Pillar 3 Risk Disclosures

Arion Bank 2018

Disclaimer

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Declaration

The Board of Directors is responsible for the Bank's risk management framework and ensuring that satisfactory risk policies and governance for controlling the Bank's risk exposure are implemented. The Board reviews on a regular basis the status of risk management issues to assess the management and monitoring of the Bank's risks.

It is the Board's assessment that the Bank has in place adequate risk management arrangements with regard to the Bank's risk profile and risk policy.

Risk Statement

Arion Bank is a strongly capitalized bank which provides universal banking services to corporations and individuals with the aim of creating future value for customers, shareholders, partners and society as a whole. The Bank places focus on customers who require diverse financial services, positive customer experience and long-term customer relationships.

The Bank's business strategy is aligned with its risk appetite as set by the Board. The business strategy is associated with the Bank's risk profile by ensuring that the Bank's business plan does not violate the risk appetite. The risk appetite is cascaded down to risk limits and targets.

Credit risk is one of the Bank's primary risk factors. The Bank's credit policy forms the basis for its credit strategy as integrated in the business plan. Credit risk is managed in line with the credit risk appetite metrics, which includes credit concentration and credit quality measurements. At the end of 2018, the Bank's largest exposure was 8.8% of eligible capital and 12 month expected credit loss rate was 25bps.

The Bank invests its own capital on a limited and carefully selected basis in transactions, underwriting and other activities that involve market risk. Market risk is managed in accordance with the risk appetite, by maximum equity position and losses, and the risk limit framework. Total equity exposure was 11.6% of total own funds at the end of 2018, thereof 7.6% was due to unlisted equity.

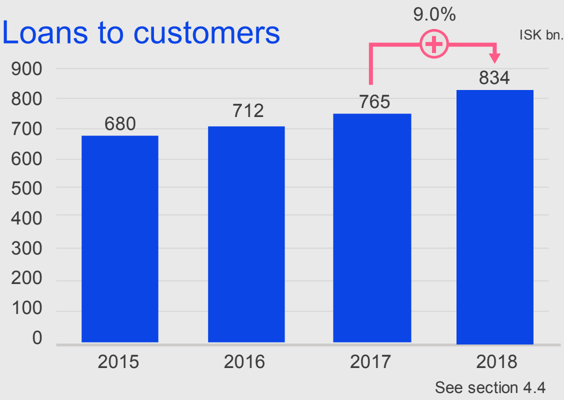
Liquidity risk is a key risk factor to the Bank. The Bank follows a conservative approach to liquidity exposure, liquidity pricing and funding requirement. The Bank's funding profile supports its liquidity profile. Liquidity positions are managed on a day-to-day basis by internal limits and targets in line with the risk appetite and regulatory standards. The Bank's liquidity coverage ratio was 153% at the end of 2018, while the regulatory requirement was 100%.

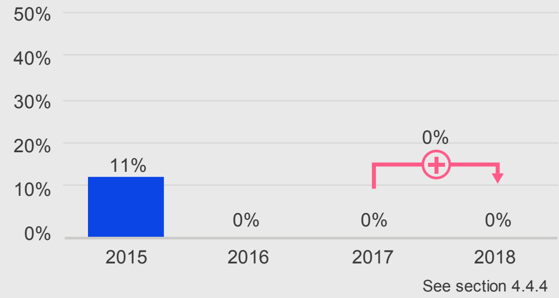
The Bank's business units are primarily responsible for managing their own operational risk, including reputation risk, with support from control functions. The Bank's operational risk framework integrates risk management practices into processes, systems and culture. The risk appetite contains a statement of non-tolerance policy for internal fraud and elimination of incidents and mistakes.

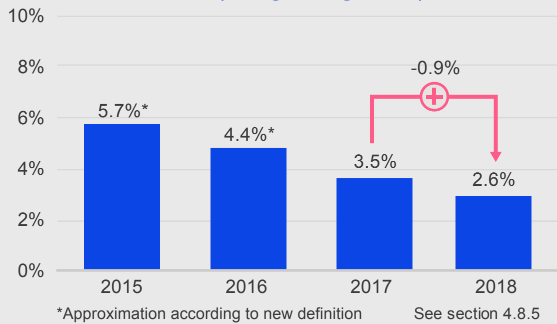
The Bank is well capitalized with capital adequacy ratio of 22.0%, and CET1 ratio of 21.2% at the end of 2018 exceeding both the regulatory requirements and risk appetite.

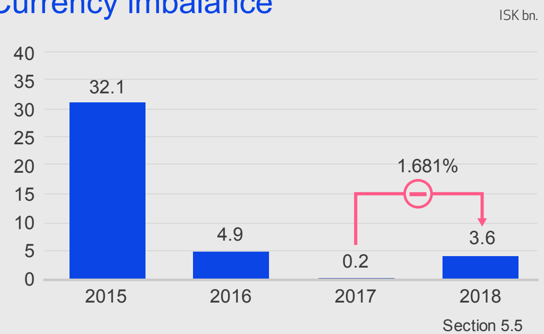
The Board of Directors of Arion Bank

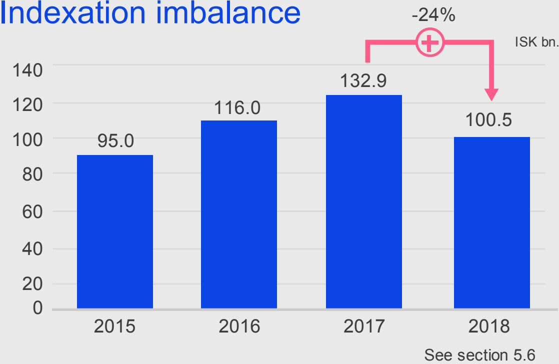
Risk Metrics Overview

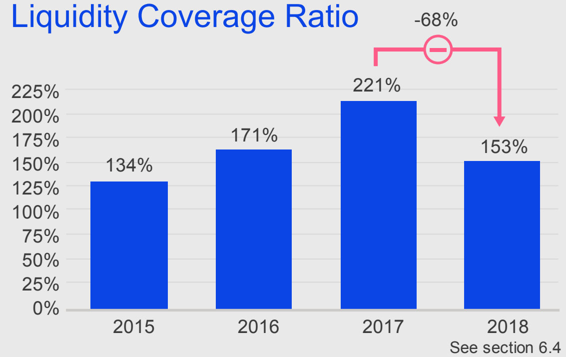


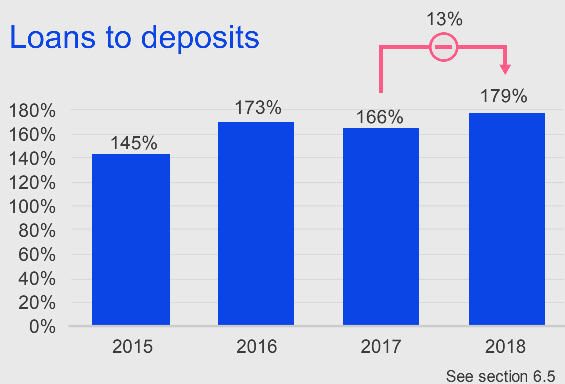


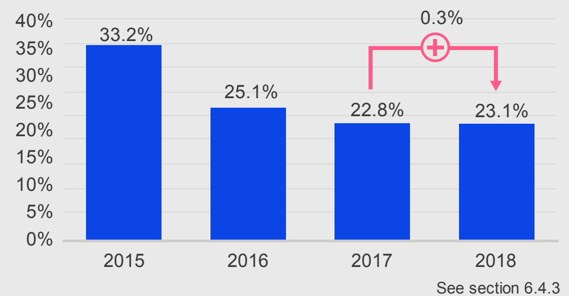


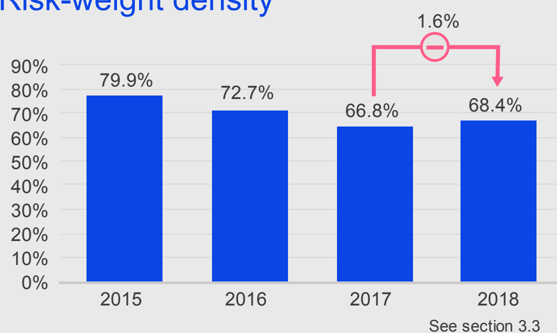


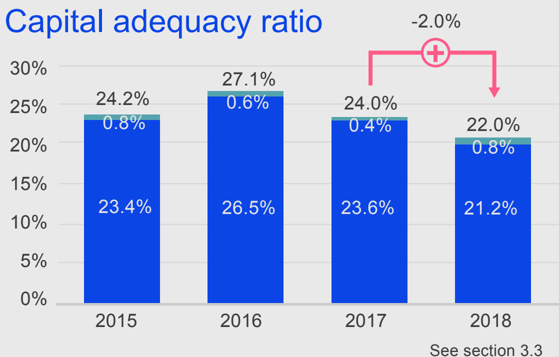












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1 Introduction

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1 Introduction

The Pillar 3 Risk Disclosures comprise information on capital and risk management at Arion Bank. The purpose of the disclosures is to meet regulatory requirements and to inform readers about Arion Bank's risk profile and risk management. The disclosures contain information on the governance of risk, capital structure and capital adequacy, and risk management with respect to each type of risk. Information on new and upcoming legislation as well as information on remuneration policy is included in the disclosures.

1.1 Arion Bank at a Glance

Arion Bank ('the Bank') is an universal relationship bank operating in the Icelandic financial market. The Bank is listed on Nasdaq Iceland and Nasdaq Stockholm since June 2018. The Bank is classified as a domestic systematically important bank (D-SIB) by the FME.

The Bank, whose roots date back to 1930, is built on a strong heritage and infrastructure. Arion Bank is a strongly capitalized bank which provides universal banking services to corporations and individuals with the aim of creating future value for customers, shareholders, partners and society as a whole. The Bank operates a number of branches across Iceland with a focus on the Capital Area. In addition, the Bank operates a customer service centre, and offers online and mobile banking, which provides a wide range of self-service options.

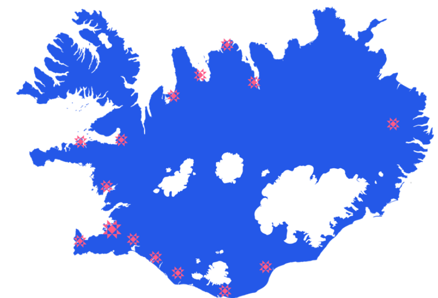
Arion Bank's focus is on customers who require diverse financial services, positive customer experience and long-term relationships by providing outstanding service through diverse channels. The Bank aims to have a leading position in terms of innovation, efficiency and security in financial services, with high focus on digital services.

Arion Bank has taken important funding and market initiatives in recent years, see section 6.5.

The Bank consists of the following operating segments: Asset Management, Corporate Banking, Investment Banking, Retail Banking, Treasury, and Other divisions. Furthermore, the Bank owns strategic subsidiaries which are important for its service offerings. At year end 2018 the number of full-time equivalent (FTEs) positions at Arion Bank was 794 with an additional 110 FTEs in the subsidiaries.

The Bank's Annual Report 2018 provides further information about the Bank, such as strategy and vision, and corporate governance.

Figure 1.1 Arion Bank's branch network



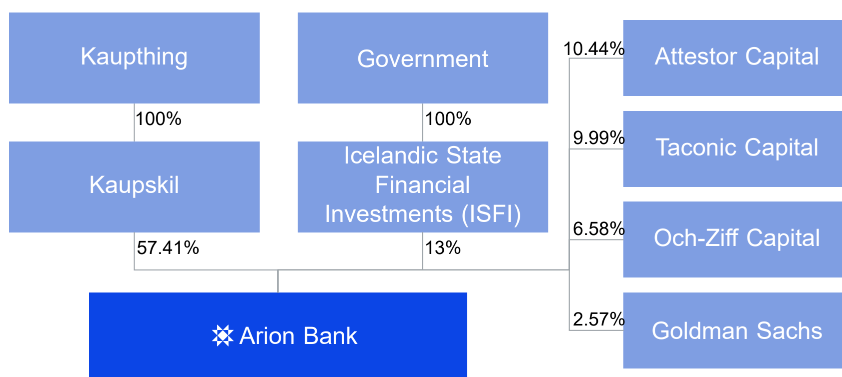
1.2 Major Changes in 2018

Several developments influenced Arion Bank's risk profile in 2018. Highlights include:

Changes in Ownership

At year end 2017 the ownership of Arion Bank was as follows and as shown in Figure 1.2.: Kaupthing ehf., through its subsidiary Kaupskil ehf., held 57.41% of the shares, Kaupskil ehf. also held the voting rights for the 9.99% shareholding of Taconic Capital Advisors UK LLP through TCA New Sidecar III S.A.R.L. and 6.58% shareholding of Sculptor Investments S.A.R.L., an affiliated entity of Och-Ziff Capital Management Group. The remaining shareholding was held by the Icelandic State Financial Investments which held 13.00% on behalf of the Icelandic government, Attestor Capital LLP through Trinity Investment Designated Activity Company held 10.44% and Goldman Sachs International through ELQ Investors II Ltd. held 2.57%.

Figure 1.2 Ownership structure at year-end 2017



On 14 February 2018 Arion Bank and Kaupthing ehf. further announced an additional private placement sale of a 5.34% share of Arion Bank to a number of funds managed by four Icelandic fund management companies (2.54%) and two existing owners, Trinity Investments (Attestor Capital LLP) and Goldman Sachs (2.8%).

On 15 February 2018, Icelandic State Financial Investments (ISFI) announced receiving a notification that Kaupskil ehf. wished to exercise its call option over the ISFI's 13% share in Arion Bank hf. in accordance with a shareholder's agreement, dated 3 September 2009, between Arion Bank hf., Kaupskil ehf. and the Icelandic Ministry of Finance.

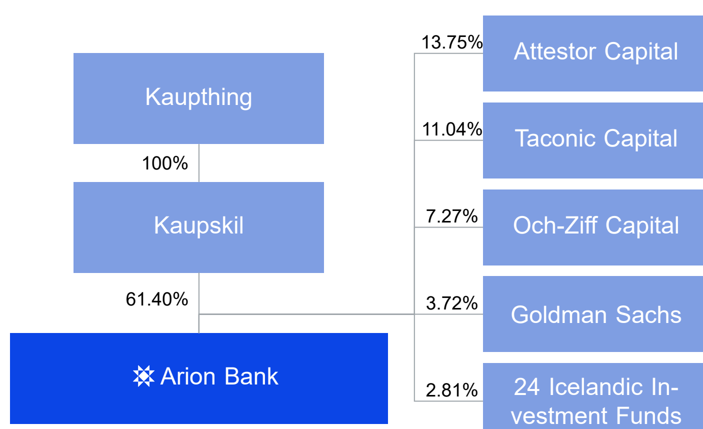
On 15 February 2018, Arion Bank announced that it has agreed to buy back a 9.5% share in the Bank from Kaupskil ehf., conditional upon final settlement between Kaupskil and the Icelandic government concerning Kaupskil's exercise of the aforementioned call option.

On 23 February 2018, the Icelandic Minstry of Finance and Economic Affairs announced the sale of the ISFI's 13% share in the Bank to Kaupskil ehf., in accordance with Kaupskil's exercise of the aforementioned call option.

On 23 February 2018, the Icelandic Minstry of Finance and Economic Affairs announced the sale of the ISFI's 13% share in the Bank to Kaupskil ehf.

Figure 1.3 shows the updated ownership structure at the end of February 2018, taking into account that Arion Bank holds 9.5% of its own shares.

Figure 1.3 Ownership of outstanding shares at end February 2018



Initial Public Offering and Dual Listing in Iceland and Sweden

In spring 2018 the Bank and Kaupthing announced the intention to launch an initial public offering to international investors with a subsequent listing of its shares on Nasdaq Iceland and Swedish Depository Receipts (“SDRs”) representing its shares on Nasdaq Stockholm.

A 28.7% share of the Bank was sold, primarily from the share holdings of Kaupthing but also from the share holdings of Attestor Capital. The IPO was successful with a manyfold oversubscription. Approximately 70% of the shares sold went to investors from Scandinavia, Great Britain, continental Europe and the United States.

On 15 June, trading of Arion Bank shares commenced in the stock exchanges of Nasdaq Iceland and Nasdaq Stockholm – the largest ever listing on the Icelandic stock exchange, the first listing of a bank on the main list of the exchange in 10 years and the first dual listing on Nasdaq Nordic during the same period. The Bank‘s market capitalization at the start of trading was ISK 135 billion.

On 15 June, trading of Arion Bank shares commenced in the stock exchanges of Nasdaq Iceland and Nasdaq Stockholm

Table 1.1 Shareholders of Arion Bank on 31 December 2018

Shareholders of Arion Bank	31 December 2018
Kaupskil ehf. (subsidiary of Kaupthing hf.)	32.67%
Taconic Capital (through TCA New Sidecar s.á.r.l.)	9.99%
Arion banki hf.	**9.31%**
Attestor Capital	7.35%
Och Ziff Capital management	6.58%
Goldman Sachs funds	3.47%
Eaton Vance funds	3.35%
Lansdowne funds	2.95%
Gildi pension fund	2.52%
Miton Asset Management funds	1.37%
MainFirst Bank AG	1.00%
Other shareholders with less than 1% shareholding	19.44%
Issued share capital	**100.00%**

► Introduction

Capital and Dividends

While the Bank's capital ratio remains strong and well above the requirements made by regulators, the long-term strategy is to reduce excess capital and optimize its capital structure with capital instruments other than Common Equity Tier 1 capital.

On 12 February 2018 a shareholders' meeting of Arion Bank approved a proposal to pay shareholders in the Bank ISK 25 billion in dividends, minus the aforementioned 9.5% share buyback, amounting to ISK 17.1 billion, for a net dividend payment of ISK 7.9 billion. On 5 September 2018 the Bank further announced that a proposal of the Board of Directors that a dividend of ISK 10 billion be paid to shareholders had been approved.

The net reduction of excess capital resulting from this ISK 35 billion dividend and share buyback on own funds, after adjusting for the Bank's 9.5% ownership of own shares was ISK 33.3 billion.

The net reduction of excess capital in 2018 was ISK 33.3 billion.

In November 2018 Arion Bank announced that it had concluded an inaugural Tier 2 issuance totaling 500 million Swedish krona. The bonds have a 10NC5 structure which is callable in November 2023 with final maturity in November 2028. The bonds were priced at a spread of STIBOR +310. The Tier 2 bonds are eligible as Tier 2 capital under the Icelandic Financial Undertakings Act No. 161/2002. The Tier 2 bond issue strengthens the Bank's own funds and is a milestone towards reaching a more optimal capital structure.

On 13 February 2019 the Board of Directors agreed to propose a dividend to shareholders of ISK 10 billion, corresponding, to 140.5% of retained earnings for 2018.

Changes in the Group Structure

On 15 November Arion Bank announced that it had engaged Citigroup Global Markets Limited (Citi) to advise on a potential change of ownership in Arion Bank's subsidiary Valitor Holding hf. (Valitor), which could include the divestment of all the shares or the majority of the shares in Valitor. A further announcement is expected during 2019. At year-end 2018, the Bank classified Valitor as *disposal group held for sale* in accordance with IFRS 5.

Arion Bank engaged Citi to advise on a potential change of ownership in Valitor

United Silicon Bankruptcy

On 22 January 2018 United Silicon, a silicon metal factory under development in Helguvík, Iceland, a borrower of Arion Bank, was declared bankrupt following serious operational problems which resulted in its operating license being temporarily suspended, as well as a failed attempt at reaching a composition with its creditors. The company had been under a moratorium on payments since 14 August 2017. In Arion Bank's 9M 2017 financial statement, impairments of ISK 4.8 billion were recognized in respect of loans, receivables and other assets relating to United Silicon, including all of the Bank's shareholding in the company.

The company's bankruptcy had been anticipated for some time and this eventuality was provided for in the impairments recognized in the Bank's 9M financial results presented in November 2017. The bankruptcy of the company did therefore not result in further impairments at Arion Bank.

In February 2018 an agreement was reached between the administrator of the bankrupt estate of United Silicon and Arion Bank, whereby the Bank foreclosed against its collateral and acquired

all the company's main assets. Disputes with other creditors regarding the validity of the collateral and assurances provided by the Bank in relation thereto are disclosed in Note 37 in the Consolidated Financial Statements for 2018.

The assets of the silicon plant are currently managed by Stakksberg ehf., which is held by the Bank through the subsidiary Eignabjarg ehf. Stakksberg ehf. has, since the transfer of the assets from United Silicon, successfully worked to reduce uncertainties surrounding the recommissioning of the silicon plant, amongst other things by securing all necessary operating permits, power supply and undertaking further engineering design groundwork necessary for the carrying out of remedial work prior to the reopening of the plant. Stakksberg ehf. is currently engaged in concluding a new environmental impact assessment for the plant which is currently well under way, as well as preparations for changes to local planning, which will be carried out in cooperation with Reykjanesbær community in due course. The outcome of the latter is uncertain at this point.

The Bank's objective is to divest Stakksberg ehf. on the basis of this preparatory work. Consequently Stakksberg ehf. is classified as *disposal group held for sale* in accordance with IFRS 5.

Tourism

Over the past 10 years, tourism has grown to become Iceland's largest export industry and has been the key to Iceland's recovery from the economic crisis of 2008. During the period, the number of tourists visiting Iceland annually have grown from less than half a million to nearly 2.5 million, see Figure **??**. Over the past three years, approximately one quarter of commercial investment has been attributed to tourism related activities. Recently, the annual growth in the number of tourists has slowed giving rise to concerns that overinvestments have been made in the industry.

The domestic airline industry has had a symbiotic relationship with the rest of the tourism industry, with an average annual increase in the number of passenger of approximately 24% since 2012, see Figure **??**. Nevertheless, the domestic airlines experienced operational difficulties in 2018 similar to those plaguing many of the world's low-cost airlines. On 2 October 2018 Arion Bank issued a profit warning associated with the bankruptcy of Primera Air, a small carrier with ties to Iceland. The two major Icelandic carriers, Icelandair and WOW Air disclosed operational losses in 2018.

The slow-down in growth of tourism is expected to continue in 2019, possibly exacerbated by the operational difficulties of the domestic carriers. For a discussion about the Bank's exposure to Tourism, see section 4.4.1.

The Bank Recovery and Resolution Directive (BRRD)

The European Bank Recovery and Resolution Directive (BRRD, Directive 2014/59/EU) lays out a comprehensive set of measures which ensures that banks and authorities make adequate preparation for crises. Adoption of the BRRD into Icelandic law has been divided into two phases. The first phase addressing primarily recovery planning, early intervention and intra-group financial support was enacted in Iceland on 6 June 2018 as Act No. 54/2018 amending the Financial Undertakings Act. The second phase addressing primarily the definition of the resolution author-

Figure 1.4 Tourists arriving in Iceland [in millions]

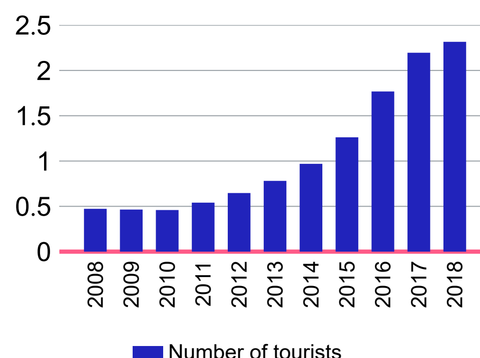
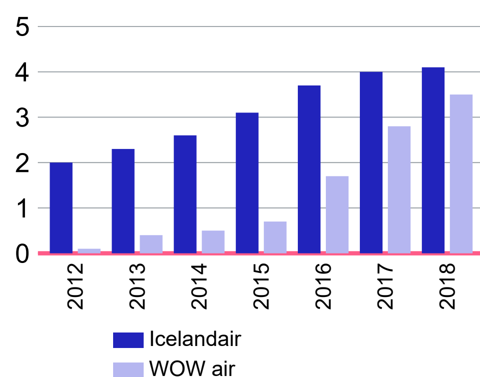


Figure 1.5 Number of passengers from Icelandair and WOW air [in millions]



The slow-down in growth of tourism is expected to continue in 2019

ity, resolution financing arrangements, minimum requirement for own funds and eligible liabilities (MREL) will likely be enacted in 2019.

During 2018 the Bank developed its initial Recovery Plan which met the BRRD standards and requirements. The Recovery Plan was submitted to the FME in December 2018.

In December 2018 the Bank submitted its BRRD Recovery Plan to the FME

The Lifting of Capital Controls

At the end of 2008, the Icelandic economy became subject to capital controls on almost all monetary transactions to and from Iceland, which entailed a low level of investment and limited access to funding. Since then, Iceland has taken gradual steps toward easing of the capital controls leading ultimately to their removal in March 2017. Among those steps was the introduction of special reserve requirements for new foreign currency inflows, introduced in June 2016 with rules No. 490/2016. The rules provide the Central Bank of Iceland with a new policy instrument, commonly referred to as a capital flow management measure, aimed at curtailing carry trade, tempering capital inflows to the country and affecting the composition of such inflows. The stated goal of the measure is to support domestic economic policy and contributing to macroeconomic and financial stability.

On 2 November 2018 the Central Bank lowered the special reserve requirement of new foreign currency inflows from 40% to 20%, taking an additional, important step toward fully opening the Icelandic economy to foreign investors.

In November 2018 the special reserve requirement of new foreign currency inflows was lowered from 40% to 20%

International Credit Rating – Investment Grade

On 21 February 2018, Standard & Poor's announced that it had elevated Iceland to BICRA group 4 from BICRA group 5, where BICRA denotes the agency's Banking Industry Country Risk Assessment.

In July 2018 Standard & Poor's confirmed Arion Bank's long term credit rating BBB+ with a stable outlook. The Bank's short term credit rating remains A-2.

Standard & Poor's expressed its opinion that the Icelandic banking market remains stable as the economy continues to grow and signs of overheating are receding. In their view the role of pension funds in mortgage lending continues to distort Icelandic banks' competitive environment in terms of business generation and margins.

S&P confirmed its long term rating of Arion Bank of BBB+ with a stable outlook

1.3 Regulatory Framework

Capital and risk management disclosure requirements for financial institutions are stipulated in the Basel framework. The framework is an international accord on capital requirements and is intended to strengthen measurement and monitoring of financial institutions' capital by adopting a more risk sensitive approach to capital management.

The Basel framework encompasses three complementary pillars:

- Pillar 1 - capital adequacy requirements
- Pillar 2 - supervisory review
- Pillar 3 - market discipline

Under Pillar 3, capital adequacy must be reported through pub-

lic disclosures that are designed to provide transparent information on capital structure, risk exposures, and the risk assessment process.

In 2013 the EU Council adopted the CRD IV/CRR framework, which consists of the Capital Requirements Directive (CRD IV: Directive 2013/36/EU) and the Capital Requirements Regulation (CRR: Regulation No. 575/2013), and represents the EU's implementation of the Basel III reforms. Basel III aims to strengthen regulation, supervision and risk management of banks, e.g. with increased level of capital requirements to ensure that banks are sufficiently resilient to withstand losses in times of stress. The framework constitutes the cornerstone of the so-called European Single Rule Book for financial regulation.

Recent years have seen numerous legislative acts passed by Parliament to implement the CRD IV/CRR framework. These acts have mostly brought amendments to the Financial Undertaking Act No. 161/2002.

The Minister of Finance and Economic Affairs adopted the CRR as secondary legislation (Regulation No. 233/2017) in 2017. It should however be noted that some provisions of the CRR are also implemented through the Financial Undertaking Act.

In December 2016 the European Banking Authority (EBA) published a final report on guidelines on disclosure requirements under Part Eight of the CRR. The objective of the guidelines is to provide standardization of disclosures for financial institutions. The guidelines apply from 31 December 2017.

Few remaining issues are yet to be implemented of the CRD IV/CRR framework. They concern e.g. the SME supporting factor (see section 3.6.2), activities of branches of financial undertakings and other financial services operating within the EEA and some issues regarding supervision on consolidated bases, see further in Chapter 10.

Few remaining issues are yet to be implemented of the CRD IV/CRR framework

Arion Bank follows the legislative requirements regarding public disclosure of information concerning capital adequacy and risk management.

1.4 Disclosure Policy

The Bank has in place a formal disclosure and transparency policy, approved by the Board of Directors, addressing the requirements laid down by law for information on risk management and capital. Accordingly, the Bank may omit information if it is not regarded as material. Information is regarded as material in disclosures if its omission or misstatement could change or influence the assessment or economic decisions of a user relying on the information.

In addition, if required information is deemed to be proprietary or confidential, the Bank may decide to exclude it from the Pillar 3 Risk Disclosures. The Bank defines information as proprietary which, if shared, would undermine the Bank's competitive position. Information is regarded as confidential if there are obligations binding the Bank to confidentiality.

1.5 Pillar 3 Risk Disclosures

The purpose of Arion Bank's Pillar 3 Risk Disclosures is to fulfill the aforementioned legal disclosure requirements and provide comprehensive information on the Bank's risk management and capital adequacy. The disclosures are prepared in accordance with legislative requirements regarding public disclosure, including the EBA's guidelines on disclosure requirements. Standardized EBA tables containing quantitative information are available in an excel sheet on the Bank's website.

The disclosures have been reviewed, verified and approved internally in line with the Bank's disclosure policy.

Summarized information on risk management and capital adequacy is presented in the Bank's Annual Report and regulatory capital information and leverage ratio are provided quarterly in the Bank's interim financial reports.

The Pillar 3 Risk Disclosures have been prepared in accordance with regulatory capital adequacy rules and differ from similar information in the Bank's Consolidated Financial Statements for 2018, which are prepared in accordance with International Financial Reporting Standards (IFRS). Therefore information in these disclosures may not be directly comparable with the information in the Financial Statements.

These Pillar 3 Risk Disclosures are in accordance with CRD IV / CRR, unlike the Bank's Financial Statements, which conform to IFRS. Therefore Pillar 3 information may not be directly comparable with that of the Financial Statements

Information in the disclosures refers to the Arion Bank Group, which consists of the parent entity, Arion Bank, and its subsidiaries; together referred to as the 'Bank'. The Bank is subject to consolidated supervision by the FME. The basis of consolidation for financial accounting purposes differ from regulatory capital reporting purposes. The differences in the scopes of consolidation are set out in the EBA table LI3, which is available on the Bank's website.

Where necessary, a distinction is made in the report between the group and parent entity. Parent entity information includes the subsidiary Arion Bank Mortgages Institutional Investor Fund (ABMIIF).

All financial figures, calculations and information in the disclosures are based on 31 December 2018 and presented in ISK millions, unless otherwise stated. Due to rounding, numbers in the disclosures may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures. The disclosures are published on an annual basis in conjunction with the Consolidated Financial Statements and the Annual Report and are available on the Bank's website. Information in the disclosures are not subject to external audit.

2 **Risk** Management

2.1 Internal Controls and Lines of Reporting
2.2 Three Lines of Defense
2.3 Risk Committees
2.4 The Risk Management Division
2.5 Risk Policies
2.6 Risk Appetite
2.7 Reporting

2 Risk Management

The Bank is in the business of taking risk. Risk is primarily incurred from extending credit to customers through trading and lending operations. Beyond credit risk, the Bank is also exposed to a range of other risk types such as market, liquidity, operational, reputational and other risks that are inherent in the Bank's strategy, product range and operating environment.

