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APPRAISAL OF THE PERFORMANCE OF THE CENTRAL BANK OF ICELAND 2020-22

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Foreword

In May 2022 we were invited to carry out the first appraisal, under the 2019 Act on the Central Bank of Iceland (CBI), of the CBI's performance in the attainment of its objectives concerning price stability, financial stability and the conduct of financial supervision. The appraisal was also to cover other aspects of the Bank's operations, such as organizational structure, distribution of tasks and authorisations.

This report contains our findings and recommendations. It is not an in-depth audit, but is based on face-to-face meetings in Reykjavik in August and November, and on video-link meetings, as well as selected published and unpublished documents of the CBI. We are very grateful to the numerous persons who so willingly shared their time and knowledge with us in interviews. This includes the Governor, Deputy Governors and senior staff of the CBI as well as members of its decision-making and supervisory bodies; members of the Government and officials of relevant Government Ministries; representatives of the Confederation of Labour and Business Iceland, and of selected financial institutions (the three big banks and two big pension funds); and independent experts.

A special word of thanks to Arnór Sighvatsson, Guðrún S. Gunnarsdóttir and Sigurður Páll Ólafsson who helped plan the structure of our visits and guided us through many institutional intricacies.

A large volume of documents was translated for our benefit by staff of the Central Bank, we are grateful for the speed and efficiency with which this was done.

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List of Abbreviations

AC	Appraisal Committee (Chaired by Tryggvi Pálsson in 2021, and appointed in accordance with Temporary Provision VI of the Act of 2019)
AML/CFT	Anti-Money Laundering and the Countering of Terrorist Financing
BCP	Basel Core Principles for Effective Banking Supervision
bp	basis points (one-hundredth of one percent)
BRRD	Bank Recovery and Resolution Directive
CBI	Central Bank of Iceland
CCoB	Capital Conservation Buffer
CCyB	Countercyclical Capital Buffer
CPI	Consumer Price Index
CRD	Capital Requirements Directive
DG	Director General
DSGE	Dynamic Stochastic General Equilibrium
DSTI	Debt-Service to Income Ratio
EBA	European Banking Authority
ECB	European Central Bank
EEA	European Economic Association
EIOPA	European Insurance and Occupational Pensions Authority
ESAs	European Supervisory Authorities
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EU	European Union
FMEN	Financial Supervision Committee (of the CBI)
FSA	Financial Supervisory Authority of Iceland (Fjármálaeftirlitið) (before 2020)
FSN	Financial Stability Committee (of the CBI)
FX	Foreign Exchange
GFC	Global financial crisis
ICAAP	Internal Capital Adequacy Assessment Process
ILAAP	Internal Liquidity Adequacy Assessment Process
IMF	International Monetary Fund

ISK	Icelandic Króna
LCR	Liquidity Coverage Ratio
LTV	Loan to Value Ratio
MPC	Monetary Policy Committee (of the CBI)
MREL	Minimum Requirement for Own Funds and Eligible Liabilities
NSFR	Net Stable Funding Ratio
O-SII	Other Systemically Important Institutions
PRC	Prudential Regulation Committee (of the Bank of England)
QE	Quantitative Easing
SREP	Supervisory Review and Evaluation Process
SSM	Single Supervisory Mechanism (of the ECB)
SyRB	Systemic Risk Buffer
UK	United Kingdom
US	United States

Executive Summary

The Central Bank of Iceland has accomplished the merger of the two precursor institutions speedily and effectively. Of course, building an integrated institution with fully efficient processes and oversight and a shared institutional culture, is a long-term project.

The staff of the merged institution are performing as intended.

Although inflation has soared to levels not seen for several years, the CBI has managed the external shocks which have caused this no less well than other European or North American central banks.

Macroprudential tools have been actively employed to protect financial stability. Supervision of the main financial institutions has proceeded along established lines.

The new committee structure has had some teething problems, though, and an overhaul of the mandate of the FMEN seems appropriate.

The high level management structure chosen post-merger may have been useful in ensuring that the initial stages of the merger were implemented as effectively as possible, but will not serve well for the longer term and requires revision. The location of residual powers as set out in the legislation also needs to be rethought.

Monetary Policy and Price Stability

Monetary policy in Iceland continues to be operated on the basis of what the Central Bank calls “inflation targeting plus”, where the “plus” includes in particular a desire to avoid volatility or mispricing of foreign exchange.

