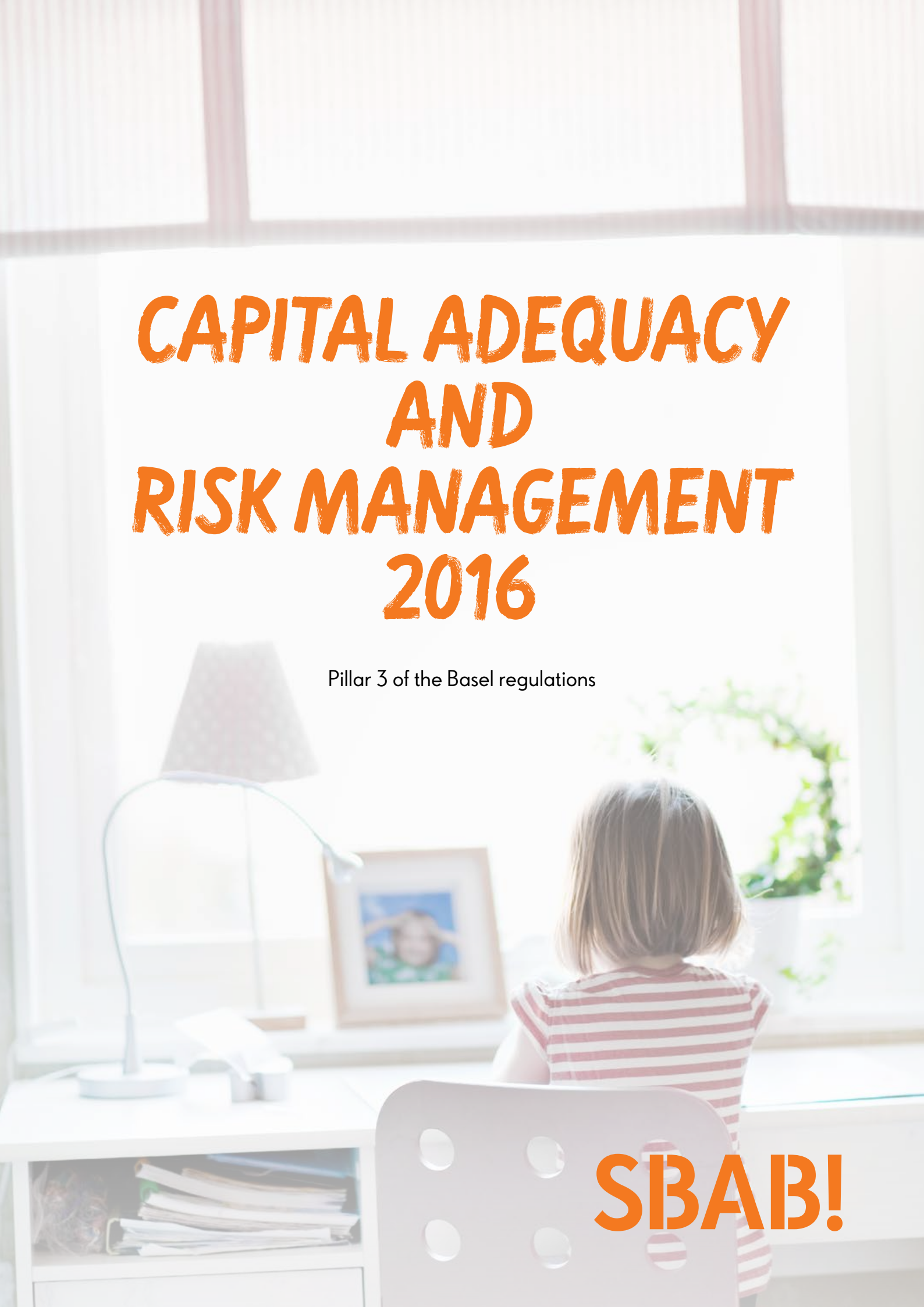
CAPITAL ADEQUACY AND RISK MANAGEMENT 2016

Pillar 3 of the Basel regulations



SBAB!

Contents

While every care has been taken in the translation of this report, readers are reminded that the original report is in Swedish.

List of tables

List of figures

GLOSSARY

CHAPTER 4 RISK MANAGEMENT AND RISK ORGANISATION

Asset and Liability Committee (ALCO)
The body that handles matters relating to risk and capital planning, which are then addressed by Executive Management and the Board.

Directive 2013/36/EU — CRD IV of the European Parliament and of the Council on authority to conduct operations in credit institutions and on the supervision of credit institutions and securities companies
Common European regulations on risk management and capital adequacy.

Regulation (EU) No. 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms (CRR)
Common European regulations on risk management and capital adequacy.

Internal capital adequacy assessment process (ICAAP)
Process according to Article 73 of CRD IV for calculating the combined capital requirements taking into account all risks, risk-weight floors for residential mortgages and stress tests.

CHAPTER 5 CAPITAL ADEQUACY

Perpetual subordinated loans
Perpetual subordinated loans have a maturity that is essentially unlimited, but they can be repurchased if a licence is obtained from Finansinspektionen (Sweden's financial supervisory authority).

Internal ratings-based approach (IRB approach)
The IRB approach is used to calculate the company's regulatory capital requirement for credit risk. The foundation IRB (FIRB) approach entails that the institution is only to estimate the PD parameter. In the advanced IRB (AIRB) approach, the institution is to estimate, in addition to PD, one or several of the parameters CCF, LGD and M (maturity).

Own funds
Own funds consist primarily of equity and subordinated loans and act as a buffer against unexpected losses.

Capital requirements under Pillar 1
Refers to the minimum amount of capital that the company is to have in accordance with CRR and CRD IV, the Special Supervision of Credit Institutions and Investment Firms Act (2014:968), the Capital Buffers Act (2014:966) and Finansinspektionen's regulations (FFFS 2014:12). These provisions also include transitional rules deriving from Basel 1.

Credit valuation adjustment risk (CVA risk)
The CVA risk is the risk that the counterparty in a financial transaction defaults and is unable to meet future payments under contracted OTC derivative agreements. Transactions with a central counterparty (CCP) should be excluded from the capital requirement for CVA risk.

Common Equity Tier 1 (CET1) capital
Tier 1 capital less additional Tier 1 capital. Consists primarily of equity.

Minimum capital requirement
The lowest amount that the company is permitted to have as own funds.

Tier 1 capital
Tier 1 capital mainly comprises equity and additional Tier 1 capital.

Additional Tier 1 capital
Additional Tier 1 capital generally comprises perpetual subordinated loans that meet the requirements in Article 52 of the CRR. According to the transitional regulations, older additional Tier 1 capital may also be included in Tier 1 capital.

Risk exposure amount in accordance with Basel 1
All balance-sheet and off-balance sheet assets that are weighted according to risk. Under the Basel 1 regulations, this is performed on a standardised basis. The assets are divided into categories based on risk, whereby they are multiplied by a number of pre-established risk weightings, primarily 0%, 20%, 50% and 100% of the carrying amount.

Risk exposure amount under Basel 3
The Basel 3 regulations permit the use of the IRB approach, within the Pillar 1 framework, to establish risk exposure amounts for balance-sheet and off-balance sheet exposures based on SBAB's own models for credit risk, market risk and operational risk. The risk weightings of other exposures are determined on a standardised basis, in appropriate cases based on the counterparty's rating.

Tier 2 instruments
Subordinated loans that meet the requirements in Article 63 of the CRR may be included in own funds. According to the transitional regulations, older Tier 2 instruments may also be included in own funds. If the remaining maturity is less than five years, a deduction will be made based on the remaining number of days.

Total capital ratio
Own funds divided by the risk exposure amount.

CHAPTER 6 INTERNAL MODEL FOR CALCULATING CAPITAL REQUIREMENTS

Economic capital
Economic capital is based on models in which SBAB assesses quantifiable risks. This constitutes an important component in, for example, pricing, financial control and in assessment of the requisite scope of risk capital.

Exposure At Default (EAD)
To calculate the EAD for off-balance sheet exposures, the unutilised amount is multiplied by a credit conversion factor (CCF).

Capital requirements under Pillar 2
The assessment is based on economic capital which, in combination with capital based on stress tests and capital for further risk, comprises the company's own assessment of the appropriate scope of risk capital. Under Pillar 2, the capital requirement may not be less than the capital metric under Pillar 1 for each risk type.

Value at Risk (VaR)
A statistical metric of the maximum expected loss at a given level of security and over a defined time period.

CHAPTER 9 CREDIT RISK IN LENDING OPERATIONS

Expected Loss (EL)
The calculated EL must be covered by earnings from operating activities, while unexpected losses must be covered by the company's equity. EL is arrived at by calculating the risk associated with each individual loan using a statistical model based on a longer time horizon. EL is measured through the formula EL = PD*LGD*EAD.

Off-balance sheet items
A commitment, pledged collateral or similar item that is not recognised in the balance sheet because it is unlikely that it will be necessary to realise or utilise it, or because, due to its extent, it cannot be calculated with sufficient reliability. Off-balance sheet items may also comprise contingent commitments, meaning it is uncertain whether or not the commitment exists.

Credit Conversion Factor (CCF)
The percentage of an off-balance sheet item that is utilised at the time of a possible future default.

Loan to Value (LTV)
The loan-to-value ratio expresses the extent of a loan in relation to the value of pledged collateral.

Loss Given Default (LGD)
Loss amount in the event of default.

Probability of Default (PD)
Probability of default of a customer or counterparty within one year.

CHAPTER 10 FUNDING

Credit Support Annexe (CSA)
Supplement to the ISDA Master Agreement that regulates the provision of collateral in connection with a derivative transaction.

Euro Medium Term Covered Note Programme (EMTCN)
International funding programme for issuing covered bonds.

Euro Medium Term Note Programme (EMTN)
International funding programme for medium and long-term non-secured senior funding.

Global Master Repurchase Agreement (GMRA)
International standardised agreement for repurchases.

CHAPTER 11 CREDIT RISK IN TREASURY OPERATIONS

International Swap and Derivatives Association (ISDA) Master Agreement
Framework agreement that regulates the rights and obligations between the parties to a derivative transaction, primarily the netting of debt in the event of insolvency.

Repo transaction
A repo transaction comprises a reverse purchase agreement whereby one party undertakes to sell a security to a counterparty in exchange for cash. In parallel, a futures contract is entered into to repurchase the security at a specific price at a specified future date.

CHAPTER 13 LIQUIDITY RISK

Liquidity Coverage Ratio (LCR)
The LCR is a liquidity risk metric that measures the relationship between liquid assets and a 30-day net cash outflow in a stressed scenario.

Net Stable Funding Ratio (NSFR)
The NSFR is a liquidity risk metric of a structural nature, which indicates the stability of the Group's funding in relation to assets.

Survival horizon
Measurement of the number of days the liquidity need can be met in a stressed scenario without access to new liquidity.

1 INTRODUCTION

In this report, SBAB discloses information on capital adequacy and risk management based on Regulation (EU) No. 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms and Finansinspektionen's regulations regarding prudential requirements and capital buffers (FFFS 2014:12). This report pertains to the consolidated situation and the conditions prevailing on 31 December 2016. For periodic information, please refer to the interim reports.

SBAB Bank AB (publ) is owned by the Swedish state. Its operations, which consist principally of deposit operations and residential mortgage lending to consumers, tenant-owners' associations and property companies in Sweden, are characterised by a low level of risk. SBAB is well capitalised. The CET1 capital ratio increased to 32.2% in 2016, mainly due to decreased credit risk. The loan loss ratio remained low (0.01%). By means of its strong capital position and good risk management, SBAB meets the supervisory rules adopted by the EU.

The credit risk in SBAB's loan portfolios declined over the year due to improved credit quality and the sale to Swedbank of the loan portfolio built up in partnership with Sparbanken Öresund. Liquidity risk decreased as a consequence of increased retail deposits. Over the year, market risk declined due to a large share of the liquidity portfolio continuing to be transferred from the trading book to the banking book.

At the end of 2016, it became mandatory under the European Markets Infrastructure Regulation (EMIR) for SBAB to clear interest-rate derivatives via central counterparties, known as clearing houses, which positively impacted the capital requirement.

During the year, SBAB started to participate in the calculation of the STIBOR (Stockholm Interbank Offered Rate) reference rate for the Swedish market.

To further strengthen the first line of risk management, risk and compliance coordinators (RCC) have been appointed in the operations. The RCCs support the respective business managers with a focus on risk management, process mapping, internal controls, incident management, and regulatory compliance. This work is coordinated by a regulatory manager.

In 2016, SBAB acquired the majority of the shares in Booli Search Technologies AB. The aim of the acquisition is to strengthen SBAB's position as an institution focused on housing, thereby increasing competitiveness within housing financing. The acquisition had only a marginal impact on SBAB's capital.

New common regulations on supervisory requirements for credit institutions were adopted by the EU and have been applied since 1 January 2014. The regulations serve to increase the stability of the international banking sector and encompass, inter alia, capital adequacy and major exposures, requirements regarding liquidity coverage and leverage ratio, as well as an opportunity for the authorities to introduce capital buffers that can be used to mitigate systemic risk and economic fluctuations. The changes entail increased capital requirements and demand increased quality of capital compared with the previous regulations. Within the framework of the applicable regulations, Swedish authorities have announced additional national capital requirements regarding the financing of housing. The pace of regulatory change has remained high and during the year, the EBA and the Basel Committee presented additional proposals for changes, aimed at increasing transparency and making credit institutions more resilient to disruptions in the market. Proposals have, inter alia, been submitted regarding changes in the Capital Requirements Regulation, CRD IV and new common reporting rules.

This report shows the material operational risks for SBAB broken down by risk type as per the table on the next page.

TABLE 1. **SIGNIFICANT RISKS**

Risk type	Risk appetite: Classification	Risk appetite: Level	Risk profile	Risk management
Credit risk in lending operations The risk that the counterparty does not fulfil its payment obligations to SBAB. Credit risk is defined as the risk of loss due to the customer's inability to make interest and loan repayments or otherwise fulfil the loan agreement. Credit risk arises in conjunction with loans and loan commitments, as well as in connection with value changes in pledged collateral. The credit risk also includes concentration risk, which refers to the increase in credit risk that arises in large exposures to individual counterparties, regions or industries. READ MORE – AR NOTE 2a.	Wanted risk	Medium	SBAB's customer base primarily comprises consumers and tenant-owners' associations, the majority of which are concentrated to major metropolitan areas. To a limited extent, lending takes place for commercial properties.	Credit risk is central to SBAB's business model and is considered to be the dominant risk in operations. Credit granting in SBAB is characterised by responsible credit granting taking into account the customer's long-term repayment capacity and resilience. Credit rules and credit management are continuously analysed, processed and improved. Corporate clients are processed individually while retail customers are analysed using a structured process in conjunction with the credit approval process.
Credit risk in treasury operations Defined as the total of investment risk and counterparty risk. Counterparty credit risk is defined as credit risk in financial derivatives that arises when the value of the instrument changes resulting from variations, for example, in interest rates or currency exchange rates, which means SBAB recognises a receivable against the counterparty. In addition, counterparty credit risk entails that SBAB's financial counterparties cannot meet their commitments under the contracted repos. Investment risk is defined as credit risk in financial investments and entails the risk that a debtor does not fulfil its payment obligations, meaning either completes payments late or not at all. Investment risk arises through investments in the liquidity portfolio and the investment of surplus liquidity. READ MORE – AR NOTE 2b.	Necessary risk	Low	SBAB's counterparty risks and investment risks are low and are not considered dominant risks.	Counterparty-risk exposure is primarily covered through collateral agreements in which the counterparty provides collateral in an effort to reduce exposure. Investment risk is mitigated as SBAB only invests in interest-bearing bonds with AAA credit ratings.
Market risk The risk of loss or reduced future income due to market fluctuations. Market risk includes interest-rate risk, currency risk, basis risk and spread risk. Currency risk refers to the risk that changes in the exchange rate for SEK against other currencies result in losses or lower future income. Interest-rate risk is defined as the risk that variations in interest rates result in losses or lower future income as assets and liabilities have different fixed-interest periods and interest terms. Spread risk refers to an exposure to changing conditions between interest costs for different issuers. Basis risk refers to the risk associated with deposits and lending that are locked to different interest bases. READ MORE – AR NOTE 2d.	Necessary risk	Low	SBAB's market risk is low and is not considered a dominant risk.	Interest-rate risk is mitigated through direct funding or the use of derivatives. Currency risks are mitigated as funding in international currency is hedged through currency swaps or invested in matching currencies.
Operational risk The risk of losses due to inappropriate or unsuccessful processes, human error, faulty systems or external events, including legal risk. The forms of operational risk applicable to SBAB are shown in the categorisation of types of events. Examples of types of events that could be applicable are internal and external fraud, work conditions and environment, damage to tangible assets, disruptions to the business operations and systems, transaction management and process control. Legal risk includes the risk that agreements or other legal transactions cannot be completed in accordance with specific terms and conditions or that judicial proceedings are started that could have a negative impact on SBAB's operations. READ MORE – AR NOTE 2e.	Necessary risk	Low	Operational risk is a natural part of all business. SBAB aims to optimise the relationship between costs for operational risk and operating activities. SBAB considers operational risk to be a prerequisite for implementing the business concept efficiently and competitively, taking into account operations, strategy, risk appetite and the macro environment.	Within SBAB, risk management consists of uniform valuation and reporting of operational risk. The analysis of risk levels in all operations is conducted on a regular basis and reported to the Board, the CEO and the Executive Management. Self-evaluation and incident management are central features in monitoring processes. In order to identify risks that may arise from changed or new processes, a new product approval process (NPAP) is carried out before implementation.
Business risk The risk of declining earnings due to deteriorating competitive conditions or an incorrect strategy or decision. As the accounting standards used by SBAB require that certain components of the portfolio are measured at market value while other components are recognised at their carrying amount, this impacts on earnings, and consequently also own funds, that do not correspond to the actual risk to which the portfolio is exposed. To limit such effects, income volatility is to be measured and limited. READ MORE – AR NOTE 2f.	Necessary risk	Low	SBAB's business risk is low and is not considered a dominant risk.	New business is usually relatively similar to the business SBAB already has. Changes in the form of new products or new markets may only constitute a small part of SBAB's activities and must be implemented at such a pace that SBAB does not substantially jeopardise its profit level and with great probability avoids pressure on its own funds. The effect on the operating profit/loss arising from applied accounting standards is mitigated through limit setting and the greater use of hedge accounting.
Liquidity risk The risk that the company will not be able to meet its payment obligations on the date of maturity without the related cost for obtaining funds increasing significantly. Short-term liquidity risk measures the risk of being impacted in the short term by a lack of liquidity, while structural liquidity risk is a measure of the mismatch between assets and liabilities in terms of maturities, which risks leading to a lack of liquidity in the longer term. READ MORE – AR NOTE 2c.	Necessary risk	Low	SBAB has a low liquidity risk and diversified funding. Securities that are part of the liquidity reserve have high credit ratings and are eligible as collateral with either the Riksbank or the European Central Bank, to guarantee liquidity.	SBAB's liquidity strategy includes proactive and continuous liquidity planning, active debt management and an adequate liquidity reserve. The funding strategy takes into consideration the expected maturity on the asset side. On this basis, SBAB limits its structural liquidity risk by maintaining diversified funding with sufficiently long maturities. SBAB has several liquidity metrics, for which limits apply, most of which are monitored and reported on a daily basis.

2 THE BOARD'S STATEMENT ON RISK MANAGEMENT AND A RISK SUMMARY

The Board of Directors of SBAB Bank AB (publ) supports the risk management described in this document and considers that it meets the requirements that may be placed on it in relation to SBAB's risk profile and adopted short and long-term strategic, capital and financial plans.

TABLE 2. **RISK APPETITE AND RISK PROFILE**

	RISK APPETITE		RISK PROFILE	
Risk type	**Classification**	**Level**	**Limit utilisation**	**Proportion of economic capital, %**
Credit risk in lending operations	Wanted risk	Medium	Medium	66
Credit risk in treasury operations	Necessary risk	Low	Low	6
Market risk	Necessary risk	Low	Medium	19
Operational risk	Necessary risk	Low	Low	6
Business risk	Necessary risk	Low	Low	3
Liquidity risk	Necessary risk	Low	Low	-

SBAB classifies risks as wanted, necessary and unwanted:

- Wanted risks comprise those directly related to the business concept.
- Necessary risks are those arising from activities that are regarded as a direct prerequisite for being able to implement the business concept efficiently and competitively, whereby a certain level of risk is accepted to achieve the positive operational effects that are a direct part of the business concept.

Credit risk is central to SBAB's business model and is considered to be the predominant risk in SBAB's operations, which is apparent as it constitutes a major part of the economic capital. Credit risk directly related to SBAB's business operations qualifies as a wanted risk, while credit risk related to liquidity investments or in the form of counterparty risk is classified as necessary risk that is acceptable, but where the level of risk should be limited.

Market risk and its components are primarily considered a necessary risk. Market risk should be kept at a low level and not be a predominant risk.

Operational risk is defined as a necessary risk, which means that both expected and unexpected losses must be optimised based on the positive effects to be expected achieved in the form of anticipated revenues, cost savings or reductions in other risk.

Business risk is defined as a necessary risk. Changes in the form of new products or new markets may only constitute a small part of SBAB's activities and must be implemented at such a pace that SBAB does not substantially jeopardise its profit level and with great probability avoids pressure on its own funds.

Liquidity risk is defined as a necessary risk and must be maintained at such a level that SBAB can manage a period of acute liquidity crisis without dependency on the capital market. Liquidity risk is not managed by capital provisions but by maintaining a liquidity buffer.

3 THE CONSOLIDATED SITUATION

The consolidated situation includes SBAB Bank AB (publ), the Swedish Covered Bond Corporation and Booli Search Technologies AB. The Swedish Covered Bond Corporation (SCBC) issues covered bonds in the Swedish and international capital markets. Booli Search Technologies AB develops products and services focusing on the housing market.

TABLE 3. **ENTITIES INCLUDED IN THE CONSOLIDATED SITUATION** *(EBA LI3 TABLE)*

Entity	Corporate Registration Number	Ownership share	Method of accounting consolidation	Method of regulatory consolidation	Company description
SBAB Bank AB (publ)	556253-7513	Parent Company	–	–	Institution
AB Sveriges Säkerstallda Obligationer (publ) (Swedish Covered Bond Corporation – SCBC)	556645-9755	100%	Full consolidation	Full consolidation	Institution
Booli Search Technoliogies AB	556733-0567	69%	Full consolidation	Full consolidation	IT company

SBAB's principal activity is to provide mortgage loans for residential properties and tenant-owners' rights located in Sweden against collateral in the form of mortgage deeds and shares in tenant-owners' associations and, to a limited extent, to finance commercial properties and provide unsecured loans. The Parent Company also offers savings accounts.

Information about the Board of Directors, the recruitment policy, the diversity policy and the risk committee is included in the Corporate Governance Report in SBAB's Annual Report. For information about related parties, please refer to Note 36 of SBAB's Annual Report.

The Swedish Covered Bond Corporation (hereinafter referred to as SCBC) does not conduct any proprietary new lending operations. Instead, it acquires loans from the Parent Company on a regular basis or as needed. The purpose of securing credits is for them to be included, in full or in part, in the cover pool that comprises collateral for holders of covered bonds issued by SCBC in Swedish and international capital markets.

SBAB's sales activities are conducted through two channels: Retail and Corporate Clients & Tenant-Owners' Associations. Retail focuses on lending to consumers and deposits from consumers and companies. Retail also includes the sales channel Partnerships & Business Development, which manages partnerships with external participants. Corporate Clients & Tenant-Owners' Associations is active in the property market through lending to property companies, property funds and tenant-owners' associations. SBAB's funding is managed by Treasury, within the Accounting & Treasury department.

In 2016, SBAB acquired a majority holding in Booli Search Technologies AB (Booli) and owns 69% of the company. Former subsidiaries of Booli have been merged into Booli.