Risk transparency for senior managers helps them make better decisions. The Bank's risk management policy is to maintain a risk culture in which risk is everyone's business.

The Bank's strategy is to have effective risk control which includes the identification of significant risks, the quantification of the risk exposure, actions to limit risk and monitoring risk. The Executive Management Committee devotes a significant portion of its time to the management of the Bank's risk. The Bank's risk is categorized in four types; credit, market, liquidity and operational risk. Each type will be discussed in detail in this report.

2.1 Internal Controls and Lines of Reporting

The Bank is committed to the highest standards of corporate governance in its business, including risk management. The Bank's corporate governance framework is based on legislation, regulations and recognized guidelines in force at each time. The ultimate responsibility for setting the Bank's risk and governance policies and for ensuring effective internal control and management of risk rests with the Board of Directors. The enforcement of the Board's policies is delegated to the Chief Executive Officer (CEO) who in turn delegates risk management to the Chief Risk Officer (CRO) and regulatory compliance to the Compliance Officer.

The Bank is committed to the highest standards of corporate governance in its business, including risk management

The CEO, on the behalf of the Board of Directors of Arion Bank, interacts with the boards of directors of individual subsidiaries and ensures that the risk appetites of subsidiaries align with the risk appetite of the Bank. Through the group-level Internal Capital Adequacy Assessment Process (ICAAP) and Internal Liquidity Adequacy Assessment Process (ILAAP), the CRO interacts with individual subsidiaries' risk managers and consolidates the assessment of capital requirements for the Bank.

Figure 2.1 Internal control structure

Acting within an authority delegated by the Board, the Board Risk Committee (BRIC), see Table 2.1, is responsible for the overseeing and reviewing of prudential risks including, but not limited to, credit, market, liquidity, operational and reputational risk, and capital adequacy. The BRIC reviews the Bank's risk appetite at least semi-annually, see section 2.6, and makes recommendations thereon to the Board when applicable. Its responsibilities also include reviewing the appropriateness and effectiveness of the Bank's risk management systems and controls, and considering the implications of material regulatory change proposals.

The BRIC reviews the Bank's risk appetite and makes recommendations thereon to the Board when applicable

Internal Audit is responsible for the independent review of risk management and the control environment. Its objective is to provide reliable, valuable and timely assurance to the Board and Executive Management of the effectiveness of controls, mitigating current and evolving high risks and in so doing enhancing the controls culture within the Bank. The Board Audit Committee (BAC) reviews and approves Internal Audit's plans and resources, and evaluates the effectiveness of Internal Audit. The Chief Internal Auditor is appointed by the Board and accordingly has an independent position in the Bank's organizational chart.

The Compliance Officer and the Compliance function operate according to a charter for compliance defined by the Board of Directors. The Compliance Officer reports to the CEO with unhindered access to the Board. Compliance also reports quarterly to the BAC and annually to and the Board of Directors.

The role of Compliance is to apply effective precautionary measures to ensure that Arion Bank complies at all times with the law, regulations and good business practices, and to foster an affirmative corporate culture in this respect.

The Compliance Officer is the Bank's Money Laundering Reporting Officer (MLRO), and is responsible for supervising the Bank's measures against money laundering and terrorist financing.

The CRO and the Risk Management function operate according to a charter for Risk Management defined by the Board of Directors. The CRO is a member of the Executive Management Committee and reports to the CEO with unhindered access to the Board. The CRO has overall day-to-day accountability for risk management in the Bank's parent company and periodic accountability for risk assessment in the Bank's subsidiaries through the ICAAP and the ILAAP. Reporting to the CRO, and working in the Risk Management division, are department heads responsible for the management of retail and corporate credit risk, market

risk, liquidity risk and operational risk. Along with their teams, the department heads are responsible for overseeing and monitoring the risks and controls of their risk type. The departments interact with each business unit as part of the monitoring and management processes, see section 2.4.

For further information on the Bank's governance arrangements please refer to the Corporate Governance Statement for the year 2018, which provides information on directorships held by Board members, nomination and diversity issues for the selection of Board members, and the number of times BRIC met during the year 2018.

2.2 Three Lines of Defense

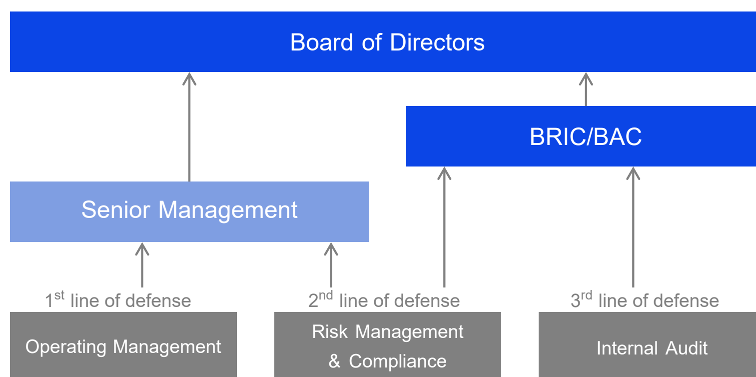
In order to ensure the effectiveness of the Bank's internal controls, to clarify responsibilities and coordinate essential risk management, and to foster the culture wherein risk is every employee's business, the Bank has adopted the three lines of defense model.

The Bank has adopted the three lines of defense model in order to ensure the effectiveness of internal controls

The model distinguishes between three lines involved in effective risk management:

1. Functions that own and manage risks
2. Functions that oversee risk management
3. Functions that provide independent assurance of effectiveness

Figure 2.2 Three lines of defense



First Line of Defense: Operating Mangement

Operational management, i.e. those in charge of overseeing and designing business operations, naturally serves as the first line of defense, which owns and manages risks, as controls are designed to fit into systems and processes under their guidance.

Second Line of Defense: Risk Management & Compliance

The second line of defense is established to ensure that the first line of defense is properly designed, in place, and operating as intended. The Bank's Risk Management and Compliance divisions are the primary second line of defense, but other divisions may also have limited second line of defense duties.

Third Line of Defense: Internal Audit

Internal Audit provides the Board of Directors and the senior management with comprehensive assurance based on the highest level of independence and objectivity within the Bank.

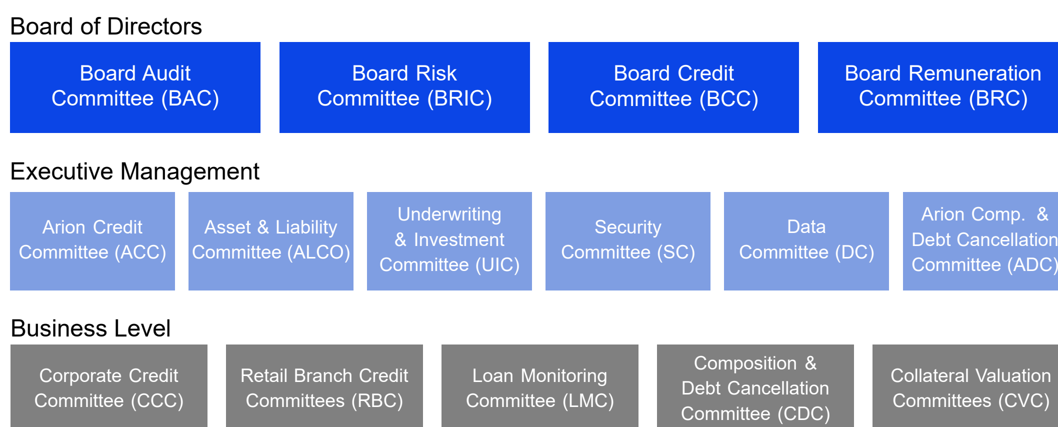
Internal Audit provides assurance on the effectiveness of governance, risk management, and internal controls, including the manner in which the first and second lines of defense achieve risk management and control objectives.

2.3 Risk Committees

The structure of risk committees within the Bank can be split into three levels. The committees define lines of responsibility and accountability within the Bank. They are charged with overseeing risk and the delegation of authority and form a control environment for the Bank.

The risk committees define lines of responsibility and accountability within the Bank

Figure 2.3 Risk committee structure



Board level committees are established by the Board and composed of members of the Board or external representatives nominated by the Board. An overview of the committees at Board level and their responsibilities is shown in Table 2.1.

Table 2.1 Board level committees

Committee	Responsibilities
Board Audit Committee (BAC)	The Board Audit Committee assists the Board in meeting its responsibilities in ensuring an effective system of internal controls and compliance and for meeting its external financial reporting obligations under applicable laws and regulations. The BAC supervises accounting procedures, the organization and function of the Bank's internal controls, and the auditing of the annual accounts and the Bank's consolidated accounts.
Board Risk Committee (BRIC)	The Board Risk Committee provides guidance to the Board on the alignment of the Bank's risk policy, high-level strategy and risk appetite, and risk management structure. The BRIC assists the Board in meeting its responsibilities in ensuring an effective system of internal controls and compliance. The BRIC assesses whether incentives which may be contained in the Bank's remuneration system, including variable remuneration, are consistent with the Bank's risk policy.
Board Credit Committee (BCC)	The Board Credit Committee is the Bank's supreme authority in granting of credit and makes decisions on credit, debt cancellations, investments and underwriting in accordance with its authority framework, as decided by the Board. The BCC can delegate specific authority to the CEO to be used in extraordinary circumstances. The committee periodically reviews reports on various aspects of the credit portfolio. The BCC defines credit rules for ACC.
Board Remuneration Committee (BRC)	The Board Remuneration Committee prepares a remuneration policy for the Bank that shall be reviewed by the Board at least annually and submitted to the AGM for approval. The BRC advises the Board on the remuneration of the CEO, Managing Directors, the Compliance Officer and Chief Internal Auditor and on the Bank's incentive scheme and other work-related payments. The CEO proposes a salary framework for Managing Directors, the Compliance Officer and Chief Internal Auditor in consultation with the BRC.

Executive-level committees which are composed of the CEO and Managing Directors or their designated representative are shown in Table 2.2.

Table 2.2 Executive level committees

Committee	Responsibilities
Arion Credit Committee (ACC)	The Arion Credit Committee makes decisions on credit cases below BCC's credit granting limits. The committee delegates limited authority and sets forth credit rules to lower credit granting bodies. ACC reviews reports concerning the credit portfolio. The CRO or his alternate has the right to be present at ACC meetings but does not participate in credit decisions. Risk management and the Credit Office are authorized to escalate all decisions of the ACC to the BCC for final approval.
Asset and Liability Committee (ALCO)	The Asset and Liability Committee is responsible for strategic planning relating to the developments of the Bank's balance sheet as well as the planning of liquidity and funding, and capital activities. The CRO or his deputy is a non-voting observer in committee meetings.
Underwriting and Investment Committee (UIC)	The Underwriting and Investment Committee decides on underwriting and principal investments. The CRO or his deputy is a non-voting observer in committee meetings.
Security Committee (SC)	The Security Committee is a consultation forum on security matters. The committee formulates, reviews and approves security goals and policies, monitors compliance with security policies and implements information security rules.
Data Committee (DC)	The Data Committee serves as a central governing body for all matters relating to data quality and data management. The Data Officer works on behalf of the Data Committee to advance the level of data quality within the Bank in line with the principles for effective risk data aggregation and risk reporting set forth in BCBS 239.
Arion Composition and Debt Cancellation Committee (ADC)	The Arion Composition and Debt Cancellation Committee deals with applications to reach composition with debtors.

The third and lowest level comprises committees on business level with delegated authority from the executive level committees, see Table 2.3.

Table 2.3 Business level committees

Committee	Responsibilities
Corporate Credit Committee (CCC)	The Corporate Credit Committee makes decisions on credit cases within authorized limits and according to credit rules.
Retail Branch Credit Committees (RBC)	Four Retail Branch Credit committees make decisions on credit cases within authorized limits and according to credit rules.
Lending Monitoring Committee (LMC)	The Lending Monitoring Committee reviews compliances with credit rules and credit committees' decisions in relation to disbursements.
Composition and Debt Cancellation Committee (CDC)	The Composition and Debt Cancellation Committee deals with applications to reach composition with debtors within authorized limits.
Collateral Valuation Committees (CVC)	Five Collateral Valuation Committees set guidelines on collateral assessment and valuation.

2.4 The Risk Management Division

The Risk Management division focuses on the identification, monitoring and control of risk. Risk Management ensures compliance with internal and external limits, and standards and regulations. Strong emphasis is placed on reporting risk to the relevant stakeholders in a clear and meaningful manner.

Risk Management's approach is based on understanding the Bank's operational exposures and how unexpected events may affect them, coupled with sound judgement from risk takers. Good judgment and common sense is often the best risk management tool.

The Risk Management division is divided into three departments;

Risk Management ensures compliance with internal and external limits, standards and regulations

Credit Control, Balance Sheet Risk, and Operational Risk. The Bank's Data Officer reports to the CRO.

Figure 2.4 Structure of Risk Management division

Credit Control

The Credit Control department monitors weak and impaired credit exposures on a customer by customer basis. The department analyzes credit exposures according to various credit quality factors, see section 4.8. Credit Control oversees the provisioning process and reports impairments and write-offs to the ACC. Credit Control also monitors the portfolio credit risk, such as single name and industry-sector concentrations, as well as monitoring financial relationships of obligors and the large exposures to financially related obligors.

Credit Control ensures that the book value of distressed loans accurately reflects the expected recovery value of loans and is responsible for collateral supervision and reporting.

Balance Sheet Risk

The Balance Sheet Risk department is responsible for analyzing, monitoring and reporting on market risk, liquidity risk and capital requirements. The department is also responsible for quantitative functions, including credit modelling and stress testing.

Within the scope of market risk are risks resulting from balance sheet mismatches, i.e. interest rate risk and foreign exchange risk, and risks stemming from the Bank's trading activities. The department interfaces primarily with the Bank's Treasury, Market Making and Capital Markets and reports its analysis and stress testing results for market, funding and liquidity risk to ALCO.

The department is responsible for the development of credit rating models, the calculation of the regulatory capital requirements and managing the Bank's economic capital models, allocated capital model and stress tests. Balance Sheet Risk is responsible for the design, implementation and management of the Bank's ICAAP and ILAAP, and interfacing with the FME in the Supervisory Review and Evaluation Process (SREP).

Additionally the department is in a supportive role for Stefnir Fund Management and the Bank's Asset Management with regards to risk reporting, risk systems and limit surveillance, and provides various quantitative support to the Bank's business units.

Operational Risk

The Operational Risk department is responsible for developing and maintaining tools for identifying, measuring, monitoring and controlling operational risk at Arion Bank. Operational Risk is also responsible for providing leadership and support to every business unit regarding the implementation of operational risk tools, processes, and ongoing improvements of the control environment. The department serves as the ICFR coordinator in the Bank's ICFR process, see section 7.6.

Operational Risk has the objective to minimize the impact of losses suffered in the normal course of business (expected losses) and to avoid or reduce the likelihood of suffering extreme tail events (unexpected losses) resulting in large losses.

The Bank's operational risk framework comprises a number of elements which allows the Bank to manage and measure its operational risk profile and to evaluate the amount of operational risk capital that the Bank needs to hold to absorb potential losses such as the Risk and Control Self-Assessment (RCSA) and loss data collection.

Data Governance

The Data Governance function is a part of the Risk Management division. The Data Officer is responsible for data governance, on behalf of the the Data Committee. The Data Committee is the central authority for all matters relating to data and data management in the Bank. The Data Committee is chartered by the CEO.

Data governance is responsible for controlling risk related to data and data management. Types of risk addressed include those related to roles and responsibilities, data architecture, data quality, data dictionary, business term definition, data quality, data integration, content management and traceability of data elements. Controls include setting policies and standards for data management, which are approved by the Data Committee. Data governance collaborates with data driven regulatory projects across the Bank. The Bank is currently implementing a solution to consolidate regulatory reporting based on reconciled risk and finance data. The Data Committee is accountable for the Bank's data management strategy.

The Data Protection Officer, who reports to the CEO, is responsible for compliance with the General Data Protection Regulation (GDPR). The Data Officer and Data Protection Officer collaborate on addressing the data aspect of GDPR.

The data governance function operates according to best practice as defined by Data Management Association International – Data Management Body of Knowledge (DAMA-DMBOK). The Bank's data management maturity level is measured against the CMMI Institute's Data Management Maturity Model.

The Bank considers data governance especially important for regulatory reporting and compliance data. The Bank plans data management improvements in order to control data aggregation for risk and financial reporting, including data quality assurance.

Risk Officer for Pension Funds

The Risk Officer for pension funds managed by Arion Bank is a member of Risk Management and reports to the CRO. The Risk Officer for pension funds performs the duties assigned in the Pension Act 129/1997 and regulation 590/2017 on risk management in pension funds. By positioning the Risk Officer in the Bank's Risk Management division the Bank aims to secure independence from the business units managing the pension funds.

2.5 Risk Policies

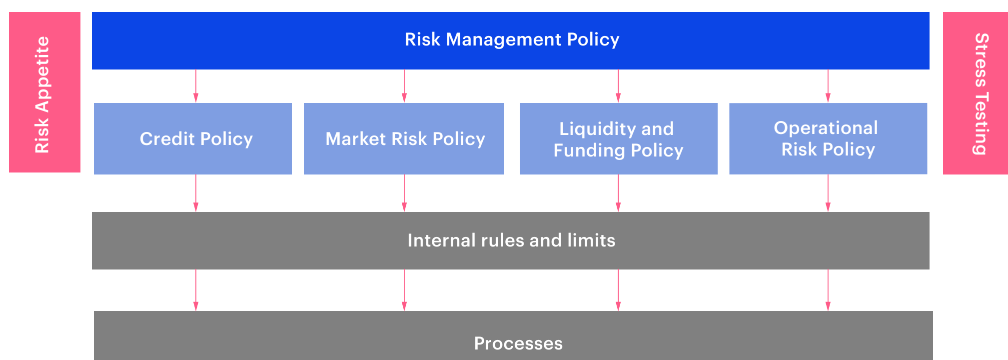
In pursuance of ensuring that existing and potential material risks are identified, managed and monitored the Bank has an enterprise risk management policy in place. The policy is reviewed and approved by the Board of Directors annually. The policy outlines, at high level, the key aspects of the Bank's risk management. The Bank recognizes that risk taking is an integral part of its business activities and must therefore be managed in an effective manner and in line with the Bank's risk appetite, see section 2.6.

The Bank recognizes that risk taking is an integral part of its business activities and must therefore be managed in an effective manner and in line with the Bank's risk appetite

The significant risks the Bank is exposed to are defined within the risk management policy. Four risk types have been defined as significant; credit, market, liquidity and operational risk. For each of these risk types the Board sets a specific policy for activities related to that risk type. The policies are reviewed and approved by the Board annually.

The Bank's risk management policy and risk type policies are implemented through the Bank's risk appetite framework, stress testing framework, internal rules and limits, and processes. The policies for each risk type are discussed further in the following chapters.

Figure 2.5 Risk policies implementation



2.6 Risk Appetite

A risk appetite is one of the key components of risk governance. A well-defined risk appetite is critical for managing risk and is essential for reinforcing a strong risk culture. In order to establish, communicate and monitor the Bank's risk appetite, the Bank has in place a risk appetite framework.

A well-defined risk appetite is critical for managing risk and is essential for reinforcing a strong risk culture

The objective of the risk appetite framework is to provide a common framework to the Board and the management to communicate, understand, and assess the types and level of risk that the Board is willing to accept in pursuit of the Bank's strategy. The framework furnishes an appropriate understanding of the Bank's risk profile relative to its risk appetite. The risk appetite framework is reviewed and approved by the Board at least semi-annually. Results of stress tests are incorporated into the review of the Bank's risk appetite and risk limits.

The Bank's risk appetite is articulated through a risk appetite statement and translated into risk limits developed and approved by the CEO or relevant executive level committee. The Bank's risk appetite is monitored by the Risk Management division to ensure that the Bank's risk profile remains within its risk appetite. The Board and BRIC are promptly notified if any risk appetite met-

rics are exceeded. Internal and external limits are monitored by the Risk Management division in accordance with the Bank's procedures.

The Bank's risk appetite is taken into consideration and aligned with the Bank's strategic objectives, business plan, and remuneration.

The Bank's quantitative risk appetite metrics are shown in Table 2.4. Additionally, the risk appetite statement includes qualitative criteria such as tolerance statements for various operational risk and regulatory compliance breaches.

Table 2.4 Risk appetite metrics

31 December 2018	Value	Legal Limit	Within Risk Appetite	Definition
Credit Risk				
Largest exposure	8.8%	25.0%	✓	Net exposure to a single customer or group of connected customers as a percentage of eligible capital.
Sum of large exposure	0.0%	-	✓	Sum of all large exposures on a net basis as a percentage of eligible capital.
Sum of 3 largest sectors*	67.1%	-	✓	Book value of loans to the three largest industry sectors as a percentage of the corporate loan portfolio.
Largest sector*	33.9%	-	✓	Book value of loans to the largest industry sector as a percentage of the corporate loan portfolio.
Expected credit loss*	0.25%	-	✓	12 month expected loss for the customer loan portfolio as a percentage of the total customer loan portfolio.
Market Risk				
Total equity exposure*	11.6%	-	✓	Total equity position, excluding investments in core assets, as a percentage of total own funds.
Unlisted equity exposure*	7.6%	-	✓	Unlisted equity position, excluding investments in core assets, as a percentage of total own funds.
Indirect equity exposure*	0.27%	-	✓	Maximum capital loss due to derivatives and margin lending in the event of an equity market stress event, based on assumptions which the Bank has adopted for such purposes.
Funding and Liquidity Risk				
Liquidity coverage ratio*	153%	100.0%	✓	Definition and calculation in accordance with the CRD IV framework.
Loans-to-deposit ratio	179%	-	✓	Ratio of total loans to customers to total customer deposits.
Encumbered asset ratio	21.1%	-	✓	Assets pledged as security for borrowings as a percentage of total assets.
Capital Management				
Capital adequacy ratio	22.0%	19.4%	✓	Total own funds as a percentage of total risk-weighted assets.
Leverage ratio	14.2%	3.0%	✓	Definition and calculation in accordance with the CRD IV framework.
Assets and Liability Management				
Currency imbalance	2.0%	15.0%	✓	Net position by which foreign currency assets exceed foreign currency liabilities as a percentage of total own funds.
Interest rate risk*	3.6%	-	✓	The amount at risk, which is calculated as a change in fair value due to yield curve movements that corresponds to the 99th percentile of the loss distribution.

* Parent level metric

2.7 Reporting

The Bank's aim is to provide relevant stakeholders with accurate and transparent risk information. Therefore, Risk Management places a strong emphasis on reporting risk and allocating sufficient resources to ensure the fulfillment of the Bank's policy. Risk information is regularly reported to the Board of Directors and its sub-committees. The CEO, the CRO and committees on the executive level, receive risk reports on a regular basis, ranging from daily monitoring reports to the Annual Report. The primary reporting within the Bank is shown in Table 2.5.

The Bank's Annual Report, Financial Statements, and Pillar 3 Risk Disclosures are all available on the Bank's website. Furthermore the Bank delivers regular reports to the FME; i.e. a monthly report on the Bank's loan portfolio quality, a quarterly report on the Bank's capital requirements (COREP) and large exposures; and an annual report on the Bank's Recovery Plan, ICAAP, ILAAP and stress testing.

Table 2.5 Primary reporting within the Bank

Primary reporting	Contents	Frequency	Recipient
Credit risk portfolio report	A report containing analysis of the Bank's loan portfolio broken down by various risk factors. Overview of the largest exposures and sector distribution. Thorough analysis of the loan's portfolio quality.	Monthly	ACC
Liquidity and market risk report	A report containing analysis of the Bank's Liquidity Coverage Ratio, information on deposit developments, secured liquidity, funding measures, currency and indexation imbalances, margin trading activities, and other relevant liquidity and market risk information.	Monthly	ALCO
Risk report	An aggregate report containing the credit risk portfolio report and the liquidity and market risk report, as well as information on the Bank's risk appetite, recovery indicators and ICAAP status, operational risk and other risk management concerns.	Monthly	Board BRIC Exec. Com.
ICAAP	Evaluation of the Bank's total risk exposure and capital adequacy. The report is submitted for review and/or approval.	Annually	Board BRIC Exec. Com.
ILAAP	Evaluation of the Bank's total risk exposure and liquidity adequacy. The report is submitted for review and/or approval.	Annually	Board BRIC Exec. Com.
Recovery plan	A plan providing measures to be taken by the Bank to restore its financial position following a significant deterioration of its financial situation.	Annually	Board BRIC Exec. Com.
Internal bank-wide stress testing	Evaluation of the impacts on the Bank's earnings and own funds, the Bank's capital and liquidity ratios and other risk appetite metrics under various stress scenarios. The report is submitted for review and/or approval.	Annually	Board BRIC Exec. Com.

3 **Capital** Management

3.1 Governance
3.2 Capital Strategy
3.3 Capital Requirements
3.4 Capital Management
3.5 Capital Position

3 Capital Management

An adequate amount of capital ensures that the Bank is able to absorb losses associated with the risks that are inherent in its operations, without its solvency being jeopardized, and allows the Bank to remain a going concern, even in periods of stress.

The Bank employs various techniques to estimate adequate capital levels and to ensure that capital is fruitfully deployed. The Bank's ICAAP is the cornerstone of the Bank's capital adequacy assessment and is aimed at identifying and measuring the Bank's risk across all risk types and ensuring that the Bank has sufficient capital in accordance with its risk profile and future development.

3.1 Governance

The Bank's capital policy and dividend policy are established by the Board of Directors based on recommendations from the Board Risk Committee (BRIC). The policies are reviewed on an annual basis.

The Bank's CEO is responsible for carrying out the Bank's capital strategy in adherence to the set policies. As established by the CEO, this responsibility is part of the principal authority of the Asset and Liability Committee (ALCO). The CRO is responsible for compliance to regulatory requirements and supervises the Bank's Internal Capital Adequacy Assessment Process (ICAAP) and allocation of capital. Stress testing, supervised by the Executive Management Committee and integrated with the Bank's business planning and ICAAP, is part of the capital management framework and is used to assess whether capital levels are acceptable under stressed conditions.

At year-end 2018 the Bank had a CET1 ratio of 21.2% and total capital ratio of 22.0%

3.2 Capital Strategy

The Bank's objective is to maintain a capital adequacy ratio that is 1.5% above the total regulatory capital requirement, which includes the Pillar 1, Pillar 2 and combined buffer requirements. Irrespective of that objective, the total capital ratio should not be lower than 20%.

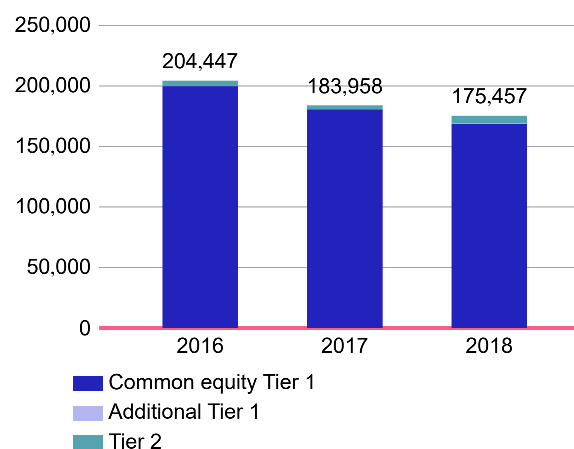
The Bank's capital position is in excess of its capital targets. According to the Bank's capital plan, surplus capital is to be distributed to shareholders and the Bank's own funds are to be restructured through issuance of Additional Tier 1 and Tier 2 capital instruments. The speed and quantum of the normalization of own funds however depends on a number of factors, including regulatory consent and currency balance restrictions, and is likely to take place over a number of years.

Major steps were taken in 2018: The Bank reduced its equity by a total of ISK 33.3 billion through extraordinary dividend payments and purchase of own shares, and in November 2018 the Bank issued a subordinated bond that accounts as Tier 2 capital. In February 2019 the Board of Directors approved a ISK 10 billion dividend distribution which approximately corresponds to the Tier 2 issuance and 50% of annual income in 2018. The Bank's capital adequacy ratios at year-end 2018 are adjusted in accordance with this foreseeable dividend payment.

As the Bank is now operating on capital levels that are close to but comfortably above regulatory requirements, the Bank puts great emphasis on managing the allocation of capital to its business units, with the aim of maximizing profitability.

As stipulated in the Bank's dividend policy, based on the Bank's expected financial performance over the medium term, the Bank aims to pay an annual dividend before special distributions, in line with a pay-out ratio around 50% of net income attributable to shareholders.

Figure 3.1 Development of own funds [ISK m]



3.3 Capital Requirements

The Bank's capital adequacy is determined in accordance with Act No. 161/2002 on financial undertakings and Regulation No. 233/2017 on prudential requirements for financial undertakings, which represent the Icelandic adoption of the EU Capital Requirements Directive and Regulation (CRD IV / CRR), excluding Article 501 on capital requirements relief for small and medium-sized enterprises. The Bank's calculations of risk-weighted exposure amounts (REA), formerly referred to as risk-weighted assets (RWA), are based on standardized approaches for the assessment of credit risk, market risk, credit value adjustments, and operational risk.

The Bank's consolidated situation as stipulated in CRR is Arion Bank's accounting consolidation without insurance subsidiaries. The capital position and solvency requirements of Vörður tryggingar hf. should therefore be viewed independently from capital adequacy for the Group's consolidated situation.

The total regulatory capital requirement is presented as a percentage of REA and consists of the items shown in the following table:

Table 3.1 Capital requirements

Source	Description
Pillar 1 requirement	The 8% minimum regulatory requirement
Pillar 2R requirement	The additional capital requirement determined by the Bank's own internal assessment of capital adequacy (ICAAP) and FME's subsequent supervisory regulatory assessment process (SREP)
Combined capital buffer requirement	The aggregated capital requirement due to four capital buffers, the level of which is determined by law (capital conservation buffer) and by the FME following guidance from the Financial Stability Council (buffers for systemic risk, systemically important financial institutions (SII), and countercyclical effects)

As part of the SREP, the results of internal or external bank-wide stress tests may result in non-binding additional capital guidance, defined as Pillar 2G.

The Pillar 1 requirement may be met with different capital instruments, restricted as follows, expressed as a percentage of REA:

- Common Equity Tier 1 (CET1) capital shall exceed 4.5%
- Tier 1 (CET1 and Additional Tier 1) capital shall exceed 6%
- Total capital (Tier 1 and Tier 2) shall exceed 8%

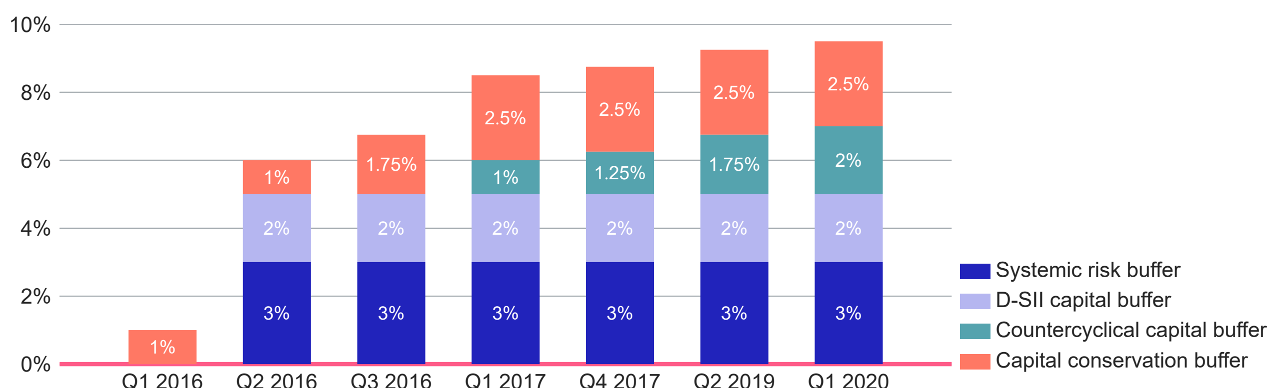
The same proportion applies to the Pillar 2 capital add-on, i.e. it can be comprised of 56.25% CET1 capital, 18.75% AT1 capital and 25% Tier 2 capital. The combined capital buffer requirement is to be met solely with CET1 capital.

