2019

Pillar 3 Report

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CRO REVIEW 2019

Íslandsbanki's capital position remained strong throughout 2019 and at year-end the Bank's overall capital ratio was 22.4%. The Bank's liquidity position is well above regulatory and internal limits, at year-end 2019 the overall liquidity coverage ratio (LCR) was 155% and the LCR for foreign currencies was 325%.

Following the annual Supervisory Review and Evaluation Process, the FME lowered the Bank's capital requirements by 0.5 percentage points to 18.8%, including the capital buffers, which is the lowest capital requirement of all the Icelandic banks. In February 2020, the counter-cyclical capital buffer will increase by 0.25pp, bringing the Bank's capital requirement to 19.0%. The Bank's target is to keep a management capital buffer of 0.5-2.0% in addition to the requirements, which means that the target capital ratio is in the range 19.5-21.0%.

The so-called SME supporting factor that reduces capital requirements for credit risk exposures to small and medium-sized enterprises came into effect in Iceland in the beginning of 2020. This change is expected to lead to an increase in the Bank's capital ratio by approximately 0.40pp.

The capital ratio is, therefore, somewhat above the long-term target.

The Central Bank of Iceland has for the first time introduced regulatory limits for the liquidity coverage ratio (LCR) in the domestic currency, ISK, and as of 1 January 2020, the minimum ISK LCR is 30%. The minimum will be increased in two steps ending at 50% in the beginning of 2022. The Bank's ISK LCR was 110% at year-end, well above the planned regulatory limits.

In October 2019, the Financial Action Task Force (FATF) reassessed Iceland's measures to prevent money laundering and terrorist financing. Although several actions had been taken by Icelandic authorities to address previously made observations by FATF, the task force concluded that authorities had not yet ensured full compliance on all recommendations. As a result, FATF placed Iceland on the list of cooperative jurisdictions with strategic deficiencies. Icelandic authorities have stated their strong commitment to resolve the observed deficiencies. Iceland's presence on the list has not affected the Bank's operations.

Following several setbacks, such as the demise of Iceland's second largest airline and a disappointing capelin season, the Icelandic economy experienced the beginning of a downturn in 2019. Accordingly, the growth of the Bank's loan portfolio slowed down as the year progressed. The annualised growth in loans to customers in the first quarter was 12.7% whereas in the fourth quarter the loan portfolio contracted by 4.2%. For the full year, the growth was 6.3%.

The worsening economic outlook also impacted loan impairments, as the forward-looking impairment method under IFRS 9 ensures that reserves are put aside for expected losses although actual losses have not been incurred. The effects of loan impairments in 2019 were ISK 3.6bn as opposed to gains of ISK 0.2bn in 2018.

Despite the worsening economic conditions, the credit quality of the loan portfolio is high on all measures. The NPL ratio was within acceptable limits at 3.0% at year-end, having grown from 2.0% at year-end 2018. At the end of 2019, there were no large exposures in the loan portfolio, compared to four at year-end 2018.

Most analysts and commentators on the Icelandic economy are expecting a prompt, although slow, recovery from the downturn. The Central Bank has lowered interest rates to stimulate the recovery, significant portions of the labour markets have agreed on modest wage modifications, and although the counter-cyclical capital buffer is set to increase in February, it has been announced that no further increases are planned this year.

Guðmundur Kristinn Birgisson was appointed Chief Risk Officer at Íslandsbanki in 2018. Guðmundur joined the Bank in 2011 and was Executive Director of Lending in the Bank's Personal Banking Division before being appointed CRO. Guðmundur holds a Ph.D. in Mathematics Education from Indiana University and has a wide range of professional experience.

1 Introduction

Íslandsbanki's Pillar 3 Report contains information on risk management, risk measurement, material risk exposures, capital adequacy and liquidity adequacy, in accordance with Icelandic law and European Regulation. The report should provide market participants and other stakeholders with information that facilitates a better understanding of the Bank's risk profile and capital adequacy.

1.1 Regulatory Background

The EU Capital Requirements Directive IV[1] and the EU Regulation on Prudential Requirements for Credit Institutions and Investment Firms[2] (CRR), hereafter referred to together as CRD IV, have for the most part been transposed into Icelandic law by amendments made to the Act on Financial Undertakings[3] and with the Regulation on the Prudential Requirements for Financial Undertakings.[4] These amendments incorporate, among other things, the CRD IV capital buffer requirements, disclosure requirements, minimum leverage ratio, supervisory review and evaluation process and capital definitions.

The scope of the CRD IV is broken into the following components:

- Pillar 1 – Rules for risk coverage, calculation of the capital requirements, quality of capital and minimum leverage ratio. Pillar 1 sets the minimum capital requirement for credit, market and operational risk.
- Pillar 2 – Supervisory Review and Evaluation Process (SREP) and framework for banks' Internal Capital Adequacy Assessment Process (ICAAP) and Internal Liquidity Adequacy Assessment Process (ILAAP).
- Global liquidity standard and supervision monitoring – Rules on minimum liquidity (LCR) and stable funding (NSFR) requirements.
- Pillar 3 – Market discipline through disclosure requirements.

For each of the Pillar 1 risk factors, the CRD IV allows for different methods to be used for calculating the minimum capital requirements and thereby risk exposure amount (REA). For credit risk and market risk, the Bank uses the standardised approach to calculate the capital requirements and for operational risk the Basic Indicator Approach. The minimum capital requirements under Pillar 1 are 8% of REA.

Pillar 2 sets out total regulatory requirements for the Bank, in view of its risk profile, by means of additional capital requirements for risk factors not addressed or not adequately covered under Pillar 1. The Bank's internal capital adequacy assessment is then reviewed by the Financial Supervisory Authority (FME) through the supervisory review and evaluation process. The SREP also includes a review of the Bank's liquidity adequacy assessment and if the Bank adequately identifies and measures its liquidity risk, holds adequate liquidity in relation to its risk profile and if it uses sound risk management systems and processes to support it.

The Central Bank (CB), which is the main supervisory authority regarding liquidity risk in Iceland, has adopted the CRD IV liquidity measures into the Icelandic rules on liquidity ratio.[5]

The European Banking Authority (EBA) issued Pillar 3 Guidelines[6] on disclosure requirements under Part Eight of CRR. The guidelines include specific guidance and prescribed tables and templates, which are regarded as a significant step towards enhancing consistency and comparability between banks through their regulatory disclosures. This Pillar 3 Report contains information in accordance with the disclosure requirements in the form of standardised EBA tables. The tables are included in an Excel sheet on the Bank's website and will hereafter be referred to as Additional Pillar 3 Disclosure.[7]

The Pillar 3 Report is intended to allow market participants to assess key information on capital, risk exposures, risk assessment processes, and hence the capital adequacy of the institution.

1.2 Consolidation

The Pillar 3 Report includes figures for the consolidated group, hereafter referred to as Íslandsbanki or the Group. When figures are shown for the parent company, it is specifically noted by referring to the Bank or parent. Names and primary businesses of major subsidiaries at year-end 2019 are listed in Exhibit 1.1.

[1] Directive 2013/36/EU
[2] Regulation 575/2013/EU
[3] Act no. 161/2002 on Financial Undertakings
[4] Regulation no. 233/2017 on the Prudential Requirements for Financial Undertakings
[5] Central Bank Rules no. 266/2017 on Liquidity Ratio
[6] EBA Guidelines on disclosure requirements under Part Eight of Regulation (EU) no 575/2013
[7] www.islandsbanki.is

Exhibit 1.1. Íslandsbanki's major subsidiaries at year-end 2019.

Name	Main Business	Ownership	Country
Borgun hf.	Payment acquirer and issuing processor	63.5%	Iceland
B-payment Group Szolgáltató Zrt.	Payment processing company	100%	Hungary
Íslandssjóðir hf.	Investment fund management company	100%	Iceland
Hringur-eignarhaldsfélag ehf.	Holding company	100%	Iceland
Allianz Ísland hf.	Insurance agent	100%	Iceland

1.3 Disclosure and Communication Policy

Íslandsbanki has in place a formal *Disclosure and Communication Policy* approved by the Board of Directors. The policy outlines the governing principles and framework for external disclosure and communication.

Risk and capital management disclosure aims at giving a true and fair view of the Bank's capital structure and adequacy, material risk exposures and risk assessment processes and governance. Íslandsbanki may decide not to disclose information that is considered immaterial. In addition, the Bank will not disclose information that is deemed to be proprietary or confidential. The classification of proprietary and confidential information is based on the relevant Icelandic laws and regulations as well as the Bank's own assessment.

The main channel for Íslandsbanki's risk and capital management disclosure is through the Pillar 3 Report, the Annual Report, Consolidated Financial Statements and investor presentations. All these documents are available on the Bank's website.[8] The Pillar 3 Report is published annually in conjunction with the Annual Report and the Consolidated Financial Statements. The Additional Pillar 3 Disclosure that is published in an Excel sheet on the Bank's website is partially updated quarterly and semi-annually. If material risk exposures change significantly between reporting periods, Íslandsbanki can choose to disclose information thereon more frequently.

1.4 Verification

The Pillar 3 Report has not been audited by external auditors and does not form a part of Íslandsbanki's audited financial statements. However, it has been appropriately verified internally and includes information from the audited Consolidated Financial Statements 2019.

The Pillar 3 Report has been prepared in accordance with the CRD IV, not in accordance with International Financial Reporting Standards (IFRS). This can cause some discrepancy between financial information in the Consolidated Financial Statements and information in the Pillar 3 Report, see LI2 in the Additional Pillar 3 Disclosure. For some parts, figures are only available, or relevant, on parent level and are clearly marked as such.

1.5 Disclaimer

The Pillar 3 Report is informative in nature and shall under no circumstances be interpreted as a recommendation to take, or not to take, any particular investment action. Íslandsbanki holds no obligation to update, modify or amend this report in the event that any matter contained herein changes or subsequently becomes inaccurate. Nothing in this report shall be interpreted as an offer to customers nor is it intended to constitute a basis for entitlement of customers. Íslandsbanki accepts no liability whatsoever for any direct or consequential loss arising from the use of this publication or its contents.

[8] www.islandsbanki.is

Exhibit 1.2. List of disclosures in the Additional Pillar 3 Disclosures.

Disclosure	Frequency	Pillar 3 Report
Table 1 – EU OVA: Institution risk management approach	Annual	Chapter 2
Table 2 – EU CRA: General qualitative information about credit risk	Annual	Chapter 4
Table 3 – EU CCRA: Qualitative disclosure requirements related to counterparty credit risk	Annual	Chapter 4
Table 4 – EU MRA: Qualitative disclosure requirements related to market risk	Annual	Chapter 5
Table 5 – EU LIA: Explanations of differences between accounting and regulatory exposure amounts	Annual	Chapter 3
Table 6 – EU CRB-A: Additional disclosure related to the credit quality of assets	Annual	Chapter 4
Table 7 – EU CRC: Qualitative disclosure requirements related to credit risk mitigation techniques	Annual	Chapter 4
Table 8 – EU CRD: Qualitative disclosure requirements on the use of external credit ratings under the Standardised Approach	Annual	Chapter 4
Table 9 – EU CRE: Qualitative disclosure requirements related to IRB models	N/A	
Table 10 – EU MRB: Qualitative disclosure requirements for institutions using the Internal Models Approach (IMA)	N/A	
Template 1 – EU LI1: Mapping of financial statement categories with regulatory risk categories	Annual	Chapter 3
Template 2 – EU LI2: Differences between regulatory exposure amounts and carrying values in financial statements	Annual	Chapter 3
Template 3 – EU LI3: Outline of the differences in the scopes of consolidation	Annual	Chapter 1
Template 4 – EU OV1: Overview of RWA	Quarterly	Chapter 3
Template 5 – EU CR10: IRB (specialised lending and equities)	N/A	
Template 6 – EU INS1: Non-deducted participations in insurance undertakings	N/A	
Template 7 – EU CRB-B: Total and average net amount of exposures	Annual	Chapter 3
Template 8 – EU CRB-C: Geographical breakdown of exposures	Annual	Chapter 4
Template 9 – EU CRB-D: Concentration of exposures by industry or counterparty types	Annual	Chapter 4
Template 10 – EU CRB-E: Maturity of exposures	Annual	Chapter 4
Template 11 – EU CR1-A: Credit quality of exposures by exposure classes and instruments	Semi-annual	Chapter 4
Template 12 – EU CR1-B: Credit quality of exposures by industry or counterparty types	Semi-annual	Chapter 4
Template 13 – EU CR1-C: Credit quality of exposures by geography	Semi-annual	Chapter 4
Template 14 – EU CR1-D: Ageing of past-due exposures	Semi-annual	Chapter 4
Template 15 – EU CR1-E: Non-performing and forborne exposures	Semi-annual	Chapter 4
Template 16 – EU CR2-A: Changes in stock of general and specific credit risk adjustments	Semi-annual	Chapter 4
Template 17 – EU CR2-B: Changes in stock of defaulted and impaired loans and debt securities	Semi-annual	Chapter 4
Template 18 – EU CR3: Credit risk mitigation techniques – overview	Semi-annual	Chapter 4
Template 19 – EU CR4: Standardised approach – credit risk exposure and Credit Risk Mitigation (CRM) effects	Semi-annual	Chapter 4

Exhibit 1.3. List of disclosures in the Additional Pillar 3 Disclosures (continued).

Disclosure	Frequency	Pillar 3 Report
Template 20 – EU CR5: Standardised approach	Semi-annual	Chapter 4
Template 21 – EU CR6: IRB – Credit risk exposures by exposure class and PD range	N/A	
Template 22 – EU CR7: IRB – Effect on RWA of credit derivatives used as CRM techniques	N/A	
Template 23 – EU CR8: RWA flow statements of credit risk exposures under IRB	N/A	
Template 24 – EU CR9: IRB – Backtesting of probability of default (PD) per exposure class	N/A	
Template 25 – EU CCR1: Analysis of the counterparty credit risk (CCR) exposure by approach	Semi-annual	Chapter 4
Template 26 – EU CCR2: Credit valuation adjustment (CVA) capital charge	Semi-annual	Chapter 4
Template 27 – EU CCR8: Exposures to central counterparties	Semi-annual	Chapter 4
Template 28 – EU CCR3: Standardised approach – CCR exposures by regulatory portfolio and risk.	Semi-annual	Chapter 4
Template 29 – EU CCR4: IRB – CCR exposures by portfolio and PD scale	N/A	
Template 30 – EU CCR7: RWA flow statements of CCR exposures under Internal Model Method (IMM)	N/A	
Template 31 – EU CCR5-A: Impact of netting and collateral held on exposure values	Semi-annual	Chapter 4
Template 32 – EU CCR5-B: Composition of collateral for exposures to counterparty credit risk	Semi-annual	Chapter 4
Template 33 – EU CCR6: Credit derivatives exposures	Semi-annual	Chapter 4
Template 34 – EU MR1: Market risk under standardised approach	Semi-annual	Chapter 5
Template 35 – EU MR2-A: Market risk under internal models approach	N/A	
Template 36 – EU MR2-B: RWA flow statements of market risk exposures under an IMA	N/A	
Template 37 – EU MR3: IMA values for trading portfolios	N/A	
Template 38 – EU MR4: Comparison of VaR estimates with gains/losses	N/A	
LCR disclosure template, on quantitative information of LCR	Annual	Chapter 6
Table on qualitative/quantitative information of liquidity risk	Annual	Chapter 6
Template on qualitative information on LCR, which complements the LCR disclosure template	Annual	Chapter 6

2 Risk Management and Internal Control

Risk assessment and the prudent evaluation and pricing of risk are key elements in Íslandsbanki's operations. In turn, an efficient risk assessment framework forms the foundation of the Bank's risk and capital management strategy. Íslandsbanki's risk governance is based on a three lines of defence framework and aims for informed decision-making and strong risk awareness throughout the Bank.

2.1 Risk Governance and Organisation

Íslandsbanki is exposed to various risk factors and managing these risks is an integral part of the Bank's operations. Íslandsbanki emphasises sound governance principles. The risk management and internal control framework is intended to ensure effective and efficient operations, adequate control of risks, prudent conduct of business, reliability of financial and non-financial information reported internally and externally, and compliance with the relevant laws, regulations, supervisory requirements and the Bank's internal rules and decisions.

2.1.1 Three Lines of Defence Model

The first line of defence consists of the Bank's business and support units. The business units take on risk through the extension of credit, through proprietary trading, and by providing other services to the Bank's customers. The primary responsibility for managing these risks lies with the business units. Each business unit shall have in place effective processes to identify, measure or assess, monitor, mitigate and report on the risks taken on by the unit. Support units, whose decisions have an impact on the Bank's operational risk, are subject to the same requirements for risk identification and management as the Bank's business units.

The second line of defence comprises the Bank's internal control units. The internal control units are responsible for developing and maintaining an efficient internal framework to facilitate adequate control of risks, prudent conduct of business, reliability of financial and non-financial information reported or disclosed, and compliance with the relevant laws, regulations, supervisory requirements and the Bank's internal policies and procedures. The Bank's internal control units are Risk Management and Compliance.

The third line of defence provides independent assurance to management and the Board of Directors of the effectiveness and completeness of the internal control framework, including both the first and the second line of defence. The third line of defence duties are performed by Group Internal Audit.

2.1.2 Organisational Hierarchy

The Bank's management body has a dual structure. The Board of Directors has a supervising role in setting and monitoring the execution of policies, the sound control of accounting and financial management and ensuring that group internal audit, compliance and risk management are effective. The Chief Executive Officer (CEO), the Chief Risk Officer (CRO) and other members of the senior management committees are responsible for implementing risk management practises and internal control in accordance with Board authorisation. Exhibit 2.1 provides an overview of the Group's risk management and internal control governance.

2.2 Roles and Responsibilities

2.2.1 Board of Directors

The ultimate responsibility for ensuring an adequate risk management and internal control framework at Íslandsbanki lies with the Board of Directors. The Board defines and communicates the risk governance framework and the acceptable level of risk through risk management policies and the *Risk Appetite Statement*.

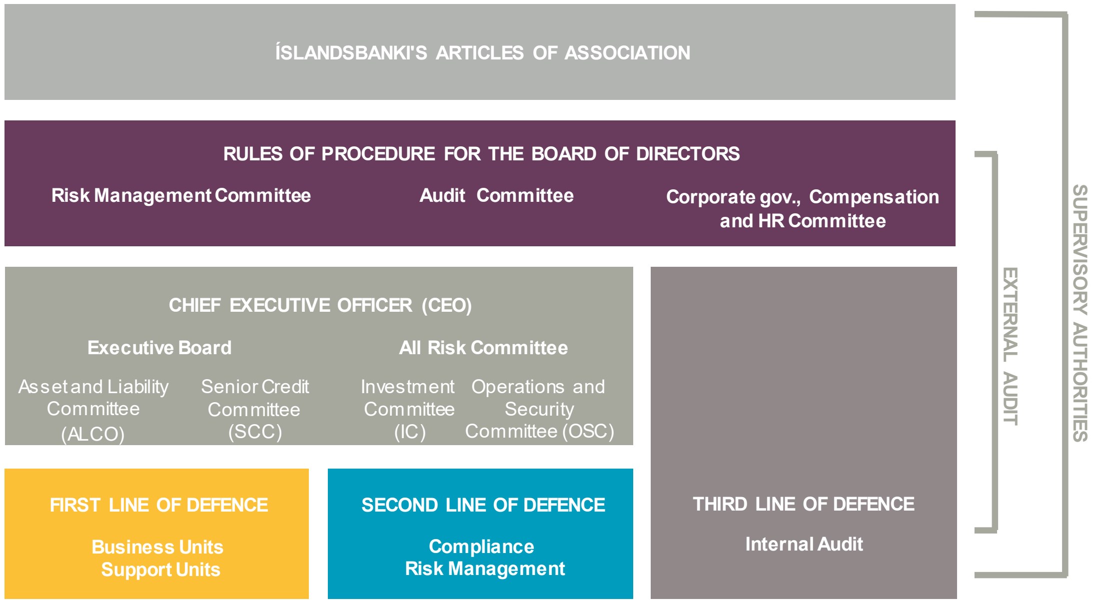
2.2.2 Board Committees

To assist the Board in fulfilling its oversight responsibilities, the Board has appointed three board subcommittees, the Risk Management Committee, the Audit Committee and the Corporate Governance, Compensation and Human Resource Committee. Further information on the Board subcommittees' role, composition and frequency of meetings can be found in the Bank's corporate governance statement in an unaudited appendix to the Consolidated Financial Statements.

2.2.3 Chief Executive Officer

The CEO is responsible for the day-to-day operations of the Bank and that the Bank's business is, at all times, in accordance with the Bank's Articles of Association, policies of the Board and the relevant law. The CEO appoints members of the Executive Board and other Senior Management Committees.

Exhibit 2.1. Íslandsbanki's risk management and internal control governance.



2.2.4 Chief Risk Officer

The CRO heads Risk Management and is responsible for defining the daily tasks of the department and to assess the adequacy of its professional skills. In addition, the CRO is responsible for monitoring the risk management framework at Íslandsbanki and verifying that the Bank has the appropriate resources and organisation to manage its risks efficiently.

The CRO is selected and appointed by the CEO, subject to Board confirmation. The CRO reports directly to the Board and the Board Risk Committee on the overall risk profile of the Group and cannot be removed without the Board's prior approval. The removal or appointment of the CRO shall be publicly disclosed and the FME informed about the reasons.

The CRO is independent from the business units. The CRO chairs the All Risk Committee (ARC), is a member of the Executive Board and reports directly to the CEO. The CRO provides an independent view on the Group's exposure to risk. The CRO can veto certain risk-taking decisions of the Bank's committees if an internal control unit considers the proposed risk inconsistent with the Bank's risk appetite, policies or procedures.

2.2.5 Compliance Officer

The Compliance Officer heads the Compliance unit and is responsible for defining the daily tasks and compliance program of the function and assessing the adequacy of its professional skills. The Compliance Officer is responsible for monitoring the compliance risk management framework for the Bank and maintaining oversight for compliance risk throughout the Bank.

The Bank's Compliance Officer is selected and appointed by the CEO, subject to Board confirmation, and reports directly to the CEO. The Compliance Officer cannot be removed without the Board's prior approval. The FME and Chief Audit Executive (CAE) shall be notified of the dismissal or departure of the Compliance Officer. The Compliance Officer is a member of the ARC.

The Compliance Officer reports directly to the Board on the overall compliance risk profile of the Bank.

2.2.6 Chief Audit Executive

The CAE is appointed by the Board, reports directly to the Board and directs Group Internal Audit with a mandate from the Board. The CAE is responsible for internal audit matters within the Group.

2.2.7 Managing Directors in Business Units

The managing directors for individual business units are responsible for the risks taken on by their units and for earning an acceptable level of return on these risks. This entails the responsibility for ensuring the necessary resources and training of employees for understanding, identifying, measuring or assessing, continuously monitoring and reporting on these risks.

Managing directors for individual business units can be assigned authorisations for assuming risk on the Bank's behalf. For business decisions exceeding the authorisations of managers at individual business units, further authorisation must be requested from the relevant senior management committee.

2.2.8 Managing Directors in Support Units

The managing directors of individual support units are responsible for the implementation of the technical and operational infrastructure necessary to fulfil internal and external requirements for the identification, continuous monitoring and reporting on the risks assumed by the business units.

The responsibility for managing individual risk factors that are owned by a business unit can only be transferred to a support unit through clear documentation, mandate letters, product descriptions, service level agreements or some other formal manner.

2.2.9 General Counsel

The General Counsel heads the legal department and reports directly to the CEO. The General Counsel provides legal advice to senior management, including the Board of Directors, and manages the Bank's legal department that provides comprehensive legal advice to the Bank's business and support units.

2.2.10 All Employees

Each employee is responsible for understanding the risk related to their day-to-day work, for knowing and understanding the respective internal and external rules and procedures, for using the alert procedures in the event of possible fraudulent activities and for conducting business in accordance with the Bank's code of conduct.

2.2.11 Internal Control Functions

The Bank's internal control functions are responsible for developing and maintaining an efficient internal control framework to facilitate adequate risk management, prudent conduct of business, reliability of financial and non-financial information reported or disclosed, and compliance with the relevant laws, regulations, supervisory requirements and the Bank's internal policies and procedures.

Risk Management

The Bank has an independent risk management function, Risk Management, headed by the CRO.

Risk Management is responsible for ensuring efficient implementation of the Bank's risk strategy and policies, for verifying that the Bank has in place efficient risk management processes and that each key risk that the Bank faces is identified and properly managed by the relevant function.

Risk Management is mandated to identify, understand, measure and monitor the risks that the Group is exposed to. It provides independent information, analyses and expert judgement on risk exposures, and advice on proposals and risk decisions made by senior management and business or support units as to whether they are consistent with the risk appetite and risk policies set by the Board. Emphasis is made on actively involving Risk Management at an early stage in elaborating the Bank's risk strategy and in all material risk management decisions, especially when offering new products or taking on new business.

Where necessary, Risk Management makes recommendations to senior management and the Board for improvements to the risk appetite, the risk strategy and the risk management framework to further clarify risk policies, procedures and limits.

Risk Management provides senior management and the Board with all relevant risk-related information to enable them to define the Bank's risk appetite. Risk Management takes an active part in developing the Bank's business strategy by ensuring that risks are appropriately and timely considered and that targets, which include credit ratings and rates of return on equity, are plausible and consistent. However, accountability for the business and pricing decisions taken remains with the business and support units and ultimately the senior management and the Board.

Compliance

The Bank has an independent compliance function, Compliance, headed by the Compliance Officer. Compliance is an independent control function and is a part of the second line of defence.

Compliance is responsible for implementing the compliance risk framework, for developing and maintaining a compliance risk policy and for communicating the policy to the Bank's employees.

Compliance is specifically responsible for regular monitoring and assessment of the suitability and efficacy of the Bank's measures concerning securities transactions and anti-money laundering (AML) in accordance with the applicable law.