FIGURE 1. **CONDENSED BALANCE SHEET**

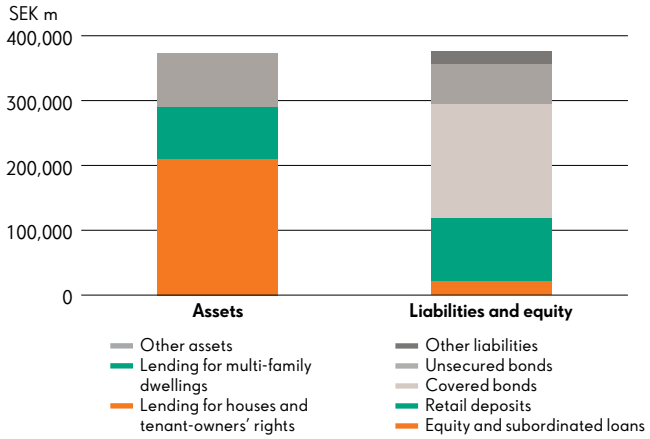
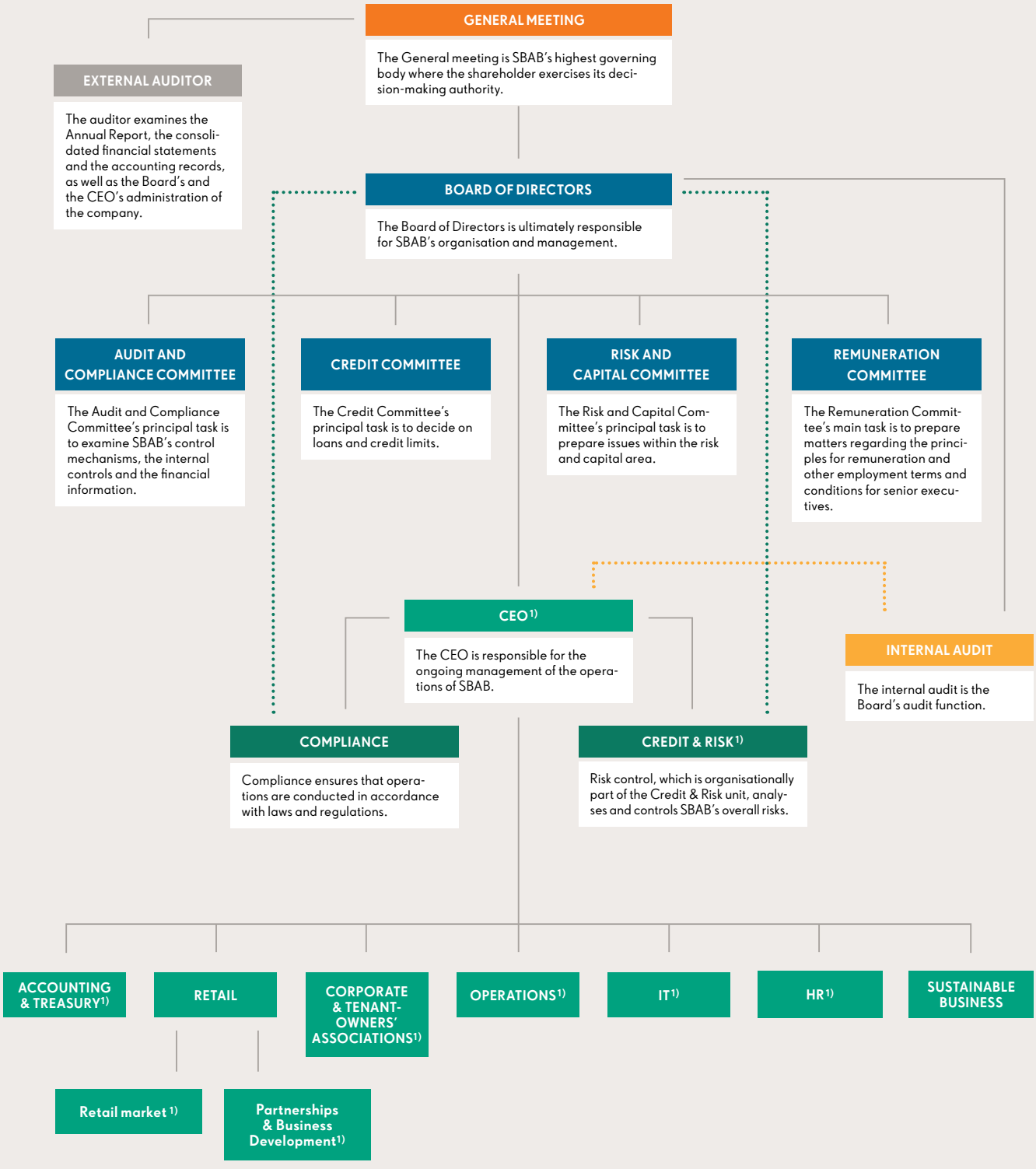


FIGURE 2. **ORGANISATION**



1) Included in Executive Management.

4 RISK MANAGEMENT AND RISK ORGANISATION

SBAB's risk taking is low and is kept at a level commensurate with financial targets for return, scope of own funds and target rating. The lending operations mainly generate credit risk, while the most material risks in the funding operations consist of interest-rate risk and liquidity risk.

4.1 General rules for risk management

Risk management within SBAB should consist of effective management and monitoring of all of the risks in the operations.

- Risk management must support operations, maintain a high level of quality to ensure control of all risks, safeguard SBAB's survival, keep in line with rating targets and limit volatility in SBAB's financial position.
- The ability to assess, manage and price risks while simultaneously maintaining sufficient liquidity and capital to meet unforeseen events is of fundamental significance for long-term profitability and stability. The aim of the strategy adopted for the operations, with respect to management and pricing, is to consider the risks that arise in the operations and the capital needed to cover these risks. This entails that an ongoing discussion should be maintained regarding the risks generated in the operations and the capital required to counter those risks.
- SBAB is to have an organisation to identify, measure, govern, report and maintain control of the risks that SBAB is or may become exposed to. There must be satisfactory internal control and a functioning and effective risk management system.
- SBAB must have knowledge and awareness of any risks to which the bank may be exposed. SBAB is to be able to estimate the size of the risks to which the bank is and may become exposed.
- An independent function for risk control must be in place with the requisite skills and authority.
- All SBAB employees are responsible for managing the company's risks as part of their regular work. SBAB is to continuously inform and train its employees on the company's risk management framework. A sound risk culture is to be realised through a value-based work approach.

4.2 Risk strategy

SBAB's operations are to be conducted such that risks are adapted to SBAB's capacity to bear risk. Risk-bearing capacity primarily refers to the capacity to manage unexpected and expected losses by means of own funds or ongoing earnings capacity and, secondly, the capacity to minimise unwanted risks by means of appropriate functions, strategies, processes, procedures, internal rules, limits and controls. Certain risks cannot be quantified and compared with the risk-bearing capacity. In such cases, the cost of mitigating the risk should be weighed up against the desired level of risk and the change in the level of risk achieved through a particular measure.

SBAB should only deliberately expose itself to risks directly attributable or necessary to SBAB's business operations. Such risks primarily encompass credit risk, liquidity risk, market risk, business risk and operational risk.

In addition to limiting the exposure to different types of risk, the risks to SBAB from using different types of financial instruments must also be limited. In its treasury operations, SBAB should mainly use derivatives for hedging purposes. Since the risk profile of a derivative transaction may differ from that of the hedged exposure, an analysis must always be performed to ensure that the total risk is understood. This is especially important in the use of new financial instruments that must be approved in SBAB's process for new financial instruments prior to the transaction.

SBAB applies a documented process for the approval of new or significantly altered products, services, markets, processes and IT systems as well as major operational and organisational changes.

SBAB's risk strategy involves managing and evaluating risks that the operations are or may be exposed to, through:

- Clear and documented internal procedures and control systems.
- An appropriate and cogent organisational structure with clearly defined and documented powers.
- Current and documented decision-making procedures that clearly state the reporting structure.
- Risk evaluation methods and system support that are adapted to the operations' requirements, complexity and size.
- Sufficient resources and skills to achieve the desirable quality in both business and control activities.
- Regular incident reporting by the operations according to a documented process.
- Documented and communicated contingency and continuity plans.
- Clear instructions on internal capital adequacy assessments, credit risk, operational risk, liquidity risk and market risk, which are updated annually and adopted by the CEO or, if required, by the Board of Directors.
- All material risks for SBAB are limited by the Board and are commensurate with the pre-determined risk appetite.

4.3 Risk appetite

The level of risk taking within SBAB is low. This is achieved by ensuring that the total risk level is kept compatible with short and long-term strategic plans, capital plans and financial plans.

An important part of SBAB's business model entails risks being relatively low and predictable, making it possible to maintain a large volume of business in relation to own funds. This does not mean that each individual credit exposure has low risk, but rather that the total lending portfolio consists largely of low-risk exposures and that their internal risk effect is such that SBAB's total risk is limited. The basis for SBAB's appetite for various types of risk is that each risk should fit within a well-defined segment of SBAB's risk-bearing capacity. The total risk exposure may not exceed the total risk-bearing capacity. The scope of the risk that is accepted must be clearly linked to how important the relevant risk is to SBAB's business model and the positive effects expected to be achieved in the form of anticipated income, cost savings or reduction of other risks.

As a rule, each business decision changes SBAB's exposure to various risk types. Accordingly, SBAB's risk control models are designed to reflect the determined risk appetite and such that each business decision is based on a healthy balance between the estimated impact on earnings and changes in risk exposure.

Based on the chosen strategy, ongoing earnings and the size of own funds, the Board of the Parent Company establishes the risk that SBAB is prepared to take and makes decisions regarding risk appetite targets. These targets are based on three main categories: solvency, liquidity risk and compliance. The solvency category encompasses the risks for which SBAB must retain capital, while liquidity risk encompasses the risks impacting SBAB's prerequisites for successful financing and liquidity management. Compliance, the third main category, encompasses the regulations and ethical standards with which SBAB must comply to pursue its operations. Each category is broken down into subgroups with established limits for which outcomes are followed up on and reported monthly to the CEO and Board.

SBAB's targets for the three risk appetite categories:

- In the first category, solvency, work is conducted to ensure that SBAB maintains sufficient capital to conduct an operation in accordance with the adopted strategy, and that credit risk, market risk, operational risk, concentration risk and income-volatility risk are kept within the levels approved by the Board, and that minimum levels are maintained with regard to capital ratios.
- In the second category, liquidity risk, work is conducted to monitor that liquidity meets the determined minimum levels so that SBAB is able to cope with periods of strained market liquidity. It also includes ensuring that the SCBC's cover pool has a sufficient level of collateral to maintain a AAA rating in a stressed scenario.
- Regulatory compliance is essential in maintaining confidence in SBAB's operations. Even rules that are not legally binding, but that reflect a market practice or ethical guidelines, affect SBAB's approach to employees and customers. The risk appetite metric for the third category, compliance, is not quantifiable in the same way as the other categories — solvency and liquidity — but is summarised in a more preventive qualitative target.

SBAB is tasked with continuously, and at least annually, reassessing the balance between risks and risk-bearing capacity or the costs to minimise risk. The reassessment includes limits and calibration levels, and should be performed prior to the start of business planning, the internal capital and liquidity adequacy assessment processes (ICAAP and ILAAP) and capital planning. The processes for business planning, ICAAP, ILAAP and capital planning should then include a clear and documented link to risk appetite.

4.4 Limits for capital ratios and targets for return

Each year, the Board considers capital requirements in relation to the risks to which SBAB is exposed. This is performed through a decision on limits for capital ratios and targets for return.

Based on the chosen business strategy, rating targets and capital planning, the Board decided to change the internal limits for the CET1 capital ratio and the total capital ratio, calculated according to the CRR, to be equal to the CET1 capital and own funds requirements communicated by Finansinspektionen. In addition, SBAB's targets for the CET1 capital ratio and the total capital ratio should exceed the internal limits by 1.5 percentage points.

The internal limit for capital under the transitional rules (according to Article 500 in the CRR) entails that own funds are to exceed the amount defined as the minimum requirement and a capital planning buffer calculated in accordance with the CRR/CRD IV. The corresponding target for own funds is that, under normal conditions, own funds should exceed the capital requirement defined in the minimum requirement and a capital planning buffer plus an additional 10% of the minimum requirement.

Outcomes are reported to the CEO and Board on a monthly basis. More detailed reporting of the current capital position in relation to established targets is performed quarterly. The CRO is responsible for this reporting.

TABLE 4. **LIMITS FOR CAPITAL RATIOS AND TARGETS FOR RETURN**

	TARGETS		OUTCOME		DIFFERENCE	
	2016	2015	2016	2015	2016	2015
Return on equity (owner's return requirement) [1], %	10.0	10.0	12.3	10.2	2.3	0.2
CET1 capital ratio, %	25.4	24.2	32.2	28.6	6.8	4.4
Total capital ratio, %	35.5	34.4	51.6	49.3	16.1	14.9
Total capital under the transitional rules	SEK 15.5 billion	SEK 15.2 billion	SEK 19.8 billion	SEK 18.9 billion	SEK 4.3 billion	SEK 3.7 billion

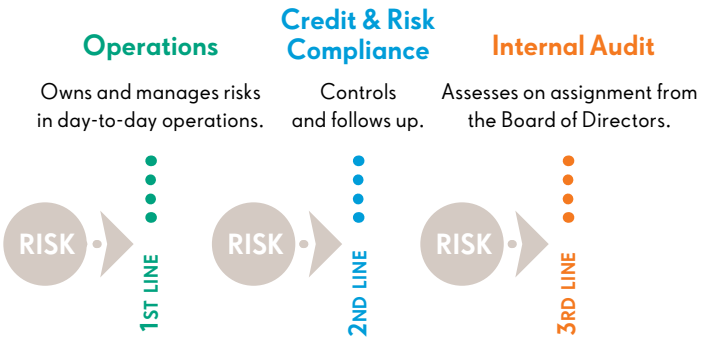
[1] Net profit for the year divided by average equity.

4.5 The three lines of defence

To define the division of responsibilities between the business operations, risk control and compliance, as well as internal audit, SBAB applies the division of roles and responsibilities resulting from the three lines of defence principle:

- The first line of defence refers to the day-to-day management of risks performed by the business operations that incur and own the risks.
- The second line of defence refers to the risk control and compliance functions. Risk Control is to ensure that risk awareness and acceptance are adequate to manage risks on a daily basis. Risk Control also has a supportive role and works to ensure that the business operations have the procedures, systems and tools required to maintain the daily management of risks, thereby ensuring that the business operations comply with applicable laws and regulations in Risk Control's sphere of responsibility. Compliance is to verify that the business operations adhere to laws and regulations and support the business operations within its area of responsibility.
- The third line of defence refers to the internal audit, which reviews and regularly assesses whether the company's organisation, governance processes, IT systems, models and procedures are appropriate and effective, and whether the company's internal controls are appropriate and effective. The internal audit is also tasked with reviewing and regularly assessing the company's risk management based on its adopted risk strategy and risk appetite.

FIGURE 3. **THE THREE LINES OF DEFENCE**



4.6 Risk organisation

SBAB's Board bears the overarching responsibility for the company's total risk exposure and determines the risk policy, capital policy and risk appetite. It is the Board's responsibility to ensure that operations can be conducted with sound internal control so that SBAB's ability to meet its obligations is not compromised. When the Board determines the business strategy, it takes into account the risks that SBAB is and may be exposed to as well as the capital required to cover SBAB's risks.

The Board or its committees are to approve all significant methods, models and processes used in risk management. (For more information regarding the Board's committees, see the Corporate Governance Report in SBAB's Annual Report.) The Board and CEO should have a sound overall comprehension of these and a detailed understanding of the content of the risk reports submitted to them. The CRO is responsible for the Board and CEO receiving ongoing training in risk-related issues and for ensuring that new members are trained within two months of commencing their appointments.

The CEO is responsible for ongoing administration in accordance with the strategies, guidelines and governance documents adopted by the Board. The CEO is to ensure that the methods, models and processes forming part of the internal measurement and control of identified risks function as intended and are approved by the Board. The CEO also ensures, on an ongoing basis, that reporting to the Board by each unit, including the Risk Control function, is conducted in accordance with the relevant instructions.

The CRO is responsible for the independent Risk Control function, which comprises identification, quantification, analysis and reporting of all risks. The CRO is directly subordinate to the CEO and reports directly to the CEO and Board of Directors of SBAB.

Among other matters, the CRO is responsible for:

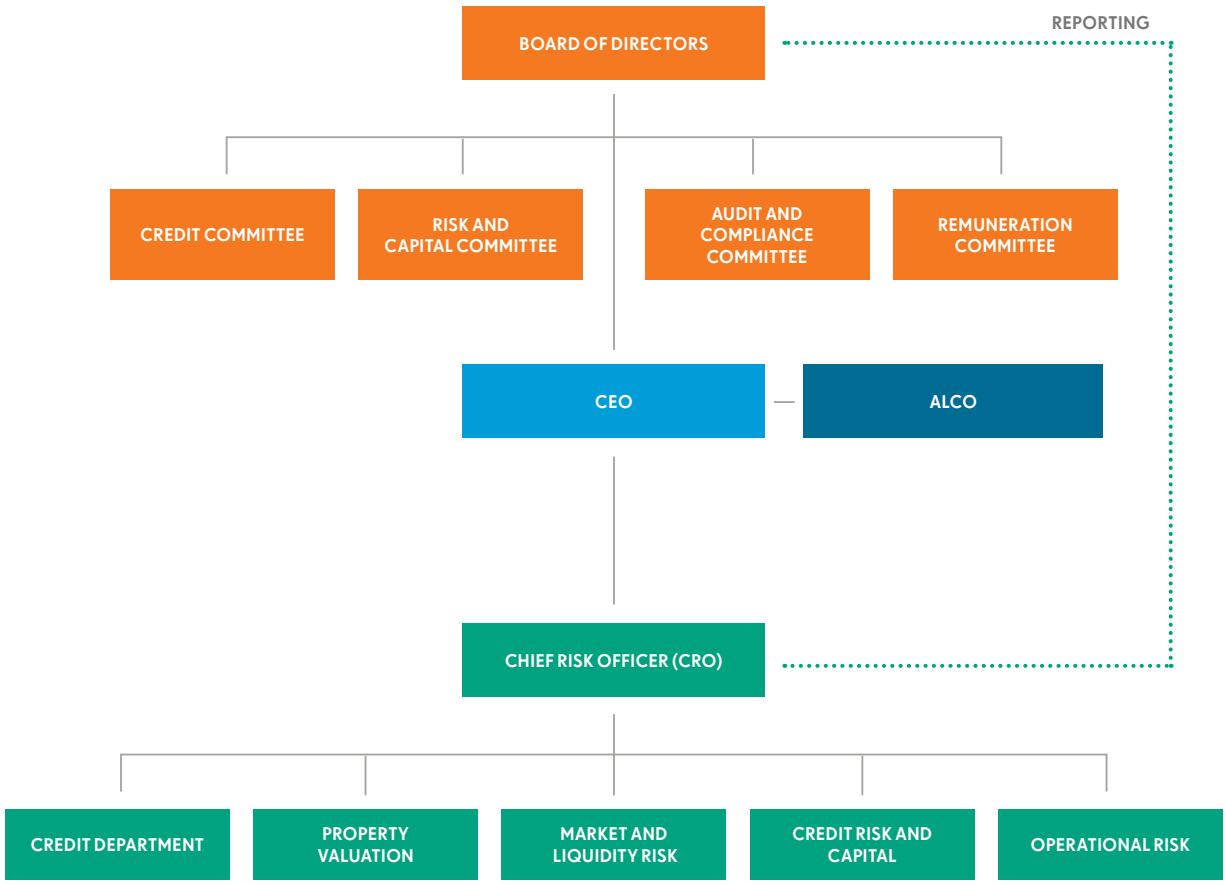
- At an overarching level, developing risk-taking strategies and ensuring that SBAB's risk-taking strategies are implemented in accordance with the Board's intentions, and that policies, instructions and processes facilitate relevant follow-up.
- Identifying, measuring, analysing and reporting risk exposure to the Board of Directors and CEO.
- Providing the Board of Directors and the CEO with a tangible and comprehensive overview of all risks in the institution.
- Designing proposals for the institution's risk strategy and participating in all material risk management decisions.
- Having sufficient authority to influence strategic risk management decisions and being able to contact the Board of Directors directly.
- Designing, implementing, ensuring reliability and following up SBAB's risk classification system and its economic capital model.

A monthly report on the overall risk situation and capital adequacy ratios is presented by Risk Control to the Board, the CEO and Executive Management. The Board and the CEO are also provided with a more in-depth description of risks on a quarterly basis. In addition, a daily report on current risk levels in relation to granted limits is presented to the CEO, CFO and CRO. SBAB's Board and Executive Management are thereby provided with a relevant overview of the Group's risk exposure on a continuous basis.

Those who own the risks, i.e. the business operations, must, without delay, inform Risk Control of occurrences of material events that could entail a heightened risk.

Clear ownership of risk and compliance applies in the first line of defence at SBAB. Therefore, in 2016, an organisation for risk and compliance coordinators was created under a Regulatory Manager, who leads, develops and coordinates risk management, and ensures regulatory compliance in the first line of defence.

FIGURE 4. **RISK REPORTING**



5 CAPITAL ADEQUACY

The rules for capital adequacy are stated in the CRR and CRD IV. In part, the rules serve to make institutions more resilient to new crises and, in part, to raise confidence in the institutions' ability to manage new crises. The institutions must prove to rating agencies and the investors who purchase the institutions' securities, as well as new and existing customers, that they have an adequate capital situation.

5.1. Capital requirements

The size of SBAB's capital requirement depends on laws and regulations, the company's internal assessment based on approved strategies, the assessments of investors and rating agencies, and the evaluations made by the owner, the Board and Executive Management.

Capital in accordance with Pillar 1, refers to the minimum amount of capital that the company is to have in accordance with the CRR and CRD IV, the EU's technical standards and delegated acts, the Special Supervision of Credit Institutions and Investment Firms Act (2014:968), the Capital Buffers Act (2014:966) and Finansinspektionen's regulations regarding prudential requirements and capital buffers (FFFS 2014:12). The CRR also includes transitional rules entailing that the capital requirement be at least 80% of the capital requirement under Basel 1. At 31 December 2016, the total capital ratio was 51.6% and the CET1 capital ratio was 32.2%.

5.2 Capital requirements and buffers

The rules in the CRR and CRD IV entail, among other things, requirements for a minimum level of own funds and controls on capital requirements. According to the requirements, the bank must have a CET1 capital ratio of at least 4.5%, a Tier 1 capital ratio of at least 6% and a total capital ratio at least equal to 8% of the total risk-weighted exposure amount for credit risk, market risk and operational risk. In addition, the bank must maintain CET1 capital to meet the combined buffer requirement, which in Sweden is the sum of a capital conservation buffer of 2.5% of the risk exposure amount, a countercyclical buffer of up to 2.5% and buffers for systemic risk of up to 5%.

Finansinspektionen has decided that, in addition to the capital conservation buffer of 2.5%, a countercyclical buffer of 1.5% will apply for Swedish exposures effective from 27 June 2016 and of 2.0% from 19 March 2017. Finansinspektionen has also decided to recognise countercyclical buffer values of up to 2.5% set by a competent authority in another EEA country, which means that Norwegian exposures are subject to a countercyclical buffer of 1.5%. Furthermore, banks considered systemically important are subject to an additional capital requirement of 5% to be covered by CET1 capital. The four largest banks in Sweden are currently considered systemically important: Handelsbanken, Nordea, SEB and Swedbank. In addition, Sweden has introduced a risk-weight floor of 25% for residential mortgages to Swedish households.

SBAB has taken these regulations into account in its capital planning (see Chapter 6, Internal model for calculating capital requirements) and meets the requirements with a margin. The buffer values are presented in Table 11, Capital requirements and risk exposure amounts.

In April 2016, Finansinspektionen announced that a capital repayment requirement would be introduced for new residential mortgages from 1 June. The requirement entails that not less than 2% of the original loan principal must be repaid each year on new residential mortgages with LTV ratios in excess of 70%. For loans with an LTV ratio of less than 70% but more than 50%, at least 1% of the original loan principal must be repaid each year.

On 1 January 2018, new forthcoming rules in IFRS 9 will replace the accounting rules for credit risk provisions in IAS 39. The new rules entail a new basis for the classification and measurement of financial instruments. SBAB is working on preparing a model for this. It is still too early to express a view on the impact this will have on the size of the provision, and therefore also on own funds.