Monetary policy in the period under review has been very active. From March 2020 the CBI followed the lead of other central banks in adopting a very expansionary stance when the pandemic hit (albeit tempered by the sale of foreign exchange to prevent too great a fall in the external value of the ISK). The lowering of nominal interest rates was associated with a strong increase in the demand for mortgage credit and a consequent rise in housing prices. Nevertheless, given the need to respond to the dramatic impact of the pandemic on economic activity, it would be hard to sustain a criticism that the CBI reacted too aggressively and lowered rates by much too much in 2020.

Inflation started to pick up during 2021 and the CBI was one of the first central banks to start increasing rates again, when it took action in May 2021, lifting its key short-term interest rate from ¾% to 1%. Since then the rate has been increased at every meeting of the Monetary Policy Committee (MPC) and now stands at 6%—much higher than other Western or Northern European or North American countries.

Given that a more aggressive tightening of monetary instruments from 2021 would have had an adverse effect on employment and economic activity, it is not obvious that a much better policy path could have been found in these years.

Although the inflation outturn in 2022—so far above the target of 2½%—is clearly disappointing, it would be hard to fault the general monetary policy approach of the Central Bank, which has been guided by a well-established and internationally respected analytical framework. Besides, most major central banks have had a similar experience. The indications are that dis-anchoring of inflationary expectations has been no more severe in Iceland than in the US, the euro area, or the UK, for example.

Communications on monetary policy have been clear and well-understood.

Some distinctive features of the Icelandic macroeconomic and monetary scene continue to deserve close attention. These include (i) the challenge of integrating a policy in relation to the exchange rate with inflation targeting; (ii) ensuring that housing price developments—which have been very important in affecting targeted inflation—receive coordinated attention from the monetary and financial stability sides of the CBI; (iii) tracking the macroeconomic impact of shifts in the inflation-indexed bond market and indexed mortgage rates.

Financial Stability

In what has been a dramatically turbulent economic period in Iceland as elsewhere, financial stability has been well-maintained in Iceland over the past three years.

Thanks to a regulatory structure that is consistent with international best practice and European law, the systemically important banks entered the period satisfying high capital ratios.

The early 2020 pandemic shock was met with a timely release by the CBI of the countercyclical capital buffer. Nor was there any undue delay in reinstating that buffer when the balance of needs shifted in mid-2021.

Emerging issues in the housing market were appropriately addressed with the introduction of debt service to income (DSTI) limits applying to the mortgage loans of both the banks and the larger pension funds; the timing of these measures was somewhat delayed by the perceived need to obtain a more secure legislative framework.

Stress tests continued to be carried out on the systemic banks by the Central Bank on an annual basis, as is the practice in many countries now. Varying the shape of the stress from year to year helps build a central bank's awareness of potential stability vulnerabilities, and future stress test design should take this aspect more into account.

The pension system warrants a special focus from a financial stability point of view to understand under what circumstances pension funds could potentially amplify market volatility and distortions. Stress test analysis of the larger pension funds, comparable to that of the banks, could also help throw light on any systemic vulnerabilities in a sector which in Iceland accounts for what is, in an international comparison, an unusually large part of the financial system.

The CBI has developed econometrics-based financial cycle indicators which may help in providing early warning of heightened vulnerabilities. Wisely, though, it does not rely too heavily on this approach, which may neglect novel sources of risk.

The CBI has continued to publish a high quality Financial Stability Report on a twice-yearly basis. This provides extensive information about developments in different segments of the financial sector, including some informative deep dives, for example into the payments system (in the most recent Report), and other relevant material such as information about the annual banking stress test and the evolution of the financial cycle indicators.

Supervision

Supervision of banks and insurance companies follows European regulatory standards and is planned in a well-structured risk-based framework. Resourcing appears to be sufficient to allow the supervisory arm to continue the work that it had been carrying out in the former structures. Some improvements in the flow of information between supervisory Departments and the rest of the Central Bank have been felt. The CBI should persist in its efforts to enhance streamlining here and in the sourcing of information from the financial system.

Pension fund regulation needs to be modernized if the Central Bank is to have the capacity to ensure that pension funds are well managed. The Government should not defer the development of draft legislation to meet this need.

The decision-making structures at the most senior level are not working as smoothly as might be hoped. Changes will be needed, especially with regard to the FMEN. There are two plausible directions of travel: one would broaden the mandate and role of this Committee by explicitly giving it an expansive role on weighty strategic and policy issues; the other direction would narrow the mandate even further than at present.

Governance and Organization

The chosen post-merger *management* structure may have facilitated decisive early steps to achieve the goals of the merger. But the senior management structure involves too wide a span of control. It also involves key-person risk. We have not seen, in other central banks that integrate supervision matters, a management structure that deviates so much from the governance structure. We do not think that it will serve well for the longer term. A more conventional management structure would be more effective.

