 2 capital) which is acceptable in relation to the risk and scope of the institution's business. This must be assessed for both the immediate future and the long term. Capital adequacy must accordingly be higher than the minimum requirement of eight per cent and applicable buffer requirements, as specified in detail in chapter 14 of the Act on Financial Institutions. The FSA will evaluate both EBK's capital target and the documentation of the assessments on which the board's conclusions are based.

RECOVERY PLAN WITH CAPITAL MEASURES

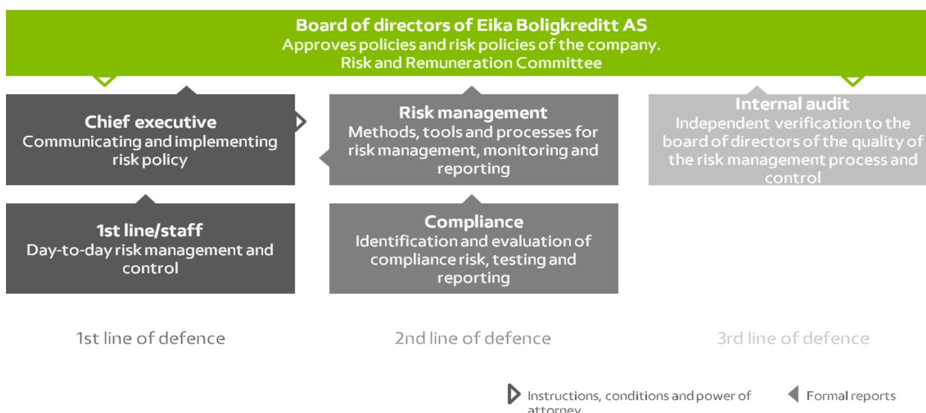
The company has established contingency and recovery measures for capital adequacy in its recovery plan, which is intended to help ensure that good processes are in place for capital management. EBK's owner banks are all subject to capital requirements and all have good solvency. The owner banks are committed by agreements to participate in issues to strengthen the company's capital. Each owner bank's capitalisation commitment is restricted primarily to its pro rata share of capital issues, which is calculated on the basis of each owner bank's share of the company's bank financing.

4 OVERALL RISK AND CAPITAL MANAGEMENT

RISK MANAGEMENT IN EBK

Responsibility for conducting the company's overall management and control is organised as follows.

Figure 4 Governance and control



EBK has established a framework for management and control through risk policies determined by the board of directors, with quarterly reporting of status and developments. Overall professional responsibility for risk management in the company lies with the chief executive. The company's attention will be focused on maintaining sufficient resources to pursue risk management and compliance, and will assess available expertise and capacity on a continuous basis.

Quarterly risk and compliance reporting is conducted to provide an overview of exposure in relation to established parameters in the company, allowing the executive management and the board to verify that risk exposure falls within the defined willingness to accept risk. This reporting quantifies and assesses all main risks relevant to the company, including strategic, credit, counterparty, market, liquidity and refinancing, and operational risk.

A good internal control regime depends on entrenchment in the whole organisation, from the individual employees to the executive management and the board. PricewaterhouseCoopers is the company's internal auditor.

ICAAP

The business is required pursuant to section 13, sub-section 6 of the Act on Financial Institutions to conduct an internal capital adequacy assessment process (ICAAP). This process involves assessing capital requirements in relation to the company's goals, policies, current and anticipated risk exposures, and applicable risk parameters and regulatory provisions. The FSA's modules for risk-based supervision, together with methods and stress tests which follow from the FSA's circular 12/2016 with appendices, provide the assumptions to the extent that they are suitable. Furthermore, the ICAAP is intended to help provide a shared understanding of the risk picture in the company and provide opportunities for evaluating risk in relation to the quality of management and control. That provides a basis for determining the capital targets. The company's internal liquidity adequacy assessment process (ILAAP), which covers liquidity and financing risk, is conducted as part of ICAAP and reported on in the same document.

Estimated budgets and forecasts for three years ahead are prepared by the management. On the basis of budgets and forecasts of anticipated developments in the company, the risk management and compliance department calculates capital needs for the coming three years.

The department analyses capital requirements in a forward-looking perspective by conducting stress tests with what would be a reasonable but stringent downturn scenario and with a scenario where bank liquidity dries up. These scenarios are intended to reflect a worst-case condition for EBK.

The preliminary ICAAP report is important for the board's assessment that the Company has adequate level of capital and liquidity, pursuant to section 3, sub-section 4 of the Act on Private Limited Liability Companies and possible opportunities to pay dividend, requirements for additional capital and so forth. The board process involves reviewing and discussing important assumptions in the ICAAP analysis, including

- significant assumptions in the budget and the three-year forecast
- an assessment of whether the stress tests are sufficiently conservative to cover a worst-case scenario
- an assessment of the capital adequacy – in other words, how much capital the company ought to have, including how large a buffer the board finds prudent/desirable.

Contributions from the initial ICAAP process, with assessments from the final board meeting for the year, and the final annual financial statements, form the basis for updating the ICAAP calculations. A report is prepared to summarise the company's ICAAP work. The final ICAAP is approved by the board and submitted to the FSA on request and every third year at a minimum.

5 RISK APPETITE AND CAPITAL POLICY

Risk appetite determines the level of risk the board is willing to accept, and represents an acceptable balance for the board between growth, risk and return.

The board assesses the business and sees to it that the company has a primary capital which is proportionate to the risk in the business being conducted. The level of the board's risk appetite is determined in relation to the size of the possible loss of primary capital for the company in the stress scenario. The company operates with low, moderate and high levels of risk. Its clear starting point is to be a low-risk company.

Table 1 The company's risk appetite

Risk type	Risk appetite
Strategic risk	Low
Credit risk on lending	Low
Couterparty risk	Low
Market risk	Moderate
Financing and liquidity risk	Moderate
Operational risk	Low

Requirements for good management and control are set in all risk areas, and management is required to see to it that risk management helps to keep overall risk in line with the company's risk appetite. Given the company's overall risk profile, it expects capital requirements to be low over and above the minimum level required.

CAPITAL AND BUFFER REQUIREMENTS

The company has updated its capital targets to ensure that they are adequate to meet the regulatory minimum requirements, the enterprise-specific Pillar 2 requirement and applicable buffer requirements for capital. An assessment conducted on the basis of the company's ICAAP result has found that the company's Pillar 2 requirement is adequate to meet the capital requirement for risks not covered by Pillar 1. The company has resolved to meet capital targets in line with the table below.

Table 2 Capital targets* for Eika Boligkreditt in the ICAAP period

Capital targets	31 Dec. 2018	32 Dec. 2019	31 Dec. 2020	31 Dec. 2021
Core tier 1 capital ratio	13.0%	13.5%	13.5%	13.5%
Tier 1 capital ratio	14.5%	15.0%	15.0%	15.0%
Tier 2 capital ratio	16.5%	17.0%	17.0%	17.0%

* including pillar 2 capital requirement and management buffer

Should the need for capital change, the shareholder agreement with the owner banks provides considerable predictability over the provision of capital from the owner banks. The company's capital targets are to be adjusted from 31 December 2019, since an increase in the countercyclical buffer from two to 2.5 per cent has been announced.

Combined buffer requirements which exceed the company's minimum requirements must be met with core tier 1 capital, and comprise system-risk, capital-conservation and countercyclical buffers. A common denominator for the buffer requirements is the restrictions imposed on opportunities to make dividend and bonus payments in circumstances where the company fails to satisfy the requirements.

Table 3 Capital buffer requirements at 31 December 2018 (amounts in NOK thousand)

Buffertypes		Core tier 1 requirements
Capital conservation buffer	2.5%	843 284
Systemical risk buffer	3.0%	1 011 941
Countercyclical buffer	2.0%	674 627
Combined buffer requriements		**2 529 853**

The company had a combined buffer requirement of about NOK 2.5 billion at 31 December 2018, which is covered by core tier 1 capital.