TABLE 5. **GEOGRAPHIC DISTRIBUTION OF CREDIT-RISK EXPOSURES FOR THE CALCULATION OF THE COUNTERCYCLICAL BUFFER**

	CREDIT RISK EXPOSURES		TRADING BOOK EXPOSURES		SECURITISED EXPOSURES		CAPITAL REQUIREMENTS					
Countercyclical buffer by country, SEK million	**Credit-risk exposure amounts using the standardised approach**	**Credit-risk exposure amounts using the IRB approach**	**Long and short trading book positions using the standardised approach**	**Trading book exposures using the IRB approach**	**Exposure amounts using the standardised method**	**Exposure amounts using the IRB approach**	**Of which, credit exposures**	**Of which, trading book exposures**	**Of which, securitised exposures**	**Total**	**Weights capital requirements, %**	**Capital conservation buffer level, %**
Sweden	35,004	304,259	6,731	–	–	–	2,339	1	–	2,340	98.29	1.50
Norway	549	–	2,387	–	–	–	4	16	–	20	0.84	1.50
Other	1,627	–	7,783	–	–	–	13	8	–	21	0.87	–
Total	**37,180**	**304,259**	**16,901**	**–**	**–**	**–**	**2,356**	**25**	**–**	**2,381**	**100.00**	

TABLE 6. **INSTITUTION-SPECIFIC COUNTERCYCLICAL BUFFER**

SEK million	
Total risk exposure amount	38,413
Institution-specific countercyclical buffer, %	1.49
Institution-specific countercyclical buffer requirements	571

5.3 Own funds

SBAB's own funds comprise equity as well as additional Tier 1 capital and Tier 2 capital consisting of subordinated loans. SBAB's own funds amounted to SEK 19,833 million at 31 December 2016. Over the year, CET1 capital was affected by the fact that net profit/loss for the period was added and the estimated dividend deducted, in accordance with SBAB's dividend policy. The surplus has been verified by the company's auditors, in accordance with Article 26, item 2, of the CRR.

According to Article 35 of the CRR, the institution shall, except in the case of the items referred to in Article 33, not make adjustments to remove from own funds unrealised gains or losses on assets or liabilities recognised at fair value. According to this Article, SEK 662 million have been added to CET1 capital.

According to Article 33, item 1, of the CRR, the part of the fair-value reserves related to gains or losses on cash-flow hedges of financial instruments that are not valued at fair value, including projected cash flows, is not to be included in own funds. The CET1 capital has been adjusted for cash-flow hedges amounting to negative SEK 526 million.

Changes in fair value that depend on the institution's own credit standing and that are related to derivatives had a negative impact of SEK 31 million on CET1 capital, in accordance with Article 33, item 1b.

With reference to Articles 34 and 105 of the CRR, SEK 67 million has been deducted due to the requirements for prudent valuation.

A deduction of SEK 142 million for intangible assets and a deduction of SEK 3 million for net provisions were made in accordance with Article 36. Under Article 62, item d, a supplement for an IRB surplus increased own funds by SEK 1 million in 2016.

No risk exposures have been deducted from own funds.

Older subordinated debt that does not meet the CRR requirements may be included in the calculation of Tier 1 capital, if certain conditions are present according to the transitional rules of the CRR and if Finansinspektionen has given its consent. The subordinated loans that were previously encompassed by these transitional rules were redeemed in 2016.

Disclosure of own funds during a transitional period

Disclosures in accordance with Article 5 of Commission Implementing Regulation (EU) No 1423/2013. No amounts are subject to the provisions preceding Regulation (EU) No 575/2013 ("CRR") or the prescribed residual amount according to Regulation (EU) No 575/2013.

TABLE 7. **OWN FUNDS, CONSOLIDATED SITUATION**

GROUP, SEK million	2016	2015
CET1 capital instruments: Instruments and reserves		
Capital instruments and the related share premium accounts	1,958	1,958
Retained earnings	9,592	8,464
Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	662	264
Tier 1 capital instruments	1,500	–
Independently verified interim profits net of any foreseeable charge or dividend	942	697
CET1 capital before regulatory adjustments	**14,654**	**11,383**
CET1 capital: Regulatory adjustments		
Additional value adjustments (negative amount)	–67	–67
Intangible assets (net of related tax liability) (negative amount)	–142	–46
Fair value reserves related to gains or losses on cash-flow hedges	–526	–236
Negative amounts resulting from the calculation of expected loss amounts	–3	–83
Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	–31	–25
Tier 1 capital instruments in equity	–1,500	–
Total regulatory adjustments to CET1 capital	**–2,269**	**–457**
CET1 capital	**12,385**	**10,926**
Additional Tier 1 capital: Instruments		
Capital instruments and the related share premium accounts	3,000	1,500
of which classified as equity under applicable accounting standards	*1,500*	–
of which, classified as liabilities under applicable accounting standards	*1,500*	*1,500*
Amount of qualifying items referred to in Article 484(4) and the related share premium accounts subject to phase-out from Additional Tier 1 capital	–	994
Additional Tier 1 capital before regulatory adjustments	**3,000**	**2,494**
Additional Tier 1 capital: Regulatory adjustments		
Total regulatory adjustments to Additional Tier 1 capital	–	–
Additional Tier 1 capital	**3,000**	**2,494**
Tier 1 capital (Tier 1 capital=CET1 + Additional Tier 1 capital)	**15,385**	**13,420**
Tier 2 capital: Instruments and provisions		
Capital instruments and the related share premium accounts	4,447	5,447
Credit risk adjustments	1	–
Tier 2 capital before regulatory adjustments	**4,448**	**5,447**
Tier 2 capital: Regulatory adjustments		
Total regulatory adjustments to Tier 2 capital	–	–
Tier 2 capital	**4,448**	**5,447**
Total capital (Total capital=Tier 1 capital + Tier 2 capital)	**19,833**	**18,867**
Total risk-weighted assets	**38,413**	**38,244**
Capital ratio and buffers		
CET1 capital (as a percentage of total risk-weighted exposure amount), %	32.2	28.6
Tier 1 capital (as a percentage of total risk-weighted exposure amount), %	40.1	35.1
Total capital (as a percentage of total risk-weighted exposure amount), %	51.6	49.3
Institution-specific buffer requirements (CET1 capital requirement in accordance with Article 92(1)(a) plus the capital conservation buffer and countercyclical capital buffer requirements, plus the systemic risk buffer, plus the systemically important institution buffers [G-SII buffer and O-SII buffer]) expressed as a percentage of the risk-weighted exposure amount, %	8.5	8.0
of which, CET1 capital, minimum requirement, %	*4.5*	*4.5*
of which, capital conservation buffer requirement, %	*2.5*	*2.5*
of which, countercyclical buffer requirement, %	*1.5*	*1.0*
of which, systemic risk buffer requirement, %	–	–
of which, G-SII buffer and O-SII buffer, %	–	–
CET1 capital available to meet buffers (as a share of risk-weighted exposure amounts, %)	27.7	24.1
Capital instruments subject to phase-out arrangements (only applicable between 1 January 2013 and 1 January 2022)		
Current cap on AT1 instruments subject to phase-out arrangements	–	2,096
Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	–	–
Current cap on T2 instruments subject to phase-out arrangements	–	910

There are no ongoing or foreseen material obstacles or other legal barriers to a rapid transfer of funds from own funds other than what is stipulated in the terms and conditions governing subordinated loans (see Note 29 in SBAB's Annual Report for 2016) or what generally applies under the Companies Act (2005:551).

The starting capital required for the Parent Company in accordance with the Act on Banking and Financing Activities (2004:297) totalled SEK 45.9 million. The corresponding capital requirement for SCBC amounted to SEK 47.0 million.

TABLE 8. **CAPITAL ADEQUACY**

	CONSOLIDATED SITUATION		PARENT COMPANY		SCBC	
SEK million	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
CET1 capital	12,385	10,926	7,708	7,459	15,162	13,906
Tier 1 capital	15,385	13,420	10,708	9,953	15,162	13,906
Total capital	19,833	18,867	15,157	15,400	15,165	13,906
Without transitional rules						
Risk exposure amount	38,413	38,244	31,484	33,295	18,402	16,151
CET1 capital ratio, %	32.2	28.6	24.5	22.4	82.4	86.1
Excess[1)] of CET1 capital	10,656	9,205	6,292	5,961	14,334	13,179
Tier 1 capital ratio, %	40.1	35.1	34.0	29.9	82.4	86.1
Excess[1)] of Tier 1 capital	13,080	11,125	8,819	7,955	14,058	12,937
Total capital ratio, %	51.6	49.3	48.1	46.3	82.4	86.1
Excess[1)] of total capital	16,760	15,807	12,639	12,737	13,693	12,614
With transitional rules						
Own funds	19,835	18,950	15,162	15,449	15,162	13,940
Risk exposure amount	168,936	165,830	35,833	50,414	133,171	115,555
Total capital ratio, %	11.7	11.4	42.3	30.6	11.4	12.1

[1)] Excess capital has been calculated based on minimum capital requirements (without buffer requirements).

5.3.1 Subordinated loans

The subordinated loans are subordinate to the Parent Company's other liabilities, and the subordinated loans included in Tier 1 capital are subordinate to other subordinated loans. For a specification of own funds and the terms and conditions for subordinated loans in accordance with Commission Implementing Regulation (EU) No 1423/2013, please refer to the information under "Capital adequacy & risk management" at www.sbab.se. The complete terms and conditions of the subordinated loans are also specified at www.sbab.se.

TABLE 9. **SUBORDINATED LOAN, SEK million**

ISIN	Currency	Nominal amount	Nominal amount outstanding	First possible redemption date	Interest rate, %	Interest rate after first possible redemption date	Maturity date	Taken up in own funds as Additional Tier 1 capital	Taken up in own funds as Tier 2 capital
XS0854751186	SEK	800	800	16 Nov 2017	3m STIBOR +2.65	3m STIBOR +2.65	16 Nov 2022	–	800
XS0854751004	SEK	200	200	16 Nov 2017	4.18	3m STIBOR +2.65	16 Nov 2022	–	200
XS1202975386	SEK	400	400	16 Mar 2020	3.8245	3m STIBOR +3.25	Perpetual	400	–
XS1202987985	SEK	1,100	1,100	16 Mar 2020	3m STIBOR +3.25	3m STIBOR +3.25	Perpetual	1,100	–
XS1245415812	SEK	1,000	1,000	11 Jun 2020	3m STIBOR +1.30	3m STIBOR +1.30	11 Jun 2025	–	1,000
XS1317715842	SEK	600	600	10 Nov 2020	2.25	3m STIBOR +1.90	10 Nov 2025	–	597
XS1317716147	SEK	1,850	1,850	10 Nov 2020	3m STIBOR +1.90	3m STIBOR +1.90	10 Nov 2025	–	1,850
XS1412406503	SEK	775	775	21 Jun 2021	5.052	3 M STIBOR +4.75	Perpetual	775	–
XS1412408897	SEK	725	725	21 Jun 2021	3 M STIBOR +4.75	3 M STIBOR +4.75	Perpetual	725	–
Total		**7,450**	**7,450**					**3,000**	**4,447**

5.4 Regulatory capital requirement

When calculating capital requirements, each exposure is allocated to an exposure class, either using the standardised or the IRB approach. Table 11 shows the individual risk exposure amounts distributed by exposure class.

The capital requirement for credit risk was positively impacted over the year due to improved credit quality and the sale to Swedbank of the loan portfolio built up in partnership with Sparbanken Öresund. Over the year, the capital requirement for market risk declined due to the liquidity portfolio largely being transferred from the trading book to the banking book. No credit risk reducing measures have been applied for credit-risk exposures where the standardised approach has been used.

TABLE 10. **RISK-WEIGHTED ASSETS AND CAPITAL REQUIREMENTS BY RISK TYPE**

	Risk exposure amount		Minimum capital requirement	
EBA OV1 table	2016	2015	2016	2015
Credit risk (excl. counterparty risk)	**29,455**	**30,735**	**2,356**	**2,459**
of which, the standardised approach	5,909	5,837	472	467
of which, the FIRB approach	12,106	10,795	969	864
of which, the AIRB approach	11,440	14,103	915	1,128
Counterparty credit risk	**3,753**	**2,664**	**300**	**213**
of which the standardised approach	1,907	1,519	152	121
of which, credit valuation adjustment risk (CVA)	1,846	1,145	148	92
Market risk	**1,571**	**1,856**	**126**	**149**
of which, the standardised approach	1,571	1,856	126	149
Operational risks	**3,634**	**2,989**	**291**	**239**
of which, the standardised approach	3,634	2,989	291	239
Adjustment for the Basel 1 floor			**10,442**	**10,207**
Total	**38,413**	**38,244**	**13,515**	**13,267**

TABLE 11. **CAPITAL REQUIREMENTS AND RISK EXPOSURE AMOUNTS**

GROUP, SEK million	Risk exposure amount 2016	Capital requirement 2016	Risk exposure amount 2015	Capital requirement 2015
Credit risk in accordance with the IRB approach				
Corporate exposures	12,106	969	10,795	864
Retail exposures	11,440	915	14,103	1,128
of which, exposures to SMEs	*1,211*	*97*	*1,628*	*130*
of which, retail exposures secured by immovable property	*10,229*	*818*	*12,475*	*998*
Total exposures in accordance with the IRB approach	**23,546**	**1,884**	**24,898**	**1,992**
Credit risk in accordance with the standardised approach				
Exposures to governments and central banks	0	0	0	0
Exposures to regional governments or local authorities or agencies	0	0	0	0
Exposures to multilateral development banks	0	0	0	0
Exposures to institutions	1,907	152	1,526	122
of which, derivatives according to CRR, Appendix 2	*1,903*	*152*	*1,505*	*120*
of which, repos	*3*	*0*	*14*	*1*
of which, other	*1*	*0*	*7*	*1*
Corporate exposures	–	–	15	1
Retail exposures	1,933	155	2,106	168
Exposures in default	12	1	7	1
Exposures in the form of covered bonds	3,384	271	2,957	237
Exposures to institutions and corporates with a short-term credit assessment	19	1	15	1
Other items	561	44	730	58
Total exposures in accordance with standardised approach	**7,816**	**624**	**7,356**	**588**
Market risk	**1,571**	**126**	**1,856**	**149**
of which, position risk	*886*	*71*	*1,314*	*105*
of which, currency risk	*685*	*55*	*542*	*44*
Operational risk	**3,634**	**291**	**2,989**	**239**
Credit valuation adjustment risk	**1,846**	**148**	**1,145**	**92**
Total risk exposure amount and minimum capital requirements	**38,413**	**3,073**	**38,244**	**3,060**
Capital requirements for capital conservation buffer		**960**		**956**
Capital requirements for countercyclical buffer		**571**		**379**
Total capital requirements		**4,604**		**4,395**

TABLE 12. **BREAKDOWN OF EXPOSURE AMOUNTS USING THE STANDARDISED APPROACH BY EXPOSURE CLASS AND RISK WEIGHT AFTER APPLICATION OF THE CCF AND CREDIT RISK MITIGATION (CRM)[1)]**
(EBA CR5 TABLE)

Exposure classes	0%	10%	20%	50%	75%	100%	150%	Deducted[2)]	Total	Of which, unrated
Exposures to governments and central banks	14,186	–	–	–	–	–	–	–	14,186	–
Exposures to regional governments or local authorities	6,437	–	–	–	–	–	–	–	6,437	–
Exposures to multilateral development banks	990	–	–	–	–	–	–	–	990	–
Exposures to institutions[1)]	–	–	716	3,529	–	–	–	–	4,245	3
Exposures to corporates	–	–	–	–	–	–	–	–	–	–
Retail exposures	–	–	–	–	2,577	–	–	–	2,577	2,577
Exposures in default	–	–	–	–	–	7	3	–	10	10
Exposures in the form of covered bonds	–	33,838	–	–	–	–	–	–	33,838	–
Exposures to institutions and corporates with a short-term credit assessment	–	–	8	33	–	1	–	–	42	1
Other items	152	–	–	–	–	561	–	–	713	713
Total	**21,765**	**33,838**	**724**	**3,562**	**2,577**	**569**	**3**	**–**	**63,038**	**3,304**

1) Exposures to institutions including counterparty risk.
2) The exposure class, "other items" includes those items deducted from own funds. As a precautionary measure, capital adequacy for these is calculated with a risk weight of 0%.

TABLE 13. **EXPOSURE AMOUNTS AND CAPITAL REQUIREMENTS BASED ON THE BALANCE SHEET[1)]**
(EBA LI1 TABLE)

Balance Sheet	Balance sheet assets	Exposure before CCF	Exposure after CCF	Of which, credit risk exposures	Of which, counter-party credit risk exposures	Of which, market risk exposures	Of which, exposures not subject to capital requirements or a reduction in capital[2)]	Risk exposure amounts before SME discount	Risk exposure amounts after SME discount	Capital requirement
Assets										
Cash and balances at central banks	0	0	0	0	–	–	–	0	0	0
Treasury bills, etc.	20,492	20,492	20,492	13,357	0	7,135	–	0	0	0
Lending to credit institutions	1,619	691	691	42	17	632	–	22	22	2
Lending to the public	296,022	296,418	321,371	321,371	–	–	–	24,640	23,503	1,880
Change in value of interest-rate-hedged items in portfolio hedges	396	396	396	396	–	–	–	396	396	32
Bonds and other interest-bearing securities	48,851	48,851	48,851	39,750	–	9,101	–	4,904	4,904	392
Derivatives	6,192	4,224	4,224	–	4,224	–	–	1,903	1,903	152
Intangible assets	152	152	152	152	–	–	–	–	–	–
Property, plant and equipment	16	16	16	16	–	–	–	16	16	1
Other assets	550	545	545	545	–	0	–	48	48	4
Prepaid expenses and accrued income	866	692	692	535	–	157	–	64	64	5
Total assets	**375,156**	**372,477**	**397,430**	**376,164**	**4,241**	**17,025**	**–**	**31,993**	**30,856**	**2,468**
Contingent liabilities	36,829	36,829	11,861	11,861	–	–	–	2,086	2,077	166
Total	**411,985**	**409,306**	**409,291**	**388,025**	**4,241**	**17,025**	**–**	**34,079**	**32,933**	**2,634**

1) The table does not include operational risk or CVA risk.
2) The exposure class, "other items" includes those items deducted from own funds. As a precautionary measure, capital adequacy for these is calculated with a risk weight of 0%.

TABLE 14. **DIFFERENCES BETWEEN BALANCE SHEET ASSETS AND EXPOSURE AMOUNTS FOR CAPITAL ADEQUACY CALCULATION** *(EBA LI2 TABLE)*

		Of which:			
SEK million	**Total**	**Credit risk**	**Counterparty credit risk**	**Securitizations**	**Market risk**
Balance sheet assets	375,156	350,917	7,214	–	17,025
Balance sheet liabilities	7,164	–	7,164	–	–
Net assets after deduction of liabilities	367,992	350,917	50	–	17,025
Contingent liabilities	36,829	36,829	–	–	–
Differences due to different netting rules, other than those already included in row 2	4,191	–	4,191	–	–
Differences in provisions	222	222	–	–	–
Valuation differences	72	72	–	–	–
Original exposure amounts considered for capital adequacy purposes (before CCF)	**409,306**	**388,040**	**4,241**	**–**	**17,025**

TABLE 15. **CREDIT-RISK EXPOSURES AND CREDIT RISK MITIGATION (CRM) USING THE STANDARDISED APPROACH** *(EBA CR4 TABLE)*

	Original exposure amount before credit risk conversion factors and mitigation methods		**Original exposure amount after credit risk conversion factors and mitigation methods**		**Risk exposure amounts and risk exposure density**	
Exposure classes	**Carrying amount**	**Contingent liabilities**	**Carrying amount**	**Contingent liabilities**	**Risk exposure amount**	**Density (%)**
Exposures to governments and central banks	14,077	–	14,186	–	–	–
Exposures to regional governments or local authorities or agencies	5,221	–	6,437	–	–	–
Exposures to multilateral development banks	990	–	990	–	–	–
Exposures to institutions[1)]	3	–	3	–	0	20
Exposures to corporates	–	–	–	–	–	–
Retail exposures	2,412	828	2,412	166	1,933	75
Exposures in default	10	–	10	–	12	115
Exposures in the form of covered bonds	33,838	–	33,838	–	3,384	10
Exposures to institutions and corporates with a short-term credit assessment	42	–	42	–	19	45
Other items	713	–	713	–	561	79
Total	**57,306**	**828**	**58,631**	**166**	**5,909**	**10**

[1)] The institution exposure class excludes counterparty risk.

TABLE 16. **EXPOSURE AMOUNTS BEFORE AND AFTER CREDIT RISK MITIGATION BY CREDIT QUALITY STEP**

Credit quality step	**Exposure amount before credit risk mitigation**	**Exposure amount after credit risk mitigation**
1	56,172	56,172
2	3,123	3,123
3	439	439
4	–	–
5	–	–
6	–	–
Total	**59,734**	**59,734**

5.5 Securitised assets

The SBAB Group has no securitised loans of its own and has not contributed to any other institution's securitisation. SBAB has no overdue exposures in respect of securitisations and re-securitisations, and no securitised rolling exposures.

5.6 Rating

When external ratings are used, the lowest rating from either Moody's or Standard & Poor's is selected. External ratings are used for the exposure classes' exposures to governments or central banks, regional governments or local authorities or agencies, multilateral development banks, institutions, institutions and corporates with a short-term credit rating, and exposures in the form of covered bonds. The association of the external rating provided by credit rating agencies with the credit quality steps prescribed in the CRR complies with the standard association published by EBA (refer to Table 21, Relationship between internal and external rating).

6 INTERNALLY ASSESSED CAPITAL REQUIREMENT

The internal capital adequacy assessment aims to ensure that SBAB has adequate capital under normal circumstances and in event of financial problems. The Board of Directors and Executive Management are responsible for the internal capital adequacy assessment. Within the framework of the internal capital and liquidity adequacy assessment processes (ICLAAP), SBAB applies an economic capital model for its internally assessed capital requirement. At present, liquidity risk does not give rise to any actual capital requirement for SBAB. The ICLAAP are designed to ensure balance between risks, capital and liquidity. Refer to Chapter 13 for more information on liquidity risk.

6.1 Internal capital adequacy assessment in line with Pillar 2 of the Basel regulations

Pillar 2 of the Basel 3 regulations imposes the requirement that the banks' management and assessment of risks must be satisfactory to ensure that the banks can fulfil their obligations. To meet this requirement, the banks must have methods that enable them to continuously evaluate and uphold capital in an amount, type and distribution sufficient to cover the risks to which they are or could become exposed. This is called the internal capital and liquidity adequacy assessment processes (ICAAP and ILAAP).

The operations conducted by SBAB affect the size of the risk taken by the company, which in turn impacts the size and nature of the capital required to manage unforeseen losses. The size of the capital in turn affects the price of individual transactions for customers. The better SBAB can assess the risk, the more accurately the scope of the capital utilised in the individual transaction can be assessed, thereby enabling the risk-adjusted return for the transaction to be calculated.

SBAB's internally assessed capital requirement comprises the minimum capital requirement under Pillar 1, the capital requirement under Pillar 2 and buffer requirements. The Pillar 2 capital requirement assesses the additional capital required for the risks covered in Pillar 1. This assessment is based on SBAB's economic capital model. If the economic capital for each risk class exceeds the capital requirement in Pillar 1, an additional amount applies under Pillar 2. The capital requirement under Pillar 2 also assesses risk classes not covered by Pillar 1. Moreover, a number of buffer requirements also apply. In addition to the buffer requirement under Pillar 1, SBAB calculates a capital planning buffer to cover any downgrade of the capital adequacy in the event of a severe but plausible financial stress.

When determining the size of the capital requirement, assessments of investors and rating agencies regarding the company's capital requirements compared with the capital held by the company are also taken into account. The views of rating agencies are reflected in SBAB's rating, which directly impacts the company's funding cost.

The quality and utilisation of risk information are essential to SBAB's long-term competitiveness in the market. The purpose of the internal capital adequacy assessment process (ICAAP) is to ensure that the company identifies, measures, secures and manages the risks to which SBAB is exposed and that SBAB has own funds that are compatible with the selected risk appetite. The process is revised annually to capture changes in the operating environment that continuously affect the company's performance.