Compliance verifies, in close cooperation with Risk Management, that the process for new products and new procedures complies with the current legal framework and, where appropriate, any known forthcoming changes to the relevant legislation, regulations and supervisory requirements.

2.2.12 Group Internal Audit

Group Internal Audit is an independent function headed by the CAE and is responsible for assessing whether the Group's risk management, internal control framework and governance processes are effective and efficient.

Group Internal Audit is not responsible for internal control or its implementation, but provides the Group with independent, objective assurance and consulting services designed to add value and im-

Exhibit 2.2. The Bank's senior committees and the number of meetings in the year 2019. In addition, the Credit Committee which is a sub-committee of the Senior Credit Committee had 127 meetings discussing credit proposals for lower exposure.

Committee	Role	Number of meetings
Executive Board	Business strategy, finances, IT strategy, marketing, governance and human resources	50
All Risk Committee	Risk strategy and risk appetite	19
Asset and Liability Committee	Funding and liquidity, market risk, capital management and internal and external pricing	41
Senior Credit Committee	Credit proposals	73
Investment Committee	Investment proposals	10
Operations and Security Committee	Product approval, operations, security and business continuity	30

prove the Group's operations. It helps the Board and senior management to evaluate and improve the effectiveness of the risk management, controls, and governance processes.

Group Internal Audit evaluates the compliance of the Bank's operations to internal policies and procedures. Group Internal Audit also assesses whether existing policies and procedures remain adequate and whether they comply with the relevant legal and regulatory requirements.

Group Internal Audit verifies the integrity of the processes ensuring the reliability of the Bank's methods and techniques, assumptions and sources of information used in risk models and accounting measurements. Group Internal Audit is, however, not involved in the design or selection of models or other risk management tools.

The work of Group Internal Audit is performed in accordance with a risk-based audit plan which is approved by the Board Audit Committee. Group Internal Audit is furthermore responsible for internal investigations on suspected fraudulent activities.

Group Internal Audit reports directly to the Board on its findings and suggestions for material improvements to internal controls. All audit recommendations are subject to a formal follow-up procedure by the appropriate levels of management to ensure and report their resolution.

2.2.13 External Audit

As is provided for in the Articles of Association, the Group's external audit firm is generally[1] elected at the Annual General Meeting (AGM) for a term of five years. External audit is responsible for the auditing of the annual accounts in accordance with accepted auditing standards and FME rules[2].

[1] EY's 5 year term has been extended by 2 years.
[2] FME Rules no. 532/2003 on the Auditing of Financial Undertakings

2.2.14 Senior Management Committees

The Bank's committee structure is divided into two categories, executive committees and business committees. There are two executive committees, the Executive Board and All Risk Committee (ARC). They are responsible for the implementation of the business strategy, risk appetite and policies. The business committees are four in total, the Asset and Liability Committee (ALCO), the Senior Credit Committee (SCC), the Investment Committee (IC), and the Operations and Security Committee (OSC). They are responsible for the approval of business proposals and the Bank's operational framework and implementation subject to internal rules and guidelines issued by the All Risk Committee and the Board.

The members of the senior management committees are appointed by the CEO, and each committee's mandate and rules of procedure is documented in a charter. The organisation of the Bank's committees is shown in Exhibit 2.2.

Executive Board

The Executive Board, chaired by the CEO, is responsible for implementing the Board-approved business strategy, maintaining oversight for and coordinating the Bank's operations and human resources. The Executive Board also coordinates key aspects of the Bank's activities and holds decision-making power in matters entrusted to it by the CEO in accordance with the Bank's strategy, policies and risk appetite.

All Risk Committee

The All Risk Committee (ARC) is responsible for the review and implementation of risk management and internal control policies issued by the Board. ARC translates the Board-approved risk policies into risk limits or guidelines for individual business units, desks or portfolios and approves methods and assumptions used for calculating risk measures, capital and liquidity requirements and targets, impairment, and internal and external pricing. The committee reviews and confirms proposals regarding risk assessment, impairments and capital and liquidity requirements prior to submission to the Board of Directors for approval.

Business Committees

The business committees decide on individual business proposals in accordance with the rules and procedures issued by the Executive Board, ARC and the Board. All business proposals discussed in the business committees are initiated and owned by a business or support unit and although authorisation has been given by a committee, the business decision itself is made and owned by the relevant unit.

Representatives from Risk Management attend all meetings of business committees. Their attendance is intended to ensure effective communication of risk information in the decision-making process, to ensure that the risks inherent in individual proposals are adequately addressed by the business units and to give an independent view on the risk inherent in the proposal and whether the risk is in line with the Bank's risk appetite.

The Risk Management representatives do not take part in the final decision of the business committees but can veto or escalate certain risk decisions if they consider them to be inconsistent with the Bank's risk appetite, policies or procedures.

2.3 Risk Culture

The Bank promotes strong risk culture as an important part of an effective risk management and internal control framework. The Bank's risk culture is reflected in the Bank's values and human resources strategy and is developed and maintained through the training of staff regarding policies, procedures and their responsibilities for risk. Emphasis is placed on transparency, acknowledgement, responsiveness and respect for risk throughout the Bank and open communication regarding risk is encouraged.

2.3.1 Ownership, Transparency and Accountability

A key feature of a strong risk culture is that every member of the organisation knows and understands their responsibilities relating to risk management. The *Risk Management and Internal Control Policy*, the *Risk Appetite Statement* along with other risk management policies outline these roles and responsibilities at Íslandsbanki.

All business decisions and the resulting risks are initiated and owned by a business unit and go through a clearly defined review and control process. As part of that process, the business units are responsible for identifying and describing the risks inherent in their proposals and for ensuring that all information regarding these risks is made available in a clear and comprehensive format before proposals are presented to the relevant authority within the Bank.

The business units are also responsible for ensuring that all information regarding risk exposures is correctly registered in the Bank's information systems to facilitate complete transparency, oversight and correct reporting of the Bank's overall risk exposures.

The meetings of business committees provide a formal platform for the communication of risk before a final decision is reached regarding individual business proposals.

The managing directors are responsible for ensuring that their employees have the necessary knowledge, resources and systems to monitor and manage their respective risk positions within the approved risk limits. All breaches of risk limits are reported through a formal limit breach process.

2.3.2 Training and Incentives

The Bank's performance and talent management aims at encouraging and reinforcing risk awareness and a healthy risk culture. The Bank has in place a comprehensive training programme managed by the Human Resources Department. The programme includes mandatory training on the Bank's internal policies and procedures tailored to the responsibilities of individual employees.

In 2019, the Bank recorded around 4,700 registrations for over 200 different in-house training courses. All employees are required to read and confirm their knowledge of the Bank's operational procedures, code of conduct, security policies and rules on measures against money laundering. The ratio of confirmation is monitored by the Bank's Human Resources Department and lack of participation is escalated to the appropriate managing directors.

2.3.3 Incident Reporting

The Bank has implemented a framework to capture both actual and potential operational risk losses. The Bank emphasises a "no-blame" culture and encourages employees to register all mistakes or failures, irrespective of financial losses, into the Bank's operational risk database. All registered events are analysed and recorded, and the infor-

Exhibit 2.3. Risk types and corresponding metrics in the Risk Appetite Statement.

Type of risk	Metrics
Profitability	Minimum rate of return on capital Cost-to-income ratio Target dividend ratio
Capital adequacy	CET1 capital ratio Total capital ratio target
Credit risk	Annual credit losses Non-primary lending activity Concentration risk
Market risk	Market risk as a ratio of the Group's total capital Market value of listed and unlisted equities Equity and bond underwriting exposures
Liquidity risk	Regulatory liquidity ratios (LCR, NSFR) Loans-to-deposits ratio Encumbrance ratio
Operational risk	Operational losses as a percentage of capital

mation used for continuous improvements to the Bank's operations and control framework.

2.3.4 Internal Alert Procedures

The Bank has an independent reporting channel enabling employees to report anonymously suspicion of fraudulent activities or actual breaches of regulatory or internal requirements. This reporting channel, which is referred to as a whistleblowing service, is provided by an external partner to ensure anonymity and whistle-blower protection. Information stored in the system is only accessible to the Bank's Group Internal Audit Fraud Investigation Team.

2.4 Risk Management Framework

The Bank's risk policies, rules and procedures, limits and reports form the Bank's risk management framework. The policies apply to the Bank and are implemented throughout the Group as applicable.

As described before, all business decisions and the resulting risks are initiated and owned by a business unit and go through a clearly defined internal review and control process. The level of authority needed to approve each business decision depends on the size, complexity and risk involved. The responsibilities regarding such decisions are outlined in the Bank's risk policies and investment policies and for material decisions summarised in the Bank's *Matrix for Material Bank Actions*.

2.4.1 Risk Appetite Statement

The Board defines the Bank's risk tolerance and financial targets in the *Risk Appetite Statement*. The *Risk Appetite Statement* is intended to support the Bank's business strategy by defining high-level limits and targets for core factors in the Bank's risk profile and operations.

The measures include target return on equity, target capitalisation level and capital composition, maximum credit losses, concentration limits, maximum amounts at risk for market risk and target liquidity ratios. Exhibit 2.3 shows the risk types and corresponding metrics in the *Risk Appetite Statement*.

2.4.2 Risk Policies and Limits

The *Risk Appetite Statement* is further implemented through risk policies, approved by the Board, and other rules, procedures and limits approved by ARC which provide more details specific to each risk type. In addition, the *Risk Assessment Framework* and the *Stress Testing Framework*, approved by the Board, describe the processes for identifying and assessing the risks inherent in the Bank's operations.

The risk policies such as the *Credit Risk Policy*, the *Market Risk Policy*, the *Operational Risk Policy* and the *Liquidity Risk Policy*, outline in further detail the Bank's strategy for risk identification, management and control within the three lines of defence framework. Finally, the risk appetite is translated into limits on individual desks, portfolios or risk positions.

The risk policies are all subject to an annual review led by Risk Management. The policy review process focuses on changes in the regulatory environment, changes in the Bank's operations and gaps that have been identified after an assessment of policy effectiveness.

2.4.3 Risk Identification

Identification of risks in the Bank's operations is made both bottom up, through the product approval process, the risk and control self-assessment process, and approval of individual transactions or portfolio and desk limits; and top-down through the annual risk assessment procedure as part of the Internal Capital Adequacy Assessment Process (ICAAP).

The product approval process and approval of individual transactions, or portfolios, is intended to ensure early detection and full oversight of risks in the Bank's operations. Each business unit is responsible for identifying the risks inherent in their operations and the products and services they offer.

The *New Products and Material Changes Policy* outlines the product and new business approval process within the Bank. The main objective is to ensure that the implementation of products and operations complies with the Bank's policy and the relevant legal requirements. The New *Products and Material Changes Policy* describes the synchronisation, review and control process necessary to ensure successful implementation of new products. The product approval process itself is a communication tool between product stakeholders, as well as a monitoring and risk management tool for new products.

In addition, as a part of the ICAAP, a formal and comprehensive assessment of the risks inherent in the Group operations is made annually. This review is described in the *Risk Assessment Framework* which is approved by the Board of Directors.

Risk Management is responsible for managing the annual risk assessment process. The assessment is done at the business unit level and then consolidated throughout the Group. The results from the risk assessment process are compared to the Bank's business strategy and risk appetite and used as input to the annual review of the *Risk Appetite Statement*.

For the key risk types identified through the assessment, a specific risk policy is defined and approved by the Board of Directors. The need for a specific risk policy is based on the assessment of the proportionality of the respective risk factors to the Bank's operations and business strategy.

Currently, the following four risk types have been defined as key to the Group's operations and business strategy and their assessment, management, mitigation techniques, and overall limits are defined in specific risk policies:

- Credit risk (Chapter 4)
- Market risk (Chapter 5)
- Liquidity risk (Chapter 6)
- Operational risk (Chapter 7)

Concentration risk is defined as material but currently managed according to the source of concentration. Concentration risk is considered in the *Credit Risk Policy*, the *Market Risk Policy* and the *Liquidity Risk Policy*.

Other Board-approved policies include a *Sustainability Policy*, *Compliance Risk Policy* and *AML Policy*.

Risk types that are not covered in separate risk policies are assessed through the annual ICAAP process and addressed in other risk policies and management reports in accordance with their nature and importance.

2.4.4 Risk Monitoring and Reporting

Risk Management provides a holistic view on risk, and compliance to limits, to internal and external stakeholders, and ensures an appropriate escalation in the event of limit breaches. Business and support units are, however, responsible for maintaining their independent view on the risks inherent in their operations, implementation of controls and other mitigating actions where needed, and reporting to senior management any present or foreseeable breaches from limits, policies or strategic direction. Exhibit 2.4 provides an overview of the governance of the risk management framework.

The strategic targets of the management are further defined in the Group's business plan, approved by the Board of Directors. The business plan gives a 5-year view of the development of the Group's operations and provides a basis for stress testing and capital planning.

ICAAP aims at identifying and assessing the risk inherent in the Group's operations and for integrating the Bank's business strategy and business plan on one hand and its risk profile and risk appetite on the other hand. This is to ensure that the Bank holds enough capital to support its risk profile and business strategy.

Íslandsbanki's *Risk Assessment Framework* outlines the Bank's framework for identifying the risks inherent in its operations and assessing its capital and liquidity adequacy. The scope of the Bank's risk assessment framework encompasses all material risks to which the Bank and its subsidiaries are exposed.

2.4.5 Recovery Plan

The Bank has implemented a comprehensive framework to ensure the viability of its operations in the unlikely event of significant financial stress. In accordance to Icelandic law[3], the Bank has in place a *Recovery Plan* setting out the relevant measures to be taken by the Bank to restore its financial position following a significant deterioration. The Recovery Plan contains several recovery

[3] Act no. 161/2002 on Financial Undertakings

Exhibit 2.4. Íslandsbanki's risk governance framework.

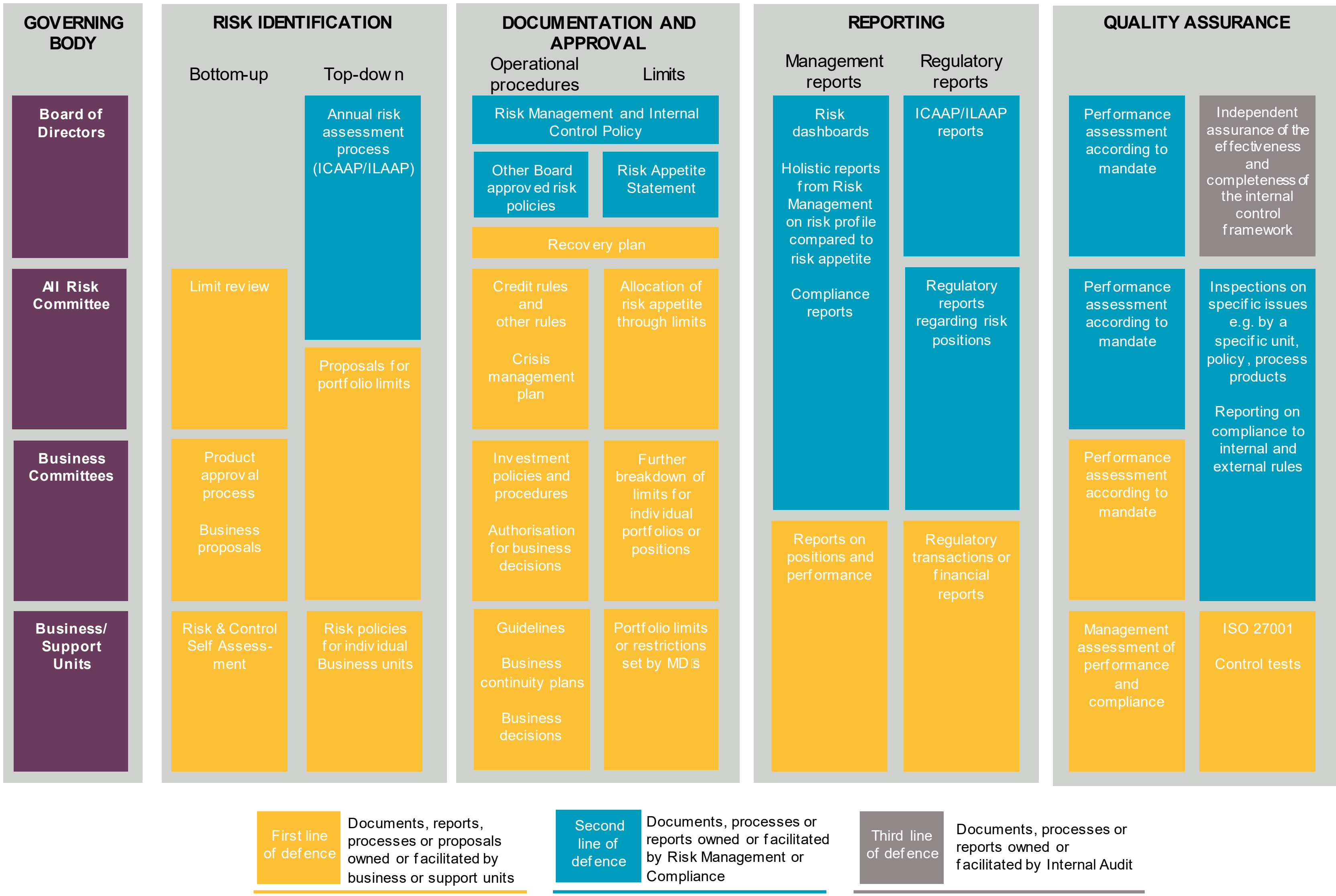


Exhibit 2.5. Risk reporting and frequency to the All Risk Committee and the Board of Directors.

Reporting	Details	Frequency
Risk Dashboard	The report provides a review of risk measures that summarise the main risk positions as compared to the risk appetite, internal and regulatory limits. This includes utilisation of limits set by the Board, or Executive and Business Committees. The report also includes the status of the Bank's contingency indicators. On a quarterly basis the report also includes an assessment of capital adequacy in light of changes in risk profile (ICAAP review).	Monthly
Compliance report	The report provides an overview of the main supervisory tasks of the compliance unit, identified deficiencies and reactions.	Semi annual
ICAAP report (Internal Capital Adequacy Assessment Process)	The ICAAP report includes a detailed description of how the Bank identifies, measures and assesses its capital adequacy in relation to its risk profile and business model. The scope of the assessment encompasses all material risks to which the Bank and its subsidiaries are exposed.	Annual
ILAAP report (Internal Liquidity Adequacy Assessment Process)	The ILAAP report includes a detailed description of how the Bank identifies, measures and assesses its liquidity adequacy in relation to its risk profile. The report also includes a forward-looking analysis based on contractual inflows and outflows, planned issuance and new lending according to the Bank's business plan.	Annual
Recovery Plan	The document provides a comprehensive recovery plan for the Bank that sets out measures to be taken for the recovery of the Banks's financial position following a significant deterioration to restore financial stability.	Annual

options that have been tested against different stress scenarios to ensure that the Bank is able to recover under different circumstances and return its core business lines and critical functions to business as usual. The Recovery Plan builds on existing business as usual liquidity, capital and risk management and governance framework and extends those with an escalation governance for recovery.

The Recovery Plan defines contingency indicators, both quantitative and qualitative in nature, that facilitate the monitoring of the development in capital, liquidity, profitability and asset quality as well as relevant macro-economic and market-based indicators. The Bank monitors these contingency indicators for early detection of a potential liquidity or capital adequacy crisis. As an integrated part of the Bank's risk management framework, the indicators are reported bi-weekly to ALCO that determines the current contingency stage. ALCO will then consider and act upon any adverse development on the basis of Treasury's recommendation. The activation of recovery options can include extraordinary measures subject to the Board's or even the shareholder's approval. The status of the Bank's contingency indicators and contingency stages is reported monthly to the All Risk Committee and the Board of Directors as a part of the Risk Dashboard.

The Board is responsible for the approval and submission of the Recovery Plan to the FME.

2.4.6 Internal Reporting

The Bank aims to have clearly defined and efficient reporting lines to ensure compliance with the approved risk limits and targets. Timely and accurate reporting on material risk factors is an essential part of the risk management and internal control governance.

Risk Management is responsible for providing ARC, the Board's Risk Management Committee and the Board with comprehensive and understandable information on the overall risk profile of the Group, including a comparison with the approved policies and limits. Exhibit 2.5 provides an overview of risk reporting and frequency to the ARC and the Board of Directors.

2.4.7 External Reporting

The Group publishes financial information mainly through the Annual Report, Consolidated Financial Statements, the Pillar 3 Report and in investor presentations. These are all available on the Bank's website[4].

The Group's financial accounts are prepared in accordance with International Financial Reporting Standards (IFRS). Regulatory reports are prepared based on CRD IV along with discretionary rules

[4]www.islandsbanki.is

and requirements set by the Central Bank of Iceland and the FME.

In addition, the Group works and reports according to the guidelines issued by Nasdaq Iceland for listed companies, since Íslandsbanki is an issuer of listed securities both on Nasdaq Iceland and on the Irish Stock Exchange. The framework for public disclosure regarding the Bank's risk and financial positions is described in the *Disclosure and Communication Policy* approved by the Board.

2.5 Sustainability Risk

Sustainability risk is the risk of being directly or indirectly negatively affected by externalities within the areas of environmental and climate considerations, anti-corruption, human rights, labour conditions or business ethics. These risks are often categorised as ESG risks which stands for Environment, Social and Governance.

Direct exposure includes the Bank's social licence to operate since damage to the Bank's reputation can cause customers or employees to leave the Bank for sustainability reasons. The Bank is indirectly exposed to sustainability risks in connection to its lending and investment activities.

Climate-related risks consist of two major categories that are often called transition risks and physical risks. Transition risks include policy, legal, technology and market changes due to adoption of new requirements related to climate change and a transition to a low carbon economy. Physical risks are related to physical impacts of climate change such as extreme weather and long-term shift in sea temperature and acidity.

Transition risks can disrupt the business models of the Bank's customers due to changes in demand for products and services. The expectation of impending changes in demand will also need to drive business decisions and in sectors where this does not happen organically, tax incentives and disincentives are likely to play a role. For example, during the transition towards cleaner energy in the transport sector, tax incentives are expected to be given for cars which use cleaner energy whereas carbon tax may be significantly increased.

The Bank's customers are exposed to physical risk related to climate change, for instance in the seafood industry due to temperature and acidity changes in the ocean around Iceland. Physical risks can have direct financial impact through damaged assets and supply chain disruptions. As awareness of the potential impact increases, exposed assets are liable to a decrease in value and higher insurance premiums.

Supervisors have globally been directing attention to climate risk and its affect on financial stability and in some places country-wide climate risk stress tests are planned. Íslandsbanki is preparing by including climate risk scenarios in its regular stress tests.

To address these risks, the Board of Directors has recently approved a revised *Sustainability Policy* for Íslandsbanki. Credit granting at the Bank is always carried out in compliance with the relevant regulatory instruments, including consumer protection provisions and anti-money laundering and anti-corruption rules and the policy reiterates that this applies to the credit process and the credit risk culture as a whole at the Bank. The policy further states that loans shall always be processed without reference to nationality, gender, race, religious beliefs, or other comparable factors. In addition, the new policy now states that the Bank shall consider sustainability and ESG criteria, as well as other risk factors, when taking credit decisions and pricing risk. Through its lending activity, the Bank is committed to supporting companies and households in their efforts to adopt more sustainable practices.

The principles in the sustainability policy aim to align the Bank and its business model with society's goals as expressed in the *United Nations Sustainable Development Goals* (SDGs) and the *Paris Climate Agreement*. The Bank endorses UNEP FI's new Principles for Responsible Banking[5] and is committed to several sustainability networks including Nordic CEOs for a sustainable future[6], UN Global Compact[7] and the domestic alliances, Festa, Center for Corporate Social Responsibility[8] and Iceland SIF[9].

[5] https://www.unepfi.org/banking/bankingprinciples/
[6] https://www.nordic-ceos.com/
[7] https://www.unglobalcompact.org/
[8] https://samfelagsabyrgd.is/
[9] https://www.icelandsif.is/

3 Capital Management

Íslandsbanki's capital position remained strong throughout 2019 and at year-end the Group's capital ratio was 22.4%, exceeding both the capital target and regulatory requirements.

The Bank aims at managing its capital position and the corresponding capital ratios at a margin above the overall regulatory capital requirement. The resulting long-term capital target assumes that the Bank maintains a capital management buffer of about 0.5-2.0% in excess of the overall capital requirements.

3.1 Strategy, Organisation and Responsibility

Banks' capital is intended to provide a buffer for unexpected losses or volatility in earnings and thereby provide protection for depositors and other creditors as well as promoting stability of the financial system. The eligible capital for calculating the capital ratio is defined by law and further outlined in relevant rules and regulations. The applicable Icelandic laws defines both the type of eligible capital and restrictions to the reliance on specific instruments.

The Bank's capital management framework is based on the CRD IV[1] as transposed into Icelandic laws.

The Board of Directors is responsible for the Bank's capital management framework and for ensuring that the Bank's capitalisation is adequate in relation to the risk inherent in the operations taking into account the Bank's business strategy and operating environment. The Board defines the capital governance framework and the adequate capitalisation through the Risk Management and Internal Control Policy, the Risk Appetite Statement and the *Capital Management and Pricing Policy*.

The All Risk Committee (ARC) governs the capital management of the Bank in accordance with the capital targets set by the Board and reviews proposals to the Board regarding issues related to capital management, including the dividend policy.

The Asset and liability committee (ALCO) is responsible for capital allocation to the business units within the framework set by the Board. ALCO reviews and approves the contingency stage assessment as a part of the Bank's *Liquidity and Capital Contingency Plan* and reviews information about the capital adequacy position of the Bank with respect to targets and limits.

Risk Management is responsible for internal and external reporting on the Bank's capital adequacy. Risk Management is also responsible for the Bank's Internal Capital Adequacy Assessment Process (ICAAP) and for the calculations of the allocated capital to individual business units.