Two of the Committees in the new (and rather elaborate) *decision-making* structure have been functioning well. Even so, it is evident that the degree to which the committee system introduced in the 2019 Act has actually distributed power among different decision-makers is somewhat limited.

As mentioned above, the mandate and governance of the Financial Supervision Committee (FMEN) is under review; some of the issues that have arisen around delegation and chairing could be more easily resolved in the context of a revised management structure. If this Committee is not to be given a more expansive policy role, but instead have a more precisely defined, limited, mandate, there may be no need for external members: it could be replaced by a staff-level decision-making process. In any case alternative accountability arrangements would be needed, not least to avoid undue concentration of decision-making.

A distinctive feature of the CBI's top-level governance since 2009 is that, as set out in legislation, its structure concentrates ultimate residual authority (that is to say, on matters not explicitly referenced in law). This arrangement has happened to work over those years, but such a structure should not be retained for the longer run. We recommend that some way should be found by the legislature of vesting residual powers in a group, which can then delegate these to the Governor; this would remove a potential source of vulnerability in the governance structure.

The Supervisory Board could also exercise a stronger role. Although it is not the ultimate authority of the Bank, it is an important entity. We feel that more could be made of it; a reinforcement of its mandate might help, though this would have to be carefully navigated to ensure no threat to the Bank’s independence from political pressure.

Preamble: What to Expect from an Integrated Central Bank and Financial Supervisor

Before discussing the policy and performance of the Central Bank of Iceland (CBI), it seems useful to place the associated issues in an international comparative context.

As a small economy heavily dependent on three specific sectors, Iceland is particularly vulnerable to external shocks. Even the best designed and implemented regulations and supervision, combined with optimal monetary policy, cannot provide absolute assurance that price and financial stability will always be maintained. All the more reason to ensure that the financial authorities are powerful and effective institutions.

Iceland has mandated the CBI with an important set of tasks: monetary policy, financial stability and financial supervision. Charged with promoting "price stability, financial stability and sound and secure financial operations" the CBI is, by international standards, among the central banks with the widest scope in their mandates, extensively integrating the activities of the classical central bank and financial authority. The new governance structure embodied in the Act of 2019 reflects this with its two new decision-making Committees, one for financial stability and one for supervision, joining the long-standing Monetary Policy Committee.

It is clear that the Icelandic legislation seeks to avoid any recurrence of the regulatory failures that resulted in the financial collapse of 2008, which reflected both inadequate supervision of each of the banks and a lack of awareness of the wider systemic risks that were being assumed in the years running up to the crisis. Iceland is far from being the only country to have revised its institutional structure for overseeing the financial sector following the global financial crisis (GFC), and most of these reforms have enhanced the role of the central bank in the structure.

The Icelandic three committee structure partially echoes that introduced in the Bank of England in 2013 when prudential regulation was brought back under the umbrella of the UK's central bank following the failures of the GFC. But the scope of the CBI's regulatory and supervisory responsibilities is wider even than that of the Bank of England in that it covers prudential supervision of Icelandic pension funds and also handles securities and consumer protection issues.

Not all European countries have gone the same route, however. Indeed, Denmark, Germany Norway and Sweden all still work with separate financial supervisory authorities, whereas Belgium, France, Finland, Ireland and the Netherlands (to mention just the other geographically closest countries to Iceland) have opted for integrating financial supervision into the central bank. Each European country has also assigned responsibility for systemic financial stability either to the central bank or to a stability council in which the central bank has a central role.[1]

With effect from 2014, the European Union (EU) created a single supervisory mechanism (SSM) under the umbrella of the European Central Bank (ECB); it supervises over 100 significant banks in 21 participating countries, at least three in each country, including all of

[1] On the other side of the Atlantic, there has been less of a move towards concentrating financial supervision in the central banks of Canada or the United States. The United States created a Financial Stability Oversight Council in 2011, where the chief officers of the main agencies meet under the chairmanship of the Treasury Secretary to discuss stability policy. Canada has less formal arrangements.

the EU members using the euro. And Iceland itself is, along with all 30 other members of the European Economic Area (EEA), a member of the European Systemic Risk Board (ESRB) which, under the chairmanship of the President of the ECB, and with a secretariat provided by the ECB, monitors and assesses systemic risks throughout the EEA and, where appropriate, issues warnings and recommendations.