6 CAPITAL

The company applies the standardised method for calculating capital requirements for credit and market risk, and the basic indicator method for calculating operational risk. The standardised method for credit risk is used in calculating capital requirements for investments in liquid securities (hereafter termed market risk).

Pursuant to the capital requirement regulations, the following weighting rules are significant for credit risk in the company:

Credit risk: commitments	Risk weighting	Assessment of capital in relation to risk
Residential mortgages secured on the property with an LTV of at least 80 per cent, including mortgages held by residential cooperatives	35%	Credit risk
Mortgage loan approvals and partly disbursed loans with an LTV of at least 60 per cent. Conversion factors of 20 and 50 per cent	35%	Credit risk
Bank deposits without fixed terms	20%	Counterparty risk
Derivatives, depending on rating	20%/50%	Counterparty risk
Repurchase agreements	20%	Counterparty risk
Local and regional government, including local authorities and county councils	20%	Market risk
Covered bonds	10%	Market risk
Government securities, multilateral development banks, foreign regional authorities and international organisations	0%	Market risk

Capitalised assets and other credit risk are basically weighted at 100 per cent unless special rules have been specified.

Calculating the capital requirement for operational risk using the basic indicator method means that the capital requirement is determined in relation to the company's net interest income and other revenues. Assessment of the operational risk is based on incidents experienced, events in the rest of the banking industry, and intrinsic risks.

Calculating the capital requirement for counterparty risk, including the risk of a reduction in the counterparty's creditworthiness (CVA risk) is calculated in accordance with the standardised method for CVA risk. See section 20a, sub-section 3 of the capital requirement regulations. Calculated on the basis of the counterparty's creditworthiness, this supplementary requirement is known as the credit valuation adjustment (CVA).

Risk types not covered by Pillar 1's minimum capital requirements have been calculated on the basis of an overall integrated risk profile, including exposure and the company's management control systems.

Table 4 Capital adequacy status at 31 Dec 2018 (amounts in NOK thousand)

Capital status	31 Dec. 2018
Share capital	1 093 319
Share premium	2 967 063
Other paid-in equity	477 728
Other equity	1 015
Total equity capital	**4 539 126**
Fund for unrealised gains	10 265
Intangible assets	(5 116)
Prudent valuation	(21 867)
Total core tier 1 capital	**4 522 408**
Hybrid capital	704 974
Total tier 1 capital	**5 227 381**
Subordinated loan capital	674 273
Total tier 2 capital	**5 901 654**
Risk-weighted assets and capital adequacy ratio	
Credit risk	31 709 021
CVA risk	1 571 751
Operational risk	450 599
Total risk-weighted assets	**33 731 370**
Capital requirement corresponding to 8% of risk-weighted assets	2 698 510
Surplus equity and subordinated capital	3 203 145
Core tier 1 capital ratio	**13.4%**
Tier 1 capital ratio	**15.5%**
Tier 2 capital ratio	**17.5%**

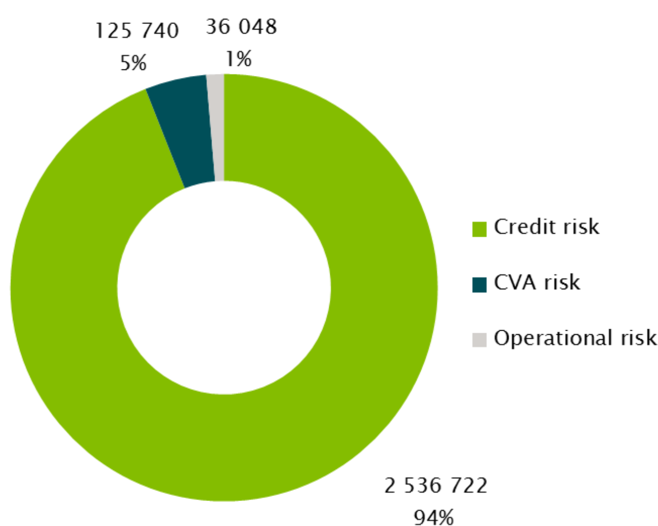
The company's capital adequacy status at 31 December 2018 comprised a core tier 1 capital adequacy of 13.4 per cent, a tier 1 capital ratio of 15.5 per cent and a tier 2 capital ratio of 17.5 per cent.

SUMMARY OF MINIMUM CAPITAL REQUIREMENT

Table 5 Capital adequacy by risk type (amounts in NOK thousand)

Capital status	31 Dec. 2018
Core tier 1 capital ratio	13.4%
Tier 1 capital ratio	15.5%
Capital ratio	17.5%
Credit risk	2 536 722
CVA risk	125 740
Operational risk	36 048
Sum Pillar 1	**2 698 510**

Figure 5 Capital requirements on Pillar 1 (amounts in NOK thousands)



LEVERAGE RATIO

The Ministry of Finance has set the requirement for the leverage ratio which applies to credit institutions, and thereby to EBK, at three per cent from 30 June 2017 (the CRR/CRD IV regulations). Banks must also have a buffer of at least two per cent (total five per cent), while systemically important banks must have an additional buffer of at least one per cent (total six per cent). The leverage ratio must be calculated using the following formula and expressed in per cent:

$$\text{Leverage ratio} = \frac{\text{Capital measure}}{\text{Exposure measure}}$$

The capital measure comprises tier 1 capital in accordance with the regulations concerning the calculation of regulatory capital. The leverage ratio requirement supplements the capital adequacy requirement calculated on the risk-weighted balance sheet and is intended to act as a safeguard against setting the calculation basis too low when calculating capital adequacy.

When calculating the leverage ratio, today's reporting standard does not permit collateral from derivative counterparties to be taken into account when calculating derivative exposure. In addition, the amount must be calculated using the current exposure method. That has unfortunate effects for EBK, and means that the indicator fails to provide a good picture of the actual risk associated with

an irresponsible increase in debt. It is actually the case that the calculation method punishes financial institutions with agreements on receiving collateral for the increased market value of derivatives. EBK has therefore also carried out calculations of the leverage ratio which show net derivative exposure calculated in accordance with the standardised method pursuant to the capital requirement regulations.

Table 6 Leverage ratio at 31 December 2018

Leverage ratio	31 Dec. 2018
Balance-sheet items (excluding derivatives)	100 151 591
Change in value of financial instruments at fair value	(26 983)
Derivative exposure (current exposure method)	10 359 406
Derivative exposure (standardised method)	3 412 695
Loan commitments to customers	143 252
Total on- and off-balance sheet exposures (c.e. method)	110 627 267
Total on- and off-balance sheet exposures (std. method)	103 680 556
Tier 1 capital	5 227 381
Leverage ratio - tier 1 (current exposure method)	**4.73%**
Leverage ratio - tier 1 (standardised method)	5.04%

EBK has estimated its future leverage ratio on the basis of the FSA's calculation method, and fulfils the specified requirement of three per cent with a good margin.

7 STRATEGIC AND BUSINESS RISK

Definition: *Strategic and business risk are defined as the risk of weakened profitability owing to changes in competitive terms, operating parameters and external factors, and also includes political and regulatory risk. This includes the risk of a lack of correlation between revenue and expenses over time. It is considered appropriate to assess business risk in relation to strategic risk. Strategic and business risk also cover rating, reputational, owner, and reward and incentive risk.*

RISK APPETITE AND EXPOSURE

Strategic and business risk in the company must be low and is not included in the calculation of the Pillar 1 capital requirement. EBK has established a good business strategy and comprehensive risk policies for managing strategic risk. Goals have been set in the business strategy, and other policies have overarching parameters related to risk appetite. The company's business concept is to improve the competitiveness of the banks and reduce their risk by issuing covered bonds in the Norwegian and international financial markets. Through professional cultivation of the financial markets, good international ratings and high-quality collateral, EBK will thereby secure long-term and competitive funding for the owner banks. Achieving this strategy is based on the following priority areas:

- tailored growth
- good international ratings
- profitability and cost-effectiveness
- prudent risk
- quality at every level.