6.2 Process for internal calculation of capital requirements

As part of SBAB's process for establishing internally calculated capital requirements, the risks generated in the operations are identified initially. Risk Control is responsible for the quantification of all risks. Various models are used depending on the risk to be measured. The economic capital model is used to calculate capital requirements for quantifiable risks.

The results are reviewed and analysed. SBAB uses stress tests to assess the impact on the capital requirement during a normal economic downturn and during a severe but plausible financial stress.

In addition to economic capital, capital buffers are reserved for capital requirements caused by stress tests and for pension risk, which are all included in the internal capital requirement. The combined results are followed up and analysed, for both short and long-term effects, in terms of capital planning and forecasts. The compiled results of the internal capital adequacy assessment are reported to the Board and CEO. Finally, the Board and CEO adopt the process and the results of the company's internal capital adequacy assessment.

FIGURE 5. **INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS**

6.3 Internal capital adequacy assessment components

SBAB's internal assessment of the capital requirement takes into consideration the minimum requirements under Pillar 1, the Pillar 2 core requirement, the risk-weight floor for Swedish residential mortgages, buffer requirements, and stress tests and the capital planning buffer.

The capital requirements for credit risk, including concentration risk and sovereign risk, market risk and operational risk are quantified in SBAB's economic capital model. Economic capital is defined as the amount of capital needed to ensure solvency over a one-year period, given a predetermined confidence interval. The confidence interval is chosen to reflect the company's target rating. In SBAB's case, the confidence level is 99.97%, which corresponds to the long-term AA- target rating (according to Standard & Poor's ratings scale).

In addition to comprising an assessment of the combined capital requirement to counter the risks in the company's operations, the economic capital is used to control and monitor profitability in the company's operations and for strategic considerations.

In addition to the capital requirement quantified with SBAB's economic capital model, an additional capital requirement arises from the risk-weight floor for Swedish residential mortgages, pension risk, and any additions in the form of business risk and the capital planning buffer. Refer to Table 17 for the internally calculated capital requirements per risk type.

6.3.1 Credit risk

Credit risk from lending is the dominant risk in SBAB's operations. Credit risk from lending is defined as the risk of loss due to the customer's or the counterparty's inability to make interest and loan repayments or otherwise fulfil the loan agreement. Lending is conducted to consumers, tenant-owners' associations and companies. Aside from through lending and loan commitments, credit risk also arises in treasury operations through derivative counterparties and through investment risk for investments in the liquidity portfolio.

6.3.1.1 Credit risk in lending operations

In the economic capital model, credit risk is calculated using the Basel framework's formulas for capital requirements for credit risk. However, these have been modified by adding further safety margins to the required correlation assumptions applied. Moreover, the capital requirement is calculated to a confidence level of 99.97%, rather than to 99.9% as applied in the original formula. However, in the economic capital calculation, which is the base for SBAB's risk-adjusted follow-up, the prescribed LGD floor of 10% is not applied. This is because economic capital, in contrast to the IRB approach applied in the regulatory framework, should be sensitive to the LTV ratio for all exposures. The formula applied by the Basel framework for calculating capital requirements under Pillar 1 does not take into account any concentration effects in the loan portfolio. In this model, the capital requirement for a single exposure is independent of the loan's portfolio and is based solely on PD, LGD and EAD for the specific exposure. Therefore a supplement for concentration risk must be made to quantify SBAB's compiled credit risk, including concentration risk.

6.3.1.2 Risk-weight floor for Swedish mortgages

In September 2014, Finansinspektionen decided to raise the risk-weight floor for Swedish residential mortgages to 25% from the previous 15%. The floor is applied as a supervisory practice in internal capital adequacy assessment under Pillar 2 and consequently does not affect the capital ratios reported under Pillar 1. SBAB has already allocated more capital to the residential mortgage portfolio than that demanded under the minimum requirements of Pillar 1, since its economic capital for credit risk has exceeded the minimum capital requirements under Pillar 1. All of SBAB's capital requirements under Pillar 1 are included in the calculation of the capital requirement arising from the risk-weight floor for Swedish residential mortgages, including the countercyclical buffer value for Sweden.

6.3.1.3 Credit risk in treasury operations

Credit risk arises in treasury operations, in part, in the form of counterparty risks for the derivative contracts entered into by SBAB to manage its financial risks and, in part, in the form of investment risk as a result of investments in the liquidity portfolio and the investment of surplus liquidity. Calculation of the exposure value for counterparty risk is based on the mark-to-market approach and the majority of the exposure is covered through collateral agreements.

The assessment of credit risk in treasury operations is based on the same principles as for lending operations. The material difference to lending operations is that the PD is set based on the counterparty's external rating and the LGD is set based on the type of instrument (derivative, covered bond, etc.).

6.3.1.4 Sovereign risk
SBAB has central government exposures in its treasury operations and lending operations, which are allocated a risk weight of 0% under Pillar 1. SBAB uses sovereign risk as a risk class in its economic capital model and quantifies the internally assessed capital requirement from sovereign risk. Sovereign risk is calculated on foreign exposures with the risk-weight formula for institutions using an LGD of 45%, and where the PD is set based on the counterparty's external rating.

6.3.1.5 Credit-related concentration risk
Concentration risk arises when exposures are concentrated to certain counterparties, regions or industries. SBAB is considered to be exposed to credit-risk related concentration risk in its lending and treasury operations. The entire capital requirement for concentration risk is included in the economic capital for credit risk.

SBAB calculates the concentration risk divided into single-name concentration, industry concentration and sector concentration (geographic concentration). SBAB's method for single-name concentration is based on a method developed by Gordy & Lutkebohmert (2007) while industry and sector concentration is based on a method based on the Herfindahl index.

Upon calculation at 31 December 2016, the internally calculated capital requirement for concentration risk amounted to SEK 669 million, of which SEK 619 million pertained to credit risk in lending operations and SEK 50 million to credit risk in funding operations. Concentration risk related to treasury operations increased SEK 9 million while concentration risk related to lending operations increased SEK 97 million compared with the preceding year end.

6.3.2 Operational risk
Operational risk means the risk of losses due to inappropriate or unsuccessful processes, human error, faulty systems or external events, the definition also includes legal risk.

SBAB applies the standardised approach for capital adequacy for operational risk under Pillar 1. This approach calculates the capital requirement based on 12, 15 and 18% of the business area's average operating income over the past three years.

A standardised approach similar to the above is also used for calculating the internal capital requirement for operational risk. As regards the standardised approach for operational risk, one difference is that the economic capital model is based on actual margins and not on average operating income over the past three years.

6.3.3 Market risk
Market risk means the risk of a negative earnings impact due to market fluctuations and, in SBAB's operations, mainly comprises interest-rate risk, credit-spread risk, currency risk and basis risk. Market risk is quantified using SBAB's Value at Risk models (VaR) and is managed by limiting exposure within limits set by the Board and by centralising the management of these risks to the Treasury department.

6.3.3.1 Interest-rate risk
Interest-rate risk pertains to the risk of variations in general interest rate levels leading to a negative earnings impact due to future income and expenses having different fixed-interest periods and/or interest terms. The general principle governing SBAB's exposure to interest-rate risk is to limit it through direct funding and the use of derivatives. As far as possible, fixed-interest liabilities are matched with fixed-interest assets, but since SBAB's residential mortgage customers generally choose floating interest (three-month fixed-interest period) while a large portion of the liability is fixed to longer maturities, a large portion of the debt must be swapped down to a three-month fixed interest period. As a general principle, the interest-rate risk associated with mortgage lending and the liquidity portfolio, including the debt allocated to the respective portfolios, should be matched. SBAB's equity is invested using a guide value determined by SBAB's Board and therefore includes a strategic long-term interest-rate risk.

6.3.3.2 Credit-spread risk
Credit-spread risk is defined as the value changes in SBAB's bond holdings, since the credit rating of the issuers can change.

6.3.3.3 Currency risk
Currency risk refers to the risk that changes in the exchange rate for SEK against other currencies would results in negatively impact on earnings. As a general rule, SBAB swaps its funding in foreign currencies into SEK or matches it against assets in the liquidity portfolio in the same currency.

6.3.3.4 Basis risk
Basis risk mainly arises when funding in foreign currency is swapped to SEK using mismatched maturities.

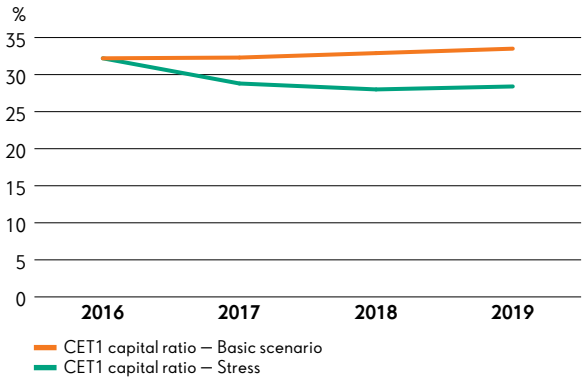
6.3.4 Pension risk
Pension risk arises from the obligation under SBAB's defined-benefit pension plans to provide agreed compensation to existing and former employees of the company. Even though SBAB makes ongoing payments to secure this obligation, a risk exists in the form of a negative outcome in terms of the return on the capital provision. The present value of the pension obligation could also increase depending on actuarial assumptions in terms of mortality and as a result of a lower discount rate. SBAB quantifies pension risks in accordance with Finansinspektionen's methods for assessing individual types of risk within Pillar 2.

6.3.5 Capital planning buffer, income volatility and business risk

6.3.5.1 Quantification and assessment of the capital planning buffer

To evaluate the effect of SBAB's stress test, a calculation is made of the change in SBAB's capital adequacy ratios resulting from increased capital requirements and reduced own funds caused by greater loan losses. In the stress scenario characterised by a severe recession, both the capital requirement and expected losses would increase significantly, albeit from very low levels. At the same time, net interest income would deteriorate relative to the basic scenario as a result of increased funding expenses. As a result of the simulation of a difficult but not unlikely scenario, SBAB's CET1 capital ratio would weaken according to the below.

FIGURE 6. **CET1 CAPITAL RATIO IN A STRESSED SCENARIO**



To counteract the weakening of SBAB's CET1 capital ratio, a provision of SEK 1,960 million would be required as a buffer without taking into account the risk-weight floor, which is the additional CET1 capital required to maintain an unchanged CET1 capital ratio relative to the basic scenario. However, most of SBAB's credit exposures are covered by the risk-weight floor for Swedish residential mortgages and, consequently, the capital requirements will not increase due to a reasonable increase in risk in the lending portfolio. Taking into account the risk-weight floor for Swedish residential mortgages and thereby excluding the increase in the capital requirements for Swedish mortgages, a provision of SEK 650 million was made as a buffer. This was then compared with the capital conservation buffer and any surplus added to the capital requirement in the form of a capital planning buffer. SBAB's stress tests are described in more detail in section 6.5.

6.3.5.2 Income volatility

Due to the structure of the accounting regulations, whereby different parts of the balance sheet are measured differently, valuation effects arise that affect operating profit and thereby own funds without constituting a real market risk.

Basis swaps not included in a hedging relation are measured at fair value while the loans to which the basis swaps are linked are not fully measured at market value should no hedge accounting relationship exist. This means that the basis risk on basis swaps that are not subject to hedge accounting lack counter-items in profit and loss.

This has the effect that operating profit, and thereby own funds, varies in a manner that does not match the actual risk to which the portfolio is exposed. To simulate how much this can conceivably affect own funds, a simplified VaR model has been used. The model is based on a holding period of one year and a confidence level of 99.97%. A substantial gradual decrease from current levels is expected in SBAB's income volatility, when outstanding basis swaps not included in the hedge accounting approach maturity. Moreover, income volatility is limited for risk mitigation and capital adequacy provided by the capital planning buffer, which is why it is not reported separately in the internally assessed capital requirement.

6.3.5.3 Business risk

Business risk means the risk of declining earnings due to harsher competition, inappropriate strategies or erroneous decisions. Weaker earnings arising, for example, from reduced margins as a result of increased funding costs or tougher competition, can to some extent be met by reducing the SBAB's costs. However, since the cost base largely comprises fixed expenses that cannot be reduced over a one-year horizon. Business risk can be described as the loss arising when earnings decline to such an extent that they no longer cover the fixed expenses in a stressed economic scenario. Similar to the definition in Finansinspektionen's consultation memorandum "Capital requirements for Swedish banks" from September 2014, SBAB defines a normal economic recession as a scenario that occurs around every seven years. The capital requirement for business risk is quantified by evaluating the effects of a stressed scenario that corresponds to a normal economic recession. SBAB's stress tests are described in more detail in section 6.5.

6.4 Compilation of internal capital adequacy assessment

According to Finansinspektionen's supervisory practices, it is expected that SBAB will cover a certain part of its capital requirement for Pillar 2 risks with CET1 capital. Pillar 2 risks are as a general rule to be covered according to the same capital distribution as the Pillar 1 capital requirement, including static buffer requirements (capital conservation buffer, systemic risk buffer and O-SII buffers). For SBAB, this means that 67% of the capital requirement for Pillar 2 risks should be covered with CET1 capital.

SBAB's internally calculated capital requirements without and with consideration for the risk-weight floor for Swedish residential mortgages are stated below. SBAB's internally assessed capital requirement corresponds to a CET1 capital ratio of 23.9% and a total capital ratio of 34.0%. According to the targets set out in SBAB's capital policy, these levels should, under normal conditions, be exceeded by at least 1.5% of the risk exposure amount. Accordingly, the CET1 capital ratio should amount to at least 25.4% and the total capital ratio to at least 35.5% as per 31 December 2016.

TABLE 17. **INTERNALLY CALCULATED CAPITAL REQUIREMENTS PER RISK TYPE**

		EXCL. RISK-WEIGHT FLOOR		INCL. RISK-WEIGHT FLOOR
SEK million		**Pillar 1**	**Internally assessed capital requirement**	**Internally assessed capital requirement**
	Credit & CVA risk[1)]	2,656	2,656	2,656
Pillar 1	Market risk	126	126	126
	Operational risk	291	291	291
	Credit risk	–	1,019	–
	Market risk	–	1,118	1,118
	Operational risk	–	91	91
Pillar 2	Risk-weight floor	–	–	6,532
	Concentration risk	–	669	669
	Sovereign risk	–	59	59
	Pension risk	–	0	0
	Capital conservation buffer	960	960	960
Buffers	Capital planning buffer, supplement[2)]	–	1,000	–
	Countercyclical buffer	571	571	571
		4 604	**8,560**	**13,073**

[1)] In the internal capital requirement without taking the risk-weight floor into account, additional credit risks in Pillar 2 consist of SBAB's estimated capital requirement in economic capital. Since the additional capital requirement for the risk-weight floor exceeds the additional capital requirement according to economic capital, only the risk-weight floor is included in the internal capital requirement with consideration for the risk-weight floor.

[2)] The higher of the stress test buffer and the capital conservation buffer is included in the internally assessed capital requirement. After taking into account the risk-weight floor, the stress test buffer is calculated without consideration for risk migration in the residential mortgage portfolios and, accordingly, the required buffer is smaller. After taking into account the risk-weight floor, the stress test buffer becomes even smaller than the capital conservation buffer, and therefore the supplement in the form of the capital planning buffer is zero.

According to its supervision and evaluation process based on data from 31 December 2015, Finansinspektionen assessed SBAB's CET1 capital requirement to correspond to a CET1 capital ratio of 22.2%. The corresponding requirement for the total capital ratio amounted to 32.5%.

The requirement for a countercyclical buffer for Swedish exposures will be increased from the current 1.5% to 2.0% as of March 2017. The effect of this is illustrated in Figure 7 below.

FIGURE 7. **INTERNAL CAPITAL REQUIREMENTS INCLUDED THE INCREASED REQUIREMENTS FOR A COUNTERCYCLICAL BUFFER (CCB)**

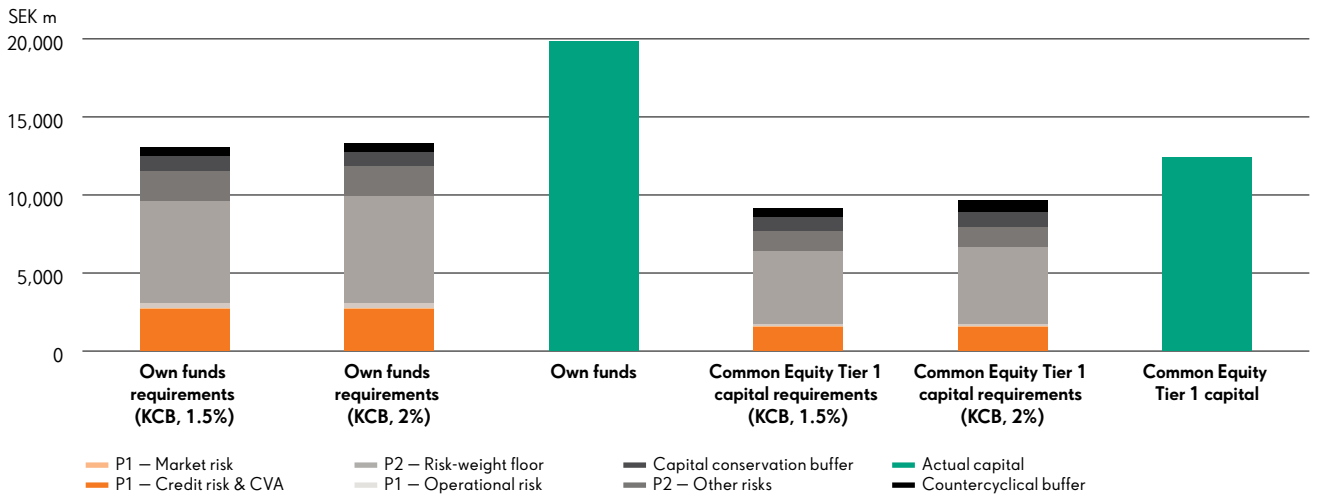


FIGURE 8. **SCHEMATIC PROCESS FOR CALCULATING ECONOMIC CAPITAL**

6.5 Stress tests

Capital planning is founded on a basic scenario that reflects the most probable operational development based on internal forecasts. Complementing this, stress tests and scenario analyses are performed, whereby the development of the loan portfolio and capital requirements during severe but plausible financial stress is evaluated. When performing the tests, events and economic conditions that could give rise to an unfavourable impact on the institution's loan-portfolio exposures and that are not reflected in the anticipated scenario are also taken into account.

6.5.1 Stress test methods

SBAB uses a number of statistical models to forecast credit risk. The common factor for the models is that they are built around one or more explanatory variables that are specifically adapted to the kind of exposure and risk dimension (PD or LGD) for which the model is intended to be used. A change in one or more of these explanatory variables results in a change in the forecast credit risk. This in turn affects the risk class to which an exposure is allocated. In the stress tests, this relationship is utilised by simulating changes in the underlying model variables. The starting point for this simulation is an assumed macroeconomic scenario. In the stress test, a scenario that expresses an unfavourable economic trend will result in a migration towards inferior risk classes, which in turn entails higher economic capital, higher risk exposure amounts and larger anticipated losses (PD*LGD*EAD). A scenario that reflects an economic recovery will consequently result in the opposite effect. A simplified illustration of the process is provided in Figure 8.

The stress test is conducted for the portfolio at that particular date. This portfolio is then subjected to stress over a three-year time horizon, taking the planned volume development within different portfolio segments into account. The macroeconomic scenario that forms the basis of the stress test is also assumed to have a direct effect in SBAB's risk models. This means that the model variables are expected to change without any time shift.

TABLE 18. PARAMETERS SUBJECTED TO STRESS IN THE CURRENT AND NEXT THREE YEARS

Demand	Prices	Interest rates
GDP growth (real)	Consumer prices	Residential mortgages, 3 month
Disposable household income (nominal)	House prices	STIBOR, 3 month
Employment	Prices of tenant-owners' rights	Government bond rate, 10 year
Unemployment	Residential property prices	STIBOR Treasury bill
		Housing bonds – Government bonds, 5 year
		Government bonds Sweden – Germany, 10 year

The components included in SBAB's model for stress tests comprise:

- Determination of a macroeconomic scenario for the stress test
- Translation of the macroeconomic scenario to model variables
- Assumptions regarding new sales and loan redemption
- Calculation of expected losses and capital requirements
- Calculation of profit and own funds.

In addition to loan losses and capital requirements related to credit risk, the stress tests also simulate the effect of a deterioration in SBAB's credit rating and the effect of a decline in property prices on SBAB's scope for funding by means of covered bonds. These are expected to lead to increased funding costs, resulting in weaker net interest income, lower earnings and consequently also reduced own funds. Finally, realised losses related to operational risks are also brought out by applying a fraud scenario independent of the macro scenarios, thus leading to further deterioration in earnings and decreased own funds.

6.5.2 Macroeconomic scenario

The stress tests can be used in a number of conceivable approaches and methods. In general, these involve an assumption regarding a future scenario, either hypothetical or based on a historical outcome. The stress tests presented in SBAB's current ICAAP and ILAAP are based on a hypothetical scenario whereby the development of the parameters is based on a subjective interpretation of economic theory and empirical analysis. The scenario describes a sharp economic decline.

For a number of variables in the models, there is a natural connection between the value the variable is expected to take on and the development of one or more of the macroeconomic parameters. In these cases, the variable value could consequently be recalculated directly based on the change in the underlying macro-parameters.

In general, all model variables are expected to be affected to some extent, except the variables that are not deemed to be correlated to economic conditions.

Since a macroeconomic scenario cannot be directly translated to the effect that it has on certain PD variables, historical correlations are used instead. Examples of such model variables are the number of reminders and claims. For these variables, the effect has instead been estimated based on the historical correlation to the residential mortgage rate.

LGD is subjected to stress according to the same methodology as PD. Since SBAB's LGD models are built around the loan-to-value ratio, changes in the market values of properties have a direct impact on LGD.

Finally, the macro scenario is combined with a simulated deterioration in SBAB's credit rating by two rating levels.

Scenario

- External shocks have a heavy impact on the Swedish economy, internal imbalances and problems reinforce these effects, resulting in recession and problems in the banking system. Typically, this kind of scenario occurs approximately every 25 years.
- Declining growth and financial unease in China and other growth countries, combined with unease surrounding US trade policy and renewed uncertainty surrounding cooperation on the euro lead to the prices of oil and other commodities falling sharply and the international financial markets being impacted by a "flight to quality." International demand declines rapidly and Swedish households rapidly tighten their belts while international confidence in the central government's financing and the banks' financial strength is eroded due to an uncertain parliamentary situation and imbalances in the housing and residential mortgage market. The Swedish krona weakens significantly, helping maintain inflation above 0%.
- The GDP decline will be about the same as during the financial crisis of 2008/2009, although the process is more protracted. Employment and income levels fall. The economy will not stabilise until 2019.
- The central government's finances deteriorate rapidly and the parliamentary situation helps erode the credibility of economic policy, causing a sharp rise in risk premiums. The banking system is under pressure. Although the Riksbank attempts to stimulate the economy, it does not succeed, since risk premiums are rising sharply. Altogether, housing prices will fall by 25–30% before stabilising in 2019.

7 LEVERAGE RATIO

The CRR introduced a non-risk-sensitive metric to avoid excessive indebtedness. This metric is calculated as Tier 1 capital in relation to total assets and off-balance sheet exposures restated with the application of credit conversion factors (CCF). A minimum level for this metric of 3% of Tier 1 capital is expected to be implemented from 2018.

The leverage ratio is a measure of solvency. Compared with the capital adequacy requirement, assets are not risk-weighted but rather the same amount of capital is required, regardless of what risk is associated with the assets. According to the European Commission 's delegated act, the leverage ratio is calculated as Tier 1 capital divided by the total exposure amount, where off-balance sheet exposures are assigned CCFs. The definition in the Commission's delegated act is therefore significantly more advantageous for SBAB compared with the previous definition in the CRR and, together with the reinforcement of Tier 1 capital, has improved SBAB's leverage ratio. According to current reporting practices, SBAB's leverage ratio amounted to 4.05% as of December 2016. According to previous reporting practices, SBAB's leverage ratio amounted to 3.15% as of December 2015.

Of the change, 0.46 percentage points of the difference between the years was attributable to the reinforcement of Tier 1 capital and 0.44 percentage points to the change of definition.