Several advantages are expected by those who have integrated micro-prudential supervision, financial stability policy and monetary policy under one roof. One important objective has been to ensure that the central bank, the lender of last resort, has the necessary information readily at hand to be able to decide on whether to provide liquidity when one or more financial institutions are in trouble. Freedom from short-term or narrowly political considerations in enforcement or resolution decisions is also more easily attained if the responsible authority carried the institutional weight of a central bank. And there are some efficiencies to be gained (especially in a small country) from pooling resources. To be sure, the approach and methodology of micro prudential regulation and supervision, financial stability policy and monetary policy are distinct. Although the different functions work in very different ways, and with different types of information, there are important synergies between the maintenance of financial stability and the other two. There is indeed some overlap between the policy *tools* that are useful for financial stability and the toolkits needed for each of the other two functions. Above all, the *information* gained in the process of micro prudential supervision, appropriately consolidated, can be an extremely valuable—indeed essential—input to financial stability policy. Not only can it cast light on evolving market practices but it can provide solvency information essential for good lender-of-last-resort decisions.

Monetary policy is concerned with price stability and the stable evolution of the economy as a whole. It is the classic function of the central bank. The monetary policy mandates of most central banks prioritize price stability, while acknowledging a secondary objective of supporting macroeconomic stability or other government policies. In pursuit of its “dual mandate” the US Federal Reserve explicitly attaches equal weight to price stability and high employment. In practice, the other central banks also attach great importance to keeping the economy close to the path of full employment. It is not constantly a question of trade-off, but there is a certain asymmetry between the goals of price stability and high employment. Expansionary monetary policy can do little to push economic activity beyond a certain level of full employment, but it can result in high or even spiralling inflation. For much of the past 15 years both objectives pulled in the same direction in most advanced economies, as inflation rates under-shot their target, and output and employment remained below potential.

The period under review here, from the beginning of 2020, has seen a series of wrenching and unprecedented disturbances affecting the macroeconomy of most advanced economies albeit in different ways, depending on the existing sectoral structure. At first, the constraints of the pandemic resulted in a huge wave of joblessness or inactivity across swathes of the economies. Governments responded with huge income support measures, largely financed by borrowing. Central banks lowered their policy interest rates and embarked on large scale asset purchases which certainly had the effect of lowering the interest cost of the government borrowing. Despite the monetary ease, inflation rates generally fell. Then during 2021, as activity returned, and spending (especially at first on goods, later on tourism and other consumer services) increased, supply and transportation bottlenecks resulted in a sharp uptick in prices all around the world. Several central banks started to increase interest rates in response, though some, including the Fed and the ECB, did not move until 2022. The war in Ukraine contributed an additional impulse to international energy and food prices. By mid-2022 concern was growing, especially in the US, about second round effects on inflation coming through wage negotiations and many central banks intensified the pace of interest rate increases, despite the likelihood that this would increase the likelihood and depth of a recession during 2023.

Micro-prudential regulation and supervision is designed to ensure that financial firms are managed by fit and proper persons and that they are operated in a safe and sound manner not knowingly or inadvertently taking risks that would threaten their solvency thereby imperilling their customers' funds. Regulations define minimum levels of capital and liquidity, and the supervision not only checks that these limits are being satisfied, but also assesses for example the effectiveness of the firms' operational controls, imposing additional ("Pillar Two") capital requirements if shortcomings are identified. Regulations are not set at a level that would make financial failure impossible, as that would stifle financial ventures of a type that is needed to improve efficiency, productivity and economic growth. Supervision substitutes efficiently for the duplication that individual solvency appraisals by would-be customers of financial firms would entail, and also protects the state from contingent liabilities arising from firm failure. The supervisors will not always spot emerging problems, especially if fraud is involved, but they can help reduce the incidence and scale of failures.

Over the past three decades an elaborate international superstructure of regulatory design has grown around the most prominent financial sectors including banks and insurance companies. The Financial Stability Board, hosted by the Bank for International Settlements, is currently the key coordinator of the larger national and international regulators and standard setting bodies, including those of the European Economic Area. The CBI is a non-voting member of the main European bodies, including the EBA for banks, EIOPA for insurance and pension funds and ESMA for securities markets. European financial legislation is in general based on the consensus formed in these international bodies. Most of this is adopted by Iceland also, with the result that relatively little rule-making innovation by the CBI is needed.

Following the GFC, international prudential rules for banks have been greatly tightened in a sequence of steps, resulting in a sharp increase in the requirements for capital (designed to ensure that losses fall on shareholders and other providers of risk capital, rather than customers) and in liquidity requirements (designed to ensure that a solvent bank is able to meet withdrawals and debt maturities in cash, without having to go to the market or to the central bank for emergency liquidity). A surcharge is usually added to the capital requirements for firms that are considered to be systemically important, whether on a global scale (some 30 big international banks) or in the national market.