EBK's reputational risk relates most significantly to the company as a source of funding. It has rated covered bonds, and a reduction in rating would be damaging. The Moody's rating agency assesses the owner banks as a single category as well as the quality of the company's cover pool. The

assessment of the owner banks is particularly vulnerable, since this depends on how far the Norwegian government would be willing to rescue them in a crisis. Should a downturn occur, fewer investors would invest in the company's covered bonds and would require a compensation in the credit spread if they opt to invest.

The company is exposed to reputational risk related to Eika as a brand. Adverse developments in one of the Eika companies or the banks could give rise to detrimental rumours and consequences which EBK must deal with. In addition, the company is exposed to the effects of political changes. A significant proportion of market-based issues by Norwegian bond issuers are conducted in currencies other than the Norwegian krone. Possible political developments in Norway have an impact on the international reputation of Norwegian issuers. That also relates to the willingness of the Norwegian authorities to support Norwegian banks in crises. Decisions taken by the Norwegian government have historically had a direct effect on the financing opportunities for Norwegian issuers and on credit spreads. Nevertheless, the risk associated with these considerations is greatest internationally and for state-owned issuers, and such political/reputational risk is particularly high in periods when the company needs to refinance maturing bonds with an order of magnitude which cannot be accommodated by the Norwegian market.

MANAGEMENT AND CONTROL

Good policy processes are important for ensuring management and control of business and strategic risk. EBK has an annual cycle in which revision of business and risk policies plays a fixed role. Part of the management and control of business risk includes changes to the company's guarantee agreements with the shareholders.

Focusing attention on good risk management, compliance, business ethics, whistleblowing, managing conflicts of interests, and other policies, strategies and routines will help the company to handle processes in a positive way.

CAPITAL REQUIREMENTS

An assessment of capital requirements for strategic and business risk is included in the assessment of Pillar 2 risk not covered by Pillar 1. No internal capital requirement related to strategic and commercial risk has been allocated.

8 CREDIT RISK

Definition: *Credit risk is the risk of loss posed by customers or counterparties failing to meet their payment obligations. Credit risk affects all claims on customers/counterparties, lending, credits, guarantees, open trades, residential mortgage approvals to customers, and the counterparty risk arising through derivatives and foreign-exchange contracts. Credit risk depends in part on the size of the claim, the time to maturity, the probability of default and possibly the value of collateral. Credit losses can also be incurred as a result of operational errors.*

RISK APPETITE AND EXPOSURE

The credit risk related to lending must be low. In its credit policy and lending activity, EBK will take account of the applicable regulations which govern credit institutions issuing covered bonds at any given time. See section 11, sub-section 5 of the Act on Financial Institutions. The company's policy for credit risk on lending is intended to minimise the risk of defaults and to keep credit risk below

the level in comparable companies. This will ensure that the company's bonds are a preferred choice for investors.

The company's credit risk is strictly limited through the company's business purpose, policies, credit guarantees from the distributor banks and the company's credit risk policy. EBK's credit risk is primarily related to balance sheet items, but it is also exposed to off-balance sheet credit risk. EBK uses the standardised method to calculate capital requirements for credit risk. Credit risk accounted for 94 per cent of the company's capital requirement under Pillar 1 at 31 December 2018. This chapter deals with credit risk related to residential mortgages. Other credit risk is handled under counterparty and market risk.

The company reports pursuant to the International Financial Reporting Standards (**IFRS**), and measures mortgages at fair value. The market value of floating-rate mortgages is measured as equal to amortised cost. The fair value of fixed rate loans is correspondingly measured as equal to amortised cost adjusted for the difference between the loans' fixed rate of interest and the applicable fixed interest rate offered at the balance sheet day. The fair value of mortgages with a fixed interest rate is determined pursuant to the regulations on credit agreements. The fair value of each individual fixed-interest mortgage is determined on the basis of the discount or premium which the customer will receive or have to pay in the event of early redemption. This value is therefore contingent on interest-rate developments, and value fluctuations will affect the financial results. The company also provides mortgages for residential cooperatives.

GENERAL CONSIDERATIONS RELATED TO CREDIT RISK IN EBK

EBK has never experienced defaults with instalments overdue by more than 90 days on its lending, or losses related to its mortgage business[2]. The guarantee structure between EBK and its distributors reduces the company's credit risk, and it therefore also expects no bad debts in the future. Consequently, the company has never taken an impairment charge on mortgages.

Table 7 Credit risk: specification of risk-weighted volume and capital requirement (amounts in NOK thousand)

Credit risk	Section pursuant to the capital requirement regulations	CCF	Balance sheet	Off-balance sheet items	Risk Weight	Calculation basis	Capital requirement 8%
Government bonds	§ 5-1		1 591 155		0%	-	-
International local/regional government	§ 5-2		497 421		0%	-	-
Local and regional government (Norwegian)	§ 5-2		5 450 648		20%	1 090 130	87 210
Multilateral development banks	§ 5-4		608 158		0%	-	-
International organisations	§ 5-5		1 933 974		0%	-	-
Banks and institutions (deposits in other banks)	§ 5-6		956 232	7 675	20%	192 781	15 423
Credit guarantees from the shareholders	§ 5-6			1 261 488	20%	252 298	20 184
OTC derivatives AA-rating (standardised method)	§ 5-7 og § 23			2 347 573	20%	469 515	37 561
OTC derivatives A-rating (standardised method)	§ 5-7 og § 23			1 065 123	50%	532 561	42 605
Claims on corporates (unrated)	§ 5-7		56 941		100%	56 941	4 555
Claims or contingent claims secured on real property	§ 5-9		82 116 141	(1 261 488)	35%	28 299 129	2 263 930
Loan commitments to customers	§ 5-9 og § 6-1 (8)	0.5		50 874	35%	8 903	712
Loan commitments to customers (duration 30 days)	§ 5-9 og § 6-1 (9)	0.2		589 077	35%	41 235	3 299
Covered bonds	§ 5-13		6 538 648		10%	653 865	52 309
Other assets	§ 5-15		1 452		100%	1 452	116
Other assets (deferred tax asset)	§ 18*		44 085		250%	110 212	8 817
Total credit risk			**99 794 855**	**4 060 321**		**31 709 021**	**2 536 722**

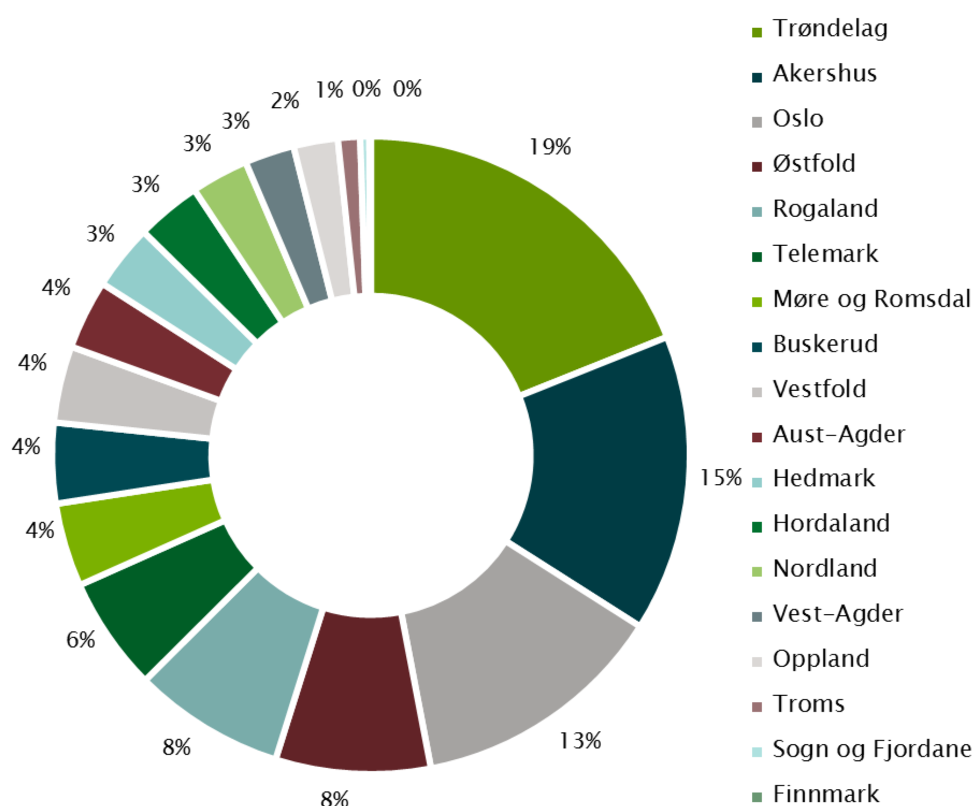
*The regulations concerning the calculation of regulatory capital

[2] Pursuant to section 10, sub-section 1 of the capital requirement regulations, a loan is to be regarded as being in default if an instalment has fallen due more than 90 days earlier, and the delay is not the result of fortuitous circumstances at the client. Should the institution have loans in default with instalments overdue by more than 90 days, the loan is to be regarded as doubtful. Doubtful loans are not necessarily in default, but the customer's financial position and the value of the collateral indicate a risk of loss.

