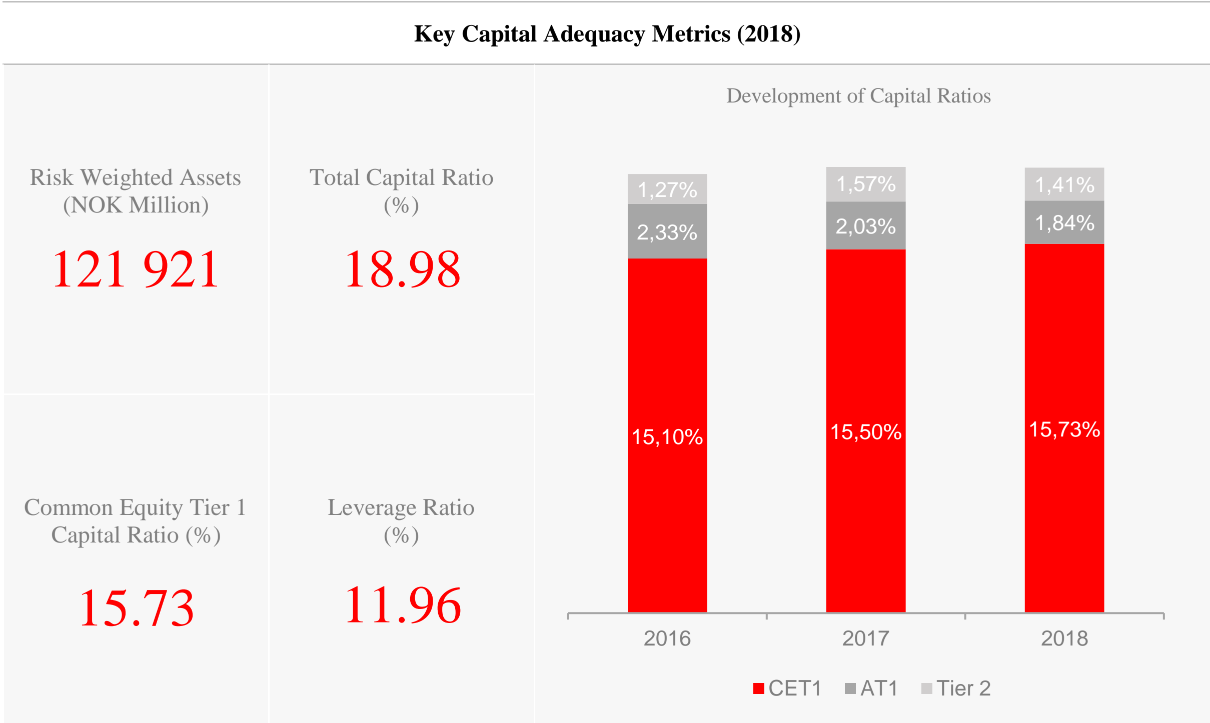
Risk and Capital Management 2018

Pillar 3 Report

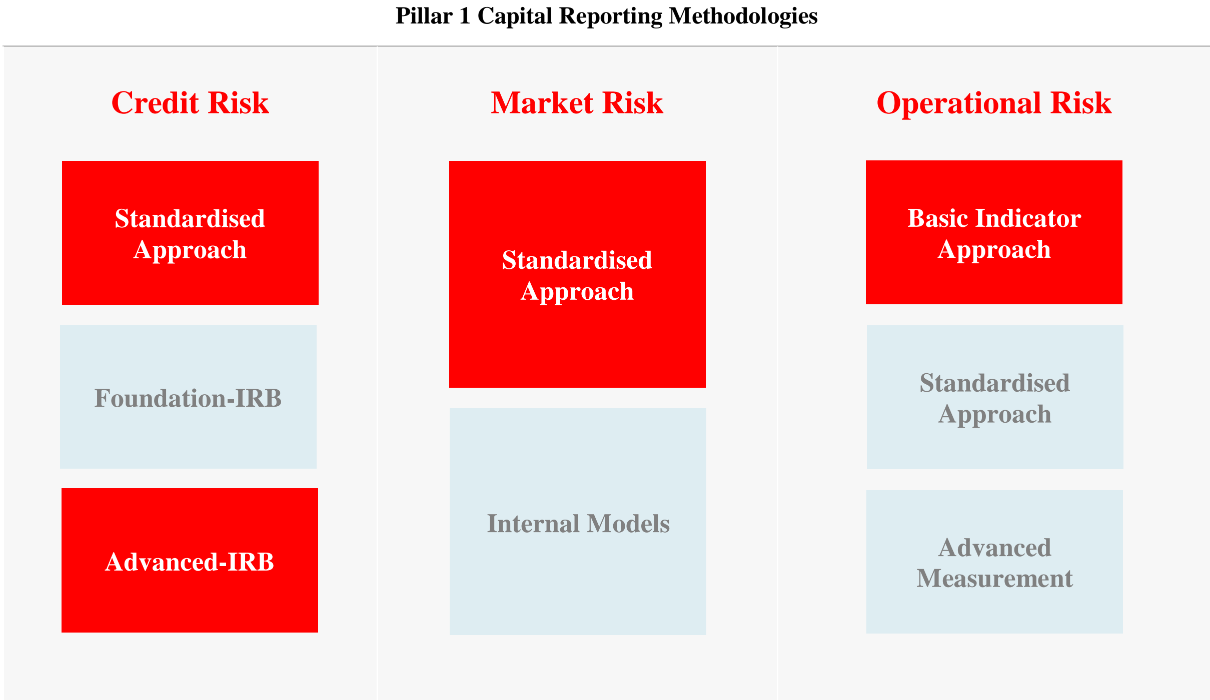
Santander Consumer Bank

SCB Group Overview

Key Capital Adequacy Metrics (2018)



Pillar 1 Capital Reporting Methodologies



Red boxes indicate those methods applied by Santander Consumer Bank

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1. Purpose and Scope of Application

The purpose of this report ("**the Pillar 3 report**") is to provide information to the market in order to assess the risk management, risk measurement and capital adequacy of Santander Consumer Bank AS. When including its subsidiary, Santander Consumer Bank AS will be referred to in this document as "SCB", "the Bank" or "SCB Group". When excluding its subsidiary, reference will be made to "SCB AS". SCB is a commercial bank 100% owned by Santander Consumer Finance S.A. in Spain, which is again owned by Banco Santander. This Pillar 3 report covers SCB's operations in Norway, its branches in Sweden and Denmark and its subsidiary in Finland ("SCF Oy").

The report meets the information requirements outlined in the capital adequacy regulation part IX (*NO: "Kapitalkravsforskriften del IX")* and CRR regulation 575/2013 (part eight). In addition we publish an appendix to the report (see Pillar 3 Appendix), where we publish capital adequacy position, terms of capital instruments, own funds disclosure, as recommended in Circular 14/2014 "Publishing information regarding own funds", leverage ratio calculations and the calculation of the applicable countercyclical buffer. This Pillar 3 report is updated annually.

Information pertaining to SCB's remuneration policy can be found in the 2018 Annual Report under "*Note 29 – Remuneration*".

2. Santander Consumer Bank AS

SCB is a Nordic commercial bank, operating in Norway, Sweden, Denmark and Finland, with the head office located at Lysaker in Norway. As at 31 December 2018, the Bank had 1,324 employees (excluding temporary hired employees) of which 579 worked in Norway, 354 in Sweden, 237 in Denmark and 154 in Finland.

The Bank is a leading consumer finance provider across the Nordic region offering car financing, consumer loans, credit cards and sales financing. The Bank also offers customer deposits in Norway, Sweden and Denmark. Note that, in this document, car financing is referred to as "secured financing" due to collateral in the vehicle and consumer loans, credit card and sales finance is referred to as "unsecured financing" as these loans are without collateral. In addition, the Bank acts as an ancillary insurance mediator for insurance companies[1] in the respective jurisdictions.

The Bank is governed by Norwegian law, supervised by the Norwegian FSA and is subject to the Norwegian Capital Requirement Regulation ("*kapitalkravforskriften*"). Furthermore, the Bank aims to adhere to the Capital Requirements Directive IV ("CRD IV") and Capital Requirements Regulation ("CRR") directives, applicable in the EU, which are expected to be implemented in Norway during 2019.

As at 31 December 2018, SCB possessed a strong capital adequacy position illustrated by a Common Equity Tier 1 ("CET1") capital ratio of 15.73%. Following the implementation of IFRS 9 in January 2018, SCB elected to adopt the transitional rule, allowing for a gradual phasing in of the IFRS 9 capital impact in 2018. Hereafter, capital figures presented are on a transitional rules basis. The capital adequacy regulations allows for different methods for calculating capital requirements (as depicted in the introductory page to this report). The Bank is in the process of becoming an Advanced IRB ("A-IRB") bank with approximately 1/3rd of its portfolios currently under this approach. The remaining amount of the portfolio are under the Standardised Approach but are expected to be calculated under the A-IRB approach in the future.

3. Risk Management Governance and Control

3.1 Role of the Board of Directors

In accordance with the Norwegian Financial Undertakings Act section 13-6, the Board of Directors ("BoD") shall monitor and manage SCB's overall risk and regularly assess whether management and control arrangements are tailored to the risk level and scale of SCB's activities. The BoD has established a risk committee (the "Board Risk

[1] CNP Santander Insurance Life DAC and CNP Santander Insurance Europe

Committee" or "BRC") consisting of three members chosen by and among board members, currently two of the Board's external directors and one internal director (non-executive), and carrying out the tasks set forth in section 13-6 of the Norwegian Financial Undertakings Act and regulations connected thereto. Future information on the BoD sub-committees is outlined in section 3.4.

The Board of Directors also instructs senior management to develop and maintain an appropriate, systematic and consistently applied process to determine risk levels, provisions for loan losses and management aligned with the corporate guidelines.

The Board of Directors adopts and participates in the reassessment of credit authorizations. It also receives relevant reports in the risk area and instigates relevant action to reduce any undesired rise in risk level. It is established in the Credit Policy that BoD shall approve parameter and management limits, as well as any proposed remedial action when facing breach of limits. All breaches of management limits must be reported to the BoD regardless of whether the breach is cured.

3.2 Risk Management and Control

The Bank has a program referred to as Advanced Risk Management ("ARM"), aimed at improving the management of Risk. The principles of ARM are listed below:

1. **An advanced and comprehensive risk management framework**, with a forward-looking approach that allows the bank to maintain a medium-low risk profile, through a **risk appetite** defined by SCB's Board of Directors and the **identification and assessment of all risks**.
2. The **forward-looking approach** for all risk types must be part of the risk identification, assessment and management processes.
3. **Lines of defence** that enable risk to be managed, controlled and monitored through a clear committee structure that separates the risk management and control functions.
4. Robust data management driven by a reliable IT infrastructure that facilitates decision-making. A continuous effort in developing risk management support infrastructure and processes.
5. A **risk culture integrated throughout the organization**, composed of a series of attitudes, values, skills and guidelines for action to cope with all risks. SCB believes that advanced risk management cannot be achieved without a strong and steadfast risk culture, which is found in each one of its activities.
6. All risks are managed by the units that generate them.

These principles, combined with a series of relevant interrelated tools, processes and ARM pillars are reflected in the bank's strategic planning process (Risk Appetite Statement, Risk Identification and Assessment, risk reporting framework, strategic commercial plan, etc.).

ARM initiatives provide a forward-looking approach to risk management and control processes focusing on: greater financial and operational efficiency, enhanced technical capabilities (Risk Data Aggregation/Risk Reporting Framework), portfolio optimization and enforcing a strong risk culture while continuously adapting the business model to the regulatory landscape.

Lines of Defence Framework

SCB adopts the three lines of defence mechanism for management and control of risk:

- **The business functions or activities that create exposure to a risk are the first line of defence.** The first line of defence is responsible for establishing an appropriate environment for the management of all risks associated with business, for proposing levels for risk appetite and limit, and for implementing the mechanisms to manage the risks and maintain them within risk appetite of the business.

- **The second line of defence consists of the risk control and oversight function and by the compliance function.** This line vouches for effective control of the risks and ensures they are managed in accordance with the level of risk appetite defined.

- **Internal audit is the third line of defence** and as the last layer of control in the Bank regularly assesses the policies, methods and procedures to ensure they are adequate and are being implemented effectively.

There is a sufficient degree of segregation between the risk control function, the compliance function and the internal audit function, to ensure that their functions are performed and that they have access to the Board of Directors and/or relevant committees through their heads.

Risk Identification and Assessment

Identifying and evaluating all risks is the first step to control and manage risks. The **Risk Map** covers the main risk categories in which SCB has its most significant exposures, current and/or potential.

The key risk types identified in the risk map are:

- **Credit Risk**: risk of financial loss arising from the default or credit quality deterioration of a customer or other third party, to which SCB has provided credit or for which it has assumed a contractual obligation.

- **Liquidity Risk**: risk that SCB does not have enough liquid resources to meet its obligations when they fall due.

- **Structural Risk**: the risk arising from the management of different balance sheet items (i.e. interest rate risk or currency risk).

- **Capital Risk**: the risk of the SCB not having an adequate amount or quality of capital to meet its internal business objectives, regulatory requirements or market expectations.

- **Operational Risk**: the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.

- **Conduct risk**: risk arising from practices, processes or behaviors, which are not adequate or compliant with internal regulation, legal or supervisory requirements.

- **Reputational risk**: risk of losses caused by events that can worsen the public perception of the bank.

- **Model Risk:** the risk of losses arising from inaccurate predictions, causing a bank to make sub-optimal decisions, or from a model being used inappropriately.

- **Strategic Risk**: the risk of loss or damage arising from strategic decisions or their poor implementation, or from an inability to adapt to external developments.

Apart from the risks identified in the risk framework and classified in the risk map, the **Risk Identification and Assessment process** (“RIA”) also aims to identify and assess all the risks to which the bank is exposed to or could be exposed to in the future. The goal is to define SCB’s risk through a quantitative and qualitative evaluation of the relevant risks composed of:

- **Risk performance**: assesses the current risk exposure and performance through a set of dimensions, metrics and thresholds.

- **Control environment:** evaluate the level of compliance of the Bank’s target operating model, identifying possible gaps and weaknesses.

- **Top Risk assessment:** a process carried out to allow for the early identification of potential threats to the profitability, solvency or strategic objectives of the entity, promoting an effective risk management and mitigation. The Top Risk assessment has a three-year horizon, and two sorts of events are taken into account, depending on their estimated likelihood and/or severity: plausible and tail risk events.

The exercise is conducted semi-annually, with the involvement of 1st, 2nd and 3rd lines of defence, and with the purpose of monitoring the Bank's risk profile.

Material risks identified in the RIA are incorporated in the Risk Appetite Statement ("RAS").

Risk Appetite

Risk Appetite is the maximum level and type of risk that SCB is willing to assume, within its risk capacity, to achieve its strategic objectives and the development of its business plan.

SCB aims to maintain a medium-low risk profile that is predictable. This profile is achieved by means of earnings stability (low P&L volatility), maintaining robust capital and liquidity position under both normal and stressed conditions, limiting the impact in earnings and capital base due to concentration on large exposures and individual counterparties, controlling and limiting non-financial risk events (fraud events, operative, technological, legal and regulatory breaches, conduct issues or reputational damage).

The Risk Appetite is defined by risk limits and alerts for the identified material risks: Credit risk, Liquidity risk, Structural risk, Capital risk, Operational risk, Conduct risk, Reputational risk, Model risk and Strategic risk. The limits are set according to their potential impact on: 1) Financial results volatility; 2) Solvency levels; 3) Liquidity; 4) Concentration; 5) Non-Financial.