Treasury is responsible for the management of the Bank's capital in accordance with the targets set by the Board and is responsible for developing the Bank's dividend policy for Board approval. Finance is responsible for reporting on the risk-adjusted performance down to individual business units.

[1] Capital Requirement Directive 2013/36/EU.

3.2 Total Capital and Capital Ratios

At year-end 2019 the Bank's common equity Tier 1 (CET1) amounted to ISK 176bn as compared to ISK 171bn at year-end 2018. The main factors contributing to the increase in CET1 is the ISK 8.5bn profit for the year offset by an ISK 5.3bn dividend payment disbursed in March 2019. The Bank's Tier 2 capital increased from ISK 16bn to ISK 23bn during the year following a SEK 500m Tier 2 bond issuance, bringing it up to its target for Tier 2 capital. For further information regarding the Bank's subordinated loans see Note 36 in the Consolidated Financial Statements. A breakdown of the Bank's total capital base is shown in Exhibit 3.1.

The Bank's minimum capital requirements, the corresponding risk exposure amount (REA) under Pillar 1 and the resulting capital ratios are shown in Exhibit 3.2. Details regarding the Bank's capital requirements can be found in Section 3.3.

The REA increased by ISK 38bn during the year. The largest increase was due to growth and changes in the loan portfolio contributing to an ISK 28bn increase. Thereof, the corporate exposure class increased by ISK 11bn. The implementation of IFRS 16, where the right to use assets is capitalised, contributes to an ISK 4bn increase of REA during the year. The main components contributing to changes in REA can be seen in Exhibit 3.3.

Article 501 in the CRR[2] came into effect in Iceland on 1 January 2020. This article introduces

[2] Capital Requirement Regulation 2013/575/EU.

Exhibit 3.1. Breakdown of the capital base at year-end 2019 and 2018 (ISK m). Consolidated.

Capital	31.12.2019	31.12.2018
Common equity Tier 1 Capital	175,647	171,473
Ordinary share capital	10,000	10,000
Share premium	55,000	55,000
Other reserves	7,065	6,499
Retained earnings	105,568	102,496
Non-controlling interests	2,428	2,318
Fair value changes due to own credit standing	392	376
Tax assets	(476)	(215)
Intangible assets	(4,331)	(5,002)
Tier 2 capital	22,674	16,216
Qualifying subordinated liabilities	22,674	16,216
Total capital base	198,321	187,688

the so-called SME supporting factor that stipulates capital requirements deduction for credit risk on exposures to small and medium-sized enterprises (SMEs) and is expected to lower the REA by ISK 15.6 billion, which corresponds to a 40 basis point increase in the Group's capital ratio.

3.3 Capital Requirements

The Board of Directors sets a minimum capital target for the Bank, expressed as the ratio between capital and risk exposure amount. The minimum capital target is intended to reduce the likelihood that the regulatory overall capital requirement is breached. The target is based on the results from ICAAP, the views expressed by the regulator through the Supervisory Review and Evaluation Process (SREP), implementation of the CRD IV capital buffers and other factors such as uncertainties in the operating environment, a possible target rating or other external factors. The following sections describe each component in more detail.

3.3.1 Pillar 1 Minimum Capital Requirements

The first pillar of the CRD IV defines the minimum capital requirements for credit risk, market risk and operational risk. The minimum capital requirement under Pillar 1, calculated as the ratio between the capital base and risk exposure amount, is 8%.

Risk Exposure Amount

For each of the Pillar 1 risk factors, the CRD IV allows for different methods to be used for calculating the minimum capital requirements and thereby REA. For credit risk and market risk, the Bank uses the standardised approach to calculate the capital requirements and for operational risk the Basic Indicator Approach.

The total REA is determined by multiplying the capital requirements for market risk and operational risk by 12.5 (the reciprocal of the minimum capital ratio of 8%) and adding the resulting figures to the sum of REA for credit risk.

Credit risk

The REA for credit risk is derived by assigning a risk weight, in the range of 0–150%, to the Bank's assets depending on the creditworthiness of the counterparty, the underlying collateral and the type and term of the exposure.

Market risk

For traded debt instruments, the capital requirement is generally in the range of 0–12% of the net exposure, based on the creditworthiness of the issuer and the term of the instrument. For traded equity instruments, the capital requirement is 16% of the net exposure. For foreign exchange (FX) risk, the minimum capital requirement is 8% of the maximum of the Bank's total long and total short positions in foreign currencies.

Operational risk

The minimum capital requirement for operational risk is equal to 15% of the relevant indicator, where the relevant indicator is the average over three years of the sum of net interest income and net non-interest income.

3.3.2 Pillar 2 Required Add-On (Pillar 2-R)

In addition to the minimum capital requirements for credit risk, market risk and operational risk under Pillar 1, financial institutions are required to make their own assessment of the overall capital requirements of the institution. These additional capital requirements, taking into account the risk

Exhibit 3.2. Pillar 1 capital requirements, REA and capital ratios at year-end 2019 and 2018 (ISK m). Consolidated.

Íslandsbanki's capital requirements and REA	Minimum capital requirements	REA	Minimum capital requirements	REA
	31.12.2019		31.12.2018	
Credit risk	63,134	789,180	60,064	750,801
Central governments or central banks	-	-	-	-
Regional governments or local authorities	189	2,358	184	2,300
Administrative bodies and non-commercial undertakings	75	940	70	876
Financial institutions	1,275	15,940	924	11,546
Corporates	39,731	496,642	38,838	485,472
Retail	10,753	134,408	10,637	132,961
Secured by real estate property	6,484	81,048	5,964	74,550
Exposure in default	2,166	27,072	1,417	17,716
Collective investment undertakings	94	1,172	81	1,009
Fair value shares, investment in associates and shares held for sale	1,073	13,412	811	10,137
Property, equipment, non-current assets held for sale and other assets	1,295	16,188	1,139	14,233
Market risk	634	7,919	610	7,622
Traded debt instruments	218	2,719	316	3,948
Shares and equity instruments	302	3,769	216	2,700
Foreign exchange	114	1,431	78	973
Credit valuation adjustment	162	2,027	191	2,385
Operational risk	6,834	85,424	6,811	85,141
Total	70,764	884,550	67,676	845,949
CET1 capital		175,647		171,473
Capital base		198,321		187,688
CET1 ratio		19.9%		20.3%
Total capital ratio		22.4%		22.2%

Exhibit 3.3. Changes in risk exposure amount (ISK bn). Consolidated.

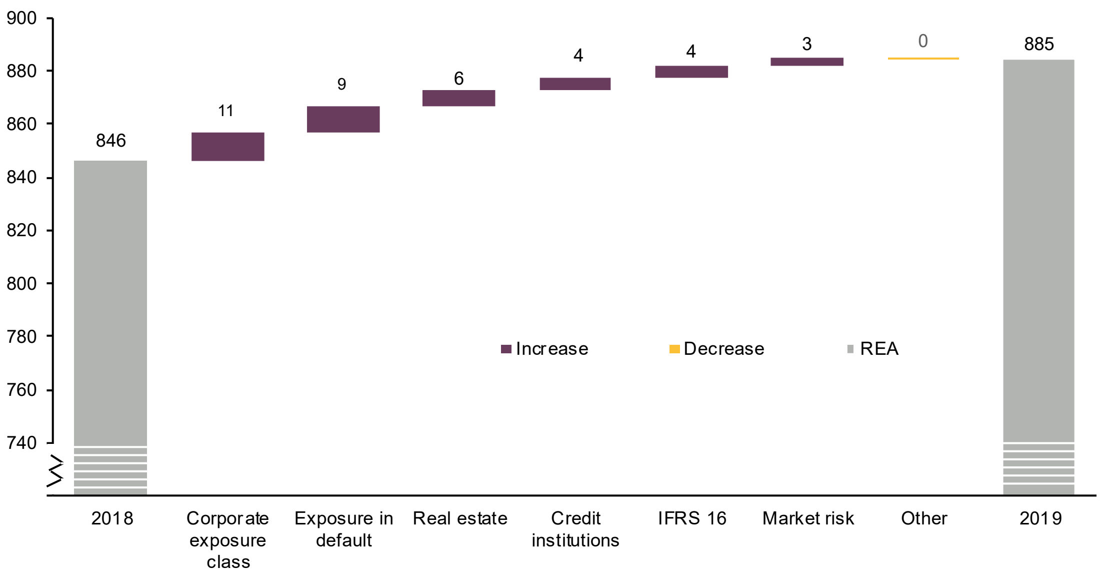


Exhibit 3.4. Breakdown of the total SREP capital requirement. Consolidated.

SREP capital requirement	2019	2018
Pillar 1	8.0%	8.0%
Credit risk	7.1%	7.0%
Market risk	0.1%	0.1%
Operational risk	0.8%	0.9%
Pillar 2-R	1.7%	2.2%
Credit risk	0.6%	0.7%
Credit concentration risk	0.5%	0.8%
Market risk	0.5%	0.7%
Subsidiaries	0.1%	-
Total SREP capital requirement	9.7%	10.2%

profile of the institution, are referred to as Pillar 2-R capital requirements.

In the ICAAP 2019, the main factors contributing to additional capital requirements under Pillar 2-R for Íslandsbanki were:

- *Additional capital requirements for risk factors underestimated under Pillar 1:* Credit risk and market risk.
- *Additional capital requirements for risk factors not addressed under Pillar 1:* Credit concentration risk, interest rate risk in the banking book (IRRBB), market risk arising from equities in the banking book and the inflation imbalance.

The Pillar 2-R capital requirements are presented as a proportion of REA in addition to the regulatory capital minimum of 8% under Pillar 1. The capital requirements under Pillar 1 and Pillar 2-R form the total SREP capital requirement for the Bank (TSCR). The Bank's Pillar 2-R results are reviewed by the Financial Supervisory Authority (FME) through the SREP. Based on the 2019 SREP, the additional capital required for Íslandsbanki under Pillar 2-R was 1.7% compared to 2.2% in 2018. The decrease is due to a reduction in concentration risk and a more moderate market risk profile. A new Pillar 2-R requirement has been added due to subsidiaries. The largest risk factor contributing to this requirement is chargeback risk in Borgun's operations. As a result, the total SREP capital requirement decreased to 10.2% from 11.2%. The breakdown of the Pillar 2-R capital requirements can be seen in Exhibit 3.4.

3.3.3 CRD IV Capital Buffers

The size of the capital conservation buffer is fixed by law at 2.5%. Based on recommendations from the Financial Stability Council,[3] The FME is autho-

[3] Article 86(a)-(e) of Act no. 161/2002 on Financial Undertakings.

Exhibit 3.5. Calculation of effective buffers for Íslandsbanki (ISK bn). Consolidated.

	Credit risk exposure amount	Market risk exposure	Total Risk exposure amount	Buffer rate	Institution specific buffer rate
Countercyclical capital buffer					
Iceland	735.3	2.9	738.1	1.75%	1.67%
Norway	2.4	0.0	2.4	2.50%	0.01%
United Kingdom	1.0	-	1.0	1.00%	0.00%
Denmark	0.8	-	0.8	1.00%	0.00%
Sweden	0.5	-	0.5	2.50%	0.00%
Other countries with effective CCB	0.2	-	0.2	0.59%	0.00%
Other countries	29.8	0.0	29.9		
Total	769.9	2.9	772.8		1.68%
Systemic risk buffer					
Iceland	738.9	-	738.9	3.00%	2.81%
Other countries	50.3	-	50.3	0.00%	0.00%
Total	789.2	-	789.2		2.81%

Exhibit 3.6. Combined capital buffer requirement. Consolidated.

	31.12.2019	31.12.2018
Capital conservation buffer	2.50%	2.50%
Countercyclical capital buffer	1.68%	1.21%
O-SII buffer	2.00%	2.00%
Systemic risk buffer	2.81%	2.84%
Combined buffer requirement	8.99%	8.55%

rised to determine the size of the countercyclical capital buffer, the capital buffer for other systemically important institutions (O-SII buffer), and the systemic risk buffer.

The FME increased the countercyclical capital buffer from 1.25% to 1.75% in May 2019, set the buffer for other systemically important financial institutions at 2.0%, and a systemic risk buffer at 3.0% of the domestic risk exposure amount. In addition, the FME has announced a 25 basis point increase in the countercyclical capital buffer effective from February 2020.

As the systemic risk buffer only applies to domestic exposures, the effective risk buffer rate is calculated by multiplying the proportion of the domestic credit risk exposure by the domestic systemic risk buffer rate.

The institution-specific countercyclical capital buffer rate applies to institution-wide total REA. The institution's specific buffer add-on amount is calculated as the weighted average of the countercyclical capital buffer rate applicable in jurisdictions in which an institution has private sector credit exposures, multiplied by the total risk exposure amount.[4]

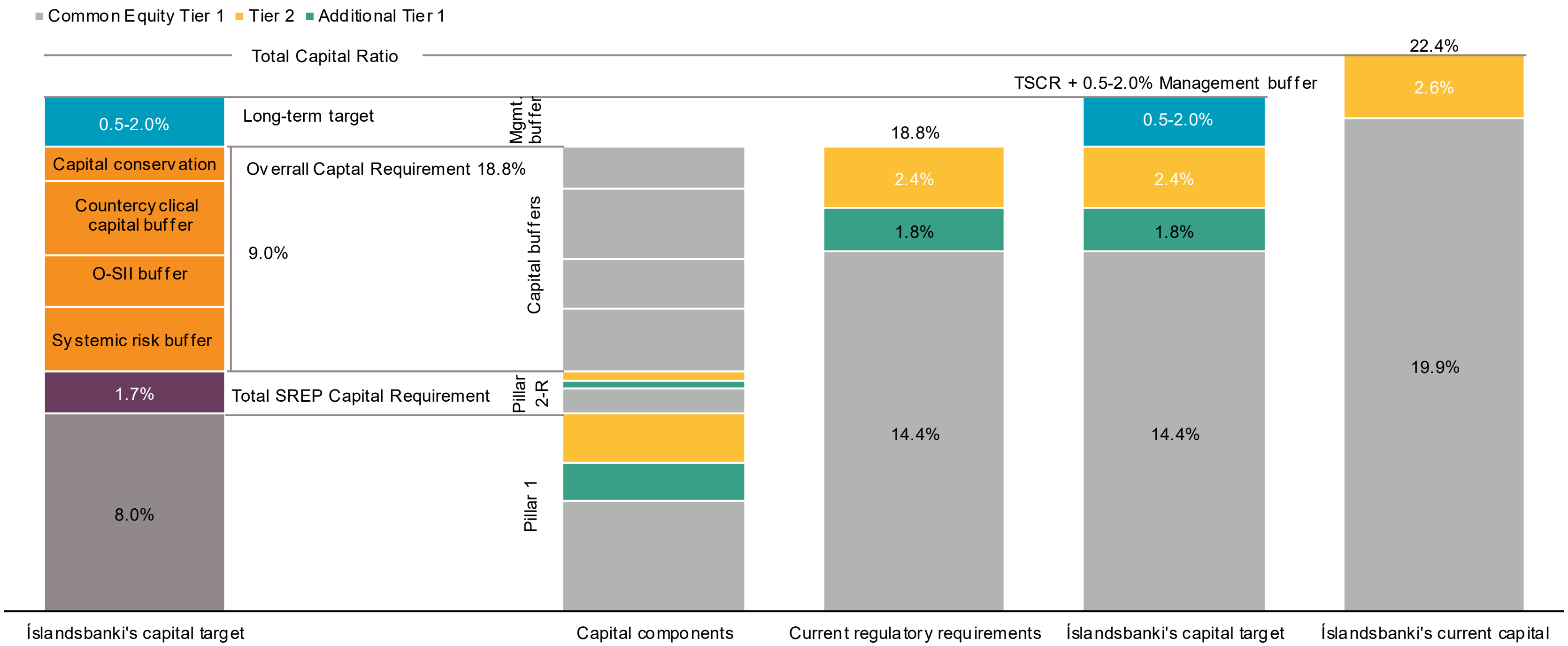
The calculations of the institution specific buffer rates are displayed in Exhibit 3.5 while Exhibit 3.6 shows combined buffer requirement for Íslandsbanki at year-end 2019 and 2018. The sum of Pillar 1, Pillar 2-R and the combined capital buffers forms the overall capital requirement.

3.3.4 Pillar 2 Guidance for Stressed Conditions (Pillar 2-G)

The Pillar 2-G is based on future risk and is subject to the regulators' assessment of stress tests performed on the financial institutions (supervisory stress testing). The FME can add the Pillar 2-G as a capital reference if the results from the supervisory assessment indicate that a financial institution might not be able to meet the total SREP capital requirements over the projected economic cycle. Currently no Pillar 2-G is applicable for the Bank.

[4] For further information on methodology see FME's Methods for setting capital buffers.

Exhibit 3.7. Current regulatory requirements compared with Íslandsbanki's minimum capital target as well as the composition of the capital target. Consolidated.



3.3.5 Management Buffer

The Bank aims at managing its capital position and the corresponding capital ratios at a comfortable margin above the overall regulatory capital requirement. This margin is referred to as the management buffer in the Bank's capital management framework. The size of the management buffer is based on factors such as views from the regulator through the SREP, volatility in the Bank's REA due to currency fluctuation, volatility in the Bank's REA due to lumpy asset growth, the Bank's target rating, competitive issues, funding terms, uncertainty in the operating environment not accounted for in the ICAAP and uncertainty in the regulatory environment.

The Bank's capital target set by the Board of Directors assumes that the Bank keeps a management buffer of about 0.5-2.0% in excess of the overall capital requirement resulting from the SREP. Based on the most recent SREP results, this translates to a target capital ratio of 19.3-20.8%.

3.3.6 Capital Composition

According to the CRD IV, the following restrictions apply to the composition of Pillar 1 capital:

- CET1 at a minimum 4.5% of REA
- Tier 1 capital including Additional Tier 1 (AT1) at a minimum 6.0% of REA
- A total capital ratio including Tier 2 debt at a minimum 8.0% of REA

The capital held under Pillar 2-R is subject to the same proportional restrictions as capital held under Pillar 1, the CRD IV capital buffers shall be comprised of CET1 capital only, whereas the composition of the management buffer is at the Bank's discretion.

Exhibit 3.7 shows Íslandsbanki's current regulatory requirements and how they contribute to the Group's minimum capital target as well as the composition of the Bank's capital, the minimum requirements for CET1 capital and the resulting room for issuing AT1 or Tier 2 capital under Icelandic rules.

Exhibit 3.8. Leverage ratio (ISK bn). Consolidated.

	31.12.2019	31.12.2018
On-balance sheet exposures	1,189	1,121
Off-balance sheet exposures	39	47
Derivative exposures	9	9
Leverage ratio total exposure measure	1,237	1,177
Tier 1 capital	176	171
Leverage ratio	14.2%	14.6%

3.4 Stress Testing

Íslandsbanki's stress testing framework aims at detecting the sensitivity of the Bank's operations to changes in the operating environment and to ensure that the Bank holds sufficient available capital and liquid funds to meet minimum requirements, even under stressed operational conditions.

The main types of stress tests performed at Íslandsbanki are:

- *Sensitivity analysis*: Sensitivity analyses provide information about key risks and enhance understanding about concentrations in one or several risk factors. Sensitivity analysis stresses one risk driver, with different degrees of severity, to assess the sensitivity of the Bank's operations to that particular risk driver.
- *Reverse stress test*: Reverse stress testing consists of defining a significant and pre-defined negative outcome and then identifying causes and consequences that could lead to such an outcome. The purpose is to identify possible combinations of events and risk concentrations that might not be included in other stress tests performed within the Bank. Thus, the reverse stress test could reveal weaknesses in the Bank's operations that might otherwise be overlooked.
- *Scenario analysis*: Scenario analysis can be defined as multiple sensitivity analyses performed at the same time which assess the resilience of an institution. A stress scenario is supposed to be forward looking and identify possible events or changes in market conditions that could adversely impact the Bank. The scenario should address the main risk factors that the Bank may be exposed to. The scenario should be severe but plausible and at the same time be consistent internally as well as economically. The Bank has recently added climate risk as one of the risk factors in the scenario analysis.
- *Specific events*: Under this type of stress testing, the Bank assesses specific current or imminent events that could have an extensive impact on its operations, the risk mitigating actions that can be taken to reduce the likelihood of these events materialising and to minimise the impact for the Bank.
- *Reputational risk stress test*: Qualitative stress testing due to reputational risk are performed by experts from across the Bank. The experts come up with a scenario that could damage the Bank's reputation and analyse how the scenario affects the Bank's reputation, the impact it has on different stakeholders, the likelihood that it would have this effect and discuss possible countermeasures. The discussions are documented and summarised in the Bank's ICAAP Stress Testing Results.

The key assumptions for a scenario analysis and other significant stress tests are developed in cooperation with the Bank's Chief Economist, business units, ARC and the Board. The results from stress tests are compared with the Bank's capital target, other risk appetite measures and risk limits. If the results indicate a breach in the Bank's capital targets or other risk appetite or strategic measures, remedial actions may be suggested, depending on the severity and likelihood of such a breach.

3.5 CRD IV – Leverage Ratio

The leverage ratio is a measure introduced in the CRD IV, supplementing the risk-based capital requirements. A lower leverage ratio indicates higher leverage. The leverage ratio is calculated by dividing Tier 1 capital by the sum of total assets and adjusted off-balance sheet exposures. According to law, the minimum leverage ratio is 3%.

Exhibit 3.8 shows the breakdown of the exposures and the leverage ratio. The increase in the total exposure measure is due to a larger balance sheet whereas the increase in the Tier 1 capital is due to retained earnings. As a result, the leverage ratio decreased slightly between years.

4 Credit Risk

The Bank undertakes credit risk by offering loans, guarantees and other credit products. Credit risk is the primary risk factor in the Bank's operations and taking on credit risk is a core activity of the Bank. The Bank has policies and procedures for accepting, measuring and managing credit risk. The objective of credit risk management is to achieve an appropriate balance between risk and return and to minimise potential adverse effects of credit risk on the Bank's financial performance.

At the end of 2019, the Bank's maximum exposure to credit risk amounted to ISK 1,305bn, compared to ISK 1,255bn at year-end 2018. The loan portfolio grew by 6.3% in 2019 after an 11.9% increase in the previous year. Credit risk accounted for 89% of capital requirements under Pillar 1 and credit risk and credit concentration risk accounted for 84% of the total capital requirements, as determined in SREP 2019.

This chapter provides a description of the Bank's credit process, risk assessment models and a detailed breakdown of the loan portfolio that gives an indication of credit concentration and credit quality.

4.1 Strategy, Organisation and Responsibility

Credit risk is defined as the current or prospective risk to earnings and capital arising from an obligor's potential failure to meet the terms of any contract with the Bank.

Credit concentration risk is the increase in risk that is driven by common underlying factors, such as sector, economy, geographical location, type of financial instrument or due to connections or relations among counterparties. This includes large individual exposures to parties under common control and significant exposures to groups of counterparties whose probability of default is driven by common underlying factors.

The ultimate responsibility for ensuring an adequate credit risk management and internal control framework at Íslandsbanki lies with the Board of Directors. The Board defines the credit risk governance framework and the acceptable level of credit risk through the *Risk Management and Internal Control Policy*, the *Risk Appetite Statement* and the *Credit Risk Policy*.

The Bank's strategy is to maintain a modest credit risk profile and it aims to have long-term average annual credit losses less than 0.9% of the loan portfolio, excluding the liquidity portfolio and the qualified retail mortgage portfolio. This risk appetite is reflected in the credit risk limit structure and guided through the use of credit risk assessment models.

Credit risk activities are controlled through exposure limits applied to counterparties, countries, sectors and products.

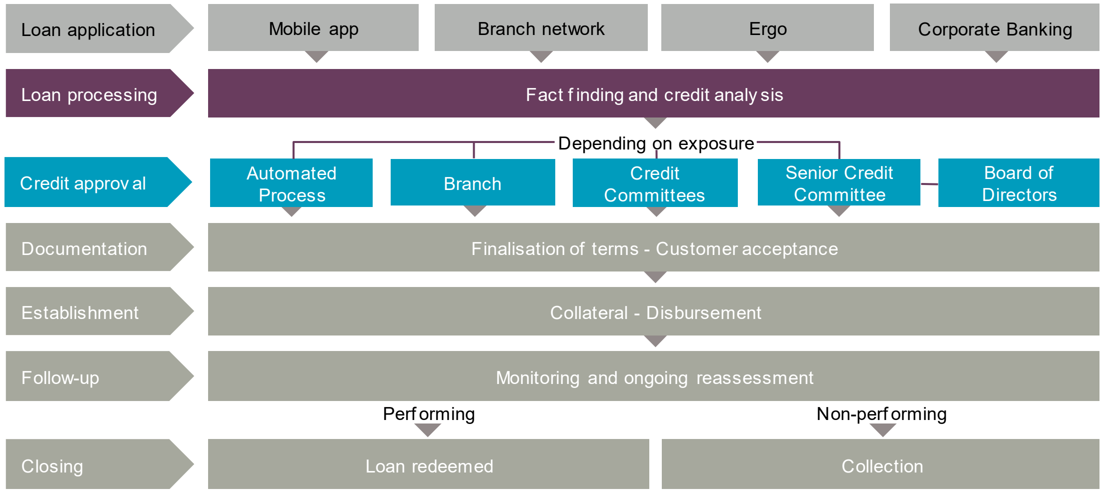
As the second line of defence, Risk Management monitors the adherence to credit risk limits and reports on credit risk to the All Risk Committee and to the Board of Directors, including current and prospective risk position compared to risk appetite.

The Bank's credit process, shown in Exhibit 4.1, is based on a committee structure where the Senior Credit Committee has the authority to approve credit proposals within authorisation limits set by the Board of Directors. The Senior Credit Committee then appoints and allocates credit authorisation limits to its subcommittees and to individual employees such as branch managers and credit managers. Credit authorisation limits can have reference to the risk class of the counterparty or to specific credit products. For certain retail products, such as overdrafts and credit cards to individuals, credit decisions are in part based on an automated approval process.