In addition to the tighter regulation, supervisory practice has developed in order to capture all relevant aspects of the ever-increasing complexity of financial activities. Supervision has had to become much more intrusive than before. Supervised financial firms use advanced internal models and financial innovations in their businesses, which may make their risk exposures opaque. Supervisory authorities have a very demanding responsibility to cover much more than typical financial and credit risks.

In case significant banks nevertheless hit problems that could cause them to fail, international standards now require that a resolution plan is developed to ensure that the failing bank can be wound down without critical services being disrupted. Each European country (including Iceland) has been preparing such plans. In order to ensure independence of the judgement on the viability of a weak bank, the resolution authority, which prepares resolution actions in the event of a significant bank failing or being likely to fail, and which is endowed with funding to meet relevant needs, is separated organizationally in each country from the supervisory function. Although these resolution plans have not been used in many cases of bank failure on either side of the Atlantic since the regime was introduced almost a decade ago, the preparation of the plans has helped clarify the often complex legal entity structures of banking groups and should help reduce the side-effects of resolving a failing bank without need for an injection of budgetary funds from the government.

For insurance firms, European legislation defines an elaborate system of minimum prudential requirements known as Solvency II, with the same kind of objective. Although insurance is not as prone to runs as banks are, accounting accurately for the risks they are assuming on both the asset and liability side can be complex, especially for long-term contracts. Insurance companies often get into trouble by under-pricing the insurance, with consequences that are not immediately apparent. Imprudent investment of the premium income is another source of insurance company failure. Containing these risks and defining the need for prudential reserves is the goal of Solvency II. Cross-border provision of insurance (notably including motor insurance) within the EEA exposes policyholders in any of the member states (including Iceland) to risks that have to be mitigated through adequate supervision by the home regulator of the cross-border provider.

Pension funds are vulnerable to similar problems to insurance, especially given changing trends in life expectancy of retired persons. Pension funds are a very important part of the Iceland financial system, rivalling the banks in balance sheet size to an extent not seen in most other countries. But the underlying structural features of the pensions sector differs widely from country to country, and this has meant that there is much less international agreement on the detailed prudential rules. Instead, most of the regulation of pension funds in all countries is based on home-grown national legislation.

Several types of financial firm operate only under the general law applying to companies, and may not be subject to regulation by financial authorities. This could include some types of cyber-asset and financial technology firms. The appropriate perimeter of financial regulation is contested, and may need to be adapted to changing technology.

Conduct supervision

Apart from financial failure of a regulated firm, detriment to customers, especially retail customers, can occur if the management of a financial firm misleads customers or exploits their lack of information regarding prices or the nature of the product. Conduct supervision addresses such sharp practice. This applies not only to deposit-taking firms and insurance companies, but also, for example, to collective investment schemes (investment funds) and brokerages. The correct handling of customers' funds between the time they are placed in the hands of the broker or investment fund manager and the time they are invested in the agreed instrument or fund is another area where deficiencies are often seen.

Conduct supervision also refers to matters affecting wholesale customers. For example, insider trading on an equity exchange can damage the efficiency of the exchange and its role in helping to finance firms. The prevention of money laundering and terrorist financing is a responsibility of financial firms which also requires official supervision.

International supervisory practice varies in the field of conduct supervision, but once again a body of European law structures the approach across Europe. Given the large number of small intermediaries, brokers and agents, and given the costs of pro-active supervision, misconduct by smaller firms often comes to light only after wrong-doing has created customer detriment; the role of the supervisor is then to ensure that penalties are appropriately applied.

Conduct supervision is a responsibility of the CBI in Iceland, in contrast to the situation in the UK (which has established a separate Financial Conduct Authority) and several other countries.

Financial stability

Whereas monetary policy and micro-supervision are functions that have a long history of operation around the world and an elaborate—and still evolving—set of analytical tools and regulations, the third major area of financial policy, the protection of financial stability, is less well-defined and has less of a history of formal institutional arrangements. Accordingly, financial stability policy calls for the exercise of judgment based on experience, despite the attempts by scholars to develop formal methods of analysis.

Even the definition of financial stability is contested, since it is inherent in finance that many asset prices will and should exhibit a degree of volatility as information and the level of investor uncertainty changes. Financial stability policy is focused on risks that relate to the financial system as a whole, reflecting correlations or interactions between the behaviour of different financial firms, and not just the behaviour of a single financial firm.