The SREP review of the Bank's ICAAP, which concluded in October of 2018 and was based on financial figures on 31 December 2017 for the Group's prudential consolidation, resulted in a Pillar 2 requirement that corresponds to 2.9% of REA. See further discussion in section 3.4.1.

For the Bank's consolidated situation, the Pillar 2 capital requirement is 2.9% of REA and the institution-specific combined capital buffer requirement is 8.5% at year-end 2018

Capital buffers were incorporated into Icelandic law with the adoption of CRD IV / CRR. The systemic risk buffer only applies to domestic exposures and is therefore applied cumulatively with the D-SII buffer in accordance with Article 133 paragraph 5 of CRD IV. FME has recently decided to increase the countercyclical buffer level, by 0.5% as of May 2019 and further 0.25% as of February 2020. The implementation of the capital buffers are shown in the chart below. The requirements are presented as percentage of REA.

Figure 3.2 Implementation of capital buffer levels for Icelandic D-SIBs



The effective countercyclical capital buffer for the Bank is determined using the weighted average of the respective capital buffer level in the countries where the Bank has exposure and weighting is decided by the percentage of credit risk in REA. The same method is used for the determination of the effective systemic risk buffer while weighting only applies to domestic exposures. Given the Bank's geographic credit risk profile at year-end 2018, the effective combined capital requirement for the Bank is 8.5%.

To summarize, the Bank's total regulatory requirement at year-end 2018 is 19.4%. Management's policy is to voluntarily hold an additional management buffer of 1.5%, which brings the total capital benchmark level to 20.9%. Applying the planned increase to capital buffers that benchmark increases to 21.3% in May 2019 and 21.6% in February 2020. The following figure shows the Bank's capital position and the capital requirement, along with an normalised capital structure under CRR.

The Bank's total regulatory requirement at year-end 2018 is 19.4%. Taking into account the capital buffer increase in May 2019 and the Bank's own 1.5% internal management buffer, the Bank's near-term total capital benchmark is 21.3%

The Bank's own funds at 31 December 2018 take into account a foreseeable dividend distribution of ISK 10 billion. Therefore, a

corresponding distribution will not affect the Bank's capital adequacy ratios.

Figure 3.3 Arion Bank's own funds regulatory requirements with combined buffer requirements as at May 2019

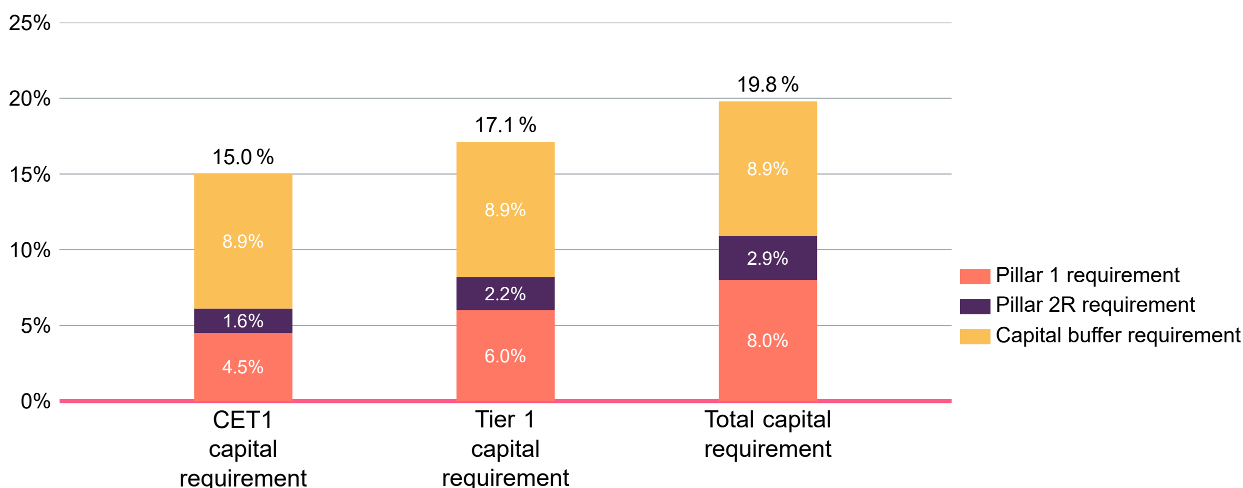
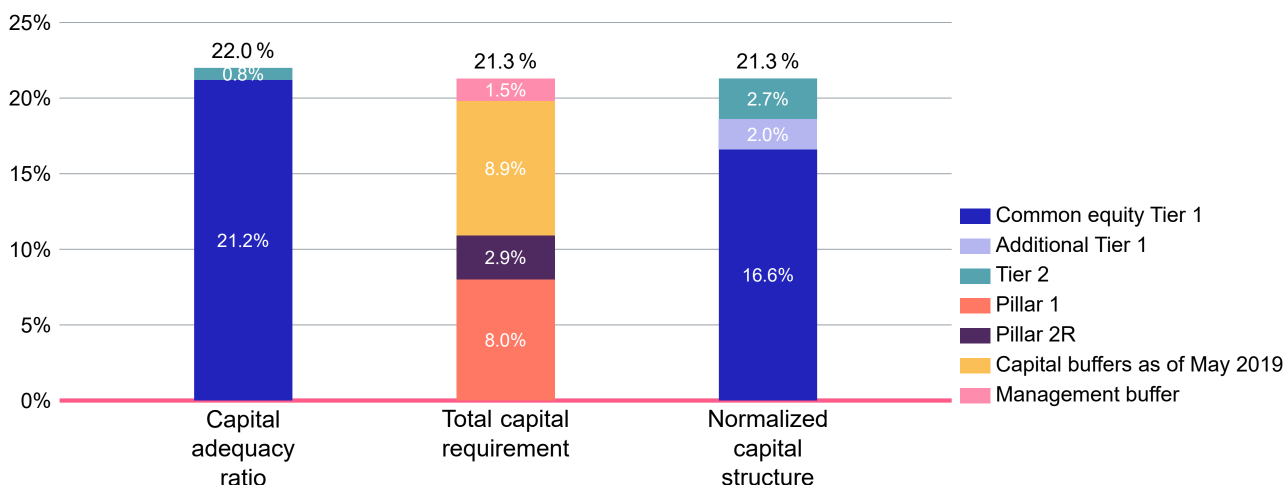


Figure 3.4 Arion Bank's own funds and own funds requirement with combined buffer requirements as at May 2019 and internal management buffer



3.4 Capital Management

The Bank employs various techniques in its assessment of capital need. The Bank's ICAAP and stress testing are key elements of the Bank's capital management framework and are performed on an annual basis. In addition to providing quantitative analysis, the processes are an important tool for management that give an insightful understanding of the risks associated to the Bank's operations and business planning. The Bank's capital is attributed to different business units and an analysis of risk adjusted performance is done on a regular basis.

3.4.1 Internal Capital Adequacy Assessment Process

The ICAAP is the Bank's internal assessment of its capital needs. The ICAAP is carried out in accordance with the Act No. 161/2002 on financial undertakings with the aim to ensure that the Bank has in place sufficient risk management processes and systems

to identify, measure and manage the Bank's total risk exposure. The scope of ICAAP is the Bank's consolidated situation, which excludes insurance subsidiaries.

The ICAAP is aimed at identifying and measuring the Bank's risk across all risk types and at ensuring that the Bank has sufficient capital for its risk profile. The Bank's ICAAP report is approved annually by the Board of Directors, the CEO and the CRO and submitted to the FME. The FME reviews the Bank's ICAAP report and sets capital requirements following its supervisory and review process (SREP). Arion Bank's own funds exceed both the internal assessment of capital requirements and the FME's SREP requirements.

The ICAAP is the Bank's internal assessment of its capital needs

In addition to the above the Bank uses the ICAAP to:

- Raise risk-awareness to all the Bank's activities and to ensure that the Board of Directors and the Executive Management Committee understand the Bank's risk profile.
- Carry out a process to adequately identify and measure the Bank's risk factors.
- Carry out a process to monitor that the Bank's capital is adequate and used in relation to its risk profile.
- Review the soundness of the Bank's risk management systems and controls that are used to assess, quantify and monitor the Bank's risks .

Managing Directors with their key personnel and key personnel from the Bank's subsidiaries participate in the process of identifying and evaluating high risk areas, and discuss their management of risk, in cooperation with Risk Management. The result from the identification phase serves as the basis for the risk assessment within the Bank's ICAAP. Risk categories identified for the business units are shown in Table 3.2.

Table 3.2 Risk identification down to business units

Business Units	Credit risk	Market risk	Liquidity risk	Operational risk	Legal risk	Reputational risk	Business risk	Political risk
Asset Management	✓			✓	✓	✓	✓	✓
Corporate Banking	✓			✓	✓	✓	✓	✓
Investment Banking	✓	✓		✓	✓	✓	✓	✓
Treasury	✓	✓	✓	✓	✓	✓	✓	✓
Retail Banking	✓			✓	✓	✓	✓	✓
Other divisions and subsidiaries	✓	✓	✓	✓	✓	✓	✓	✓

The Bank's ICAAP methodology involves assessing key risks that are not believed to be adequately addressed under Pillar 1. For each such risk, a capital add-on is applied on top of the minimum 8% regulatory capital requirements. This additional capital requirement is referred to as the Pillar 2R requirement. The main risk elements for which additional capital is required are:

- Interest rate risk in the banking book (IRRBB) and indexation risk
- Single name concentration of credit risk
- Equity risk

On the recommendation of the Icelandic Systemic Risk committee (IS: Kerfisáhættunefnd), the Systemic Risk Buffer has been set to 3% for domestic exposures. In its recommendation, the committee cited numerous systemic risk factors which the Bank therefore does not include in its Pillar 2 capital assessment.

As part of the Pillar 2 capital assessment the Bank uses internal models to assess capital needs for credit risk. The Bank's assessment is that the capital requirements specified by the standardized approach are adequate. Meanwhile, the FME has published SREP guidelines, stating that *"domestic exposures are considered riskier, resulting in higher capital requirements for those institutions that do not use the internal ratings based method"*, and has specified elevated Pillar 2 risk weights for certain exposure classes: 24% for Regional government & Institutions, 61% for Commercial real estate, 80% for Retail and 109% for Corporate & other. This results in a considerable SREP capital add-on, not reflected in the Bank's ICAAP result.

The SREP of 2018, which was based on financial figures from 31 December 2017 for the Bank's consolidated situation, resulted in a Pillar 2R capital requirement of 2.9% of REA.

The SREP of 2018, which was based on financial figures from 31 December 2017 for the Bank's consolidated situation, resulted in a Pillar 2R capital requirement of 2.9% of REA

3.4.2 Stress Testing

Stress tests provide an important management tool for the Bank. The results of stress tests raise risk awareness and improve general understanding of the Bank's operations and are to be considered for strategic, capital and contingency planning. The results of stress tests are incorporated into the review of the risk appetite and the Bank's limit framework.

The Bank's stress testing framework outlines the scope and responsibilities for stress testing in the Bank. Within the framework's scope are the ICAAP and ILAAP, which are carried out in parallel, the Recovery Plan, as well as firm-wide and regulatory internal stress tests on the Bank's business plan. The framework is aligned with FME's guidelines No. 2/2015 which are based on EBS's Guidelines on Stress Testing (GL32). Stress testing at the Bank consists of sensitivity analysis and scenario analysis.

Stress tests provide an important management tool for the Bank

The impact of stress testing is estimated on the Bank's earnings and capital adequacy as well as for the Bank's liquidity ratios, other risk appetite metrics and recovery indicators. Each business unit contributes to the estimation of its portfolio with the view of identifying the most important risk drivers and suggests relevant stressed scenarios.

Figure 3.5 The stress testing process at the Bank.

Scenario analyses are carried out on the Bank's business plan. The Bank's Economic Research department contributes an economic base case projection as well as stressed projections that are used in the Bank's capital planning and in preparation of the Bank's five year business plan. The design of the bank-wide internal stress test is challenged and reviewed by the Executive Management Committee and the Board of Directors.

One of the stressed scenarios carried out on the business plan is provided by the Central Bank in collaboration with the FME. The Bank also performs various regularly scheduled stress tests and targeted ad-hoc stress tests.

3.4.3 Capital Allocation and Capital Planning

The Bank allocates capital to its business units based on capital requirements assessed under the ICAAP. The risk-adjusted performance of the business units is based on the Return on Allocated Capital (ROAC) and reported to ALCO. The ALCO conducts capital planning based on the capital requirements of the business units.

Figure 3.7 Allocated capital at end of December 2018

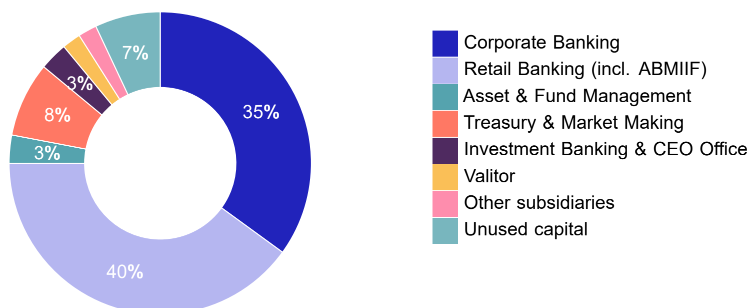
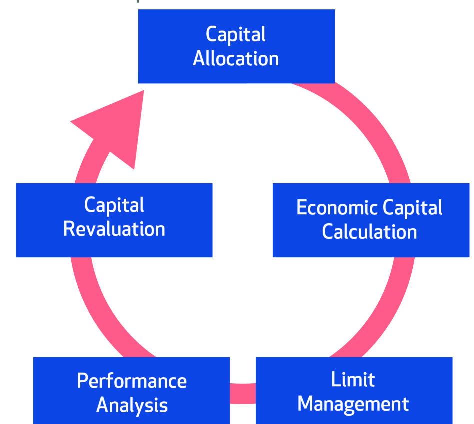


Figure 3.6 Capital planning and monitoring process



The focus of capital management at the Bank is to normalize the capital structure in the medium term and consequently maintain the Bank's capitalization comfortably above the regulatory minimum, including capital buffers and Pillar 2 requirements.

3.5 Capital Position

The Bank's accounting consolidation is different than that of its prudential consolidation for capital adequacy as insurance subsidiaries are excluded from the Group's consolidated situation as stipulated by CRR. The solvency requirements and capital position of insurance subsidiaries should be viewed separately from the consolidated situation.

Table 3.3 Accounting and regulatory consolidation and mapping of financial statement categories with regulatory risk categories (EU LI1)

31 December 2018 [ISK m]	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying value of items				
			Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
Assets							
Cash and balances with Central Bank	83,139	83,139	83,139				
Loans to credit institutions	56,322	55,863	55,863				
Loans to customers	833,826	833,826	833,826				
Financial instruments	114,557	99,677	67,843	6,241		28,054	190
Investment property	7,092	7,092	7,092				
Investments in associates	818	734	734				
Intangible assets	6,397	3,886	0				3,886
Tax assets	90	90	0				90
Non-current assets and disposal groups held for sale	48,584	48,584	40,216				8,368
Other assets	13,502	9,396	9,396				
Total assets	**1,164,327**	**1,142,287**	**1,106,337**	**6,241**		**28,054**	**12,534**
Liabilities							
Due to credit inst. and Central Bank	9,204	9,204					
Deposits	466,067	467,027					
Financial liabilities at fair value	2,320	2,320		1,795		1,698	
Tax liabilities	5,119	4,882					
Non-current liabilites and disposal groups held for sale	26,337	26,337					
Other liabilities	30,107	15,437					
Borrowings	417,782	418,675					
Subordinated liabilities	6,532	6,532					
Total liabilities	**963,468**	**950,414**		**1,795**		**1,698**	
Total equity	**200,859**	**191,873**					

Table 3.4 Overview of own funds and capital adequacy

31 December [ISK m]	2018	2017
Own funds		
Common Equity Tier 1 (CET1) capital	168,795	180,635
Tier 1 capital	168,925	180,763
Total own funds	175,457	183,958
Risk-weighted exposure amount	796,599	766,768
CET1 capital ratio	21.2%	23.6%
Tier 1 capital ratio	21.2%	23.6%
Total capital ratio	22.0%	24.0%
Own funds requirement		
Pillar 1: Minimum capital requirement	8.0%	8.0%
of which CET1 requirement	*4.5%*	*4.5%*
of which Tier 1 requirement	*6.0%*	*6.0%*
Pillar 2: Additional capital requirement (ICAAP/SREP)	2.9%	3.4%
of which CET1 requirement	*1.6%*	*1.9%*
of which Tier 1 requirement	*2.2%*	*2.6%*
Combined capital buffer requirement	8.5%	8.4%
of which capital conservation buffer requirement	*2.5%*	*2.5%*
of which systemically important institution buffer requirement	*2.0%*	*2.0%*
of which systemic risk buffer requirement	*2.8%*	*2.75%*
of which countercyclical capital buffer requirement	*1.2%*	*1.17%*
Total CET1 capital requirement	14.6%	14.8%
Total capital requirement	19.4%	19.8%
Own funds in relation to minimum capital requirement	2.75x	3.00x
Leverage ratio		
Exposure measure for leverage ratio calculation	1,196,628	1,177,147
Leverage ratio	14.2%	15.4%

Table 3.5 Overview of risk-weighted exposure amount (EU OV1)

31 December [ISK m]	REAs		Minimum own funds requirements
	2018	2017	2018
Credit risk (excluding CCR)	**689,900**	**662,038**	**55,192**
of which the standardized approach	689,900	662,038	55,192
CCR	**6,633**	**8,350**	**531**
of which mark to market	4,405	5,844	352
of which CVA	2,228	2,506	178
Settlement risk			
Securitisation exposures in the banking book (after the cap)			
Market risk	**13,208**	**10,368**	**1,057**
of which the standardized approach	13,208	10,368	1,057
Large exposures			
Operational risk	**86,858**	**86,013**	**6,949**
of which standardized approach	86,858	86,013	6,949
Amounts below the thresholds for deduction (subject to 250%risk weight)			
Total	**796,599**	**766,769**	**63,728**

Table 3.6 Determination of institution-specific capital buffer requirements based on geographical distribution of credit risk. Based on buffers recognized by FME in SREP of 2018.

Country, 31 December 2018	Systemic risk buffer	Countercyclical capital buffer	Credit risk (incl. CCR) REA [ISK m]	Buffer weight	Institution specific systemic risk buffer	Institution specific countercyclical capital buffer
Iceland	3%	1.25%	643.604	92.7%	2.78%	1.16%
Norway		2%	4.977	0.7%		0.01%
United Kingdom		1%	4.296	0.6%		0.01%
Sweden		2%	958	0.1%		0.003%
Other countries with recognized buffer		1%	14	0.002%		0.000%
Other			40.454	5.8%		
Total			**694.303**	**100%**	**2.78%**	**1.18%**

Table 3.7 Arion Bank's capital buffer requirements

Capital buffer, 31 December 2018	Buffer rate	Institution-specific buffer rate
Capital conservation buffer	2.5%	2.5%
Systemically important institution buffer	2.0%	2.0%
Systemic risk buffer	3.0%	2.78%
Countercyclical capital buffer	1.25%	1.18%
Total	**8.75%**	**8.46%**

Table 3.8 Arion Bank's capital buffer requirements as of May 2019

Capital buffer, 15 May 2019	Buffer rate	Institution-specific buffer rate
Capital conservation buffer	2.5%	2.5%
Systemically important institution buffer	2.0%	2.0%
Systemic risk buffer	3.0%	2.78%
Countercyclical capital buffer	1.75%	1.65%
Total	**8.75%**	**8.93%**

3.6 Impact on Own Funds due to Regulatory and Accounting Changes

3.6.1 IFRS 9

As of 1 January 2018, IFRS 9 replaced the IAS 39 accounting standard.

Under the Basel III regulatory capital framework, general provisions or general credit risk adjustments as defined in CRR, are eligible as Tier 2 capital for financial institutions that apply the standardized approach for capital requirement calculations. General provisions reduce Common Equity Tier 1 capital through reduction of assets but are effectively reintroduced into own funds through Tier 2 capital as they are loss absorbing. In contrast, for financial institutions that apply internal models (IRB) for capital requirement calculations, expected loss reduces risk-weights as capital is meant to meet unexpected losses in excess of expected

losses as the latter should be accounted for in the pricing of credit exposures. Any excess of accounting allowances to expected losses under IRB is included as Tier 2 capital for IRB banks.

The European Banking Authority (EBA) has issued an opinion stating that "EBA believes that all IFRS 9 provisions should be considered SCRA [special credit risk adjustment]" as they "will not be freely and fully available to meet losses that subsequently materialize, as these provisions are ascribed to particular assets, whether individual or grouped". The FME has adopted this opinion and as a result, as of 1 January 2018, the Group's own funds no longer included general credit risk adjustments as Tier 2 capital. All impairments under IFRS 9 are treated as SCRA and changes to IFRS 9 provisions are directly reflected in the Common Equity Tier 1 (CET1) capital, without re-adjustment through Tier 2 capital.

Transitional rules that mitigate the impact of IFRS 9 on own funds have been introduced into European law through Regulation (EU) No. 2017/2395. The arrangements were not adopted in Iceland and therefore the Group does not apply transitional rules but recognised the full impact on 1 January 2018.

The adoption of IFRS 9 resulted in the Bank's total capital ratio between 31 December 2017 and 1 January 2018 being reduced by 0.3% of REA.

3.6.2 SME supporting factor

Article 501 of the EU Capital Requirements Regulation (CRR) stipulates a capital requirements deduction for small and medium enterprises (SMEs) in the form of a supporting multiplication factor of 0.7619, which is applied to the relevant risk-weighted exposure amount. It is applicable to SMEs with group exposure below EUR 1.5 million.

The rationale is that SMEs *"are one of the pillars of the Union economy given their fundamental role in creating economic growth and providing employment. The recovery and future growth of the Union economy depends largely on the availability of capital and funding to SMEs established in the Union to carry out the necessary investments to adopt new technologies and equipment to increase their competitiveness."*

This article was omitted in the adoption of CRR into Icelandic law. It is unclear if and when this provision will be ratified in Iceland. If adopted, the Bank's REA would decrease by approximately ISK 10 billion, increasing capital adequacy ratios by 0.3%.

3.6.3 Basel III Revision

On 7 December 2017 the Basel Committee on Banking Supervision published an updated Basel III standard which finalizes the Basel III post-crisis reforms. The updated standard will be effective from 1 January 2022 for banks using the standardized approach (SA) and implemented in steps from 1 January 2022 to 1 January 2027 for banks using the IRB method. The initial phase of the Basel III reforms (2010) focused on strengthening global capital and liquidity rules with the goal of promoting a more resilient banking sector.

The Basel III reforms include improvements on the standardized and the IRB approaches. The goal is to restore credibility in the

calculation of REAs, reduce their excessive variability, improve the comparability of banks' capital ratios and restore a level playing field between standardized and IRB banks.

It is expected that the Bank's capital ratio increases as a result of the changes to the accord. The more risk-sensitive standardized approach will result in lower average risk-weights for mortgages as the loan-to-value ratio of mortgages are predominantly below 80% and well distributed, see 4.6. Furthermore, as Article 501 of CRR, on capital requirements relief for small and medium-sized enterprises (SMEs), has not been implemented in Iceland, a proposed corporate SME risk-weight will result in lower average corporate exposure risk-weights for the Bank.

4 **Credit** Risk

4.1 Credit Policy
4.2 Credit Granting
4.3 Credit Risk Management
4.4 Credit Risk Exposure
4.5 Equity Risk in the Banking Book
4.6 Collateral Management and Valuation
4.7 Credit Rating
4.8 Portfolio Credit Quality and Provisions
4.9 Counterparty Credit Risk

4 Credit Risk

Credit risk is defined as the current or prospective risk to earnings and capital arising from the failure of an obligor to discharge an obligation at the stipulated time or otherwise to perform as agreed. Credit risk arises anytime the Bank commits its funds, resulting in capital or earnings being dependent on counterparty, issuer or borrower performance.

Loans to customers and credit institutions are the largest source of credit risk but credit risk is also inherent in other types of assets, such as bonds, short-term debt securities, derivatives, and in commitments such as guarantees and unused credit lines or limits. Credit risk is inherent in business units connected to lending activities, as well as trading and investment activities, i.e. Corporate Banking, Retail Banking, Investment Banking and Treasury within Finance.

Table 4.1 Sources of credit risk

Source	Description
Loans to customers	The loan portfolio is the Bank's main asset. To maintain and improve the quality of the loan portfolio it is imperative to constantly monitor the performance of loans, counterparties, and collateral, both individually and at the portfolio level.
Commitments and guarantees	The Bank often commits itself to ensuring that funds are available to customers as required. The most common commitments to extend credit are limits on overdrafts on checking accounts, credit cards, and credit lines.
Bonds and debt instruments	The Bank trades and invests in bonds and debt instruments. Bonds and debt instruments are important to the Bank's liquidity management.
Balances with the Central Bank and loans to credit institutions	The Bank maintains cash and balances with the Central Bank in the form of certificates of deposits, mandatory reserve deposits, and other balances. Furthermore the Bank holds money-market deposits and deposits in nostro accounts with credit institutions. These assets form a key part of the Bank's liquidity buffer.
Counterparty credit risk	The Bank offers financial derivative instruments to professional investors, e.g. FX, interest, and securities derivatives. The Bank also uses hedging derivatives and engages in securities lending. For further information on counterparty credit risk, see section 4.9.
Equity risk in the banking book	Equity risk in the banking book arises primarily from investment in positions that are not made in short term trading purpose and assets repossessed as a result of credit recovery i.e. restructuring or collection. For further information on equity risk in the banking book, see section 4.5.

4.1 Credit Policy

The Bank's credit policy contains high-level criteria for credit granting, as well as outlining the roles and responsibilities for further implementation and compliance. The Bank's credit policy is the base for the Bank's credit strategy as integrated in the business plan, the Bank's risk appetite towards credit exposure, the Bank's credit rules, and the Bank's credit procedures and controls.

Arion Bank is a universal bank offering companies and individuals tailored banking solutions. Credit is granted by a hierarchy of credit committees with different credit granting limits, or by employees with restricted credit granting limits. The emphasis is on maintaining a high quality credit portfolio by adhering to a strict

credit process, and seeking business with financially strong parties with strong collaterals and good repayment capacity. The risk level of each credit is considered in its pricing.

Credit granting, where the underlying collateral is securities issued by Arion Bank, is prohibited.

4.2 Credit Granting

The Board Credit Committee (BCC) is the supreme authority in granting credit. The Arion Credit Committee (ACC), which acts below BCC's granting limits, in cooperation with the CEO, delegates authority within its own credit limits and sets credit granting rules and guidelines for the business units.

The Credit Office division is involved in all the Bank's larger loan cases and its aims to guarantee a comprehensive overview of the Bank's loan portfolio. The Credit Office is headed by the Chief Credit Officer who reports directly to the CEO. The Credit Office has voting members in all of the Bank's credit committees and the Chief Credit Officer attends the BCC's meetings as an adviser. The Credit Office manages and advises on the Bank's credit rules and policies.

The Credit Office is involved in larger credit cases and aims to improve credit portfolio oversight in the first line of defense with credit experts specializing in the Bank's major customers and markets. The Credit Office fields credit managers which operate as counterparties to corporate account managers in the preparation of credit proposals. It also employs specialists that provide written comments to be evaluated by the relevant credit committees.

Risk Management is authorized to attend any credit committee meeting. Risk Management and the Credit Office have the power to escalate controversial credit committee decisions to a higher authority as well as put any credit case on the agenda on a ACC meeting for discussion and decision if applicable. Extraordinary credit proposals are referred to the BCC for approval and and also if they surpass 5% of own funds for new loans and 10% group of connected parties.

The Bank gathers information for each credit application and evaluates certain elements that serve as a basis for a decision, e.g. the company profile, the financial analysis of the company, the proposed collaterals, the company's credit rating, and related parties and their total exposure.

The Bank generally requires collateral but a central element in assessing creditworthiness is the customer's ability to service the debt.

In 2017 the Bank established a Credit Office function to strengthen the first line of defense for Credit Risk

4.3 Credit Risk Management

Credit risk management entails diversification of risk, well informed lending decisions, good oversight of the portfolio performance, and a clear identification of any sign of weaknesses to conduct a timely recovery.

To ensure well informed lending decisions, Credit Office monitors credit risk before a credit decision is made and participates in credit committee meetings at ACC and CCC (Corporate Credit Committee) level, both with an advisor who follows through with the comments as described above, and with a voting member. Various controls ensure that a loan is only disbursed following a thorough review of all documents and the registration of all relevant information regarding the loan and collaterals into the Bank's IT systems.

During the repayment phase, Risk Management monitors the credit portfolio. The Credit Control department aggregates the portfolio monthly, based on consistent criteria, to analyze the outstanding risk, the collateral level, as well as the portfolio quality. Credit Control analyzes loans that have been classified at risk and maintains an independent and centralized overview of distressed credits. Credit Control, based on its analysis, manage provisions and reviews write-offs. Monthly credit risk reports are sent to the ACC, the BRIC and the Board of Directors.

4.4 Credit Risk Exposure

The Bank is exposed to credit risk from both on-balance sheet exposures and off-balance sheet exposures, the latter of which represents credit commitments to customers in the form of undrawn credit limits, unused overdrafts, guarantees, and letters of credit. The tables in this section do not include exposures on the Bank's trading books or counterparty credit risk (CCR) exposures.

The exposure amounts shown are on different basis: Exposure at default amounts according to rules on capital requirements are derived from original exposure (gross carrying value including off-balance sheet amounts), net exposure after applying specific credit risk adjustments to the original exposure, adjusted exposure value (net exposure after applying credit risk mitigation (CRM), i.e. exposure net of collateral) and exposure at default (EAD) which is the adjusted exposure value after applying credit conversion factors (CCF) to off-balance sheet items. Also shown are risk-weighted exposure amounts (REA), previously referred to as risk-weighted assets (RWA).