TABLE 19. **LEVERAGE RATIO** [1)]

	GROUP	
	2016	2015
Tier 1 capital, SEK million	15,385	13,420
Exposure Measure, SEK million	380,230	426,080
Leverage ratio (%)	4.05	3.15

[1)] Calculated in accordance with the applicable regulations at the reporting date.

8 RISK IN REMUNERATION SYSTEMS

SBAB is to have a remuneration system that is both compatible with and promotes effective risk management and does not encourage undue risk-taking. Remuneration should promote SBAB's long-term interests. Further information on remuneration systems is available in Note 8 of SBAB's annual report and on the website www.sbab.se.

The Annual General Meeting decides on the overall principles for remuneration and other employment benefits for senior executives (members of SBAB's Executive Management). The Board of Directors decides on:

- Remuneration policy, risk analysis regarding remuneration systems and other policy documents for remuneration issues
- Remuneration and other employment benefits for Executive Management and the heads of the control functions (the CRO and the heads of Internal Audit and Compliance)
- Follow-up on the application of SBAB's control documents regarding remuneration issues.

The Board has appointed a Remuneration Committee. Information on the members of the Remuneration Committee and the number of meetings can be found in the Corporate Governance Report in SBAB's Annual Report at www.sbab.se.

The Remuneration Committee is tasked with preparing remuneration issues for decision by the Board and for conducting an independent assessment of policy documents pertaining to remuneration issues and remuneration systems. The Board is to ensure that the appropriate control functions participate in the independent assessments.

The Board decides the mission description for the Remuneration Committee. The meetings of the Remuneration Committee are reported back to the Board through the minutes prepared from the Remuneration Committee's meetings. The Board annually evaluates and follows up how SBAB has complied with the principles for the remuneration of senior executives that have been adopted by the Annual General Meeting and the remuneration structures and remuneration levels, including bonuses.

SBAB has no variable remuneration to senior management or members of staff whose actions have a material impact on the risk profile.

9 CREDIT RISK IN LENDING OPERATIONS

SBAB conducts customer-centric credit operations in which guiding principles such as professionalism, simplicity and quality create the conditions for favourable profitability and long-term customer relations. This means that the credit operations are denoted by high credit quality, efficient decision-making processes, and respect for and understanding of the customer's situation. This also entails straightforward conduct, language and procedures, balanced risk-taking in the portfolio and in each individual transaction, and risk-based pricing.

9.1 Credit risk management

SBAB is to have documented risk management of credit risk with a clear division of responsibilities. Credit risk management must support the business operations, ensure SBAB's survival and be in line with SBAB's rating targets. SBAB's credit operations are characterised by low risk taking. Business-related risks are viewed in relation to arisen earnings. Credit risk is considered in all business decisions and constitutes a component in the pricing of products and services.

SBAB's Board and Executive Management are to be actively involved in the design of the institution's risk management system and the follow-up of credit risks. The Board of Directors or its committees approve all significant methods, models and processes related to credit risk.

The reporting structure is designed so that the Board of the Parent Company and the Executive Management receive reports on all material risks. Procedures must be in place for managing and acting, based on the information provided in the reports.

9.2 Credit risk in the lending portfolio

Credit risk is the single largest risk in SBAB and accounts for 82% of the risk exposure amount according to Pillar 1. Credit risk is defined as the risk of loss due to the customer's inability to make interest and loan repayments or otherwise fulfil the loan agreement. Aside from through lending and loan commitments, credit risk also arises in connection with changes in the value of pledged collateral, resulting in this no longer covering the Group's receivables.

In the credit-granting process, the credit risk of a new credit is first checked by the business area and then, in some cases, by the credit department. Credit risk is then monitored through portfolio management by risk control, which is also responsible for analysing credit risk. Each business operation deals with the practical management of credit risk.

Credit risk in lending operations is restricted by limits determined for the customer or customer group. The credit risk is also managed through a credit-granting process, whereby the ability of potential borrowers to make their interest payments and capital repayments is analysed. For example, new retail loans are granted only to borrowers who are expected to be able to pay interest and make capital repayments when interest rates comfortably exceed the rate prevailing today. Furthermore, risk classification based on the IRB approach is used in the analysis of the credit risk for new and existing customers in the loan portfolios.

Large exposures, meaning those amounting to 10% or more of own funds, are managed based on the credit instructions and external regulations. All exposures exceeding 2% of own funds are identified and analysed for the purpose of deciding whether they fall within the framework of large exposures in relation to a group of customers with internal ties.

The granting of credit requires the provision of adequate collateral, which can be provided in the form of real property or a share in a tenant-owners' association. Adequate collateral usually means mortgage deeds in a property or a tenant-owners' association of not more than 75–85% of the market value. The 85% ratio applies provided that collateral can be obtained with first lien and that the customer has a risk class of R1–R4 for retail customers and C1–C3, and manually adjusted from C3 to C4, for corporate customers (for the relation between risk class and rating, refer to Table 21). In other cases, an LTV ratio of 75% generally applies for corporate exposures. SBAB also grants small unsecured loans to borrowers in the retail segment. Furthermore, SBAB applies a debt ratio ceiling of 600% (gross income in relation to the loan) for new retail loans.

When lending to consumers, market values for collateral in the form of properties or rights of use are generally determined by the administrator, based on approved calculation models. If the market value cannot be determined using approved calculation models, it is determined by the person in charge of valuations or an approved external appraiser.

When lending to tenant-owners' associations and companies, the market values for collateral in the form of properties or rights of use are generally determined by the person in charge of valuations. External valuations can form the basis of decisions upon approval by the person in charge of valuations. If an external valuation is carried out by an approved external appraiser, the valuation does not require approval by the person in charge of valuations.

SBAB verifies the property value on a regular basis. For residential properties and tenant-owners' rights, the property value is verified at least every third year. For other properties, the value is verified at least annually. If there are major changes in economic factors that affect the property market, the value is verified more often.

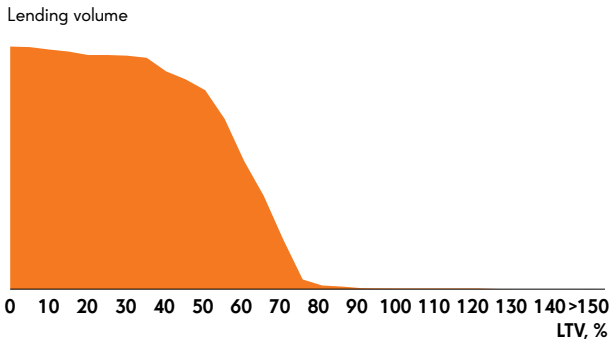
In addition to collateral in real property or a unit in a tenant-owners' association, it is possible to grant credit against, for example, collateral in the form of a state credit guarantee, a municipal guarantee, securities, bank guarantees and deposits at a Swedish bank.

To a limited extent, equities corresponding to up to 85% of the market value of the underlying properties can be approved as collateral in conjunction with a property purchase through a company transaction. SBAB does not hold any collateral that has been taken over in foreclosure to protect claims.

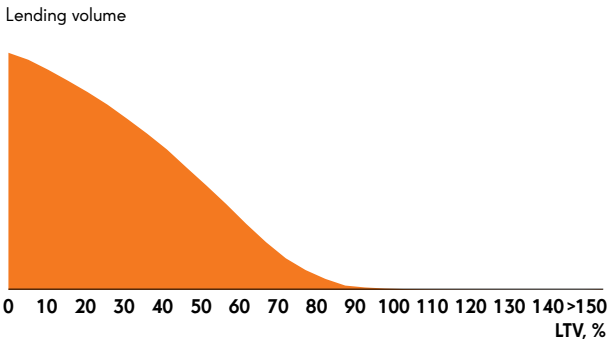
Lending to the public accounts for 79% of SBAB's total assets. Figures 9 and 10 describe loan-to-value (LTV) for loans for which collateral consists of mortgage deeds on shares in tenant-owners' associations. Figure 9 shows corporate exposures and Figure 10 shows retail exposures [1]. The areas in the figures correspond to the lending volume and cover 98% of total retail lending. Since 83% of lending is secured with collateral in mortgage deeds or shares in tenant-owners' associations to within 50% LTV and 98% within 75% LTV, as well as 94% of borrowers being categorised in risk classes 1–4, the credit quality is assessed as very favourable (see the table under figures 9 and 10).

FIGURES 9 AND 10. **"LOAN TO VALUE" (LTV) FOR CORPORATE AND RETAIL EXPOSURES**

CORPORATE EXPOSURES



RETAIL EXPOSURES



Segment, %	Below 50%	Below 75%	Below 100%	Exposure-weighted average LTV
Corporate exposures	77.8	99.3	99.9	64.5
Retail exposures	83.2	98.1	99.8	56.8
Total	**82.6**	**98.2**	**99.8**	**57.7**

[1] "Retail loans" refers to all lending to the public pertaining to houses, holiday homes and tenant-owners' rights, as well as unsecured loans to consumers and loans to tenant-owners' associations with a turnover of less than EUR 50 million. "Loans to corporates" refers to loans to other legal entities and, to a lesser extent, to other retail lending.

9.3 Risk classification system

SBAB applies the IRB approach for retail loans and lending to tenant-owners' associations and the foundation IRB approach (FIRB approach) for corporate loans. These commitments comprise 97% of lending to the public. For other types of exposures, including unsecured loans, the standardised approach is used for quantifying credit risk.

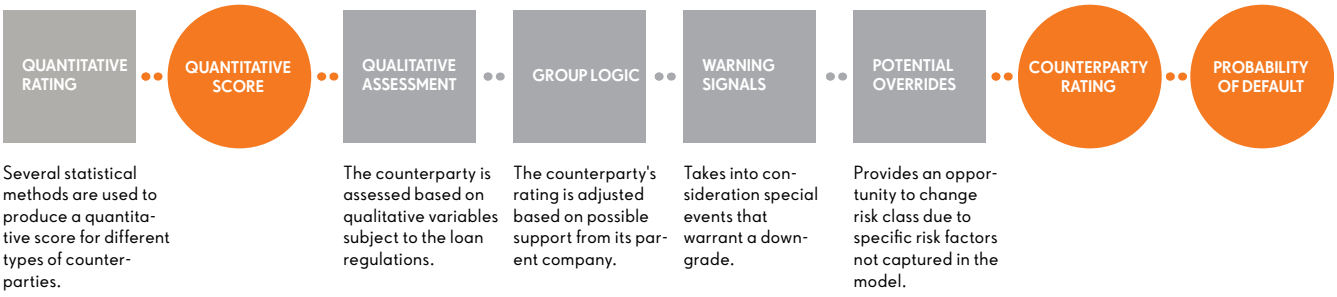
The IRB approach has been used since 2007 for assessing credit risk where a mortgage deed or a share in a tenant-owners' association is used as collateral. In 2013, permission was received to include tenant-owners' associations with a turnover of less than EUR 50 million in the retail exposure class, for which SBAB holds an IRB permit. In 2015, SBAB also received permission to use the IRB approach for excess exposures that are not fully covered by mortgage deeds, property financing using collateral other than directly pledged mortgage deeds and letters of credit. Previously, the standardised approach was used for these exposures.

In credit risk models, an assessment is made of the probability of default[1)] and share of loss, as well as the proportion of loan commitments utilised in the event of default. On the basis of these parameters and the size of the exposure, the expected and unexpected loss can be estimated. The exposure is rank by probability of default to one of eight risk classes for corporate and retail loans, of which the eighth class comprises customers in default. Trends for customers in high-risk classes are monitored diligently and, when necessary, exposure is managed actively by credit monitoring personnel.

The IRB models are used throughout SBAB's lending operations for tasks such as credit granting, pricing, portfolio analysis and performance monitoring per business area. All deviations from the quantitatively calculated risk class are analysed. The models produced are validated annually by risk control and, whenever required, they are recalibrated. The validations carried out for 2016 did not result in any changes to models. A major challenge in the validation process has been that the number of defaults and losses has been very low.

For those customer segments within corporate exposures for which current financial statements are available, the quantitative assessment process is supplemented with a systematic qualitative assessment in accordance with SBAB's loan regulations, based on a number of predetermined questions (see Figure 11). For other customer segments involving corporate lending, credit analysts add their assessment of risk class and an explanatory statement to the supporting material for assessment of risk class in the decision-processing system.

FIGURE 11. **INTERNAL RATING PROCESS FOR CORPORATES**



[1)] An exposure is regarded as in default if the receivable is more than 60 days past due (for receivables exceeding SEK 1,000) or if an assessment has been made that the customer will probably not be able to pay agreed interest amounts or cover repayments of the principal.

9.4 Risk classification method

In conjunction with capital adequacy and risk classification, exposures are categorised in exposure classes. Loans to tenant-owners' associations with a turnover of less than EUR 50 million and 100% collateral in residential property are reported in the retail exposure class. For central government, institutional, unsecured lending exposures and other exposures, the standardised approach is applied. The portion of loans for which a municipality or the Swedish National Housing Credit Guarantee Board (currently a part of the National Board of Housing, Building and Planning) has issued a guarantee is referred to central government and municipal exposures and is recognised in accordance with the standardised approach. Table 11, Capital requirements and risk exposure amounts, shows the distribution of risk exposure amounts and capital requirements by exposure class.

With regard to exposures that are assessed using the IRB approach, SBAB has opted to use a scoring method for risk classification of counterparties in the PD dimension. The data on which the scoring models are based was obtained from both internal and external sources. Internal data consists of customer information, loan information, default outcomes and internal payment records. Data obtained externally includes income data, financial accounts, external payment records, property data and macroeconomic data.

SBAB's PD models for corporate exposures and exposures to tenant-owners' associations are based on data originating in December 1996. PD models for retail exposures are based on data from September 2001 and onwards. In preparing PD estimates, data from the financial crisis of the 1990s and onwards are also used. Table 20 shows the distinction between retail exposures and corporate exposures.

For off-balance sheet retail exposures, which primarily consist of retail residential mortgage commitments, SBAB uses in-house estimates of the credit conversion factor (CCF). In the CCF calculation, a scoring model is used to estimate the probability that the exposure will end up on SBAB's balance sheet. The model builds primarily on how far the particular loan case has progressed in SBAB's credit-granting process. The estimated probability is used to allocate each exposure to eight CCF risk classes. The CCF estimate, including the safety margin, is calculated as the 99th percentile of the average approval frequencies per monthly observation point in the particular CCF classes.

TABLE 20. **LOAN PORTFOLIOS AND EXPOSURE CLASSES FOR WHICH THE IRB APPROACH IS APPLIED**

Portfolio	Property	Exposure class	PD model
Corporates	Private properties	Corporate exposures	Corporate
	Tenant-owner associations (turnover greater than or equal to EUR 50 million)		
	Commercial properties		
Retail	Houses and holiday homes	Retail exposures	Retail
	Tenant-owners' rights		
	Tenant-owner associations (turnover less than EUR 50 million)		

9.5 The link between external and internal ratings

SBAB's risk classes are not directly comparable to the ratings used by external credit rating agencies.

The credit rating agencies' ratings do not correspond to a direct classification of the counterparties' probability of default in the same way that the bank's risk classification does. The credit rating agencies also consider, to a varying degree, the severity of the losses that may be caused by default, while SBAB captures this in the LGD dimension. The time horizon on which the credit rating is based is not always the same for credit rating agencies as for SBAB. Accordingly, it is difficult to translate internal risk classes to external ratings unequivocally and consistently. However, by analysing the historic proportion of default in SBAB's risk classes compared with the proportion of default in Standard & Poor's rating classes, it is possible to obtain a reasonably correct comparative table. Table 21 presents the external rating classes that best correspond to the historic proportion of default in each of SBAB's risk classes.

TABLE 21. **THE LINK BETWEEN EXTERNAL AND INTERNAL RATING**

Risk class	Standard & Poor's rating	Risk class	Standard & Poor's rating
C1	AAA–A	R1	AAA–AA
C2	A	R2	AA–A
C3	A–BBB	R3	A
C4	BBB-BB	R4	A–BBB
C5	BB	R5	BBB–BB
C6	BB–C	R6	BB
C7	B–C	R7	BB–C

9.6 Exposure amounts and capital requirements

Table 22 shows all credit-risk exposures both in and outside the lending portfolio. Without taking credit-risk protection into account, the total amount for all credit-risk exposures was SEK 392,281 million.

Credit-risk protection used for IRB exposures consists of government and municipal guarantees. Loans backed by collateral in the form of a unit in a tenant-owners' association or mortgage deeds account for the entire amount for IRB exposures. Credit-risk protection is not used for exposures reported in accordance with the standardised approach.

Although SBAB has also obtained credit loss guarantees of SEK 74 million from business partners, these are not used when calculating capital adequacy ratios. In addition, the Parent Company and SCBC have jointly taken up credit insurance with Genworth Financial Mortgage Insurance Limited (Genworth) (sold to AmTrust Financial Services, Inc in 2016), which is also not used when calculating capital adequacy. The credit insurance covers that part of the principal that exceeds 85% of the value of collateral pledged. The insured principal amounted to SEK 94 million at 31 December 2016. The insurance policy was cancelled effective 1 January 2009 and cannot be utilised for new loans. However, the policy continues to apply as before for loans that were covered by the insurance from the start.

Corporate exposures comprised only 13% of total exposures in the loan portfolio for which the IRB approach is used, but due to the higher average risk weighting, the exposures account for 51% of the total capital requirement according to Pillar 1 when the IRB approach is applied.

TABLE 22. **EXPOSURE AMOUNTS BY EXPOSURE CLASS FOR CREDIT-RISK EXPOSURES**

SEK million	Original exposure before credit risk protection	Value adjustments	Collateral that reduces capital requirements in the form of guarantees and financial securities	Inflows	Exposures within the line before CCF	Exposure after CCF[1)]	Exposure within the line after CCF	Exposure amounts covered by credit-risk protection in the form of properties
Credit risk in lending portfolio recognised under the IRB approach								
Corporate exposures	42,574	–	-179	–	4,942	40,801	3,348	40,801
Retail exposures	287,316	–	-1146	–	31,060	263,458	8,348	263,458
of which, houses and holiday homes	*118,792*	–	*–91*	–	*11,652*	*110,204*	*3,156*	*110,204*
of which, tenant-owners' rights	*121,663*	–	–	–	*19,250*	*107,472*	*5,059*	*107,472*
of which, tenant-owners' associations	*46,861*	–	*–1,055*	–	*158*	*45,782*	*133*	*45,782*
Total credit risk under the IRB approach	**329,890**	**–**	**-1325**	–	**36,002**	**304,259**	**11,696**	**304,259**
Credit risk in the lending portfolio recognised under the standardised approach								
Exposures to central governments and central banks	14,077	–	–	109	–	14,186	–	–
Exposures to regional governments or local authorities	5,221	–	–	1216	–	6,437	–	–
Multilateral development banks	990	–	–	–	–	990	–	–
Institutional exposures	4,245	–	–	–	–	4,245	–	–
Corporate exposures	–	–	–	–	–	–	–	–
Retail exposures	3,249	-10	–	–	828	2,577	166	–
Unsettled items	16	-6	–	–	–	10	–	–
Covered bond exposures	33,838	–	–	–	–	33,838	–	–
Exposures to institutions with a short-term rating	42	–	–	–	–	42	–	–
Other items	713	–	–	–	–	713	–	–
Total credit risk under the standardised approach	**62,391**	**-16**	**–**	**1,325**	**828**	**63,038**	**166**	**–**
Total	**392,281**	**-16**	**-1,325**	**1,325**	**36,830**	**367,297**	**11,862**	**304,259**

[1)] In exposures after inflows and outflows, adjustments have been made of amounts to be recognised and covered by capital in an exposure class other than the original one.
[2)] Off-balance sheet exposures have been excluded.

The average exposure amount for the corresponding loan portfolio, calculated on the basis of the exposure amount in the lending portfolios at the end of each month in the past year, was SEK 296,011 million, of which 88% comprised retail exposures. Loan commitments and other credit-related commitments totalled SEK 36,830 million which, after the credit conversion factor was taken into account, amounted to SEK 11,862 million.

Risk exposure amounts for credit-risk exposures amounted to SEK 31,362 million, of which SEK 23,546 million was recognised in accordance with the IRB approach and SEK 7,816 million with the standardised approach.

The average risk weighting for exposures recognised in accordance with the IRB approach was 7.7%, while the weighting for exposures recognised with the standardised approach was 12.4%. Exposure-weighted average PD per counterparty for IRB exposures amounted to 0.32% for corporate exposures and 0.50% for retail exposures. Exposure-weighted average LGD for corporate exposures was 37.2% and exposure-weighted LGD for retail exposures was 10.0%. The exposure-weighted amount for LGD is controlled by the limitation rule, which entails a lowest total level for LGD of 10% for retail exposures covered by the advanced IRB approach, for which collateral consists of a share in a tenant-owners' association, a mortgage in a residential property or the site leasehold on such a property.