The All Risk Committee approves frameworks for rule-based and automated approval processes. The frameworks include appropriate control mechanisms, continuous monitoring and reporting, assessment of the risk associated with the process, and mitigating actions. To further strengthen the quality of frameworks for rule-based or automated approval processes, they shall be reviewed annually with the result presented to the Board of Directors. Automated approval processes do not relieve the business units granting the credit of their responsibilities regarding credit quality or accountability.

The Bank's Credit Rules outline the principles governing loans, guarantees and other products that expose the Bank to credit risk. Trust between the Bank and its customers is a prerequisite for all lending, as well as the customer's ability and willingness to repay in a timely manner. Sufficient collateral alone cannot justify lending to customers

Exhibit 4.1. Schematic overview of the Bank's credit process. Loan applications can be received through the Bank's Call Centre as well as the Bank's mobile and online banking platforms.



with insufficient payment capacity. According to the Bank's *Sustainability Policy* it is required that sustainability and ESG risk is evaluated in the credit granting and risk assessment process.

To mitigate risk, the Bank requires collateral that is appropriate for the product offered. For some products, such as relatively small overdrafts to individuals, no collateral is required, given that the customer's creditworthiness meets the Bank's criteria. Since the Bank does not seize collateral unless a borrower faces serious repayment difficulties, the valuation of collateral focuses on its future expected value at the time of default. The Bank has appointed a Collateral Board that reviews and proposes guidelines for the valuation of collateral and pledged assets. The objective is to ensure that the valuation of collateral is coordinated throughout the Bank.

As the first line of defence, the business units continuously monitor their loan portfolio and periodically reassess customers' performance. Collection procedures are set to be agile and swift to keep arrears at minimum. Loan covenants are monitored, and appropriate actions are taken to protect the Bank's interests if there are covenant breaches.

Customers that show signs of financial difficulties are placed on an internal watchlist and monitored carefully. When restructuring measures are more appropriate than collection procedures, the Bank can offer several measures and restructuring frameworks for customers in financial difficulties. Forbearance measures include temporary payment holidays, extension of loan terms, capitalisation of arrears and waiving of covenants. In cases when these measures are not sufficient, they may be precursors to a more formal restructuring process.

Formal legal collection and liquidation of collateral is the final step of the collection process if other measures are not successful.

4.2 Measurement and Monitoring

Portfolio credit risk is measured both in terms of current events and possible future events. Current events include non-performing ratios, the scope of forbearance agreements and impairment allowance for defaulted facilities, while possible future events are captured by measurements such as the probability of default and, since the adoption of the accounting standard IFRS 9, also in the impairment allowance for non-defaulted facilities.

To ensure that the Bank charges an adequate interest rate and that it has sufficient capital reserves to ensure long-term sustainability, the Bank estimates expected and unexpected losses of its loan portfolio.

The long-term expected credit loss on the loan portfolio is covered by a part of the interest rate margin. Due to various underlying factors, the observed annual losses can fluctuate significantly around the long-term average, sometimes up to an order of magnitude. To be able to cover these unexpected losses at any time, the Bank holds a substantial capital buffer against these fluctuations. An adequate return on this capital buffer also needs to be covered by the interest rate margin.

The annual expected loss (ECL) for a single obligor depends on the probability that the obligor defaults within the horizon of one year (PD), the expected exposure at time of default (EAD) and the loss given default (LGD), expressed as a fraction of the exposure at default:

$$ECL = PD \cdot LGD \cdot EAD.$$

Exhibit 4.2. Methods used to assess the default risk of different obligor types, approximate number of obligors and relative size of on-balance-sheet exposure at year-end 2019. Parent.

Obligor type	PD assessment	Number of obligors	Exposure
		(approx. count)	(%)
Individuals	Statistical model	84,000	30.9
Small companies	Statistical model	9,000	7.9
Large companies	Hybrid model	400	37.8
Credit institutions	External rating agencies or expert model	50	6.8
Regional governments	Expert model	20	1.3
Sovereigns	External rating agencies	10	15.3

Under IFRS 9, all loans are required to carry an impairment allowance of either 12-month expected credit loss or, in case of a significant increase in credit risk since origination, lifetime expected credit loss. This impairment allowance is calculated using several different scenarios for the future economic development and the final result is the probability-weighted average of the ECL in these scenarios. The calculation of the impairment allowance under IFRS 9 is further discussed in Note 66.3 in the Consolidated Financial Statements.

The main drivers for the unexpected portfolio loss are correlations between obligor defaults within the portfolio. These correlations may be due to common dependencies on macroeconomic factors or due to business relations between individual obligors.

4.2.1 Definition of Default

The Bank's definition of default has been updated so that it simultaneously satisfies the requirements in the definition of stage 3 according to IFRS 9, the definition of default according to article 178 of CRR and the definition of non-performing exposure used in FINREP. Obligors are considered to be in default according to the current definition if (a) it is the opinion of the Bank that it is unlikely that they will fulfil the terms of their contracts or (b) they are more than 90 days past due on a material credit obligation. Defaults are defined on the obligor level rather than the facility level.

The assessment under point (a) is based on a defined set of triggers, some of which are fully objective whereas others are based on assessment. The general rule is that if any one of these triggers is activated then the customer is deemed to be in default. Furthermore, there are requirements that a customer actively demonstrates that there is no longer any reason for the Bank to say that they are in default.

Among the triggers which activate default are that the revenues of the customer do not sustain their level of indebtedness, that the customer is in serious breach of covenants in their loan contracts, that the Bank has initiated serious collection measures, that the customer has been given a serious registration on an internal watchlist and registrations on a credit bureau watchlist are also considered.

Among the triggers which indicate that a customer should no longer be considered in default are that the customer has maintained normal repayments over a certain period, that a period of probation has been completed and that the customer has improved their financial position e.g. by the injection of new capital.

4.2.2 Probability of Default

The way an obligor's probability of default (PD) is assessed depends on the obligor type. Exhibit 4.2 shows the methods used to assess the risk for different obligor types and the number of obligors and the relative size of exposure for each obligor type.

The Bank uses internal rating models to assess the default probability of companies and individuals. The rating of large companies is based on a company's most recent financial statements, together with a qualitative assessment of its management, market position and industry sector. The model assigns each obligor to one of ten risk classes. Risk class 10 is for obligors in default and risk classes 1-9 for other obligors.

For individuals and small companies[1], the Bank uses two different statistical rating models. These models are behavioural scoring models and use information about a customer's payment history, amount of debt and deposits and demographic variables to assess the probability that a customer will default on any of their obligations within 12 months of the rating assessment.

Exhibit 4.3 shows the mapping from risk classes to the probability of default (PD) for the three

[1] For credit purposes, a company is considered to be small if the total exposure to the Bank is less than ISK 150m.

Exhibit 4.3. Average long-term PD levels per risk class for the different rating models.

Risk group	Risk class	Large companies	Small companies	Individuals
		(%)	(%)	(%)
Low	1	0.3	0.2	0.1
	2	0.4	0.4	0.2
	3	0.8	0.8	0.4
	4	1.3	1.7	0.9
Medium	5	2.3	2.7	1.7
	6	4.1	5.0	2.6
Increased	7	7.1	8.5	4.0
	8	12.5	17.0	7.3
High	9	21.8	41.1	23.4

different rating models. The PD corresponds to the observed long-term average of the default rate.

4.2.3 Observed Default Frequency

The Bank's PD models predict the long-term average of the one-year default rate while the observed default frequency (ODF) depends on the current state of the economy which, in comparison with the previous year, showed some signs of slowing down.

In 2019 there were only about a dozen observed defaults for large companies, which translates to a 2.5% default frequency compared to a predicted default probability of 5.4%. The defaults were so few that a meaningful comparison of observed default frequency and predicted probability of default per risk class is not possible.

For individuals and small companies, however, the number of defaults allow for a meaningful breakdown by risk classes as shown in Exhibits 4.4 and 4.5. Risk classes 1 through 4 are grouped together due to few defaults in those risk classes. In the case of individuals, the mapping from PD to risk classes for the years 2018 and 2019 differ from those of previous years, due to a recalibration of the rating model in 2018. As expected, given the current state of the Icelandic economy, the observed default frequency is higher than in 2018 but still lower than the predicted long-term default rate. The observed default frequency was 2.9% compared to the 4.0% predicted probability of default for individuals, while corresponding rates were 4.5% and 7.4% for small companies, respectively.

4.2.4 Loss Given Default

The loss given default (LGD) represents the percentage of the exposure which is expected to be lost if an obligor goes into default. The loss given default mostly depends on collateralisation and other credit mitigants but in many cases defaulted customers become performing again without the need to seize collateral. To take historically observed loss experience into account, while also allowing for a risk-sensitive differentiation of the portfolio, loss given default is therefore modelled

Exhibit 4.4. Observed default frequency (dots) and the range of the predicted through-the-cycle probability of default (vertical lines) by risk class for individuals in 2019, results from other years shown for comparison. Logarithmic scale. Parent.

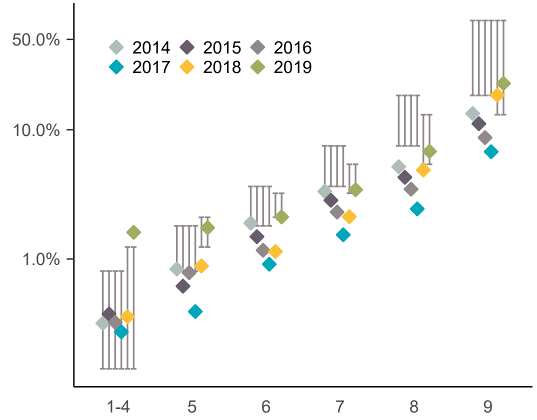
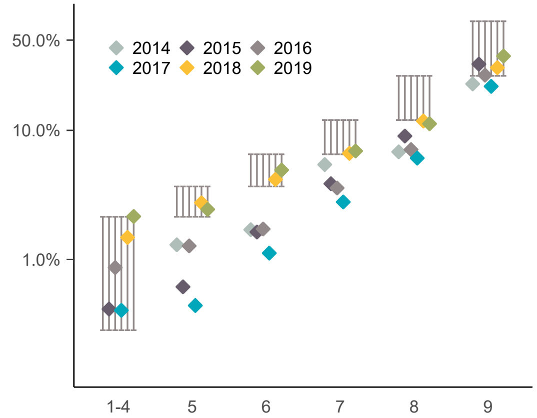


Exhibit 4.5. Observed default frequency (dots) and the range of the predicted through-the-cycle probability of default (vertical lines) by risk class for small companies in 2019, results from other years shown for comparison. Logarithmic scale. Parent.



using loss severity in several different scenarios. One of the scenarios considered is that the facility becomes performing again without intervention by the Bank and the probability of that scenario is the so-called cure rate. The other scenarios assume that recoveries are based on the seizing of collateral and apply different haircuts according to the type of collateral and scenario. The haircuts are applied to the most current and appropriate valuation of the pledged collateral. The haircuts take into account cost of sale, depreciation of value and discounting of recovery cash flows. The resulting amounts are allocated to eligible exposures by minimising the total uncollateralised exposure amount subject to constraints imposed by the collateral agreements. For facilities and obligors where collateral is generally not pledged the estimate of LGD may be based on a specific assessment.

4.2.5 Exposure at Default

To model exposure at default (EAD), the Bank currently applies the supervisory credit conversion factors (CCF) stipulated by Basel to unutilised amounts:

$$\text{EAD} = \text{drawn amount} + \text{CCF} \cdot \text{undrawn amount}.$$

The Bank has developed models for exposure at default that take the expected amortisation schedule into account and these models are used in calculations of both the 12-month and lifetime expected credit losses in IFRS 9. The EAD shown here is, however, the one found for capital requirement purposes and not for IFRS 9.

4.3 Credit Concentration

The Bank monitors credit concentration risk which arises from the unequal and granular distribution of exposure to borrowers, industry sectors and geographic regions. The portfolio concentration is monitored and constrained by limits set in the *Risk Appetite Statement*.

4.3.1 Borrower Concentration

The Bank actively seeks to limit large exposures. A large exposure is defined as an exposure to a group of connected clients that is 10% or more of the Bank's total capital base. The exposure is evaluated both before and after application of eligible credit risk mitigating effects according to FME rules.[2] When assessing the exposure, both on-balance sheet items and off-balance sheet items from all types of financial instruments are included. The Bank has internal criteria that define connections between clients in line with Icelandic law[3] and EBA guidelines[4], where groups of connected clients are defined.

At year-end 2019, the Bank had no large exposures which is a reduction from year-end 2018 when the Bank had four large exposures amounting to 44% of its capital base.

The Bank seeks to limit borrower concentration risk and has an internal limit on the aggregated exposures to the 20 largest groups of connected clients.

4.3.2 Industry Sector Concentration

The Bank defines industry sectors as groups of entities that have similar primary activities, underlying risk factors and behaviour characteristics. A see-through principle is applied for holding companies that own other companies but do not produce goods or services, i.e. a holding company may be classified in the sector of its investments and not as an investment company if all the investments are in the same sector. This is done to better capture the underlying risk of economic industry sectors.

The Bank has limits on both the exposure to any single economic industry sector as well as the aggregated exposure to the three largest economic industry sectors as a percentage of the Bank's total credit exposure. Exposure to individuals, as an economic industry sector, is also considered separately.

The tourism industry is an important economic sector in Iceland but due to the nature of tourism, its effects are not limited to hotels, car rentals and tour guides. The effects can also be seen in convenience stores, restaurants and other operations that benefit from the inflow of tourists. The Bank therefore monitors the tourism industry internally as a quasi-sector instead of a new separate sector.

4.3.3 Geographic Concentration

Country risk is the risk of losses that may occur, for example, due to economic difficulties or political unrest in countries to which the Bank has exposures. Country risk includes political risk, exchange rate risk, economic risk, sovereign risk and transfer risk, i.e. economic factors that could have significant influence on the business environment.

Specific geographical limits are established to manage country risk. The geographical limits apply to the country from where the credit risk arises. Iceland is considered to be a home market and is as such not subject to geographical limits.

Most of the Bank's activities are in Iceland but the Bank maintains a certain amount of international activities. The overseas strategy is built on a heritage of servicing the core industries in Ice-

[2] FME Rules no. 233/2017 on Prudential Requirements for Credit Institutions

[3] Article (1)(a) of Act no. 161/2002 on Financial Undertakings

[4] Guidelines on connected clients, EBA-GL-2017-15

land, primarily focusing on the seafood industry. The strategy focuses on the North Atlantic region, including Canada, the United States and Norway.

4.3.4 Product Concentration and Collateral Concentration

The Bank regularly monitors product concentration and collateral concentration but neither type is currently considered to be material.

4.4 Settlement Risk

Settlement risk is the risk that a party will fail to deliver on the terms of a contract at the time of settlement. Settlement loss can occur because of a default at settlement and because of any timing differences in settlement between two parties. The amount at risk or the potential loss is the principal of the transaction.

To mitigate settlement risk on counterparties, the Bank utilises the services of clearing houses and applies the general rule of delivery versus payment. If such a rule is not applicable due to the nature of the business relationship, a settlement limit is assigned to the counterparty to limit the risk.

4.5 Counterparty Credit Risk

Counterparty credit risk (CCR) is the risk arising from the possibility that the counterparty may default on amounts owed on a derivative transaction.

Íslandsbanki takes on CCR when entering into derivatives transactions. This includes, but is not limited to, interest rate swaps and futures, cross-currency swaps, equity forwards and options.

Customers enter into derivatives contracts with the Bank either to take on speculative positions or to hedge risk for the customer's own risk mitigation purposes. Derivatives contracts with customers are generally done on margin where customers post collateral to the Bank. The Bank's objective in setting margin requirements is to have adequate collateral to absorb any losses that the position could suffer before the Bank is able to close the position. Margin requirements are decided based on the underlying product and its characteristics, such as volatility and liquidity. In addition to cash, the Bank accepts selected stocks and bonds as collateral posted for margin trades. Non-cash collateral is subject to haircuts depending on risk characteristics such as the issuer and duration in the case of bonds and volatility and liquidity in the case of stocks. The Bank uses netting across contracts of the same counterparty to allow profits in one contract to offset collateral requirement in another contract. Information on the extent of netting is provided in Table CCR5-A. To mitigate wrong-way risk, the Bank generally does not accept collateral that is correlated with the asset underlying the respective customers' derivatives contracts. The Bank may waive collateral requirements where the purpose of the derivatives contract is to mitigate the customer's own risk, subject to certain conditions, including an approved credit limit based on the customer's creditworthiness. Limits are also set to manage the concentration risk towards single issuers or instruments and thus to manage the risk of the instruments becoming illiquid.

The Bank actively uses derivatives to hedge currency, interest and inflation exposures. Such derivatives contracts are generally subject to ISDA master agreements with a Credit Support Annex, or similar terms, with collateral in the form of cash and eligible bonds. Counterparties in these contracts are also subject to approved credit limits.

When setting credit limits for counterparties in derivatives contracts, the Bank follows the same process as for other credit exposure and, as for credit concentration risk in general, credit limits for counterparties are constrained by various concentration limits, many of which are defined in terms of the Bank's capital base. This is discussed further in section 4.3.

Information on CCR exposures, broken down by various characteristics, is provided in Tables CCR1, CCR2, CCR3, CCR5-A, CCR5-B and CCR6 in the Additional Pillar 3 Disclosures.

4.6 Credit Risk Exposures

Credit risk exposure comprises both on-balance sheet and off-balance sheet items. Exposure to credit risk for on-balance sheet assets is the net carrying amount as reported in the Consolidated Financial Statements. The exposure for off-balance sheet items is the amount that the Bank might have to pay out against financial guarantees and loan commitments, less the impairment the Bank has made for these items. The credit exposure for capital requirement purposes does not reconcile with the net carrying amount in the Consolidated Financial Statements mostly due to the contribution of off-balance sheet items, see Table LI2 in the Additional Pillar 3 Disclosures for details on the difference. For capital requirement purposes, credit conversion factors are applied to guarantees and undrawn commitments. For derivative contracts, the exposure is calculated by adding potential future credit exposure to the positive market value of the contract. The Bank currently has no direct credit exposure to securitisation.

Exhibit 4.6 summarises and describes the main sources of credit risk, while Exhibit 4.7 shows the main sources for credit risk at year-end 2019 and 2018.

Exhibit 4.6. The main sources of credit risk.

Item	Obligor type	Description
Loans to customers	Individuals and households	Loans to individuals derive from lending activities to individuals and households. The largest product type is mortgages, but it also includes term loans, car loans and leasing agreements, credit cards and overdrafts.
	Legal entities, municipalities and state-guaranteed obligors	Loans to companies as well as municipalities and public-sector entities. This includes long-term facilities, leases and asset-based financing, working capital facilities and other short-term financing, project finance and financing of income producing real estate.
Balances with the Central Bank and loans to credit institutions	Financial institutions and central banks	Mandatory reserve deposits and other balances with the Central Bank as well as other exposures to international banks and financial institutions, for example as part of the Bank's liquidity management.
Bonds and debt instruments	Government entities, issuers of listed bonds approved by the Bank's credit committees	The Bank is exposed to credit risk due to trading and investing in debt instruments, for example as part of the Bank's liquidity management and its trading activities.
Off-balance sheet items		This includes unused overdrafts and credit card limits, undrawn amounts in credit agreements and project finance agreements, letters of credit and export documentary credits.
Derivatives	Qualified counterparties with defined credit limits at the Bank	Derivatives and other financial instruments that involve contingent exposures.
Other financial assets		Unsettled transactions, account receivables.

4.6.1 Balances with the Central Bank and Loans to Credit Institutions

Cash and balances with the Central Bank (CB) and loans to credit institutions can fluctuate considerably between periods due to liquidity management. Exhibit 4.8 shows a breakdown of these exposures at year-end 2019 and 2018.

Cash and balances with the Central Bank include CB deposits, minimum reserve requirements and other balances with the CB.

The Bank has exposures to domestic and foreign credit institutions, mostly in the form of money-market deposits and nostro accounts.

Exhibit 4.7. The main sources for credit risk at year-end 2019 and 2018 (ISK bn). Consolidated.

Credit risk	31.12.2019	31.12.2018
Loans to customers	899.6	846.6
Balances with the Central Bank and loans to credit institutions	201.0	176.6
Bonds and debt instruments	52.9	69.4
Off-balance sheet items	135.8	146.0
Derivatives	9.5	8.9
Other financial assets	5.8	7.5
Total	1,304.6	1,255.1

Exhibit 4.8. Cash and balances with the Central Bank and loans to credit institutions at year-end 2019 and 2018, with ratings based on S&P Global ratings or equivalent (carrying amount, ISK bn). Consolidated.

Type of institution	31.12.2019	31.12.2018
Central Bank	146.6	135.1
Domestic credit institutions	1.6	0.8
Foreign credit institutions	52.7	40.8
thereof rated AA- and above	30.6	5.7
thereof rated A- to A+	13.8	25.5
thereof rated BBB+ and lower	8.3	9.5
Total	201.0	176.6

Exhibit 4.9. Bonds and debt instruments at year-end 2019 and 2018, with ratings based on S&P Global ratings or equivalent (carrying amount, ISK bn). Consolidated.

Bonds and debt instruments	31.12.2019	31.12.2018
Icelandic government and regional government guaranteed bonds	6.4	15.4
Foreign government bills	30.8	41.3
thereof rated AAA	12.3	24.7
thereof rated AA and AA+	18.5	16.6
Domestic corporates	2.8	2.1
Domestic credit institutions	12.9	10.6
Total	52.9	69.4

Exposures are only granted to credit institutions that have been allocated a credit limit by the Senior Credit Committee. When applying for a credit limit for a specific credit institution, a thorough analysis of the institution is presented to the committee, including credit ratings from rating agencies, as appropriate.

4.6.2 Bonds and Debt Instruments

The Bank is exposed to credit risk as a result of trading and investing in bonds and debt instruments, for example as part of the Bank's liquidity management and as a result of restructuring activities. Exhibit 4.9 presents the Bank's position in bonds and debt instruments.

4.6.3 Off-Balance Sheet Items

The Bank's exposure deriving from off-balance sheet items totalled ISK 136bn at year-end 2019 compared to ISK 146bn the year before. For regulatory purposes a credit conversion factor is applied to calculate the exposure under the credit risk framework. Calculated in this way, the regulatory credit exposure deriving from off-balance sheet items totalled ISK 39bn at year-end 2019 compared to ISK 47bn at year-end 2018.

4.6.4 Derivatives

The Bank uses derivatives to hedge currency, interest and inflation exposure. The Bank carries relatively low exposure due to margin trading with clients and in these cases, the Bank holds collateral to cover possible losses. Credit risk for derivatives amounted to ISK 9.5bn at year-end 2019 compared to ISK 8.9bn the year before.

See also discussion on derivatives in Sections 4.5 and 5.3.5.

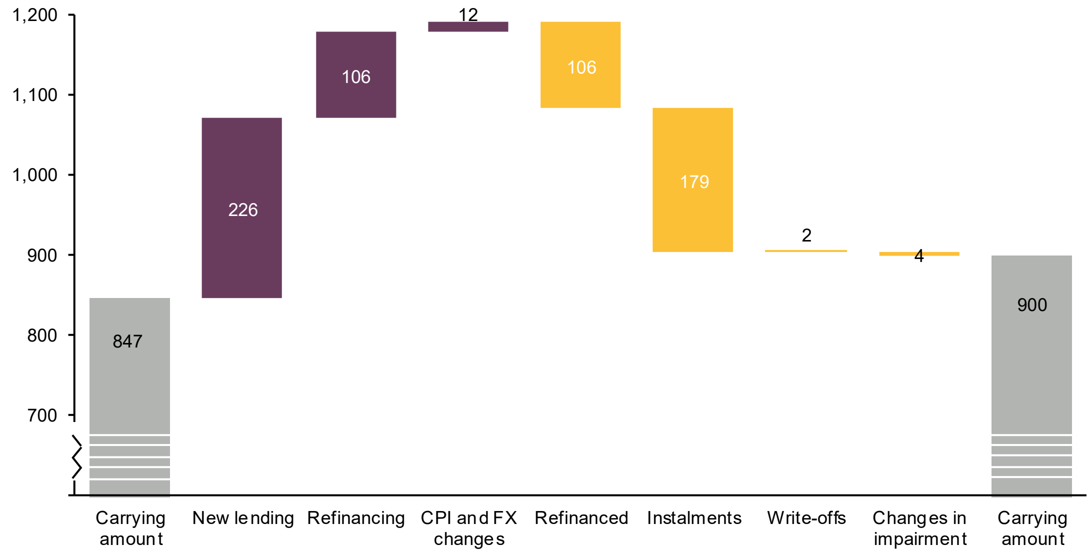
4.6.5 Country Risk Exposure

Exposure to countries other than Iceland amounted to ISK 92bn at year-end 2019. This exposure relates mainly to the management of the Bank's foreign liquidity reserves. The Bank has no retail lending activities outside of Iceland but maintains a modestly sized portfolio of lending to companies in the United States, Canada and Norway within its North-Atlantic strategy. The exposure to companies within this portfolio was ISK 23.3bn at year-end 2019.

4.7 Loans to Customers

Loans to customers, both individuals and companies, represent the largest part of the Bank's credit

Exhibit 4.10. The main sources of changes in the net carrying amount of loans to customers from year-end 2018 to year-end 2019. Outstanding loans that are refinanced within the Bank are shown both as an increase and a decrease in the carrying amount. Regular instalments, pre-payments and loans that are fully repaid are all shown as instalments in this chart. The effect of facilities that do not have a fixed repayment schedule such as overdrafts and credit cards is in *Other changes*. (ISK bn). Consolidated.



risk exposure. This section describes the portfolio of loans to customers and its development.