Table 8 Credit risk by commitment category (amounts in NOK thousand)

Claims	Capital requirement
Claims on regional and local government	87 210
Claims on institutions	115 772
Claims on corporates	4 555
Claims or contingent claims secured on real property	2 267 941
Covered bonds	52 309
Other items	8 933
Total capital requirement credit risk	**2 536 722**

Figure 6 Residential mortgages by Norwegian county as % of total mortgage volume at 31 Dec 2018



Having the owner banks as the distributor channel means that customers are well spread geographically. The company's customers are primarily private individuals, each of whom accounts for a relatively small proportion of the company's total portfolio.

Table 9 Loans and investments by commitment type and residual time to maturity (amounts in NOK thousand)

Expected maturities	31 Dec. 2018	0-1 months	1-3 months	3-6 months	6-12 months	1-3 years	3-5 years	5-10 years	Over 10 years
Lending:									
Residential	75 685 367	126	3 063	1 939	10 229	205 714	559 856	3 256 153	71 648 285
Residential cooperatives	6 309 164	14	43	-	1 489	18 295	56 420	215 475	6 017 427
Investments:									
Government bonds	1 591 155	-	1 342 183	248 973	-	-	-	-	-
Covered bonds	6 538 648	-	-	110 414	603 204	4 851 154	973 876	-	-
Local or regional autority (Norwegian)	5 450 648	532 767	3 153 199	1 213 205	452 384	99 092	-	-	-
Government guaranteed etc.	2 542 132	648 211	1 487 511	297 799	40 763	67 846	-	-	-
Local or regional autority (foreign)	497 421	-	-	20 048	50 142	176 334	250 896	-	-
Repurchase agreements	358 120	358 120	-	-	-	-	-	-	-
Bank deposits	956 021	956 021	-	-	-	-	-	-	-
Total	99 928 676	2 495 261	5 985 999	1 892 379	1 158 212	5 418 437	1 841 048	3 471 628	77 665 713

Table 9 shows that EBK has a good spread of maturities on its mortgages and other lending, which helps to reduce the company's credit risk.

EBK has a diversified mortgage portfolio in terms of geographical distribution and individual customers.

CREDIT RISK – THE STANDARDISED METHOD

As an issuer of covered bonds, EBK must ensure that all loans and advances in its cover pool comply with credit quality step 1 or 2. When assessing ratings, credit rating agencies specified by Commission implementing regulation (EU) 2016/1799[3] and pursuant to FSA circular 18/2016[4] are used to determine the credit quality step. Where a counterparty has been rated by two or more of these agencies, the credit quality step will be determined by the second best rating pursuant to section 7, sub-section 2 of the capital requirement regulations. If the counterparty is rated by only a single accredited agency, that rating will be used.

- States and central banks: long-term ratings by an accredited agency are used to assign the credit quality step.
- Multilateral development banks and international organisations: only counterparties awarded a zero per cent risk weighting pursuant to section 5, sub-sections 4 and 5 of the capital requirement regulations
- Local and regional government: long-term rating is used for local authorities and county councils. Unrated local authorities are treated as AA-rated counterparties
- Institutions: long-term rating of institutions rated by approved rating agencies will be utilised to determine the credit quality step for financial institutions.
- Enterprises: long-term ratings from an accredited agency are used to assign the credit quality step, with a 100 per cent risk weighting applied to relevant claims if no approved rating exists.

GUARANTEES

All residential mortgages transferred to EBK must have a loan-to-value (LTV) ratio of a maximum of 60 per cent at origination. A further requirement is that collateral must be secured in completed residential properties or holiday homes. EBK's collateral requirements satisfy the provision in the capital requirement regulations calling for 35 per cent risk weighting of mortgages and advances with collateral in residential properties. Documentation of value must be an approved appraiser's valuation, an estate agent's valuation, a purchase contract or a valuation by Eiendomsverdi AS, which must not be more than six months old when the mortgage is approved.

Upon transfer to Eika Boligkreditt, the owner banks assume mandatory guarantees for the mortgages they have transferred. The main features of these guarantees are as follows.

1. *Case guarantee,* covering the entire amount of the mortgage over the period from the owner bank's request for payment until the mortgage's collateral has been perfected (legally registered) and the custody department of the owner bank has checked the documentation.

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[3] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1479307277253&uri=CELEX:32016R1799

[4] https://www.finanstilsynet.no/contentassets/631324a179404e31a6dcc72c73da848f/rundskriv_18_2016.pdf

2. *Loss guarantee*, where the bank undertakes to cover 80 per cent of a loss recognised on a mortgage. The loss guarantee is limited to one per cent of the bank's mortgage portfolio in EBK, with a minimum of NOK 5 million, or the whole portfolio if it is smaller than NOK 5 million. The remainder not covered by the loss guarantee may be offset by EBK against its commission payments to all the owner banks, calculated pro rata on the basis of each bank's share of the mortgage portfolio at the point when the loss is recognised. The offsetting right applies for a period of 12 months.

An overview was established at 31 December 2018 of the outstanding residential mortgage portfolio compared with the valuation of the mortgage collateral at origination. This shows that the company has mortgages within the following collateral bands.

Table 10 Distribution of loan-to-value (LTV) at origination (amounts in NOK thousand)

Loan to value (LTV)	Origination values			
	Residential	Residential cooperatives	Total	Share of total
0 <= 40	11 943 878	5 332 674	17 276 553	21%
40 < x <= 50	13 253 169	675 042	13 928 211	17%
50 < x <= 60	50 027 023	289 549	50 316 571	62%
Total	**75 224 070**	**6 297 265**	**81 521 335**	**100%**
Average LTV	**50.6%**	**19.8%**	**48.3%**	

EBK's residential mortgages have a maximum loan-to-value ratio of 60 per cent of the property at origination. The collateral is accordingly regarded as very good and the risk considered small.

CONTINUOUS VALUATION OF COLLATERAL

The portfolio is indexed on a quarterly basis against market values estimated by Eiendomsverdi AS, whose weighting model calculates a market value based on objects sold over time in the immediate vicinity, adjusted for price developments. It also takes account of the valuations registered by EBK on the mortgaged property at origination. Were residential property prices to fall, the company would have a good margin before possible repossessions might lead to loss. The table below presents indexed market values for EBK's mortgage portfolio.

Table 11 Distribution of indexed loan-to-value (LTV) (amounts in NOK thousand)

Loan to value (LTV)	Indexed values			
	Residential	Residential cooperatives	Total	Share of total
0 <= 40	17 710 984	5 642 431	23 353 416	29%
40 < x <= 50	15 581 746	349 989	15 931 735	20%
50 < x <= 60	30 947 797	212 910	31 160 707	38%
60 < x <= 75	10 457 580	91 935	10 549 515	13%
x > 75	525 962	-	525 962	1%
Total	**75 224 070**	**6 297 265**	**81 521 335**	**100%**
Average LTV	**48.6%**	**17.0%**	**46.2%**	

The indexed LTV at 31 December 2018 was 46.2 per cent, compared with an original LTV of 48.3 per cent. Indexing of residential cooperatives shows an indexed LTV of 17 per cent, compared with an original LTV of 19.8 per cent. This indicates that house prices have risen across the board since the mortgages were granted (combined with payment of instalments).