Table 4.2 Credit risk exposure and credit risk mitigation effects (EU CR4)

	Net exposures before CCF and CRM		EAD post CCF and CRM		REAs and REA density	
31 December 2018 [ISK m]	On-balance sheet	Off-balance sheet	On-balance sheet	Off-balance sheet	REAs	REA density
Central governments or central banks	134,470	171	134,470	86	0	0%
Regional governments or local authorities	4,971	3,647	4,968	1,518	1,336	20.6%
Public sector entities	314	32	314	14	213	65.1%
Multilateral development banks	800	0	799	0	0	0%
Institutions	78,425	704	78,127	352	17,857	22.8%
Corporates	361,826	88,827	355,890	33,880	389,771	100%
Retail	113,060	41,715	112,782	15,551	96,250	75%
Secured by mortgages on immovable property	348,547	5,398	348,365	1,477	125,106	35.8%
Exposures in default	13,816	1,408	13,802	695	17,659	121.8%
Exposures associated with particularly high risk	3,118		3,118		4,677	150%
Collective investments undertakings (CIU)	3,780		3,780		2,747	72.7%
Equity	6,337		6,337		6,337	100%
Other items	27,945		27,945		27,945	100%
Total	**1,097,409**	**141,902**	**1,090,697**	**53,573**	**689,898**	**60.3%**

Table 4.2 Continued

	Net exposures before CCF and CRM		EAD post CCF and CRM		REAs and REA density	
31 December 2017 [ISK m]	On-balance sheet	Off-balance sheet	On-balance sheet	Off-balance sheet	REAs	REA density
Central governments or central banks	171,808	155	171,808	77	0	0%
Regional governments or local authorities	4,163	4,757	4,163	1,731	1,223	20.8%
Public sector entities	316	53	313	15	328	100%
Multilateral development banks	511	80	511	40	0	0%
Institutions	103,010	609	102,979	300	23,823	23.1%
Corporates	334,877	94,143	329,536	34,935	364,471	100%
Retail	113,179	38,531	113,132	14,650	95,836	75%
Secured by mortgages on immovable property	305,138	8,344	305,132	1,941	109,560	35.7%
Exposures in default	16,770	391	16,770	182	21,429	126.4%
Exposures associated with particularly high risk	4,288		4,288		6,432	150%
Equity	11,004		11,004		11,004	100%
Other items	27,930		27,930		27,930	100%
Total	**1,092,995**	**147,063**	**1,087,566**	**53,871**	**662,038**	**58.0%**

The Bank's credit risk-weight density, or REA density, measured as risk-weighted exposure amounts (REA) relative to EAD, increases from 58.0% to 60.3% in 2018. The increase is primarily due to a reduced share of liquid assets that attract low risk-weights. The sale of equity positions, reduced exposures in defaults and an increase in the tax value of real estates contribute to a lower risk-weight density.

Table 4.3 Exposure at Default (post CRM and CCF) by exposure classes and risk-weights (EU CR5). The last column refers to ratings from external rating agencies.

31 December 2018 [ISK m]	Risk weights							Total	Of which unrated
Exposure classes	0%	20%	35%	50%	75%	100%	150%		
Central governments or central banks	134,556							134,556	
Regional governments or local authorities		6,437				48		6,485	6,485
Public sector entities	6			217		105		328	328
Multilateral development banks	799							799	799
Institutions		71,276		7,203				78,479	10,508
Corporates						389,771		389,771	383,413
Retail					128,333			128,333	128,333
Secured by mortgages on immovable property			332,099	17,743				349,842	349,842
Exposures in default						8,174	6,323	14,498	14,498
Exposures associated with particularly high risk							3,118	3,118	3,118
Collective investments undertakings (CIU)	107	961		314		2,398		3,780	3,780
Equity						6,337		6,337	6,337
Other items						27,945		27,945	27,945
Total	**135,468**	**78,674**	**332,099**	**25,477**	**128,333**	**434,778**	**9,441**	**1,144,271**	**935,386**

Table 4.3 Continued

31 December 2017 [ISK m]	Risk weights							Total	Of which unrated
Exposure classes	0%	20%	35%	50%	75%	100%	150%		
Central governments or central banks	171,885							171,885	
Regional governments or local authorities		5,839				55		5,895	4,599
Public sector entities						328		328	328
Multilateral development banks	551							551	551
Institutions		93,281		9,662		335		103,278	335
Corporates						364,472		364,472	362,472
Retail					127,782			127,782	127,782
Secured by mortgages on immovable property			293,172	13,901				307,073	307,073
Exposures in default						7,998	8,954	16,952	16,952
Exposures associated with particularly high risk							4,288	4,288	4,288
Equity						11,004		11,004	11,004
Other items						27,930		27,930	27,930
Total	**172,436**	**99,130**	**293,172**	**23,563**	**127,782**	**412,122**	**13,242**	**1,141,437**	**863,314**

4.4.1 Credit Risk Exposure by Sector

The Bank's loan book is diversified with regard to individuals and industry sectors. Of loans to customers, 48% are loans to individuals, of which 86% are mortgage loans. Credit exposure to individuals represents 35% of the total credit risk exposure. Real estate activities and construction is the largest industry sector comprising 18% of loans to customers or 13% of the Bank's total credit risk exposure. According to the Bank's analysis, this distribution mirrors closely the sector distribution of credit from all lenders in the Icelandic economy. Thus, the Bank's sector diversification is as good as can be expected for a bank which primarily operates in Iceland.

Arion Bank monitors the risk associated with the rapid growth of the tourism industry. The Bank has not modified its standard industry classification to incorporate a separate tourism sector, opting instead to monitor the exposure internally alongside the standard sectors. To define the tourism industry, the Bank has adopted a classification from the Central Bank of Iceland which identifies, primarily, 19 activities from ISAT08 as core tourism activities. According to this definition, the Bank has determined that its exposure to the tourism industry was 6% of loans to customers at the end of 2018, compared to 7% in 2017. The tourism exposure draws mainly from three standard industry sectors: Wholesale and retail trades (34%), Real estate and construction (30%) and Transportation (17%).

6% of loans to customers are related to the growing tourism industry

Table 4.4 Net exposure (pre CRM and CCF) by industries and exposure classes (EU CRB-D)

Net exposure, 31 December 2018 [ISK m]	Agriculture	Financial and insurance services	Fishing industry	Individuals	Industry, energy and manufacturing	Information and communication technology	Public administration, human health and social act.	Real estate and construction	Services	Transportation	Wholesale and retail trades	Other/Not specified	Total
Central gov./banks		90,671					43,970						134,641
Administrative bodies						106	241						346
Regional governments					2,588		5,557		473				8,617
Multilateral dev. banks	16				18	141		65	535		26		800
Institutions		78,127		704	0	0	298						79,129
Corporate	3,658	52,271	98,154	8,166	52,621	21,202	655	118,356	11,851	12,558	71,160		450,652
Retail	3,182		2,096	112,264	2,980	1,458	1,424	13,266	7,034	1,555	9,515		154,775
Real Estate	902	1,003	1,274	308,538	2,681	387	627	28,995	3,227	392	5,920		353,946
Exposures in default	386	99	1,135	6,353	1,894	76	166	3,537	375	241	963		15,224
CIUs		3,780											3,780
High risk items	8	2,192	31		35	315		327	208		2		3,118
Equity		6,324							13				6,337
Other												27,945	27,945
Total	**8,152**	**234,466**	**102,691**	**436,024**	**62,817**	**23,684**	**52,937**	**164,545**	**23,716**	**14,747**	**87,586**	**27,945**	**1,239,311**

4.4.2 Credit Risk Exposure by Geographic Area

The Bank is not significantly exposed to credit in other countries than Iceland apart from liquid assets, which includes short term deposits and money market loans at foreign credit institutions, and foreign sovereign bonds. Loans to customers outside Iceland amounted to ISK 24,866 million at the end of 2018 or 3.0% of the total loans to customers of which ISK 7,637 million are loans to individuals currently domiciled outside Iceland.

Table 4.5 Net exposure (pre CRM and CCF) by geography and exposure classes (EU CRB-C)

31 December 2018 [ISK m]	Iceland	Nordic	Rest of Europe	North America	Other	Total
Central governments or central banks	95,160		22,686	16,795		134,641
Regional governments or local authorities	8,617					8,617
Public sector entities	346					346
Multilateral development banks			800			800
Institutions	11,610	21,383	22,434	21,639	2,064	79,129
Corporates	429,958	7,640	9,099	3,954	1	450,652
Retail	150,383	2,599	998	553	242	154,775
Secured by mortgages on immovable property	351,450	812	1,252	293	140	353,946
Exposures in default	14,987	119	63		55	15,224
Collective investments undertakings (CIU)	1,520		2,260			3,780
Equity exposures	3,087		13	3,180	57	6,337
Items associated with particularly high risk	2,939	2	161	3	13	3,118
Other exposures	27,945					27,945
Total standardized approach	**1,098,001**	**32,555**	**59,766**	**46,417**	**2,572**	**1,239,311**

4.4.3 Credit Risk Exposure by Maturity

The following table shows net exposure by residual maturity and exposure classes.

Table 4.6 Net exposure (pre CRM and CCF) by residual maturity and exposure classes (EU CRB-E)

31 December 2018 [ISK m]	On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
Central governments or central banks	92	107,545	24,645	2,360		134,641
Regional governments or local authorities	5	3,755	2,402	2,456		8,617
Public sector entities		115	230	2		346
Multilateral development banks		21	649	130		800
Institutions		38,093	40,738	297		79,129
Corporates	16	196,069	184,881	69,686		450,652
Retail		49,645	42,222	62,908		154,775
Secured by mortgages on immovable property		17,122	14,410	322,413		353,946
Exposures in default		2,594	2,641	9,989		15,224
Collective investments undertakings (CIU)	3,780					3,780
Equity exposures	6,337					6,337
Items associated with particularly high risk	3,118					3,118
Other exposures	301	4,279	896	5	22,463	27,945
Total standardized approach	**13,649**	**419,239**	**313,714**	**470,247**	**22,463**	**1,239,311**

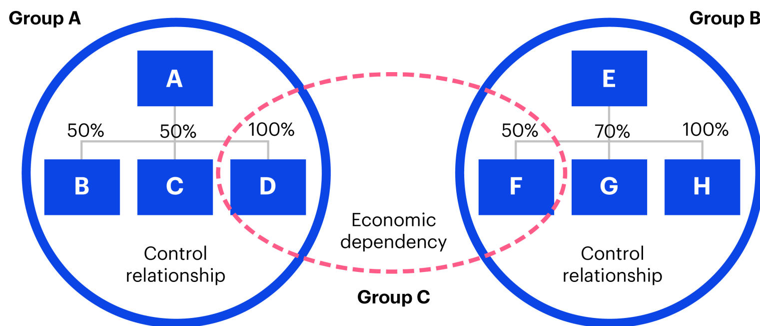
4.4.4 Related Parties and Large Exposures

A large exposure is defined as an exposure to a group of related parties which exceeds 10% of the Bank's eligible capital according to Act on Financial Undertaking No. 161/2002 and Regulation No. 233/2017 on prudential requirements. The legal maximum for individual large exposures, net of eligible collateral, is 25% of the eligible capital.

The Bank seeks to limit its total credit risk through diversification of the loan portfolio by limiting large exposures to groups of related parties. No single large exposure or sum of large exposures shall exceed limits expressed in the Bank's risk appetite, both of which are lower than the legal limits.

The Bank connects related parties according to internal rules that conform to Act on Financial Undertakings No. 161/2002 and relevant EBA guidelines, which define the groups of related parties. The internal rules define the Bank's interpretation of conditions a. and b. in the FME rules, and describe the roles and responsibilities related to the interpretation and maintenance of related parties. The Bank evaluates the relationship of customers with respect to both control and economic dependencies. Economic dependencies between two companies within different groups of related parties do not necessarily combine these groups into one. This relationship is illustrated in Figure 4.1.

Figure 4.1 Related parties



Risk Management monitors party relations both prior to the granting of a loan and during the lifetime of the loan. Connections are stored in the Bank's customer relationship management (CRM) system and the Bank's relationship database.

Customers' exposures are updated daily and are available at any time through the Bank's CRM system. In addition, an exposure report for a group of connected clients is updated weekly and is accessible at any time to Risk Management, Corporate Banking and Retail Banking as well as Credit Office. The report shows a breakdown of lending to each group. Exposures that exceed 2.5% of the eligible capital are reported monthly to the ACC and to the BRIC.

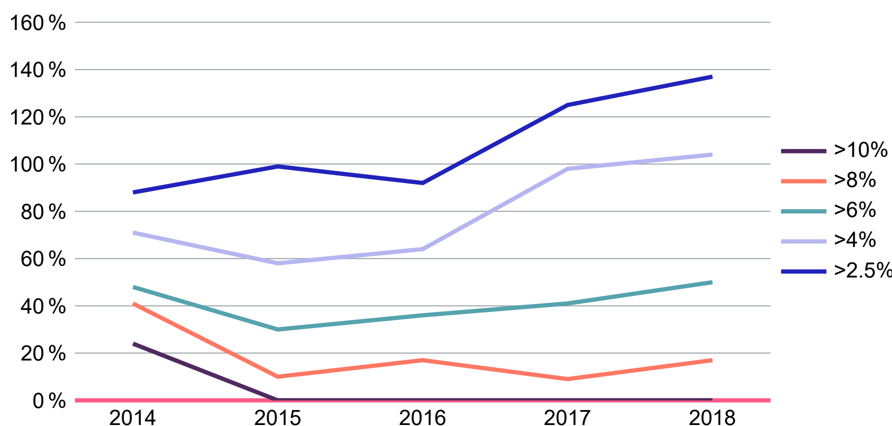
At year end 2018 the Bank had no large exposures. The same applied for the end of 2017. For comparison, large exposures among loans to customers were 24% at the end of 2014. The largest exposure to a group of related parties at the end of 2018 was ISK 15.7 billion or 8.7% of the eligible capital, before accounting for eligible collateral.

Although the sum of large exposure has decreased the sum of exposure exceeding 2.5%, net of eligible collateral, increased from 125% to 144% year-on-year, see Figure 4.2. This is a result of the Bank's optimization of the capital base.

Risk Management monitors party relations both prior to granting a loan and during the lifetime of the loan

No exposure to a group of related parties was classified as a *large exposure* at year end 2018

Figure 4.2 Total of net exposures to a group of related parties (excluding loans to financial institutions)



4.5 Equity Risk in the Banking Book

Exposure limits for the banking book are set in the Bank's risk appetite statement. The Bank has had a disposal schedule for non-core assets which it acquired during the process of restructuring companies following the financial crisis in 2008. The Bank has successfully carried out this plan, resulting in a significant reduction in equity exposures over the past years. The position in listed equities was reduced in 2018, mainly as a result of the sale of shares in Refresco and Skeljungur.

The decrease in fund shares stems from the sale of foreign currency liquidity funds to fund a dividend payout in early 2018. Amounts in Table 4.7 are based on the Bank's prudential consolidation which excludes the Group's insurance operations.

Table 4.7 Equity exposure in the banking book

31 December 2018 [ISK m]	Listed	Unlisted	Total
Investments in associates, non-core		382	382
Equity instruments with variable income	3,193	5,949	9,142
Fund shares - Bonds		1,582	1,582
Fund shares - Other	95.21660904	2,605	2,701
Total equity exposure in the banking book	**3,288**	**10,519**	**13,807**
Unrealized gain/loss in 2018			3,503
31 December 2017 [ISK m]	**Listed**	**Unlisted**	**Total**
Investments in associates, non-core		291	291
Equity instruments with variable income	3,725	7,625	11,350
Fund shares - Bonds		15,367	15,367
Fund shares - Other	127	2,728	2,865
Total equity exposure in the banking book	**3,852**	**26,021**	**29,873**
Unrealized gain/loss in 2017			3,887

4.6 Collateral Management and Valuation

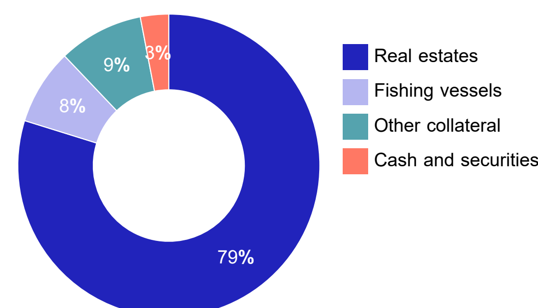
Accurately valued collateral is one of the key components in mitigating credit risk. The Bank's initial valuation of a collateral takes place during the credit approval process. Credit rules outline the acceptable levels of collateral for a given counterparty and exposure type. The collateral obtained by the Bank is typically as follows:

- Retail loans to individuals: Mortgages in residential properties.
- Corporate loans: Real estate properties, fishing vessels and other fixed and current assets including inventory and trade receivables, cash and securities.
- Derivative exposures: Cash, treasury notes and bills, asset backed bonds, listed equity, and funds that consist of eligible securities.

Other instruments used to mitigate credit risk include pledges, guarantees and master netting agreements.

To ensure coordinated collateral value assessment, the Bank operates five collateral valuation committees. The committees set guidelines on collateral valuation techniques, collateral value, val-

Figure 4.3 Collateral by type



uation parameters and haircuts on the applied collateral value. The five committees' areas of expertise are:

- Agriculture
- Fishing vessels and fishing quota
- Real estate
- Securities
- Inventory and trade receivables

The Bank operates a collateral management system (CMS) to consolidate the Bank's collateral data. Table 4.8 shows the collateral held by the Bank for loans to customers, broken down by business sector. Collateral held at year end is to the largest extent real estate collateral, which makes up 79% of the total collateral. At the end of 2018, loans to customers were secured by collateral conservatively valued at ISK 751,449 million, which results in a collateral coverage ratio of 91% compared to 85% at the end of 2017.

The credit exposure towards the Central Bank and financial institutions is unsecured as it is due to the Bank's own deposit accounts and money market loans.

The collateral coverage ratio of loans to customers at the end of 2018 was 91% compared to 85% at the end of 2017

Table 4.8 Collateral for loans to customers

31 December 2018 [ISK m]	Cash and securities	Real estate	Fishing vessels	Other collateral	Total collateral	Unsecured ratio % 2018	Unsecured ratio % 2017
Individuals	837	363,615	18	11,027	375,497	6.2%	8.3%
Real estate activities and construction	1,280	136,935	22	2,484	140,721	4.3%	7.9%
Fishing industry	11	9,452	57,978	10,771	78,212	7.0%	9.0%
Information and communication technology	550	3,562	-	6,618	10,730	48.0%	83.3%
Wholesale and retail trade	349	29,196	15	29,257	58,817	10.6%	15.3%
Financial and insurance services	15,152	6,470	685	9,001	31,308	4.3%	28.3%
Industry, energy and manufacturing	61	23,801	0	7,520	31,382	11.4%	12.5%
Transportation	17	1,055	307	1,673	3,052	74.5%	84.5%
Services	64	7,407	118	4,535	12,124	26.7%	42.0%
Public sector	3	2,031	-	315	2,349	65.6%	50.6%
Agriculture and forestry	0	6,989	-	268	7,257	2.7%	5.7%
Total	**18,324**	**590,513**	**59,143**	**83,469**	**751,449**	**9.4%**	**14.9%**

Note that the collateral value in the table above is capped by exposure amount.

Figure 4.5 shows the mortgage portfolio broken down to LTV bands based on the face value of the mortgages. At the end of 2018, 87% of the mortgages, by value, had loan-to-value below 80% compared to 83% at the end of 2017. As shown in figure 4.4 the mortgage properties are primarily located in the Greater Reykjavik area or 70% of the portfolio, by value.

Figure 4.4 Mortgage portfolio by location

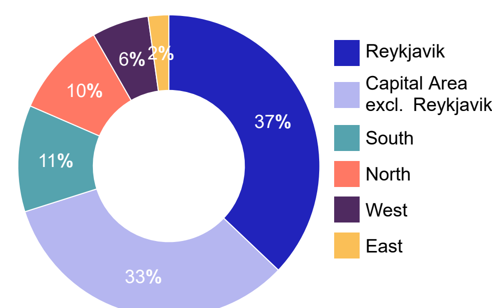
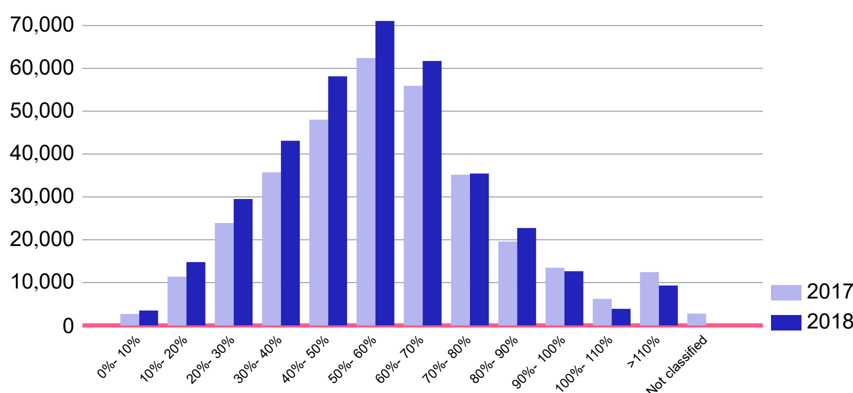


Figure 4.5 Loan to value of mortgage loans [ISK m]



4.7 Credit Rating

As outlined in Chapter 3, the Bank uses the standardized approach to calculate capital requirements for credit risk. Nevertheless, it is the Bank's policy to apply sophisticated credit rating models to monitor the development of credit risk and to estimate customers' default probability. These estimates are used extensively within the Bank as they play a role in both the manual and automatic evaluations of loan applications, portfolio monitoring, collective provisioning and internal economic capital calculations.

The Bank uses four credit rating models that apply to different types of borrowers and exposures. The Bank has also created separate application-versions of each model in order to rate new exposures and loan commitments.

Table 4.9 Probability of Default models

Model	Description
Large corporates	Defined as corporate clients with a) individual exposure over ISK 160 million (approx. EUR 1 million) or b) individual exposure over ISK 65 million and related exposure over ISK 160 million. The model is run manually, based on quantitative information drawn from financial statements as well as qualitative data entered by account managers and approved by Credit Office.
Retail corporates	Defined as corporate clients with a) individual exposure below ISK 65 million or b) individual exposure between ISK 65 million and ISK 160 million and related exposure below ISK 160 million. The model is statistical, run automatically, and uses quantitative internal and external information found to be predictive of default.
Individuals, prime mortgages	Applied to prime mortgages, for which there are standard loan collateral agreements. The model is statistical, run automatically, and based on historical behavior of customers and characteristics of the customer and the exposure.
Individuals, other exposures	Applied to other loans than prime mortgages. The model is statistical, run automatically,and based on historical behavior of customers and characteristics of the customer and the exposure.

The Bank's PD models are developed within the Balance Sheet Risk department, while the validation of the models is performed independently by the Risk Management's Credit Control unit.

4.7.1 Credit Exposure by Rating

Table 4.10 shows the portfolio's rating status, by exposure, for each rating model. In some cases, companies are temporarily unrated. This primarily applies to newly formed entities where no financial or historical information is available, and entities for which the Bank's main rating models are deemed unreliable. During the process of carrying out compliance with IFRS 9, emphasis was placed on rating every customer. Newly formed entities and

corporates without financial statements were rated using application models and special rating models were created for guarantees and public sector entities based on expert judgement, supported by analysis of historical data. At the end of 2018 only 0.4% of the parent company's loan portfolio was unrated.

A default rating grade (DD) is assigned to an exposure when it has been in arrears for over 90 days or the customer is deemed unlikely to pay, which, among other things, can be a result of provisioning against the customer's exposure. Around 1.7% of the portfolio, by exposure, was assigned a default rating at the end of 2018 compared to 2.2% at the end of 2017. Active PD values are translated into an internal rating scale of letters from CCC- to A+. The scale is outlined in table 4.11. The Bank has standardized five risk classes that categorize the internal rating scale, shown in the same table.

Table 4.10 Breakdown of rating status by exposure

	2018			2017		
Rating Model	% Active credit rating	% DD	% Unrated	% Active credit rating	% DD	% Unrated
Large corporates	97.9%	1.4%	0.8%	98.1%	1.7%	0.2%
Retail corporates	95.0%	4.7%	0.2%	94.6%	5.4%	0.0%
Individuals, prime mortgages	98.7%	1.3%	0.0%	98.5%	1.5%	0.0%
Individuals, other exposure	96.8%	3.2%	0.0%	95.2%	4.8%	0.0%
Total	**97.9%**	**1.7%**	**0.4%**	**97.7%**	**2.2%**	**0.1%**

Table 4.11 Rating scale

Risk class	Rating	Lower PD	Upper PD
1	A+	0.00%	0.07%
	A	0.07%	0.11%
	A-	0.11%	0.17%
	BBB+	0.17%	0.26%
	BBB	0.26%	0.41%
	BBB-	0.41%	0.64%
2	BB+	0.64%	0.99%
	BB	0.99%	1.54%
	BB-	1.54%	2.40%
3	B+	2.40%	3.73%
	B	3.73%	5.80%
	B-	5.80%	9.01%
4	CCC+	9.01%	31.00%
	CCC-	31.00%	99.99%
5	DD	100.00%	100.00%

The rating distributions of each model are discussed below.

Large Corporates

Figure 4.7 shows the large corporates portfolio broken down by ratings. The change in the rating distribution is mainly due to pure migration i.e. a shift in the rating of existing customers. Note that the distribution also includes new customers and customers previously rated by the model for retail corporates.

The exposure-weighted average PD for the large corporate portfolio was 1.8% in year-end 2018 compared to 1.5% in year-end 2017. However, in terms of exposure about 14% have been upgraded towards a better risk class, in contrast to 10% that have been downgraded. The migration analysis does not cover defaulting customers or customers that were previously unrated (e.g. new customers), or rated by the model for retail corporates.

Figure 4.6 Risk class rating migration by exposure between 2017 and 2018 – Large Corporates

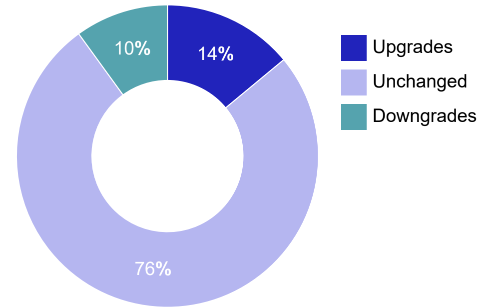
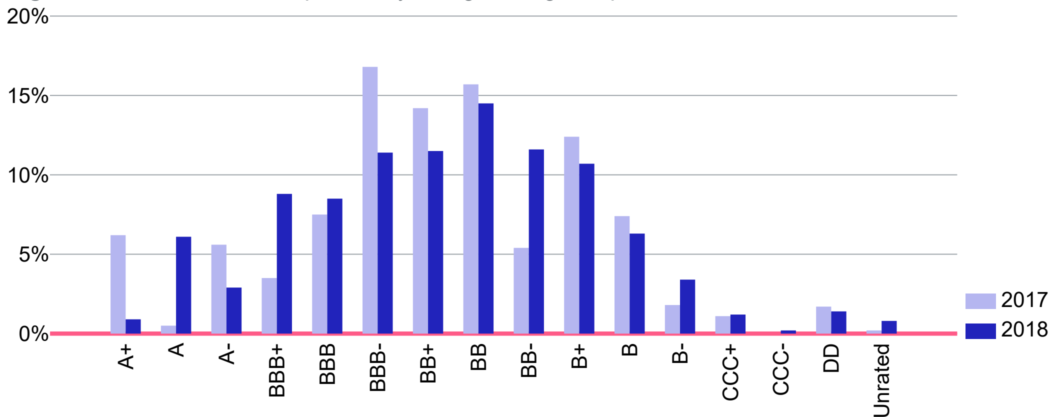


Figure 4.7 Distribution of exposure by rating for large corporates



Retail Corporates

Figure 4.9 shows the retail corporate portfolio broken down by ratings. A modest change to rating distribution is observed between years, towards an improved credit profile.

The exposure-weighted average PD was 6.7% at the end of 2017 but had decreased to 5.5% at the end of 2018. However, in terms of exposure 18% have been upgraded towards a better risk class whereas 19% have been downgraded. The migration analysis does not cover defaulting customers or customers that were previously unrated or rated by the model for large corporates.

Figure 4.8 Risk class rating migration by exposure between 2017 and 2018 – Retail Corporates

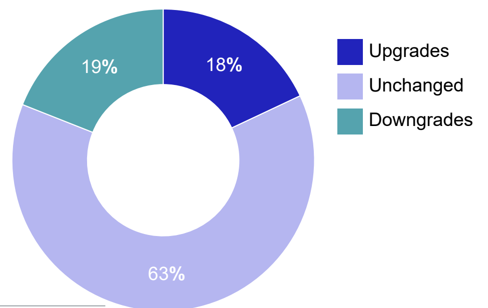
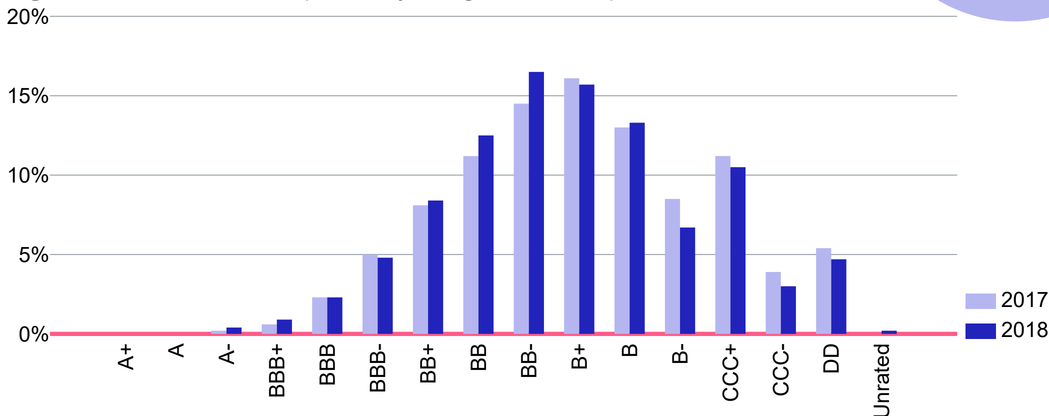


Figure 4.9 Distribution of exposure by rating for retail corporates



Prime Mortgages to Individuals

Figure 4.11 shows the prime mortgage portfolio broken down by ratings. A migration towards an improved credit profile is observed between years.

The exposure-weighted average PD for the prime mortgage portfolio was 2.0% in year-end 2017 compared to 1.5% in year-end 2018. In terms of exposure, approximately 22% of prime mortgages have migrated towards an improved credit grade whereas only 5% have been downgraded. The migration analysis does not cover defaulting customers and customers that were previously unrated and/or are new.