4.7.1 Development of the Loan Portfolio

At year-end 2019 the net carrying amount of the portfolio of loans to customers was ISK 900bn, having grown from ISK 847bn at year-end 2018. This growth of 6.3% is mainly due to new lending to new and existing customers. The growth is significantly smaller than in 2018 which was 12%. Exhibit 4.10 shows the development of the loan portfolio through 2019.

4.7.2 Currency Composition of Loans to Customers

As a principle, the Bank aims to have the currency composition of loans to customers in balance with customer needs. In particular, loans to customers whose income is predominantly in ISK should be denominated in ISK. The Bank has in place rules regarding lending in foreign currency, ensuring management of this risk. Exhibit 4.11 shows a breakdown of loans to customers by industry sector and currency types. Loans to customers are categorised into three currency types, Non-indexed ISK, Consumer Price Index (CPI) linked ISK and Foreign currency (FX).

4.7.3 Loans to Individuals

Loans to individuals amounted to ISK 349bn at year-end 2018 compared to ISK 319bn the year before. New loans and refinancing amounted to ISK 98bn.

Loans to individuals derive from lending activities to individuals and households and can be broken down into five product types, namely mortgages, term loans, credit cards, overdrafts and leasing.

The largest part of loans to individuals is in the form of residential real estate mortgages. Mortgages are granted to individuals to buy or refinance real estate for their own use. Mortgages are secured by the first lien on the residential real estate or consecutive liens from and including the first lien. The Bank actively manages the mortgage portfolio by making payment processing effortless with automatic transfers and by actively initiating collection procedures in a timely manner by contacting customers immediately if payments are late.

Term loans to individuals are often secured with residential real estate but do not satisfy all the requirements needed to be classified as the product type mortgages. These loans may have a non-standard term structure, or the purpose of the loan may not have been to acquire the underlying property. These term loans are generally not as well collateralised as mortgages. Other examples are uncollateralised consumer loans granted by an automated process through the Bank's app. A last group of term loans are loans provided to individuals for purchases of vehicles, mostly cars and campers. These loans are usually well collateralised.

Credit cards and overdrafts to individuals are usually uncollateralised short-term consumer

Exhibit 4.11. Currency composition of loans to customers at year-end 2019 (net carrying amount, ISK bn). Consolidated.

Industry sector	Non-indexed	CPI-linked	Foreign currency	Total
Individuals	153.0	196.1	0.2	349.3
Commerce and services	103.0	16.2	7.0	126.1
Construction	39.9	3.7	0.8	44.4
Energy	3.8	3.9	0.2	7.9
Financial services	2.3	-	-	2.3
Industrial and transportation	43.7	4.7	34.1	82.4
Investment companies	10.1	3.8	9.6	23.6
Public sector and non-profit organisations	10.2	2.1	0.0	12.3
Real estate	69.7	65.0	11.0	145.6
Seafood	10.7	0.2	94.7	105.6
Total	446.3	295.7	157.6	899.6

loans. They are used to meet fluctuations in cash flows and the outstanding amounts per customer are typically low. It is expected that future earningability of individuals is sufficient for repayment without a formal collateral.

Leasing agreements are provided to individuals for purchases of vehicles, mostly cars and campers. These agreements are usually well collateralised. For credit risk purposes these leasing agreements are very similar to loans provided for the same purpose.

Note 47 in the Consolidated Financial Statements shows a breakdown of the maximum credit exposure by these product types.

The loan-to-value (LTV) ratio is an important factor when measuring the risk of a mortgage portfolio. The LTV for a single mortgage is the current net carrying amount of the loan divided by the value of the property. The value of the property is usually taken as the tax value obtained from Registers Iceland[5] but for newly granted mortgages, the purchase price of the property can be used as a valuation in the beginning while it is considered more accurate. For mortgages that are not on the first lien, the combined loan to value (CLTV) is the sum of the current carrying amount of the loan under consideration and the outstanding balance of all previous liens, divided by the value of the property. For a portfolio of mortgages, however, the LTV can be represented in various ways depending on the intended usage. Here, two such representations are presented.

The first representation is from the property point of view. To find the average LTV of a mortgage portfolio, each property is assigned the maximum CLTV value of the Bank's mortgages on that property and that value is weighted with the total carrying amount of the Bank's loans on the property. The weighted average LTV, calculated in the manner described, was 62% at year-end 2019 compared to 61% at year-end 2018. The slight increase between years, which can also be seen in exposure in the 80-90% buckets in Exhibits 4.12 and 4.13, is due to the fact that additional loans available to first-time buyers are now included in the definition of mortgages.

Exhibit 4.12 shows the LTV distribution by categorising the total carrying amount of the Bank's loans on each property in the mortgage portfolio by the maximum CLTV for that property.

Another way to represent the LTV of a mortgage portfolio is to consider how each part of the loan amount is distributed in loan-to-value bands. In the breakdown, each part of the loan amount is categorised according to its ranking in the total debt on the property. The first band represents the part of the portfolio that falls in the 0-10% LTV band, the second represents the part that falls in the 10-20% LTV band and so on. Exhibit 4.13 shows how the mortgage portfolio is distributed in loan-to-value bands defined in this way.

For capital requirement assessment purposes, residential real estate mortgages to individuals are divided into two segments, the part that is covered up to 80% LTV and the amount that exceeds 80% LTV. The part with an LTV below 80% is potentially eligible for a 35% risk weight when calculating the capital requirements as compared to 75% for the remaining part. One of the benefits of the representation shown in Exhibit 4.13 is that the part of the mortgage portfolio that is potentially eligible for a 35% risk weight is on the left side of a vertical line drawn at 80% LTV in Exhibit 4.13, this amount cannot be inferred from Exhibit 4.12.

[5] In Icelandic: Þjóðskrá Íslands. For detail see Icelandic Property Registry.

Exhibit 4.12. Breakdown of the mortgage portfolio by the LTV calculated for each property, year-end 2019 and 2018 (net carrying amount, ISK bn). Consolidated.

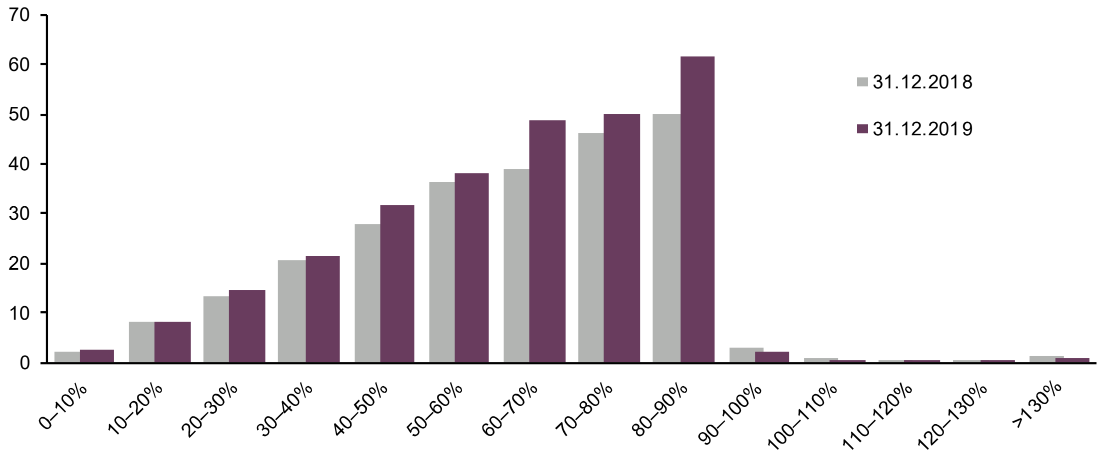
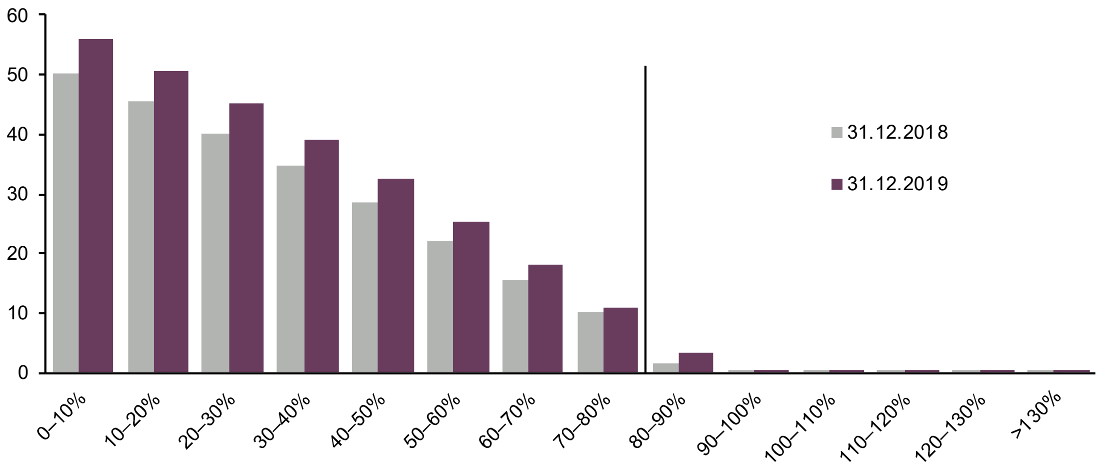


Exhibit 4.13. Breakdown of the mortgage portfolio by LTV bands, year-end 2019 and 2018 (net carrying amount, ISK bn). See main text for further explanation. Consolidated.



4.7.4 Loans to Companies

The category loans to companies includes loans to companies as well as municipalities and public sector entities. These loans comprise a significant part of the Bank's balance sheet and operation. Loans to companies amounted to ISK 550bn at year-end 2019 compared to ISK 527bn at year-end 2018. New loans and refinancing of outstanding loans amounted to ISK 234bn in 2019.

Credit policies are in place to ensure to the extent possible that companies have the capacity to repay their loans. The Bank also takes collateral to minimise loss in case of default.

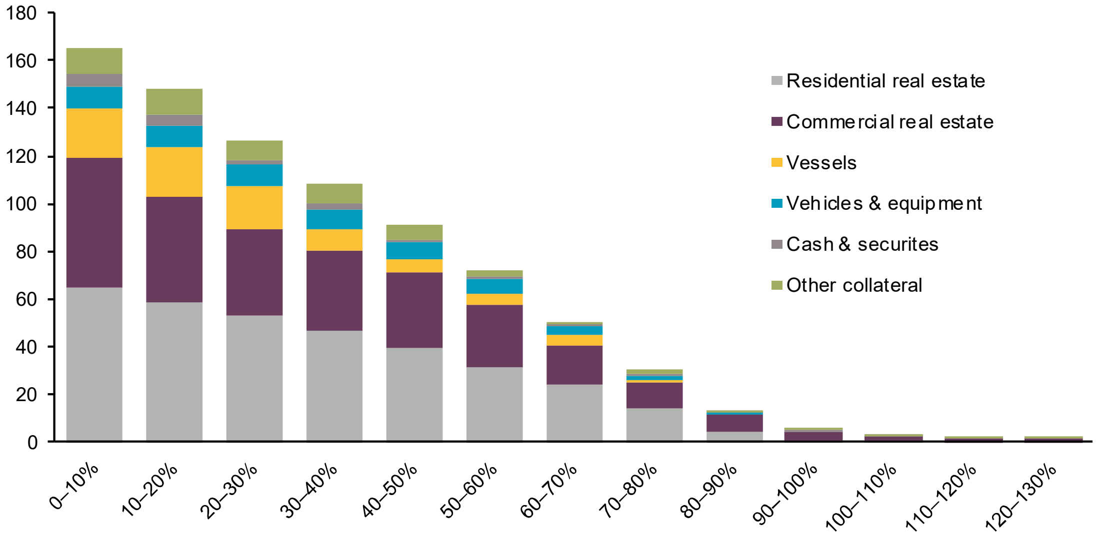
Notes 47 and 48 in the Consolidated Financial Statements show the maximum credit risk exposure for loans to companies, broken down by industrial sectors, product types and whether the facilities are in stage 3 or not. Note 48 furthermore shows the type of collateral held against these exposures.

The Bank's exposure to tourism has increased with the increased importance of tourism to the Icelandic economy. The exposure to tourism was 10% of the loan portfolio at year-end 2019, which is a decrease from the year before.

4.8 Loans Covered by Collateral

Collateral and other credit risk mitigants vary between types of obligors and credit facilities. Loans to eligible credit institutions are usually unsecured. For loans to individuals, the principal collateral pledged is residential property against mortgages. Unsecured loans to individuals are mostly short-term consumer loans such as overdrafts and credit cards. In the case of large companies, pledged collateral includes real estate, fishing vessels, cash and securities, as well as other collateral including accounts receivable, inventory, vehicles and

Exhibit 4.14. The continuous LTV distribution of the portfolio of loans to customers by type of underlying asset at year-end 2019 (ISK bn). Consolidated.



equipment. Loans to government entities and to municipalities are generally unsecured. The measured credit risk exposure of loans is not affected by the pledged collateral.

In some cases, the Bank uses guarantees as credit enhancement but since guarantees effectively transfer credit risk from one counterparty to another they do not represent a reduction in exposure to credit risk although they may strengthen its quality. The guarantees which the Bank accepts are from parties which have some relationship with the obligor, e.g. direct ownership. Thus, the Bank does not use general credit derivatives to mitigate credit risk. Covenants in loan agreements are also an important credit enhancement but they do not reduce credit exposure.

Valuation of collateral is based on market price, official valuation from Registers Iceland or the expert opinion of the Bank's employees, depending on availability. In the case of fishing vessels, the assigned fishing quota is included in the valuation, based on a valuation by the Bank's Collateral Council. Valuations can only be valid for a certain amount of time and must therefore be reassessed regularly. Since the price volatility differs between asset classes it is interesting to consider how the LTV distribution of the portfolio is split between asset classes. This LTV distribution is shown in Exhibit 4.14.

To assess the financial effect of collateral on maximum credit exposure, the Bank allocates collateral to loans using an optimisation algorithm. Among other things, the algorithm ensures that collateral is not assigned in excess of its estimated value, in excess of any maximum amount stipulated in a collateral agreement or in excess of the claim value of the relevant loans or the maximum potential exposure in case of facilities with an undrawn component. The last constraint means that if some loans have collateral values in excess of their claim value, then the excess is removed in this assessment in order to reflect the Bank's actual exposure to credit risk.

Exhibit 4.15 shows the financial effect of allocated collateral at year-end 2019 broken down by sector and type of collateral.

4.9 Risk Profile

As described in Section 4.2.2, each obligor is assigned a risk class depending on how likely they are considered to default in the next 12 months. Note 49 in the Consolidated Financial Statements shows the breakdown of loans to customers, off-balance sheet loan commitments and financial guarantees into risk class groups and stages. Exhibits 4.16 and 4.17 show the breakdown of loans to customers graphically where in addition, exposure to individuals and exposure to companies are shown separately. Exhibit 4.18 shows the migration of customers between risk classes in 2019.

According to IFRS 9, the impairment allowance, i.e. the difference between the gross and the net carrying amount, is the expected credit loss (ECL). Exhibit 4.19 shows the breakdown of the ECL for loans to customers by IFRS 9 stages. The columns show the contribution to the ECL from the probability of default (PD) and the loss given default (LGD). For facilities in stage 3, the PD does not apply since default has already occurred. Additionally, the LGD contribution is divided into the probability that the default will not cure, and thus lead to an economical loss (loss rate), and the expected size of the eventual economic loss (loss severity). Finally, for facilities in stage 2, the loss allowance is equal to the expected loss for any events occurring

Exhibit 4.15. Financial effect of allocated collateral for loans to customers at year-end 2019 (ISK bn). Consolidated.

Collateral	Residential real estate	Commercial real estate	Vessels	Cash & securities	Vehicles & equipment	Other collateral	Credit exposure covered by collateral
Individuals	292.4	7.9	0.0	0.1	13.6	0.0	314.1
Commerce & services	9.8	54.9	0.9	3.3	28.5	19.3	116.7
Construction	20.5	18.0	-	0.5	5.0	0.3	44.3
Energy	-	5.1	-	0.4	0.0	-	5.5
Financial services	-	-	-	0.0	-	3.0	3.0
Industrials & transportation	1.4	41.3	0.0	2.0	8.7	14.1	67.6
Investment companies	1.5	6.4	-	12.4	0.1	3.2	23.6
Public sector & NPO's	0.1	0.8	-	-	0.0	-	1.0
Real estate	19.3	123.4	0.0	1.9	0.4	0.3	145.2
Seafood	0.3	10.9	81.4	0.0	0.2	13.1	105.9
Total	345.3	268.8	82.3	20.6	56.6	53.3	826.9

Exhibit 4.16. Loans individuals by risk groups and stage at year-end 2019 (net carrying amount, ISK bn). Consolidated.

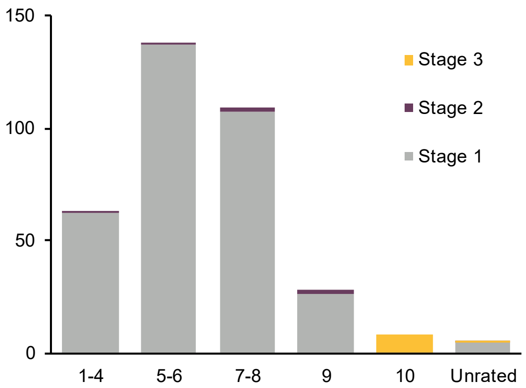
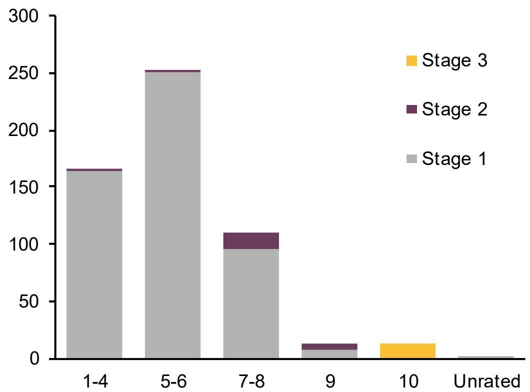


Exhibit 4.17. Loans companies by risk groups and stage at year-end 2019 (net carrying amount, ISK bn). Consolidated.



during the lifetime of the facility, the contribution of this is shown in the column Effect of lifetime loss.

The Bank monitors the non-performing loans (NPL) ratio but due to the adoption of IFRS 9 it has been necessary to change the definition. The non-performing ratio that the Bank uses, depicted in Exhibit 4.20, is based on the gross carrying amount of loans to customers that are in default (i.e. stage 3), see Section 4.2.1 for further details on the Bank's definition of default. When doing comparisons on NPL ratios between different banks it must be borne in mind that an industry standard has not yet emerged on how to define the NPL. The NPL ratio will usually not be comparable between banks unless they use the exact same definition. The exposure amounts used to calculate the NPL ratio can be seen in Note 49 to the Consolidated Financial Statements. The Bank's NPL ratio was 3.0% at year-end 2019 compared with 2.0% at

Exhibit 4.18. Migration of risk classes in 2019 (net carrying amount, ISK bn). Consolidated.

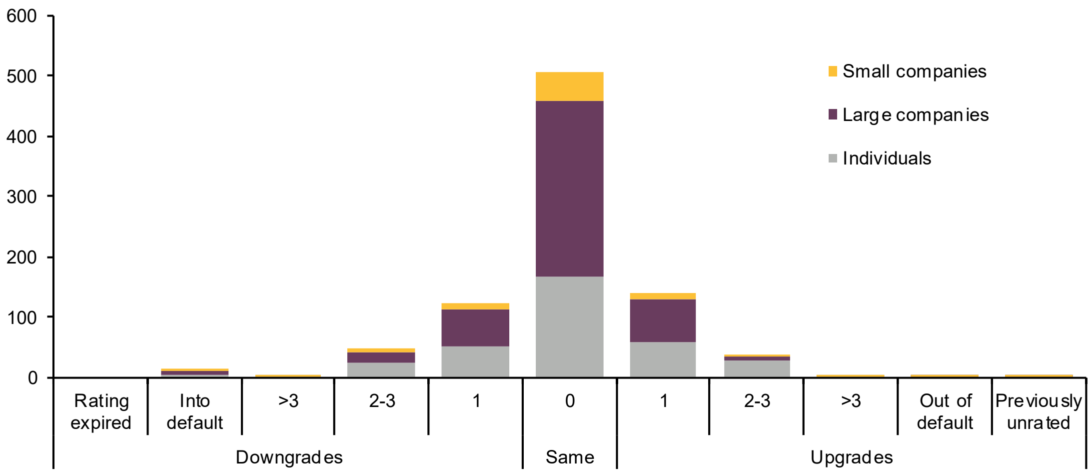


Exhibit 4.19. The expected credit loss for loans to customers at year-end 2019. See Section 4.9 in the main text for further details. Consolidated.

Stage	Gross carrying amount	PD	LGD loss rate	LGD loss severity	Effect of lifetime loss	ECL
	(bn)	(%)	(%)	(%)	(%)	(%)
Stage 1	858.8	5	39	21		0.4
Stage 2	23.8	15	39	28	246	4.0
Stage 3	27.3		63	33		20.9

Exhibit 4.20. The Bank's definition of non-performing assets indicated by the highlighted cells.

Asset classes	Exposure	Cross default	Non-performing criteria
(can choose many)	(choose one)	(choose one)	(can choose many)
Loans to customers	Gross carrying amount	Per facility	>90 days past due
Loans to credit institutions	Net carrying amount	Per customer	Unlikeliness to pay
Off-balance sheet items	Payments in arrears	Per group of connected clients	Forbearance
Other financial assets			Cure period

year-end 2018. The change reflects the economic slowdown which Iceland experienced in 2019.

4.10 Exposures in Default and Exposures with Forbearance

The Bank's definition of default is described in detail in Section 4.2.1. Details on exposure amounts in default can be seen in the Note 49 of the Consolidated Financial Statements where stage 3 corresponds to amounts in default. Furthermore, Exhibits CR1-A, CR1-B and CR1-C of the Additional Pillar 3 Disclosures show these amounts broken down by asset class, industry sector and geographic region.

Exhibits CR2-A and CR2-B of the Additional Pillar 3 Disclosures show the development of impairment amounts and the stock of defaulted loans throughout the year.

Forbearance measures can be granted to customers facing temporary challenges or financial difficulties. For a loan to be considered as forborne, two conditions need to apply: (1) the Bank has agreed to changes to the terms of the loan that would normally not be offered to the customer and (2) the customer was in financial difficulties, making it hard for them to uphold the loan contract, at the time the terms were changed. Such forbearance measures include temporary payment holidays, capitalisation of arrears, extension of loan terms and waiving of covenants. Generally, forbearance measures are less severe than recovery actions for defaulted exposures and they do not lead to economic loss for the Bank. When the restructuring of loans corresponds to an economic loss then the obligor is classified as in default and any subsequent forbearance actions are classified as forbearance on non-performing facilities.

For households, forbearance measures are used to accommodate temporary changes in household income, for instance due to illness or unemployment. Temporary changes in terms are also granted to companies when needed, for example to meet adverse changes in the operating environment, which affect revenue and cash flows or to meet necessary but unforeseen capital expenditures. The customer is expected to resume normal repayments after the concession period. Furthermore, when covenants are waived due to minor difficulties of customers then it may be classified as a forbearance measure.

Note 50 in the Consolidated Financial Statements provides a summary of the Bank's forborne assets.

4.11 Capital Requirements

The Bank reports its Pillar 1 capital requirements for credit risk according to the standardised approach of the CRD IV. Exhibit CR5 of the Additional Pillar 3 Disclosures shows exposure amounts, risk weights and corresponding risk-exposure amounts for the different portfolios at year-end 2019.

Capital add-on for credit risk under Pillar 2-R is estimated in the annual ICAAP process. This add-on includes concentration risk and underestimation of credit risk under Pillar 1. The ICAAP discussion with the regulator in Iceland has matured considerably in recent years, resulting in a stable basis for calculating the add-on for credit risk in Pillar 2-R. This includes an increased risk weight for certain asset classes where the standardised approach may not be representative of the inherent risk. These asset classes comprise municipalities with low payment capacity, loans to holding companies to buy shares in operating companies, high volatility commercial real estate and customers with forbearance agreements. Furthermore, additional capital is held against loans to customers that are in stage 2 or have been more than 30 days past due in the last 12 months.

5 Market Risk

The domestic stock market, with a 21% increase in total turnover compared to 2018, yielded a return of 33.2% in 2019 according to the stock market index OMXI10GI. The return of the domestic bond market was 9.5%, as measured by the NOMXIBB index, with a total turnover increasing by 32% in 2019 compared to 2018. The Central Bank cut its policy rate five times in 2019, lowering the rate from 4.5% to 3.0% during the year. Inflation was modest in 2019 as the Consumer Price Index rose by only 2.0% and the ISK depreciated by 3.1% based on the Central Bank main trade-weighted ISK index.

Market risk accounted for 6.4% of the Group's total SREP capital requirement in 2019 compared to 7.8% in 2018. The Group's market risk was fairly stable through 2019 for most risk factors except for equity risk where exposure rose modestly over the course of the year.

5.1 Strategy, Organisation and Responsibility

Market risk is defined as the current or prospective risk to earnings and capital arising from adverse movements in the level or volatility of prices of market instruments, such as those that arise from changes in interest rates, inflation, equity prices and foreign exchange rates.

Market risk has been identified as one of the key risk factors in the Bank's operations. The Bank takes on market risk as a part of its business strategy and aims to maintain a moderate market risk profile. The objective of the Bank's market risk management framework is to manage and control market risk exposures and ensure that the market risk profile is within the Board's approved risk appetite.

Market risk at Íslandsbanki is split into two categories, trading book and banking book. Market risk due to mismatches in assets and liabilities with respect to currencies, interest reset dates and CPI-indexation falls in the banking book. Market risk in the banking book also includes exposures held for long-term investment purposes, in unlisted securities and holdings in subsidiaries or affiliates. Market risk exposures in the trading book are related to short- and medium-term trading in securities, currencies and other capital market instruments and derivatives. The positions are undertaken mainly as a part of the Bank's flow trading, through the Bank's liquidity portfolio and as hedges against customers' derivatives contracts.