The limits and alerts are set by the Risk department in cooperation with Financial Management, Financial Control and Compliance departments and are approved by the BoD. For 2019, the new limits and alerts were approved on February 20th 2019 by the BoD.

Most of the metrics are monitored on a monthly basis by the Nordic Risk Appetite function and reported at least quarterly to the BoD.

Risk Data Aggregation

In line with Basel Committee on Banking Supervision's standards number 239, the Risk Data Aggregation project ensures that the risk data reported to senior management reflects the basic principles enforced in the regulation: captures all types of risks with appropriate accuracy and timeliness.

During 2018, the Risk Data Aggregation team continued to focus on providing a proper data governance along with the entire data life cycle, robust IT processes and reliable risk reporting. Data quality and traceability controls were set to ensure that risk reports contain accurate granularity and appropriate data sources.

Strategic Commercial Plan

The Strategic Commercial Plan ("SCP") constitutes the basic instrument for managing and controlling SCB credit portfolios, defining sales strategies, risk policies and the means and infrastructures necessary to meet the annual budget.

Regular monitoring of the SCP will anticipate any undesirable deviations observed with respect to the initial budget, and will enable management to identify significant changes to risk, assess their potential impact, and apply any courses of corrective action that may be necessary.

This will also give management an updated view at all times of the creditworthiness of the portfolios, and identify any key weaknesses in terms of policies, processes and means to help the Bank implement the mitigation mechanisms required.

3.3 Monitoring and Reporting

The main objective of risk monitoring and reporting is to ensure all risk types are managed in conformity with the risk appetite level approved by the board. For this purpose, an array of different reports has been developed with different contents, audience and frequencies. The development of risk reports is defined both at local and consolidated level. Risk Management in local business units is responsible for reporting at local level, as well as for the delivery into consolidated level for validation and consolidation purposes.

The responsibility for developing consolidated risk reports rests with the Nordic Risk Management unit, which is also responsible for securing the quality, standards, content, timeliness, and the distribution of risk information.

Reporting at SCB currently contains a series of standard reports aimed at capturing risk performance indicators on a regular basis (monthly/quarterly) for all risk types.

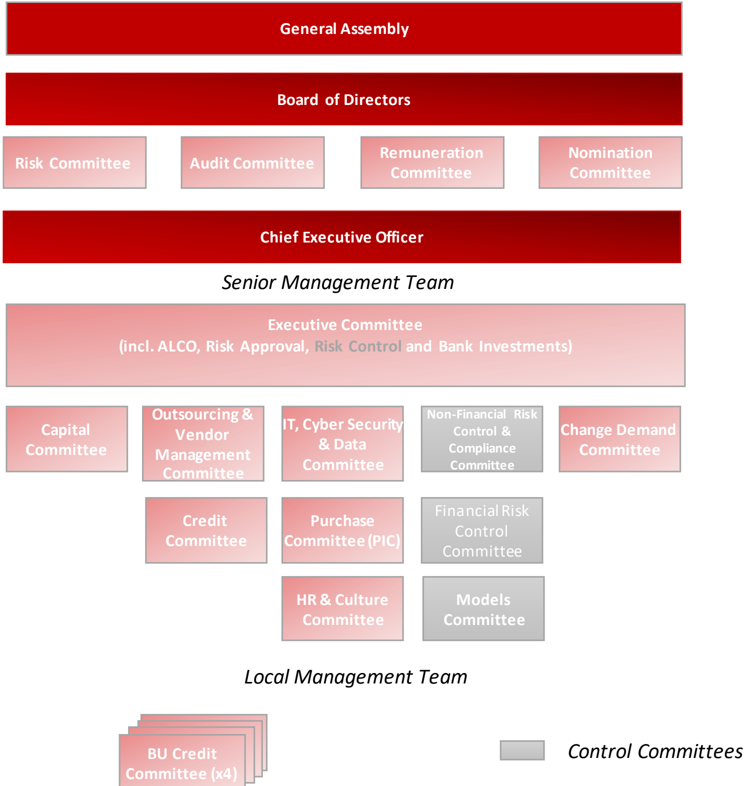
3.4 Internal Control

The BoD has established sub-committees with powers of supervision, information advice and proposals. An overview of the main objectives of the sub-committee is detailed below:

- **Board Risk Committee (BRC):** advise the BoD on current and future risks, risk appetite and risk strategy. This includes ensuring the establishment of appropriate internal control systems and the compliance with laws, ordinances and internal regulations as well as generally accepted practices or standards
- **Audit Committee:** review SCB's financial information and internal control systems and serve as the communication channel between the BoD and the external auditor. The committee also supervises the Internal Audit department. Further details on the Internal Audit function are detailed below.
- **Nomination Committee:** oversee the balance, knowledge, diversity and experience of the BoD and to identify, when applicable, candidates to fill vacant positions in the BoD.
- **Remuneration Committee:** preparation of remunerations decisions to be adopted by the BoD and ensure compliance with and transparency of the remuneration policy.

The figure below illustrates how SCB's corporate governance is structured. It identifies the allocation of authority and responsibilities and how decision-making and reporting lines between the shareholder, the BoD, management and Internal Audit are arranged.

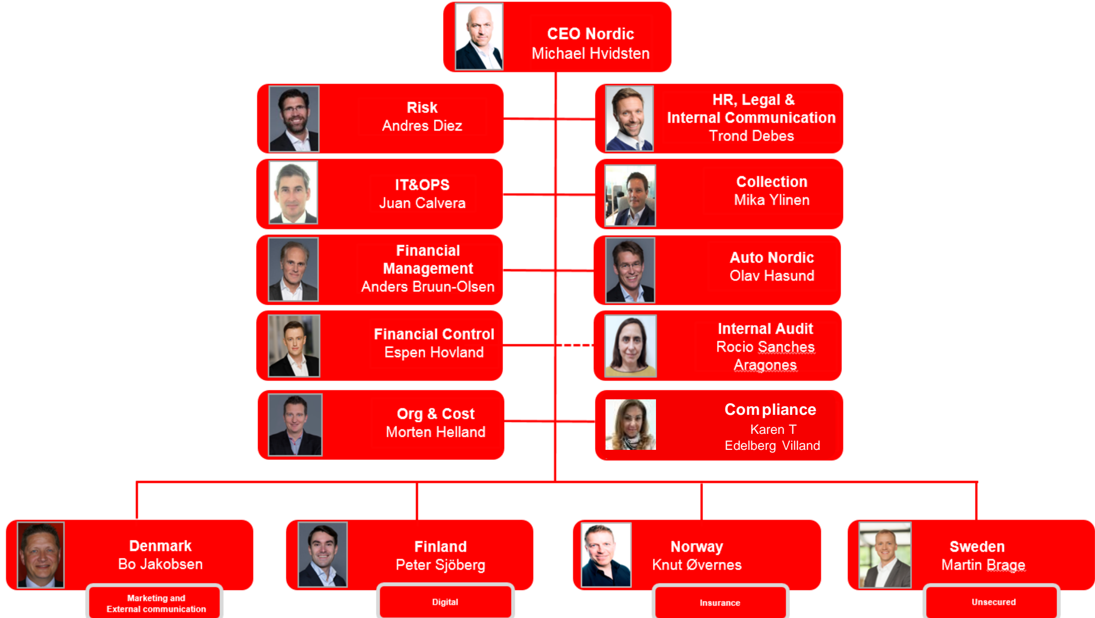
Figure 3.4.1 SCB Governance Structure Overview



The Senior Management

As SCB is organized as a Nordic cluster, the Bank operates with a pan-Nordic management structure, consisting of the CEO, the heads of the different business units and the executives responsible for central staff functions.

Figure 3.4.2 SCB Senior Management



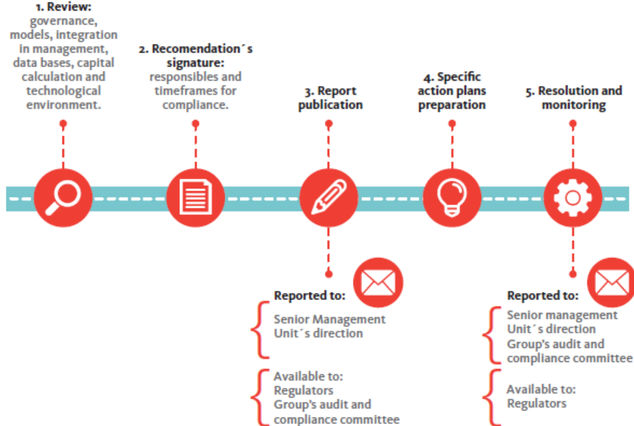
Internal Control Framework

The internal control framework within SCB is based on the local requirements by Nordic regulators as well as the Santander Internal Control Framework, requirements of The Sarbanes-Oxley Act (SOX) and the COSO (Committee of Sponsoring Organizations of the Treadway Commission) framework. The Santander Internal Control Framework sets the foundations for the Internal Control function in SCB and the internal control methodology.

Internal Audit Function

SCB Internal Audit ("IA") is a permanent function – in third line of defence - independent of any other functions or units whose objective is to provide the Board of Directors and the senior management with independent assurance on the quality and effectiveness of internal control, risk management (current or emerging) and governance processes and systems, thereby helping to protect the Bank's value, solvency and reputation.

Figure 3.4.3 Internal Audit Review Process



Internal Validation Team

SCB, as part of Banco Santander, has wide experience in the use of models to help make decisions, and risk management decisions in particular. Prior to being put into use, a model needs to be validated by the internal validation team. The process of validation includes evaluation of the methodological aspects of the specific model, but also technological aspects are analysed, data quality, their functionality and application. Robustness, usefulness and effectiveness from the model must be validated prior to its implementation and use. Today validation is conducted by Banco Santander internal validation team. Model risk is of material significance for SCB being an IRB bank and more details can be seen in the Credit Risk chapter.

4. Capital Adequacy

4.1 Capital Management Governance

Governance and responsibilities related to capital management are outlined in the Bank's Capital Framework and Policy documents. The objective of the Capital Management governance framework is to ensure adequate solvency levels, regulatory compliance and efficient use of capital.

The BoD have the ultimate responsibility for the solvency and capital adequacy of the bank.

Capital management decisions requiring BoD approval must be approved and recommended by the Capital Committee before being recommended to the BoD. Certain items may also need to be reviewed in the Board Risk Committee before being presented to the Board. Capital management decisions will include those relating to capital adequacy, capital targets, capital composition, capital plan, dividend policy and capital contingency plans. The Capital Committee consist of members of senior management (the Chief Financial Officer, Chief Risk Officer and the Chief Controlling Officer) who have voting power and representatives from Risk, Financial Management and Financial Control who have an advisory role.

The BoD approves minimum and target capital ratios, at least on an annual basis. Capital positions and forecasts are presented to the BoD on a regular basis. Capital reporting to the Norwegian FSA is approved by the Capital Committee before submission. Concerning dividends, any payment must be approved in the SCB General Meeting, based on proposal by the BoD.

Capital increases and capital reductions must be approved by the BoD and in the General Meeting of SCB. Capital increases will also need approval by the owner both at SCF and at Banco Santander level. In case of repayment of hybrid capital and subordinated loan capital, approval from the BoD will be sufficient.

The Bank has a formal dividend policy that was approved by the BoD in 2019. The dividend policy states that *"As a reference criterion, the pay-out ratio shall, over time, be at least 50%. However, the policy will be adapted to SCB's specific circumstances"*.

The Norwegian FSA has to approve both capital increases and capital decreases.

4.2 Capital Requirements

SCB is supervised by the Norwegian FSA and has to comply with the capital requirements for banks in Norway. Norwegian banks are subject to ongoing capital adequacy requirements, which implement EU Directives and Regulations based on the Basel III regime. In line with the recommendations of the Basel Committee on Banking Supervision (the "Basel Committee"), the regulatory approach in the Financial Undertakings Act is divided into three pillars:

- **Pillar 1:** Minimum regulatory capital of 8% of risk-weighted assets: banks shall, at all times, satisfy capital adequacy requirements reflecting credit risk, operational risk and market risk;
- **Pillar 2:** Assessment of overall capital needs and individual supervisory review: banks must have a process for assessing their overall capital adequacy in relation to their risk profile and strategy for maintaining their capital levels – the "Internal Capital Adequacy Assessment Process" or "ICAAP". The

regulator evaluates the ICAAP and, following completion of the Supervisory Review and Evaluation Process, publishes the Pillar 2 requirement for the bank;

- **Pillar 3:** Disclosure of information: banks are required to disclose relevant information on their activities, risk profile and capital situation to the market.

SCB is required to comply with capital requirements at both the SCB Group level and SCB AS level. The figure below outlines the expected capital requirements for 2019 for SCB Group and SCB AS. The levels include the actual and announced increases in countercyclical buffers in Sweden (from 2% to 2.5%), Denmark (from 0% to 1%) and Norway (from 2% to 2.5%) during 2019. The internal capital targets approved by the BoD also includes a management buffer as recommended by the Norwegian FSA.

Figure 4.2.1 SCB Capital Requirements 2019

Nordic - SCB Group

Estimate for 2019	Capital Requirement (%)
CET1	
Minimum requirement	4,50 %
Capital Conservation Buffer	2,50 %
Systemic Risk Buffer	3,00 %
Countercyclical Buffer (CCB)*	1,62 %
Total Pillar 1 requirement	**11,62 %**
Pillar 2 requirement	2,60 %
Total CET1 requirement	**14,2 %**
Tier1 (T1)	
Additional T1 requirement	1,50 %
Total T1 requirement	**15,7 %**
Tier2 (T2)	
Additional T2 requirement	2,00 %
Total T2 requirement	**17,7 %**
Leverage Ratio (LR)	
Minimum leverage requirement	3,0 %
Buffer requirement for non-SIFI banks	2,0 %
Total LR requirement	**5,0 %**

** Based on local CCB req. Dec19: NO 2,5%, SE 2,5%, DK 1,0%, FI 0%*

Nordic - SCB AS

Estimate for 2019	Capital Requirement (%)
CET1	
Minimum requirement	4,50 %
Capital Conservation Buffer	2,50 %
Systemic Risk Buffer	3,00 %
Countercyclical Buffer (CCB)*	2,09 %
Total Pillar 1 requirement	**12,09 %**
Pillar 2 requirement	2,60 %
Total CET1 requirement	**14,7 %**
Tier1 (T1)	
Additional T1 requirement	1,50 %
Total T1 requirement	**16,2 %**
Tier2 (T2)	
Additional T2 requirement	2,00 %
Total T2 requirement	**18,2 %**
Leverage Ratio (LR)	
Minimum leverage requirement	3,0 %
Buffer requirement for non-SIFI banks	2,0 %
Total LR requirement	**5,0 %**

** Based on local CCB req. Dec19: NO 2,5%, SE 2,5%, DK 1,0%, FI 0%*

4.2.1 Pillar 1 requirements

The minimum capital adequacy requirement of 8% shall consist of at least 4.5% Common Equity Tier 1 capital ("CET1 capital"), at least 6.0% must be Tier 1 capital and the remaining 2.0% may consist of subordinated capital instruments.

In addition, banking institutions are subject to various regulatory buffer requirements referred to as combined buffer requirements ("CBR") which must be met with CET1 capital. For SCB, the CBR consists of a 2.5% capital conservation buffer, a 3% systemic risk buffer and a countercyclical buffer ("CcB"). Per 31 December 2018, the countercyclical buffer requirement was 2% for Norway and Sweden. In Finland and Denmark, the CcB requirement was 0%. In accordance with CRD IV Article 140, the Bank calculates its CcB as a weighted average of the country specific CcB in Norway, Denmark, Sweden and Finland. As of 31 December 2018, the weighted average countercyclical buffer requirement for SCB Group was 1.14% while at SCB AS level the requirement was 1.47%. During 2019, the CcB requirements in Norway, Sweden and Denmark will increase and as a result, will increase SCB's capital requirement as outlined in Figure 4.2.1 above.