To be aware of financial stability risks, the policymaker needs to keep a close eye on market developments. A growing share of activity in a few particular segments or instruments should trigger a closer look. Measures of risk based on market prices, for example of certain derivatives can also signal possible problems, but cannot be relied upon. After all, if a market price is signalling a risk, market participants are already aware of the risk, and have probably taken steps to manage their exposure to it.

Three recent notable systemic risk events illustrate the type of issue that needs to be watched for, and how difficult it is to do so in highly developed financial markets such as London and New York. It also illustrates the role that central banks can be called upon to perform when a financial stability accident occurs. The “dash for cash” at the outbreak of the Covid-19 pandemic occurred in March 2020, when the price of US Treasury Bonds became suddenly volatile with sharp yield spikes and marked widening of bid-ask spreads. Only enormous bond purchases by the Federal Reserve stabilized the situation. While it was clear that the pandemic had increased uncertainty dramatically, it was unexpected that this uncertainty should cause investors to shun what is often considered the safest and most liquid of all assets.[2]

A quite similar event, though on a smaller scale, occurred in the UK in October 2022 after the market reacted to the Government's mini-budget, when a cumulative downward spiral in the price of UK Government bonds resulted, among other things, in the resignation of the UK Prime Minister.[3] Once again the central bank (Bank of England) stepped in to stabilize the market.[4]

The third recent case also related to derivatives, this time bought by European electricity utilities to hedge energy price falls. As prices rose, here too collateral shortages risked resulting in disorderly markets including financial markets. Central banks, such as the Swedish Riksbank, were involved in the corrective action.

These three recent cases illustrate how complex financial hedging and speculation on a large scale needs to be closely monitored and understood by central banks.

The 2008 Icelandic crash, like that in Ireland, illustrates another type of systemic stability threat. In this kind of case, the stability policy maker does not have to analyse a particularly complex set of financial transactions; instead what is needed is awareness of the scale of leverage that was being assumed throughout the system and the possibility that plausible external shocks will turn the leverage into heavy losses and insolvencies.

This, then, is the environment and international expectation in which the CBI has operated since the commencement of the new legislation in January 2020.

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[2] Scholars still pore over the evidence to discover what went wrong; one theory relates to the large leveraged positions that were being taken by investment firms to exploit small arbitrage opportunities which suddenly became unprofitable when different asset prices moved relative to each other in unfamiliar ways.

[3] The source of this problem was the attempt by pension funds to meet regulatory requirements by taking leveraged positions in derivatives related to the bond market. The sudden yield movements made it impossible for the pension funds to meet collateral requirements without heavy bond sales.

[4] Given the fact that Iceland also has a three committee decision-making structure, the internal discussion at the Bank of England in this case is instructive. Briefed by Bank staff, the Financial Policy Committee advised the Monetary Policy Committee that asset purchases to stabilize the situation and the latter Committee did not object (even though its stated monetary policy path involved *sales* of its holdings of government bonds).

Price Stability and Monetary Policy

Summary

Monetary policy in Iceland continues to be operated on the basis of what the Central Bank calls "inflation targeting plus", where the "plus" includes in particular a desire to avoid volatility or mispricing of foreign exchange. It has been an active period, beginning (in line with most other central banks) with a very expansionary demarche when the pandemic hit (albeit tempered by the sale of foreign exchange to prevent too great a fall in the external value of the ISK).

Inflation started to pick up during 2021 and the Central Bank was one of the first to start increasing rates again, when it took action in May 2021, lifting its key short-term interest rate from ¾% to 1%. Since then the rate has been increased at every meeting of the Monetary Policy Committee and now stands at 6%--much higher than other Western or Northern European or North American countries.

Although the inflation outturn in 2022—so far above the target of 2½%—is clearly disappointing, it would be hard to fault the general monetary policy approach of the Central Bank, which has been guided by a well-established and internationally respected analytical framework. Besides, most major central banks have had a similar experience. The indications are that inflationary expectations have not been dis-anchored in Iceland any more than in the US, the euro area, or the UK, for example. Communications on monetary policy have been clear and well-understood.

Some distinctive features of the Icelandic macroeconomic and monetary scene continue to deserve close attention. These include (i) the challenge of integrating an exchange rate goal with inflation targeting; (ii) ensuring that housing price developments—which have been very important in affecting targeted inflation—receive coordinated attention from the monetary and financial stability sides; (iii) tracking the macroeconomic impact of shifts in the inflation-indexed bond market and indexed mortgage rates.