Figure 4.10 Risk class rating migration by exposure between 2017 and 2018 - prime mortgages to Individuals

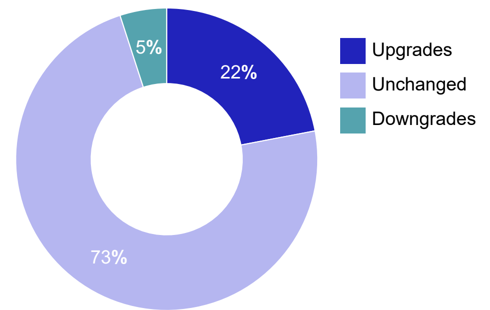
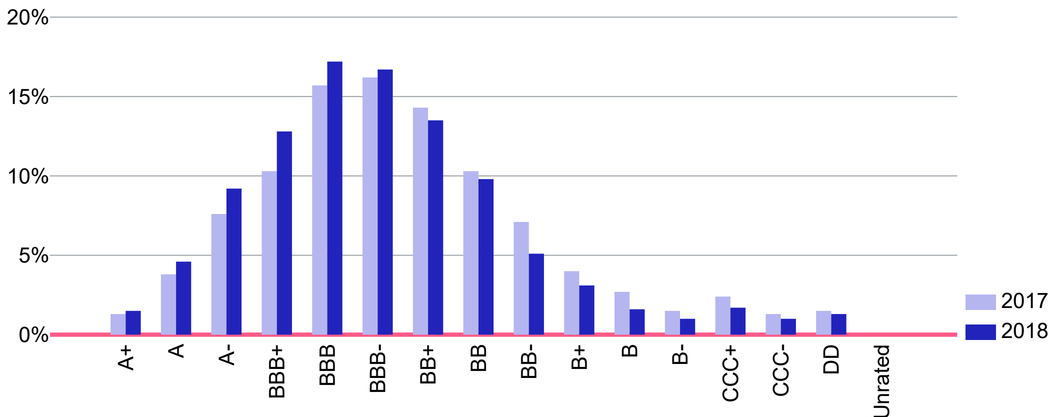


Figure 4.11 Distribution of exposure by rating for prime mortgages to individuals



Other Exposures to Individuals

Figure 4.13 shows the portfolio for other exposures to individuals broken down by ratings. The distribution is similar between years and as for the other portfolios the portion of exposures in default has decreased.

The exposure weighted average PD for the portfolio was 3.9% at year-end 2017 compared to 3.2% at year-end 2018. In terms of exposure about 17% have been upgraded towards a better risk class whereas 14% have been downgraded. The migration analysis does not cover defaulting customers or customers that were previously unrated.

Figure 4.12 Risk class rating migration by exposure between 2017 and 2018 - Other Exposures to Individuals

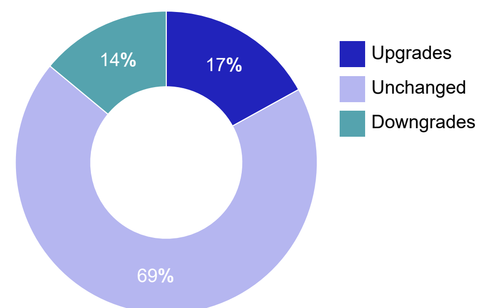
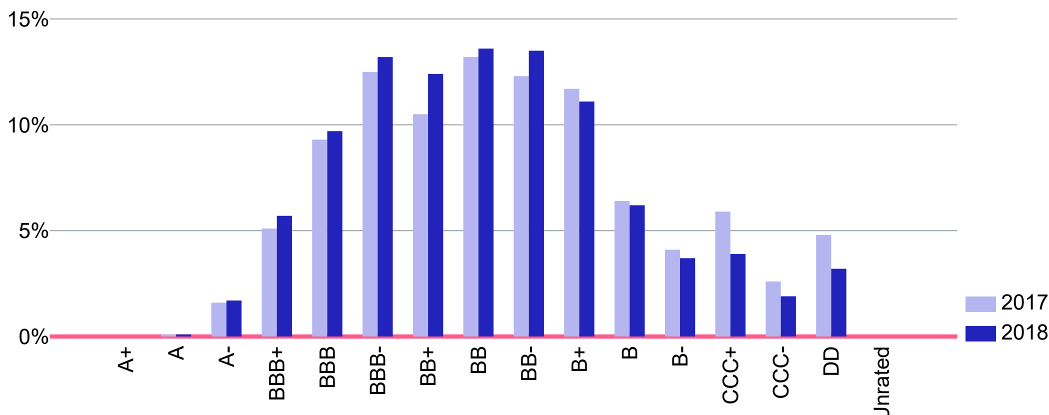


Figure 4.13 Distribution of exposure by rating for other exposures to individuals



Model performance

At the end of 2018, the discriminatory power is in line with or exceeds the Bank's internal requirements and the prediction accuracy is satisfactory. The comparison values for the average PD estimates at the end of 2017 and observed default rates in 2018 are shown in the following table.

Table 4.12 Model performance. Observed default rates in 2018 compared to probability of default predicted at year-end 2017

Model portfolio	Average PD	Observed avg default rate
Large corporates	2.2%	2.6%
Retail corporates	3.6%	3.5%
Individuals, prime mortgages	1.5%	0.9%
Individuals, other exposures	2.3%	2.0%

Note that here the default rate and predicted probability is measured by number of customers, not exposure-weighted as for the rating distributions above.

In figures 4.14 and 4.15, the actual default rate for each rating level in 2018 is compared to the predicted default probability at the end of 2017 for individuals and corporates, respectively.

For individuals, no defaults were observed for A and A+ customers, and no defaults were observed for corporate customers with rating A- or better.

Figure 4.14 Comparison of actual default rate in 2018 and predicted default probability - Individuals

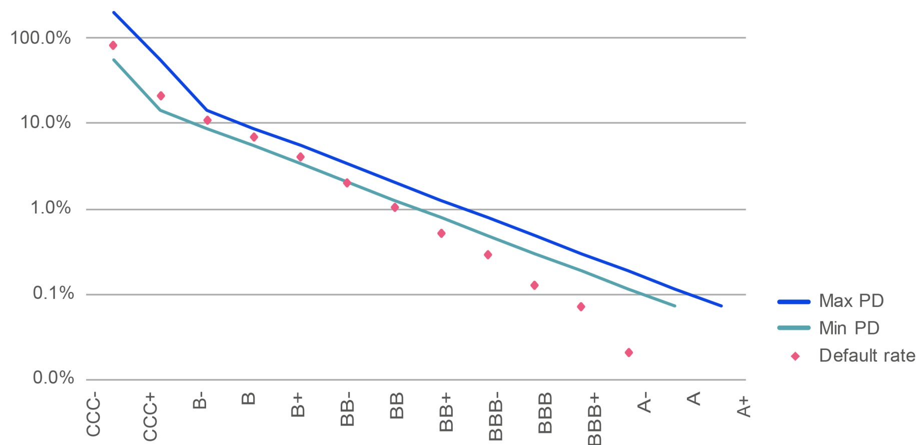
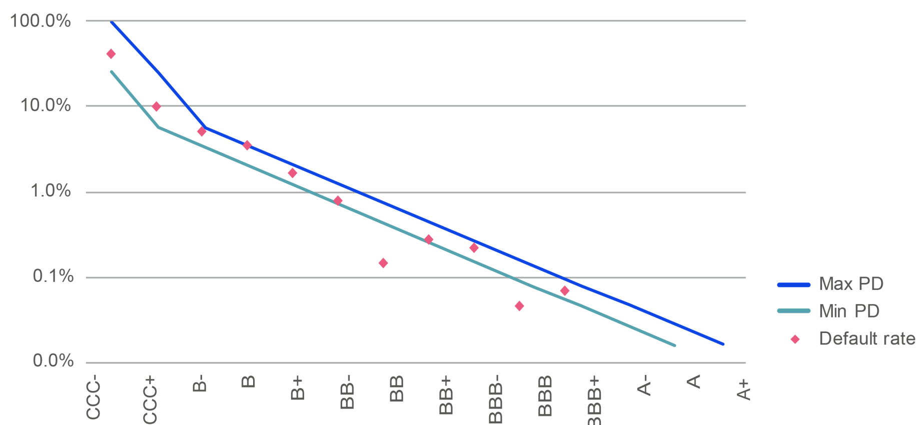


Figure 4.15 Comparison of actual default rate in 2018 and predicted default probability - Corporates



4.8 Portfolio Credit Quality and Provisions

The Bank places great emphasis on monitoring and reporting the quality of its loan portfolio. The credit portfolio quality is regularly aggregated and assessed in terms of industry concentration, single name concentration, product type and credit rating. Risk Management presents its findings to the ACC and the BRIC on a monthly basis. Credit Office monitors extensively the residential real estate market and reports to the ACC its findings and outlook.

The Bank places great emphasis on monitoring and reporting the quality of its loan portfolio

4.8.1 Impairment and Provisions

The Credit Control department is in charge of the Bank's provisioning process. Provisions for credit loss are made according to the IFRS 9 three-stage expected credit loss model. For impaired loans, Stage 3 provisions are made based either on a portfolio level assessment or by individual assessment of credits. For loans that are not impaired, provisions are either made for a 12 month expected credit loss (Stage 1) or a lifetime expected credit loss (Stage 2). Expected credit loss calculations are based on the borrower's probability of default (PD), loss given default (LGD) and the exposure at default (EAD).

A cross-default approach is applied. If a corporate borrower has one impaired credit then all exposures to this borrower are moved to Stage 3 and classified as risk class 5 (a DD rating). Prime mortgages to individuals are assessed separately and do not automatically trigger a movement to Stage 3 and risk class 5 for other exposures to the borrower, and vice versa. A default event for a mortgage can however be an indicator on the likelihood of default for the borrower's other exposures, and vice versa.

For further information, see Note 57 on Credit Risk Rating in the Bank's Consolidated Financial Statements for 2018.

Individual assessment

Financial assets are impaired when the borrower is more than 90 days past due or considered to be unlikely to pay. The level of detail for credit monitoring depends on the size of the exposure, where factors such as delinquency by the borrower, forbearance measurements, and the internal credit rating (see chapter 4.7) are

considered. For larger borrowers, interviews with account managers are also conducted.

Portfolio assessment

The provisions for impairment for prime mortgages and other exposures to individuals, where the amount of the exposure is within a predetermined, and acceptable range, is made on a portfolio basis. The impairment is based on a 90 days delinquency status and a collateral allocation method where the collateral is usually the tax value of the pledged real estate property.

For further information on measurement of impairment, see Note 57 on Expected credit losses in the Bank's Consolidated Financial Statements for 2018.

Table 4.13 Credit quality of exposures by exposure classes and instruments (EU CR1-A)

31 December 2018 [ISK m]	Gross carrying value of		Specific credit risk adjustment	General credit risk adjustment	Net values
	Defaulted exposures	Non-defaulted exposures			
Central government		134,641	0		134,641
Regional government		8,670	53		8,617
Administrative bodies		349	3		346
Multilateral development banks		839	39		800
Institutions		79,129	0		79,129
Corporate		452,405	1,738		450,667
of which SME		160,405	0		160,405
Retail		156,554	1,779		154,775
of which SME		42,643	0		42,643
Real estate		357,140	3,194		353,946
of which SME		33,142	0		33,142
In default	30,660	0	15,452		15,208
High risk		3,118	0		3,118
Collective investment undertaking		3,780	0		3,780
Equity		6,337	0		6,337
Other assets		27,945	0		27,945
Total	**30,660**	**1,230,908**	**22,258**		**1,239,311**
of which: Loans to Customers	29,241	1,035,684	21,586		1,043,339
of which: Debt securities		54,085			54,085
of which: Off-balance sheet exposures	1,419	141,139	671		141,887

4.8.2 Past Due Exposures

Figures 4.16 and 4.17 show the development of serious defaults from the end of 2010 for individuals and corporates, using the facility default and the cross default methods. In the latter method, all exposure to the customer is considered in default if one facility is in default. Defaults have steadily decreased during the period, mainly due to the progress made in restructuring problem loans, the resolution of the legal uncertainty surrounding the FX loans, progress in legal collection, as well as a better economic environment.

Figure 4.16 Development of past due exposures to individuals, parent company

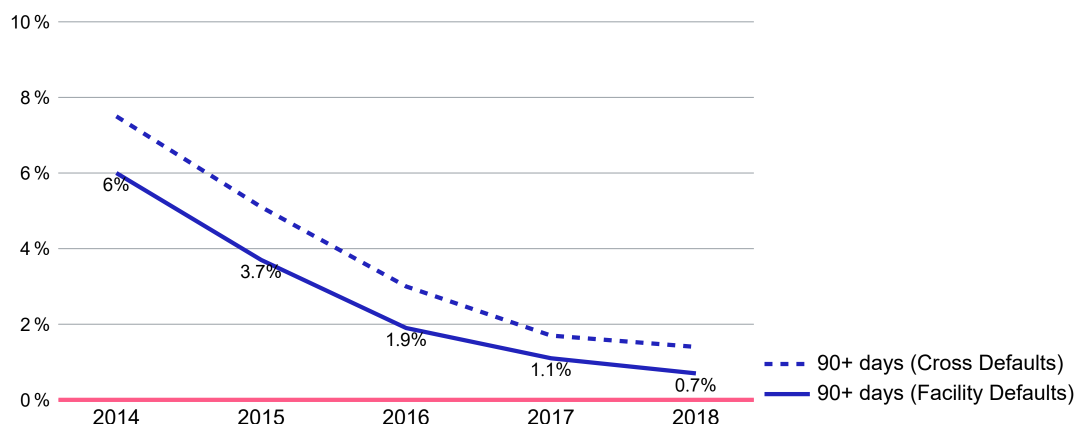
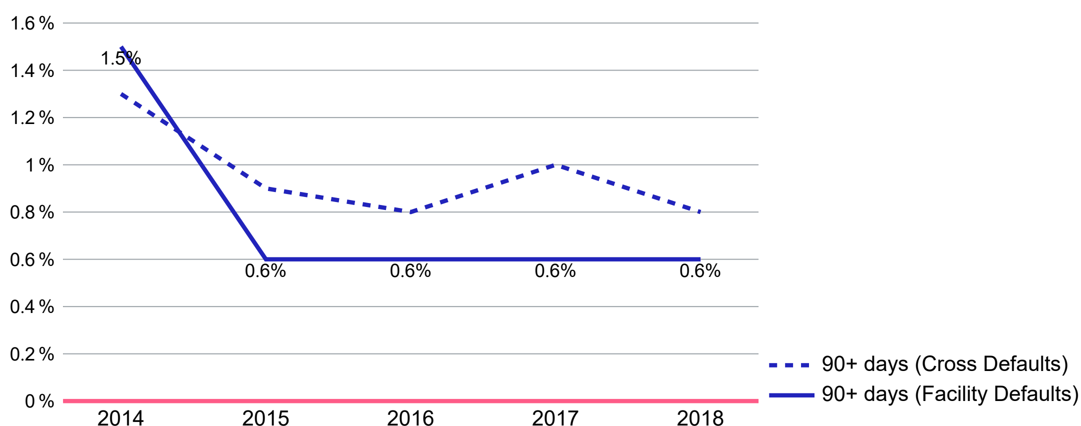


Figure 4.17 Development of past due exposures to companies, parent company



Customer loans that are more than 90 days past due were 0.7% of the total loan book at year-end 2018 if measured at facility level. The cross default ratio more than 90 days past due was 1.1%; 1.4% for individuals and 0.8% for corporates.

Customer loans that are more than 90 days past due represent 0.7% of the total loan book at year-end 2018 if measured at facility level

Table 4.14 Ageing of past-due exposures (EU CR1-D)

31 December 2018 [ISK m]	Gross carrying value of					
	≤ 30 days	> 30 days ≤ 60 days	> 60 days ≤ 90 days	> 90 days ≤ 180 days	> 180 days ≤ 1 year	> 1 year
Companies	12,308	2,789	333	861	1,623	2,160
Individuals	12,653	4,537	310	1,567	1,092	2,251
Total loans	**24,962**	**7,326**	**642**	**2,428**	**2,716**	**4,411**

4.8.3 Forbearance

The Bank has adopted the European Banking Authority's (EBA) definition of forbearance. According to the definition, an exposure is considered forborne if concessions, such as modification of

terms or debt refinancing, have been granted due to the client's financial difficulties of and those concessions would not have been granted in the absence of those financial difficulties.

The Bank is willing to consider forbearance measures in situations when a client is unable to comply with terms and conditions due to financial difficulties, if there is a realistic possibility that the terms and conditions can be met again. This is especially considered in cases when the Bank and the client have enjoyed a long-standing business relationship.

The decision to apply a forbearance measure is subject to the Bank's credit granting mechanism, as described in section 4.2 and for potential forbearance cases there is, as a part of the relevant credit committee's decision, a determination of whether the concession constitutes forbearance.

Table 4.15 shows the Gross Carrying Value of forborne loans at the Bank by forbearance type and whether the loan is currently classified as performing or non-performing.

Table 4.15 Forborne loans to customers

	2018			2017		
31 December [ISK m]	Performing	Non-performing	Total	Performing	Non-performing	Total
Modification	22,167	5,924	28,091	25,351	5,682	31,033
Refinancing	975	473	1,448	1,440	18	1,458
Total	**23,142**	**6,397**	**29,539**	**26,791**	**5,700**	**32,491**
% of Loan portfolio	2.7%	0.8%	3.5%	3.4%	0.7%	4.2%

4.8.4 Expected Credit Loss

12 month expected credit loss (ECL) is defined as the amount of credit loss that the Bank expects, on average, in the following business year. The Bank accounts for expected credit loss according to the IFRS 9 three stage model. In addition, the Bank holds capital in order to be able to meet unexpected loss (see chapter 3.3).

During the IFRS 9 implementation the Bank has further refined its ECL model taking advantage of enhanced collateral management within the Bank and the experience gained from the economic difficulties in the past few years. Apart from the IFRS 9 implementation other areas have benefitted from these refined ECL calculation such as, impairment predictions in the annual budget and the pricing of credit, where credit spreads take into account the exposure's expected loss, cost of capital, and operational cost.

Expected credit loss is calculated using the formula $ECL = PD \cdot LGD \cdot EAD$ where each credit exposure's ECL is derived from the customer's probability of default (PD) as per the Basel III definition, loss given default (LGD) for the credit type, and the predicted amount of the exposure at default (EAD). For additional information about the estimation of PD see sections 4.7 and 4.7.1.

Expected credit loss is calculated using the formula $ECL = PD \cdot LGD \cdot EAD$

The main components of LGD are:

- the *cure-rate* of the exposure, which describes the probability that the customer returns to a non-defaulting status, without a write-off, within one year from the default event

- the *collateral gap* of the defaulted exposure, with haircuts based on historical evidence and expert judgement
- assessment of recoveries of defaulted non-collateralized exposures, conditional on non-cure

Table 4.16 shows the 12 month Expected Loss rate for different customer and exposure classes for exposures in Stage 1 and Stage 2. PD and LGD values are weighted by the corresponding Gross Carrying Value taking Off-Balance Sheet items also into account.

Table 4.16 Expected credit loss by exposure type

31 December 2018	PD	LGD	EL
Large Corporates	2.0%	11.5%	0.17%
Retail Corporates	4.7%	13.1%	0.88%
Individuals, Prime Mortgages	1.5%	0.6%	0.03%
Individuals, Other	2.7%	32.3%	0.79%
Weighted average	**2.1%**	**10.5%**	**0.25%**

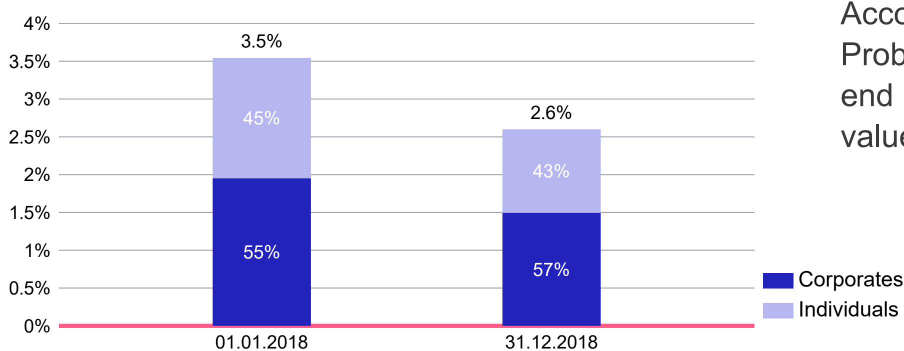
1 January 2018	PD	LGD	EL
Large Corporates	1.4%	15.2%	0.18%
Retail Corporates	5.8%	13.7%	0.52%
Individuals, Prime Mortgages	1.9%	1.1%	0.04%
Individuals, Other	3.9%	29.6%	1.17%
Weighted average	**2.2%**	**11.8%**	**0.25%**

4.8.5 Problem loans

The Bank has aligned its definition of *Problem loans* with IFRS 9. Problem loans are now defined as loans in Stage 3 and the *Problem loans ratio* takes is calculated base on the gross carrying value of loans. At the end of 2018 the problem loan ratio is 2.6% af the loan portfolio, compared to 3.5% in the beginning of the year. 57% of Problem loans, by value, at year-end 2018 are loans to corporates and 43% to individuals.

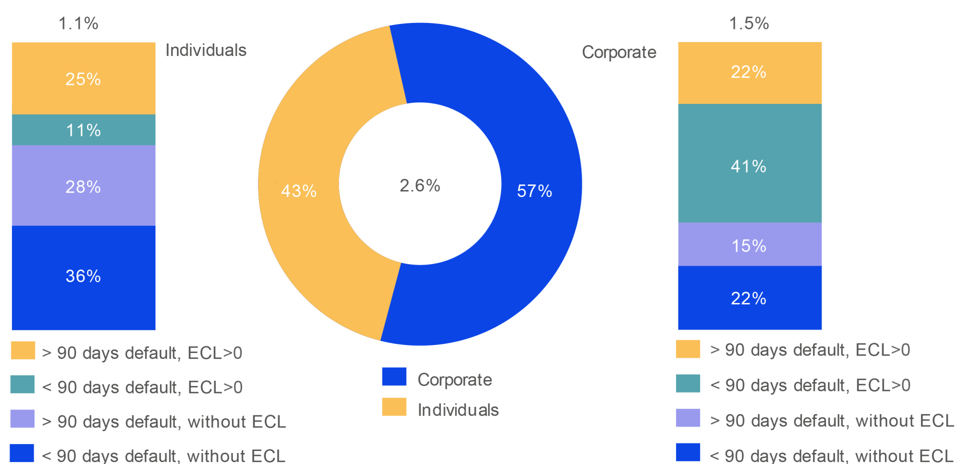
According to a new definition of Problem loans the ratio at year end is 2.6%, at gross carrying value.

Figure 4.18 Development of problem loans



The breakdown of problem loans by status is shown in Figure 4.19. 49% of the problem loans carry no expected credit loss (ECL) due to acceptable collateral cover.

Figure 4.19 Breakdown of problem loans by status



4.9 Counterparty Credit Risk

Counterparty credit risk is the risk of the Bank's counterparties in derivative transactions, securities lending, or repurchase agreement defaulting before the final settlement of the contract's cash flows.

The Bank offers financial derivative instruments to professional investors. Table 4.17 shows derivative trading activities currently permitted. The derivative instruments are classified according to primary risk factor and type of derivative instrument.

Table 4.17 Permitted derivative trading activities

Primary risk factor	Swaps	Forwards	Options
Interest rate	x		
Foreign exchange	x	x	x
Securities		x	x
Commodities		x	x

Value changes are made in response to changes in interest rates, exchange rates, security prices and commodity prices. Counterparty credit risk arising from derivative financial instruments is the combination of the replacement cost of instruments with a positive fair value and the potential for future credit risk exposure. Replacement risk and future risk are used to calculate the capital requirement for counterparty credit risk in combination with the counterparty's risk weights, taking into account collateral posted (credit risk mitigation, CRM).

Table 4.18 CCR exposures by standardized risk-weights and exposure class (EU CCR3)

31 December 2018 [ISK m]	Risk weights					
Exposure classes	0%	20%	50%	100%	Total	Of which unrated
Central governments and central banks	75				75	
Regional governments or local authorities		0			0	0
Institutions			7,599		7,599	
Corporates				606	606	606
Total	**75**	**0**	**7,599**	**606**	**8,280**	**606**

The Bank sets limits on customer's total exposure to control the Bank's risk associated with derivatives trading. These limits are generally client-specific and may refer specifically to different categories of contracts. Generally, collateral is required to cover potential losses on a contract. Should the net-negative position of the contract fall below a certain level, a call is made for additional collateral. If extra collateral is not supplied within a tightly specified deadline, the contract is closed. The margin-call process is monitored by Risk Management.

The margin-call process is monitored by Risk Management

Table 4.19 Impact of netting and collateral held on exposure values (EU CCR5A)

31 December 2018 [ISK m]	Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure
Derivatives	6,571		6,571	5,247	1,324
SFTs	6,606		6,606	5,037	1,569
Cross-product netting					
Total	**13,177**		**13,177**	**10,284**	**2,893**

Table 4.20 Composition of collateral for exposures to CCR (EU CCR5B)

	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair Value of Collateral received		Fair Value of Collateral posted		Fair Value of Collateral received	Fair Value of Collateral posted
Item	Segregated	Unsegregated	Segregated	Unsegregated		
Cash - domestic currency		1,548				679
Cash - other currency		3,363		1,175		
Domestic sovereign debt		367			646	
Other sovereign debt					4,322	
Institutions		321			69	50
Corporate		40				5,877
Equity securities		4,611				
Other collateral		435				
Total		**10,686**		**1,175**	**5,037**	**6,606**

4.10 Informative: CPI-linked Loans Explained

Loans indexed to the official consumer price index (CPI) have been a common credit product in Iceland since 1979. An Icelandic government agency, Statistics Iceland, maintains the CPI by measuring changes in the prices paid by consumers for a reference-basket of goods and services, the composition of which is based

on an expenditure survey conducted regularly. The expenditure survey has been carried out continuously since 2000, and the results are used in the annual revision of the CPI base. The CPI is published monthly.

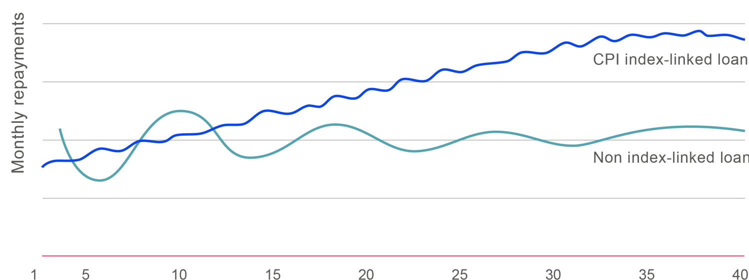
CPI-linked mortgages are a common form of mortgage lending in Iceland. They are typically annuities, where the monthly payment and the remaining principal are linked to the CPI. As the real interest rates on the loans are generally lower than nominal rates, the initial payments for CPI-linked loans are lower than those for corresponding non-CPI-linked loans. This increases the borrower's purchasing power, which contributes to the popularity of the product.

CPI-linked mortgages are typically annuities, where the monthly payment and the remaining principal are linked to the CPI

In an inflation environment there will be a gradual increase in the monthly payment. To understand the risk trade-off for the borrower it is interesting to contrast a CPI-linked mortgage and a non-CPI-linked mortgage with a variable interest rate. In a high inflation environment, with e.g. 20% annual inflation, a monthly payment of 100 would rise to 120 year-on-year. In this environment, a non-CPI borrower might see a doubling of his interest rate which could lead, approximately, to a doubling of the monthly payment. The greater risk of default for the non-CPI loan is evident in this scenario. For CPI-linked loans, the inflation effect accumulates on top of the principal, effectively being borrowed throughout the lifetime of the exposure.

For CPI-linked loans, the inflation effect accumulates on top of the principal, effectively being borrowed throughout the lifetime of the exposure

Figure 4.20 Monthly payments of a 40 year CPI-linked annuity, for illustrative purposes

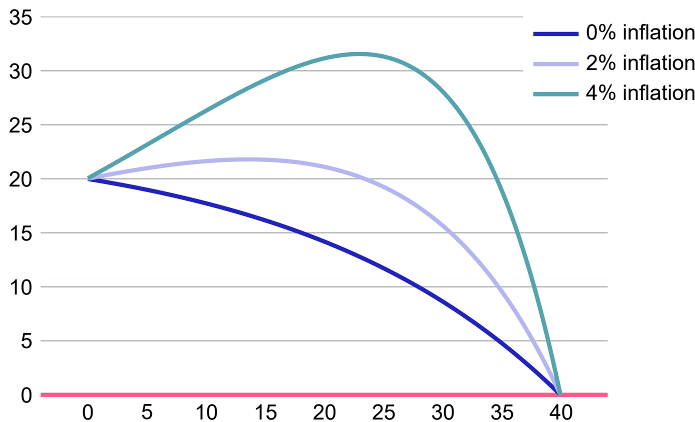


Default-risk in CPI-linked loans is further mitigated by a legislated mechanism called *payment adjustment* (IS: greiðslujöfnun). The purpose of this mechanism is to reduce the risk of borrower distress in periods when inflation outpaces increases in wages. The mechanism is triggered when the CPI exceeds the official wage index and has the effect that the monthly payment is temporarily indexed to the wage index instead of the CPI and a portion of the monthly payment is deferred. The deferred portion is drawn down once the wage index has surpassed the CPI or by extending the term of the loan.

The downside for CPI-linked loans is the borrower's equity position. Because the remaining principal is CPI-linked, in an inflation environment a negative amortisation may occur, particularly during the first part of the term, see Figure 4.21. During the period of 20% inflation in the aforementioned scenario, the remaining principal would increase by approximately 20%, which could deplete the borrower's equity (LTV could increase from 80% to 100%).

In an inflation environment a negative amortization of a CPI-linked loan may occur, particularly during the first part of the term

Figure 4.21 The effect of inflation (x-asis) on the development of the remaining principal of a 40 year CPI-linked annuity [ISK m] (y-axis)

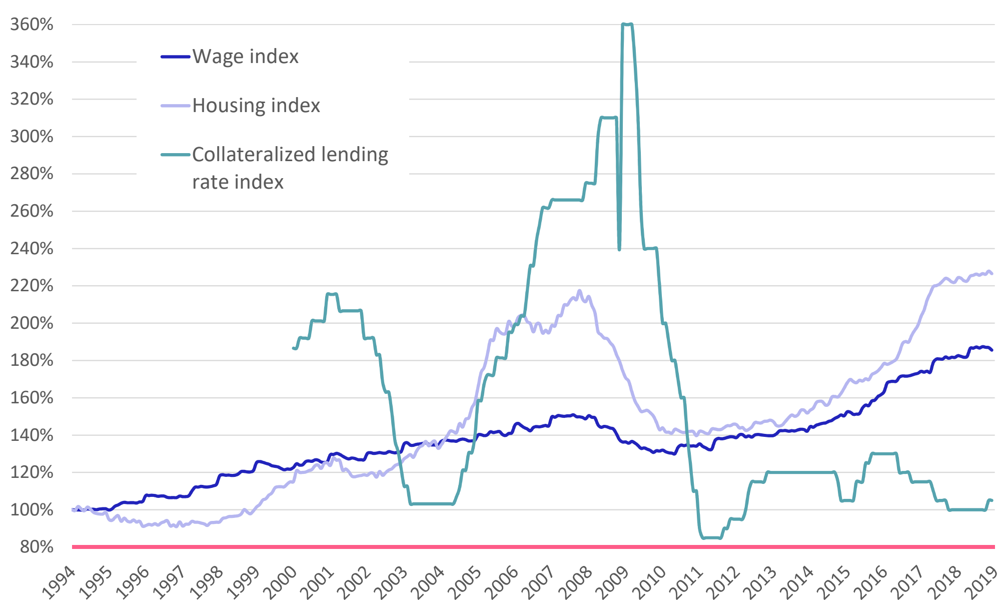


Typically wages and housing prices are correlated to the CPI in the medium and long term. Therefore, payment difficulties and LTV-deficiencies for a CPI-linked mortgage are often demonstrated to be temporary. This relationship was stressed following the financial crisis which began in October 2008. Figure 4.22 shows the development of the official wage and housing indices, in real terms. The figure demonstrates the approx.35% average drop in housing prices and approx. 15% average drop in salaries – in real terms – during the recession of 2009-2010. The loss of home equity and purchasing power explains the loss in mortgage portfolio quality during the period.