Systemic important financial institutions should hold an additional 2% buffer of CET1 capital. However, SCB is not considered a systemic important financial institution ("SIFI") and therefore, has no SIFI buffer requirement.

In summary, the Pillar 1 CET1 capital requirement per 31 December 2018 was 11.14% for SCB Group and 11.47% for SCB AS. It is expected to increase to 11.62% for SCB Group and 12.09% for SCB AS by the end of 2019.

4.2.2 Pillar 2 requirements

SCB conducts, at least annually, an ICAAP which is used as one input to determine the Bank's Pillar 2 capital requirement. Several departments are involved in the ICAAP process including Financial Management, Risk, Financial Control, Legal and Compliance & Conduct and IT Risk. Stress scenarios, as well as outcomes of various analysis in the ICAAP report are reviewed and approved by the Capital Committee. In addition, all analysis and governance processes leading to the ICAAP report is reviewed by Internal Audit.

Thereafter, the ICAAP is reviewed by the Board Risk Committee, which gives its recommendations to the Board of Directors. Finally, the ICAAP is reviewed and approved by the Board of Directors before being submitted to the Norwegian FSA.

The Pillar 2 requirement set by the Norwegian FSA was 2.3% for 2018. Following submission of the ICAAP in April 2018, the Pillar 2 requirement for 2019 was set at 2.6%. The result was published on 28 February 2019 and is applicable from 1 March 2019. The Pillar 2 requirement must be met with CET1 capital.

4.2.3 Pillar 3 requirements

This Pillar 3 report is updated at least annually in conjunction with the Annual report, as outlined in the Capital Framework approved by the BoD. In addition, the Bank publishes an appendix to the report (see Pillar 3 Appendix), where terms of capital instruments, capital & own funds, leverage ratio, countercyclical buffer requirements and credit exposures are disclosed in accordance with the Norwegian FSA capital adequacy regulation *"Kapitalkravsforskriften"* and CRR regulation 575/2013. The senior management members of the Capital Committee, consisting of the Chief Risk Officer, the Chief Controlling Officer and the Chief Financial Officer, as voting members, approve the content of the Pillar 3 report.

Internal Audit assesses the quality of the disclosure of information about the bank's capitalization, risk profile and management and control of risk.

4.2.4 Leverage Ratio requirements

In addition to the Pillar 1 and Pillar 2 capital requirements, banks are required to adhere to leverage ratio requirements. The leverage ratio is calculated in accordance with CRR Article 429 i.e., Tier 1 capital and total exposures (on and off-balance sheet). Since 30 June 2017, the Norwegian FSA has set a minimum leverage ratio requirement of 3%, a mandatory buffer of 2% for all banks and a 1% buffer for SIFI banks. SCB has to comply with a leverage ratio requirement of 5%.

4.3 Capital Position per December 2018

SCB possesses a robust capital adequacy position. As at 31 December 2018, the Bank's CET1 capital ratio was 15.73%, which was 2.29% higher than the regulatory requirement. With regards to SCB AS, the CET1 capital ratio as at 31 December 2018 was 16.71%.

Following the implementation of IFRS 9 in January 2018, SCB reports its official capital ratios on a transitional rules basis, which for 2018, allowed for a 95% reversal of the IFRS 9 capital impact. The capital figures reported hereafter represent those of SCB Group on a transitional rules basis. For more information with respect to capital adequacy of SCB Group and SCB AS, please refer to "*Note 9 – Capital Adequacy*" in the 2018 Annual Report. With regards to leverage, the Bank's leverage ratio was 11.96% (SCB AS: 13.41%) as per 31 December 2018, significantly above the 5% regulatory requirement. Figure 4.3.1 below details SCB Group's surplus of capital vs. regulatory capital requirements in 2018.

During 2018, the Bank refinanced its NOK 2 250 million hybrid loan (*"Fondsobligasjon"*), ensuring the Bank meets its Tier 1 capital ratio going forward. As of 2018, all of the Bank's capital instruments are prescribed to by Santander Consumer Finance.

Figure 4.3.1 SCB Capital Adequacy vs. Regulatory Requirements as at 31 December 2018

Composition of SCB's Capital Adequacy Requirements			
		2018	2019
	%	NOK m	%
Minimum CET1 requirement	4,5	5 469	4,5
Systemic Buffer	3,0	3 646	3,0
Counter cyclical buffer	1,1	1 386	1,6
Capital conservation buffer	2,5	3 039	2,5
Pillar 2 requirement	2,3	2 795	2,6
CET1 requirement	**13,4**	**16 335**	**14,2**
Additional Tier 1	1,5	1 823	1,5
Tier 1 requirement	**14,9**	**18 158**	**15,7**
Tier 2	2,0	2 431	2,0
Total Capital requirement	**16,9**	**20 589**	**17,7**

SCB CET1	**15,7**	**19 174**
- Surplus of CET1	*2,3*	*2 783*
SCB Tier 1	**17,6**	**21 424**
- Surplus of Tier 1	*2,6*	*3 197*
SCB Total Capital	**19,0**	**23 136**
- Surplus of Total capital	*2,0*	*2 479*

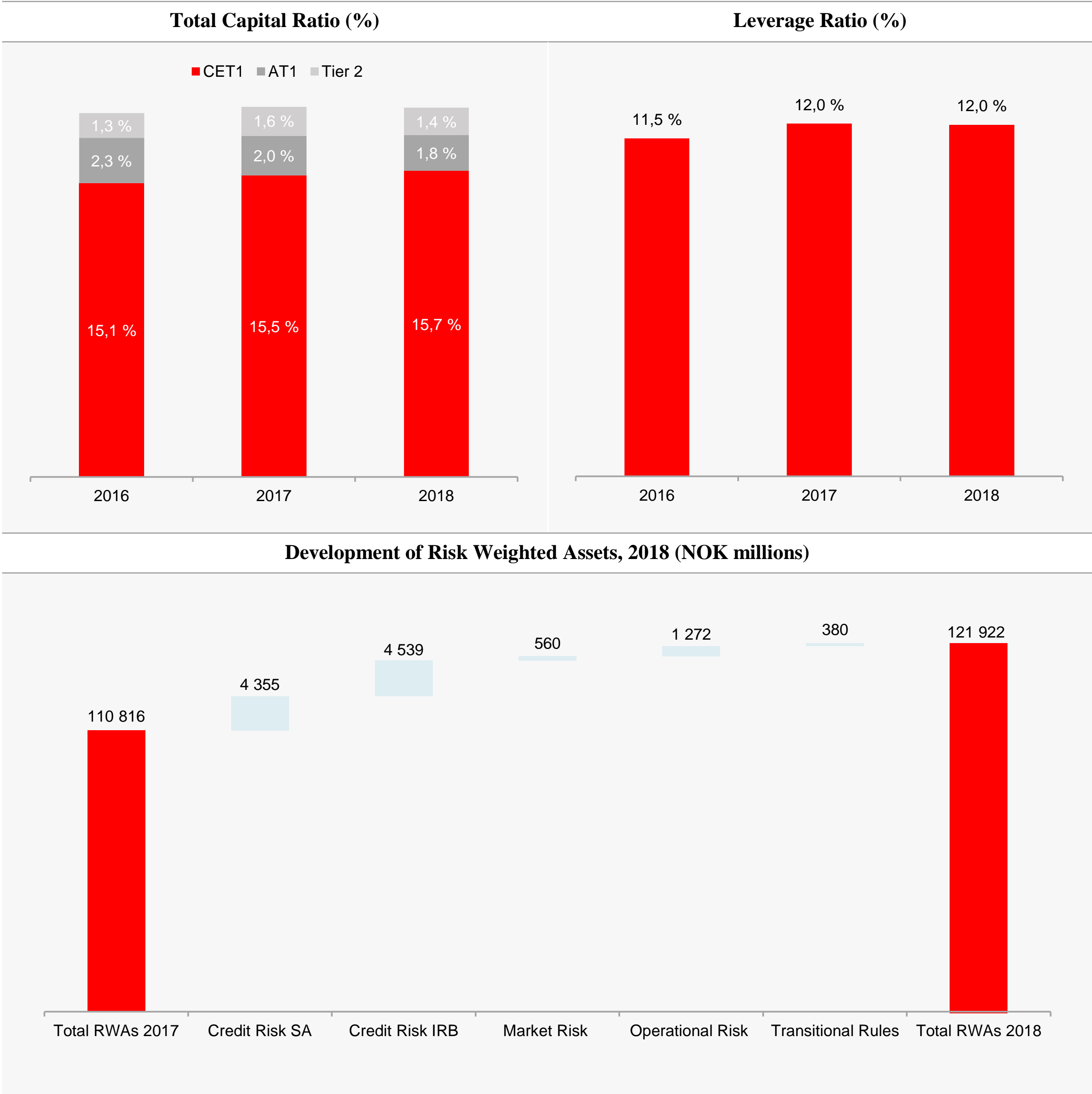
SCB uses both the Standardised approach and A-IRB approach for calculating risk weighted assets ("RWAs") for credit risk and the Standardised method for calculating both market and operational risk. The Bank's RWAs are used as the basis for calculating the combined buffer requirements. For 2018, RWAs increased by NOK 11 106 million to NOK 121 922 million. The increase was largely driven by an increase in credit RWAs due to a combination of continued growth in core markets and a weakening of the NOK relative to EUR, SEK and DKK. As can be seen from the figure below, the majority of the Bank's RWA are related to retail customer loans under both the Standardised approach and under the A-IRB approach.

Figure 4.3.2 SCB Risk Weighted Assets as at 31 December 2018

Risk-Weighted Assets ("RWAs")	2017	2018
Standardised Approach		
- Regional Governments	*78*	*73*
- Institutions	*978*	*836*
- Corporates	*5 528*	*9 156*
- Retail	*51 402*	*56 206*
- Covered Bonds	*420*	*466*
- Default	*1 051*	*999*
- Other	*7 414*	*3 490*
Total Standardised Approach	66 871	71 226
Internal Ratings Based Approach:		
- IRB	*31 032*	*35 571*
Total IRB Approach	31 032	35 571
Market Risk	852	1 472
Operational Risk	11 896	13 168
CVA	165	105
Total RWAs	**110 816**	**121 542**
IFRS 9 Transitional Adjustment	-	380
Total RWAs (after IFRS9 transitional rules)	**110 816**	**121 921**

The figure below depicts the development of the Bank's key capital adequacy metrics.

Figure 4.3.3 – Development of Key Capital Adequacy Metrics



The Pillar 3 appendix and *"Note 9 - Capital Adequacy"* in the 2018 Annual Report, discloses more information on SCB's capital adequacy position and requirements.

5. Counterparty Risk

The Bank defines counterparty credit risk as defined in Article 272 of CRR: "Risk that the counterparty to the transaction could default before the final settlement of the transaction cash flows".

Transactions within the scope of counterparty credit risk in the Bank are cross currency swaps and interest rate swaps. These type of derivatives are used in order to hedge currency and interest rate risk related to funding transactions. All of the Bank's derivatives have signed collateral agreements (VM CSAs) with the counterparty with bilateral daily collateral posting.

The Bank holds derivatives for hedging purposes only and capital required for these transactions represent a very small share of total capital requirements, counterparty credit risk is not considered a significant risk for the Bank.

6. Credit Risk

SCB defines credit risk as the potential that a borrower or counterparty will fail to meet its obligations in accordance with agreed terms.

SCB's business is focused on auto and unsecured products (consumer loans, credit cards and durables) and therefore, credit risk is the most significant risk for SCB.

6.1 Strategy and Policies

The Bank's strategy and risk policies contain diversification requirements and therefore, SCB's credit portfolio must possess a diversified composition with regard to customers, business sectors, geographical areas and market segments.

SCB establishes the frameworks and general guidelines for all lending and credit-granting activities in the Nordic countries in the Nordic Retail Credit Policy. The objective of this Policy is to ensure a customer portfolio with a satisfactory risk profile. The risk department consists of a Nordic risk function complemented by a local risk management function where a risk director reports centrally. Each jurisdiction manages its risk according to its Local Credit Procedure, which is in line with Nordic Credit Policies.

6.2 Credit Risk Monitoring and Reporting

In order to fulfil SCB's ambitions on credit quality and portfolio composition, the Bank has put in place information systems supported by analytical techniques that measure and report credit risk on both individual and portfolio levels throughout the credit risk cycle.

While the Bank's retail customers are monitored on an aggregated / portfolio level, wholesale customers are monitored individually. Wholesale customers are assigned an internal rating based on the Banco Santander internal rating model, which will then derive an individual Probability of Default ("PD"). The model takes in to consideration the Bank's internal knowledge and expertise as well as an objective assessment of the customers financial and management structure.

In order to monitor the retail and wholesale businesses, the Bank has a quarterly monitoring of the Strategic Commercial Plan. The business functions are responsible for performing regular monitoring of the degree of execution of the commercial strategies. The Risk department is responsible for monitoring the degree of execution of the portfolio policies, of the credit admission and management policies and of the recovery strategies. In the event of deviations from the Bank's objectives, the responsible parties will propose and develop the appropriate corrective actions in conjunction with Risk.

6.3 Admission and Monitoring of Standardised and Non-standardised Risk

To ensure business policy and practices are aligned with product features and characteristics, and with the needs of the Bank's customers, SCB divides its portfolios into two main segments:

- **Retail:** follows a standard, highly automated credit approval process primarily based on system-generated decisions (credit scorecards).
- **Wholesale** or "*Non-standardised risk*": applicable to all stock-finance customers and customers whose volume of risk exposure is more than NOK 5 million, DKK 5 million, SEK 5 million and EUR 0.5 million in Norway, Denmark, Sweden and Finland respectively. Specific risk analysts are assigned to these credits.

Credit Scorecards

The main credit risk management tool for the retail portfolio in the Bank is based on the use of scorecards. Admission and behavioural scorecards have been developed and implemented for all retail portfolios. The purpose of the admission scorecards is to separate the "good" customers from the "not so good customers", whilst the

purpose of the behavioural scorecards is to track how the customer is performing. Upon scoring, the customer is assigned a Probability of Default (PD) bucket which is used for risk monitoring purposes and in capital calculations under Advanced Internal Ratings Based ("A-IRB") approach, among other things. All scorecards are continuously monitored. The goal is to ensure that portfolio delinquency rate is within acceptable limits by adjusting the score limits in line with the risk appetite of the Bank. All implemented scorecards are monitored for their stability, accuracy and predictability to ensure they work as intended.

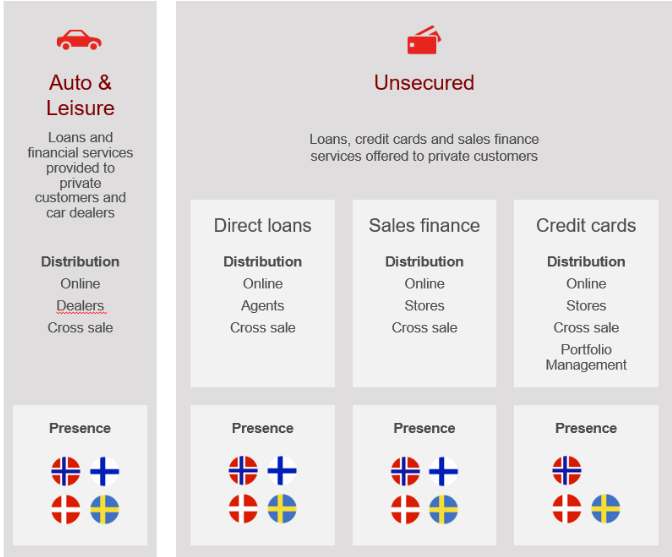
Internal Rating Model

The non-standardised customers in the Bank are composed of large and/or complex exposures evaluated individually by a risk analyst, and are not scored by the retail scorecards. Depending on the size of the loan the application will need to be escalated and submitted to the relevant Credit Committee for approval; this in compliance with delegated credit authorities' structure established in the Credit Policy. During 2010, an internal rating model developed centrally in Banco Santander (SCB's ultimate parent) was implemented in all units. This involved risk analysts reviewing all wholesale clients and setting a rating score, following the Santander Rating scale. Ratings from the Santander Internal Rating model method will result in an individual PD by wholesale exposure.