1. Background

The short three-year period under review has been a very active period for monetary policy not just in Iceland but across the world. Almost everywhere the period began with a sharp lowering of interest rates to combat conditions resulting from the pandemic, and ended with a sharp increase in rates to respond to a largely unforeseen surge in inflation during 2021 and 2022. Icelandic monetary policy must be seen against this international background.

Early in 2020, determined not to have monetary restriction exacerbate the economic contraction that was in prospect, the US Federal Reserve lowered short-term US dollar interest rates. Nevertheless, a "dash for cash" disrupted the US Treasury Bond market, tiggering a vigorous purchase programme by the Fed as it strove to restore market functioning and stabilize rates. Other central banks followed suit with an expansionary stance, including government bond purchase programmes.

The global central banking activism of 2020 clearly reflected a determination to avoid a repeat of the financial panic-induced recession of 2008-9. It was accompanied by expansive fiscal policy as governments—avoiding, for their part, a repetition of the over-tight fiscal stance of 2010-2—sought to maintain income levels and the survival of firms through the period of pandemic shut-downs and supply chain disruptions. Despite transportation bottlenecks and supply interruptions, inflation was generally low in the main economies during 2020. However, as pandemic conditions eased, labour shortages and shifting demand patterns, combined with a surge in consumer spending reflecting pent-up desire to spend savings accumulated during the shut-downs, began to push up prices of goods and services. Reluctant to stifle the economic recovery, most central banks reacted to the rising prices at first as likely to be transitory. However, especially after the invasion of Ukraine by Russia in early 2022 drove up the prices of gas, other fossil fuels and foodstuff commodities, major central banks began an interest rate tightening cycle. Market expectations are that this tightening will be effective in limiting the knock-on or second round effects of the inflation surge in the major economies, and that inflation will return close to target by 2024. There is, however, considerable uncertainty about this prospect and no decisive evidence that inflation has definitively peaked even at the double digit levels to which it has recently risen.

For Iceland, although the 2021-22 surge in inflation—the worst for a decade—has had an important monetary dimension, the primary impulse – aside from housing – came from abroad, both from exogenous input price increases and from tourism-driven demand expansion. There will also have been a contribution from the easy money conditions. As in other countries, CBI expansionary monetary policy in 2020 created a pre-existing liquid environment which ensured a rapid pass-through of imported prices into domestic inflation. In addition to external supply shocks, the tourism recovery created a demand-driven element to inflation, and the low interest rates also contributed to demand-driven housing price inflation.

In contrast, Iceland has experienced a lower increase in the energy component of the CPI than most other countries because of the local availability of non-fossil fuel sources of energy.

Could the inflation in Iceland have been dampened more quickly? This would have required drastic monetary policy action which would have strongly appreciated the exchange rate, choking off the tourism recovery, curtailing construction activity and damaging levels of employment. It would have been a mistake for the CBI to have attempted too drastic a contraction.

Without diluting the price stability goal of the CBI, there would be benefit in a more thorough acknowledgement that the speed with which an inflation rate close to the target should be restored in Iceland involves a short-to-medium term trade-off against economic activity.

2. Policy Response in Iceland to the Pandemic in 2020

The CBI's response to the emerging pandemic situation in March 2020 largely followed the emerging pattern being established by the US Federal Reserve. Although Icelandic interest rates were already on a downward path at the start of 2020, the CBI's pandemic-related shift to expansion was rather sharp. Prudent post-crisis monetary policy had built credibility at the CBI which it was able to use at this time to ease policy without triggering a loss of confidence.

Advancing its scheduled meeting by a week to 9-10 March 2020, interest rates were lowered by 50 basis points.[5] In addition, reserve requirements were effectively halved to a level of 1 per cent, lower than at any point since the Global Financial Crisis. This action was followed a week later at an extraordinary meeting with a further 50 basis point interest rate reduction. The Monetary Policy Committee's concern over the likely impact of the pandemic on tourism as well as on domestic demand for services was evident; possible knock-on effects on the exchange rate were a further concern.

In an unusual passage, the minutes of this meeting reported that "it emerged at the meeting that, after meeting with the Governor to discuss the current economic uncertainty, the Icelandic Pension Funds Association had issued a unilateral statement strongly encouraging pension funds to refrain from purchasing foreign currency for the next three months." This step by the Governor had taken the Committee by surprise, and the reference in the minutes likely reflects some members' view that they should have approved or at least known in advance about what could be considered a policy intervention.