The ultimate responsibility for ensuring an adequate market risk management and internal control framework at Íslandsbanki lies with the Board of Directors. The Board defines the market risk governance framework and the acceptable level of market risk through the *Risk Management and Internal Control Policy*, the *Risk Appetite Statement* and the *Market Risk Policy*.

The All Risk Committee (ARC) is responsible for the review and implementation of the *Market Risk Policy* and the market risk appetite. The Asset and Liability Committee (ALCO) decides on individual proposals for assuming and pricing market risk on behalf of the Bank within the appetite and limits approved by the Board and ARC. The managing director of Corporate & Investment Banking and the managing director of Finance & Treasury (CFO) are responsible for the market risk taken on or owned by their units and for earning an acceptable level of return on these risks. The directors of business units that take on market risk on behalf of the Bank are responsible for identifying and managing the risk in their portfolios within limits approved by the Board, ARC or ALCO.

5.2 Measurement and Monitoring

The Bank uses various tools to measure, monitor and limit market risk exposures. These tools include conventional risk measures, limits on notional and sensitivity measures. The Bank's overall market risk exposure is measured according to the Bank's Market Risk Measurement Framework (MRMF) and the Risk Appetite Statement mandates that the Bank's market risk shall not exceed 15% of the Bank's capital base. The MRMF uses stress tests to calculate potential losses from extreme but plausible market events for each risk exposure, both for the current position of each portfolio, as well as the maximum position within the limits for the given portfolio. The limits for each portfolio are set so that the total market risk across all market risk exposures will not exceed 15% of the Bank's capital when all limits are fully utilised. Limits are also set to manage the concentration risk towards single issuers or instruments, as well as to manage trading liquidity risk. The Bank is also exposed indirectly to market risk through customers' derivative positions. Those positions are subject to strict margin and monitoring requirements.

Exhibit 5.1. Main types of market risk within Íslandsbanki.

Risk type	Description	Source of risk	Main limit types
Interest rate risk	Current or prospective risk to earnings or capital arising from adverse movements in interest rates. Main sources of interest rate risk are as follows: – Re-pricing risk: Arising from differences between the timing of rate changes and the timing of cash flows. – Yield curve risk: Arising from changing rate relationships across the spectrum of maturities (change in slope and shape of the yield curve). – Basis risk: Arising from changing rate relationships among yield curves that affect the institution's activities. – Optionality risk: Arising from interest rate related options embedded in the institution's products. This includes prepayment risk.	– Bonds and debt instruments. – Interest rate derivatives. – Loans and deposits.	– Basis point value (BPV). – Total long and short positions in underlying securities. – Open delta position of underlying securities. – Duration of underlying securities.
Inflation risk (CPI risk)	The risk that earnings or capital may be negatively affected from changes in inflation due to the indexation af assets and liabilities to the Consumer Price Index (CPI).	– CPI-linked bonds and debt instruments. – CPI-linked loans and deposits. – CPI-linked derivatives.	– Size of the inflation imbalance.
Credit spread risk	The risk that earnings or capital may be negatively affected from adverse movements in bond risk premium for an issuer.	– Bonds and debt instruments.	– Issuer-specific notional limits.
Currency risk	The risk that earnings or capital may be negatively affected from the fluctuations of foreign exchange rates, due to transactions in foreign currencies or holding assets or liabilities in foreign currencies.	– Spot positions in currencies. – Foreign exchange derivatives. – Foreign-currency-denominated loans and deposits.	– Total currency balance. – Total open position per currency. – Total notional in underlying derivatives.
Price risk	The risk that earnings or capital may be negatively affected from the changes in the price level or volatility of debt instruments or equity instruments.	– Equities. – Bonds and debt instruments. – Interest rate and equity derivatives.	– Total position in equities. – Total position in individual securities.
Trading liquidity risk	The risk that the Bank is unable to easily liquidate or offset a particular position without moving market prices due to inadequate market depth or market disruption, thus negatively affecting the earnings or capital.	– Bonds and debt instruments. – Equities. – Derivatives.	– Total position in individual securities. – Total notional of foreign exchange derivatives.

The business units, as the first line of defence, are responsible for continuous monitoring of the market risk inherent in their operations, for maintaining their view on these risks and for notifying senior management of any foreseeable breaches of limits, policies or strategic direction. Risk Management, as the second line of defence, monitors the overall market risk profile of the Group, ensures proper escalation of limit breaches and provides an independent view on all market risk taken on by the Group.

Exhibit 5.2. Market risk exposure and market risk appetite as a percentage of total capital base, average positions. Consolidated.

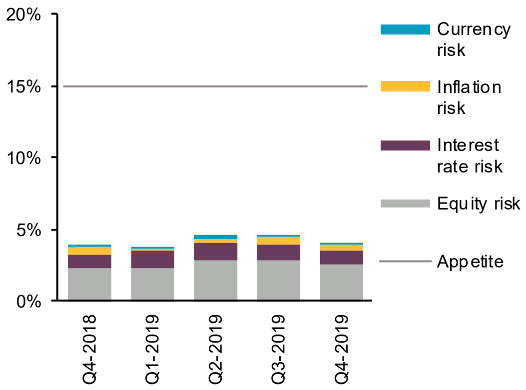


Exhibit 5.1 shows the main types of market risk in the Group's operations, the source of the risk and main limit types.

5.3 Market Risk Exposure

Market risk, as measured by the MRMF, increased slightly in 2019, mainly due to an increased equity exposure, which continued to be the largest contributing factor to the Bank's total market risk in 2019. The overall market risk remains moderate and well within the Group's risk appetite, as Exhibit 5.2 shows.

5.3.1 Equity Risk

The Group's equity risk arises from flow trading, market making, shares acquired through restructuring of companies, and strategic investments.

The equity risk is managed through limits on aggregate market value and maximum exposure or market share in single securities. Equity risk includes bonds with equity-like features but excludes hedges against customers' equity forward

Exhibit 5.3. Quarter-end development of equity risk in 2019. (ISK m). Consolidated.

positions. The quarter-end figures for the Group's equity risk in 2019 are presented in Exhibit 5.3. Equity exposure in the trading book increased in 2019 with an average position of ISK 1.7bn compared to ISK 1.3bn in 2018. The maximum equity exposure in the trading book was ISK 3.0bn in 2019 compared to ISK 2.1bn in 2018. Equity exposure in the banking book, including fair value shares and shares held for sale, also rose from ISK 7.5bn to ISK 8.9bn. The Group has no equity underwriting positions.

An overview of the equity instruments is presented in Note 5 in the Consolidated Financial Statements. Please note that bonds with equity-like features are excluded and hedges against customers' equity forward positions are included in Note 5 which is not in line with equity risk as it is defined by the Bank from a risk management perspective. For information on equity forward positions, see Note 24 in the Consolidated Financial Statements.

5.3.2 Interest Rate Risk

To manage interest rate risk, the Bank uses sensitivity measures like basis point value (BPV). The BPV measures the effect of a 0.01 percentage point (1 basis point) parallel upward shift in the yield curve on the fair value of the underlying position. The quarter-end figures for the Group's interest rate risk in 2019 are presented in Exhibit 5.4. The interest rate risk in the banking book fluctuated in 2019 within a moderate range.

Interest Rate Risk in the Trading Book

The Group's interest rate exposures in the trading book arise mainly from flow trading, market making and liquidity management. All positions in the trading book are subject to BPV or duration limits, both intraday and end-of-day limits. In addition to BPV limits, there are limits on the total short and long positions in underlying bonds. For foreign bonds and bills in the liquidity portfolio there are issuer rating and maturity limits. The maximum interest rate risk, measured as the absolute value of the effect of a 100 basis points parallel adverse shift in yield curves, was ISK 264m in 2019 compared to ISK 371m in 2018. An overview of the Bank's interest rate risk in the trading book is provided in Note 57 in the Consolidated Financial Statements.

Interest Rate Risk in the Banking Book

Interest rate risk in the banking book (IRRBB) arises from the Group's core banking activities. It represents the risk of loss from fluctuations in future cash flows or fair value of financial instruments as market rates change over time, reflecting the fact that the Group's assets and liabilities are of different maturities and are priced relative to different interest rates. The Group's main sources of interest

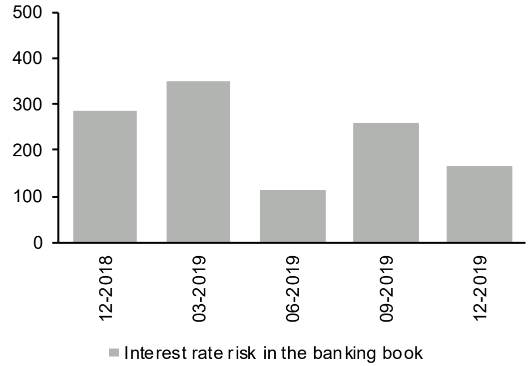
Exhibit 5.4. Quarter-end development of interest rate risk in 2019. Presented as the change in fair value that results from a 100 basis points parallel upward shift in yield curves (100 BPV in ISK m). Consolidated.

rate risk in the banking book are fixed rate mortgage loans, covered bond debts and fixed-term deposits.

Interest rate risk in the banking book is managed by limits on the sensitivity of the fair value of the Bank's assets and liabilities to changes in market rates. All interest-bearing assets and liabilities are bucketed according to their next interest rate reset date, and the effect of a 100 basis points upward parallel shift on the interest rate exposure is measured. The sensitivity calculations are based on the duration of the underlying assets and liabilities. The calculations exclude non-performing loans since the valuation of such loans is based on the expected recovery and is not affected by changes in the underlying interest rates. An overview of the Bank's interest rate risk in the banking book is provided in Note 57 in the Consolidated Financial Statements.

In addition to a parallel shift in yield curves, the Group measures the effect of a so-called weight-

Exhibit 5.5. Quarter-end development of interest rate risk in the banking book in 2019 (weighted adverse 100 BPV in ISK m). Consolidated.

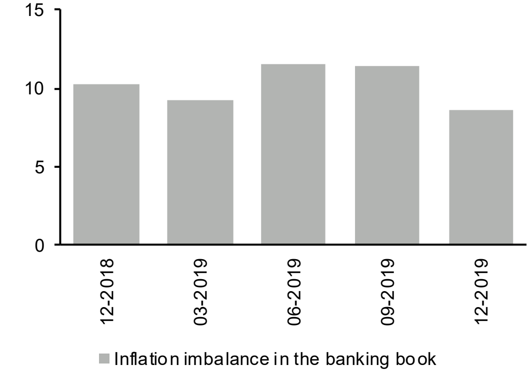


ed adverse shift in yield curves. This entails that different weights are used to shift each yield curve in a direction that results in a loss for the Group, and the effect per yield curve is then added up to a single amount. The development of the Group's interest rate risk in the banking book in 2019 based on this weighted adverse 100 BPV is shown in Exhibit 5.5.

5.3.3 Inflation Risk

The Group is exposed to inflation risk since assets linked to the CPI exceed liabilities linked to the CPI. The net carrying amount of all CPI-linked assets and liabilities changes according to changes in the CPI at any given time and all changes in the CPI affect the Group's profit and loss through interest income. The inflation risk inherent in the trading book positions is captured through the interest rate risk of the positions. The inflation imbalance in the banking book was fairly stable in 2019 and amounted to ISK 8.6bn at the end of the year compared to ISK 10.2bn at year-end 2018. Exhib-

Exhibit 5.6. Quarter-end development of the banking book inflation imbalance in 2019 (ISK bn). Consolidated.



it 5.6 shows the development of the Group's banking book inflation imbalance in 2019.

5.3.4 Currency Risk

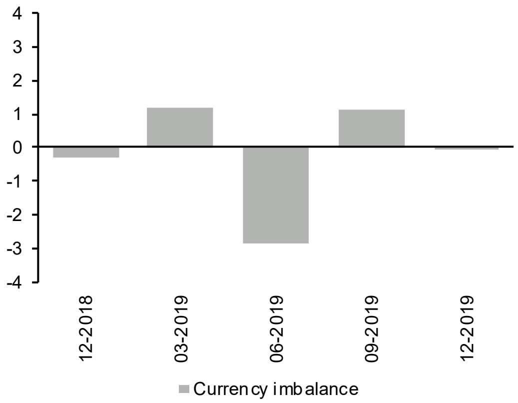
Currency risk arises when financial instruments are not denominated in the Group's reporting currency, especially if there is a mismatch in the currency denomination of assets and liabilities.

Currency risk is managed within regulatory and internal limits, with separate limits for the banking book and the trading book. Exhibit 5.7 shows the development of the Group's currency imbalance in 2019. The size of the currency imbalance was modest throughout the year and fluctuated around zero. The overall consolidated currency imbalance was ISK -0.1bn at year-end 2019 compared to ISK -0.3bn at year-end 2018.

5.3.5 Derivatives

The Bank offers various types of derivative products to its customers and uses derivatives to hedge risks on its own balance sheet. The main products offered to customers are interest rate swaps (IRS),

Exhibit 5.7. Quarter-end development of the currency imbalance in 2019 (ISK bn). Consolidated.



cross-currency interest rate swaps (CIRS), foreign exchange swaps (FX swaps), outright forwards (FX forwards) as well as equity and bond forwards. The Bank uses derivatives to hedge imbalances with respect to currency exposure, interest rate risk and inflation risk in the banking book. Other derivatives in the Group are insignificant.

All derivatives positions that carry direct market risk are subject to risk limits. The overall position in interest rate swaps and cross currency interest rate swaps is subject to both BPV and duration limits, while options are subject to several limits, including a limit on the open delta position in each underlying instrument. Derivatives positions that are fully hedged do not carry direct market risk but are exposed to indirect market risk due to counterparty credit risk. These positions include customers' forward contracts on equities, bonds and foreign exchange. Such positions are subject to notional limits that cap the Bank's indirect exposure to the underlying risk factors. The Bank's counterparty credit risk management is discussed in Section 4.5. For further information on derivative contracts see Note 24 in the Consolidated Financial Statements.

5.4 Capital Requirements

The Bank reports its Pillar 1 capital requirements for market risk according to the standardised approach of the CRD IV. An overview of the Pillar 1 capital requirements for market risk is displayed in the MR1 table in the Additional Pillar 3 Disclosures. Capital add-on for market risk under Pillar 2-R is estimated in the annual ICAAP process and reviewed by the regulator through the supervisory review and evaluation process (SREP). In 2019 the main add-on for market risk under Pillar 2-R was due to underestimation of equity risk and interest rate risk in the trading book under Pillar 1 and due to risk factors not addressed under Pillar 1, namely market risk arising from equities in the banking book, interest rate risk in the banking book and inflation risk.

6 Liquidity Risk

The Bank maintained a strong liquidity position throughout 2019 and all regulatory metrics were well above limits. At year-end 2019 the Bank's Liquidity Coverage Ratio (LCR) was 144% for the parent company and 155% for the Group. The Net Stable Funding Ratio (NSFR) at year-end 2019 was 118% for the parent company and 119% for the Group.

The year-end balance of deposits rose by approximately ISK 55bn from 2018 to 2019, the change was mainly due to an increase in retail deposits (ISK 15bn), deposits from corporation (ISK 11bn) and a substantial increase in deposits from domestic and foreign financial institutions (ISK 26bn) during the year. The rise in deposits matched that of loans so that the loan-to-deposits ratio for households and nonfinancial corporations did not change between year-ends.

The Bank´s market-based funding activities continued to evolve in 2019. The Bank consolidated its position in the domestic covered bond market, maintained strong liquidity ratios with further issuance of senior and subordinated debt in foreign currencies and it´s first senior unsecured transaction in ISK. Íslandsbanki´s credit ratings from S&P were affirmed during the year at BBB+ with a negative outlook.

6.1 Strategy, Organisation and Responsibility

The Bank defines liquidity risk as the risk of not being able to fund its financial obligations or planned growth, or only being able to do so substantially above the prevailing market cost of funds.

Sound and efficient management of liquidity risk is a key factor to ensure the viability of the Bank's operations and to achieve and maintain a target credit rating. The Bank takes a conservative and prudent approach to manage liquidity risk and its liquidity strategy assumes that the Bank always fulfils external rules on liquidity and can sustain a prolonged period of stress. Following are the key principles on which the Bank's liquidity risk management framework is based:

- Roles and responsibilities with respect to management of liquidity risk shall be clear.
- The definition, categorisation and management of liquid assets shall be clear.
- The Bank has in place a liquidity contingency plan which shall be tested regularly.
- The Bank aims for consistency and transparency in liquidity disclosure.
- The Bank aims to maintain a prudent amortisation profile on its portfolio of loans to customers in order to reduce the refinancing risk of both the Bank's customers and the Bank itself.
- The Bank aims to maintain a prudent balance between the maturity of assets and liabilities and to avoid spikes in the funding profile.

The Bank's liquidity risk appetite is reflected in the liquidity risk framework and guided through the liquidity limit structure.

The ultimate responsibility for ensuring an adequate liquidity risk management and internal control framework at Íslandsbanki lies with the Board of Directors. The Board defines the liquidity risk governance framework and the acceptable level of liquidity risk through the *Risk Management and Internal Control Policy*, the *Risk Appetite Statement* and the *Liquidity Risk Policy*.

The All Risk Committee (ARC) is responsible for the review and implementation of the *Liquidity Risk Policy*, *Liquidity and Capital Contingency Plan* and the liquidity risk appetite. The Asset and Liability Committee (ALCO) decides on individual proposals for internal and external pricing, subject to the policies and models approved by the Board and ARC. ALCO also reviews and approves investment policies for managing the Bank's liquid assets, reviews and approves the contingency stage assessment as part of the Bank's *Liquidity and Capital Contingency Plan* and reviews information about the liquidity position of the Bank with respect to targets and limits.

The Chief Financial Officer (CFO), as the managing director for Treasury, is responsible for ensuring the necessary resources and training of employees for understanding, identifying, measuring or assessing, monitoring, mitigating and reporting on funding and liquidity risk. Treasury is responsible for the liquidity management of the Bank, in line with the internal and regulatory limits and policies, and the associated risks. Treasury is also responsible for the Bank's funding operations and the internal pricing framework.

The Bank complies with FME guidelines on liquidity management[1] which are based on the *Principles for Sound Liquidity Risk Management and*

[1] FME Guidelines no. 2/2010 for Sound Liquidity Risk Management and Supervision

Supervision[2], issued by the Basel Committee on Banking Supervision.

6.2 Measurement and Monitoring

Key measures for the assessment of liquidity risk are the LCR and the NSFR introduced by the Basel Committee on Banking Supervision in 2010 and incorporated into European law through the CRD IV.

The Central Bank of Iceland, which is the main supervisory authority regarding liquidity risk, has incorporated the LCR and the NSFR based on the CRD IV standards into the *Rules on Liquidity Ratio* and the *Rules on Funding Ratio in Foreign Currencies*.[3] At the end of 2019, the CB announced amendments to the Rules on Liquidity Coverage Requirement. The amendments implement a 50% minimum liquidity coverage ratio in Icelandic króna. The requirement will be introduced in stages, beginning at 30% in 2020, increasing to 40% in 2021 and finally reaching the full 50% at the beginning of 2022. The new minimum requirements do not pose any challenge for the Bank as the ISK LCR has been well above 50% throughout 2019. The minimum standard for the NSFR has been implemented in foreign currencies but the CB has not issued a plan regarding implementing the standard in Iceland for all currencies. In addition, the CB receives additional liquidity monitoring metrics (AMM)[4] to obtain a comprehensive view of the Bank's liquidity risk profile. The AMM cover a wide array of monitoring metrics, including a maturity ladder, funding concentration, concentration of counterbalancing capacity and rollover of funding.

According to the CB's rules on liquidity ratios, the Bank submits monthly reports on the LCR and NSFR ratios along with AMM reports to the CB. In addition to these regulatory measures, the Bank monitors several quantitative and qualitative liquidity measures, both static and forward-looking, to assess and quantify its liquidity position and thereby its liquidity risk. These include predefined triggers for the assessment of liquidity stage and forecasts of the development of the LCR. The assumptions for the internal liquidity measures are reviewed regularly.

Treasury, as a first line of defence, is responsible for continuous monitoring of the liquidity risk inherent in the Bank's operations and for notifying senior management of any foreseeable breaches from either internal or regulatory targets, limits or strategic direction. Risk Management, as the second line of defence, is responsible for providing an independent view on liquidity risk on a consolidated basis to internal and external stakeholders and for managing the annual Internal Liquidity Adequacy Assessment Process (ILAAP).

Current or prospective breaches in internal or regulatory liquidity targets or limits result in an escalation of the Bank's liquidity stage according to the definitions and triggers described in the Bank's *Liquidity and Capital Contingency Plan* which is described further in Section 6.5.

6.3 Liquidity Position

The Bank maintained a strong liquidity position throughout 2019 and all regulatory and internal metrics were above limits. The Bank continues to steer its liquidity ratios with the aim of reducing liquidity cost further while keeping the ratios comfortably above minimum requirements.

Exhibits 6.1–6.5 show the development of the LCR and NSFR ratios for Íslandsbanki in 2019 as compared to the regulatory minimum where applicable. The following chapters provide further details on the composition of the LCR and NSFR.

The Bank's Treasury invests a part of the liquidity portfolio in foreign currencies in highly liquid bonds and bills issued by foreign governments with a long-term issuer-rating of at least AA, short-term bank deposits or commercial paper issued by banks which have been allocated a credit limit. See further information in Exhibits 4.8 and 4.9 in Chapter 4.

6.3.1 Liquidity Coverage Ratio

The LCR is defined as the proportion of *High Quality Liquid Assets* (HQLA) to net cash outflow over the next 30 calendar day period. The formula for the LCR is

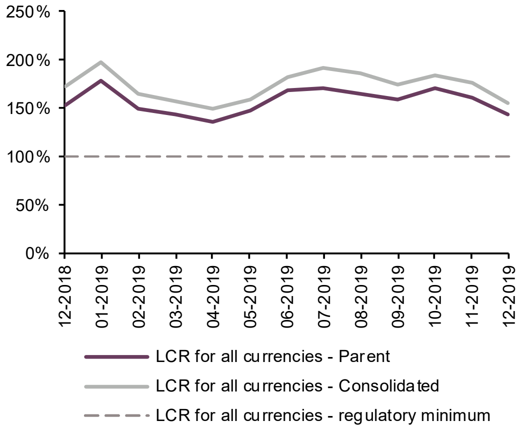
$$\frac{\text{Stock of HQLA}}{\text{Cash outflow} - \text{Min}\{\text{Cash inflow}, 75\% \text{ Cash outflow}\}}$$

HQLA are defined as assets that can be easily and immediately converted into cash at little or no loss of value. These include cash, CB deposits, government bonds and corporate debt securities. The main outflow factors include on-demand deposits, committed credit and liquidity facilities, contractual lending obligations within a 30-day period, derivative cash outflow and other contractual cash outflows. This is offset by contractual cash inflows from outstanding exposures that are fully performing and derivative cash inflows.

To prevent banks from relying too much on anticipated inflows to meet their liquidity requirements, the amount of inflows that can offset outflows is capped at 75% of total expected cash outflows. This requires that banks must maintain a

[2] Basel Committee on Banking Supervision, Principles for Sound Liquidity Risk Management and Supervision
[3] Central Bank Rules no. 266/2017 and no. 1032/2014
[4] EBA draft implementing standards on additional liquidity monitoring metrics

Exhibit 6.1. LCR for all currencies. Consolidated and parent.



minimum stock of HQLA equal to 25% of the total cash outflows.

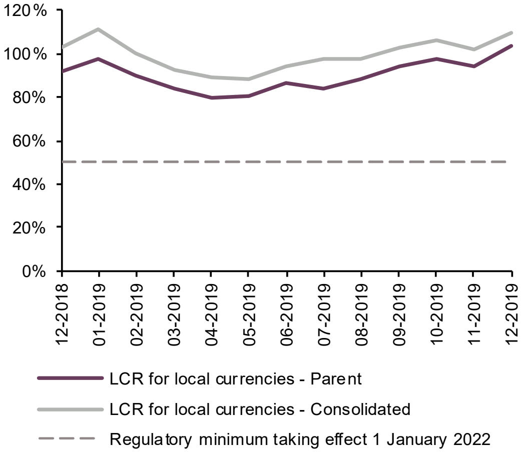
The EU LIQ1 in the Additional Pillar 3 Disclosure shows the breakdown of the Group's positions[5] underlying the LCR at year-end 2019. According to the LCR disclosure standards, the figures show the average of end-of-month positions throughout 2019 as opposed to the year-end figures in Note 54 in the Consolidated Financial Statements.

6.4 Funding

The Bank continues to be predominantly funded by deposits although borrowings through bond issuance amount to 34% of the total funding. The Bank has been gradually increasing its borrowing in recent years with covered bond issuance, unsecured bonds, foreign currency denominated bonds and subordinated debt.

[5]In accordance with Article 435(1) of Regulation (EU) 575/2013 and guidelines from the Central Bank

Exhibit 6.2. LCR in ISK. Consolidated and parent.



6.4.1 Net Stable Funding Ratio

A key metric for assessing the long-term viability of the Bank's funding structure is the NSFR. The ratio measures the proportion of stable funding to long-term assets for a time horizon of over one year. In particular, the NSFR is structured to ensure that

Exhibit 6.4. NSFR for all currencies. Consolidated and parent.