6.4 Credit Risk Profile

SCB's credit portfolio has a diversified risk composition across customers, sectors, geographies and industries. The Bank is operates in four different countries and the consumer lending business is composed by the following products:

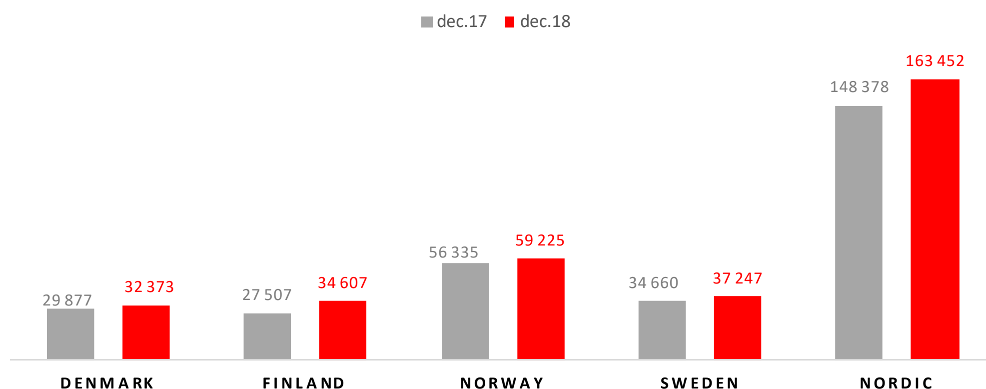
Figure 6.4.1 SCB Lending Products



Gross outstanding loans increased from NOK 148 billion to NOK 163 billion between 2017 and 2018 driven by organic growth in all countries.[2] As Figure 6.4.2 and 6.4.3 shows, the increase was driven by auto portfolios. Compared to 2017, the asset distribution per country has remained fairly stable with a small increase of the Finnish exposure as a result of a greater relative increase in auto loans.

[2] All figures presented hereafter include operating leases, classified as consignment and gross customer loans in the Annual Report 2018

Figure 6.4.2 Gross Outstanding Amounts by Country (NOK 000s)



Auto Private Persons ("Auto PP") continues to be the largest portfolio of the Bank. Auto PP Norway accounts for a large part of the Auto portfolio. Note, 'Non Std.' refers to auto stock finance portfolios. The Bank's total exposure to secured products is more than 75% of gross outstanding. Figure 6.4.4 shows the split between secured and unsecured portfolio per country. As evidemced, the share of secured portfolios at the Group level increased from 76.7% to 78.3% from 2017 to 2018.

Figure 6.4.3 Gross Outstanding Amounts by Product (NOK 000s)

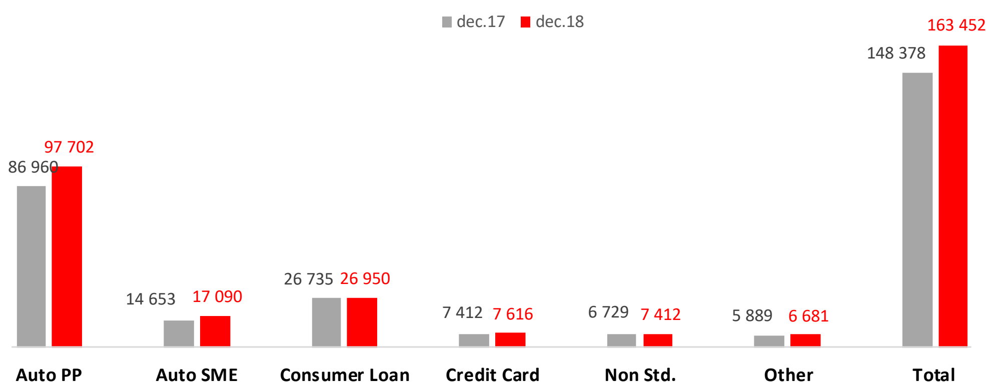


Figure 6.4.4 Share of Gross Outstanding by Product and Geography

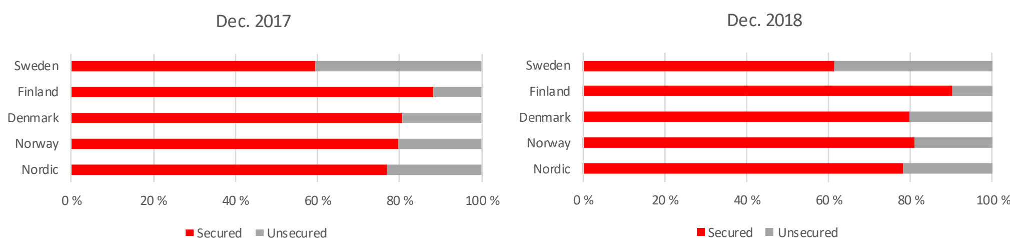
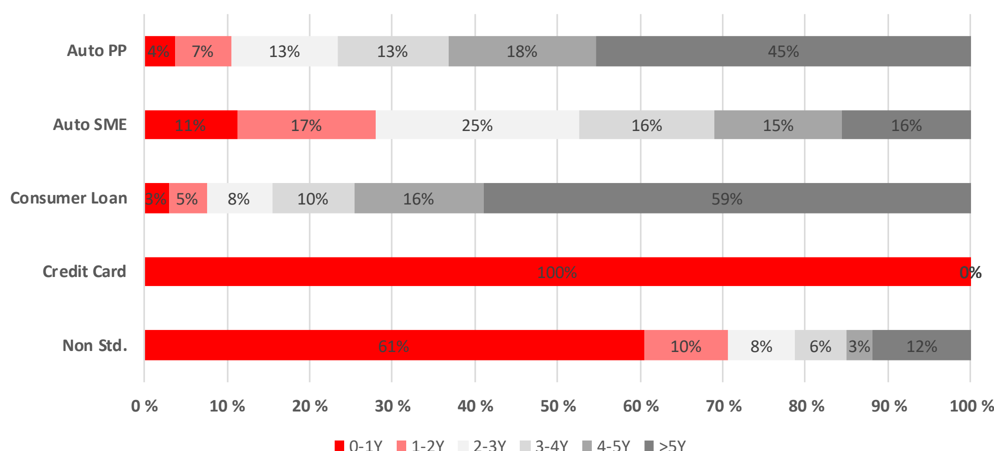


Figure 6.4.5 shows the distribution of gross outstanding by different residual maturity buckets.

As can be seen, Auto PP and Consumer Loans have the longest maturity on a contractual basis. However, the behavioural maturity profile of these loans are often much shorter due to a relatively high prepayment rate. With new regulation restricting maturity on consumer loans in Norway, the contractual maturity profile is expected to fall going forward.[3]

[3] Forskrift om krav til finansforetakenes utlånspraksis for forbrukslån

Figure 6.4.5 Maturity Profile of Gross Outstanding Amounts by Product



The table below details the risk-weighted asset density of its exposures. As can be seen, the average risk weight of the Bank's exposures is c. 60%. As will be detailed in the following section, the Bank reports its credit exposures under the Standardised and Advanced Internal Ratings Based Approach.

Figure 6.4.6 Overview of Gross Exposures, Exposure at Default and RWAs as at 31 December 2018

NOK millions	Gross Total Exposure	Total EAD	Total RWA	RWA Density [4]	Capital Required
Regional and Governments	6 167	6 167	73	1,2 %	6
Institutions	3 627	3 627	836	23,0 %	67
Corporates	13 402	9 156	9 156	100,0 %	732
Retail (Standardised approach)	99 009	74 941	56 206	75,0 %	4 496
Retail (A-IRB approach)	74 457	74 457	35 571	47,8 %	2 846
Exposures in Default	2 590	999	999	100,0 %	80
Covered Bonds	4 664	4 664	466	10,0 %	37
Other Exposures	3 210	3 210	3 490	108,7 %	279
Total Credit Risk	**207 124**	**177 220**	**106 797**	**60,3 %**	**8 544**

6.5 SCB's Application of Credit Risk Methodologies

SCB uses both the Standardised Approach and the Advanced-IRB Approach to calculate its capital requirements for credit risk.

- **Standardised Approach:** general risk weights are prescribed in the Capital Requirements Regulation ("CRR") for each exposure type in order to determine credit risk RWA amounts.
- **Advanced-IRB Approach ("A-IRB"):** banks use their own estimated risk parameters – Probability of Default, Loss Given Default and Exposure at Default – in order to determine credit risk RWA amounts. There are numerous and very stringent requirements that banks must adhere to in order to be able to report under A-IRB.

SCB considers the implementation of the A-IRB approach to be strategically important and a key business driver for sustainable growth and future competitiveness. The operational benefits of A-IRB are related to improved client information, increased accuracy of models, improved scoring, processes and routines and in general risk management practice of the Bank. Greater information regarding the Bank's adoption and use of A-IRB is detailed in Section 6.8.

[4] RWA density is calculated as Total RWA / Total EAD

6.6 Key Terminology: Credit Risk Metrics and IRB Parameters

The information below describes many important terms used to describe credit risk across the Bank's credit portfolio. These terms will be used throughout the remainder of this chapter.

6.6.1 Non-performing Loans, Impairments and Write-offs

The Bank's definition of the default, write-off and loan loss reserves is detailed below.

- **Default:** a default is considered to have occurred when it is considered that the obligor is unlikely to pay for objective reasons i.e., bankruptcy is more than 90 days past due (in line with CRR Art.178 (1)). Defaults are also referred to as non-performing loans. The EBA has published new recommendations on the definition of default, which will promote a standardised assessment of defaulted exposures across banks. SCB is working to implement the requisite changes ahead of the deadline of January 2021.

- **Write-off:** credit obligation is written-off and removed from on-balance sheet exposure according to accounting standards, which states, "financial assets are written off once the entity has no reasonable expectation of recovering a financial asset in its entirety or part thereof". SCB uses indicators such as days past due, expected cash flows and collateral to determine write-offs. In 4Q 2018, SCB's Board of Directors approved a change in write-off policy for its unsecured portfolios in Sweden, Denmark and Finland. The revised policy dictates that, in order for an exposure to be written-off, it must meet the criteria of being more than 720 days past due ("DPD") as opposed to 180 DPD as was previously applicable.

- **Loan loss reserves ("LLR"):** represents management's best estimates of losses incurred in the Bank's loan portfolio at the balance sheet date. Since January 2018, the Bank amended its accounting policy from IAS 39 to IFRS 9. As a result, LLRs will be classified across Stage 1, Stage 2 and Stage 3. This replaces IAS 39 in which LLRs were classified as specific and collective impairments.
    - **Stage 1:** effectively compares to what was a "collective impairment" under IAS 39
    - **Stage 2:** exposures that have exhibited a substantial increase in credit risk (SICR), determined by the change in PD vs. the PD at origination.
    - **Stage 3:** defaulted exposures and compares to specific write-downs.

SCB has a model for calculating the Expected Credit Loss (ECL), in which all exposures are divided into the aforementioned stages. The impairment calculation for Stage 1 and Stage 2 is provided by models that estimate future losses based on forecasts of future economic development.

6.6.2 IRB Parameters

In order to measure the credit risk of an exposure for capital requirement purposes, Expected Loss and Unexpected Loss needs to be determined. Unexpected Loss relates to the very high but improbable level of losses not considered recurring but must be absorbed by capital. For Expected Loss, SCB determines Probability of Default, Loss Given Default, and Exposure at Default in order to derive an exposures' Expected Loss.

- **Probability of default (PD):** probability that a given customer will default on their credit exposure within the next 12 months. The PD used for regulatory capital is Through-the-Cycle ("TTC") i.e., long term. A default is deemed to have occurred when either there exists reasonable doubt whether there will be a repayment or when a customer is more than 90 days past due on their credit obligation. Defaulted exposures are automatically assigned a PD of 100%. Calculation of PD is done based on the Bank's historical information.

- **Loss given default (LGD):** indicates how much the Bank expects to lose in the event of a default. For the purpose of regulatory capital, LGD is calculated based on a downturn economic cycle. In the calculation for LGD, customer collateral, future cash flows and other relevant factors are incorporated.

- **Exposure at default (EAD):** the value of the debt at the time of default.

The parameters and associated metrics, including Expected and Unexpected loss, are to be used not only for regulatory purposes but also for internal credit risk management. In SCB, the internal credit risk parameter estimates are used in a variety of management tools, including pre-classifications, RORWA (Return on Risk Weighted Asset) calculations, stress testing, and scenario analyses. The results are subsequently reported to senior management through various internal committees.

6.7 SCB Credit Performance

SCB's credit portfolio has exhibited a stable non-performing loan ("NPL") ratio providing a good indication regarding the underlying portfolio credit quality and the Bank's underwriting standards. The figure below shows the development in the NPL ratio, split by secured and unsecured and by geography, during 2016, 2017 and 2018. From December 2016 until December 2018, the NPL ratio remained stable at 1.1% for the secured portfolio, whilst it increased slightly for the unsecured portfolio. During the second half of 2018, the Bank amended its write-off policy for unsecured loans in Sweden, Denmark and Finland in order to ensure alignment with IFRS 9. This resulted in an increase in NPLs and therefore, an increase in the unsecured NPL ratio from 4.92% in December 2017 to 5.34% in December 2018. This impact can also be seen in Figure 6.7.2. Norway possesses a higher NPL ratio due to its higher concentration of credit card exposures relative to the other countries.

Figure 6.7.1 NPL ratio developments for 2016-2018 for secured and unsecured portfolios

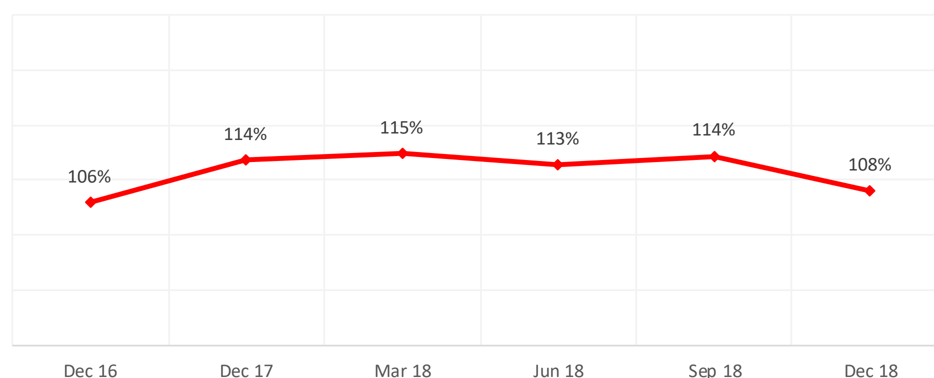
NPL ratio	Dec-16	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
Secured	1,09%	1,06%	1,14%	1,22%	1,16%	1,12%
Unsecured	4,89%	4,92%	5,29%	5,33%	5,13%	5,34%
Nordic	***2,02%***	***1,96%***	***2,08%***	***2,13%***	***2,02%***	***2,03%***

Figure 6.7.2 NPL ratio developments for 2016-2018 by geography

NPL ratio	Dec-16	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
Denmark	1,24%	1,17%	1,28%	1,22%	1,19%	1,45%
Finland	0,71%	0,74%	0,77%	0,84%	0,76%	0,90%
Norway	3,36%	3,50%	3,66%	3,84%	3,56%	3,46%
Sweden	1,22%	1,12%	1,19%	1,09%	1,07%	1,34%
Nordic	**2,02%**	**1,96%**	**2,08%**	**2,13%**	**2,02%**	**2,03%**

NPL coverage is defined as LLRs divided by NPLs. The NPL coverage ratio for SCB remained well above the risk appetite during 2018. NPL coverage is an important metric; it identifies the amount of provisions already set aside to cover exposures considered non-performing. The figure below identifies SCB's provisioning levels over the previous two financial years.