Average exposure amounts for lending portfolio exposures [2)]	Risk exposure amounts before SME discount	Risk exposure amounts after SME discount	Capital requirement	Average risk weight, %	Individual provisions	Collective provisions with deduction for guarantees	Expected loss	Exposure-weighted average PD, %	Exposure-weighted average LGD, %
35,222	12,922	12,106	969	29.7	18	1	48	0.32	37.20
260,789	11,770	11,440	915	4.3	38	149	160	0.50	10.00
112,816	*4,939*	*4,939*	*395*	*4.5*	*5*	*62*	*66*	*0.49*	*10.5*
100,586	*5,290*	*5,290*	*423*	*4.9*	*12*	*87*	*70*	*0.56*	*12.2*
47,387	*1,541*	*1,211*	*97*	*2.6*	*21*	*0*	*24*	*0.38*	*8.3*
296,011	**24,692**	**23,546**	**1,884**	**7.7**	**56**	**150**	**208**		
134	0	0	0	0.0	–	–			
1,378	0	0	0	0.0	–	–			
–	0	0	0	0.0	–	–			
–	1,907	1,907	152	44.9	–	–			
–	–	–	–	–	–	–			
2,542	1,933	1,933	155	75.0	-	10			
14	12	12	1	115.2	3	2			
–	3,384	3,384	271	10.0	–	–			
–	19	19	1	44.9	–	–			
–	561	561	44	78.7	–	–			
4,068	**7,816**	**7,816**	**624**	**12.4**	**3**	**12**			
300,079	**32,508**	**31,362**	**2,508**	**8.5**	**59**	**162**			

TABLE 23. **CREDIT RISK EXPOSURE BY EXPOSURE CLASS AND PD RANGE**
(EBA CR6 TABLE)

SEK million		PD scale	Original on-balance-sheet exposure	Off-balance-sheet exposures pre-CCF	Average CCF, %	Exposure value after CCF	Average PD, %	Number of borrowers	Average LGD, %	Average maturity	Risk exposure amount	Risk exposure amount density, %	Expected loss	Value adjustments and provisions
Exposure class														
Corporates (foundation approach)	Of which, Corporate SME	0.00 to <0.15	6,318	443	94.9	6,390	0.09	58	35.6	2.5	1,065	17	2	–
		0.15 to <0.25	5,900	209	97.6	5,940	0.21	125	35.7	2.5	1,475	25	5	–
		0.25 to <0.50	3,408	–	95.1	3,395	0.45	105	35.4	2.5	1,262	37	5	–
		0,50 to <0.75	–	–	–	–	–	–	0.0	–	–	–	–	–
		0.75 to <2.50	453	–	85.4	418	1.16	29	35.8	2.5	255	61	2	–
		10.00 to <100.00	120	–	75.4	114	3.11	16	35.3	2.5	93	82	1	–
		2.50 to <10.00	12	–	92.0	12	27.04	3	35.2	2.5	16	133	1	–
		100.00 (Default)	49	–	100	49	100.00	1	35.0	2.5	-	-	17	–
		Portfolio subtotal	**16,260**	**652**	**94.2**	**16,318**	**0.58**	**337**	**35.6**	**2.5**	**4,166**	**26**	**33**	**19**
	Of which, Corporates Other	0.00 to <0.15	15,757	1,544	95.1	16,855	0.09	104	36.8	2.5	4,114	24	6	–
		0.15 to <0.25	4,038	1,857	96.7	5,431	0.21	35	40.7	2.5	2,344	43	5	–
		0.25 to <0.50	1,519	889	96.3	2,182	0.45	25	43.3	2.5	1,470	67	4	–
		0,50 to <0.75	–	–	–	–	–	–	–	–	–	–	–	–
		0.75 to <2.50	58	–	28.6	15	1.16	4	35.1	2.5	12	80	0	–
		10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
		2.50 to <10.00	–	–	–	–	–	–	–	–	–	–	–	–
		100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
		Portfolio subtotal	**21,372**	**4,290**	**94.3**	**24,483**	**0.15**	**168**	**38.2**	**2.5**	**7,940**	**32**	**15**	–
Retail (advanced approach)	Of which, Retail SME	0.00 to <0.15	27,050	67	99.1	26,849	0.09	1,087	7.7	–	372	1	2	–
		0.15 to <0.25	16,242	71	97.5	15,889	0.21	922	8.7	–	464	3	3	–
		0.25 to <0.50	2,764	20	93.4	2,516	0.45	256	10.4	–	152	6	1	–
		0.50 till <0.75	–	–	–	–	–	–	–	–	–	–	–	–
		0.75 to <2.50	394	–	94.3	329	1.16	55	11.7	–	43	13	0	–
		10.00 to <100.00	141	–	88.9	101	3.57	33	11.8	–	25	25	0	–
		2.50 to <10.00	14	–	0	0	27.04	1	0.0	–	–	–	–	–
		100.00 (Default)	98	–	100	98	100.00	6	17.3	–	155	158	17	–
		Portfolio subtotal	**46,703**	**158**	**97.7**	**45,782**	**0.38**	**2,360**	**8.3**	**–**	**1,211**	**3**	**23**	**21**
	Of which, Retail Other	0.00 to <0.15	126,378	15,120	97.7	129,931	0.04	111,072	9.9	–	1,634	1	5	–
		0.15 to <0.25	40,859	10,881	94.4	43,934	0.16	33,350	10.8	–	1,722	4	8	–
		0.25 to <0.50	26,482	4,452	95.6	27,661	0.42	19,669	11.2	–	2,262	8	13	–
		0.50 till <0.75	–	–	–	–	–	–	–	–	–	–	–	–
		0.75 to <2.50	11,778	355	99.2	12,042	1.55	8,072	11.7	–	2,483	21	22	–
		10.00 to <100.00	2,387	38	99.4	2,416	4.17	1,669	11.6	–	888	37	12	–
		2.50 to <10.00	1,405	56	98.3	1,429	24.67	1,245	12.5	–	1,094	77	44	–
		100.00 (Default)	264	–	99.7	263	100.00	205	13.5	–	146	56	33	–
		Portfolio subtotal	**209,553**	**30,902**	**97.0**	**217,676**	**0.53**	**175,282**	**10.4**	**–**	**10,229**	**5**	**137**	**166**
Total (all portfolios)			**293,888**	**36,002**	**97.0**	**304,259**	**0.48**	**178,147**	**13.6**	**–**	**23,546**	**8**	**208**	**206**

TABLE 24. **TREND FOR RISK EXPOSURE AMOUNTS UNDER THE IRB APPROACH** *(EBA CR8 TABLE)*

SEK million	Risk exposure amount	Capital requirement
Risk exposure amount at the end of the previous period	**24,898**	**1,992**
Asset size	2,848	228
Asset quality	–2,692	–215
Model updates	–	–
Methodology and policy	–	–
Acquisitions and disposals	–1,495	–120
Foreign exchange movements	–	–
Other	–13	–1
Risk exposure amount at the end of the reporting period	**23,546**	**1,884**

TABLE 25. **TOTAL AND AVERAGE NET AMOUNT OF CREDIT-RISK EXPOSURES** *(EBA CRB-B TABLE)*

SEK million	Net value of exposure at the end of the period	Average net exposures over the period [2]
Exposures to governments, central banks and Swedish municipalities	–	–
Exposures to institutions	–	–
Exposures to corporates	42,574	40,198
of which, Specialised Lending	–	–
of which, SMEs	16,913	15,932
Retail exposures	287,316	303,024
of which, secured by real estate and tenant-owners' rights	287,316	303,024
of which, exposures to SMEs	46,861	48,259
of which, exposures to other	240,455	254,765
Total IRB approach	**329,890**	**343,222**
Exposures to governments and central banks	14,077	8,471
Exposures to regional governments or local authorities or agencies	5,221	5,240
Exposures to public sector entities	–	–
Exposures to multilateral development banks	990	796
Exposures to international organisations	–	–
Exposures to institutions[1]	4,245	4,932
Exposures to corporates	–	11
of which, exposures to SMEs	–	–
Retail exposures	3,240	3,586
of which, exposures to SMEs	–	–
Exposures in default	10	8
Exposures in the form of covered bonds	33,838	36,202
Exposures to institutions and corporates with a short-term credit rating	41	222
Other items	713	922
Total standardised approach	**62,375**	**60,390**
Total	**392,265**	**403,612**

[1] The institution exposure class excludes counterparty risk.
[2] Average net exposures over the period are based on observed amounts over four quarters.

9.7 Exposure amounts by geographical region

SBAB's lending operations are concentrated to Sweden. There is some exposure to other countries in Western Europe, Canada and the US due to the funding of the Swedish lending operations.

SBAB's lending portfolio is mainly secured by housing in the Stockholm area (61%). Only 1% of the underlying collateral derives from economically weak regions. Sweden is divided as follows:

- Greater Stockholm: Stockholm's labour market region according to Statistics Sweden (SCB) (2004);
- Greater Gothenburg Gothenburg's labour market region according to SCB (2004);
- The Öresund region: Labour market regions in Malmö and Helsingborg according to SCB (2004);
- University and growth regions: Municipalities with universities and municipalities with especially buoyant growth according to analyses by SBAB;
- Weak regions[1]: Municipalities with very weak or negative growth according to analyses by SBAB;
- Other regions[1]: Municipalities that are not allocated to any other category.

[1] The analysis is based in part on statistics from SCB, such as short and long-term population growth, the proportion of the population older than 64 years, average income and the vacancy rate in public utility housing, and in part on the local knowledge of SBAB's analysts.

The tables illustrating lending operations differ from the information provided in the Annual Report 2016 as exposure amounts, including accrued interest, are reported instead of the principal and because transaction costs are excluded. When the term exposure amount is used in the following section of this chapter, it refers to gross exposure before credit-risk protection and after adjustment for outflows and inflows, and off-balance sheet exposures, unless stated otherwise.

TABLE 26. **EXPOSURE AMOUNT BY GEOGRAPHICAL AREA FOR CREDIT-RISK EXPOSURES**

SEK million	Sweden	Denmark	Finland	France	Germany	Norway	United Kingdom	USA	Canada	Switzerland	Other countries	Total
Credit risk recognised under the IRB approach												
Exposures to corporates	37,453	–	–	–	–	–	–	–	–	–	–	37,453
Retail exposures	255,110	–	–	–	–	–	–	–	–	–	–	255,110
of which, exposures to SMEs	*45,649*	–	–	–	–	–	–	–	–	–	–	*45,649*
of which, retail exposures secured by immovable property	*209,461*	–	–	–	–	–	–	–	–	–	–	*209,461*
Total exposures recognised with the IRB approach	**292,563**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**292,563**
Exposures to governments and central banks	13,831	–	355	–	–	–	–	–	–	–	–	14,186
Exposures to regional governments or local authorities or agencies	6,437	–	–	–	–	–	–	–	–	–	–	6,437
Exposures to multilateral development banks	–	–	–	–	–	–	–	–	–	–	990	990
Exposures to institutions	970	1,787	–	71	36	21	1,001	313	1	45	–	4,245
Exposures to corporates	–	–	–	–	–	–	–	–	–	–	–	–
of which, exposures to SMEs	–	–	–	–	–	–	–	–	–	–	–	–
Retail exposures	2,411	–	–	–	–	–	–	–	–	–	–	2,411
of which, exposures to SMEs	–	–	–	–	–	–	–	–	–	–	–	–
Exposures in default	10	–	–	–	–	–	–	–	–	–	–	10
Exposures in the form of covered bonds	31,662	1,072	–	–	–	549	–	–	555	–	–	33,838
Exposures to institutions and corporates with a short-term credit rating	42	–	–	–	–	–	–	–	–	–	–	42
Other items	713	–	–	–	–	–	–	–	–	–	–	713
Total exposures recognised with standardised approach	**56,076**	**2,859**	**355**	**71**	**36**	**570**	**1,001**	**313**	**556**	**45**	**990**	**62,872**
Total	**348,639**	**2,859**	**355**	**71**	**36**	**570**	**1,001**	**313**	**556**	**45**	**990**	**355,435**

TABLE 27. **EXPOSURE AMOUNT BY GEOGRAPHICAL AREA FOR CREDIT-RISK EXPOSURES IN LENDING OPERATIONS**

SEK million	Greater Stockholm	Greater Gothenburg	Öresund region	University and growth regions	Weak regions	Other regions	Total
Credit risk recognised in accordance with IRB approach							
Exposures to corporates	17,068	2,592	6,866	6,551	831	3,545	37,453
Retail exposures	161,976	23,632	30,852	22,413	2,736	13,501	255,110
Total exposures recognised with the IRB approach	**179,044**	**26,224**	**37,718**	**28,964**	**3,567**	**17,046**	**292,563**
Standardised exposures							
Exposures to governments and central banks	25	5	22	29	7	22	110
Exposures to regional governments or local authorities or agencies	371	102	57	244	131	313	1,218
Exposures to corporates	–	–	–	–	–	–	–
Retail exposures	1,267	229	319	316	78	212	2,421
Exposures in default	12	1	1	1	0	1	16
Total exposures recognised with standardised approach	**1,675**	**337**	**399**	**590**	**216**	**548**	**3,765**
Total	**180,719**	**26,561**	**38,117**	**29,554**	**3,783**	**17,594**	**296,328**

9.8 Exposure amounts by next stipulated date of expiry

A large proportion (61%) of credit-risk exposures have less than one year remaining until maturity [1]. The proportion with a remaining term of between one and five years accounts for 37% of the outstanding exposure.

Exposures under other items where the duration cannot be calculated have been placed in the interval less of than a year to provide a better overview.

TABLE 28. **EXPOSURE AMOUNTS BY REMAINING MATURITY FOR CREDIT-RISK EXPOSURES**

SEK million	< 1 year	1–5 years	> 5 years	Total
Credit risk recognised in accordance with IRB approach				
Exposures to corporates	8,890	28,163	400	37,453
Retail exposures	191,789	59,480	3,841	255,110
Total exposures recognised with the IRB approach	**200,679**	**87,643**	**4,241**	**292,563**
Credit risk recognised with the standardised approach				
Exposures to governments and central banks	8,354	5,832	–	14,186
Exposures to regional governments or local authorities or agencies	3,096	2,906	435	6,437
Exposures to multilateral development banks	–	821	169	990
Exposures to institutions	576	2,931	738	4,245
Exposures to corporates	–	–	–	–
Retail exposures	2,411	–	–	2,411
Exposures in default	10	–	–	10
Exposures in the form of covered bonds	847	32,481	510	33,838
Exposures to institutions and corporates with a short-term credit rating	42	–	–	42
Other items	713	–	–	713
Total exposures recognised with standardised approach	**16,049**	**44,971**	**1,852**	**62,872**
Total	**216,728**	**132,614**	**6,093**	**355,435**

[1] For credit-risk exposures in the lending portfolio, the next stipulated date of expiry has been used. The stipulated date of expiry is defined as the day for establishing the conditions that are to apply for loans during the forthcoming contractual period. The terms must be supported by the stipulations of the original loan agreement.

9.9 Exposure amounts by type of property

In the distribution of the lending portfolio by type of property, lending for houses, holiday homes, tenant-owners' rights and tenant-owners' associations accounts for 88% of the total lending portfolio.

TABLE 29. **EXPOSURE AMOUNTS BY TYPE OF PROPERTY FOR CREDIT-RISK EXPOSURES IN LENDING OPERATIONS**

SEK million	Houses and holiday homes	Tenant-owners' rights	Tenant-owners' associations	Private multi-family dwellings	Municipal multi-family dwellings	Commercial properties	Unsecured	Total
Credit risk recognised in accordance with IRB approach								
Exposures to corporates	13	–	4,007	28,513	137	4,783	–	37,453
of which, SMEs	*13*	–	–	*13,850*	*83*	*2,241*	–	*16,187*
Retail exposures	107,048	102,413	45,649	–	–	–	–	255,110
of which, SMEs	–	–	*45,649*	–	–	–	–	*45,649*
Total exposures recognised with the IRB approach	**107,061**	**102,413**	**49,656**	**28,513**	**137**	**4,783**	**–**	**292,563**
Credit risk recognised with the standardised approach								
Exposures to governments and central banks	2	–	102	5	–	–	–	109
Exposures to regional governments or local authorities or agencies	89	–	957	67	104	1	–	1,218
Exposures to corporates	–	–	–	–	–	–	–	–
of which, exposures to SMEs	–	–	–	–	–	–	–	–
Retail exposures	168	260	–	–	–	–	1,994	2,422
of which, exposures to SMEs	–	–	–	–	–	–	–	–
Exposures in default	3	0	–	–	–	–	13	16
Total exposures recognised with standardised approach	**262**	**260**	**1,059**	**72**	**104**	**1**	**2,007**	**3,765**
Total	**107,323**	**102,673**	**50,715**	**28,585**	**241**	**4,784**	**2,007**	**296,328**

9.10 Past due exposures and exposures subject to impairment requirements

Past due exposures refer to total claims where any part is more than five days past due. SBAB has elected to use this method so that the result of the analysis is not distorted when payments are delayed because the payment date coincided with a public holiday. Exposures subject to impairment requirements refer to doubtful exposures whereby individual provisions have been posted for commitments relating to corporate loans or retail loans, meaning that in SBAB's assessment, future payments are exposed to risk and the collateral does not cover the amount of the claim. The selection used for provisions comprises all corporate customers where there is objective evidence of impairment and individual retail customers where special reasons for impairment exist. All exposures in risk class C8 are reviewed monthly and assessed for risk. The size of the individual provision for corporate customers is assessed by comparing the agreed payment flow from the customer with the expected future payment capacity in combination with a valuation of the underlying collateral. In separate cases, after individual assessment, retail customers in risk class R8 are covered by an individual provision. The individual and collective provisions, with deductions for guarantees, amounted to 58% of the exposure amount for past due exposures.

The collective provision is intended to cover losses for events that have occurred but that have not yet had effect on the individual level in the form of payment difficulties or been otherwise identified in an individual review of commitments. The collective provision consists of customers in risk classes C6–C8 and R5–R8. All loans with individual provisions are automatically excluded from the collective provision given that SBAB has already estimated the risk of losses for these loans. Other customers in risk class C8 are included in the collective provision but with a risk of loss of SEK 0. The risk of loss is estimated at SEK 0 because SBAB has assessed these individually and there is no need for them to be included in the collective provision.

All provisions have been assessed to constitute specific risks based on Article 1, item 5, of the EBA's regulatory technical standards on specific and general risk regarding Article 110, item 4 of the CRR.

TABLE 30. **EXPOSURES WITH PAST DUE AMOUNTS AND PROVISIONS**

					SPECIFIC RISK		
SEK million	**Total exposure amount in the lending portfolio**	**Of which, not overdue exposures**	**Of which, past due exposures[1)]**	**Exposure amounts for exposures with individual provisions**	**Individual provisions**	**Collective provisions with deduction for guarantees**	**Total exposure amount in the lending portfolio after deduction for provisions**
Houses and holiday homes	107,324	107,143	181	15	4	62	107,258
Tenant-owners' rights	102,672	102,489	183	64	12	87	102,573
Tenant-owners' associations	50,715	50,710	5	23	21	0	50,694
Private multi-family dwellings	28,585	28,585	–	28	18	1	28,566
Municipal multi-family dwellings	241	241	–	–	–	–	241
Commercial properties	4,784	4,784	–	–	–	–	4,784
Unsecured	2,007	1,992	15	4	4	12	1,991
Total	**296,328**	**295,944**	**384**	**134**	**59**	**162**	**296,107**

[1)] For past due exposures, amounts past-due by five days or less are not taken into consideration to ensure that the analysis is not distorted by payments delayed because the payment date is a holiday.

TABLE 31. **GEOGRAPHICAL DISTRIBUTION OF EXPOSURES WITH PAST DUE AMOUNTS AND PROVISIONS**

					SPECIFIC RISK		
SEK million	**Total exposure amount in the lending portfolio**	**Of which, not overdue exposures**	**Of which, past due exposures[1)]**	**Exposure amounts for exposures with individual provisions**	**Individual provisions**	**Collective provisions with deduction for guarantees**	**Total exposure amount in the lending portfolio after deduction for provisions**
Greater Stockholm	180,719	180,493	226	100	34	97	180,588
Greater Gothenburg	26,561	26,534	27	14	12	13	26,536
Öresund region	38,117	38,051	66	5	1	28	38,088
University and growth regions	29,554	29,526	28	1	0	10	29,544
Weak regions	3,784	3,779	5	13	11	3	3,770
Other regions	17,593	17,561	32	1	1	11	17,581
Total	**296,328**	**295,944**	**384**	**134**	**59**	**162**	**296,107**

[1)] For past due receivables, amounts past-due by five days or less are not taken into consideration to ensure that the analysis is not distorted by payments delayed because the payment date is a holiday.

TABLE 32. **EXPOSURES WITH PAST DUE AMOUNTS AND PROVISIONS PER EXPOSURE CLASS**

					SPECIFIC RISK		
SEK million	**Total exposure amount in the lending portfolio**	**Of which, not overdue exposures**	**Of which, past due exposures[1)]**	**Exposure amounts for exposures with individual provisions**	**Individual provisions**	**Collective provisions with deduction for guarantees**	**Total exposure amount in the lending portfolio after deduction for provisions**
Credit risk recognised in accordance with IRB approach							
Exposure to corporates	37,453	37,450	2	28	18	1	37,434
Retail exposures	255,110	254,749	362	103	38	149	254,923
of which, houses and holiday homes	*107,049*	*106,873*	*176*	*15*	*5*	*62*	*106,982*
of which, tenant-owners' rights	*102,413*	*102,231*	*182*	*65*	*12*	*87*	*102,314*
of which, tenant-owners' associations	*45,648*	*45,645*	*4*	*23*	*21*	*0*	*45,627*
Total exposures recognised with the IRB approach	**292,563**	**292,199**	**364**	**131**	**56**	**150**	**292,357**
Credit risk recognised with the standardised approach							
Exposures to governments and central banks	109	109	–	–	–	–	109
Exposures to regional governments or local authorities or agencies	1,218	1,217	1	–	–	–	1,218
Exposures to corporates	–	–	–	–	–	–	–
Retail exposures	2,422	2,415	7	–	–	10	2,412
Exposures in default	16	4	12	4	3	2	11
Total exposures recognised with standardised approach	**3,765**	**3,745**	**20**	**4**	**3**	**12**	**3,750**
Total	**296,328**	**295,944**	**384**	**135**	**59**	**162**	**296,107**

[1)] For past due receivables, amounts past-due by five days or less are not taken into consideration to ensure that the analysis is not distorted by payments delayed because the payment date is a holiday.

9.11 Reconciliation of change in specific credit risk adjustments for loans with provisions

SBAB only has specific credit-risk adjustments and no general credit-risk adjustments. These emanate from individual and collective provisions.

Unlike the previous tables, provisions are reported without deductions for guarantees.

TABLE 33. **CHANGE IN PROVISION FOR PROBABLE LOAN LOSSES**

SEK million	Individual provision for individually measured receivables	Individual provision for collectively measured receivables	Collective provision
Provision at the beginning of the year	**-43**	**-38**	**-172**
Individual provision for the year	–	–	–
Reversed from previous provisions	4	16	–
Individual provision utilised for confirmed loan losses	–	2	–
Allocations to/unwinding of collective provisions	–	–	-4
Provision at the end of the year	**-39**	**-20**	**-176**

9.12 Exposures per risk class in the PD dimension

The quality of the portfolio is favourable. A total of 99.6% of corporate exposures and 93.2% of retail exposures in the balance sheet derive from the best risk classes: up to C4 (corporate exposures) and up to R4 (retail exposures).

FIGURE 12. **IRB CORPORATES – EXPOSURE BY RISK CLASS**

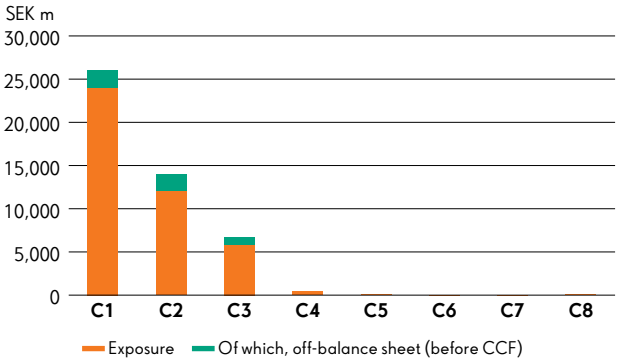


FIGURE 13. **IRB RETAIL – EXPOSURE BY RISK CLASS**

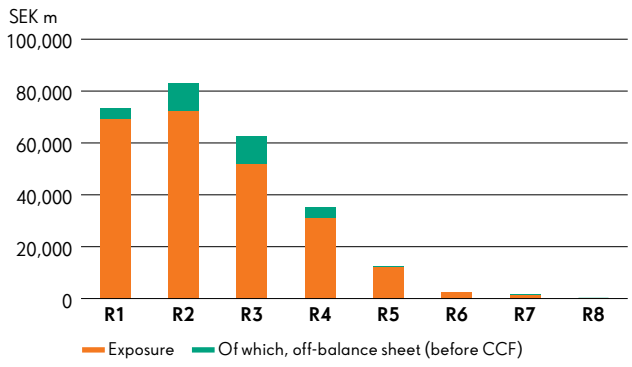


FIGURE 14. **IRB RETAIL – TENANT-OWNERS' RIGHTS – EXPOSURE BY RISK CLASS**

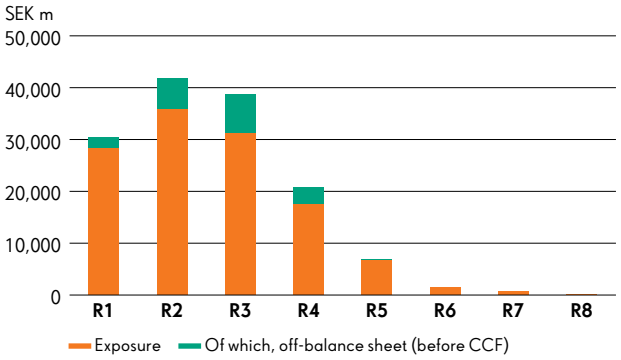


FIGURE 15. **IRB RETAIL – HOUSE/HOLIDAY HOME – EXPOSURE BY RISK CLASS**

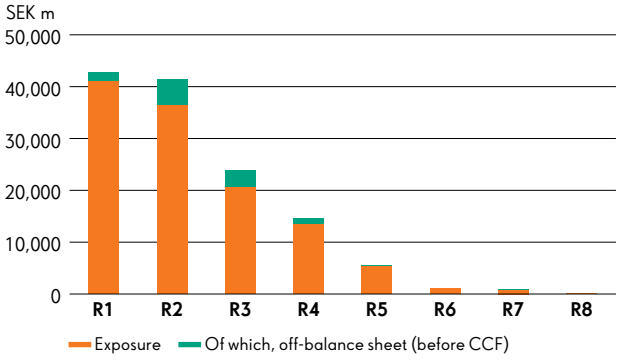
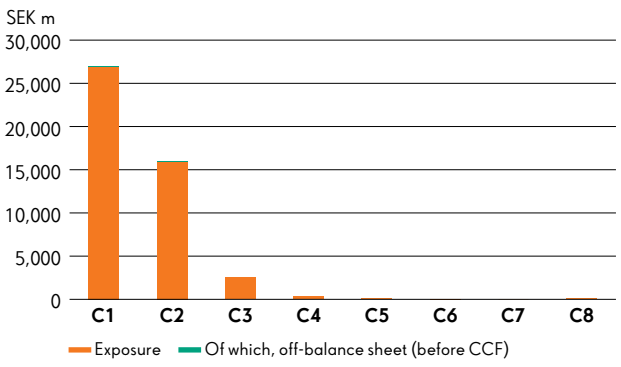


FIGURE 16. **IRB RETAIL – TENANT-OWNERS' ASSOCIATION – EXPOSURE BY RISK CLASS**



9.13 Realised outcome in the PD and LGD dimensions

Table 34 shows the PD and LGD estimates as of 31 December 2015 and the outcome for 2016. The estimated outcome for the retail exposures is somewhat above the actual outcome, which indicates that, in the prevailing economic conditions, the PD models overestimate the risk of default. The estimated outcome for corporate exposures is also somewhat above the actual outcome. However, as there are so few outcomes, it is not possible to draw any conclusions based on the result. The exposure-weighted LGD amount is controlled by the above limitation rule, which entails that the lowest total level for LGD is 10% for exposures covered by the advanced IRB approach and where collateral comprises a share in a tenant-owners' association, a mortgage in a residential property or the site leasehold on such a property.