The loss of home equity and purchasing power during the recession of 2009-2010 explains the loss in mortgage portfolio quality during the period

Figure 4.22 also shows the development of the Central Bank's key interest rate (not CPI-linked) for collateralized lending (indexed to the 5% believed to be prevailing in 1994). Periods with sharp increases in the key rate are evident.

Figure 4.22 Development of wages, housing prices and interest rates



A significant portion of the Bank's CPI-linked mortgages has a fixed interest rate for up to 40 years and is match funded with covered bonds which have a pre-payment option.

5 **Market** Risk

5.1 Governance and Policy
5.2 Market Risk Management
5.3 Market Risk Measurement
5.4 Minimum Capital Requirements
5.5 Foreign Exchange Risk
5.6 Indexation Risk
5.7 Interest Rate Risk in the Banking Book
5.8 Trading Book

5 Market Risk

Market risk is the current or prospective risk that changes in financial market prices and rates will cause fluctuations in the value and cash flow of financial instruments. The risk arises from balance sheet imbalances on the banking book and trading positions in bonds, equities, currencies, derivatives, and any other commitments depending on market prices and rates. The main market risk factors are price risk, currency risk, indexation risk and interest rate risk.

5.1 Governance and Policy

The Bank's market risk policy and market risk appetite is established by the Board of Directors and is reviewed on an annual basis.

In accordance with the market risk policy, the Bank's CEO has set up a market risk framework, which outlines responsibilities, rules and limit framework for market risk arising from the Bank's operations. On the management level, the Asset and Liability Committee (ALCO) is the principal authority for management and monitoring of market risk.

According to the policy, the Bank invests its own capital on a limited and carefully selected basis in transactions, underwritings and other activities that involve market risk. The Bank aims to limit market exposure and imbalances between assets and liabilities in balance with its strategic goals for net profit.

5.2 Market Risk Management

Market risk controls vary between trading and banking (non-trading) books where the trading book holds positions with trading intent, according to the EU Capital Requirements Directive, that are actively managed on a daily basis. The limit framework for the trading book is explicit and is monitored daily, while such a framework does not apply to the banking book due to the nature of the exposure. However, the banking book market risk exposure is monitored and reported on a monthly basis. The Board of Directors has set limits on various market risk exposures in the Bank's risk appetite statement.

Table 5.1 Sources of market risk

Origin	Source	Risk Management
Trading Book	Positions held for Market Making and Proprietary Trading purposes. Trading derivatives and associated hedge positions managed within Treasury and Capital Markets.	Explicit limits and rules for positions and hedging requirements. Daily monitoring.
Banking Book	Balance sheet imbalances.	Board of Directors' risk appetite and strategic management of ALCO. Monthly monitoring.

Risk Management's Balance Sheet Risk department is responsible for measuring and monitoring market risk exposure and compliance with the limits framework. The performance, exposure and relevant risk measures for the trading book are summarized and reported to the relevant employees and managing directors on a daily basis. Exposures and relevant risk measures are reported on a regular basis to ALCO and the Board of Directors.

5.3 Market Risk Measurement

Market risk exposure and price fluctuations in markets are measured on an end-of-day basis. The Bank uses various risk measures to calculate market risk exposure, see Table 5.2.

Table 5.2 Methods of market risk measurement

Market risk type	Measurement methods
Equity risk	Exposure in equity is measured with net and gross positions. VaR and stressed VaR is used to assess risk of loss under current and severe circumstances.
Interest rate risk	Interest rate risk is quantified as the change in fair value and/or variability in net interest income, after simulating yield curve movements. This is done for all positions sensitive to interest rates. Prepayment risk is reflected in the Bank's models.
Foreign exchange risk	Foreign exchange risk is quantified using the net balance of assets and liabilities in each currency. This includes current positions, forward positions, delta positions in FX derivatives and the market value of derivatives in foreign currency. The VaR method is used to quantify possible losses.
Indexation risk	Indexation risk is quantified using the net balance of CPI-linked assets and liabilities. In assessing unexpected loss to earnings due to indexation, the CPI is simulated in conjunction with interest rate movements.

5.4 Minimum Capital Requirements

The Bank's capital requirements for market risk under Pillar 1 are calculated using the standardized method as stipulated in the EU Capital Requirements Regulation (CRR) No. 575/2013.

Table 5.3 Market risk minimum capital requirements (EU MR1)

31 December 2018 [ISK m]	REAs	Capital requirements
Outright products		
Interest rate risk (general and specific)	4,293	343
Equity risk (general and specific)	4,635	371
Foreign exchange risk	4,280	342
Commodity risk		
Options (non-delta)		
Securitisation (specific risk)		
Total	**13,208**	**1,056**

5.5 Foreign Exchange Risk

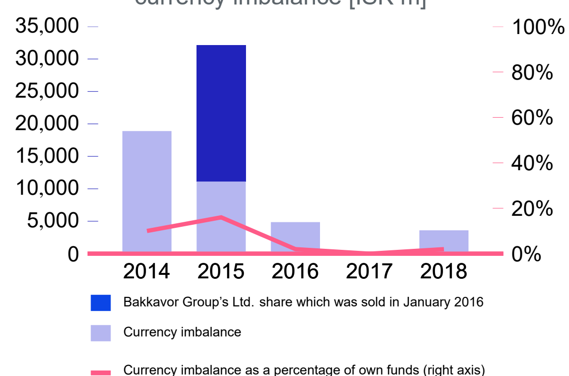
Currency risk is the risk of loss due to adverse movements in foreign exchange rates. The Bank is exposed to currency risk due to imbalances between assets and liabilities for different currencies. The Bank has managed to significantly reduce the consolidated total net position in currencies over the past years. At year-end 2018 the Group's currency imbalance was 2.0% of total

own funds. According to the Central Bank's rules No. 784/2018 the currency imbalance may not exceed the lower of 10% of total own funds and ISK 25bn.

Table 5.4 Net position of assets and liabilities by currency and Value-at-Risk results

Foreign currency [ISK m]	Net Exposure	10 day 99%VaR
EUR	2,632	79
USD	545	24
GBP	265	13
DKK	-555	17
Other	713	42
Diversification	-	-67
Total	**3,600**	**107**

Figure 5.1 Development of the Bank's currency imbalance [ISK m]



5.6 Indexation Risk

Indexation risk is defined as the risk of loss due to movements in the Consumer Price Index (CPI), i.e. inflation or deflation. A considerable part of the Bank's balance sheet consists of indexed assets and liabilities, the value of which is directly linked to the CPI. This risk factor should not be mistaken for inflation risk which represents the risk of loss in real value due to inflation.

At the end of 2018, the total amount of CPI-linked assets amounted to ISK 369,149 million and the total amount of CPI-linked liabilities amounted to ISK 268,605 million. Therefore, the net CPI-linked imbalance was ISK 100,544 million, which means that deflation would result in a loss for the Bank. The indexation imbalance has decreased in 2018 by ISK 32bn primarily due to an increase in CPI-linked liabilities with almost no net increase in CPI-linked loans. Furthermore, the Bank has entered into strategic derivatives positions in order to manage the imbalance.

The Bank strives to keep its indexation imbalance stable. The Bank views the imbalance as an important hedge against loss to equity in real value terms and as a hedge against increased leverage. The price of the hedge is reflected in higher volatility of earnings in nominal terms.

Periods of persistent deflation in the Icelandic economy are unknown in modern history. The period from 2014 to 2017 is largely unprecendented as inflation was below the Central Bank of Iceland target inflation of 2.5%. In 2018 inflation was however measured at 3.2%. The Bank measures its capital requirements due to indexation risk in conjunction with interest rate risk as inflation is a dominant factor in the dynamics of interest rates and therefore cannot be viewed independently.

Figure 5.2 Development of the Bank's indexation imbalance [ISK m]

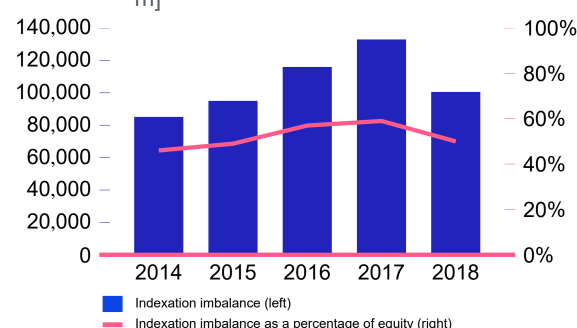


Figure 5.3 12 month inflation in Iceland

5.7 Interest Rate Risk in the Banking Book

Interest rate risk is the risk of loss through changes in fair value or net interest income caused by changing interest rates. The Bank's balance sheet is subject to a mismatch between interest-bearing assets and interest-bearing liabilities, characterized by a gap in interest-fixing periods. A large amount of liabilities such as

deposits have floating interest rates while assets in general have longer interest-fixing periods.

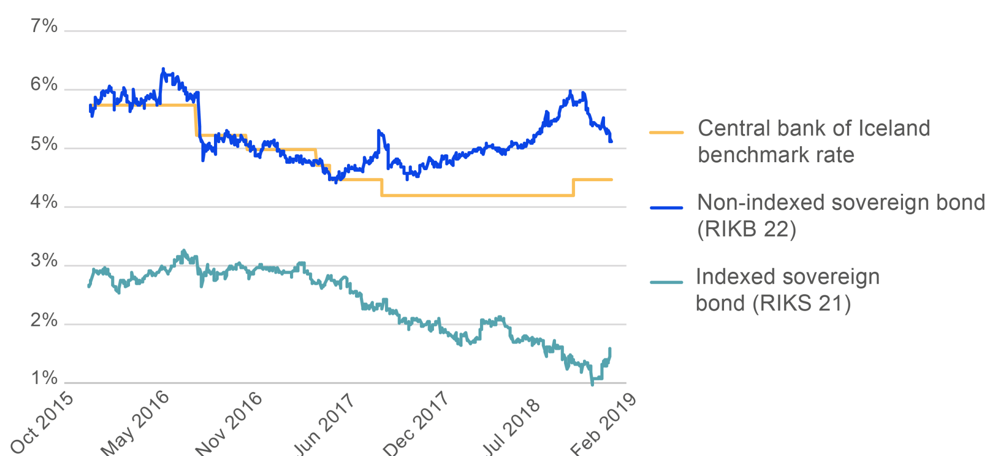
The Bank's strategy for managing interest rate risk is to strive for an interest rate balance between assets and liabilities.

The Bank's interest rate risk for foreign currencies is limited as foreign denominated assets predominantly have short fixing periods and the Bank has applied cash flow hedging for its foreign denominated fixed rate borrowings. For domestic rates, longer fixing periods are more common, and this especially applies to indexed mortgages issued between 2004 and 2006. The fixing profile of indexed mortgages is however largely matched by that of the Bank's structured covered bonds issues, which serves as a hedge against repricing risk. The Bank has been able to manage relatively small interest fixing gaps.

For a breakdown of the Bank's interest-bearing assets and liabilities by interest-fixing periods, see Note 44 in the Consolidated Financial Statements.

In the past years domestic interest rates, nominal and real, have fallen. Due to favorable refinancing spreads, prepayments and refinancing of loans have been considerable. Prepayment risk is mitigated by prepayment fees and the Bank's own prepayment options. The Bank's prepayment of structured covered bonds is a reaction to mortgage prepayments and mortgage refinancing.

Figure 5.4 Development of the Central bank of Iceland benchmark rate, and yields of sovereign bonds.



Refinancing of indexed fixed-rate loans and matching covered bonds has resulted in the shortening of the Bank's interest-fixing profile as current market lending is targeted on shorter interest-fixing periods. The Bank's net interest income is now sensitive to lower real interest rates as prepayments of indexed assets have exceeded that of matching liabilities, and the Bank's statutory covered bonds are largely non-prepayable. For non-indexed instruments, the Bank is however sensitive to higher nominal rates as the net increase of fixed rate duration of assets has exceeded that of liabilities. Figures 5.5 to 5.7 show the Bank's interest fixing profile for the Bank's mortgages to individuals and covered bonds, indexed and non-indexed.

The Bank's balance sheet is subject to a mismatch between interest-bearing assets and interest-bearing liabilities, characterized by a gap in interest-fixing periods

Figure 5.5 Interest-fixing profile of the Bank's only remaining structured covered bond, CB2, and the corresponding pledged mortgages. CB2 is a prepayable bond [ISK m]

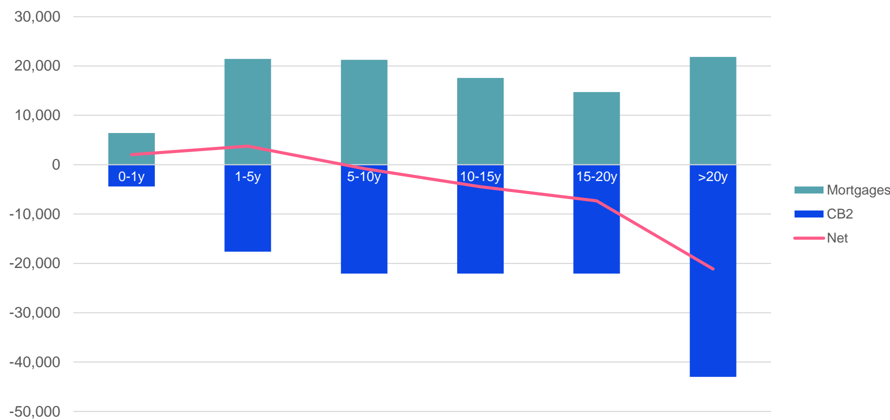


Figure 5.6 Interest fixing profile of the Bank's indexed mortgages and covered bonds other than CB2 and its corresponding pledged mortgages [ISK m]

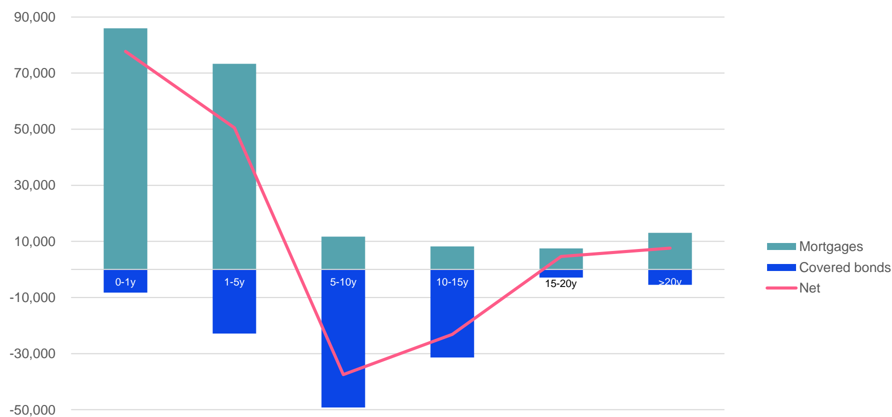


Figure 5.7 Interest fixing profile of the Bank's non-indexed mortgages and covered bonds [ISK m]

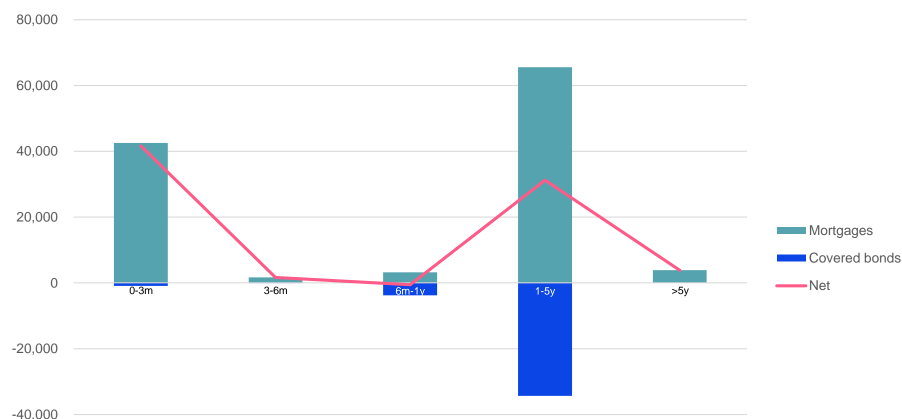


Table 5.5 shows the fair value sensitivity of interest-bearing assets and liabilities in the banking book for different yield curve shifts. The risk is asymmetric as the Bank applies its prepayment models in the fair value calculations, taking into account the prepayment likelihood of loans and matched liabilities and the expected behavior of non-maturing deposits. Note that the Bank's

book value is not affected in the same way as the fair value.

Table 5.5 Sensitivity of the fair value of interest bearing assets and liabilities in the banking book by interest rate base

	2018		2017	
31 December [ISK m]	-100bps	+100bps	-100bps	+100bps
ISK, CPI indexed linked	-4,544	4,872	-1,465	2,411
ISK, Non Indexed linked	624	-139	-76	742
Foreign currencies	700	-708	88	-113
Total	**-3,220**	**4,024**	**-1,453**	**3,040**

The capital assessment for interest rate risk in the banking book for domestic rates is calculated through simulations of nominal and real yield curve movements and the value of the CPI. The dynamics between interest rates and the CPI are calibrated to historical data and economic fundamentals. Significant diversification is observed due to the close correlation between inflation and interest rates. Prepayment rates are dynamic in the model as changing interest rates affect customers' repayment spreads. Economic capital is the 1% worst loss due to fair value losses and loss to net interest income due to changes to the CPI. For foreign currencies, the Bank applies a 200bps shock interest rate hike.

5.8 Trading Book

The trading book is defined as the Bank's positions held with trading intent, which includes market watch and proprietary trading positions and non-strategic derivatives positions and associated hedge positions. The purpose of strategic derivatives is to reduce imbalances on the balance sheet and hedge against market risk. Non-strategic derivatives are however offered to the Bank's customers to meet their investment and risk management needs. Financial instruments on the trading book are exposed to price risk, i.e. the risk that arises due to possible losses from adverse movements in the market prices at which securities in the Bank's holding are valued.

5.8.1 Market Making Activities and Proprietary Trading

Securities positions in relation with the Bank's market making and proprietary trading activities are shown in Table 5.6.

Table 5.6 Positions within the Bank's market making activities and proprietary trading

31 December [ISK m]	2018	2017
Bonds	6,536	2,445
Equity	2,307	1,661
Total	**8,843**	**4,106**

Market watch is subject to a limit framework where possible breaches are monitored daily and reported to relevant parties such as the CEO, CRO, relevant MD and trader. The Bank's trading exposure varies from day to day and the following table shows the end of year exposure along with the 2018 average and maxi-

mum exposure in both equity and bonds.

Table 5.7 The Bank's proprietary trading exposure

	Bonds		
31 December 2018 [ISK m]	Long	Short	Net
Year-end	7,023	-487	6,536
Average	4,793	-666	4,126
Maximum	8,937	-2,411	8,492

	Equity		
31 December 2018 [ISK m]	Long	Short	Net
Year-end	2,307	0	2,307
Average	2,840	-36	2,804
Maximum	4,491	-226	4,491

5.8.2 Trading Derivatives

The Bank's derivative operation is twofold: a) a trading operation where the Bank offers a variety of derivatives to customers to meet their investment and risk management needs and b) a strategic operation where the Bank uses derivatives to hedge various imbalances on its own balance sheet in order to reduce risk such as currency risk. This section covers trading derivatives.

Trading derivatives are subject to a rigid limit framework where exposure limits are set per customer, per security, per interest rate etc. Forward contracts with securities are traded within Capital Markets and bear no market risk since they are fully hedged. Derivatives for which the Bank takes on market risk are traded within Treasury and are subject to interest rate limits per currency and an open delta position limit for each underlying security.

Table 5.8 Derivatives on the trading book

31 December 2018 [ISK m]	No. of contracts	Assets	Liabilities	Net	Underlying positions	Main risk factor
Forward exchange rate agreements	133	747	388	359	33,721	Market risk
Interest rate and exchange rate agreements	34	162	371	-209	22,769	Market risk
Bond swap agreements	40	18	45	-27	7,538	Credit risk
Share swap agreements	144	1,340	84	1,256	8,138	Credit risk
Options	6	8	8	0	1,149	Market risk
Total	**357**	**2,275**	**896**	**1,379**		

31 December 2017 [ISK m]	No. of contracts	Assets	Liabilities	Net	Underlying positions	Main risk factor
Forward exchange rate agreements	202	332	236	97	28,224	Market risk
Interest rate and exchange rate agreements	39	945	579	365	24,719	Market risk
Bond swap agreements	18	1	15	-14	1,819	Credit risk
Share swap agreements	163	678	-47	631	8,212	Credit risk
Options	4	9	0	9	1,138	Market risk
Total	**254**	**1,965**	**783**	**1,088**		

Counterparty credit risk is the risk of the Bank's counterparty in a derivative contract defaulting before final settlement of the derivative contract's cash flows. This risk is addressed in section 4.9.

5.8.3 Trading Book Risk

The trading book's profit or loss is calculated daily. Table 5.9 shows the 10 day 99% Value-at-Risk for the trading book position at the end of 2018, based on historical data collected over the previous 250 business days. The risk of loss is calculated for each instrument and portfolio within the trading book, as well as for the aggregate portfolio. Loss due to currency risk is not taken into account in the loss distribution as it is addressed in the Bank's VaR calculations for currency risk which covers both the banking book and the trading book.

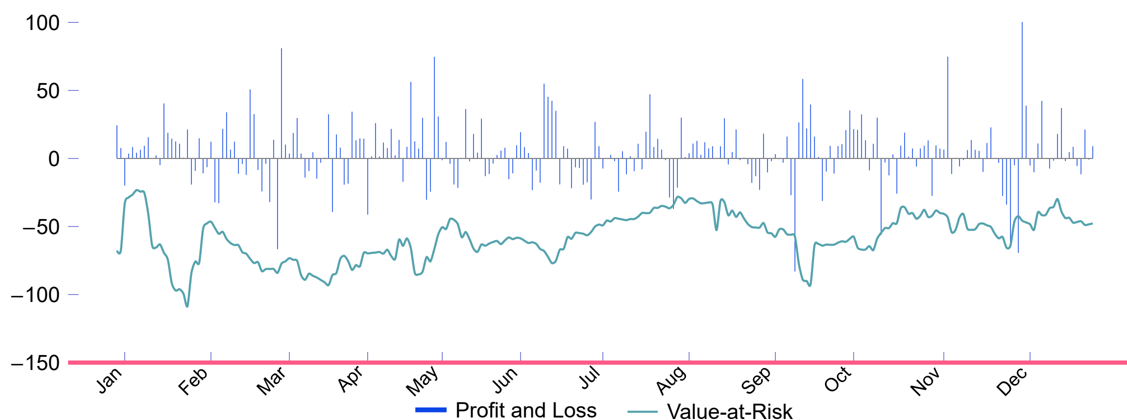
Table 5.9 Value-at-Risk for the trading book with a 99 percent confidence level over a 1 day and 10 day horizon

31 December 2018 [ISK m]	10 day 99%VaR
Equities	148
Equity options	11
Bonds	85
Interest rate swaps	42
Diversification effects	-135
Trading book Total	**151**

According to the result, there is 1% likelihood of loss in the trading book that exceeds ISK 151 million over a 10 day period.

Figure 5.8 further shows the daily profit and loss of the Bank's trading book for 2018 along with the evolution of its one-day 1% Value-at-Risk. The trading book's loss exceeds the VaR two times during the 250 business days, in line with the 2.5 times expected by the risk measure.

Figure 5.8 Backtesting of the Bank's one-day 99 percent Value-at-Risk for 2018 [ISK m]



6 **Liquidity** Risk

6.1 Governance and Policy
6.2 Liquidity Risk Management
6.3 Liquidity and Funding Risk Measurement
6.4 Liquidity Position
6.5 Funding

6 Liquidity Risk

Liquidity risk is the current or prospective risk that the Bank, though solvent, either does not have sufficient financial resources available to meet its liabilities when they fall due, or can only secure them at excessive cost. Liquidity risk arises from the inability to manage unplanned decreases or changes in funding sources.

An important source of funding for the Bank is deposits from individuals, corporations and institutional investors. As the maturity of loans generally exceeds the maturity of deposits, the Bank is exposed to liquidity risk.

6.1 Governance and Policy

The Bank's liquidity and funding policy and related risk appetite statements are established by the Board of Directors and is reviewed annually.

In accordance with the liquidity and funding policy, the Bank's CEO has set up a liquidity and funding framework, which outlines responsibilities, strategy and methods in relation to the Bank's liquidity and funding risk. On the management level, the Asset and Liability Committee (ALCO) is the principal authority for management and monitoring of liquidity and funding.

According to the liquidity and funding policy, the Bank follows a conservative approach to liquidity exposure, liquidity pricing and funding requirement. The Bank maintains a sufficient level of liquid assets in order to meet expected and unexpected cash flows and collateral needs, without it having adverse financial impact on the Bank. The Bank shall have a funding profile that supports its liquidity profile to withstand extended periods of stress without reliance on volatile funding or external support. The Bank manages its assets and liability mismatches, seeks a balanced maturity profile and diversifies its funding between deposits and wholesale funding.

6.2 Liquidity Risk Management

Liquidity risk is a key risk factor and emphasis is placed on managing it. The Bank's liquidity risk is managed by the Treasury department on a day-to-day basis and monitored by the Balance Sheet Risk department. Treasury provides all divisions with funds for their activities against a charge of internal interest. A small part of the Bank's total liquidity risk is due to subsidiaries which have their own liquidity management.

ALCO is responsible for liquidity management conforming to the policies and risk appetite set by the Board. The committee meets at least monthly to review liquidity reports and make strategic decisions on liquidity and funding matters.

Liquidity risk is controlled by limit management and monitoring. Active management of liquidity is only possible with proper monitoring capabilities. An internal liquidity report is issued daily for Treasury and Risk Management staff and at each ALCO meeting liquidity and funding ratios are reported as well as information on deposit development and withdrawals, secured liquidity, stress tests and any relevant information or risk management concern regarding liquidity and funding risk.

For best practice liquidity management, the Bank follows FME's *Guidelines for Financial Institutions' Sound Liquidity Management*, No. 2/2010, which are based on *Principles for Sound Liquidity Risk Management and Supervision*, issued by the Basel Committee in 2008.

6.2.1 Internal Liquidity Adequacy Assessment Process

In conjunction with the ICAAP, see Section 3.4.1, the Bank runs the Internal Liquidity Adequacy Assessment Process (ILAAP) with the purpose of assessing the Bank's liquidity position. The ILAAP is carried out in accordance with the Act on Financial Undertakings with the aim to ensure that the Bank has in place sufficient risk management processes and systems to identify, measure and manage the Bank's liquidity risk.

The Bank's ILAAP report is approved annually by the Board of Directors, the CEO and the CRO and submitted to the FME. The FME reviews the Bank's ILAAP report following its supervisory and review process (SREP).

6.2.2 Contingency Plan for Liquidity Shortage

The Bank monitors its liquidity position and funding strategies on an on-going basis, but recognizes that unexpected events, economic or market conditions, earning problems or situations beyond its control could cause either a short or long-term liquidity crisis. Although it is unlikely that a funding crisis of any significant degree could materialize, it is important to evaluate this risk and formulate contingency plans should one occur.

The Bank's Contingency Plan for Liquidity Shortage is constantly active and the contingency level is reviewed at each of the monthly ALCO meetings, based on various analysis and stress tests. ALCO reviews a report on liquidity risk from Risk Management and receives projections on sources of funding and the use of funds from Finance.

6.3 Liquidity and Funding Risk Measurement

In December 2010, the Basel Committee on Banking Supervision issued Basel III: Internal Framework for Liquidity Risk Measurement, Standards and Monitoring. The framework introduced two new liquidity measures, the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), designed to coordinate and regularize liquidity risk measurements between banks. The Central Bank of Iceland has implemented LCR requirements for total and foreign currency positions as well as NSFR requirements for foreign currencies. The Bank reports the LCR and NSFR mea-

sures to the Central Bank of Iceland on a monthly basis.

LCR matches high quality liquid assets against estimated net outflow under stressed conditions in a period of 30 days. Different outflow weights are applied to each deposit category and the measure is thus dependent on the stickiness of each bank's deposit base. The ratio is therefore comparable throughout the banking sector. The LCR is the Bank's key indicator for short-term liquidity.

While the focus of LCR is on short term liquidity, the NSFR is aimed at requiring banks to maintain an overall stable funding profile. Subject to NSFR, funding with maturity greater than one year is considered stable. Different weights are applied to funding with shorter maturities depending on the type of funding. The aggregated weighted amounts are defined as the Available Stable Funding (ASF). Similarly, on-balance and off-balance sheet items on the asset side are weighted differently, depending on its liquidity and maturity, to form a bank's Required Stable Funding (RSF) under NSFR. The ratio of the two gives the NSFR. When calculating the ratio for foreign currencies, a negative foreign currency balance is subtracted from the numerator and a positive balance is subtracted from the denominator.

In addition to using LCR and NSFR for liquidity and funding measurement, the Bank performs various analysis, including liquidity survival horizons and stress tests in relation to the concentration of deposits.

6.4 Liquidity Position

At year end 2018, the Bank's liquidity buffer amounted to ISK 202,797 million, or 17% of total assets and 44% of total deposits. Composition of the Bank's liquidity buffer is shown in Note 45 of the Bank's Consolidated Financial Statements.

The Bank's strong liquidity position was reflected in high Liquidity Coverage Ratio (LCR) values, namely 164% and 439% for total and foreign currency balances respectively. Under the liquidity rules issued by the Central Bank of Iceland, credit institutions are required to maintain an LCR above 100% for both total LCR and LCR in foreign currencies.

The liquidity position at year-end 2018 should however be viewed in context of a foreseeable dividend payout and maturity of a EMTN issue in April of 2019. The liquidity position has been managed with forecasted LCR levels above 100% taking these outflows into account.

Table 6.1 Liquidity Coverage Ratio

31 December 2018	FX	Total
Liquidity Coverage Ratio	439%	164%
LCR Central Bank requirements	100%	100%

The Bank has held a strong liquidity position throughout 2018, both in foreign currencies and in total, with the LCR well above the regulatory minimum of 100%. The development of LCR-FX

At year end 2018, Arion Bank's strong liquidity position was reflected in high LCR values, namely 164% and 439% for total and foreign currency balances respectively

and LCR-Total is shown in figures 6.1 - 6.2. For greater detail see exhibit EU LIQ1 in the accompanying excel document.