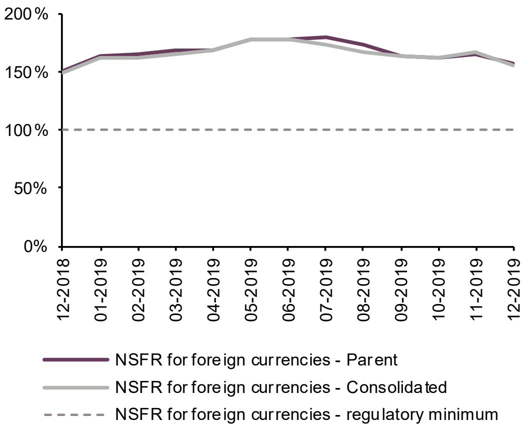
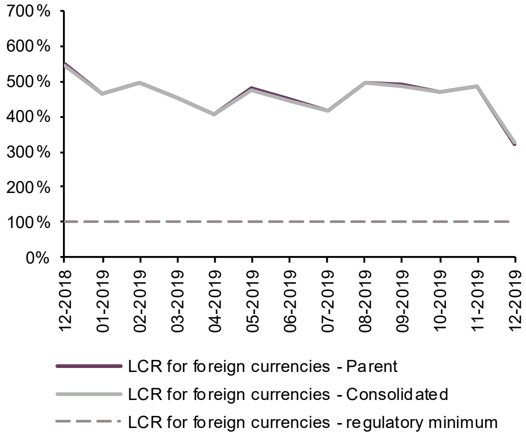


Exhibit 6.3. LCR in foreign currency. Consolidated and parent.



long-term assets are funded with at least a minimum amount of stable liabilities and thus to limit over-reliance on short-term wholesale funding.

$$\text{NSFR} = \frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}}$$

Exhibit 6.5. NSFR in foreign currency. Consolidated and parent.

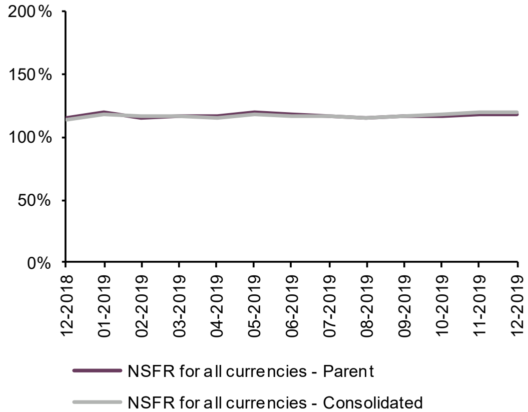


Exhibit 6.6 Breakdown of the components underlying the Group's NSFR in 2019 (ISK bn). Consolidated.

NSFR breakdown, end-of-month average through 2019	Foreign currency		All currencies	
	Balance	NSFR weighted	Balance	NSFR weighted
Tier 1 and Tier 2 capital	-	-	176	176
Other capital instruments	20	20	20	20
Unsecured financing	229	181	469	263
Secured financing	-	-	159	154
Less stable deposits (LCR classification)	22	20	249	224
Stable deposits (LCR classification)	4	4	93	88
Other liabilities	7	-	33	0
Available stable funding	282	225	1,199	926
Liquid assets	48	2	171	3
Encumbered assets (loans and securities)	-	-	199	198
Unencumbered assets (loans and securities)	226	128	776	529
Other assets	5	5	61	59
Off-balance sheet	21	1	153	7
Currency imbalance	0	0	0	0
Required stable funding	301	136	1,361	795
Net stable funding ratio (2019 end-of-month avg.)		165%		116%
Net stable funding ratio (year-end 2019)		159%		119%

The amount of *Available Stable Funding* (ASF) is measured based on the assumed relative stability of an institution's funding sources reflected in the corresponding ASF factor. The available amount of stable funding is composed mostly of retail deposits, wholesale deposits with remaining maturity of greater than one year, borrowings with a residual maturity over one year and equity.

The amount of *Required Stable Funding* (RSF) is measured based on the liquidity risk profile of an institution's assets and off-balance sheet exposures. The required amount of stable funding is mainly in the form of encumbered and unencumbered assets with maturity of more than one year and other on- and off-balance sheet exposures. All categories are weighted by the appropriate RSF factor.

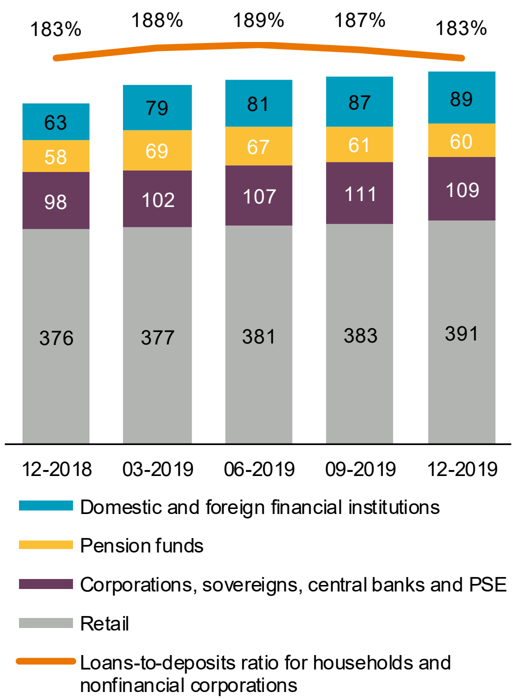
Exhibit 6.6 shows a high-level breakdown of the components underlying the Group's NSFR in 2019.

6.4.2 Deposits

The Loan-to-deposits ratio for households and nonfinancial corporations was 183% at year-end 2019 after having increased slightly during the year from the same value at year-end 2018. The ratio is expected to remain in this range and deposits to continue to be the largest source of funding for the Bank in the years ahead.

The deposit balance rose by approximately ISK 55bn over the course of the year 2019 as shown in Exhibit 6.7. The change was mainly due to an in-

Exhibit 6.7. Deposits by liquidity coverage ratio category in 2019 (ISK bn) and the Loan-to-deposits ratio for households and nonfinancial corporations. Consolidated.



crease in retail deposits (ISK 15bn), deposits from corporation (ISK 11bn) and a substantial increase in deposits from domestic and foreign financial institutions (ISK 26bn) during the year.

The proportion of term deposits increased slightly from 27% of total deposits at year-end 2018 to 28% at year-end 2019. The rise was mainly due to domestic financial institutions while core retail term deposits remained stable. For a more detailed composition of deposits by LCR categories and term see Note 54 in the Consolidated Financial Statements.

Deposit concentration is monitored since a substantial amount of the Bank's deposits are held by relatively few counterparties. The Bank's highest deposit concentrations are in wholesale deposits from foreign and domestic financial institutions and pension funds. As shown in Exhibit 6.8, deposit concentration has increased slightly in the past year with 17% of the Bank's deposits belonging to the 10 largest depositors, up from 14% at the end of 2018. The proportion of the 100 largest depositors increased from 29% to 32% in the year 2019.

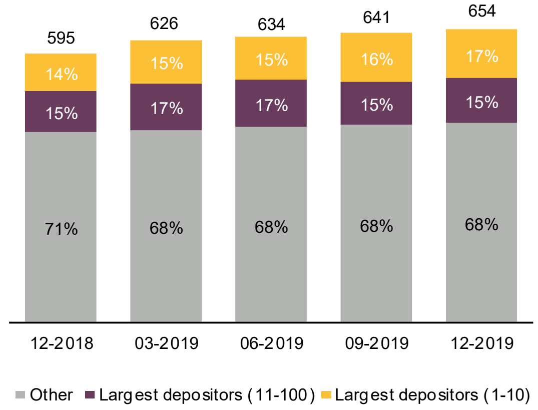
6.4.3 Capital Markets Activity

Íslandsbanki is one of the largest issuers of covered bonds in the domestic market. Domestically, the Bank is also a frequent issuer of unsecured senior bonds. The Bank's USD 2,500m Global Medium-Term Note (GMTN) Programme is the Bank's platform for funding in international markets.

Íslandsbanki has an ISK 170bn covered bond programme in place. The bonds are issued under Act 11/2008 on Covered Bonds. Issuance is regulated by the Icelandic Financial Supervisory Authority which additionally appoints an independent inspector to monitor the issues. Íslandsbanki issued ISK 28.9bn of covered bonds in 2019, compared to ISK 29.7bn in 2018. This activity was in line with the domestic issuance plan for 2019 which assumed new covered bond volumes of ISK 25-30bn. Liquidity has remained strong in the Bank's covered bonds and yields have fallen from year-to-year. The total outstanding amount of covered bonds at year-end 2019 was ISK 139.7bn, thereof ISK 114.5bn CPI-linked.

In November the Bank issued its first senior unsecured bond in ISK with an issue of ISK 3.6bn five-year floating rate bond. The bond was priced at 1m

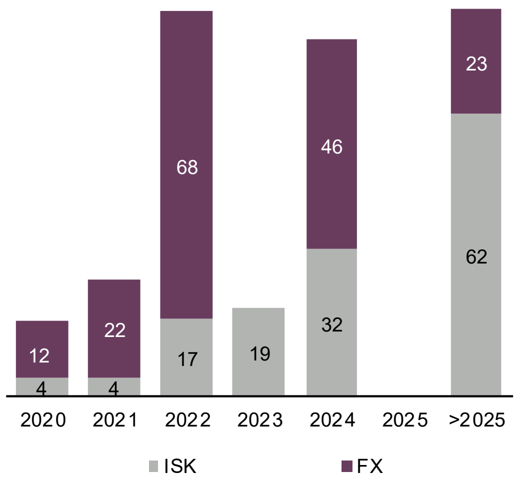
Exhibit 6.8. Development of the deposit concentration throughout 2019 (ISK bn). Consolidated.



REIBOR +90bp. The transaction was well received by the local investor community and marked an important milestone in the build-up of the domestic capital markets.

The Bank continued its issuance of commercial paper (i.e. unsecured short-dated bonds) in the domestic market during the year and had ISK 2.7bn outstanding at year-end. International credit markets were markedly influenced by volatile geopolitical issues over the course of late 2018 in- to 2019. The ebb and flow of world trade disputes, Brexit and uncertainty over Eurozone quantitative easing all conspired to produce widespread investor caution at the beginning of 2019. The credit spreads of Icelandic banks were not immune from this widening bias observed elsewhere in credit markets. For instance, the Bank's Euro-denominated benchmark bond maturing in 2024 started 2019 at a spread of 167 basis points over swaps, having been launched at a spread nearly 100 basis points tighter a year earlier.

Exhibit 6.9. Maturity profile of long-term funding (ISK bn) as of year-end 2019. Parent.



Nonetheless, it was observed that as the first quarter progressed and investor risk appetite returned, the secondary levels of the Icelandic banks' bonds were remaining stubbornly wide. Just how inefficient secondary markets have become was clearly demonstrated in April when the Bank issued a 3-year fixed rate euro benchmark. The bond, a 1.125% fixed rate note due 2022, was priced in line with outstanding secondary bonds at a spread of 130 basis points over mid-swaps. The order book was heavily oversubscribed and the paper was widely and successfully placed by lead managers Bank of America, Citi, Deutsche Bank and Morgan Stanley. The bond tightened by 20 basis points over little more than the course of the week post-launch, and by 40 basis points over the course of the following month. In so doing, it contributed to the repricing of the whole of the Icelandic bank "complex" of bonds. In other words, a primary issue repriced the secondary market – a reversal of normal market behaviour.

This new bond was issued in April in conjunction with a first tender offer to repurchase a portion of the Bank's EUR 500 million benchmark bond maturing in 2020. The April tender resulted in the repurchase of EUR 300 million, and a subsequent tender in December 2019 saw the Bank buy back a further EUR 147 million. The Bank also bought back a SEK 250m bond maturing in February 2020. These buybacks are part of the Bank's endeavours to maximise the efficiency of its funding resources whilst maintaining strong liquidity ratios.

Íslandsbanki continued to be active issuing bonds in Nordic markets with several private placements in Swedish kronor and Norwegian kroner. In the first quarter, the Bank issued a total of NOK 1.4 billion and SEK 350 million of bonds across several transactions.

In June, the Bank issued its third Swedish kronor denominated subordinated bond. The SEK 500 million 10-year non-call 5-year Tier 2 notes were placed with a range of predominantly Nordic investors at a spread of STIBOR +390, bringing the Bank up to its target for Tier 2 capital. The transaction was managed by Danske Bank, Nordea and Swedbank.

In January 2019, Íslandsbanki announced that following expiration and by agreement of parties, the credit rating service contract between Fitch Ratings and Íslandsbanki was to terminate. Fitch Ratings affirmed its ratings on Íslandsbanki with a stable outlook, and subsequently withdrew its rating.

Exhibit 6.9 provides a summary of how the maturity of outstanding bond issues is distributed over the coming years and Note 35 in the Consolidated Financial Statements gives an overview of the terms of outstanding bonds issued by the Bank at year-end.

In July 2019, S&P Global Ratings (S&P) placed Íslandsbanki and the other Icelandic banks on negative outlook whilst reaffirming it BBB+ rating. Citing concerns over profitability and increasing competition in a slowing economy. "The negative outlook reflects the possibility that we could lower the ratings on Íslandsbanki over the next 24 months if the operating environment in Iceland becomes even more difficult, leading to banks having weaker business and profitability prospects than peers on a sustained basis. We could also revise the outlook to stable should the competitive environment become more benign, leading to improved earnings prospects for banks. If this scenario does not materialise, to warrant a stable outlook we would expect to see Íslandsbanki improving its returns, efficiency, and asset quality above domestic peers, with no further widening of the gap it has with foreign peers."

Exhibit 6.10 shows the credit rating history for Íslandsbanki from April 2014 to December 2019.

6.4.4 Asset Encumbrance

The asset encumbrance ratio is critical when monitoring the consequences of changes in funding sources and the ability to withstand funding stress. The Bank's asset encumbrance predominately consists of:

- Loans and securities serving as collateral for covered bond issuance which is one of the Bank's strategic long-term funding sources
- Cash and securities as collateral for currency swap agreements
- Central Bank (CB) term deposits for the payment system

Exhibit 6.10. Íslandsbanki's credit rating history.

	S&P counterparty credit rating (long-term)	S&P outlook	S&P counterparty credit rating (short-term)		Fitch Long-term Issuer Default Rating	Fitch outlook	Fitch Short-term Issuer Default Rating
April 2014	BB+	Stable	B-3	April 2015	BBB-	Stable	F3
October 2014	BB+	Positive	B-3	April 2016	BBB-	Stable	F3
November 2014	BB+	Positive	B-3	January 2017	BBB	Stable	F3
July 2015	BBB-	Stable	A-3	September 2017	BBB	Stable	F3
November 2015	BBB-	Stable	A-3	December 2017	BBB	Stable	F3
January 2016	BBB-	Positive	A-3	November 2018	BBB	Stable	F3
October 2016	BBB	Positive	A-2				
November 2016	BBB	Positive	A-2				
October 2017	BBB+	Stable	A-2				
December 2017	BBB+	Stable	A-2				
July 2018	BBB+	Stable	A-2				
July 2019	BBB+	Negative	A-2				

Íslandsbanki asset encumbrance ratio was 18.1% at year-end 2019 and Exhibit 6.11 shows the development of the reported encumbrance in 2019.

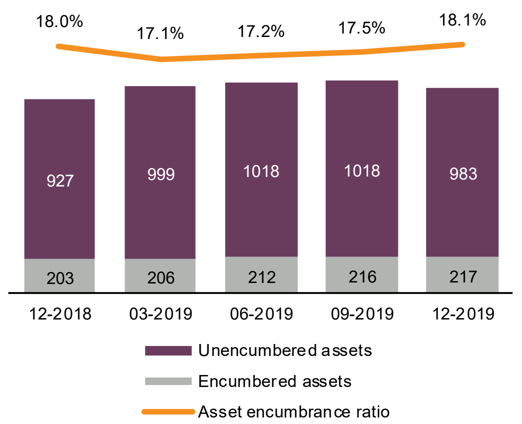
6.4.5 Funding Outlook

The Bank's funding need for 2020 remains modest as the Bank has bought back a large part of its 2020 maturities and has limited redemptions in 2021 to pre-fund.

The Bank estimates that the total issuance of covered bonds will be between ISK 20-25bn in 2020. In addition, the Bank plans to continue its issuance of senior bonds in ISK in a continued effort of developing and promoting the domestic bond market. The timing and size of such issues will depend on the Bank's funding need and market conditions. Issuance under the Banks GMTN Programme will depend largely on the Bank's loan growth in foreign currencies as well as on upcoming maturities. The Bank is contemplating issuing Additional Tier 1 capital instruments in foreign or local currency, whereas the Bank's Tier 2 bucket is currently full.

Due to the Bank's strong liquidity position, both in ISK and foreign currencies, the Bank may explore buybacks or refinancing of outstanding transactions in 2020 in a continuing effort to maintain a strong balance sheet position while efficiently applying surplus liquidity.

Exhibit 6.11. Development of asset encumbrance in 2019 (ISK bn). Consolidated.



6.5 Liquidity and Capital Contingency Plan

The Bank has in place a *Liquidity and Capital Contingency Plan*. The main purpose of the contingency plan is to identify liquidity or funding problems as early as possible and thereby improve the Bank's ability to respond to such situations. As a part of the *Liquidity and Capital Contingency Plan*, the Bank has defined four contingency stages reflecting different levels of severity. The contingency stages are determined based on both predefined risk triggers and on qualitative assessment. For each stage, management and reporting actions have been defined and communicated to the relevant parties, including the Board of Directors and the CB. The *Liquidity and Capital Contingency Plan*, which forms a part of the Bank's *Recovery plan*, is tested regularly and findings from the tests are used to improve the contingency plan if needed.

7 Operational Risk

The overall level of operational risk was unchanged in the past year and remains at an acceptable level. The top priorities are currently outsourcing risk and IT risk, and significant steps were made in the year 2019 to further strengthen the monitoring and mitigation of these risk factors. The largest part of the registered events occurred without causing a direct loss.

7.1 Strategy, Organisation and Responsibility

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or external events. The Bank's definition of operational risk includes reputational risk, legal risk, model risk, conduct risk and compliance risk among other risk factors.

The ultimate responsibility for ensuring an adequate operational risk management and internal control framework at Íslandsbanki lies with the Board of Directors.

The operational risk management framework is based on the following principles:

- Clear responsibilities and ownership of operational risk and operational risk controls.
- The Bank accepts no unnecessary operational risk, meaning that it only assumes operational risk when the cost of mitigating that risk and preventing possible losses outweighs the benefits.
- With the aim of ensuring business continuity and minimizing customer impact the Bank shall have adequate processes, procedures and resources to ensure quick discovery, analysis and termination of IT incidents; define and meet service-level objectives for digital solutions, in line with the Bank's vision to be #1 in service; and protect information and data from loss of confidentiality.
- The Bank promotes a strong risk culture, emphasising compliance to internal and external laws and regulations.
- The Bank has no appetite for compliance risk that can lead to financial loss or loss of reputation.
- A key feature of a strong risk culture is to foster a "no blame" environment where operational risk events are recognised and registered to enable continuous improvement to the Bank's operations.

The All Risk Committee (ARC) is responsible for the review and implementation of the operational risk framework. The Operations and Security Committee (OSC) decides on individual proposals for assuming and mitigating operational risk on behalf of the Bank within the appetite and limits approved by the Board and ARC. The OSC also reviews and approves proposals for new products, services, new outsourcing or other high-risk changes of systems or procedures within the Bank.

The managing directors for individual business and support units are responsible for the operational risk inherent in their business. This entails identifying the sources of operational risk in their operations, assessing whether the cost of avoiding the risk outweighs the benefits and ensuring that unacceptable operational risks are mitigated, and losses prevented.

Risk Management is responsible for implementing the Bank's operational risk framework, for developing and maintaining the *Operational Risk Policy* and for communicating the policy to the Bank's employees. Key risk factors related to operational risk are addressed in other policies that have been moved to the Board level, such as, *Security Policy*, *Outsourcing Policy* and *New Products and Material Changes Policy*. These policies outline the risk management and internal controls specific to these risk categories.

The Security Policy highlights that the Bank's employees' and customers' safety is a priority and that the Bank aims to ensure confidentiality, integrity, and availability of information related to the Bank's operations and its customers.

Risk Management monitors the overall operational risk profile of the Bank, ensures proper escalation and reporting of operational risk issues and provides an independent view on the overall operational risk inherent in the Bank's operations. Furthermore, Risk Management is responsible for reporting on operational risk events and limit breaches to senior management, the Board of Directors and to the competent authorities in accordance with internal procedures and regulatory requirements.

Compliance is responsible for implementing the Bank's compliance risk framework, for developing and maintaining the Bank's *Compliance Risk Policy* and for communicating the policy to the Bank's employees. The Compliance Officer is responsible for supervising the Bank's measures against money laundering and terrorist financing and is the Bank´s Money Laundering Reporting Officer.

A new IT model was implemented late in 2019. The objective is to create joint teams of Business and IT that focuses on a specific product area. The benefits of such a change is that the customer is at the centre of everything that is done from an IT perspective, it ensures a more sustainable solution, improves decision making and trade-offs, and allows clear accountability. This should also reduce operational risk in the long term even though an organisational change like this can result in a short-term rise in risk level. The Bank's IT risk and model risk frameworks have also been strengthened to support the strategic direction towards further digitalisation.

7.2 Measurement and Monitoring

The Bank has implemented an operational risk management framework which fulfils the criteria for the standardised approach according to the Capital Requirements Directive (CRD IV). For capital requirement calculations, the Bank currently uses the Basic Indicator Approach as further described in section 7.5.

The main processes for measuring and managing operational risk are the Business Continuity Framework including the *Crisis Management Plan,* the Risk and Control Self-Assessment, development and monitoring of Key Risk Indicators and the follow up and reporting of all significant operational risk events in the Bank's Loss Event Database (LED).

Aggregated registered operational risk losses in any given quarter shall not exceed a given percentage the of Bank's capital, as defined in the *Risk Appetite Statement*. The *Operational Risk Policy* describes the reporting limits on operational risk losses in any given quarter to the Board of Directors.

The digital transformation within the financial markets and in people's daily lives in recent years has led to increased regulatory requirements and more focus on operational risk and operational risk management. Supervisory bodies have put tight restraints on how information technology and information security and the resulting risks should be managed, especially with respect to access to personal data. At Íslandsbanki, various measures have been taken to strengthen the operational risk management framework to accommodate to these requirements. Special focus has been on employee training with the objective to increase risk awareness and contribute to a strong risk culture.

The Bank's compliance risk is managed and monitored within the Compliance unit. The Compliance unit uses a risk-based approach in identifying, measuring, managing and monitoring compliance risk within the Bank. By using a risk-based approach the Bank has a more comprehensive overview of the need to apply mitigation measures to reduce the risk within the Bank.

A part of the monitoring framework are regular assessments and inspections of compliance with risk policies and underlying procedures within the Bank. Model validation is also an important part of this framework to monitor and mitigate model risk.

The Bank maintains an operational risk insurance covering loss events where insurance is deemed to be a cost-effective mitigation of operational risk. The insurance coverage limits financial loss caused by serious unexpected events or legal liabilities that occur despite other operational risk management procedures. The Bank's insurance also offers coverage for wrongful act claims brought solely against directors and officers of the Bank.

7.3 Operational Risk Exposure

In 2019, a total of 650 operational risk events were registered in the Bank's LED compared to 500 events in the year 2018. Most of the recorded operational risk events occurred without financial loss. Further statistics for registered loss events are presented in Exhibit 7.1.

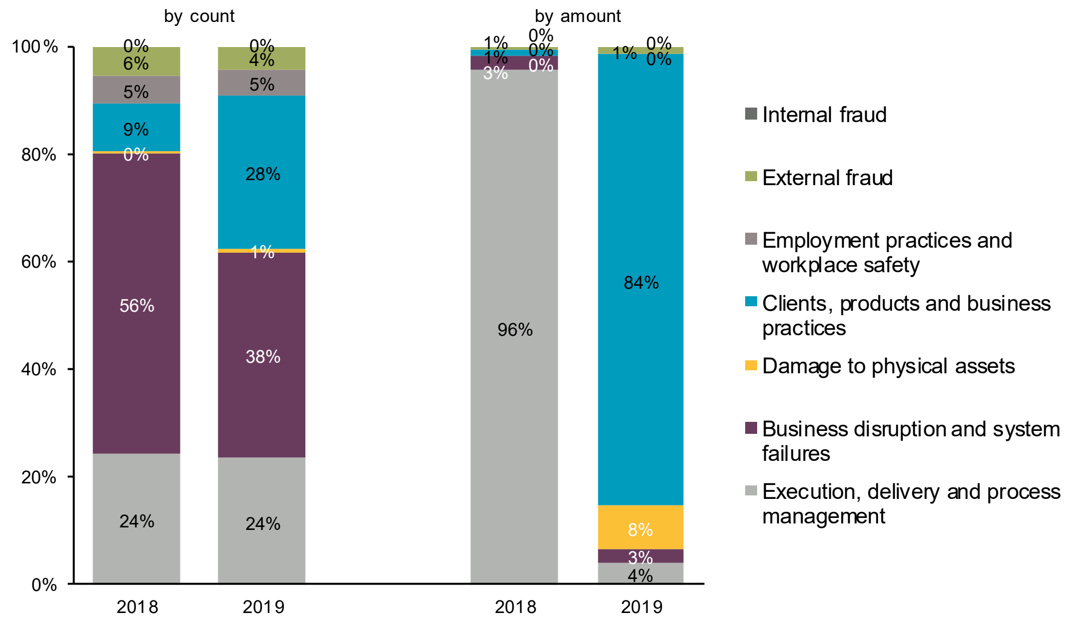
The loss events in the category "Business disruption and system failures" accounted for 38% of the total number of events in 2019, and roughly half of those incidents were due to outsourcing risk. The loss events in the category "Clients, products and business practices" accounted for 84% of the total loss amount attributed to operational risk in 2019.

7.4 Anti-Money Laundering

In September 2019, the Financial Action Task Force (FATF) reassessed Iceland´s measures to prevent money laundering and terrorist financing. Although several actions had been taken by Icelandic authorities to address previously made observations by FATF, the task force concluded that authorities had not yet ensured full compliance on all recommendations. As a result, FATF placed Iceland on the list of cooperative jurisdictions with strategic deficiencies. Icelandic authorities have stated their strong commitment to resolve the observed deficiencies.