TABLE 34. **REALISED OUTCOME IN THE PD AND LGD DIMENSIONS**

Exposure class	PD estimates, %	Realised outcome[1], %	LGD estimates	Realised outcome[2], %
Exposures to corporates	0.4	0.0	–	–
Retail exposures	0.6	0.2	10%[3]	0.5%[3]

[1] An exposure is regarded as in default if the receivable is more than 60 days past due or if an assessment has been made that the customer will probably not be able to pay agreed interest amounts or cover repayments of the principal.

[2] Realised outcome has been calculated on loans in default where the default was concluded during the year.

[3] The results are exposure-weighted.

9.14 Comparison of expected loss and outcome

During the comparison period, it can be seen that the expected loss (EL), in accordance with the internal rating, increased for both corporate and retail exposures. In both cases, the increase was attributable to raised volumes. The relatively small confirmed loan losses emerging during the year were due, in part, to lenders not managing their interest payments and loan repayments and, in part, because the value of pledged collateral was less than the value of SBAB's receivables.

TABLE 35. **COMPARISON OF EXPECTED LOSS BETWEEN OUTCOME AND MODEL, AND PROVISION FOR LOANS REPORTED ACCORDING TO IRB [1]**

Exposure class, SEK million	EL, IRB/IRB basic 2015	EL, IRB/IRB basic 2014	EL, IRB/IRB advanced 2015	EL, IRB/IRB advanced 2014	Realised outcome 2016	Realised outcome 2015	Total provisions, including guarantees 2016	Total provisions, including guarantees 2015
Exposures to corporates	50	44	–	–	–	–	19	19
Retail exposures	–	–	231	218	8	13	187	180
of which, houses and holiday homes	–	–	*107*	*114*	*5*	*9*	*67*	*67*
of which, tenant-owners' rights	–	–	*93*	*71*	*3*	*3*	*99*	*80*
of which, tenant-owners' associations	–	–	*31*	*33*	–	*1*	*21*	*33*
Total	**50**	**44**	**231**	**218**	**8**	**13**	**206**	**199**

[1] Expected loss (EL) has been calculated for the loan receivables that existed at the end of 2014 and 2015, respectively. The expected loss is compared with the actual outcome for confirmed loan losses during the outcome years of 2015 and 2016, respectively.

10 FUNDING

SBAB's operations are primarily financed through funding in the capital and money markets. Since 2007, funding is also increasingly raised through retail deposits. Funding is conducted, in part, through the Parent Company SBAB Bank AB (publ) and, in part, through SCBC where funding is carried out through the issue of covered bonds. Swedish and international programmes are utilised for funding, which is predominantly conducted in public markets and supplemented with private placements. Funding is mainly targeted at major institutional investors.
International funding is primarily aimed at European investors, but SBAB also attracts investors in the US, Japan and other parts of Asia.

10.1 Medium and long-term funding

10.1.1 Senior unsecured funding

SBAB has a medium and long-term funding programme, the Euro Medium Term Note Programme (EMTN programme), which is used both for Swedish and international funding. The EMTN programme has a limit of EUR 13 billion. The programme grants investors the right to demand early redemption of a bond should the Swedish government no longer control at least 51% of the voting rights for the shares in the company. This right is subject to the condition that the Swedish government has not previously guaranteed SBAB's obligations under the bonds, in which case the right to early redemption expires. In all other cases, the terms of the EMTN programme match market practice for similar programmes and entitle investors to early redemption of the bonds if, for example, SBAB fails to pay the interest or capital on time, breaks other terms of the programme (with consideration given to certain healing periods) or if SBAB is placed into receivership or liquidation. Under the EMTN programme, SBAB can choose between various types of interest-rate structures, including floating and fixed rates, and issue bonds in several currencies and denominations. Moreover, the EMTN programme allows SBAB to issue both senior and dated subordinated debt, which may qualify as Tier 2 capital on approval by Finansinspektionen.

Based on the EMTN programme, SBAB has also drawn up a stand alone prospectus under which perpetual subordinated debt intended to qualify as Additional Tier 1 capital has been issued. SBAB has a Japanese Shelf Registration in place, under which SBAB can issue bonds in the Japanese market. Like the EMTN programme, bondholders are entitled to early redemption of a bond if the Swedish government ceases to control at least 51% of the voting rights for shares in the company. This right is subject to the condition that the Swedish government has not previously guaranteed SBAB's obligations under the bonds, in which case the right to early redemption expires.

10.1.2 Secured funding

The subsidiary SCBC has three funding programmes for issuing covered bonds: a Swedish covered bond programme with no fixed limit, an international Euro Medium Term Covered Note Programme (EMTCN programme) with a limit of EUR 16 billion and an Australian Covered Bond Issuance Programme with a limit of AUD 4 billion. The terms of these programmes for issuing covered bonds are in line with market practice for similar programmes and entail, for example, that investors are not entitled to early redemption of the bonds. The terms also stipulate that SCBC can choose between various types of interest-rate structures, including floating and fixed rates, and issue bonds through these three programmes in several currencies and denominations. The EMTCN programme also allows SCBC to issue bonds with a soft-bullet structure, which entitles the issuer, in certain cases, to postpone the maturity of the bond according to the issuer's terms.

10.2 Short-term funding

SBAB manages its short-term funding primarily through two commercial paper programmes:

- A Swedish commercial paper programme with a limit of SEK 25 billion; and
- A European commercial paper programme with a limit of EUR 3 billion.

The terms of these programmes match market practice for similar programmes and include limited opportunities for an investor to demand early redemption. SBAB can issue commercial paper in the international market in a variety of currencies through the European programmes, while the Swedish programme is mainly used for SEK. The commercial paper mainly comprises "discount paper," meaning that it does not have floating or fixed coupon rates, but is issued in an amount that is more/less than the nominal amount that will be repaid when it falls due.

10.3 Encumbered and unencumbered assets

As a part of SBAB's operations, residential mortgages are transferred to the subsidiary SCBC. These residential mortgages can include credits pledged against mortgages in real estate intended for residential purposes, against tenant-owners' rights or credits that otherwise qualify for inclusion in the cover pool for covered bonds. SBAB's receivables relating to the transferred residential mortgages purchased by SCBC are repaid (wholly or in part) to SBAB at the same time as covered bonds are issued by SCBC. SBAB's receivables relating to these transfers and other receivables (unless they have arisen as a result of a derivative contract connected to the cover pool) are subordinated receivables without priority, in the event SCBC were to enter receivership or be liquidated.

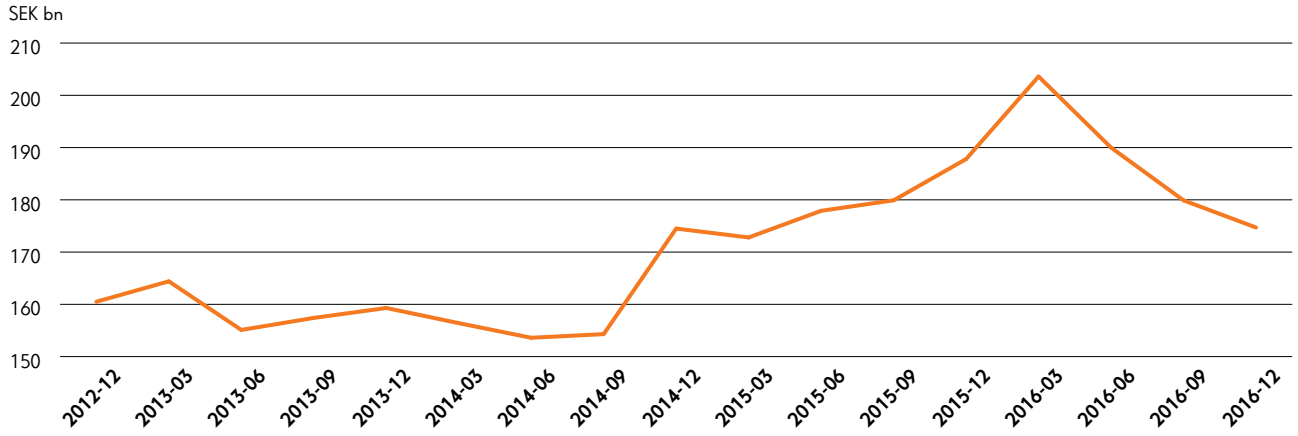
Derivative contracts may be used to ensure a good balance regarding currencies, interest rates and fixed-interest periods in the cover pool. By entering into interest-rate swap contracts with SBAB or external counterparties regarding the assets registered in the cover pool, SCBC is able to convert interest payments received by SCBC in SEK for certain assets that are registered in the cover pool into variable payments linked to 3 month STIBOR. In the same manner, SCBC may enter into currency swaps to hedge currency risks arising from funding in foreign currencies or potential assets in foreign currencies that are registered in the cover pool.

The companies in the SBAB Group are also able to enter into derivative transactions that do not need to be recorded in the cover pool. Derivative contracts may be entered into between the companies in the SBAB Group or with external counterparties. For all counterparties documentation exists in the form of ISDA Master Agreements. In most cases, an agreement is supplemented by a credit support annex (CSA). The Parent Company and SCBC may also enter into repo transactions with certain counterparties. These transactions are governed through so-called Global Master Repurchase Agreements (GMRA). In all instances, the collateral transferred between counterparties under CSAs and GMRAs is in the form of cash.

As of 31 December 2016, the cover pool assets consisted mainly of loans to the public in the form of loans against mortgages of immovable property intended for residential use or against pledged tenant-owners' rights. The cover pool may also include substitute collateral, and it is consequently possible to include derivatives or securities in the cover pool.

According to the Covered Bonds (Issuance) Act (2003:1223), the value of the assets in the cover pool must always exceed the value of the bonds issued with the mortgaged assets as collateral (referred to as overcollateralisation, "OC"). The unutilised scope in the last four-year period is described in Figure 18, Unutilised scope. At 31 December 2016, SCBC had set 6.5% as a minimum requirement for the OC level, which is the level required by Moody's to maintain the Aaa rating. At 31 December 2016, this level was equal to a volume of SEK 11.3 billion, corresponding to 14.9% of the unencumbered assets in SCBC and 5.6 percent of the unencumbered assets in the SBAB Group.

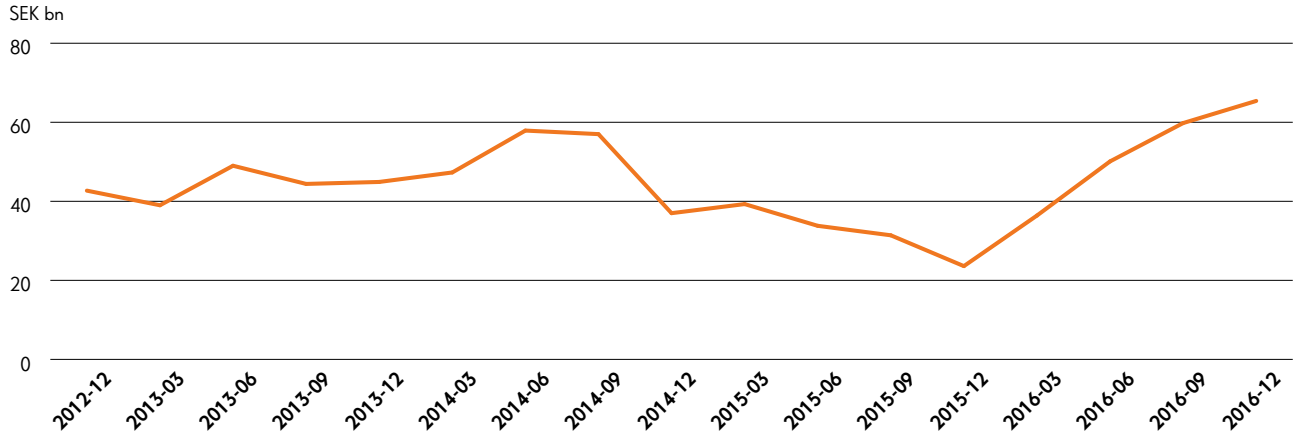
FIGURE 17. **ASSETS ENCUMBERED**



At 31 December 2016, SBAB had assets (reserves) corresponding to SEK 29.0 billion that can constitute covered assets in SCBC.

Reserves in SBAB over the past four-year period are shown in Figure 18, Unutilised scope.

FIGURE 18. **UNUTILISED SCOPE**



Of the assets included in Table 36, "Encumbered assets disclosures" below, under the heading "Unencumbered assets, carrying amount" with the amount recognised in the item "Other assets," SBAB has reported any items that are not available for mortgaging or other collateral arrangements in the regular operations. Such assets include deferred tax assets, property, plant and equipment, intangible assets and certain other assets that are not mortgaged, pledged as collateral or used as security in the regular operations.

TABLE 36. **ASSETS ENCUMBERED DISCLOSURES**

Assets, SEK million	Encumbered assets, carrying amount		Encumbered assets, fair value		Unencumbered assets, carrying amount		Unencumbered assets, fair value	
		of which, hypothetically acceptable as EHQLA and HQLA		*of which, hypothetically acceptable as EHQLA and HQLA*		*of which, eligable as EHQLA and HQLA*		*of which, eligible as EHQLA and HQLA*
Equity instruments	174,282	–	–	–	164,703	69,343	–	–
Interest-bearing securities	–	–	–	–	–	–	–	–
of which, covered bonds	–	–	–	–	69,343	69,343	70,082	70,082
of which, covered bonds	–	–	–	–	*37,255*	*37,255*	*37,693*	*37,693*
of which, securitised bonds	–	–	–	–	–	–	–	–
of which, issued by central banks and similar institutions	–	–	–	–	*23,178*	*23,179*	*23,403*	*23,403*
of which, issued by financial institutions	–	–	–	–	*8,910*	*8,910*	*8,986*	*8,986*
of which, issued by non-financial corporates	–	–	–	–	–	–	–	–
Other assets	174,282	–	–	–	95,360	–	–	–

TABLE 37. **COLLATERAL RECEIVED**

SEK million	Fair value of encumbered collateral received or own interest-bearing securities		Unencumbered collateral: Fair value of collateral received or own interest-bearing securities available for encumbrance	
		of which, hypothetically acceptable as EHQLA and HQLA		*of which, acceptable as EHQLA and HQLA*
Collateral received by the reporting institution	1,059	–	118	–
Equity instruments	–	–	–	–
Interest-bearing securities	118	–	118	–
Other collateral received	941	–	–	–
Own interest-bearing securities in issue, except own covered bonds or asset-backed securities	–	–	–	–

TABLE 38. **ASSETS ENCUMBERED /COLLATERAL RECEIVED AND RESULTING LIABILITIES**

SEK million	Matching liabilities, contingent liabilities or securities lent	Assets encumbered, collateral received and own interest-bearing securities issued excluding covered bonds and asset-backed securities.
Certain financial liabilities, book value	174,282	174,282

10.4 Funding strategy

The size of the funding portfolio is adjusted based on the volume of the loans outstanding and on the composition of the assets, taking into consideration such factors as liquidity risk and the company's risk appetite. Funding is also continuously adapted to meet the new liquidity rules included in Basel 3 and the requirements imposed by rating agencies and investors. Funding must be well diversified. The portfolio must have an effective distribution between secured and unsecured funding and strive for an even distribution of debt maturity dates, i.e. avoiding periods with large concentrations of maturities. The funding portfolio must also comprise funding in several currencies with a balanced and diversified investor base. As a consequence of the company's lending being conducted exclusively in SEK, the majority of the funding is allocated against SEK. The second largest currency for funding is EUR and the Group has been a regular issuer in the EUR market for many years. Funding is to take place through several lead banks and through public offers and private placements. Interest-rate risk and currency risk associated with funding are managed using derivatives, primarily interest-rate and currency swaps.

SBAB's lending is funded mainly by retail deposits and through the financial capital markets in the form of commercial papers and bonds. Long-term funding is mainly conducted via covered bonds.

Short-term funding under SBAB's commercial paper programme must be adjusted to market conditions and needs, but always constitute at most a limited share of the total funding portfolio. SBAB's loan assets should be used effectively by acting as collateral for secured funding. The funding mix between SCBC and the Parent Company must be well balanced, taking into account the companies' risk appetites, ratings and total long-term funding costs.

SBAB and SCBC must maintain an active market presence, with favourable and frequent relations with investors in each investor segment.

10.5 Deposit strategy

SBAB has an expressed ambition of gradually increasing the amount of deposits and their share of balance sheet liabilities. Retail deposits are to amount to a significant proportion of total liablities. To ensure that funding is diversified and to limit dependence on capital markets, deposits are to constitute at least 24% of lending (deposit-to-loan ratio). At 31 December 2016, this ratio was 33%. SBAB aims to raise the deposit-to-loan ratio further moving forward. Figure 20 illustrates the trends for deposits, lending and the deposit-to-loan ratio (DTLR) since 2010.

FIGURE 19. **FUNDING SOURCES AND DISTRIBUTION BY CURRENCY FOR DEPOSITS AND FUNDING**

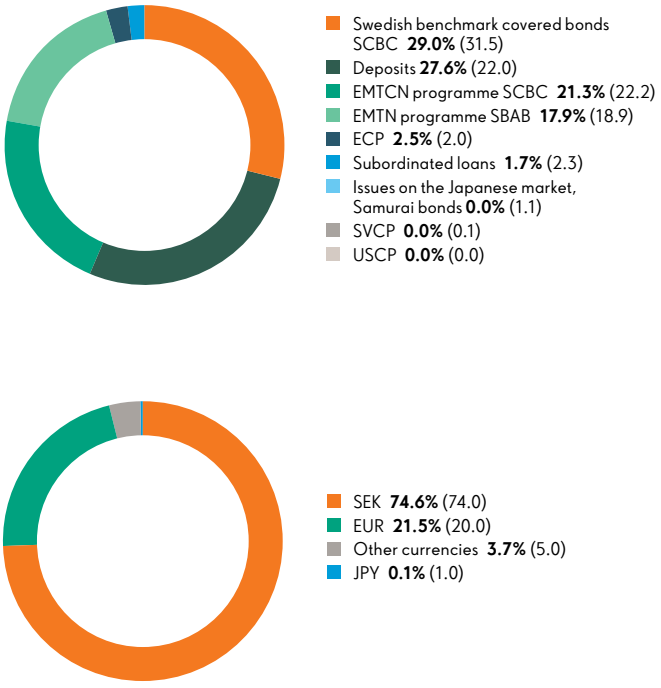
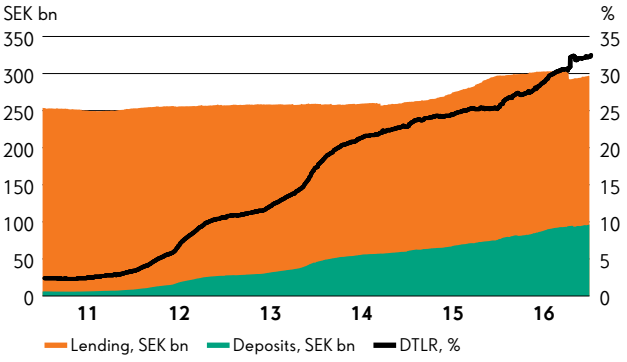


FIGURE 20. **DEPOSITS AND LENDING TRENDS**



11 CREDIT RISK IN TREASURY OPERATIONS

Credit risk arises in treasury operations, in part, in the form of counterparty credit risks for the derivative contracts entered into by SBAB to manage its financial risks and, in part, in the form of investment risk as a result of investments in the liquidity portfolio and the investment of surplus liquidity.

In accordance with the credit instruction adopted by the Board, credit-risk limits are established by SBAB's Credit Committee for all counterparties in the treasury operations (meaning debtors and financial counterparties) with the exception of the Swedish government and companies included in the SBAB Group, for which no exposure limits are set. Calculation of the exposure amount for counterparty credit risk is generally based on the market value and observes the standards set in the bank's netting agreements for derivative contracts.

The credit-risk limit may be established for a period of no longer than one year, following which a new assessment must be conducted. Credit-risk limit decisions taken by the Credit Committee must be reported to the Parent Company's Board at the following Board meeting.

11.1 Counterparty credit risk

Counterparty credit risk is the risk that SBAB's financial counterparties are unable to meet their commitments under contracted derivatives and repo agreements, and consists primarily of exposures to major banks. Exposure is primarily covered through collateral agreements in which the counterparty provides collateral in an effort to reduce exposure.

To limit the potential counterparty credit risk associated with derivative transactions involving non-standardised derivatives that are not cleared through a central counterparty (CCP) approved by the competent authority (in accordance with Regulation (EU) No 648/2012), a framework agreement must have been concluded with the counterparty. This ISDA Master Agreement, or similar agreements, has in most cases been supplemented with associated collateral agreements, known as Credit Support Annexes (CSAs). The ISDA Master Agreement entails, inter alia, that netting is regulated in the event of bankruptcy. A CSA means that the parties have agreed in advance to transfer collateral if the exposure exceeds a specified threshold amount. The threshold amount and the minimum amount to be transferred to or from the counterparty can vary depending on the parties' ratings. Tables 40 and 41 provide an overview of the distribution of the market value of individual derivative transactions by rating and maturities.

GMRAs are used to limit the counterparty credit risk associated with repo transactions. These agreements control aspects such as the transfer of collateral to or from the counterparty.

Counterparty risk is subject to daily or weekly reconciliation with each derivative counterparty with whom a collateral agreement has been signed, and collateral is transferred to even out exposure. Wherever applicable, posted and received collateral takes the form of cash with a transfer of title, which entitles the party that receives the collateral to use the collateral in its operations. In certain cases, under the agreements concluded by the Parent Company and SCBC, threshold and minimum transfer amounts are regulated by the parties' rating, the poorer the party's rating, the lower these amounts are. At 31 December 2016, a decline in SBAB's rating would not result in the need for SBAB to post additional collateral to any external counterparty [1].

TABLE 39. **RISK WEIGHTS FOR COUNTERPARTY-CREDIT RISK EXPOSURES BY EXPOSURE CLASS** *(EBA TABLE CCR3)*

SEK million Exposure class	0%	10%	20%	50%	Total
Institution	–	–	712	3,529	4,241
Total	**–**	**–**	**712**	**3,529**	**4,241**

11.2 Credit quality in the liquidity portfolio

The primary purpose of SBAB's liquidity portfolio is to act as a provision for situations when the ability to obtain liquidity from other sources is limited or rendered materially more difficult. The portfolio comprises liquid, interest-bearing securities with high ratings. Moreover, securities holdings constitute an integrated part of the total credit-risk utilisation for each issuer. Securities holdings in the liquidity portfolio are limited by asset class and by country, and must have the highest rating upon acquisition.

Holdings of covered bonds are risk weighted in relation to their credit quality step in the CRR. At 31 December 2016, all of SBAB's holdings of covered bonds were assigned credit quality step one, which means a risk weight of 10%. The holdings in the portfolio are long-term and at 31 December 2016, the market value was SEK 70.7 billion. At the same date, 96% of the portfolio's value had a rating of Aaa from Moody's or AAA from Standard & Poor's. The various asset classes in the portfolio are securities issued by or guaranteed by central governments, securities issued by sovereigns, supranationals and agencies, securities issued by non-governmental public sector entities and European covered bonds. Liquidity portfolio holdings are either classified as "Securities measured at FVTPL," "Available-for-sale financial assets" or "Investments held to maturity."[2]

[1] In case of a decline in SBAB's rating, the Parent Company would need to provide collateral of SEK 3.18 billion to SCBC.