Figure 6.1 Development of the Bank's LCR in total

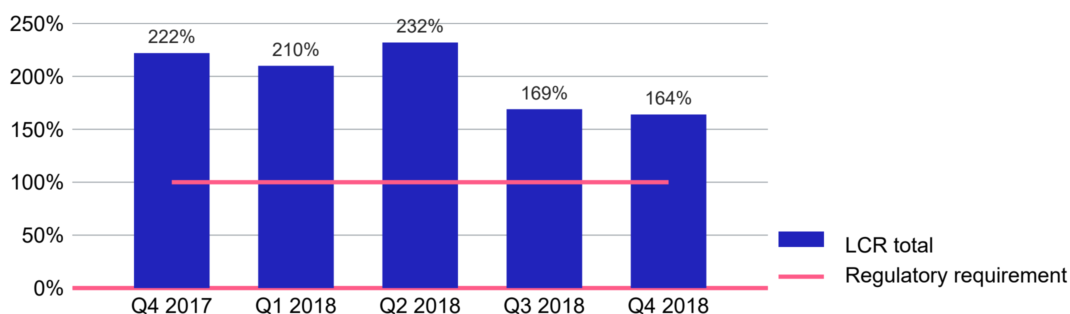
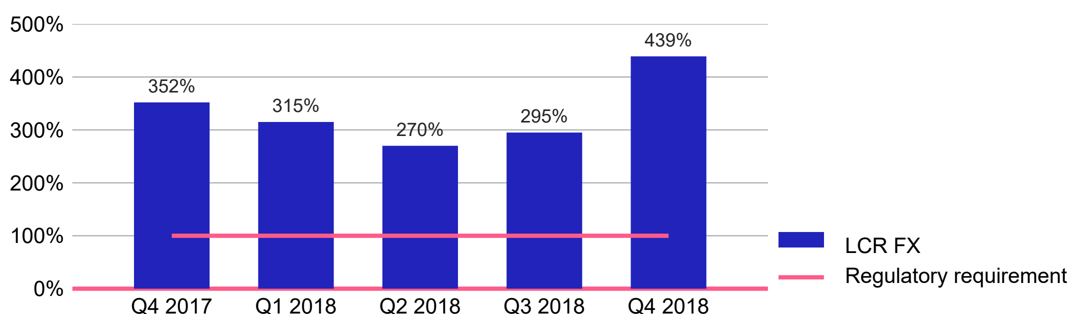


Figure 6.2 Development of the Bank's LCR in foreign currencies



6.4.1 Breakdown of LCR

In general, total inflow is capped at 75% of total outflow. As a result, the Bank's foreign currency position in nostro and money market accounts, which contribute to cash inflow under LCR, is not fully utilized for foreign currency LCR.

At 31 December 2018, under the LCR stressed scenario the Bank's weighted assets and inflows amount to ISK 197,717 million, substantially exceeding the weighted outflow of ISK 149,089 million. Of the total stressed outflow, ISK 124,991 million are due to deposits which are further analyzed in section 6.4.2 on deposit categories. Figure 6.3 further shows the contribution of the Bank's main components to the LCR's weighted outflows, inflows and assets.

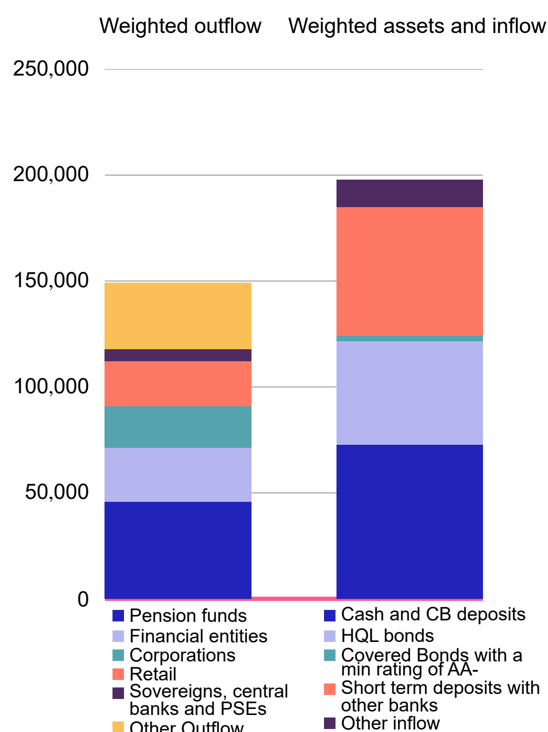
6.4.2 Deposit Categories

As per the LCR methodology, the Bank's deposit base is categorized based on the type of deposit holders. Deposits are also classified as stable or less stable based on business relations and insurance scheme coverage. Each category is given an expected outflow weight based on stickiness, i.e. the likelihood of withdrawal under stressed conditions.

Figure 6.5 shows the contribution of each category, in order of magnitude, to the stressed outflow under LCR, whereas figure 6.4 shows the distribution of the Bank's deposit base.

At year end 2018, 64% of the Bank's deposit base are due to retail clients, up from 61% at year end 2017. The Bank has placed emphasis on increasing its retail deposit base.

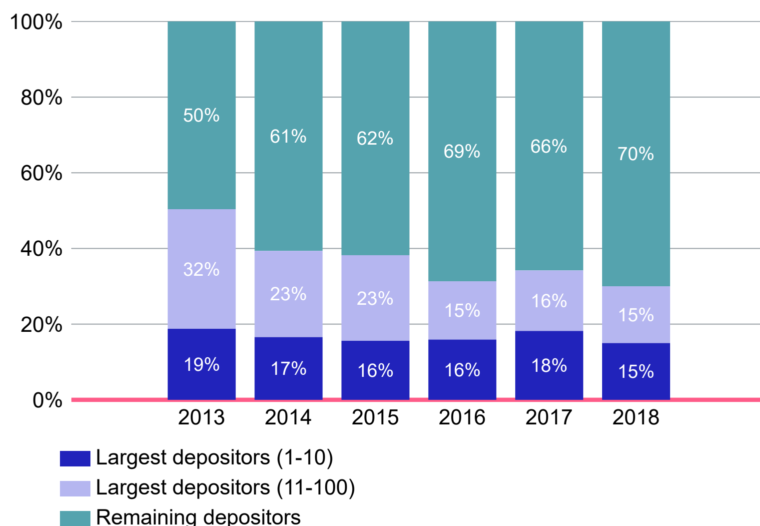
Figure 6.3 Breakdown of weighted outflow, inflow and assets under LCR's stressed scenario as of 31 December 2018 [ISK m]



6.4.3 Concentration of Deposits

As seen in figure 6.6, 77% of the Bank's deposits mature within 30 days, same as at year end 2017. At the end of 2018, 15% of the Bank's deposits maturing within 30 days belonged to the 10 largest depositors, down from 18% in 2017 as seen in section 6.7.

Figure 6.7 Concentration of deposits on demand within 30 days



6.5 Funding

Over the past few years Arion Bank has taken significant steps to diversify its funding issuing senior unsecured bonds in euros and other currencies. The Bank did its inaugural subordinated bond issue in November 2018, when it issued a Tier 2 note denominated in Swedish krona. On the Icelandic market the Bank has continued to issue covered bonds and commercial paper.

In March 2018 Arion Bank issued 5-year bonds in the amount of EUR 300 million. The issue was oversubscribed, attracting offers for EUR 375 million from more than 40 investors. The instruments bear a fixed 1.0% coupon and were sold at terms equivalent to 0.65% margin over interbank rates. This is the lowest margin over interbank rates on a bond issue that any Icelandic bank has achieved in recent years.

In December 2018 the Bank repurchased EUR 300 million of bonds maturing in April 2019. The Bank received offers of EUR 155 million and all offers were accepted.

In July 2018 Standard & Poor's (S&P) affirmed Arion Bank's credit rating at BBB+ with a stable outlook. The short-term rating is A-2.

S&P noted that the Icelandic financial system was stable and that the economy was continuing to grow but signs of overheating were declining. S&P opined that the participation of the pension funds in the mortgage market distorted the competition environment of Icelandic financial institutions.

Figure 6.4 Distribution of deposits by LCR categories at year-end 2018

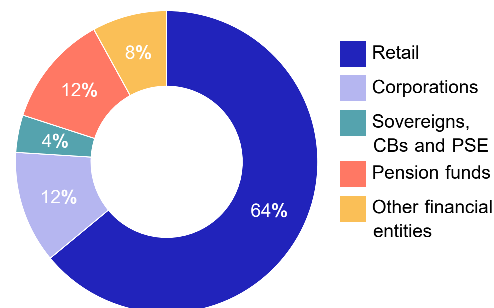


Figure 6.5 Source of impact on LCR outflow from deposits categories

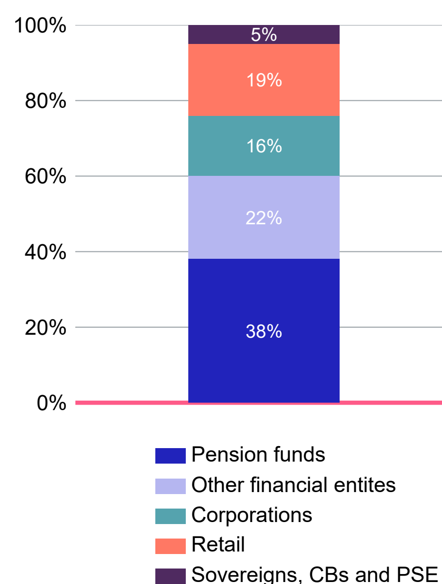
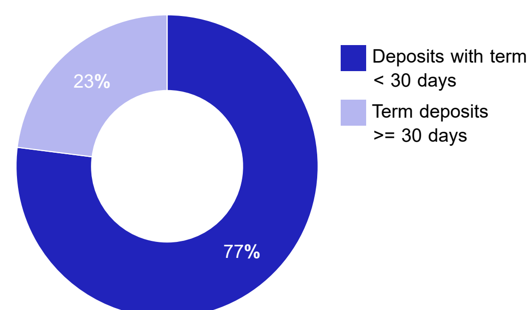


Figure 6.6 Deposit term distribution



S&P affirmed Arion Bank's credit rating at BBB+ with a stable outlook. The short-term rating is A-2

▶ **Liquidity** Risk

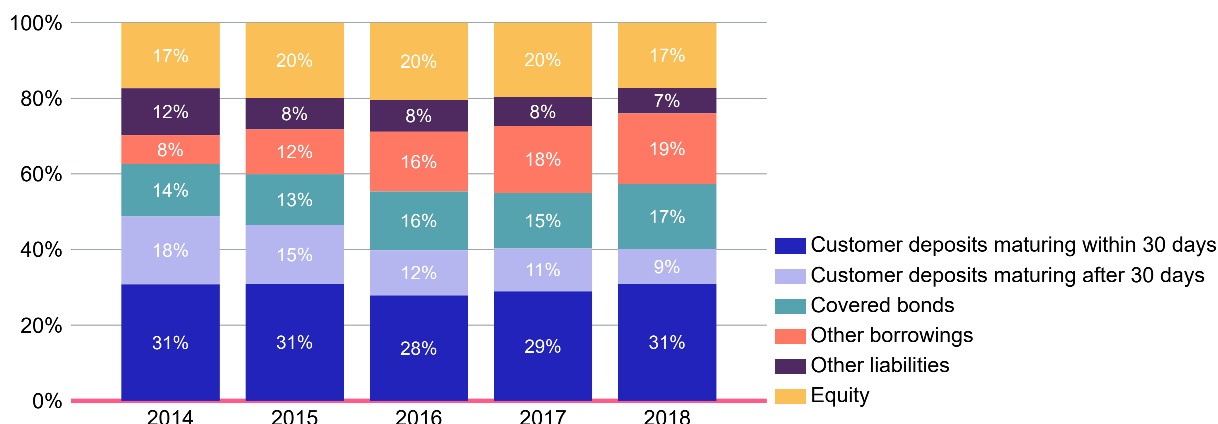
Figure 6.8 Development of the market spread for the Bank's EUR bond issues [Basis points]

Arion Bank continued to issue covered bonds which are secured in accordance with the Covered Bond Act No. 11/2008. The Bank issued covered bonds amounting to ISK 31.6 billion in 2018. In January 2018 the Bank issued a new inflation-linked series, ARION CBI 48. Arion Bank renewed its agreement with Kvika, Íslandsbanki and Landsbankinn on market making for covered bonds issued by Arion Bank on Nasdaq Iceland. The purpose of the agreement is to stimulate trading with benchmark covered bonds issued by the Bank.

The Bank has continued to issue commercial paper on the domestic market and this has further diversified the Bank's funding. Commercial paper amounting to ISK 31.4 billion was issued in 2018. Outstanding commercial paper at the end of 2018 amounted to ISK 15.5 billion.

Figure 6.9 shows the development of the Bank's funding profile.

Figure 6.9 Development of funding by type



Despite progress in diversifying the Bank's funding sources and extending the maturity profile, the deposit base continues to be an important funding source and the focal point of liquidity risk management. The ratio of loans to deposits was 179% as at 31 December 2018. The development of the loans to deposits ratio is shown in Table 6.2.

Covered bonds are also an important source of funding and its

payment profile is largely matched by the corresponding pledged mortgages, see Figure 6.10. Other liabilities are mostly foreign currency denominated with the next significant redemption in April 2019 as seen in Figure 6.11. As the Bank's foreign currency deposits are effectively entirely covered by liquid assets, these other FX liabilities are a source of funding for loans to customers in foreign currency. The duration of those liabilities is greater than that of the loans, so there is low maturity gap risk for the Bank's foreign currency position.

The Bank's asset encumbrance ratio, the ratio of pledged assets and total assets, has increased from 19% to 21% in the year 2018.

There is low maturity gap risk for the Bank's foreign currency position

Table 6.2 Development of the Bank's loans to deposits ratio and asset encumbrance ratio

31 December	2018	2017	2016	2015	2014
Loans to deposits ratio	179%	166%	173%	145%	142%
Asset encumbrance ratio	21%	19%	21%	23%	27%

Figure 6.10 Contractual cashflow profile of covered bonds and corresponding pledged mortgages [ISK m]

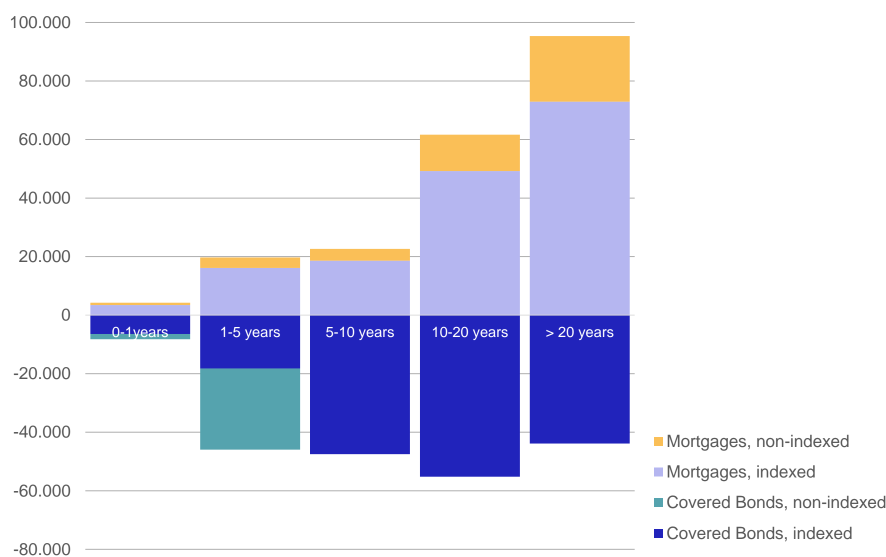
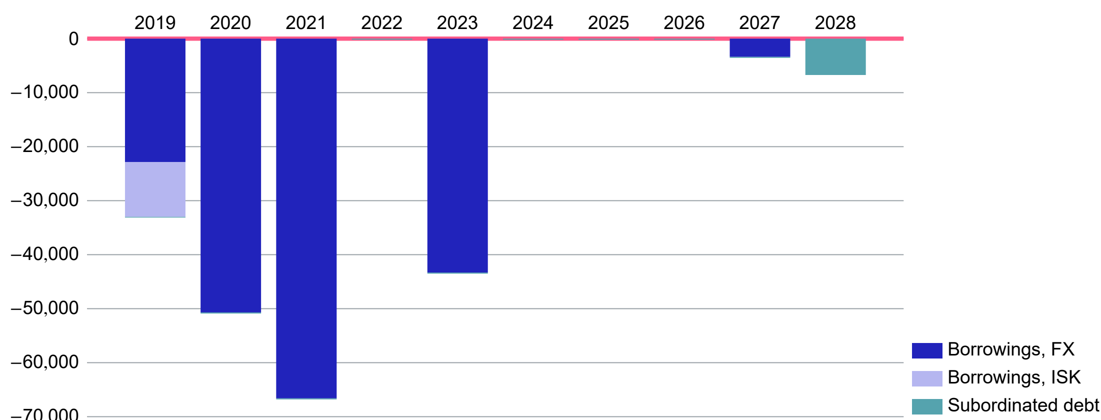


Figure 6.11 Maturity profile of borrowings, other than covered bonds [ISK m]



The NSFR for financial institutions' foreign currency positions shall be greater than 100%. The Bank's NSFR in foreign currencies is at 155% at year-end 2018 while the total NSFR is 120%. The Bank has held the NSFR-FX level well above the minimum regulatory requirement during 2018, as well as a strong NSFR-total as seen in figures 6.12 - 6.13.

The Bank's NSFR in foreign currencies is at 155% at year-end 2018 while the total NSFR is 120%

Table 6.3 Net Stable Funding Ratio

31 December 2018	FX	Total
Net Stable Funding Ratio	155%	120%
NSFR Central Bank requirements	100%	N/A

Figure 6.12 Development of the Bank's NSFR in total

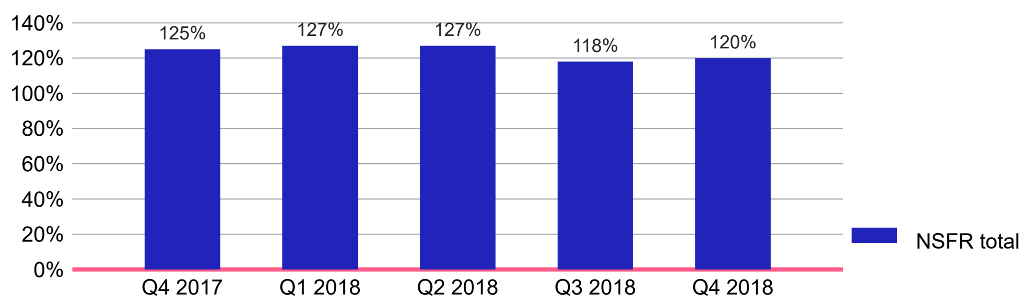
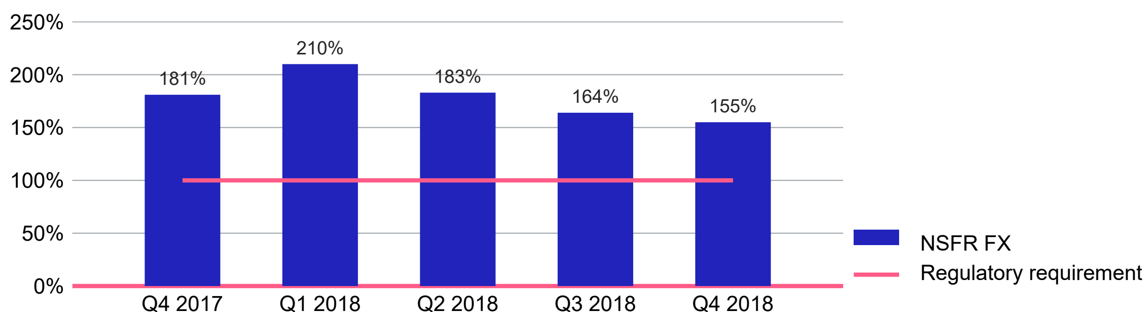


Figure 6.13 Development of the Bank's NSFR in foreign currencies



7 Operational Risk

7.1 Operational Risk Policy
7.2 Operational Risk Management Framework
7.3 Reputational Risk
7.4 Information Security and IT Risk
7.5 Operational Risk Measurement
7.6 Internal Control Over Financial Reporting

7 Operational Risk

Operational risk is the risk of direct or indirect loss or damage to the Bank's reputation resulting from inadequate or failed internal processes or systems, from human error or external events that affect the Bank's image and operational earnings.

Reputational risk, IT risk and legal risk are, among others, considered sub-categories of operational risk. Operational risk is inherent in all activities within the Bank.

- Reputational risk is defined as the risk arising from negative perception on the part of customers, counterparties, shareholders, investors or regulators that can adversely affect the Bank's ability to maintain existing or to establish new business relationships and continued access to sources of funding.
- IT risk is defined as the risk arising from inadequate information technology and processing in terms of manageability, exclusivity, integrity, controllability and continuity.
- Legal risk is defined as the risk to the Bank's interests resulting from instability in the legal and regulatory environment, as well as risk arising from ambiguous contracts, laws or regulations (see also section 8.1).

Each business unit within the Bank is primarily responsible for managing their own operational risk. The Operational Risk department is responsible for developing and maintaining tools for identifying, measuring, monitoring and reporting the Bank's operational risk.

The Bank uses the Basel III standard approach for the calculation of capital requirements for operational risk.

7.1 Operational Risk Policy

The Bank's policy is to reduce the frequency and impact of operational risk events in a cost effective manner. The Bank reduces its exposure to operational risk with a selection of internal controls and quality management, educated and qualified staff, and awareness of operational risk. The Bank follows the Basel principles of sound management of operational risk. This policy defines operational risk at a high-level and delegates responsibility for further implementation and compliance within the Bank.

The Bank reduces its exposure to operational risk with a selection of internal controls, quality management and well-trained and qualified staff

7.2 Operational Risk Management Framework

The operational risk management framework at the Bank aims at integrating risk management practices into processes, systems and culture. The Operational Risk department serves as a partner to senior management supporting and challenging them to align the business control environment with the Bank's strategy by measuring and mitigating risk exposure, contributing to optimal return for the stakeholders.

The ideology behind the framework is based on the effectiveness

of managing processes, their risks and controls, analyzing deviations from best practices and continuously improving the operation.

Process Management

The most important business processes are documented, where primary activities, risks and respective control are identified, along with employee roles and responsibilities. A uniform methodology is used to improve efficiency and increase standardization within the operation. Process mapping is not only an effective method to streamline the operation but necessary to determine the risks within the processes and relevant control activities.

Risk Assessment

The Bank regularly performs a formal Risk and Control Self-Assessment (RCSA) on the main processes and important subprocesses underlying the operation, detecting and evaluating risks within the processes, and the effectiveness of the respective controls. The risks are assessed based on severity and likelihood of an event occurring as well as the effectiveness of the internal control environment. The assessment of the severity of an event includes both financial losses and reputational damage. Actions are planned for risks with extreme, high or moderate impact due to insufficient controls. The goal is to bring relevant risks to acceptable levels by enhancing the control environment.

Control Management

Internal controls minimize losses from operational risk events and ensure that the Bank's operation is efficient, compliant and that information is reliable, timely and complete. The Bank's internal controls involve management control as well as confirmation and testing of controls. Key controls are tested periodically based on design, implementation and performance.

Deviation Analysis

The Bank captures information on deviations from the Bank's standard operations (Loss Data) to provide meaningful information on operational risks and the effectiveness of internal controls. The analysis involves the impact of deviations on financial losses, damage to the Bank's reputation and the Bank's capital requirements. The information is utilized to understand the root cause of the event to be able to mitigate the risk and improve internal controls.

Change Management

The Bank has adopted an approval process for all critical changes within the operation. This include new or changed products, activities, processes and systems. The process assesses the possible impact on the Bank's processes, risks, controls, and systems. The process is used for new products, services or systems that are currently not offered to clients or a significant change to an existing product, service or systems. The process ensures an appropriate level of cross communication with all stakeholders, and an adequate preliminary assessment prior to implementation.

Continuous improvement

Any issues arising from the RCSA, the auditing process, loss data collection or any other internal or external event are used to enhance the internal control environment of the Bank and can re-

Figure 7.1 Operational risk management framework

The goal of the operational risk management is to bring relevant risks to acceptable levels by enhancing the control environment. The Operational Risk department follows up on the planned actions with the units

sult in remediation on processes or internal controls. Once the issues are identified, analyzed and assessed, the business unit is in charge of improvements, but the Operational Risk unit will support and follow up on planned actions.

7.3 Reputational Risk

The Bank has put in place controls to monitor reputational risk. The Bank performs a RCSA on the reputational risk that reveals what events can cause reputational damage, what the possible consequences are and what can be done to prevent the reputational event. This raises awareness of reputational risk within the Bank, and for the most severe events, contingency processes are prepared with the aim to prevent or reduce the damage that the Bank's reputation might sustain.

7.4 Information Security and IT Risk

Information security means that information is protected against a variety of threats to ensure business continuity, minimize damage and maximize performance. Information security includes ensuring confidentiality, integrity and availability.

The Bank's Security Officer (SO) is responsible for the day-to-day supervision of issues relating to the Bank's IT and data security, and is under the authority of the Security Committee. The Security Committee is responsible for the implementation and enforcement of the Bank's security policy.

Risk related to information security is managed according to the Bank's Information Security Management Manual and is based on best practices according to ISO/IEC27001:2013 Information technology - Security techniques - Information security management system - Requirement and the Information Technology Infrastructure Library (ITIL). The Bank has in place a business continuity management (BCM) approach with the aim to ensure that specific operations can be maintained or recovered in a timely fashion in the event of a major operational disruption.

The Bank has in place a business continuity management (BCM) approach with the aim to ensure that specific operations can be maintained or recovered in a timely fashion in the event of a major operational disruption

To understand security risks better, the Bank conducts a special Information Security Risk Assessment on the Bank's most important assets, according to Guidelines No. 2/2014 on the Information Systems of Regulated Parties published by the Financial Supervisory Authority (FME).

7.5 Operational Risk Measurement

The Bank uses Key Risk Indicators (KRIs) to provide an early warning that may be indicative of increased risk and/or ensure that risks remain within established tolerance levels.

Major Incident (MI) is an event causing interruption in IT or a failure in a system classified as important. As these events can affect the service level provided to the Bank's customers and can, if serious enough, harm the operation, they are managed through a robust MI process. The purpose of the process is to ensure firm, coordinated and controlled action in the occurrence of MI, in order to restore service as soon as possible with minimum interruptions and damage to the business.

An increase in MIs was observed in 2018, albeit with a stable 12 month moving average, see fig 7.2. This trend can largely

be attributed to the Bank's digitalization effort which has created new challenges in IT operations and also a new payment system being implemented in other banks. In 2019 efforts will be made to normalize MI-rates and get closer to the set goal.

A new classification scheme was developed and deployed in the beginning of January 2018 categorizing the incidents depending on severity. The three categories are Minor, Partial and Extensive. Minor are incidents that have little impact but need quick reactions, Partial are incidents that have a moderate and delimited effect on the business, and Extensive are incidents that have a significant impact on the bank and are reported to FME by the Security Officer.

The Bank utilizes the deviation data to quantify the operational risk the Bank faces in its current affairs. The Bank records the data using the categorisation from Basel and can quickly draw out a statistical summary that shows to which category most of the events belong and where the most significant losses occur.

Figure 7.2 Development of Major Incidents in IT

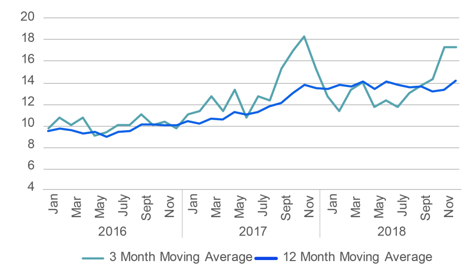


Figure 7.3 Distribution of loss events by number, parent company

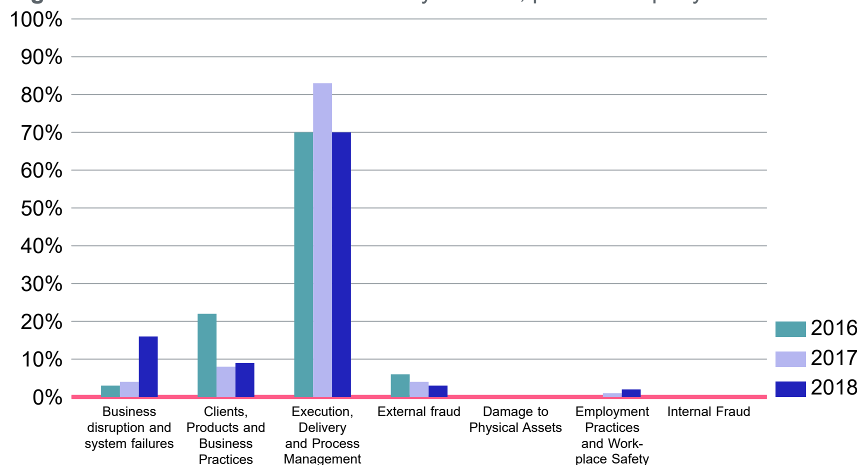
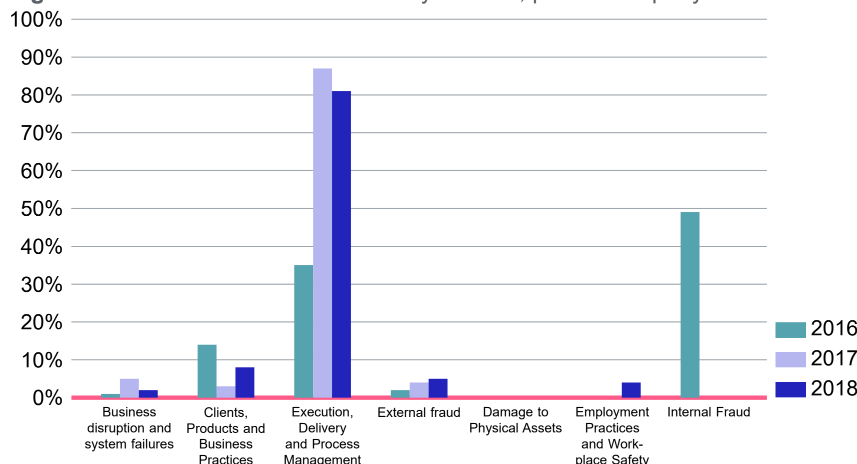


Figure 7.4 Distribution of loss events by amount, parent company



7.6 Internal Control Over Financial Reporting

Internal Control over Financial Reporting (ICFR) is a process designed to provide reasonable assurance regarding the reliability of financial reporting and reduce the risk of misstatement. The

Bank's ICFR is based on the framework established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Operational Risk unit has taken on the role of ICFR coordinator.

The ICFR framework is built upon five internal components: Control Environment, Risk Assessment, Control Activities, Information & Communication and Monitoring. The text below describes how the ICFR work is organized within the Bank with regards to these five components to ensure structured monitoring of key controls.

Process Risk Assessment and ICFR Catalogue

In order to identify and understand the risks in the financial reporting, the Bank has identified the key processes affecting the financial statements. The processes were risk assessed and key controls, that mitigate the assessed risk, were identified. The Bank will continuously monitor that the most significant risks are identified and that the controls in place will appropriately mitigate the risks.

The identified risks and key controls that affect the financial reporting are listed in the ICFR catalogue with a detailed description. The ICFR coordinator and Group Accounting continuously communicate with involved parties within the Bank that are responsible for controls, to set expectations and clarify responsibilities. The framework consists of group-wide controls as well as IT and process controls, for example, validation of the valuation of financial instruments.

Control Monitoring and Testing

The controls are monitored and evaluated on a continuous basis by control owners through self-assessments. Control owners shall confirm the implementation and effectiveness of controls which they are responsible for.

The ICFR coordinator performs a formal testing of all of the key controls that have been assessed as significant in mitigating risks regarding the financial closing of the Bank. The tests are performed in accordance with an annual testing plan that is based on the frequency and risk of failure in the performance of each control. The testing focuses on the design and implementation of each control and whether the control was performed. The results from the evaluations of the controls are analysed to assess the risk of misstatements in the financial reporting.