Some mortgages are indexed with a higher LTV than at origination, which might indicate a fall in house prices for objects related to these mortgages.

RISK OF DEFAULT IN THE COVER POOL

EBK's covered bonds are rated by Moody's. Moody's Collateral Score informs investors about the agency's modelling of the risk of loss related to the credit quality of the cover pool in an Aaa scenario. The higher the credit quality, the lower the collateral score. This score determines the level of loss which Moody's estimates will affect investors in the company's covered bonds in the event of default on these, based on the credit quality of the cover pool. The collateral score presents Moody's analysis of the amount of risk-free assets which must be added to the cover pool in order to offset the negative effect of the stress test scenario as defined by the rating agency. For further information, see Moody's methodology for the definition of the collateral score and the way it is calculated.

In its report covering the second quarter of 2018 (the most recent to be published),[5] Moody's specified a collateral score of 1.9 per cent, which is the lowest figure for global issuers of covered bonds rated by the agency. The table presents EBK's covered bonds as Eika Boligkreditt – Mortgage Covered Bonds.

Table 12 Ten best collateral scores worldwide at 30 June 2018. Source: Moody's global covered bonds monitoring overview

Exhibit 11

Covered bond programmes with lowest (best) collateral scores

Name of programme	Type of programme	Country	Collateral score
Eika Boligkreditt AS - Mortgage Covered Bonds	Mortgage	Norway	1.9%
OP Mortgage Bank - Mortgage Covered Bonds 2	Mortgage	Finland	2.0%
NatWest Bank plc - Mortgage Covered Bonds	Mortgage	UK	2.2%
Skipton Building Society - Mortgage Covered Bonds	Mortgage	UK	2.4%
Coventry Building Society - Mortgage Covered Bonds	Mortgage	UK	2.4%
Yorkshire Building Society - Mortgage Covered Bonds	Mortgage	UK	2.4%
Nationwide Building Society - Mortgage Covered Bonds	Mortgage	UK	2.5%
SpareBank 1 Boligkreditt AS - Mortgage Covered Bonds	Mortgage	Norway	2.6%
HSBC SFH (France) - Mortgage Covered Bonds	Mortgage	France	2.8%
Santander UK PLC - Mortgage Covered Bonds	Mortgage	UK	2.8%

Source: Moody's Investors Service

STRESS TESTS FOR RESIDENTIAL PROPERTY PRICES

EBK conducts stress tests for falls in residential property prices in order to identify the company's mortgage credit risk. The capital requirement regulations require residential mortgages to have an LTV of at least 80 per cent (60 per cent for holiday homes) before the mortgage can be assigned a risk weight of 35 per cent. If this is not the case, the company's capital requirement will be increased for that part of the mortgage portfolio which must be weighted at 75 per cent[6] rather than 35 per cent when calculating capital requirements. Calculations are carried out when residential property prices fall by 15, 25 and 35 per cent respectively. Before the worst-case scenario with a price fall of 35 per cent could occur, for example, EBK would already have taken a number of steps to improve the quality of its cover pool, including initiating contingency and recovery measures for strengthening overcollateralisation. If certain mortgages in the cover pool acquire an LTV greater than 75 per cent (60 per cent for holiday homes), this part of the mortgage can no longer be included

[5] EBK reports an overview of the content of the cover pool to Moody's on a quarterly basis. Against that background, EBK's borrowing programme is analysed by comparison with other borrowing programmes in Europe and the results are published in Moody's quarterly *Global Covered Bonds Monitoring Overview*.

[6] The mortgages are assumed to satisfy the requirements for the retail exposures class and can accordingly be weighted at 75 per cent pursuant to the capital requirement regulations.

when determining the overall value of the cover pool. That will be significant for the company's compliance with the requirement that covered bond liabilities must be covered by cover assets pursuant to section 11, sub-section 7 of the regulations for financial institutions, and for its obligations related to overcollateralisation.

The company has better security in its portfolio and a lower minimum for LTV than is usual among covered-bond issuers in Norway, and is accordingly well equipped to handle the risk related to a fall in residential property prices. Reactions to such a fall would generally be swift because of the guarantee structure and the need to comply with legislation on covered bonds. No increased Pillar 2 requirement has accordingly been incorporated for a worst-case scenario with house prices falling by 35 per cent, since the risk associated with a general fall in residential property prices is adequately covered by the company's guarantee structure and by maintaining requirements for overcollateralisation of the cover pool.

MANAGEMENT AND CONTROL

EBK's distribution channel runs through the owner banks. These banks are locally entrenched with a high proportion of loyal customers and good knowledge of their markets. Customer selection through the owner banks is regarded as helping to ensure that the company's customers are generally good and loyal.

The company has established policies for credit risk on mortgages, counterparty risk and capital management, which form the basis for management and control of credit and counterparty risk. The status of compliance with the company's credit policy is assessed continuously, and the position in relation to the approved level of risk acceptance is reported quarterly to the board in the risk and compliance report. Compliance with the credit handbook, including safe custody department checks, is monitored on a continuous basis. Overall management and control of risk is described in more detail in chapter 4 above.

CAPITAL REQUIREMENTS

EBK applies the standardised method to calculate the capital requirement for credit risk. This was calculated to be NOK 2 537 million at 31 December 2018. The capital requirement calculated in accordance with Pillar 1 is considered to meet the potential risk of loss related to credit risk in the portfolio.

9 COUNTERPARTY RISK

Definition: *Counterparty risk is the risk of loss because counterparties are unable to meet their payment commitments and accordingly represent a credit risk. It relates to all claims with counterparties, including guarantees, unsettled transactions and undrawn credits, and to the counterparty risk which arises from exposure to derivatives. Counterparty risk depends in part on the size of the claim, time to maturity, probability of default and value of possible collateral.*

RISK APPETITE AND EXPOSURE

The company has established a policy for counterparty risk to ensure that overall requirements for management and control of such risk are met. This policy is intended to meet the company's need for control over large exposures, including the total exposure with a single counterparty. It will ensure that counterparty risk is manageable at all times by establishing parameters for such risk,

ensuring the establishment of an international swaps and derivatives association (ISDA) with associated credit support annex (CSA) for counterparties to derivatives, and providing a clear division of responsibility and authority.

EBK has established the following risk parameters for counterparty risk:

- maximum limit for total exposure (regulations on large exposures)
- internal maximum limit for total exposure
- entering into derivative contracts and defining maximum exposure to a counterparty.

The company is exposed to counterparty risk through lending, investment of surplus liquidity and derivatives. Attention in this chapter is focused on counterparty risk related to derivatives, bank deposits and repurchase agreements (repo), since this does not belong naturally with the assessment of other risk factors. Counterparty risk is treated as part of credit risk when it relates to lending, and as part of market risk when it relates to investment of surplus liquidity.

- **Counterparty risk related to bank deposits and repo agreements in credit institutions**

EBK uses bank deposits and repurchase agreements when investing surplus liquidity, and is accordingly exposed to counterparty risk in relation to the various banks concerned. Classic repo is regulated under the global master repurchase agreement (GMRA) which, like the ISDA, is an internationally recognised template for regulating bilateral agreements. The company has so far entered into GMRAs with three banks – Nordea, DNB and Danske Bank. In addition, it has entered into a global master securities lending agreement (GMSLA) with SEB in order to be able to enter into swap agreements for securities. Repos and bank deposits must be confined to banks with a low credit risk, and the underlying security must fall within the requirements for inclusion in the cover pool (minimum credit quality step 2, rating A-/A3 for residual times to maturity of up to 100 days). Parameters for counterparty risk per bank are defined in the company's policy for capital management and in its investment mandate.