Figure 6.7.3 Coverage ratio development for 2016-2018



6.8 SCB Credit Risk under the A-IRB Approach

6.8.1 Approved IRB portfolios

As mentioned above, in December 2015, SCB received approval from the Bank of Spain and the Norwegian FSA, to report under A-IRB for the Auto PP portfolios in Norway, Sweden and Finland only. The stability of the parameters and the underlying data for the portfolios performance were monitored closely before the IRB approval.

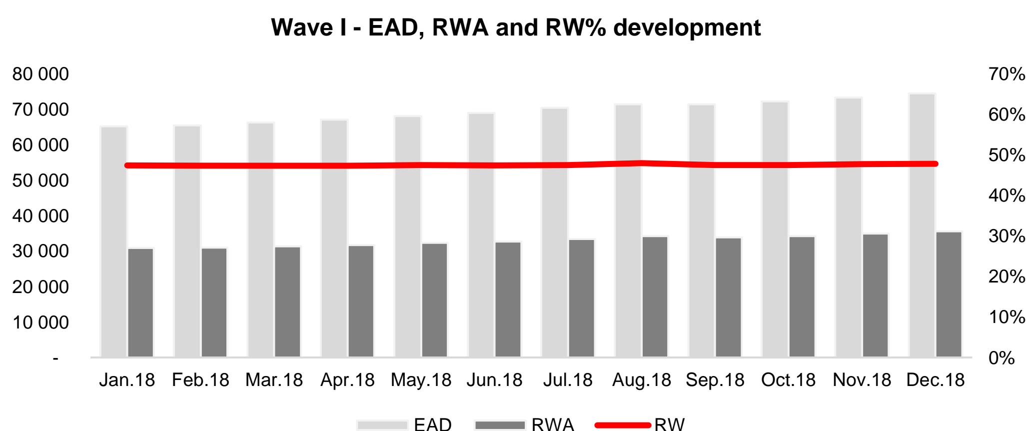
Historical information on portfolios is essential for estimating regulatory parameters. The EU Regulation (UE NO 575/2013) stipulates that the minimum period of data to be used in estimates for retail portfolios is five years. For this reason, SCB has an internal data model containing past information on portfolios, which is subject to review by the internal supervisory divisions (Validation and Internal Audit), and by the supervisory authorities.

Figure 6.8.1.1 Overview of SCB's Application of A-IRB

Component	Portfolio	No. Of significant models Nº	Portfolio RWA Thousands of Euros	Description of model and methodology	No. of years of loss data	Basel category	Regulatory floors applied
PD	Auto PP Norway	1	1 330,29	Statistical model which produces a PD that is scaled to a cycle average	5	Retail Others	PD > 0.03%
	Auto PP Sweden	1	1 040,85	Statistical model which produces a PD that is scaled to a cycle average	5	Retail Others	PD > 0.03%
	Auto PP Finland	1	1 204,40	Statistical model which produces a PD that is scaled to a cycle average	5	Retail Others	PD > 0.03%
LGD	Auto PP Norway	1	1 330,29	Loss estimates based on internal data, stressed to a downturn situation	5	Retail Others	
	Auto PP Sweden	1	1 040,85	Loss estimates based on internal data, stressed to a downturn situation	5	Retail Others	
	Auto PP Finland	1	1 204,40	Loss estimates based on internal data, stressed to a downturn situation	5	Retail Others	
EAD	Auto PP Norway	1	1 330,29	N/A	-	Retail Others	
	Auto PP Sweden	1	1 040,85	N/A	-	Retail Others	
	Auto PP Finland	1	1 204,40	N/A	-	Retail Others	

Figure 6.8.1.2 shows the EAD, RWAs, and risk weights of the A-IRB Wave 1 portfolios. During 2018, EAD has grown, while the risk weight remained stable.

Figure 6.8.1.2 A-IRB Portfolio Wave 1



The table below provides RWA and parameter details as at 31 December 2018 for the current A-IRB portfolios. The table is in accordance with CR6 as per the EBA's disclosure requirements "*EBA/GL/2016/11*". The Bank's A-IRB portfolios consist of instalment loans without assigned credit limits and therefore, CCF columns have not been reported.

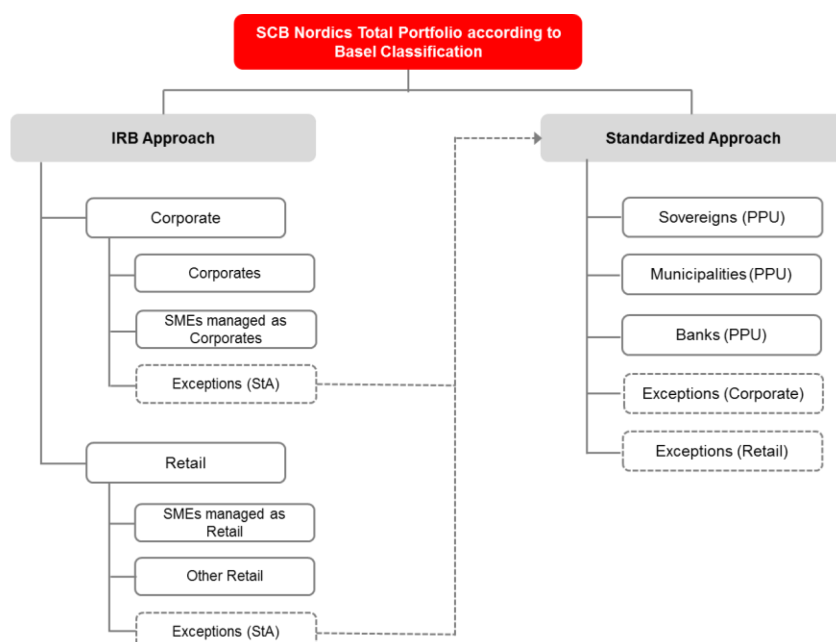
Figure 6.8.1.3 A-IRB Portfolio Parameter Information – EU CR6

PD_Bucket	On Balance Sheet gross exposure	EAD post CRM and post CCF	Average PD	# Obligors	Average LGD	Average Maturity	RWA	RWA Density	EL	Provisions
A [0.00-0.50)	9 571 612	9 571 612	0,26 %	55 050	34,2 %	4,08	1 671 652	17,5%	8 501	25 075
B [0.50-1.00)	21 541 197,73	21 541 198	0,72 %	169 830	45,9 %	3,77	9 264 805	43,0%	73 497	69 556
C [1.00-1.38)	20 023 711,72	20 023 712	1,09 %	127 587	41,3 %	3,94	9 255 049	46,2%	90 572	88 915
D [1.38-3.35)	11 327 181,24	11 327 181	2,07 %	89 085	42,3 %	3,83	6 593 461	58,2%	102 181	58 352
E [3.35-4.07)	586 895,12	586 895	3,38 %	4 700	47,3 %	4,20	417 029	71,1%	9 355	2 122
F [4.07-8.21)	6 047 937	6 047 937	5,50 %	43 820	41,5 %	3,95	3 968 549	65,6%	136 555	71 876
H [10.64-100)	4 675 862,02	4 675 862	25,19 %	32 775	37,9 %	3,94	4 308 514	92,1%	450 975	185 208
PD 100	682 318	682 318	100,00 %	5 659	38,3 %	2,89	91 511	13,4%	254 055	297 448
Total	***74 456 716***	***74 456 716***	***3,82 %***	***528 506***	***41,7 %***	***3,89***	***35 570 569***	***47,8%***	***1 125 692***	***798 552***

6.8.2 IRB Roll-out Plan

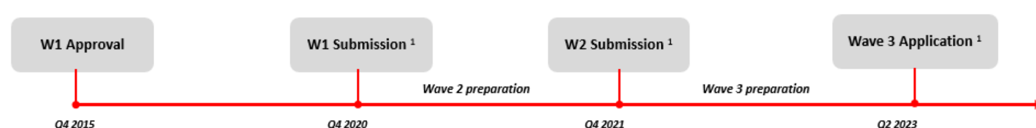
The figure below provides an overview of the Bank's portfolio classified under the Basel II accord. This represents the "end-state" portfolio classification i.e., when A-IRB has been fully rolled out. As can be seen, some portfolios will remain under the standard approach based on the characteristic of the obligor and materiality of the credit risk.

Figure 6.8.2.1 Portfolio classification by Basel II



The Bank has a three "wave" approach for the roll out of the portfolios under A-IRB. The roll out plan is depicted in the figure below. SCB received Wave 1 approval in December 2015, which constituted the Auto PP portfolio in Norway, Sweden and Finland. SCB is required to re-submit the approved Wave 1 model to ensure that it reflects the EBA's new default definition, applicable from January 2021. Once Wave 1 has been approved we plan to submit Wave 2 and then finally Wave 3 as outlined in the Figure below.

Figure 6.8.2.2 A-IRB roll out calendar



1 - Applying New Default Definition

6.8.3 IRB Regulatory Limits

In order to measure any significant variation within the A-IRB portfolios and ensure stability, regulatory limits are established on key performance indicators for the A-IRB portfolios. These limits are part of the "Management and Regulatory Limits" document which are reviewed on a yearly basis and approved by the Board of Directors.

For A-IRB portfolios, limits are set on following performance indicators:

- Risk Weight for total portfolio
- Expected Loss (EL) for total portfolio
- Probability of Default (PD) for non-defaulted portfolio
- Downturn Loss Given Default (LGD)
- Risk Weight (RW) for New business volume for the month
- Expected Loss (EL) for New business volume for the month

Actual performance of the A-IRB portfolios are then reviewed against the set limits on a monthly basis and are delivered to relevant stakeholders, with any point of attention clarified and managed in case necessary. The regulatory limits have not been breached during 2018, and will be reassessed for 2019 considering the portfolio developments during 2018.

6.8.4 Credit Risk Mitigation

In the regulatory capital calculation, the application of credit risk mitigation affects the value of the risk parameters used for the calculation of capital. The identification and valuation of the collateral and/or guarantees associated with the contracts is essential. This process of mitigation is undertaken on the proviso that the validity of the collateral and/or guarantee has been checked and they are considered eligible to be applied. Under the A-IRB approach, the presence of collateral impacts on the final value of the LGD used in the calculation of capital. For LGD estimations on its A-IRB portfolios, SCB uses vehicles pledged as collaterals in form of other physical collaterals following the requirements specified under CRR article 199.1(c). With regards to the calculation, the Bank, in its LGD model, applies a pre-defined collateral value for each exposures group.

6.8.5 IRB Model Governance

A fundamental part of the process implementing A-IRB models is to establish robust control and review mechanisms by Internal Validation and Internal Audit. This to ensure effective monitoring, validation and documentation of the capital models and their integration into risk management. The governance model involves different levels of control structured around three lines of defence with an organizational structure and independent, clearly defined functions.

- Model owners, model users, model developers and model implementers (1 LoD) have responsibility for the primary management of model risk, which arises from their activities.
- Internal validation (IV) and Model Risk Control (2 LoD) functions comprehensively oversee, independently validate, asses, and control model risk management.
- Internal Audit function (3 LoD) is involved in all stages of the model lifecycle and they oversee all other functions

This governance model meets the regulatory requirements for IRB models:

1. Existence of a strong governance model.
2. Existence, separation and independence of the Risk Control and Supervision, Internal Validation and Internal Audit areas.

3. Independent annual reviews by Internal Validation and Internal Audit (also at Banco Santander level)

4. Communication processes with Management which ensure all associated risks are reported

Model Validation

Independent internal validation of models before implementation is not only a regulatory requirement but also a key feature for proper model risk management and control. Thus at the Santander Consumer Finance ("SCF H.Q.") level, an independent specialist unit provides a technical opinion on the suitability of internal models to their purposes, and sets out conclusions concerning their robustness, utility and effectiveness. Validation requirements are higher for IRB models relative to other models.

After being validated, the validation opinion is converted into a score on a scale of 1 to 5, where 1 is low model risk, 2 is moderate low, 3 is moderate, 4 is moderate high and 5 is high.

In addition, the internal validation function provide recommendations, in case the model needs improvements, which are followed up on a regular basis by the model risk function and model owners. The Bank's A-IRB parameter models include a significant level of conservatism to account for model risk. As per 2018, A-IRB models are determined to be high quality with moderate risk level.

Model Monitoring

Models are designed and built based on certain information and circumstances, which may change over time. These models are subject to regular performance monitoring to ensure that they are still working properly and to aid in the planning of redevelopments and decommissions.

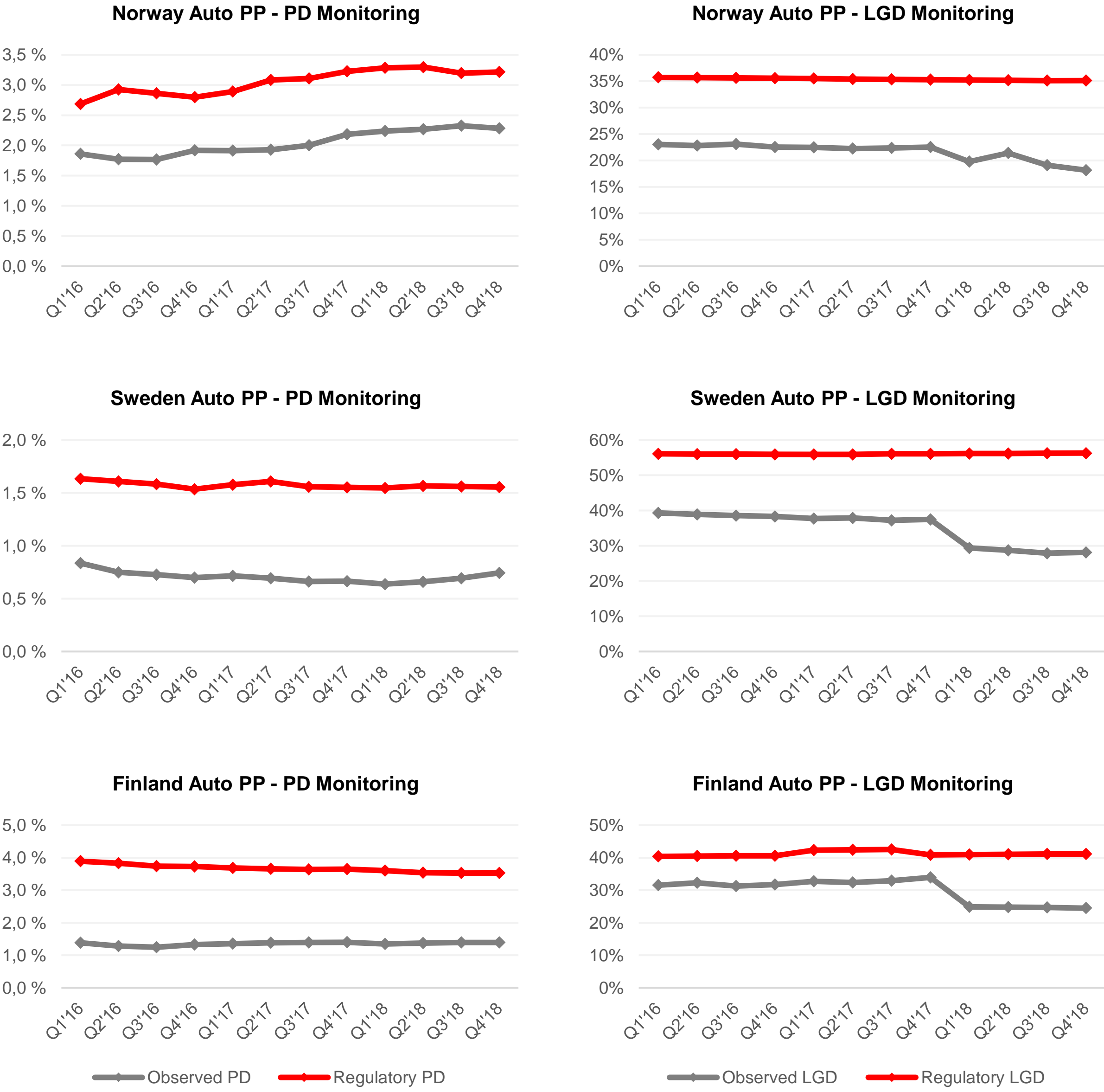
The model owner and model developer are in charge of performance monitoring of the models in use according to corporate standards for stability, calibration and performance. The monitoring results are presented to the relevant governance bodies and reviewed by the internal validation function independently.