The Bank has issued procedures on the management and testing of controls within the Bank, linking the responsibility of controls to the overall internal control framework of the Bank.

Reporting

Annually the ICFR coordinator reports to the BAC the outcome of the self-assessment and testing. Group Accounting is responsible for updating the Bank's financial handbook and other accounting instructions and making them available to the reporting units.

8 **Other Material** Risk
9 **Remuneration**
10 **Upcoming and New** Legislation
11 **Abbreviations**

8 Other Material Risk

In addition to the previously mentioned risk types, the Bank faces other types of risks. Of these risk types, the Bank has identified legal and compliance risk, business risk and political risk as material risk. Other risk types are not considered material, and will not be discussed further.

8.1 Legal and Compliance Risk

Legal risk is defined as the risk to the Bank's interests resulting from instability in the legal and regulatory environment, as well as risk arising from ambiguous contracts, laws or regulations. The Bank holds additional capital for legal risk under Pillar 2.

Compliance risk is defined as the risk of not complying with rules and guidelines applicable to the firm as a licensed Bank regarding rules and guidelines targeting the financial sector, based on regulations governed by the European Supervisory Authorities (ESAs), and as a listed company. Compliance risk is present in all areas of the Bank. Compliance risk can lead to fines, damages and/or the voiding of contracts and can diminish the Bank's reputation.

In 2018, the Bank was not subject to any fines or other sanctions arising from violations or non-compliance.

Frequent changes to applicable requirements, and any ambiguous requirements, increase compliance risk. The Bank monitors upcoming changes, and has in place procedures for regulatory change management. Foreseeable changes in legislation that might affect the Bank are discussed in chapter 10. These risk factors are considered in the Bank's ICAAP.

Legal Claims

Litigation is a common occurrence in the banking industry due to the nature of the business undertaken. The Bank has formal controls and policies for managing legal claims. Once professional advice has been obtained and the amount of loss reasonably estimated, the Bank makes adjustments to account for any adverse effects which the claims may have on its financial standing. The largest cases concerning the Bank and possible impact on the Bank's financial position, can be put into a two categories: a) court cases and b) cases before supervisory authorities. In 2018 there were several legal matters or unresolved legal claims that were considered contingent liabilities, such as legal proceedings regarding damages. The Bank is a party to a few significant cases that fall into category a). Description of these cases can be found in Note 37 in the Consolidated Financial Statements for 2018.

Competition

Competition is one of the factors that the Bank is constantly monitoring. To safeguard its own competitive practices, the Bank has set a competition compliance policy. According to the compliance

policy, the Bank endeavors to protect and encourage active competition for the good of the consumer, the business sector and society at large. It is furthermore the Bank's policy to practice effective and powerful competition on all the markets on which it operates. An integral component of the Bank's competition policy is to ensure that the Bank complies with competition law at all times.

8.2 Business Risk

Business risk is defined as risk associated with uncertainty in profits due to changes in the Bank's operations and competitive and economic environment. Business risk is present in most areas of the Bank. Business risk is considered in the Bank's ICAAP.

The Bank faces competition in the marketplace. Competition from less regulated financial institutions has been increasing in recent years, for example the use of specialized credit funds that are able to offer better terms for quality loans. The pension funds' expanded participation in the mortgages market for individuals is further affecting the Bank. The Bank responds by offering more versatile and tailored services, and competes on price where possible. Another threat is competition from foreign banks that mainly target strong Icelandic companies with revenues in foreign currency.

Another competitive factor facing the Bank is the large footprint of the Icelandic State in financial services through its ownership in Landsbankinn hf., Íslandsbanki hf., The Icelandic Housing Financing Fund and the Icelandic Student Loan Fund, who together are representing the largest pool of all loans to individuals.

Arion Bank faces a business risk in the form of excessive or unbalanced taxation. Several new taxes on financial institutions were introduced to help fund the recovery of the Icelandic financial system following the crisis of 2008 and were understood to be temporary. The taxes paid by the main Icelandic banks are much higher than those paid by other companies. Most significant in this respect are the special 6% tax on earnings exceeding ISK 1 billion and the bank levy of 0.376% on liabilities exceeding ISK 50 billion. Although the recovery of the Icelandic financial system and the Icelandic economy has, by most accounts, been successfully completed the tax environment has not changed.

An integral component of the Bank‘s competition policy is to ensure that the Bank complies with competition law at all times

Special taxes on Icelandic banks include the special 6% tax on earnings exceeding ISK 1 billion and the bank levy of 0.376% on liabilities exceeding ISK 50 billion

8.3 Political Risk

Political risk is defined as risk to the Bank's interests resulting from political uncertainty, e.g. from political decision making or destabilizing political events, which therefore lead to instability in the legal and regulatory environment. In the present political and economic environment in Iceland, the Bank faces some political risk.

Iceland is part of the EEA Agreement and applies therefore most of the European Union legislation in the financial services sector. The Single Rulebook of the European Union aims to provide a single set of harmonized prudential rules which institutions throughout the EU must respect. Nevertheless, a number of special Icelandic rules in the field of financial services are still to be found.

Given discussions in the Icelandic Parliament there is a certain

possibility that the government will resort to regulatory restrictions that are different and more stringent than reforms being discussed in the rest of Europe. As the Icelandic Sate is now the majority owner of the Bank's principal domestic competitors, Landsbankinn hf. and Íslandsbanki hf., the likelihood of this event may have increased.

Foreseeable changes in legislation that might affect the Bank are discussed in chapter 10. These risk factors are considered in the Bank's ICAAP.

9 Remuneration

Arion Bank has a remuneration policy in place in accordance with Act No. 2/1995, on Public Limited Companies, Act No. 161/2002, on Financial Undertakings, and the FME's Rules No. 388/2016, on Bonus Schemes under the Act on Financial Undertakings. The policy is an integral part of Arion Bank's strategy to protect the long-term interests of the Bank's owners, its employees, customers and other stakeholders in an organized and transparent manner. The Bank's subsidiaries also have remuneration policies in place when applicable in accordance with law.

The Design of the Remuneration System

Arion Banks remuneration policy is framed in accordance with regulatory requirements, such as those established in the Financial Supervisory Authority's (FME) Rules No. 388/2016 on Bonus Schemes under the Act on Financial Undertakings. Arion Bank's remuneration policy is reviewed annually by the Board and submitted and approved at the Bank's annual general meeting. Arion Bank´s remuneration policy is, furthermore, published on the Bank´s website and information on compensation to the Board of Directors and Bank's management is disclosed in the Consolidated Financial Statements for 2018, see Note 12.

The Bank's main objective with regard to employee remuneration is to offer competitive salaries in order to be able to attract and retain outstanding and qualified employees. The Bank, furthermore, aims to ensure that the policy does not encourage excessive risk taking, but rather, supports the Bank's long-term goals and its healthy operation. The policy is an integral part of the Bank's strategy to protect the long-term interests of the Bank's owners, its employees, customers and other stakeholders in an organised and transparent manner. In accordance with Article 79a of Act No. 2/1995 on Public Limited Companies and rules on good corporate governance, the Board of Directors of Arion Bank approves the Bank's remuneration policy with respect to salaries and other payments to the Board Directors, Chief Executive Officer, Managing Directors, Compliance Officer and Internal Auditor.

Arion Bank's remuneration policy is framed in accordance with regulatory requirements, such as those established by the FME, and is reviewed and approved annually

Remuneration Components and Parameters

According to the previously cited FME's rules on Bonus Schemes under the Act on Financial Undertakings, the combined amount of variable remuneration, including deferred payments, may not exceed 25% of annual salary of the recipient employee. The rules require a deferral of at least 40% of the variable remuneration for a period of no less than three years, unless the total aggregate is less than 10% of the fixed salary of the employee, in which case the variable remuneration does not require deferral and may be paid in full.

Lastly, in accordance with the Rules, Risk Management, Compli-

The combined amount of variable remuneration, including deferred payments, may not exceed 25% of annual salary, with at least 40% thereof deferred for no less than three years

ance and Internal Audit review and analyze whether the variable remuneration scheme complies with the aforementioned rules and the Bank's remuneration policy. The objective of the scheme is to incentivize employees to help the Bank achieve its objectives. Well defined measures concerning risk and compliance are an integral part of the scheme. Parameters deciding the amount of the payments are on four levels:

- The performance of the Bank as a whole (these include return on equity, return on risk-weighted assets and costs-to-net income)
- Performance of individual divisions
- Performance of individuals
- Compliance with internal and external rules

Coinciding with Arion Bank's Initial Public Offering in the year 2018 the Bank made provision for variable remuneration, including salary related expense.

Corporate Governance Arrangements

The Board Remuneration Committee (BRC) and the Board Risk Committee (BRIC), which are established by the Board of Directors of Arion Bank, provide guidance to the Board on the Bank's remuneration policy. The BRC advises the Board on the remuneration of the CEO, Managing Directors, the Compliance Officer and Chief Internal Auditor, as well as the Bank's remuneration scheme and other work-related payments. The BRC convened 7 times in the year 2018. The committee consists of at least three members, the majority of whom must be independent of the Bank and the Bank's day-to-day management. The CEO, Managing Directors, or other employees of the Bank cannot be members of the Committee.

The main responsibilities of the BRC are to review and propose changes to the Board on the Bank's remuneration policy, which proposes the changes to a shareholders' meeting. In addition, the BRC is tasked with ensuring that wages and other employment terms are in accordance with laws, regulations and best practices as current from time to time.

The CEO decides on a salary framework for Managing Directors and the Compliance Officer in consultation with the Head of Human Resources taking into consideration the size of the relevant division and level of responsibility.

A performance based compensation system has been in place since 2013 where both BRC and BRIC have a role as regards its design. BRC reviews and monitors the scheme, before submitting it to the Board, and BRIC´s role is to assess annually whether incentives which may be contained in the Bank´s system are consistent with the Bank´s risk policy. About 100 employees take part in the scheme. They include the CEO, Managing Directors, many heads of divisions as well as several other employees. Excluded are the CRO, the Internal Auditor, the Compliance Officer, the Head of Research and all the employees they manage.

Quantitative Information on Remuneration

According to disclosure requirements set out in Art. 450 of the Capital Requirements Regulation (EU) No. 575/2013, financial undertakings are required to provide aggregate quantitative in-

The Board Remuneration Committee monitors the performance based compensation scheme, ensuring compliance with laws, regulations and best practices. The Boards Risk Committee annually assesses whether incentives are consistent with the Bank´s risk policy

formation on remuneration, broken down by senior management and members of staff whose actions have a material impact on the risk profile of the institution. The Bank discloses information on remuneration for all beneficiaries of variable remuneration.

Table 9.1 Remuneration broken down by business areas

[ISK m]	Asset management	Corporate banking	Investment banking	Retail banking	Other functions
Total remuneration in the year 2018	497	246	535	2,870	3,612
of which variable remuneration	31	17	30	216	270

Table 9.2 Remuneration broken down by fixed and variable remuneration

[ISK m]	Executive management committee	Other beneficiaries
Number of beneficiaries	7	96
Total remuneration in the year 2018	274	1,577
Fixed remuneration	267	1,484
Variable remuneration	7	93
of which cash	0	0
of which to be paid out	0	0
Ratio of variable remuneration to fixed	2.6%	6.2%
Outstanding deferred remuneration		
Outstanding deferred remuneration from previous years	45	257
Deferred remuneration awarded during 2018	0	0
Reduced through performance adjustments	0	0
Vested in 2018 and paid out	-20	-115
New sign-on and severance payments made during 2018	-	-
Number of beneficiaries	-	-
Severance payments awarded during 2018	-	-
Number of beneficiaries	-	-
Highest severance payment	-	-

Table 9.2 shows total remuneration earned in the financial year 2018 by the members of the Executive Management Committee of Arion Bank, as well as other beneficiaries, separated into fixed remuneration—including pension contributions and other salary related benefits—and variable, performance based remuneration.

In 2018, coinciding with Arion Bank's Initial Public Offering, Arion's shareholders meeting agreed to a Restricted Stock Grant wherein permanent full-time or part-time employees were given a bonus in the form of shares. The scheme did not extend to employees in Risk Management, Compliance and Internal Audit. The amount was based on each respective employee's monthly salary, net of income tax and other wage related duties. The bonus was, furthermore, subject to a two year lock-up period and capped at ISK 1 million.

For those already participating in Arion Bank's variable remuneration system, the Restricted Stock Grant was not additional to 2018's variable remuneration contributions.

Remuneration

Boards of directors of individual subsidiaries decide on an incentive scheme for the subsidiaries. The Asset Management Company Stefnir and the card and payment solution company Valitor have incentive schemes in place. For information on a consolidated basis, see Note 12 in the Consolidated Financial Statements for 2018.

10 Upcoming and New Legislation

As a financial undertaking, Arion Bank, and many of its subsidiaries, must comply with various laws and regulations. The legal environment is dynamic and the Bank must therefore constantly monitor upcoming changes in legislation in order to meet legal requirements at any given time. The following section covers recent legislative activities by Parliament, Althingi, as well as upcoming legislation signalled by the Icelandic authorities, which the Bank deems necessary to mention.

10.1 New Legislation

Act No. 54/2018 amending the Financial Undertaking Act No. 161/2002, concerning recovery plans, early intervention, consolidation supervision, etc.

The Act adopts substantive provisions of EU directive No. 2014/59 on Bank Recovery and Resolution (hereinafter "BRRD"). The BRRD lays out a comprehensive set of measures meant to ensure banks and authorities make adequate preparation for crises.

National authorities will be equipped with regulatory tools to intervene in troubled institutions at an early stage to address developing problems and harmonized resolution tools and powers to take rapid and effective action when a bank failure cannot be avoided. With the BRRD it is mandatory for banks to build a Recovery Plan which meets the BRRD standards and requirements.

In addition, the Act includes amendments concerning consolidated supervision of financial undertakings and other financial services operating within the EEA. This includes provisions on the determination of the consolidating supervisor, when institutions are authorised to operate in two or more EEA States, the coordination of supervisory activities, in cases of cross-border activities, and joint decision-making by said supervisor and other national regulatory authorities on institution-specific prudential requirements. These amendments represent some of the final parts of the CRD IV implementation process.

The Act entered into force 22 June 2018.

Act No. 34/2018 amending the Financial Undertaking Act No. 161/2002, concerning set-offs, netting agreements and voidable legal acts

The amending act was brought about due to an EFTA Surveillance Authority (ESA) reasoned opinion in February 2018, concerning the incorrect implementation of Directive (2001/24/EC) on the reorganisation and winding up of credit institutions. The Directive's aim is to ensure that when credit institutions in EEA States enter into reorganisation or winding-up proceedings, a single procedure is applied to all creditors and investors. As a general rule,

this means that the law of the home state of the credit institution applies. ESA's reasoned opinion found three exceptions to this general rule, found in the in directive, had been incorrectly implemented by Iceland. One provision ensures the possibility for a beneficiary in rescission proceedings to argue that the challenged legal act is governed by another EEA Member State's law. The other two provisions clarify creditors' rights to set-off and netting agreements.

The Act entered into force 17 May 2018.

Act No. 94/2017 amending the Financial Undertakings Act No. 161/2002, concerning the Financial Supervisory Authority's authorization to limit damages to the financial market

The Act extends the Financial Supervisory Authority's provisional authorization to react to financial or operational difficulties within financial undertakings, in order to maintain financial market stability. A temporary provision to this effect has been in place since 2008, following the financial crisis.

The Act entered into force 31 December 2017.

Act No. 140/2018 on measures to prevent money laundering and terrorist financing

The Act, which has replaced Act No. 64/2006, implements the EU's Fourth Anti-Money Laundering Directive (2015/849/EU) into Icelandic law as well as certain provisions of the EU's Fifth Anti-Money Laundering Directive (2018/843/EU). The aim of the Directives is combatting money laundering and terrorism financing by preventing the misuse of financial markets. It seeks to ensure EU/EEA rules are consistent with global standards laid down in the international recommendations adopted by the Financial Action Task Force (hereinafter "FATF"). The Act is a restatement of Iceland's anti-money laundering legislation while its foundations are based on the prior legal framework. The main focus is still on obliged entities applying customer due diligence measures, requiring them to maintain internal procedures capable of identifying suspicious transactions and to report them to the appropriate authorities. The Act also expands the definition of obliged entities, i.e. entities which are subject to the Act, as well as requiring a risk assessment, which involves identifying and assessing the risk of money laundering and terrorist financing, taking into account factors including those relating to customer make-up, services provided, etc. Risk assessments shall be documented, kept up to date and made available to the relevant authorities upon request. The first risk assessment by obliged entities is due no later than 1 June 2019.

The Act entered into force 1 January 2019.

Act No. 91/2018 amending the Act No. 64/2006, on measures to prevent money laundering and terrorist financing, concerning virtual currency and digital wallets

The amending Act addresses service providers for virtual currency and digital wallets. Firstly, the act assumes that such entities fall within the scope of the Act and are subject to supervision by the FME. Secondly, these entities must be registered at the FME. Lastly, the same requirements are made to management and actual owners of service providers, as are made to the same

parties at currency exchange offices and money and value transfer services.

The Act entered into force 29 June 2018.

Act No. 90/2018 on Data protection and processing of personal data

A new European legal framework for data protection, the General Data Protection Regulation 2016/679 (hereinafter "GDPR"), entered into force on May 25 2018 in the EU and has now been adopted in Iceland via the EEA Agreement.

The reform in question signifies the biggest reform of data protection by the EU/EEA since the adoption of Directive 95/46/EC, which Iceland's previous Act on the Protection of Privacy as regards the Processing of Personal Data, No. 77/2000, was based on.

The new framework seeks to strengthen and unify data protection for individuals in the EEA and entails a strict data protection compliance regime with somewhat severe penalties in case of breaches. The regulation also applies to organizations based outside the EEA should they process personal data of EEA residents.

The Act entered into force 15 July 2018.

Act No. 15/2018 on OTC derivatives, central counterparties and trade repositories

With an aim to enhance transparency of OTC derivative trading and reduce counterparty and operational risk, as well as increasing the activity of the derivative market via more effective procedures, the Act implements Regulation (EU) No. 648/2012 on OTC derivatives, central counterparties and trade repositories (hereinafter "EMIR").

Changes introduced by the Act include a duty to clear all standardised OTC derivatives contracts via central counterparties, the objective of which is to minimise systemic risks, as well as reporting duties to trade repositories which must include at least the counterparty and the underlying of the derivatives contract as well as the face value of the contract. The impact of this involves a substantial change to previous market practices and also the setting-up of internal processes in relation to the compliance with reporting and clearing obligations.

The Act entered into force 1 October 2018.

Act No. 77/2018 amending various acts in relation to actions against tax avoidance and tax evasion concerning tightened tax surveillance and tax investigations, increased information acquisition etc.

The Act brings amendments to various Acts, the following amendment being of concern to the Bank. A condition in the Income Tax Act No. 90/2003, that only companies with unlimited tax liability in Iceland were able to obtain permission to be jointly taxed has been modified to include EEA States, EFTA States and the Faroe Islands. This follows comments made by the EFTA Surveillance Authority in April 2016, which argued that limiting joint taxation possibility to situations where all the companies have their legal residence in Iceland constituted a restriction contrary to Article 31 EEA, on the freedom of establishment in the EEA.

The Act entered into force 26 June 2018.

10.2 Upcoming Legislation

10.2.1 Bills to be submitted to Parliament

Proposals for a restated Central Bank Act and amendments to the Act on Official Supervision of Financial Activities (No. 87/1998), and more.

A bill has been announced which proposes a restated Central Bank Act (currently Act No. 36/2001), while concurrently making required amendments to the Official Supervision of Financial Activities Act (No. 87/1998) for the merger of the Central Bank of Iceland and Iceland's Financial Supervisory Authority.

The Government's Ministerial Committee on Economic Affairs and the Financial Market Reorganization proposed the merger in late 2018 based on working committee reports which focused on macro-prudential policies and financial supervision in Iceland. Corresponding amendments to the Financial Undertakings Act (No. 161/2002), as well as other legislative acts, will also be proposed.

The bill proposals are expected to be submitted to Parliament in spring 2019.

Amendments to the Financial Undertakings Act No. 161/2002

Two separate amending bills to the on Act on Financial Undertakings (No. 161/2002) have been submitted to Parliament or have been proposed by the Government, based on Directive 2013/36/EU (CRD IV).

Firstly, a bill has been submitted proposing limitations on the number of directorships held by the CEO or members of the Board of Directors of systematically important institutions. In addition, amendments are proposed concerning the auditing of financial undertakings.

The bill is currently under review in Parliament's Economic Affairs and Trade Committee.

Secondly, a bill is planned concerning the capital buffers regime, adopted from the CRD IV Directive. Specifically, a new capital buffer applicable to globally systemically important institutions will be introduced, administrative changes concerning the Financial Supervisory Authorities role in setting capital buffers will be made, and, lastly, minor general adaptations are proposed to bring Act No. 161/2002 better in line with the CRD capital buffer regime.

The bill is expected to be submitted to Parliament in spring 2019.

Bill on Bank Recovery and Resolution

Issues concerning the implementation of Directive 2014/59/EU on Bank Recovery and Resolution (BRRD), still remain. The directive provides authorities with comprehensive and effective arrangements to deal with failing banks at national level. The Directive grants national authorities powers to ensure an orderly resolution of failing banks with minimal costs to taxpayers. It includes rules to set up a national resolution fund which all financial institutions have to contribute to, based on their respective size and risk profile.

A bill on mention matter will likely be submitted to Parliament in 2019

Upcoming and New Legislation

Bill on MiFID II/MiFIR

The MiFID II Directive 2014/65/EU and the accompanying MiFIR Regulation 600/2014 represent a review and update to the Markets in Financial Instruments Directive 2004/39/EC (MiFID), passed into law in Iceland in 2007.

The review seeks to increase market stability and confidence and bolster consumer protections.

The MiFID II Directive applies to all financial entities providing investment services, amongst others introducing a new trading venue for bonds, structured finance products, emissions allowances and derivatives. These organised trading facilities (OTF) aim to increase transparency and efficiency of the financial market. Financial undertakings licensed to engage in securities trading will be made to fulfil more extensive organisational and trade transparency requirements.

Although still unannounced, a bill will likely be submitted to Parliament in 2019.

Bill concerning managers of alternative investment funds

The bill transposes Directive 2011/61/EU on Alternative Investment Fund Managers. The Directive introduces a legal framework for the authorization, supervision and oversight of managers of a range of alternative investment funds (AIFM), including hedge funds and private equity funds located and/or operated in EU countries requiring fund managers to obtain authorization from the competent authority as well as making them subject to supervision. Furthermore, the bill will repeal provisions of the Act on Undertakings for Collective Investment in Transferable Securities (UCITS), Investment Funds and institutional investor funds regarding investment funds (No. 128/2011).

The bill is expected to be submitted to Parliament in 2019.

Bill on securities settlement and on central securities depositories

Regulation 2014/909/EU on improving securities settlement and on central securities depositories (CSDR) is intended to harmonise the relevant rules in this sector and to better ensure safe and efficient settlements of security transactions. Examples of further demands concern increased prudential requirements for central securities depositories and an increase in regulatory oversight.

The bill is expected to be submitted to Parliament in 2019

Bill on interchange fees for card-based payment transactions

Regulation 2015/751/EU on interchange fees for card-based payment transactions will cap interchange fees, increasing transparency on fees and enhancing competition by providing consumers with more and better choices between different types of payment cards and service providers.

The bill is expected to be submitted to Parliament in 2019.

Bill on amending both the Act respecting private No. 138/1994 and public No. 2/1995 limited companies

The bill proposes amendments to combat illegal phoenix activities that annually is a big detriment to both the Icelandic general economy and state treasury. The Icelandic Financial Services Association is working closely with the government to submit a bill early in 2019.

The bill is currently under review in Parliament's Economic Affairs and Trade Committee.

Bill on amending Act No. 155/2010 on special tax on financial institutions

The bill will propose lowering the tax ratio on financial institutions in four stages from 0,376% in 2020 to 0,145% in 2023.

The bill is expected to be submitted to Parliament in 2019.

Bill on implementing Directive (EU) 2016/1148 Concerning measures for a high common level of security of network and information systems

Directive (EU) 2016/1148 aims to increase the ability of member states to improve network security and respond to situations where network security is threatened as well as improving cooperation between the states in this field. In doing so it is necessary to strengthen the foundations of important infrastructures where network security is involved.

The bill proposes that the directive is implemented in a comprehensive legislation since the scope of the directive spreads across a wide range of fields, many of which are completely lacking rules on network and information security.

The objective is to harmonize minimum requirements regarding risk management and capabilities of major infrastructures as well as legalizing notification requirements in cases of serious incidents, regarding network and information systems.

Additionally it is worth noting that the bill imposes strict standards on operators, including banks, regarding specific organization of their network and information security as well as the overall framework of risk management and capabilities. Failure to meet the imposed standards can lead to sanctions. On the other hand the operators gain valuable access to the Post- and telecom administration, safety and response team.

The bill is currently being discussed by a parliament committee.

10.2.2 EU directives and regulations – examples of other foreseeable implementation

Considerable changes have taken place recently in the legal environment of financial institutions, on account of changes brought about by the introduction of EU directives to the EEA agreement and subsequently into Icelandic law. In the medium term there is a great deal of work to be carried out concerning proposed changes to legislation applying to banking, and in response the Bank is preparing to implement relevant legislations.

Upcoming and New Legislation

Bill on market abuse

A bill is expected concerning the implementation of Regulation No. 596/2014 on market abuse (MAR). The regulation entails new provisions on insiders, lists of insiders, handling of insider information, duties of notification, market abuse, etc. The MAR regulation contains more extensive provisions than the present legal framework, a broader scope and includes more financial instruments than previously.

Undertakings for the collective investment in transferable securities bill

Directive 2014/91/EU brings amendments to the regulatory framework outlined by Directive 2009/65/EB Undertakings for collective investment in transferable securities, in conjunction with higher standards vis-à-vis alternative investment funds which the implementation of the AIFM Directive will introduce. The amendments focus on further clarifying the UCITS depositary's functions and improvements to provisions governing their liability, should assets be lost in custody; the introduction of rules on remuneration policies; and harmonisation of the minimum administrative sanctions that are to be available to supervisors.

A bill might be submitted to Parliament in autumn of 2019.

Bill on payment services

Directive 2015/2366/EU, which the bill seeks to introduce into Icelandic law, broadened the scope of the Directive on Payment Services 2007/64/EC considerably, which previously only applied to intra-EEA payments. The legal framework introduced by the Directive further strengthens intra-EEA cross-border payment activities, including payments to and from third countries where one of the payment service providers is located in the European Economic Area, and enhances consumer protection. The Directive sets out strict security requirements for electronic payments and the protection of consumers' financial data; increases the transparency of conditions and information requirements for payment services; and sets out rules concerning the rights and obligations of users and providers of payment services.

The Directive, furthermore, seeks to open up payment markets to new entrants, which is expected to lead to increased competition. It is specifically aimed at emerging and innovative payment services, such as internet and mobile solutions. As regards the Bank specifically, once implemented, the Bank's customers, consumers and businesses alike, will be able to use third-party providers to manage their finances. Banks will be obligated to provide access to customers' accounts to these third-party providers, through open APIs (application program interface), enabling third-parties to build financial services on top of the Banks' data and infrastructure. The Directive is complemented by Regulation (EU) 2015/751, which puts caps on interchange fees charged between banks for card-based transactions. This is expected to drive down the costs for merchants in accepting consumer payment cards.

PSD2 is thus foreseen to fundamentally change the payments value chain, impacting the profitability of more traditional business models in banking.

A bill is likely to be submitted to Parliament in 2019.

Bill on key information documents for packaged retail and insurance-based investment products

Packaged retail investment and insurance products (PRIIPs) are at the core of the retail investment market. Despite their potential benefits for retail investors, PRIIPs are often complicated and lacking in transparency. The information which institutions make available to investors when selling these products can be overly complex. They often contain too much jargon and can be difficult to use for comparisons between different investment products. Since institutions selling these products often also play a role in advising investors, conflicts of interest may arise producing advice which may not be in the investor's best interests.

Regulation 1286/2014/EU on key information documents for PRIIPs obliges those who produce or sell investment products to provide retail investors with 'key information documents' (KIDs) about the products. These documents should be simple, no more than three (3) pages and provide clear information on a product allowing the investor to take an informed investment decision.

A bill may be submitted to Parliament in late 2019.

Bills on CRD IV

Although much progress has been made in recent years concerning the adaptation of Iceland's legal regime with that of the EU's CRD IV/CRR regime, i.e. Directive 2013/36/EU on Access to the Activity of Credit Institutions and the Prudential Supervision of Credit Institutions and Investment Firms and the accompanying Capital Requirements Regulation (EU) No. 575/2013, some outstanding issues remain and further implementation is thus foreseeable. These include, amongst others, provisions concerning consolidated supervision of financial institutions and imposable sanctions.

11 Abbreviations

ACC	Arion Credit Committee
AIFM	Alaternative Investment Fund Manager
ALCO	Asset and Liability Committee
BAC	Board Audit Committee
BCC	Board Credit Committee
BRC	Board Remuneration Committee
BRIC	Board Risk Committee
BRRD	Bank Resolution and Recovery Directive
CBI	Central Bank of Iceland
CCC	Corporate Credit Committee
CCF	Credit Conversion Factor
CCR	Counterparty Credit Risk
CEO	Chief Executive Officer
CMMI	Capiability Maturity Model Institute
COREP	Common Reporting
CPI	Consumer Price Index
CRD	Capital Requirements Directive
CRM	Credit Risk Mitigation
CRO	Chief Risk Officer
CRR	Capital Requirements Regulation
CVA	Credit Value Adjustment
D-SIB	Domestic Systemically Important Bank
EAD	Exposure at Default
EBA	European Banking Authority
EEA	European Economic Area
ECL	Expected Credit Loss
EFTA	European Free Trade Association
EMIR	European Market Infrastructure Regulation
EMTN	Euro Medium Term Note
ESA	EFTA Surveillance Authority
ESAs	European Supervisory Authorities
EU	European Union
FATF	Financial Action Task Force
FME	Financial Supervisory Authority Iceland
FTE	Full-time equivalent
GDPR	General Data Protection Regulation
IAS	International Accounting Standards
ICAAP	Internal Capital Adequacy Assessment Process
ICFR	Internal Controls over Financial Reporting
IFRS	International Financial Reporting Standards
ILAAP	Internal Liquidity Adequacy Assessment Process
LCR	Liquidity Coverage Ratio
LGD	Loss Given Default
LTV	Loan to Value
MAR	Market Abuse Regulation
MD	Managing Director
MI	Major Incident
MiFID	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
NSFR	Net Stable Funding Ratio
OTC	Over the Counter
PD	Probability of Default
PSD	Payment Services Directive
PSE	Public Sector Entities
RCSA	Risk Control Self-Assessment
REA	Risk-weighted Exposure Amounts, previously referred to as Risk-Weighted Assets (RWA)
SCRA	Specific Credit Risk Adjustment
SDRs	Swedish Depository Receipts
SME	Small and Medium Enterprises
SREP	Supervisory Review and Evaluation Process
SFTs	Securities Financing Transactions
STIBOR	Stockholm Interbank Offered Rate
UCITS	Undertaking for Collective Investment in Transferable Securities
VaR	Value at Risk

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Arion Bank
Borgartún 19 105 Reykjavík Iceland

+354 444 7000
arionbanki.is