- **Counterparty risk related to derivatives**

Activities in EBK are subject to strict regulations for risk exposure, and the company is obligated to refrain from accepting greater interest-rate and foreign-exchange risk than is prudent at any given time.[7] This means that the company uses both interest-rate and foreign-exchange derivatives when borrowing in foreign currencies and/or fixed interest rates in order to keep risk at a minimum. The same applies to hedging interest-rate risk relative to lending at fixed interest rates.

Derivative contracts can only be entered into with counterparties which have a low credit risk, and must fall within the requirements for inclusion in the cover pool (minimum credit quality step 2, rating A-/A3).[8] EBK will only enter into derivative contracts within the framework established by the ISDA. ISDA master agreements with CSA are based on a standardised template utilised by most of the Norwegian covered-bond issuers who enter into derivative contracts. Counterparty risk related to derivatives is reduced through the existing set of agreements, which involves unilateral obligations for EBK's counterparties to provide collateral at specified thresholds, depending on rating and the agreed threshold for receipt of collateral. Where new derivative agreements entered

[7] FOR-2018-12-09-1502. Sections 11-1 and 11-3 of the regulations for financial institutions.
[8] Should the derivatives be downgraded below credit quality step 2, they can still be included in the cover pool providing the counterparty provides satisfactory collateral.

into after March 2018 are concerned, the threshold for provision of collateral is zero. In other words, the counterparty provides collateral from the first krone if the fair value is positive in EBK's favour.

Pillar 1 specifies capital requirements related to counterparty risk through the standardised method for credit risk in part II of the capital requirement regulations. The company calculates counterparty risk in derivatives using the standardised method.[9] Account is taken of financial collateral in the form of cash and securities[10] when calculating capital requirements related to the counterparty risk in derivatives. At 31 December 2018, the company had the following counterparty exposure in derivatives by rating category.

Table 13 Counterparty risk in derivatives pursuant to the standardised method (amounts in NOK thousand)

Counterparty rating	EAD*	Risk classification	Risk weight	Risk weighted assets
AA	2 347 573	1	20%	469 515
A	1 065 123	2	50%	532 561
	3 412 695			**1 002 076**

*Exposure at default, the company's exposure to derivatives, is calculated as the maximum of the derivatives' potential future exposure and market value less received collateral in cash or securities.

- **CVA risk**

CRD IV introduced a requirement intended to cover the risk related to changes in the fair value of bilateral derivative contracts which are not traded on a stock exchange.[11] This additional requirement is calculated on the basis of the counterparty's creditworthiness and is called the credit valuation adjustment (CVA).[12] The calculation basis amounted to NOK 1.6 billion at 31 December 2018.

Table 14 Total calculation basis for counterparty risk related to derivatives, bank deposits and repo at 31 Dec 2018 (amounts in NOK thousand)

Risk weighted assets		Amount
Bank deposits		191 246
Derivatives		1 002 076
Repurchase agreements (repo)		1 535
Credit valuation adjustment (CVA)		1 571 751
Total		**2 766 608**
Pillar 1 capital requirement	**8%**	**221 329**

MANAGEMENT AND CONTROL

EBK has established a policy and associated parameters for counterparty risk which forms the basis for management and control of this risk in EBK. The status of compliance with the company's policy

[9] FOR-2006-12-14-1506 Capital requirement regulations, chapter 23.
[10] FOR-2006-12-14-1506 Capital requirement regulations, chapters 17 and 18.
[11] Bilateral derivative contracts are also called over-the-counter or OTC derivatives.
[12] FOR-2006-12-14-1506 Capital requirement regulations, chapter 20a.

for counterparty risk is assessed continuously, and the position in relation to the approved level of risk acceptance is reported quarterly to the board in the risk and compliance report.

CAPITAL REQUIREMENTS

The capital requirement calculated in accordance with Pillar 1 is considered to cover the potential risk of loss related to counterparty risk in the portfolio.

10 MARKET RISK

Definition: Market risk is the risk of loss on the market value of portfolios of financial instruments as a consequence of fluctuations in interest rates, credit spreads and exchange rates. It comprises interest-rate, credit-spread, currency and equities risk.

Interest-rate risk in the balance sheet (net interest income) arises from differences between interest terms for borrowing and/or lending, and from borrowing by the company in different markets than those it lends to, so that the borrowing interest rate may change without the company being able to adjust the lending rate equally quickly.

Market risk in EBK will normally take the form of interest-rate risk in the bank portfolio (net interest income) which arises because of differences between fixed interest rates on assets and liabilities, in addition to the credit-spread risk which the company accepts when investing in securities (the securities portfolio). The company aims to maintain a low to moderate market risk. The company has borrowings in foreign currencies, but all significant currency risk related to borrowing is hedged through derivatives. The securities portfolio must not accept unsecured currency risk, or equity and property risk.

RISK APPETITE AND EXPOSURE

The total risk parameter for interest-rate and credit-spread risk in the balance sheet is five per cent of the company's core tier 1 capital, with an expected composition of two per cent interest-rate risk and three per cent credit-spread risk. The individual investment must not have an interest rate fixed for longer than one year, and the maximum limit for the average duration of the whole liquidity portfolio is 0.3 years. The residual time to maturity for the individual security must be less than 3.5 years, and the average residual time to maturity must be less than two years. Interest-rate risk is stress-tested, in line with the FSA's methodology,[13] by looking at a parallel shift of two percentage points in the interest-rate curve. Credit-spread risk is stress-tested on the basis of the FSA's method for spread risk[14], which builds on the methodology in Solvency II for insurance undertakings.

Assessment of interest-rate risk in the bank portfolio (net interest income)

Interest-rate risk in the bank portfolio will be limited by ensuring that lending on floating interest-rate terms is financed by borrowing or derivatives at floating interest rates, and that lending at fixed

[13] It follows from article 98 (5) of the CRD IV directive and the EBA's guidelines on interest-rate risk in the bank portfolio that interest-rate risk must be assessed on the basis of a stress factor level of a two-percentage-point parallel shift in the interest-rate curve.
[14] FSA circular of 12/12017 – appendix 3.

interest rates is hedged with derivatives at floating rates. The company will make active use of derivatives to reduce interest-rate risk. Interest-rate risk related to net interest income must be low.

The bulk of the residential mortgages in EBK's portfolio have a floating interest-rate. Pursuant to the Financial Contracts Act, interest rates on such mortgages can be adjusted at six weeks notice in line with the development of the company's borrowing costs. EBK is not subject to such notice in relation to the interest rates it charges to the owner banks. Interest-rate changes can therefore be implemented more quickly, which ensures efficient adjustment to changes in EBK's funding costs.

EBK permits the addition of fixed-rate mortgages to the cover pool, and this is regulated by separate agreements with the banks. EBK establishes the interest rate for fixed-interest mortgages, while the owner banks specify customer terms and interest rates based on borrowing costs and risk assessment for the advance.

EBK uses hedge accounting pursuant to the IFRS on borrowing at fixed interest rates, and an interest swap must be assessed as very effective when entered into. The company measures interest-rate risk on the balance sheet at least quarterly, based on the duration of the various claims and commitments. Duration means the number of years until the next interest-rate adjustment.

Table 15 Interest-rate sensitivity in the balance sheet (amounts in NOK thousand)

Interest rate sensitivity	Duration	Amount	Effect negative shift	Effect positive shift
Funding	0.12	91 129 613	(218 297)	218 297
Lending with floating rate*	(0.12)	77 556 428	186 135	(93 068)
Lending with fixed rate	(3.59)	4 458 257	319 793	(319 793)
Derivatives lending	3.25	4 426 465	(287 831)	287 831
Government bonds	(0.24)	1 591 155	7 481	(7 481)
Government guaranteed etc.	(0.14)	2 542 132	7 354	(7 354)
Covered bonds	(0.17)	6 538 648	22 090	(22 090)
Local and regional autority (Norwegian)	(0.18)	5 450 648	19 673	(19 673)
Repo	(0.01)	358 120	60	(60)
Bank deposits	(0.01)	954 215	133	(133)
Local and regional autority (foreign)	(0.14)	497 421	1 409	(1 409)
Interest rate risk by shift in yield curve of 2 percentage points			**58 001**	**35 067**

*In the event of an increase in financing costs or money market the duration on lending with floating interest-rate is estimated to be 0.06 or 0.12 in the event of a decrease. Asymmetry occurs because of the ability to await to cut interest rate on the lending portfolio in the event of a decrease.