6.8.6 Back-testing of IRB Parameters

SCB has a comprehensive back-testing framework to test the IRB parameters validity on a quarterly basis. The aim of the PD back-test is to compare the regulatory PD used for calculating capital requirements with actual observed defaults (Observed Default Frequency ("ODF")). The purpose of this exercise is to assess the predictive power of the IRB models.

In order to manage model risk for the PD's and LGD's used for capital requirement calculation, SCB group has set up validation processes to monitor the quality of the models on an ongoing basis. Back-testing is a key quantitative validation tool in which predicted PD's and LGD's are compared with observed PD's and LGD's. Timely detection of inadequate performance of the PD's and LGD's are crucial since they are used in the capital requirement calculation, and back-testing is thus conducted on a regular basis.

Figure 6.8.6.1 Back-testing of IRB Portfolios



As can be observed from the graphs above, the observed PD for the A-IRB portfolios are below the predicted measurements used in capital requirement calculation. This indicates that the calculation is sufficiently conservative. The divergence in the observed LGD's in Sweden and Finland during 2018 can be explained by corrections in recovery movements in Finland and the phasing out of an old portfolio with very high LGD levels in Sweden.

For each portfolio, regulatory PD buckets, representing different PD levels, are established. For each of these, the average PD assigned is compared with the ODF. To observe defaults, outstanding loans that were not in default at a reference date is selected, and the rate of new defaults among these outstanding loans over the subsequent 12-month period is observed.

The regulatory PD is a through-the-cycle (TTC) PD, i.e. a long-term average that is not tied to any particular point in the cycle. However, the default frequency is observed at a given point in time (2018). Given their different characteristics, the comparison between the two figures does not constitute a precise control of the regulatory PD, but it does serve to assess the size of the cyclical adjustment used in the calculation of the regulatory (TTC) PD.

ODF is also compared with the point-in-time (PIT) PD, which is influenced by the cyclicality. This allows the slope of the PD curve to be compared with the delinquency observed in each rating category. The graphs below illustrates that the TTC PD is consistently higher than observed defaults.

Figure 6.8.6.2 Norway A-IRB: Observed Default Frequency by PD bucket and PD rate

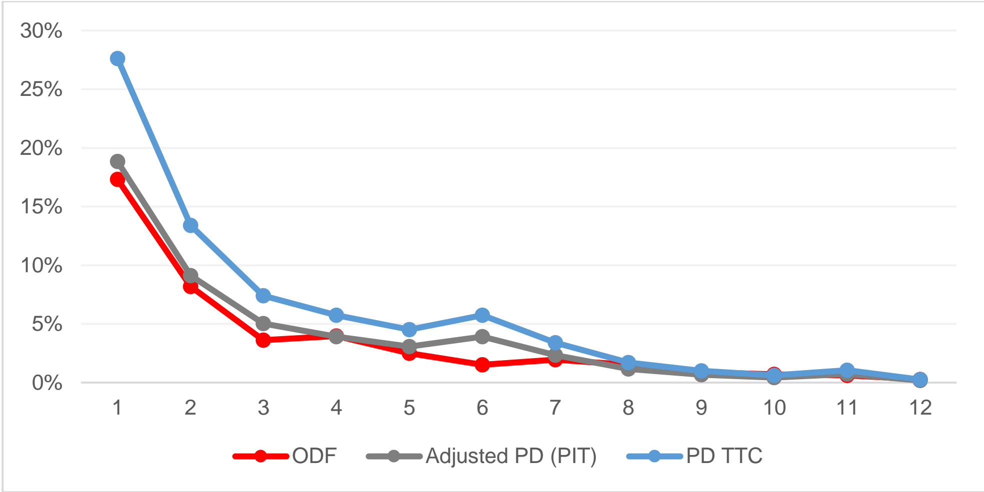


Figure 6.8.6.3 Sweden A-IRB: Observed Default Frequency by PD bucket and PD rate

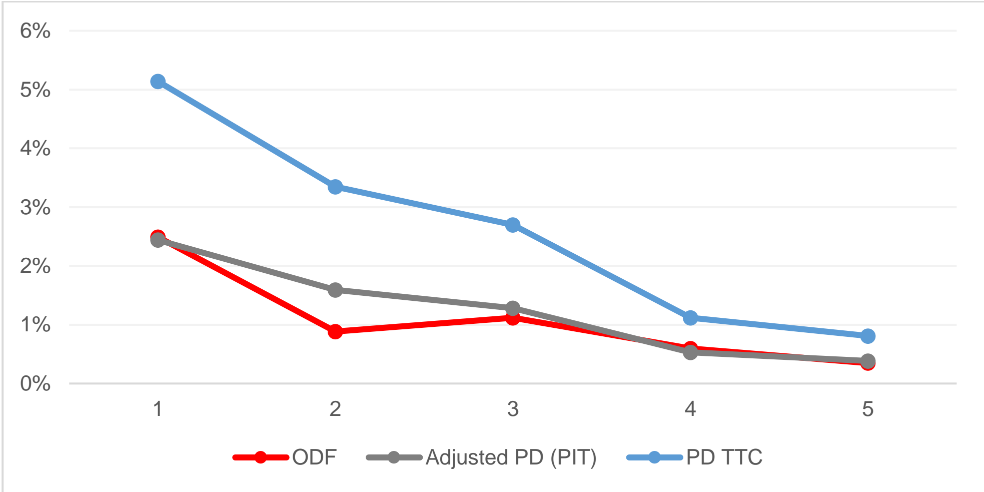
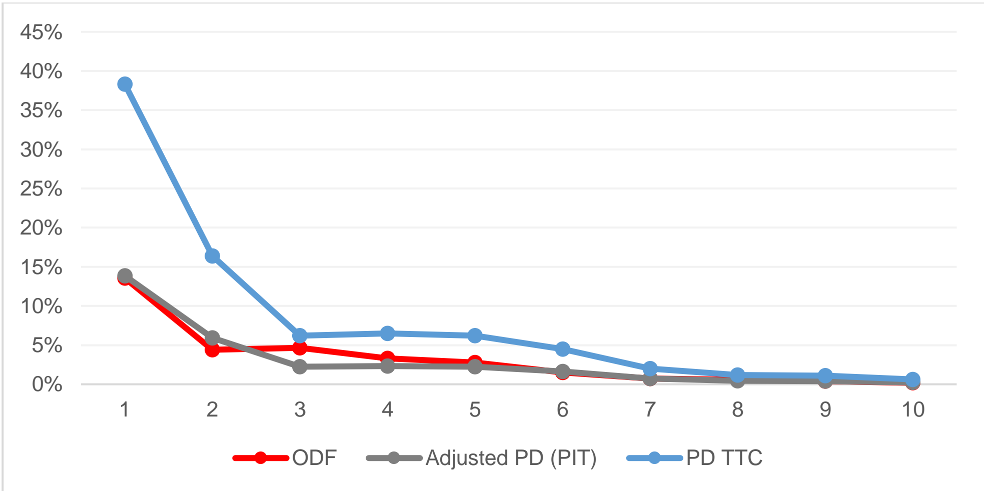


Figure 6.8.6.4 Finland A-IRB: Observed Default Frequency by PD bucket and PD rate



In addition to the above analysis, Figure 6.8.6.5 gives an overview of the back-testing exercise through the disclosure table CR9 as per EBA/GL/2016/11. As shown, there is no material difference between the average exposure-weighted PD and the simple average in each bucket. In general, it is observed that the PD assigned to A-IRB portfolios for capital requirement is conservative when compared with average defaults over the last 5 years.

Figure 6.8.6.5 Back-testing A-IRB parameters – 31 December 2018 - CR9

Nordics	PD Range	External Rating Equivalent	Weighted average PD	Arithmetic average PD by obligors	Number of obligors: End of previous year	Number of obligors: End of the year	Defaulted obligors in the year	Average historical annual
Nordics - Norway Auto Individuals	0 < 0,15%	AAA to A-	-	-	-	-	-	-
	0,15 < 0,25%	A- to BBB+	-	-	-	-	-	-
	0,25 < 0,50%	BBB+ to BBB-	0,26 %	0,26 %	55 317	55 050	148	0,28 %
	0,50 < 0,75%	BBB- to BB+	0,63 %	0,63 %	44 403	46 391	303	0,69 %
	0,75 < 2,50%	BB+ to BB-	1,36 %	1,40 %	60 454	65 397	697	1,02 %
	2,50 < 10,0%	BB- to B-	6,00 %	5,94 %	19 684	16 747	587	3,04 %
	10,0 < 100%	B- to C	23,94 %	24,00 %	18 362	18 590	2 480	22,02 %
	100% (Default)	D	100,00 %	100,00 %	4 646	4 136	1	
Nordics - Sweden Auto Individuals	0 < 0,15%	AAA to A-	-	-	-	-	-	-
	0,15 < 0,25%	A- to BBB+	-	-	-	-	-	-
	0,25 < 0,50%	BBB+ to BBB-	-	-	-	-	-	-
	0,50 < 0,75%	BBB- to BB+	-	-	-	-	-	-
	0,75 < 2,50%	BB+ to BB-	0,85 %	0,85 %	106 239	121 526	409	0,39 %
	2,50 < 10,0%	BB- to B-	3,39 %	3,39 %	32 602	34 526	463	1,40 %
	10,0 < 100%	B- to C	67,43 %	67,07 %	328	511	133	56,50 %
	100% (Default)	D	100,00 %	100,00 %	368	429	0	
Nordics - Finland Auto Individuals	0 < 0,15%	AAA to A-	-	-	-	-	-	
	0,15 < 0,25%	A- to BBB+	-	-	-	-	-	
	0,25 < 0,50%	BBB+ to BBB-	-	-	-	-	-	
	0,50 < 0,75%	BBB- to BB+	0,62 %	0,62 %	16 297	19 186	29	0,19 %
	0,75 < 2,50%	BB+ to BB-	1,36 %	1,41 %	89 647	111 720	444	0,53 %
	2,50 < 10,0%	BB- to B-	4,87 %	4,86 %	15 700	19 529	324	2,25 %
	10,0 < 100%	B- to C	26,33 %	26,45 %	11 557	13 675	975	20,63 %
	100% (Default)	D	100,00 %	100,00 %	891	1 094	0	

From the back-testing perspective, the average historical default rate is important. It averages the default rates experienced in each of the past five years for each PD bucket. Comparing this with weighted average PD and simple average PD provides an idea of how well the Bank's regulatory PD matches actual experience.

In order to measure any significant variation within the portfolio and ensure the stability, management and regulatory limits are established on key risk performance indicators every year per country and product.

7. Market Risk

Market risk is the potential loss of value in assets and liabilities due to changes in the market prices such as foreign exchange and interest rates. SCB's strategy is not to actively assume market risk other than what results directly from the Bank's operations. For SCB, market risk can be split into the following categories:

- **Currency risk:** risk of loss resulting from changes in foreign exchange rates. The key metric is the open exposure amount in the relevant currencies
- **Interest rate risk:** risk of loss resulting from changes in interest rates. The key metrics are Net Interest Margin (NIM) and Market Value of Equity (MVE) sensitivities
- **Credit spread risk:** risk of loss as a result of changes in credit spreads

Market risk is managed by the Financial Management Division and controlled by the Risk Division.

As alluded to above, SCB's strategy is not to take on market risk beyond what results directly from our normal business operations in the four countries where SCB is present. The Bank is exposed to currency risk because it operates in four different countries with different currencies and through its use of international funding markets. The Bank has interest rate risk to the extent there is a mismatch between interest rate exposure on the asset side and liability side. SCB does not have an active trading portfolio or positions in securities and commodities but does possess a liquidity portfolio consisting of High Quality Liquid Assets ("HQLAs") where the intention is to

hold the bonds to maturity. HQLAs comprises, amongst others, marketable securities backed by sovereigns and central banks and covered bonds.

7.1 Governance of Market Risk

SCB maintains two documents directly relating to Market Risk that are approved by the BoD. The high-level Structural Risk Model document outlines all requirements of the Bank's Market Risk organization and governance, and the more specific Liquidity and Market Risk Policy document details how these requirements are fulfilled. In addition, the Risk Appetite Model forms the foundation of the Bank's Market Risk limit structure.

The Bank maintains a balance sheet composition that ensures that the market risk is managed at prudent levels and within established limits, as detailed in the Liquidity and Market Risk Policy.

SCB's Risk Appetite statement ("RAS") contains the Bank's risk appetite limits for Market Risk. In addition, the Bank has a set of Management limits, subject to annual review and approval by the Risk Approval Committee, which encompasses more metrics and stricter limits than the RAS. As per the governance structure specified in the Liquidity and Market Risk policy of the Bank, the limits are monitored by the Risk Control Committee and the Board Risk Committee. The Bank maintains limits for interest rate risk and currency risk but not for share risk, property risk, CVA risk or spread risk since the Bank has very limited exposure to these risks.

7.2 Currency risk

The Bank aims for a balance sheet composition that minimizes currency risk by ensuring that the assets and liabilities are primarily denominated in the same currency. When raising funding through the international debt market, any open currency exposure is closed using derivatives.

The currency exposure is continuously monitored and controlled and it is reported monthly to the Risk Control Committee. The limits for currency risk are approved by the Risk Approval Committee and reviewed by the BoD on an annual basis.

Figure 7.2.1 Actual FX Positions as at December 2018 vs. Management Limits:

	Currency Position MNOK Equivalent	2018 Management Limit
Open Net Position EUR	1 281	1 500
Open Net Position SEK	191	600
Open Net Position DKK	(27)	700
Open Net Position Total	1 446	1 500

The EUR position stems from net assets built up through retained earnings in the Finnish subsidiary, SCF Oy.

7.3 Interest rate risk

Interest rate risk is the risk of reduced earnings or reduction in the economic value of the equity due to changes in market interest rates. SCB aims to achieve a balance sheet composition that minimizes the interest rate risk by balancing the total weighted interest term for both assets and liabilities. The Bank is only exposed to interest rate risk that follows directly from the Bank's operations, as does not actively take on interest rate risk.

The strategy of managing interest rate risk involves the use of variable / fixed rate intragroup loans, interest rate derivatives and variable / fixed rate customer deposits. The interest rate gap positions for all significant currencies are monitored and reported monthly. The Bank also calculates the six interest rate risk scenarios as described by the Basel committee in interest rate risk in the banking book (IRRBB). In addition, a sensitivity analysis and a forecast of future interest rate risk is performed.