[2] Excluding other liquid short-term investments.

Securities measured at FVTPL:
- Securities issued by central governments, SEK 7.2 billion;
- Securities guaranteed by central governments, SEK 2.6 billion;
- Securities issued by sovereigns, supranationals and agencies, SEK 0.8 billion;
- Securities issued by non-governmental public sector entities SEK 2.0 billion; and
- European covered bonds, SEK 3.8 billion.

Available-for-sale financial assets:
- Securities issued by central governments, SEK 13.5 billion;
- Securities guaranteed by central governments, SEK 0.1 billion;
- Securities issued by sovereigns, supranationals and agencies, SEK 0.7 billion;
- Securities issued by non-governmental public sector entities, SEK 2.4 billion; and
- European covered bonds, SEK 25.6 billion.

Investments held to maturity:
- Securities issued by sovereigns, supranationals and agencies, SEK 0.2 billion;
- Securities issued by non-governmental public sector entities, SEK 2.8 billion; and
- European covered bonds, SEK 8.3 billion.
- All securities above are recognised at their market value, regardless of their accounting classification. Credit risk assessment is conducted on the basis of assessed future cash flows and the market value of the collateral.

TABLE 40. **DERIVATIVES**

SEK million	Total nominal value	Positive market values	Negative market values
< 1 year, Interest-rate-related	239	358	-203
> 1 year, Interest-rate-related	–	3,524	-1,496
< 1 year, Currency-related	25,501	569	-407
> 1 year, Currency-related	50,146	1,741	-369
Total	**75,886**	**6,192**	**-2,475**

TABLE 41. **DERIVATIVES SPECIFIED BY RATING**

SEK million	Net market value	Positive market values	Negative market values
AA-	495	1,308	-813
A+	895	1,270	-375
A	2,215	2,873	-658
A-	147	147	–
BBB+	163	461	-298
BBB	-270	11	-281
BBB-	72	122	-50
Total	**3,717**	**6,192**	**-2,475**
Collateral			**3,287**
Netting benefits			**2,141**

TABLE 42. **NET CREDIT EXPOSURE FOR DERIVATIVES**

SEK million	
Gross positive fair value of contracts	6,192
– Netting benefits	-1,534
= netted current credit exposure	4,658
– Collateral held	-4,010
= net credit exposure for derivatives	648

12 MARKET RISK

Market risk is the risk of loss or reduced future income due to market fluctuations.

SBAB is characterised by low risk taking, with the Board determining the overall risk appetite and setting the limits for the risk metric Value at Risk (VaR). In addition to VaR, a number of supplementary risk-based metrics set by the CEO of SBAB are also subject to limitation. Through daily reports, Risk Control checks compliance with current risk levels and limits. Market risk is followed up at Group level as well as individual levels.

The general principle governing SBAB's exposure to market risk is that the level of risk taking should be low. As a general principle, interest-rate risk is to be mitigated through direct funding or the use of derivatives. Currency risks are mitigated as funding in international currency is hedged through currency swap contracts or invested in matching currencies.

12.1 Value at Risk

VaR is a comprehensive portfolio metric expressing the potential loss that could occur given a certain level of probability and holding period. SBAB's model is a historical model and applies percentiles in historical market data from the past two years.

Limits for the day-to-day follow up of VaR are set at three levels: SBAB's total market risk, all market risks which Treasury is responsible for managing and the trading portfolio. The limit for SBAB's total market risk is based on the VaR metric included in the model for economic capital and applies a probability level of 99.97% and a holding period of one year, while the other two metrics apply a probability level of 99% and a holding period of one day.

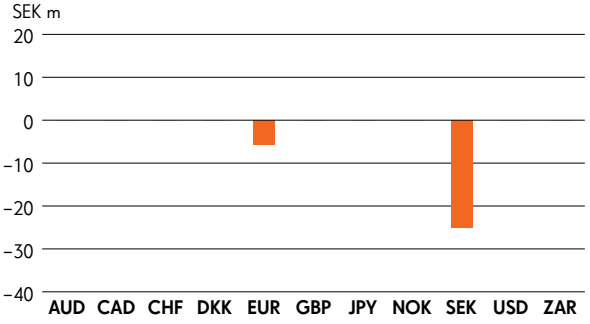
As per 31 December 2016, SBAB's total market risk exposure was SEK 1,118 million (1,154), compared with the limit of SEK 1,850 million (1,850) decided by the Board. Exposure to market risks managed by Treasury was SEK 42 million (36) compared with the limit of SEK 55 million (55). Exposure in the trading portfolio was SEK 1.5 million (1.6) and the limit was SEK 12 million (12).

12.2 Supplementary risk measurements

In addition to the overall VaR limits determined by the Board, the CEO has set a number of supplementary risk metrics for different kinds of market risks to which SBAB is exposed. For interest-rate risk, there are limits for parallel shifts, where the effect on the present value of a one percentage-point shift in the yield curve is measured, and curve risk where the effect on the present value is measured in different scenarios, in which the short end of the yield curve is adjusted down (up) and the long end is adjusted up (down). Currency risk is controlled by measuring the effect on present value when currency exchange rates change, and in the liquidity portfolio by controlling the matching of the principal in each currency. There are also limits for basis risk and income volatility from basis spreads.

Income volatility from basis spreads arises because the derivatives used to hedge funding are recognised at fair value while the underlying funding is recognised at book value, in accordance with the accounting standards applied by SBAB. This causes effects to arise in operating profit that do not correspond to the actual risk to which SBAB's portfolio is exposed. The income volatility from basis spreads is expected to decrease going forward, as SBAB has applied hedge accounting through cash-flow hedges since 2014, which means that income volatility will only be calculated for swap contracts that are not subject to cash flow hedges.

FIGURE 21. **INTEREST-RATE RISK BY CURRENCY IN THE EVENT OF A PARALLEL SHIFT IN THE YIELD CURVE OF +1 PERCENTAGE POINT**



The interest-rate risk totalled negative SEK 31.0 million at 31 December 2016.

12.3 Interest-rate risk in other operations

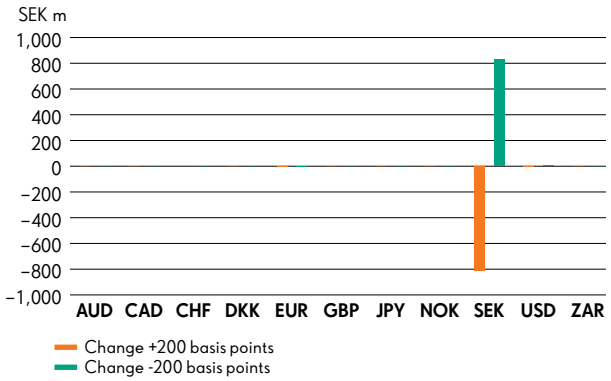
Interest-rate risk in other operations is measured and reported quarterly to Finansinspektionen in accordance with FFFS 2007:4. For the calculation of interest-rate risk in other operations, a maturity of one day is assumed for deposits that are not time limited. As per 31 December 2016, the effect on the present value was negative SEK 818 million (negative: 785) for a 2 percentage-point parallel upward shift and a positive SEK 835 million (809) for a 2 percentage-point parallel downward shift. The exposure distributed by currency is presented in Figure 21.

The net interest income effect is measured to capture the impact of changes in interest rates on profit or loss. The metric reflects the differences in volume and fixed-interest periods between assets, liabilities and derivatives in other operations. The net interest income effect is based on an instantaneous parallel shift of one percentage point up and down over a 12-month time horizon with no changes to the balance sheet. At the end of the year, the net interest income effect was negative SEK 97 million.

12.4 Risks in the trading book

The trading book consists of investments in SBAB's trading portfolio and the part of the liquidity portfolio that is classified as "financial assets measured at FVTPL." The liquidity portfolio is subject to a minimised interest-rate risk. The risk in the liquidity portfolio primarily derives from credit risk. The trading portfolio gives SBAB a limited mandate to accept market risk by taking its own positions in the market. At 31 December 2016, there was one open position in the trading portfolio. Interest, currency, credit and liquidity risks in the trading book are managed within SBAB as an integrated part of the balance sheet together with other operations. Credit risks in the form of issuer and counterparty credit risks in the trading book are governed by credit-risk limits set by SBAB's Credit Committee.

FIGURE 22. **INTEREST-RATE RISK IN OTHER OPERATIONS IN THE EVENT OF A PARALLEL SHIFT IN THE YIELD CURVE OF +/– 2 PERCENTAGE POINTS**



12.5. Regulatory capital requirement for market risk

SBAB uses the standardised approach to quantify capital requirements for market risk in Pillar 1. The regulatory capital requirement for market risk is shown in Table 43.

TABLE 43. **RISK EXPOSURE AMOUNT AND CAPITAL REQUIREMENT FOR MARKET RISK** *(EBA TABLE MR1)*

Risk class	Risk exposure amount	Capital requirement
Interest-rate risk (general and specific)	886	71
Currency risk	685	55
Total	**1,571**	**126**

13 LIQUIDITY RISK

Liquidity risk is defined as the risk that SBAB will not be able to meet its payment obligations in conjunction with due dates without the related cost to obtain funds increasing significantly.

13.1 Liquidity strategy and liquidity risk management

The overall aim of SBAB's liquidity strategy is to ensure SBAB's survival in terms of liquidity and that the company can effectively meet its payment obligations. Key features of the strategy are proactive and continuous liquidity planning, active debt management and the scope, content and management of SBAB's liquidity reserve. SBAB has long identified and allowed for the importance of well-functioning and proactive liquidity risk management. SBAB's liquidity risk management is described below.

13.1.1 Broad and diversified funding

Because SBAB has maintained an active presence in the international capital market since 1989, its brand is well established. Short-term, mid-term and long-term funding takes place on a global basis. Moreover, the SBAB Group has access to the covered bond market, both in Sweden and internationally, through SCBC. In addition to issuing bonds, SBAB is funded by retail deposits.

13.1.2 Liquidity reserve

The liquidity reserve is defined as the reserve value of the securities in the liquidity portfolio and other liquid short-term investments. When calculating the reserve value of the securities included in the liquidity reserve, the SBAB Group applies the haircuts issued in accordance with the Riksbank's Guidelines for Collateral Management in the regulatory framework for RIX and monetary policy instruments.

The liquidity portfolio acts as a buffer, as the securities in the portfolio can be sold to free up liquidity in stressed conditions. The portfolio holdings are long-term and mainly comprise liquid, interest-bearing securities with high ratings, where 100% of the portfolio's value can be used as collateral for repos with the Riksbank or the European Central Bank (ECB).

Excluding pledged collateral, SBAB's liquidity reserve amounted to SEK 66.3 billion at 31 December 2016 (the reserve value at the Riksbank or the ECB). The market value amounted to SEK 69.5 billion with an average maturity of 2.2 years. Moreover, unutilised issuance capacity for covered bonds comprises an additional reserve that is not included in the calculation of the above liquidity metrics.

TABLE 44. **LIQUIDITY RESERVE**

		DISTRIBUTION BY CURRENCY			
Liquidity reserve, SEK million	**2016**	**SEK**	**EUR**	**USD**	**Other**
Cash and balances at central banks	632	632	–	–	–
Balances at other banks	–	–	–	–	–
Securities issued or guaranteed by governments, central banks or multinational development banks	25,166	14,343	7,602	3,221	–
Securities issued or guaranteed by municipalities or public sector entities	6,596	5,311	–	1,285	–
Covered bonds issued by other institutions	37,070	31,364	4 739	967	–
Covered bonds issued by SBAB	–	–	–	–	–
Securities issued by non-financial corporates	–	–	–	–	–
Securities issued by financial corporates (excl. covered bonds)	–	–	–	–	–
Other securities	–	–	–	–	–
Bank and loan facilities	–	–	–	–	–
Total	**69 464**	**51,650**	**12 341**	**5,473**	**–**
Distribution by currency		74%	18%	8%	–

13.1.3 Continuous monitoring of liquidity risk

Active debt management, the liquidity of the balance sheet and the size of SBAB's liquidity reserves are key factors in SBAB's liquidity risk management. By viewing funding activities as a natural part of both operational work and the strategic planning of liquidity risk, concentrations of excessively large funding maturities are avoided. Another important part of the ongoing liquidity risk management is the continuous monitoring and testing of the practical liquidity value of the liquidity portfolio in the secondary market.

13.1.4 Contingency plan

SBAB has a contingency plan for the management of liquidity crises. The contingency plan contains a clear delegation of responsibility for the personnel concerned, as well as instructions on how the company can rectify potential liquidity deficits. The plan stipulates suitable actions to handle the implications of various types of crisis scenarios and contains definitions of events that cause and escalate the contingency plan. The contingency plan must be regularly tested and updated based, for example, on the results of stress tests.

13.2 Liquidity risk — Short-term liquidity risk

SBAB is subject to Finansinspektionen's liquidity coverage ratio (LCR) requirements as defined in FFFS 2012:6. The LCR measures the amount of assets that can be converted to cash in relation to a stressed liquidity need for a 30-day period. The regulations stipulate that the institutions covered by them must, at every point in time, have an LCR amounting to at least 100%, both at a total level and for EUR and USD isolated.

At 31 December 2016, the LCR, in accordance with the definition in FFFS 2012:6, was 243% at the consolidated level, and 182,704% and 258%, respectively, in EUR and USD. In 2016, SBAB's LCR never fell below 131%.

At 31 December 2016, the LCR, in accordance with the EU's Delegated Regulation (EU) 2015/61, was 277% at the consolidated level, and 7,315% and 262%, respectively, in EUR and USD. In 2016, SBAB's LCR never fell below 178%. According to the EU's Delegated Regulation, all credit institutions must meet a total LCR of at least 70%. The requirement will be gradually raised to 80% on 1 January 2017 and 100% on 1 January 2018. Since SBAB is already required to comply with Finansinspektionen's requirement of an LCR of 100%, the introduction will not have any material effect on SBAB.

Internally within the SBAB Group, the liquidity risk is measured and stress tested by totalling the maximum conceivable need for liquidity for each coming day. This liquidity risk metric is referred to as the survival horizon. The calculations are based on a crisis scenario in which all loans are assumed to be extended on maturity, meaning that no liquidity is added through loan redemption, and where no funding is available. Retail deposits are treated with a conservative assumption, whereby withdrawals from the portfolio are distributed over time on the basis of historical balance volatility. Accordingly, the maximum need for liquidity can be identified for every given future period, and the necessary liquidity reserve can be established. The survival horizon corresponds to the number of days for which the liquidity reserve covers the maximum outflow and it has been limited to a minimum of 180 days at any given time.

At 31 December 2016, the survival horizon amounted to 444 days. In 2016, the survival horizon was never less than 244 days.

In addition to these metrics, the concentration of debt maturities in the next six months is also limited, so that the maximum debt maturity in a 30-day period does not exceed 60% of the size of the liquidity reserve.

TABLE 45. **LIQUIDITY COVERAGE RATIO**

SEK million	Total	EUR	USD
Liquidity coverage ratio	243%	182,704%	258%
Liquid assets	**63 904**	**11,630**	**5,329**
Assets with 100% weight	32,394	7,602	4,506
Assets with 85% weight	31,510	4,028	823
Cash outflows	**25,886**	**25**	**2,634**
Deposits from the public	15,886	–	–
Market funding	5,190	0	2,633
Other outflows	4,810	25	1
Cash inflows	**3,674**	**1,594**	**571**
Inflows from lending to the public	586	–	–
Other inflows	3,088	1,594	571

Liquidity coverage ratio = liquid assets/(cash outflows - cash inflows). The LCR is recognised according to the definitions and weights in FFFS 2012:6. The calculation takes into consideration that assets with 85% weight must not constitute more than 40% of the reserve, and that inflows must not exceed 75% of the outflow in each column.

13.3 Liquidity risk – Structural liquidity risk

Structural liquidity risk pertains to when funding opportunities become more costly, or there is a shortage in supply, as a result of differences in structure and maturity between lending and funding. SBAB aims to have a diversified funding. The SBAB Group has adopted a conservative approach to the management of funding. A larger share of future maturities is being pre-financed and the share of total funding attributable to short-term funding is being maintained at a low level. SBAB works actively to ensure an even distribution of maturities, while at the same time extending the maturity of the liabilities. Monitoring of upcoming maturities, repurchases, replacements and pre-financing constitute key elements of the practical management aimed at reducing the risk.

SBAB limits its dependence on market funding by applying a limit on the ratio between deposits and lending to the public. At 31 December 2016, the ratio was 33% compared with a limit of 24%. Access to funding from covered bonds is further secured by monitoring, at each point in time, including in stressed circumstances, that the overcollateralisation in the cover pool exceeds Moody's requirements for Aaa ratings.

SBAB also measures its structural liquidity risk through a metric for maturity matching that measures the relationship between the term to maturity of assets and liabilities from a liquidity perspective at various points in the future. This can be viewed as SBAB's internal version of the net stable funding ratio (NSFR), in which the maturity, in terms of liquidity, on deposits and lending is estimated by means of SBAB's own statistical models, which are based on historical data of the behaviour of SBAB's customers. At 31 December 2016, the ratio was 116% at the one-year point, compared with the limit of 90%. The NSFR according to the Basel Committee definition was 122%.

13.4 Stress tests for liquidity risk

SBAB has a model for stress testing liquidity risk aimed at internal requirements for analytical and contingency management of liquidity risk. The stress tests have been designed in line with Finansinspektionen's regulations on liquidity management, which impose general requirements on stress tests (FFFS 2010:7). The model analyse SBAB's capacity to meet the need for cash and cash equivalents in various market scenarios and to assess the effect of protracted stress on SBAB's ability to finance its operations. The scenarios are designed on the basis of SBAB's specific risk profile and cover both company-specific and market-related scenarios that may render the financing of the operations difficult. The scenarios are divided into different stages that illustrate increasing levels of stress intensity to reflect how a crisis can continuously deteriorate.

The scenarios simulated by the stress tests include:

- The 2008/2009 financial crisis — stress in the funding operations, with funding programmes closing at various stages
- Rating-related stress, with gradually lower ratings for SBAB and SCBC
- Falling property market prices — various levels of falling prices, which increase LTV ratios, thus lowering the share of funding that can be conducted via covered bonds
- Stress of liquidity in the liquidity reserve
- Sizeable fluctuations in interest and currency exchange rates, leading to larger amounts having to be secured through CSAs, which could thus impair liquidity

The stress tests are under continuous development and the assumptions on which the various scenarios are based are assessed regularly. The stress tests are conducted and reported quarterly, with results assessed against SBAB's established risk appetite and used to adapt strategies and guidelines.

13.5 New regulations for liquidity risk

In the wake of the financial crisis and its implications, a major international review was carried out and extensive efforts launched to review the regulations for the management of liquidity risk in banks and credit institutions. The aim of the new regulations, which are still being formulated, is to increase the resilience of banks to serious disruptions in the capital market and to achieve a more harmonised and transparent approach to liquidity risk at the international level.

To set minimum levels for the liquidity of banks, the new regulations focus on two standard metrics — the liquidity coverage ratio (LCR) as described above and the net stable funding ratio (NSFR). The aim of the NSFR is to indicate how stable the Group's funding is by comparing the maturities of the institution's assets and liabilities.

In the EU, both metrics are included in the new capital adequacy regulations that came into effect on 1 January 2014 and are reported to the EBA. The NSFR is not currently subject to a quantitative requirement. It is expected that the Basel Committee's definition of the NSFR will be implemented in the EU, potentially with some deviations, and it is expected that the quantitative requirements will enter into force in 2019. The EU requirements refer to each company, but SBAB has entered into agreements regarding liquidity support between the Parent Company and SCBC and is therefore exempt from the requirements at the company level.

The EBA has developed five more metrics for liquidity risk that are intended for comparison and supervisory purposes. No quantitative requirements have been set for these metrics. Reporting to the EBA started in spring 2016 for four of the metrics. Reporting of the fifth metric — a maturity ladder showing maturities of assets and liabilities up to ten years into the future — has not yet been initiated. The other four metrics are:

- Concentration of counterbalancing capacity per issuer/counterparty, showing the bank's holdings of liquid assets or liquidity facilities to meet temporary declines in access to liquidity in the market
- Concentration of financing counterparties and products, showing the counterparties or financing products representing such a large percentage that losing them would affect the bank's liquidity risk
- Prices for various financing maturities
- Extension of maturing financing during the reporting period.

14 OPERATIONAL RISK

Operational risk means the risk of losses due to inappropriate or unsuccessful processes, human error, faulty systems or external events. The definition includes legal risk.

14.1 Risk management

Within SBAB, risk management consists of uniform measurement and reporting of operational risk. An analysis of risk levels in all operations is conducted on a regular basis and reported to the Board, the CEO and the Executive Management. The Operational Risk function within the Credit and Risk department has overall responsibility for the methods and procedures used for identifying, measuring, monitoring and reporting on operational risk. The management of operational risk is carried out based on SBAB's risk appetite and the significant processes for the business. This entails constant efforts to improve the risk culture, processes and procedures as well as to provide the right tools to efficiently manage day-to-day operational risk.

14.2 Self-evaluation

The self-evaluation process encompasses the identification and evaluation of operational risks in all significant processes. Self-evaluation is carried out using a shared method that includes system support. The result of the self-evaluation is reported annually to the Board, the CEO and the Executive Management.

14.3 Incident management

SBAB has procedures and system support intended to facilitate the reporting and follow-up of incidents. The Operational Risk function supports the operations with the analysis of reported incidents to ensure that root causes are identified and suitable measures are implemented. Even incidents that have not caused direct damage or financial loss are reported, to promote proactive risk management.

14.4 New product approval policy (NPAP)

SBAB has an NPAP in place for the implementation of new or significantly altered products, services, markets, processes and IT systems as well as major operational and organisational changes at SBAB. The aim of the NPAP is the advance identification and management of risks related to changes.

14.5 Security and contingency management

At SBAB, security involves protecting customers, individuals, information and physical assets. Information must be kept confidential and be reliable and accurate, and it must be made available to the appropriate people as and when needed. SBAB's security efforts include technical, organisational and administrative measures, which are based on the international information security standard ISO/IEC 27000.

SBAB works in a pre-emptive manner to prevent security incidents that may affect the company's ability to operate. The bank has an established contingency organisation that is responsible for crisis and catastrophe management, and communication in case of serious incidents, crises or disasters.

In 2016, responsibility for security and continuity management was moved from operational risk to the operations unit.

14.6 Risk and compliance coordination

As part of strengthening SBAB's risk culture, the bank has established a risk and compliance coordinator (RCC) in the first line. The RCC supports the business managers with a focus on risk management, process mapping, internal controls, incident management, and regulatory compliance. RCC initiatives are coordinated by a regulatory manager.

14.7 Capital requirements for operational risks

SBAB uses the standardised approach to quantify capital requirements for operational risk. This approach calculates the capital requirement based on 12–18% of the business area's average operating income over the past three years. The capital requirement for operational risk is shown in Table 11, Risk exposure amounts and capital requirements.

15 BUSINESS RISK

By business risk, SBAB means the risk of declining earnings due to harsher competition, inappropriate strategies or erroneous decisions.

Business risk includes strategic risk, reputational risk and margin risk, which arise when the interest margins on lending and funding have different maturities. SBAB defines business risk as a necessary risk. New business is usually relatively similar to the business SBAB already has. Changes in the form of new products or new markets may only constitute a small part of SBAB's activities and must be implemented at such a pace that SBAB does not substantially jeopardise its earnings level and with great probability avoids pressure on its own funds.

As the accounting standards used by SBAB require that certain components of the portfolio are measured at market value while other components are recognised at their carrying amount, this has effects on the operating profit, and consequently also on own funds, that do not correspond to the actual risk to which the portfolio is exposed. To limit such effects, income volatility must be measured and limited. Business risk is included in the calculation of the Pillar 2 capital requirement as part of SBAB's stress tests. (See also Section 6.5 Capital requirement due to income volatility.)

Production: SBAB in cooperation with Sjö&Berg,

SBAB!

SBAB BANK AB (PUBL)

Corp. Reg. No. 556253-7513
Visiting address: Svetsarvägen 24
Address: Box 4209, SE-171 04 Solna, Sweden
Tel: +46 771 45 30 00
Fax: +46 8 611 46 00
www.sbab.se