Íslandsbanki does not conduct business with counterparties that operate in sectors or industries that are considered to be high-risk from the point of view of anti-money laundering. Money laundering risks are identified in accordance with the Icelandic Act on Measures against Money Laundering

Exhibit 7.1. Categorisation of loss events in 2018 and 2019 by CRD IV event types. The two columns on the left show the number of events of each event type as a percentage of the total number of events for that year, the two columns on the right show the loss amounts for each event type as a percentage of the total loss amount for that year. Parent.



and Terrorist Financing[1]. Procedures for monitoring money laundering risks include the collection and review of customer information and the monitoring of transactions in accordance with a risk-based approach.

All employees receive regular training and information regarding changes in regulations and new trends and patterns, as well as regarding methods that may be used for money laundering and terrorist financing. The Bank has a process for providing information regarding suspicion of money laundering to the Icelandic Financial Intelligence Unit[2].

[1] Act no. 140/2018
[2] Independent administrative unit within the District Prosecutor's Office

7.5 Capital Requirement

The Bank uses the Basic Indicator Approach of CRD IV to calculate the capital requirements for Pillar 1 operational risk, in accordance with Icelandic law and regulations.[3] Under the Basic Indicator Approach the risk exposure amount for operational risk is equal to 15% of the relevant indicator multiplied by 1250%. The relevant indicator is the average over three years of the sum of net interest income and net non-interest income. According to the Supervisory Review and Evaluation Process (SREP) results, Operational risk accounted for 8.2% of the Group's total SREP capital requirement in 2019 compared to 8.8% in 2018.

[3] Regulation no. 233/2017 on the Capital Requirement of Financial Undertakings

8 Remuneration

The Bank's Compensation Policy states that the Board of Directors shall not make or authorise agreements for variable compensation without the shareholders' consent and on terms agreed by shareholders at a shareholders' meeting.

8.1 Regulatory Framework

The Icelandic Financial Supervisory Authority (FME) publishes rules regarding remuneration in financial undertakings.[1] The rules reflect a conservative framework for remuneration schemes within the financial sector. According to the rules, a bank intending to pay variable remuneration to one or more employees is required to have in place a compensation policy approved by its board of directors. The compensation policy shall be reviewed at least annually, and the bank shall account for the policy to the FME.

8.2 Compensation Policy

The Bank's *Compensation Policy*[2] states that the Board of Directors shall not prepare or authorise any contracts for variable remuneration. An exception can be made if a prior approval has been obtained from the shareholders, and the terms are in accordance with the terms agreed upon at shareholders' meeting.

8.3 Remuneration in 2019

Exhibit 8.1 shows a breakdown of remuneration for the Board of Directors and the Executive Board in 2019. The only variable remuneration in 2019 relates to agreements that were made before the current *Compensation Policy* came into effect. For further information on the previous remuneration scheme please refer to the 2016 Pillar 3 Report.[3]

The salaries and other benefits of the Bank's management and the Board of Directors are disclosed in Note 15 in the Consolidated Financial Statements. Please note that the amounts displayed in Exhibit 8.1 are not fully comparable to the figures in the Annual Report as the basis for preparation differs.

[1] Rules no. 388/2016 on Remuneration Policy for Financial Undertakings in accordance with Act no. 161/2002 on Financial Undertakings.

[2] Íslandsbanki Compensation Policy

[3] Íslandsbanki's Pillar 3 Report 2016

Exhibit 8.1. Total remuneration for the Board of Directors and the Executive Board broken down by fixed and performance-based remuneration (ISK m).

Total remuneration earned in the financial year 2019 broken down by fixed and performance-based remuneration	Board of Directors	Executive Board
Total annual remuneration	67	372
Number of beneficiaries	10	9
Total fixed remuneration	67	349
Total variable remuneration	-	23
Cash	-	23
Other	-	0
Variable remuneration % of fixed	-	6.5%
Sign-on and severance pay granted during the financial year 2019		
Total amount	-	29
Number of beneficiaries	-	2
Highest individual award	-	26

9 Legal and Regulatory Changes

As a financial institution, Íslandsbanki must comply with a comprehensive set of laws and regulations. The legal and regulatory environment of the Bank is constantly changing and the Bank puts substantial resources into monitoring and implementing these changes to ensure full compliance.

This chapter provides an overview of the main legal and regulatory changes in Iceland relevant to the Bank's operations that came into effect in 2019.

9.1 Integration of CB and FME

Act no. 92/2019 on the Central Bank of Iceland

The main changes contained in the Act are that it is proposed that the Central Bank (CB) and the Financial Supervisory Authority (FME) are to be merged and that in future, financial undertakings will be monitored at CB. Changes are also proposed to CB's management system, including that three committees make decisions on the application of authority on monetary policy and financial stability and in the field of financial supervision.

With the merger of CB and FME, it is believed that the advantages that come with the proximity of financial supervision, financial stability and monetary policy will be achieved. Good information flow within the organisation and synergy in data utilisation will be ensured which will lead to increased efficiency and more opportunities for analysis. The monitoring of system risk should therefore be improved. It is considered important that the arrangements for the decision-making process of the separate tasks of a merged organisation will be transparent and solidified, and major decisions will be made in multilateral committees with the involvement of external parties.

Act no. 117/2019 on amendments to various laws regarding the merger of CB and FME

In the Act there are amendments to the Act on Financial Supervision and various other laws that are necessary for the merger of CB and FME to come into one institution under the name Central Bank of Iceland. The bill also proposes that the Systemic Risk Committee should be abolished and that the role of the Financial Stability Council to be changed. The proposals are in accordance with changes in the structure of the CB. It is also proposed that the application of capital add-ons for systemic risk, capital add-ons for systemically important financial undertakings and anti-volatility enhancement should be based on administrative instruments instead of government decisions as is currently the case. Finally, amendments are made to the legal framework on supervision of liquidity and stable funding.

9.2 Law changes regarding the "grey list"

In October, Iceland was been placed on the FATF (Financial Action Task Force) grey list of countries deemed to have insufficient controls against money laundering and the financing of terrorist organisations.

Act no. 82/2019 on registration of beneficial owners and amendments thereto

The purpose of the Act is to ensure that accurate and reliable information is always available about beneficial owners so that money laundering and terrorist financing can be identified and prevented. To ensure this, it is considered necessary to identify each individual who has legal control. Beneficial owners will be registered in the Register of Business. It is assumed that information will be recorded on the persons who can decide on the disposal of the parties' funds, the management of the party and those persons who benefit from the assets in question.

Entities which have a notification obligation according to the law on actions against money-laundering and financing of terrorism must be given have access to the necessary information and data on beneficial owners when conducting due diligence.

Parties that were already registered in the Register of Business had until 1 June 2020 to provide the information in question, but with amendments to the Act it was expedited until 1 March 2020.

Act no. 119/2019 on the registration of non-profit organisations with cross-border activities

The law requires non-profit organisations that collect or distribute funds for public benefit and have cross-border activities to register with The Directorate of Internal Revenue. The Directorate maintains the Register of Business and must create a separate register for these organisations. The FATF definition of non-profit organisations covers legal entities or similar entities or organisations that have the primary purpose of collecting or distributing funds in public interest, such as charitable, religious, cultural, educational, social or other charities.

Act no. 64/2019 on the freezing of funds and registration of parties on lists of sanctions in connection with the financing of terrorism and distribution of weapons of mass destruction

The main subject of the Act concerns the freezing of funds and the registration of parties on lists in connection with coercive measures. Among other things, the Act stipulates what measures entities which have a notification obligation according to the law on actions against money-laundering and financing of terrorism are required to take to assess whether their customers are on the list of coercive measures. There have been no rules before on the designation and delisting of lists of coercive measures.

9.3 Other regulatory changes

Rules no. 1170/2019 amending the rules on the liquidity ratio of credit institutions no. 266/2017

These rules are intended to ensure that a credit institution always has available assets to meet the foreseeable and potential payment obligations over a given period. In the rules, there are requirements that credit institutions have available assets to be able to meet not only their maturing obligations, but also possible outflows that may arise, for example, through deposit withdrawals, reduced access to funding or increased collateral requirements or unavoidable lending under stress conditions over the next 30 days.

Under current rules, a credit institution's liquidity coverage ratio (LCR) must be at least 100% in all currencies in total. In addition, a liquidity ratio of 100% must be maintained in all foreign currencies in total. The amendment will require the liquidity ratio in ISK to be above 50%. The requirements will be introduced in stages, beginning at 30% in 2020, increasing to 40% in 2021 and finally reaching the full 50% at the beginning of 2022.

Guidelines EBA/GL/2018/10 on disclosure of non-performing and forborne exposures

The guidelines specify the common content and uniform disclosure formats for the information on non-performing exposures (NPEs), forborne exposures and foreclosed assets that credit institutions should disclose. Proportionality is embedded in the guidelines based on two criteria – the significance of the credit institution and the level of NPEs – and there is a set of templates that needs to be disclosed only by significant credit institutions with a gross NPL ratio of 5% or above. The aims of the guidelines are to ensure the disclosure of meaningful information to market participants on credit institutions' asset quality and to gain a better insight into the distribution and level of collateralisation of NPEs among institutions with a gross NPL ratio of 5% or above, and thus a better understanding of credit institutions' risk profiles, in compliance with the second subparagraph of Article 431(3) of Regulation (EU) No 575/2013 (the CRR). The Bank's NPL is currently 3.0% and is therefore under this threshold.

Guidelines EBA/GL/2018/06 on management of non-performing and forborne exposures

The guidelines are aimed primarily at reducing non-performing exposures (NPEs) on banks' balance sheets by providing supervisory guidance to ensure that credit institutions effectively manage NPEs and forborne exposures (FBEs) on their balance sheets. The aim is to achieve a sustainable reduction of NPEs on credit institutions' balance sheets by means of the institutions' own NPE strategies, which would prove beneficial from both micro and macro perspectives

The guidelines outline the proportionate approach to the key elements of governance and operations in relation to an NPE workout framework, covering aspects related to steering and decision-making, the NPE operating model, the internal control framework and NPE monitoring processes.

The guidelines stress that any forbearance measures should be granted only when they aim to restore sustainable repayment by the borrower and are thus in the borrower's interests. These guidelines set out requirements relating to processes for recognising NPEs and FBEs, as well as a forbearance-granting process with a focus on the viability of forbearance measures.

The guidelines set out guidance on the estimation of future cash flow resulting from an active workout of the exposure and/or the sale of collateral and require credit institutions to have in place policies for timely impairments and write-offs. The guidelines also set out requirements for competent authorities' assessments of credit institutions' NPE management activities.

Guidelines EBA/GL/2015/18 on product oversight and governance arrangements for retail banking products

The purpose of the EBA Guidelines on product oversight and governance arrangements for retail banking products is that products are manufactured with the customer in mind, not the vendor.

The guidelines apply to both manufacturers and to distributors. Regarding manufacturers it is stated that they establish certain product manufacturing processes, assess conflicts of interest, define the product's target market, perform a scene analysis and ensure disclosure to distributors. Regarding distributors it is stated that certain product distribution processes are established, that they have knowledge of the target market and that product information is provided to the manufacturer.

Regulation no. 50/2019 on recovery plans for credit institutions, securities firms and their consolidations

The regulation applies to the reform plans of credit institutions and securities firms with initial contribution.

The regulation deals with the content of the reform plans and how the evaluation of the recovery plans is carried out.

Guidelines EBA/GL/2017/15 on connected clients under Article 4(1)(39) of Regulation (EU) No 575/2013

The guidelines focus exclusively on the issue of connected clients as defined in Article 4(1)(39) of Regulation (EU) No 575/20132 and apply to all areas of that Regulation where the concept of connected clients is used, i.e. the large exposures regime, the categorisation of clients in the retail exposure class for the purposes of credit risk (Articles 123(c) and 147(5)(a)(ii)), the development and application of rating systems (Article 172(1)(d)), the specification of items requiring stable funding for reporting purposes (Article 428(1)(g)(ii)) and the SME supporting factor (Article 501(2)(c)). The guidelines also apply to EBA technical standards and EBA guidelines that refer to 'groups of connected clients', as defined in Article 4(1)(39) of Regulation (EU) No 575/2013, namely in the case of liquidity reporting.

Definitions

Basel
International recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision.

Basel III
A set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision and risk management of the banking sector.

Basis Point Value (BPV)
The BPV measures the effect of a 0.01 percentage point (1 basis point) parallel upward shift in the yield curve on the market value of the underlying position. Thus, a BPV of ISK 1 million means that a 0.01 percentage point upward shift in the yield curve would result in a reduction of approximately ISK 1 million in the market value of the underlying asset.

Basis Indicator Approach
Standardised approach to calculate the capital requirement for operational risk.

Capital Requirements Directive IV (CRD IV)
The CRD IV rules are based on the Basel III guidelines and came into force on 17 July 2013. The supervisory framework in the EU is designed to ensure the financial soundness of credit institutions and reflects EU global liquidity standards on banking capital adequacy.

Carrying Amount
Book value of loans as displayed in the Financial Statements. The difference between gross carrying amount and net carrying amount is the impairment allowance.

Chargeback risk
Chargeback is the charge a payment acquirer pays to a customer after the customer successfully disputes a failure of having received a product and/or services purchased by the credit card.

Claim Value
The remaining amount of obligor's debt.

Collateral Board
The All Risk Committee has appointed a Collateral Board that reviews and proposes guidelines for the valuation of collateral and pledged assets to ensure that the valuation of collateral is co-ordinated throughout the Bank.

Concentration Risk
The significantly increased risk of any type that is driven by common underlying factors, e.g. sector, economy, geographical location, type of financial instrument or due to connections or relations among counterparties. This includes large individual exposures or liabilities to parties under common control and significant exposures to groups of counterparties whose likelihood of default is driven by common underlying factors.

Country Risk
The risk of losses that may occur due to economic difficulties or political unrest in countries to which the Bank has exposures.

Credit Risk
Current or prospective risk to earnings and capital arising from an obligor's potential failure to meet the terms of any contract with the Bank or otherwise fail to perform as agreed.

Credit Risk Exposure
Credit risk exposure comprises both on-balance sheet and off-balance sheet items. Exposure to credit risk for on-balance sheet assets is the net carrying amount as reported in the Consolidated Financial Statements. The exposure for off-balance sheet items is the amount that the Bank might have to pay out against financial guarantees and loan commitments, less provisions the Bank has made because of these items. Because of off-balance sheet items, the credit exposure does not reconcile with the carrying amount in the Consolidated Financial Statements. For capital requirement purposes, credit conversion factors are applied to guarantees and undrawn commitments. For derivative contracts, the exposure is calculated by adding potential future credit exposure to the positive market value of the contract.

Currency Risk
The risk that earnings or capital may be negatively affected from the fluctuations of foreign exchange

rates, due to transactions in foreign currencies or holding assets or liabilities in foreign currencies.

Default

The Bank's definition of default simultaneously satisfies the requirements in the definition of stage 3 according to IFRS 9, the definition of default according to article 178 of CRR and the definition of non-performing exposure used in FINREP. Obligors are in default if (a) it is the opinion of the Bank that it is unlikely that they will fulfil the terms of their contracts or (b) they are more than 90 days past due on a material credit obligation. Defaults are defined on the obligor level rather than the facility level.

Expected Credit Loss (ECL)

The annual expected credit loss (ECL) for a single obligor depends on the probability that the obligor defaults within the horizon of one year (PD), the expected exposure at time of default (EAD) and the loss given default (LGD).

Under IFRS 9, all loans are required to carry an impairment allowance of either 12-month expected credit loss or, in case of a significant increase in credit risk since origination, lifetime expected credit loss. This impairment allowance is calculated using several different scenarios for the future economic development and the final result is the probability-weighted average of the ECL in these scenarios.,

Exposure at Default (EAD)

Expected credit exposure of a facility at the time of default.

Forbearance

For a loan to be considered as forborne, two conditions need to apply: (1) The Bank has agreed to changes to the terms of the loan that would normally not be offered to the customer and (2) the customer was in financial difficulties, making it hard for them to uphold the loan contract, at the time the terms were changed.

High Quality Liquid Assets (HQLA)

Assets that can be easily and immediately converted into cash at little or no loss of value and include Central Bank certificates of deposits, government bonds and corporate debt securities.

Indirect Exposure

An exposure to counterparties that is not direct but becomes direct at the event of default of other counterparties.

Inflation Risk

The risk that earnings or capital may be negatively affected due to inflation (changes in the Consumer Price Index or CPI).

Interest Rate Risk

Current or prospective risk to earnings or capital arising from adverse movements in interest rates. Main sources of interest rate risk are re-pricing risk, yield curve risk, basis risk and optionality risk.

Internal Capital Adequacy Assessment Process (ICAAP)

The ICAAP includes an evaluation of the capital required under Pillar 2-R. The Bank identifies and measures its risks and ensures sufficient capital in accordance to the *Risk Appetite Statement*. The assessment is based on minimum capital under Pillar 1 and capital required add-on for other risk factors under Pillar 2-R. In the ICAAP process, the Bank performs stress tests, aiming to detect the sensitivity of the Bank's operations to changes in the operating environment and to ensure that the Bank holds sufficient available capital, even under stressed operational conditions. Once a year a full ICAAP report is submitted to the FME.

Internal Liquidity Adequacy Assessment Process (ILAAP)

The ILAAP aims at ensuring that the Bank adequately identifies and measures its liquidity risk, holds adequate liquidity at all times in relation to its risk profile and uses sound risk management systems and processes to support it. Once a year a full ILAAP report is submitted to the FME.

Large Exposure

An exposure to a group of connected clients that is 10% or more of the Group's capital base.

Legal Risk

The risk to earnings or capital arising from uncertainty in the applicability or interpretation of contracts, law or regulation, for example when legal action against the Bank is concluded with unexpected results, when contracts are not legally enforceable or rendered illegal by a court's ruling.

Leverage Ratio

A non-risk based measure which is calculated by dividing Tier 1 capital with the sum of total assets and adjusted off-balance sheet exposures. A lower leverage ratio indicates higher leverage.

Liquidity Coverage Ratio (LCR)

The proportion of HQLA to net cash outflow over the next 30 calendar day period.

Liquidity Risk

The risk of not being able to fund financial obligations or planned growth, or only being able to do so substantially above the prevailing market cost of funds.

Loan-to-Value Band

The loan-to-value (LTV) of a portfolio can be represented by considering how each ISK lent is distributed in loan-to-value bands. In the breakdown, every ISK is categorised according to its seniority in the total debt on the underlying property. The first band represents the part of the portfolio that falls in the 0-10% LTV band, the second represents the part that falls in the 10-20% LTV band and so on.

Loss Given Default (LGD)

Expected loss on a credit facility in the case of default, as fraction of the exposure at default. Any cost relating to repossession of collateral is included in the LGD.

Loss Rate

The probability that the Bank will need to claim collateral or experience a loss, given that the obligor defaulted.

Loss Severity

The percentage of exposure at default that is lost in the case of loss or repossession of collateral.

Market Risk

Current or prospective risk to earnings and capital arising from adverse movements in the level or volatility of prices of market instruments, such as those that arise from changes in interest rates, equity prices and foreign exchange rates.

Net Stable Funding Ratio (NSFR)

The proportion of long-term assets to long-term stable funding with a time horizon of one year.

Non-Performing Loans (NPL) Ratios

A way to measure asset quality for loans to customers. A facility is non-performing if it is in stage 3 according to IFRS 9 or the obligor is in default. The ratio is based on the gross carrying amount.

Obligor

A customer that has a loan or other credit facility with the Bank.

Observed Default Frequency (ODF)

The ratio of customers that defaulted during the observed period.

Operational Risk

The Bank's definition of operational risk includes reputational risk, legal risk, model risk, conduct risk and compliance risk among other risk factors.

Pillar 1

This contains generic rules for calculating credit, market and operational risks to determine a bank's risk exposure amount (REA). It also stipulates the minimum capital requirement.

Pillar 2-R

Supervisory Review and Evaluation Process (SREP) and framework for banks' Internal Capital Adequacy Assessment Process (ICAAP) and Internal Liquidity Adequacy Assessment (ILAAP).

Pillar 3

Disclosure requirements which promote market discipline by allowing market participants to assess the capital structure, risk exposures, risk assessment process and hence the capital adequacy of the institution.

Probability of Default (PD)

Probability that a counterparty will default within the time horizon of 12 months.

Reputational Risk

The risk to earnings or capital arising from adverse perceptions of the Bank by customers, counterparties, shareholders, investors or regulators.

Risk and Control Self Assessment (RCSA)

A structured approach to identify and assess all potential risks in order to plan appropriate actions to mitigate them. The ultimate purpose of this framework is to improve the way a bank operates through a regular review of policies, processes and systems. The RCSA process is undertaken at least once a year by all units within the Bank.

Risk Class

Each obligor is categorised in one of ten risk classes. The risk classes 1-9 are for performing obligors and reflect the 12-month probability of default. Risk class 10 is for obligors that are in default.

Risk Exposure Amount (REA)

Risk weighted exposure value i.e. the exposure value after considering the risk inherent in the asset.

Settlement Risk

The risk that a party will fail to deliver on the terms of a contract at the time of settlement. Settlement loss can occur because of default at settlement and because of any timing differences in settlement between two parties. The amount at risk or the potential loss is the principal of the transaction.

Subordinated Debt
Debt that ranks after other debts should a company fall into receivership or go bankrupt.

Supervisory Review and Evaluation Process (SREP)
Through the SREP, the regulator assesses the risk management framework of the Bank and whether the Bank's capitalisation and liquidity is adequate for its risk profile and business strategy. As part of the SREP, the regulator reviews the Bank's ICAAP and ILAAP reports but the review can also include on- or off-site inspections of specific parts of the operations.

Sustainability Risk
Risk of being directly or indirectly negatively affected by externalities within the areas of environmental and climate considerations, anti-corruption, human rights, labour conditions or business ethics.

Tier 1 Capital
Tier 1 capital is composed of Common Equity Tier 1 capital and Additional Tier 1 capital, less regulatory deductions.

- *Common Equity Tier 1 capital*: Consists of paid-in share capital, share premium account and other premium accounts, reserve accounts and retained earnings, net of the book value of own shares or guarantee capital certificates, goodwill, deferred tax credit and other intangible assets.
- *Additional Tier 1 capital*: Contingent convertible capital and non-innovative hybrid capital subject to conditions on maturity, repayment, interest and conversion to equity as defined in rules and regulations.
- Regulatory deductions include for example holdings in financial institutions and tax assets.

Tier 2 Capital
Tier 2 allows for inclusion of subordinated loans which state clearly that the repayment period of the loan is not less than five years with further restrictions defined in rules and regulations.

Total Capital Base
Tier 1 capital in addition to Tier 2 capital.

Total Capital Ratio
Total capital base divided by risk-weighted assets. (Also referred to as solvency ratio.)

Trading Liquidity Risk
The risk that the Bank is unable to easily liquidate or offset a particular position without moving market prices due to inadequate market depth or market disruption, thus negatively affecting the earnings or capital.

Value-at-risk (VaR)
A statistical method used to measure and quantify the level of financial risk within a portfolio over a specified time horizon at given confidence levels.

Yield Curve
A curve displaying interest rates across the spectrum of maturities for bonds which are otherwise identical or very similar.

Abbreviations

AGM	Annual General Meeting
ALCO	Asset and Liability Committee
AML	Anti-Money Laundering
AMM	Additional Monitoring Metrics
ARC	All Risk Committee
ASF	Available Stable Funding
AT1	Additional Tier 1
BPV	Basis Point Value
BRRD	Bank Recovery and Resolution Directive
CAE	Chief Audit Executive
CB	Central Bank
CCF	Credit Conversion Factor
CEO	Chief Executive Officer
CET1	Common Equity Tier 1
CIRS	Cross-Currency Interest Rate Swap
CIU	Collective Investment Undertaking
CLTV	Combined Loan to Value
CPI	Consumer Price Index
CRD	Capital Requirements Directive
CRO	Chief Risk Officer
CRR	Capital Requirements Regulation
EAD	Exposure at Default
EBA	European Banking Authority
ECL	Expected Loss
EEA	European Economic Area
ESG	Environment, Social and Governance
EU	European Union
FATF	Financial Action Task Force
FME	The Icelandic Financial Supervisory Authority
FS	Financial Statements
FX	Foreign Currency
GDPR	General Data Protection Regulation
GMTN	Global Medium-Term Note
HQLA	High Quality Liquid Assets
IAS	International Accounting Standard
IC	Investment Committee
ICAAP	Internal Capital Adequacy Assessment Process
IFRS	International Financial Reporting Standards
ILAAP	Internal Liquidity Adequacy Assessment Process
IRRBB	Interest Rate Risk in the Banking Book
IRS	Interest Rate Swap
ISDA	International Swaps and Derivatives Association
ISK	Icelandic Króna
KRI	Key Risk Indicators
LCP	Liquidity Contingency Plan
LCR	Liquidity Coverage Ratio
LED	Loss Event Database
LGD	Loss Given Default
LTV	Loan-to-Value
MRMF	Market Risk Measurement Framework
NPE	Non-Performing Exposure
NSFR	Net Stable Funding Ratio
ODF	Observed Default Frequency
OSC	Operations and Security Committee
O-SII	Other Systemically-Important Institutions
PD	Probability of Default
RCSA	Risk and Control Self-Assessment
REA	Risk Exposure Amount
RSF	Required Stable Funding
SCC	Senior Credit Committee
SDG	Sustainable Development Goals
SME	Small and Medium-Sized Enterprises
SICR	Significant Increase in Credit Risk
SREP	Supervisory Review and Evaluation Process
STIBOR	Stockholm Interbank Offered Rate
TSCR	Total SREP Capital Requirement
UNEP FI	United Nations Environment Programme Finance Initiative
VaR	Value-at-Risk

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