The Financial Management department, as the risk taker, proposes interest rate risk limits to the Risk department, which assesses the proposal and submits it to the BoD for final approval. Limits must be reviewed annually for each of the following metrics:

- **Net Interest Margin (NIM) sensitivity:** The sensitivity of the NIM is a measure of the difference between the return on assets and the financial cost of the liabilities over a 12-month horizon. The impact is measured as the worst effect on NIM of +/-25, 50, 75 and 100 bps parallel movement in the interest rate curves
- **Economic Value or Market Value of Equity (MVE) sensitivity:** The sensitivity of MVE is a measure, which complements the sensitivity of NIM. It measures the implicit interest rate risk in the MVE from a variation in interest rates (worst of +/-25, 50, 75 and 100 bps parallel movement in the interest rate curves) on the Bank's financial assets and liabilities

The interest rate is calculated in the internally developed Asset and Liability Model by distributing all interest rate sensitive assets and liabilities into tenor buckets and then calculating the MVE and NIM sensitivities. The assets and liabilities are assigned re-pricing maturities following certain assumptions that are regularly reviewed. The assumptions include the behavioural aspects of non-maturity deposits that do not have contractual maturity and the re-pricing criteria of the loan portfolio that are contractually neither fixed or floating rate products. The repricing distribution for non-maturity deposits is based on a run off assumption (exponential distribution), whose parameters are estimated based on historical deposits data. For the loan portfolio, the repricing distribution is based on a prepayment model, which is governed by a Constant Prepayment Rate, estimated by each business unit.

The table below shows, per currency, the 2018 year-end NIM and MVE sensitivities, considering the worst-case scenario of the earlier specified scenarios.

Figure 7.3.1 Interest Rate Risk Limits per December 2018 (millions)

	NOK	SEK	DKK	EUR
MVE Sensitivity				
Management limit	317	254	182	18,2
Actual 31 December 2018	-65,56	-54,26	-0,13	-5,88
NIM Sensitivity				
Management limit	215	112	86	7,2
Actual 31 December 2018	-19,77	-54,17	-27,65	-1,87

7.4 Credit Valuation Adjustment Risk

Credit Valuation Adjustment ("CVA") is an adjustment in the value of derivatives taking into account the risk that the counterparty may default.

As per December 2018, the outstanding notional balance of SCB's derivatives was NOK 42.6 billion consisting exclusively of Over-the-Counter ("OTC") derivatives to hedge currency and interest rate risk arising from the Bank's funding transactions. All of the derivatives are collateralized with CSA agreements, limiting the counterparty credit risk. As at 31 December 2018 the net Mark-to-Market ("MtM") value of the derivatives held by SCB was NOK 190.8 million versus net collateral received NOK 197.4 million.

SCB has no qualifying central counterparty "QCCP" or non-QCCP derivatives, thus only OTC derivatives, covered by CSA agreements, are included in the Bank's Pillar I capital calculation.

7.5 Credit Spread risk

Credit spread risk is defined as the risk of changes in market value of securities or any credit derivatives because of an overall change in credit spreads. As mentioned, SCB's strategy is not to take on market risk in excess of what occurs directly from the Bank's operations. Consequently, the Bank's liquidity portfolio consists of HQLAs. SCB did not have any credit derivatives per December 2018.

The market risk exposure of the liquidity portfolio is considered as low, since the investment mandate is limited to short term Level 1 HQLAs where the intention is to hold the bonds to maturity.

7.6 Capital Requirement for Market Risk

The Bank's market risk capital requirements are calculated in accordance with capital adequacy regulations and the CRD IV/CRR regulations. The approach to calculate market risk regulatory capital can be either the internal model approach or the standardised approach. SCB reports according to the standardised approach for market risk. The table below depicts SCB's Pillar 1 market risk capital over the previous three financial years.

Figure 7.6.1 SCB Pillar 1 Market Risk Capital (NOK millions)

Pillar I Market Risk	2016	2017	2018
Interest Rate Risk	-	-	-
Currency Risk	68	68	118
CVA Risk	22	13	8
Credit Spread Risk	-	-	-
Total	**89**	**81**	**126**

The capital requirement for interest rate risk in 2018 was determined to be zero given that the Bank, through its balance sheet structure, runs minimal interest rate risk as is illustrated in Figure 7.6.1 above. The capital requirement for currency risk for 2018 was NOK 118 million due to the total net currency position exceeding 2% of total own funds. This is due to the open currency exposure SCB has relating to the SCF Oy net asset position. CVA risk is minimal due to the net mark-to-market value of derivatives and thus resulted in a minor Pillar 1 capital charge of NOK 8 million.

8. Exposure to Securitization Positions

Securitization risk is defined as a reversal of capital relief obtained through securitization, which would result in an immediate and substantial increase in required capital.

None of the securitization transactions executed by SCB has resulted in a reduction in capital for SCB[5]. To-date, SCB Group has used the securitization programs for funding. The intention of the securitization programs has been to provide the Bank with access to the international debt capital markets and potentially to access the liquidity provided by Central Banks to ensure functional credit and money markets.

Securitization programs have been implemented across the four Nordic units over the past seven years, and serve as an integral part of the Bank's funding strategy. The Bank has completed 17 transactions:

- 7 transactions with Norwegian collateral;
- 7 from its Finnish business;
- 2 transactions from Sweden (including a warehouse structure); and,
- 1 in Denmark

Total external funding raised equals approximately NOK 14.5 billion and EUR 2.8 billion (swapped to NOK) from the Norwegian business, EUR 3.4 billion from Finland, SEK 8.4 billion from Sweden and DKK 4.2 billion from Denmark. Of the 17 transactions completed, 11 have been wound-down, with full payment to external investors.

Securitization initiatives completed in 2018 consist of one transaction from the Finnish portfolio, which was issued in the public ABS markets. In addition, the warehouse in Sweden was extended for eighteen months.

The securitization programs have not, and will not, affect the Bank's front or back systems in any significant way. Other than additional information extracted for management and reporting purposes, all systems remain the same.

[5] In 2018, SCF HQ utilized the transfer of credit risk with the sale of the subordinated tranches in the seventh Finnish securitization transaction to reduce their risk-weighted assets, and hence received a capital reduction.

9. Operational risk

Operational risk is defined as *"the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events"*. It includes events that may arise due to legal or regulatory risk, compliance and conduct risk, model risk and IT risk. It does not include events arising due to strategic or reputational risk.

9.1 Operational Risk Developments in 2018

SCB places great significance on its operational risk and going forward, the Bank has identified areas of particular focus to be cyber security, IT related risk and compliance and conduct risk. With this in mind, in 2018 the Bank proceeded with a strategy to ensure such operational risk challenges are met. Amongst other things, the strategy includes:

- Centralization of the Bank's governance structure
- Consolidation of IT systems into an eco-system of unified platform services providing stability and security benefits, enabling a cohesive security architecture.
- Implementation of new outsourcing policy & process providing a structured method for addressing IT risk and cyber security in relation to third party service
- Active hiring of IT and cyber security specialists to ensure the Bank possesses sufficient knowledge and expertise
- Increased reporting and governance of IT and cyber security risk indicators to be on a monthly basis
- Introduction of a cyber-security framework

9.2 Management of Operational Risk

To ensure that the Bank operates within the BoD approved risk appetite, an operational loss risk appetite is set at least annually which requires BoD approval. The main risk appetite metric is "Operational risk losses" / "Gross margin". Ongoing BoD meetings monitors the data related to operational loss risk appetite.

- **Risk Appetite:**
    - The limit of the operational risk losses is set to 2.5% of gross margin. This corresponds to a medium-low operational risk profile based on the Bank's risk appetite methodology. The risk appetite alert level is 1.8% and is considered the Management Limit.
- **Operational loss budget:**
    - Each of the four Nordic SCB units, define their respective operational risk loss budgets. For this process, the Bank uses the seven Basel categories of operating losses. The non-financial risk committee approves the budget.

On a monthly basis, the budget is monitored, reconciled and reported to SCB and its local committees. Specific general ledger operational risk accounts, both at local and corporate level, has been set for this purpose.

9.3 Operational Risk Framework

SCB's operational risk framework is based on the Banco Santander governance and framework for Operational Risk. One of the objectives with this framework is to ensure that the Bank is operating within the given risk appetite limits. To be able to monitor and manage the risk appetite limits, all relevant operational risk elements need to be detected, reported, monitored and managed. Therefore, the SCB operational risk model consists of six interlinked main processes.

All of the six processes use the Santander Corporate system called Heracles, a holistic operational risk and internal control governance system, which uses standardised processes and taxonomies. This methodology and system

ensure a high standard of the management of operational risk and internal control processes and a consistent report of data across all SCB units.

Internal control processes consists of the following:

- **Event loss reporting process** – process includes the identification, consolidation, aggregation, calculation, development of mitigation plans/activities and the reporting of events that has occurred, or might potentially occur. In order to assure that all business units are covered by the operational risk reporting process, and that the procedures are followed, a number of 1st Line of Defence operational risk coordinators have been appointed. They safeguard the operational risk loss processes and act as a promotor for operational risk processes within the Bank.

- **Risk and Control Self-Assessment (RCSA) process** – yearly risk assessment identifying and evaluating potential risks and controls to prevent risks of materializing in a proactive manner. Potential risks are also managed continuously during the year within the event loss reporting process. In addition to the RCSA process, various thematic risk assessments, such as IT risks assessment and Conduct risks assessment, are performed on an annual basis. The RCSA process covers all Basel categories and both risk owners and control owners take part in the assessment.

- **Control management** – controls will constantly be a part of 'business as usual' within all processes. Controls will be reviewed and assessed at least once a year. The corporate tool Heracles ties together the operational risks and assessments with their respective controls in a holistic risk vs control environment. In this way, potential gaps can be found and remediated.

- **Metrics** – use of different metrics, or key risk indicators, is an important tool for detecting and remediating potential risks before they are materialized. SCB rolled out a set of metrics during 2018 and aims to continue implementing a number of metrics in 2019 based on corporate methodology and adapted to local conditions and needs, which will be monitored in the corporate tool Heracles.

- **Business Continuity Management (BCM)** – in the BCM program, plans are defined to recover a system or a process exposed to a major event or a disaster in a quick manner. In the potential event of an activation of a BCM plan, the event will also be a part of the event loss management and reporting process.

- **Reporting** - Operational risk reporting is reported in the corporate tool Heracles and managed in various risk committees depending on the type or severity of the potential or materialized event or assessment.

In addition to the six main processes presented above, the following processes are important to acknowledge within the SCB operational risk management:

- **Santander Cyber Security Program –** program is aligned with business and stakeholder needs and is intended to assess, detect, prevent, and mitigate serious IT related security threats. The program is governed by the Security Organization and IT department and monitored by the 2 LoD in the non-financial risk area.

- **Fraud management –** internal and external fraud events are within the operational risk scope and thus there are policies and procedures governed by the risk area. The objective is to control and minimize the losses related to fraud events. Fraud is also governed by the Non-Financial risk area to assure that fraud events are detected, reported and managed in a consistent and proficient way across the countries.

- **Risk culture and awareness –** since it is important that all employees acknowledge the importance of the operational risk framework, and that the operational risk mindset is incorporated in the daily business activities, Santander Corporate have initialized the Risk Pro concept. The objective of the concept is to incorporate the "Risk DNA" in all employees. The risk pro concept includes a senior management promotion of risk thinking. Various operational risk awareness trainings are performed with employees.

- **Compliance and reputational risks –** within the operational risk scope also compliance and reputational risks are considered. The management of these risks, from the operational risk perspective, share and/or

follow the methodology of the general operational risk management processes. These processes include the loss event process, key risk indicators, annual risk assessments, awareness, and the reporting process.

To ensure that the IT operational risks are covered within the operational risk scope, the IT area is involved in all of the main operational risk processes described above. Appointed operational risk coordinators represent the IT department and report IT related operational risk events to the local operational risk leader. The appointed IT operational risk coordinator also participates in the frequent local operational risk forums. Potential losses from IT operational risk events are being managed within the event operational risk reporting process and specific general ledger accounts are in use for reporting purposes.

One of the Bank's core focus areas for 2019 is the Cyber Security program and IT related risk indicators.

9.4 Operational Risk Governance

Based upon SCB Corporate guidelines, the Bank has adapted and established a Nordic operational risk framework, model and appropriate policies and procedures, which describes the operational risk management.

The operational risk management of SCB's follows three lines of defence structure. 1 LoD are business units as owners of risks, 2 LoD are specialized risk and compliance teams that oversee and monitor risks, 3 LoD is Internal Audit. Each country has full time operational risk leaders within risk department, working as 2 LoD. The operational risk leaders have appointed approximately ten operational risk coordinators (1 LoD) who are responsible for many operational risk processes, such as annual risk assessment process or the event reporting process.

The governance includes several risk committees that operates with the objective to assure that the senior management team, including the Board, are updated on relevant operational risks and ongoing activities.

9.5 IT & Cyber Security Risk

The landscape is constantly shifting for financial services companies and throughout 2017 and 2018, the Bank has noted an increase in the number of cyber-attacks that directly target financial organizations. This is combined with an increase in cyber terrorism to generate a complex and challenging landscape. In parallel, SCB sees new laws and regulations being introduced that maintain a focus on compliance and protecting against known directed threats.

In order to ensure that such challenges are met, the Bank has proceeded with a strategy that encompasses:

- Consolidation of IT systems into an eco-system of unified platform services providing stability and security benefits, enabling a cohesive security architecture.
- Implementation of new outsourcing policy & process providing a structured method for addressing IT risk and cyber security in relation to third party service
- Active hiring of IT and cyber security specialists to ensure the Bank possesses sufficient knowledge and expertise
- Increased reporting and governance of IT and cyber security risk indicators to be on a monthly basis
- Introduction of a cyber-security framework

9.6 Model Risk

SCB uses models to support decision making, financial and regulatory reporting, and to provide predictive information in a number of business functions, such as credit risk management, market risk management, capital estimation and stress testing, and asset/liability management, among others.

The use of models entails exposure to model risk, which is defined as the potential for adverse consequences from decisions based on incorrect, inadequate or misused model outputs and reports, including the opportunity cost of

lacking adequate models. Thus model development, implementation and use can all be potential sources of model risk. Model risk can ultimately lead to financial loss, poor business or strategic decision-making, or damage to SCB's reputation.

The program at SCB includes robust corporate governance around model risk management, involving all relevant stakeholders including Senior Management, comprehensive review mechanisms and a complete and continuously updated model inventory. To support this process, Santander Consumer Finance (SCF) has defined clear frameworks, policies and guidelines for establishing common general principles for the management and control of model risk, which are adopted by SCB and adhered to by the Board of Directors.

9.6.1 Model Validation

Independent internal validation of models before implementation is not only a regulatory requirement in certain cases, but also a key feature for proper management and control of Model Risk. Thus at SCF level, a specialist unit, completely independent of both developers and users, draws up a technical opinion of the suitability of internal models to their purposes, and sets out conclusions concerning their robustness, utility and effectiveness.

After each model has been validated, the validation opinion is converted into a score on a scale of 1 to 5, where 1 is low model risk, 2 is moderate low, 3 is moderate, 4 is moderate high and 5 is high.

In addition to the score, the internal validation function provide recommendations, categorized by relevance, in case the model needs improvements, which are followed up on a regular basis by the model risk function and model owners. When in use, the models are subject to recurrent validation to review their use suitability with frequency and depth varying based on model type and taking into account regulatory requirements.