Fixed interest rates on the company's borrowing have longer periods than on its lending. This means that, in circumstances where the interest rate for funding costs increases by two percentage points, the company will in reality benefit from the change if this is priced out to the banks before the borrowing costs have increased, and as long as the asset side of the balance sheet has a shorter fixed-interest period than the liability side. Other factors may nevertheless exist which prompt the company to reduce its lending margin and net interest income, but these will be independent of the interest-rate risk.

Assessment of credit-spread risk in the securities portfolio

The company's business purpose is to obtain favourable funding by issuing covered bonds. This means that its surplus liquidity must satisfy legal and regulatory requirements concerning what may be included in the cover pool. The objective of the company's investment of surplus liquidity is to have liquidity available at all times to secure the financing of growth and maturation, and to secure

the highest possible return within specified risk parameters. Surplus liquidity is held in bank deposits or fixed-income securities in Norwegian kroner. In addition, the company has received liquidity in NOK and EUR which reflects the receipt of cash collateral from counterparties to derivatives. Collateral received is held in bank deposits or low-risk securities in the currency of receipt to ensure that no currency risk arises for the company on its cash collateral.

EBK's securities portfolio totalled NOK 16.6 billion at 31 December 2018 and constituted about 15 per cent of the company's total assets. The company has invested in government bills, public-sector loans and so forth as well as in foreign local authorities which satisfy the requirement for zero risk weighting pursuant to the capital requirement regulations. The company has calculated capital requirements for the securities portfolio on the basis of the standardised method for credit risk (Pillar 1) pursuant to part II of the capital requirement regulations.

Table 16 Calculation basis and capital requirement for market risk at 31 December 2018 (amounts in NOK thousand)

The securities portfolio	EUR	NOK	Total NOK	Risk weight	Risk weighted assets	Capital requirement
Government bonds	843 028	748 128	1 591 155	0%	-	-
Government guaranteed etc.	2 474 285	67 846	2 542 132	0%	-	-
Local and regional authority (foreign)	-	497 421	497 421	0%		
Covered bonds	-	6 538 648	6 538 648	10%	653 865	52 309
Local and regional authority (Norwegian)	-	5 450 648	5 450 648	20%	1 090 130	87 210
Total	**3 317 313**	**13 302 691**	**16 620 004**		**1 743 994**	**139 520**

MANAGEMENT AND CONTROL

The company has established a policy for asset liability management which forms the basis for total interest-rate risk in its balance sheet. In the event of an increase in financing costs or money market interest rates, a decision to adjust the interest-rates charged to the owner banks will be made by the CEO in consultation with the rest of the company's executive management and based on forecasts of anticipated interest-rate developments and planned new funding. Such forecasts are made by the finance and accounting department. Interest-rate risk is measured quarterly as the change in value arising from a two-percentage-point adjustment to the level of interest rates, and the company has defined maximum exposure related to this. The exposure is reported quarterly in the risk and compliance report submitted to the board.

The basis for management and control of market risk in the portfolio of securities is provided by policies for asset liability and for investment management with an associated investment mandate. The company's risk management and compliance function continuously assesses exposure in relation to approved risk acceptance and parameters in quarterly risk and compliance reports for the board. The board-approved parameter as a percentage of core tier 1 capital is meant to cover the interest-rate risk in the bank portfolio of a two-percentage-point parallel change in the interest-rate curve and increased credit-spread outcomes in the company's portfolio of securities. Market risk in the securities portfolio is managed on a daily basis by the funding department in line with its mandate and the company's risk policies.

CAPITAL REQUIREMENTS

The capital requirement for credit risk in the securities portfolio is taken into account in the standardised method for credit risk, and totalled NOK 139.5 million at 31 December 2018, including risk-weighting of the various investments in securities. Assessments of capital

requirements for market risk, including interest-rate risk in the bank portfolio and credit-spread risk in the securities portfolio, are included in the evaluation of Pillar 2. EBK's enterprise-specific Pillar 2 requirement of 0.5 per cent is considered to be adequate for meeting future Pillar 2 capital requirements related to market risk.

No provision has been made for any supplementary potential for loss related to a lack of risk spreading in the securities portfolio or for market liquidity.

11 FINANCING AND LIQUIDITY RISK

Definition: The risk that the company will be unable to meet its commitments as and when they fall due without incurring substantial costs in the form of expensive refinancing or the need for premature realisation of assets. In the worst case, liquidity risk is the risk that the company will be unable to refinance itself sufficiently in order to meet commitments as and when they call due.

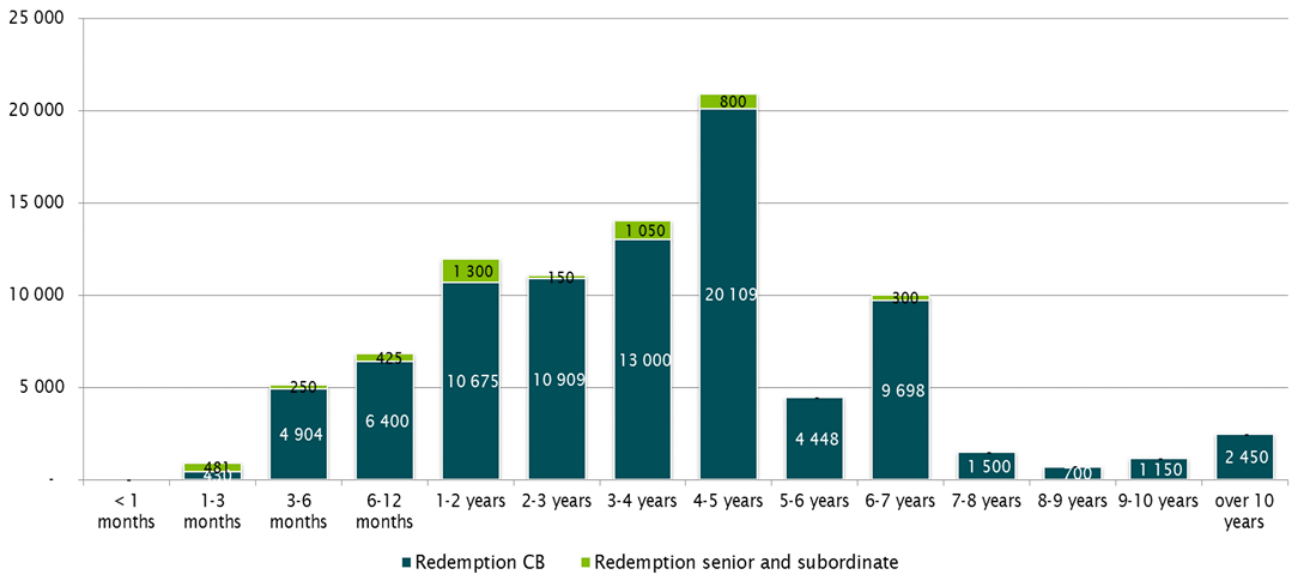
RISK APPETITE AND EXPOSURE

The company's liquidity and refinancing risk must lie within a moderate risk level. EBK has a dedicated strategy for financing and liquidity risk, including defined risk parameters as well as contingency and recovery measures should a shortage of liquidity arise. EBK finances lending primarily through the issue of covered bonds. Through its opportunity to make such issues, the company achieves lower borrowing costs than its owner banks. The company will also raise ordinary senior unsecured bonds in order to cover overcollateralisation requirements, and tier 1 perpetual bonds and subordinated loans to cover requirements for other tier 1 and subordinated loan capital. EBK has established an international borrowing programme for issuing covered bonds. This Euro Medium Term Covered Note (EMTCN) programme was signed and approved by the UK Listing Authority for the first time on 10 August 2007. Bonds are issued under the EMTCN programme to both Norwegian and international investors. The programme is revised at least once a year.

The company has established overarching goals and specified parameters for liquidity management to keep financing and liquidity risk satisfactorily low, and to comply with section 11, sub-section 12 of the Act on Financial Institutions, chapter 11 of the regulations for financial institutions issuing covered bonds, and the regulations on sound liquidity management.

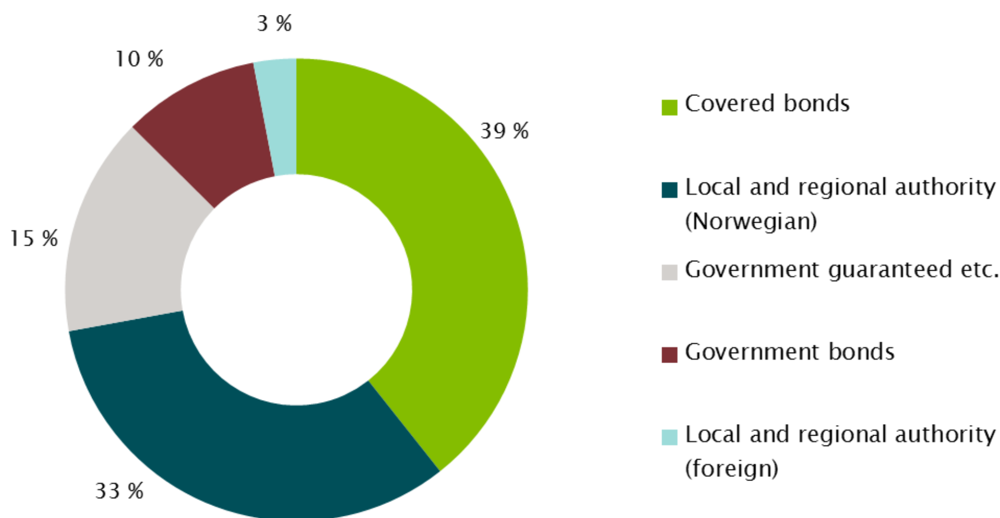
EBK had a good liquidity position at 31 December 2018, with total liquid assets of about NOK 14.1 billion exclusive of collateral received. The company issued bonds and certificates amounting to NOK 16.6 billion in bonds during 2018, comprising NOK 15.5 million in covered bonds, NOK 750 million in tier 1 perpetual bonds and NOK 325 million in subordinated loans. About 71 per cent of the issues during 2018 were in Norwegian kroner and 29 per cent in euros. Availability of funding was good during 2018. The company complied at 31 December 2018 with all risk exposure parameters for funding and liquidity management.

Figure 7 Redemption profile of the company's debt financing at 31 December 2018 (amounts in NOK million)



Investor interest in subscribing to the company's covered bonds was high in 2018, and the company also achieved good terms for its borrowing during the year. In addition to contingency facilities, the company has a 12-month soft bullet structure on its covered bonds, which confers the right to postpone maturity by up to one year residual time.

Figure 8 Composition of the liquidity buffer



EBK is subject to the quantitative requirements for the liquidity coverage ratio (LCR). These rules are incorporated in the CRR/CRD IV regulations and the regulations on prudent liquidity management. The company must satisfy the LCR applicable at any given time.[15] The company will monitor the development of the LCR closely, and uses forecasts in order to be prepared for the need to adapt

[15] FOR-2014-08-22-1097 CRR/CRD IV regulation.

liquid assess which can be included in the indicator at short notice. At 31 December 2018, the company's total LCR indicator was 402 per cent, its EUR indicator was 1 573 per cent and its NOK indicator was 647 per cent.

Article 413 of the CRR requires companies to have stable and long-term financing, but the final definition and level requirements have yet to be clarified. A requirement for the net stable funding ratio (NSFR) is included in the risk reduction measures (RRM) package recently agreed by the EU. A minimum requirement of 100 per cent has been proposed for the NSFR. Until the final definition of the NSFR has been formally adopted, the FSA's calculation of the NSFR will be based on the Basel committee's final recommendations of October 2014. The company has reported the NSFR to the FSA on a quarterly basis since 30 September 2014. The RRM will probably mean that residential mortgages in a cover pool will be given a lower weighting (reduced from 100 to 85 per cent). The company's NSFR indicator was 97 per cent at 31 December 2018.

MANAGEMENT AND CONTROL

EBK has established a risk policy for financing risk, including defined risk appetite, risk parameters and a crisis plan in the event of insufficient liquidity. This risk policy forms the basis for liquidity management.

Financing and liquidity risk is managed through parameters for financing structure, requirements for diversification of instruments, markets and residual times to maturity, and the establishment of contingency facilities. An agreement has also been entered into between the shareholders and EBK to ensure that the company can access liquidity in a crisis. The agreement commits the owner banks, under given circumstances, to purchase the company's covered bonds limited to the maturity of the company's covered bonds issued under the EMTCN programme and the associated swap agreements over the coming 12 months. EBK's own liquidity is deducted when calculating the liquidity obligation. The owner banks can deposit these covered bonds as collateral with the Central Bank of Norway in exchange for a haircut. EBK is not permitted to make such deposits in the Central Bank of Norway.

The company has a separate funding department headed by the CFO, who is responsible for operational liquidity management and reports to the CEO. The funding department utilises liquidity forecasts, particularly when obtaining new funding. The future liquidity holding, refinancing indicators and the average time to maturity of funding are then simulated. Each board meeting receives detailed information on the financing and liquidity position in the company.

EBK's risk and compliance function measures exposure linked to financing and liquidity risk in relation to approved parameters on a continuous basis, and reports quarterly on the actual exposure in the risk and compliance report to the board. These reports provide a basis for the executive management and the board to assess the exposure status in relation to established parameters and targets. The company performs stress tests which simulate the effect of possible liquidity crises, including market-specific, company-specific and combined market/company crises.

CAPITAL REQUIREMENTS

Financing and liquidity risk are not included in the capital assessment pursuant to Pillar 1. The assessment of capital requirements for financing and liquidity risk is included in the assessment under ICAAP/ILAAP in the company, where the company's capital targets are considered to be adequate for handling future capital and liquidity needs over and above the minimum regulatory requirements.

12 OPERATIONAL RISK

Definition: *Operational risk is the risk of loss as a result of inadequate or deficient internal processes or systems, human error, or external events. Operational risk also comprises compliance, legal and default risk.*

RISK APPETITE AND EXPOSURE

EBK has a simple and transparent organisation, and has therefore adopted the basic indicator method for calculating the capital requirement for operational risk. With this approach, the calculation basis for the minimum primary capital requirement is 15 per cent of average income over the past three years multiplied by 12.5. See section 42, sub-section 1 of the capital requirement regulations.

Table 17 Calculation basis and capital requirement for operational risk (amounts in NOK thousand)

Operational risk	2016	2017	2018
Net income	218 966	289 168	212 824
Average income			240 319
Basis of calculation			450 599
Capital requirement			**36 048**

The company will have a low-risk profile for operational risk. Operational risk which could expose EBK to loss consists virtually entirely of a failure to establish adequate collateral, deficient internal control or failure of IT systems.

MANAGEMENT AND CONTROL

EBK has established a policy for operational risk which forms the basis for its management and control. A number of guidelines and routines have been implemented for all significant processes in the company. These are intended to help identify that operational risk is being handled in a way which ensures an acceptable level of residual risk. The company will have an updated business continuity plan at all times, which ensures that it can maintain its operations, while functions will have adequate back-up. Relevant contingency plans have also been drawn up to deal with crises.

The company monitors operational risk through reporting and registering of operational events, pursuing compliance activities, internal auditing and so forth. The company's risk and compliance department prepares a quarterly risk and compliance report which presents the status of and trend for operational risk based on the above-mentioned conditions. This reporting provides the executive management and the board with the basis for assessing the status of exposure in relation to established parameters and targets.

CAPITAL REQUIREMENTS

EBK applies the basic indicator method to calculate the capital requirement for operational risk. The capital requirement was calculated to be about NOK 36 million at 31 December 2018 and is considered to make sufficient allowance for loss in the worst case.