As per December 2018, the Bank had 126 models in force. The majority of these models in the inventory are classified as high quality based on the Internal Validation team's model score. Model re-development and re-calibration plans ensure that they are under continuous improvement and maintenance under a well-defined methodology and model risk management framework.

9.7 Compliance and Conduct Risk

SCB divide compliance risk into three risk categories:

1. Regulatory compliance risk – the risk of the Bank's non-compliance with rules or supervisory expectations resulting in legal or regulatory penalties.

2. Conduct risk – the risk of actions of individuals or the Bank as a whole that lead to bad outcomes for customers or the markets in which the Bank operates.

3. Reputational risk – the risk of damage to the way the Bank is perceived by public opinion, its clients, investors, or any other interested party.

The Compliance & Conduct (C&C) function consists of compliance professionals in the operations across the Nordics, overseen by the Chief Compliance Officer (CCO), who has a functional reporting line to the Chief Compliance Officer at Santander Consumer Finance S.A. To ensure the independence of the C&C function, the Chief Compliance Officer (CCO) has direct access to the Board and Board Risk Committee. As of June 1, 2018, the CCO is part of the Senior Management Team and reports directly to the Chief Executive Officer. The local Compliance Directors reports to the CCO (except for SCF OY – where local Compliance Director reports to Managing Director and has functional reporting line to the CCO). As of May 25, 2018, the local Compliance Directors' roles were extended to include the roles as Data Protection Officers.

The C&C function promotes adherence to rules, supervisory requirements, principles of good conduct and values by acting as a second line of defence – establishing standards, challenging, advising and reporting – in the interest of employees, customers, shareholders and the wider community. The C&C function covers all matters related to regulatory compliance, product governance and customer protection, anti-money laundering and terrorism financing, reputational risks, as well as any others the Group could place at compliance risk.

The C&C function, as the second line of defence for regulatory compliance, product governance, customer protection, money laundering, terrorism financing and reputational risks, provides independent challenge and oversight of the risk management activities performed by the first line of defence. The C&C function ensures that risks under its responsibility are managed in accordance with the risk appetite defined by senior management and approved by the Board. The Bank is yearly assessing its risks, applying the risk assessment methodology of Banco Santander. The objective is to assess risks within core activity lines, in banking activities where customer relations need to be managed, and excludes therefore risks within Tax, Financial Accounting, HR, and similar non-core compliance areas. The mandatory risk assessments facilitates a homogenous approach to assess, report and escalate compliance risks to local and corporate management, as well as providing an effective supervision of risk management throughout the Bank.

The regulatory compliance risk assessment ensures that inherent risk is assessed based on its probability and impact and measures the risk mitigating effect of the preventative and detective controls in place. In addition, there are annual thematic risk assessments, such as the AML risk assessment and the conduct risk assessment. The conduct risk assessment is performed through questionnaires, where customers, product and business practices are assessed, and becomes part of the annual RCSA process.

The C&C function reports on a regular basis, its findings and recommendations to the management and the CEO in management committees, on both local and Nordic level, as well as to the Board Risk Committee and the Board of Directors.

External regulations and legislation are changing rapidly and becoming increasingly complex. This, combined with the pace of innovation in the financial services industry, makes it extremely demanding for banks to keep track of, implement and ensure compliance with new legislation. Banks need to use a structured, risk-based approach which ensures effective management and handling. Clear roles, extensive expertise and a strong culture of compliance are the central elements of the Bank's compliance management. The "One Bank" initiative, aiming to improve and centralize the IT structure, governance processes and the organizational set-up of the Bank, is an important measure to meet these challenges.

9.8 Capital Requirements for Operational Risk

SCB applies the Basic Indicator Approach ("BIA") for calculating its capital requirement for operational risk. Under the BIA, the RWAs for operational risk are calculated as a percentage (alpha) of the three-year average gross income amount multiplied by 12.5. This alpha is given by article 315 (1) of the CRR and is currently 15%. The table below details the Bank's BIA calculation for 2018.

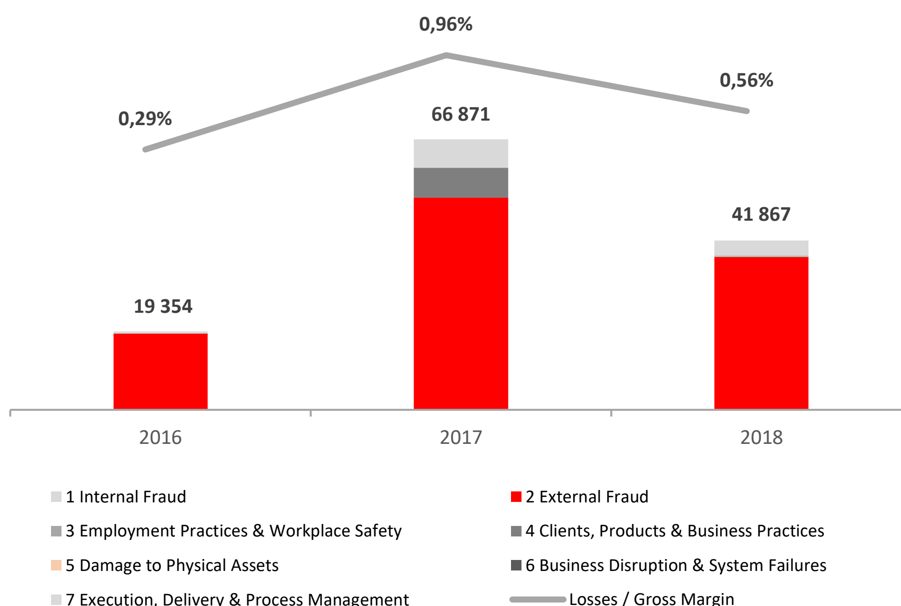
Figure 9.8.1 SCB Application of Basel Indicator Approach (NOK million)

Basic Indicator Approach	2016	2017	2018
SCB Gross Margin	6 697	6 989	7 384
3-year average Gross Margin			7 023
15% BIA Capital Charge			1 053
RWA			**13 168**

9.9 Operational Loss Performance in 2018

As detailed above, for 2018 the Bank held NOK 1 053 million of operational risk capital under Pillar 1 whilst net operational losses amounted to NOK 41.9 million mostly focused in the external fraud category. The chart below identifies SCB's operational losses by category over the three previous financial years.

Figure 9.9.1 Operational losses by Basel category (NOK 000s)



On an overall level, total detected operational risk events were stable versus 2017, the loss amount was well within the Bank's risk appetite and there were no outstanding litigation cases. However, SCB did incur a critical incident relating to AML, which has been escalated to the Norwegian FSA and thoroughly investigated, accordingly.

10. Liquidity Risk

Liquidity Risk is the risk that an entity becomes unable to meet its obligations as they fall due because of an inability to liquidate assets or obtain adequate funding.

Liquidity risk management in the Bank aims to ensure sufficient funds to support daily operations, a balance between weighted average life of the assets and liabilities, diversified funding sources and sufficient amount of liquidity reserves across all four currencies in order to survive a stress scenario.

The key ratios for assessing liquidity risk are the Liquidity Coverage Ratio ("LCR") and the Net Stable Funding Ratio ("NSFR").

- The LCR is established as a metric to measure short-term liquidity risk. This ratio indicates the short-term resilience of the entity's liquidity risk profile, ensuring that there are sufficient high-quality liquid assets to withstand an event of combined systemic and global stress over a period of 30 calendar days. SCB calculates this ratio on an ongoing basis and reports on a monthly basis according to CRD IV. Since September 2017, the Bank is compliant with the specific Norwegian legislations regarding LCR to meet the requirements both at a consolidated level and per significant currency. For the Bank, the significant currencies are NOK, SEK, DKK and EUR. The LCR levels were 134% at a consolidated level, 88% in NOK, 128% in SEK, 219% in DKK and 142% in EUR as of December 31st 2018.

- The NSFR is the long-term funding ratio that compares the structural funding needs to the entity's stable funding sources. This ratio requires banks to maintain a stable funding profile in relation to the composition of their assets and off-balance sheet activities. SCB calculates this ratio on a quarterly basis in accordance with CRD IV. As of December 31st 2018, the Bank's NSFR was 94%.

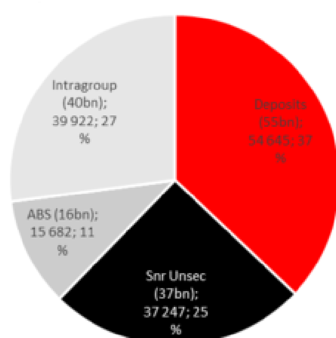
10.1 Diversification of funding sources

SCB's objective is to maintain a well-diversified funding composition and within that, to reduce its reliance on funding from the parent company. As of December 31st 2018, the Bank had a self-funding ratio of 73%[6]. The Bank is raising funds through the following sources:

- Customer deposits in Norway, Sweden and Denmark. The customer deposit products are demand deposits, fixed rate deposits and notification products
- Secured funding in the Nordic countries (Asset Backed Securities)
- Senior Unsecured funding in the local Nordic markets and in international markets
- Intragroup funding from the parent company
- Repo capabilities with Nordic counterparties

The figure below shows the funding composition on a consolidated Nordic level as of December 31st 2018.

Figure 10.1.1 SCB Funding Composition as of December 31st 2018.



Over the last few years, retail deposits have been introduced in Norway, Sweden and Denmark. As of year-end 2018, deposits constituted about 37% of the Bank's funding base.

As of year-end 2018, the Bank has 11% of its funding coming from securitizations. Due to recent legislative changes, SCB is currently only running an active program in the Finnish subsidiary, but is ready to restart the programs in the other countries, once the legislation allows for this.

The Bank is well-established in the Norwegian senior unsecured bond market and has increased issuances under its Euro Medium Term Note program (EMTN). Issuances under this program have, since H2 2016, been issued under SCB's standalone credit ratings from Fitch (A-) and Moody's (A3). Per year-end 2018, senior unsecured funding constituted about 25% of the Bank's funding, down from 27% in 2017.

SCB has available drawdown facilities from its parent Santander Consumer Finance S.A.. Per year-end 2018, senior funding from parent constituted about 27% of the Bank's funding, up from 23% in 2017. In addition to senior funding, SCB also has subordinated debt and hybrid capital provided by the parent company.

In addition to drawdown facilities from the parent and Banco Santander Group, SCB has committed credit facilities provided by third party banks. This is intended to cover short-term liquidity requirements of an operational nature and to serve as a liquidity buffer.

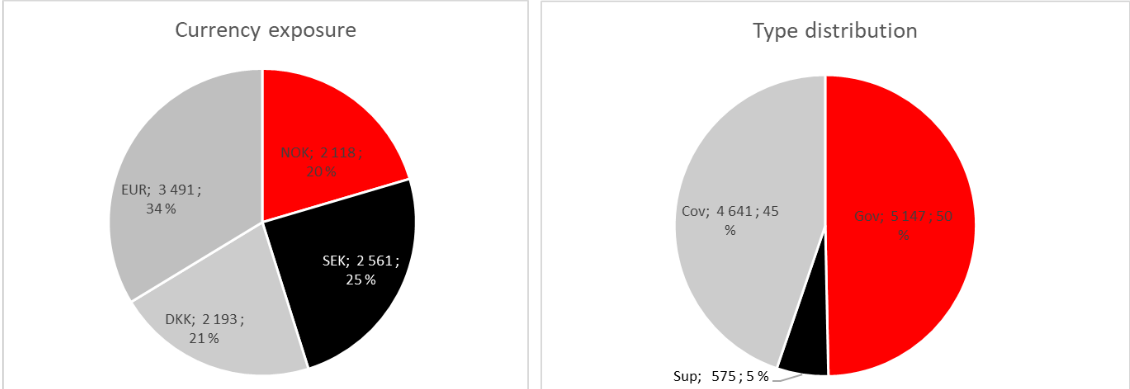
10.2 Liquidity portfolio

The Bank holds a liquid bond portfolio to mitigate liquidity risk. The size of this liquidity portfolio is determined through the Bank's liquidity stress tests as well as regulatory requirements, such as the LCR.

[6] Calculated as a proportion of senior debt, excluding equity and subordinated debt

As of year-end 2018, the liquidity bond portfolio was c. NOK 10.4 billion equivalent, up from c. NOK 7.7 billion equivalent in 2017. The Bank has a conservative mandate for liquidity portfolio investments and only invests in LCR Level 1 securities. The portfolio is invested in Nordic and European government bonds, supranational bonds and AAA/Aaa rated Nordic covered bonds, issued in NOK, SEK, DKK and EUR. Further, SCB only invests in floating rate coupon bonds with a maturity up to 3 years and fixed rate bonds with a maturity up to 1 year. The intention is to hold the bonds in the liquidity portfolio to maturity. The Bank can deposit bonds from the liquidity portfolio in the Norwegian Central Bank to provide intraday liquidity if needed, and is also active in the Repo market in managing the liquidity portfolio in the short term.

Figure 10.2.1 Overview of the HQLA allocations in NOK as of December 2018



10.3 Asset Encumbrance

The asset encumbrance ratio is calculated and reported on a quarterly basis. As of December 2018, the main source of asset encumbrance in the Bank are auto Asset Backed Securities (ABS) issued and retained or placed in the market. In addition, the Bank has pledged reserve fund amounts in the Special Purpose Vehicles (SPV) of the respective ABS transactions, which together with customer payments, amounted to NOK 850 million at year-end.

In addition, the Bank held at year-end one reverse repo of SEK 96 million, but it is not considered structurally encumbered and is not included in the calculation. No new ABS transactions have been issued in Sweden, Denmark or Norway since 2015, with only SCF Oy issuing Finnish ABS transactions annually. This has led to a decline in the encumbrance ratio, which is expected to remain well below the management limit of 35% going forward.

Figure 10.3.1 SCB Asset Encumbrance Ratio as at 31 December 2018

Total Encumbered assets	18 959 290
Loans on demand	*846 483*
Retained asset-backed securities issued	*2 813 007*
Sold asset-backed securities issued	*15 299 800*
Total Non-encumbered assets	128 440 285
Loans on demand	*435 271*
Debt securities	*10 363 740*
Loans and advances other than loans on demand	*107 510 712*
Other assets	*10 130 561*
Asset Encumbrance Ratio	**12,86 %**

10.4 Liquidity Management and Governance

The Risk Appetite framework defines the Bank's risk appetite limits for liquidity risk. The currently approved risk appetite limits for liquidity risk in SCB address NSFR, LCR and Liquidity Survival Horizon (form of stress scenario).

All three metrics are considered primary metrics in the risk appetite and any risk excess must be communicated to the BoD. The metrics are reported to the BoD in every meeting, at least on a quarterly basis and are monitored by the Board Risk Committee and the Risk Control Committee.

SCB also has a set of management limits on additional liquidity risk metrics including, amongst others, asset encumbrance, intraday liquidity limits and intragroup limits. The management limits must be reviewed annually, and must be approved by the Risk Approval Committee. The management limit metrics covered in the risk appetite statement must also be approved by the BoD, as detailed in the SCB governance structure.

The limits are managed by the Financial Management department, and controlled by the Market Risk department on a monthly basis, and some on a daily basis. Any breach of any management limits are reported to the relevant controlling committees in SCB.

10.5 Liquidity Stress Tests

SCB maintains a Liquidity Stress Test model, which is run on a monthly basis. The liquidity stress test of the Bank complies with regulatory requirements and is used both as a tool for measuring liquidity risk and for managing funding and liquid assets.

The liquidity stress test results are presented to Senior Management on a quarterly basis and to the BoD on a semi-annual basis. The objective of the liquidity stress test is to ensure that the Bank has sufficient liquidity to survive a given period under defined stress scenarios. The stress test is used as part of the liquidity risk management of the Bank.