A few days later the MPC met again, its discussion focusing on the likely impact on the bond market (and hence on monetary transmission) of increased borrowing by the Government to meet pandemic-related needs. The MPC decided to authorize the purchase of government bonds to ensure that its policy of lower interest rates would pass through to households and firms. Finally, on April 2, at yet another extraordinary meeting, the MPC accepted a proposal from the Governor for a special lending facility for banks and an easing of collateral requirements.

The tightening cycle started in Iceland in May 2021, earlier than in most other central banks, and was a response to strengthening economic conditions. Inflation was already at almost 5%—a lot higher at that point than in the main neighbouring countries—but there was no evidence of de-anchoring of inflation expectations. A total of ten successive interest rate increases in subsequent months brought the policy interest rate to its highest level since August 2010. However, the inflation rate increased to almost 10% at mid-2022 and has showed no appreciable fall yet.

All in all, although the inflationary outcome has not been good, relative to the target, this has also been true of the main European and North American central banks. This reflects the limited central banking tools that are available to deal with large supply shocks such as have occurred in the world in 2020-2. Given that more aggressive use of monetary instruments would have had an adverse effect on employment and economic activity, it is not obvious that a much better policy path could have been found in these years.

Interest Rates

At the start of 2020, CBI's key interest rate was at 3 percent and was already well into an easing cycle which had started from 4½ percent in May 2019, shortly after the collapse of WOW airline. (The rate had been 5¾ percent as recently as mid-2016). A further 25 bp rate reduction was effected in early February 2020. This easing trend was coherent with the then

[5] Figures showing developments in the main economic and financial series can be found in the CBI's very useful quarterly publication *Economic Indicators*, and have therefore not been duplicated in this report.

current projections of moderate inflation over the coming three years and a projected weak GDP growth in 2020.

The vigorous response of major central banks to financial disruption as the pandemic broke out, and to fears of consequential economic collapse were echoed by the CBI which, having lowered its key policy interest rate (the seven-day deposit rate) by 50 bp twice in March 2020. Then forecasting that inflation was likely to remain below target, the CBI pushed the policy rate down by a further 75 bp in May and 25 bp in November to reach a low point of 0.75%. The total reduction in Iceland's short-term policy rates of 175 bp is not as great as the 250 bp implemented by the Federal Reserve (in just two steps during March), and Iceland ended the easing cycle with a policy rate still higher than that of the Fed (and those of the main European central banks). It would be hard to sustain a criticism that the CBI reacted too aggressively and lowered rates by much too much (though the last 25 bp reduction could perhaps be debated).

The tightening phase began only in May 2021, with three successive 25 bp increases between then and October. Larger increases were made thereafter: two each of 50 bp, 75 bp and 100 bp, followed by one of 25 bp in November 2022 to bring the rate to 6 percent. By this stage the real policy rate was about zero if deflated by the CBI's expectation of the year-on-year inflation rate 2022-3 (a bit higher if deflated by the expectation of Q4-Q4 inflation).

Exchange rate policy

The ISK has experienced much volatility in the past, and the short period under review is no exception. The financial market turbulence following the outbreak of the pandemic saw the ISK's average value fall by about 15 per cent (March-May 2020). With a sharp decline in export earnings, the ISK remained generally weak for most of the rest of 2020. Since then, its average value recovered significantly to mid-2022, though it remained well below its early 2020 level and lost ground later. The strength of the US dollar during 2022 has been one important factor in keeping the ISK low in trade-weighted index terms.

The trend in the exchange rate remains an important factor in influencing future inflation, and also has implications for export profitability and economic activity. Policy on exchange rates in Iceland has been an important, albeit often secondary, part of the "inflation targeting plus" regime that has been in operation for several years. It has two main components, (i) a standing policy to avoid excessive foreign exchange market volatility or spirals, for example on a daily basis and (ii) occasional action to intervene to prevent the exchange rate from being too low or too high relative to what would be fundamentally desirable. The first component is operated continuously at technical level by the staff of the Markets Department, with the approval of the Governor.

Most of the time, only the first component is operational, and during these times, CBI intervention in the foreign exchange market is undertaken only to smooth short-term fluctuations. This first component has continued to operate smoothly and effectively in the period under review.[6] In practice there is a close communication between the Markets

[6] The net use of FX reserves for stabilizing intervention would be expected net out to zero over time. But in the period under review reported stabilizing intervention (like directional intervention) involved sizable net sales of FX. This somewhat surprising finding raises the question as to whether stabilizing intervention fully met stated

Department and the Governor, providing him with prompt advice on exchange market developments and the actions needed to remove unwarranted volatility. (As shown in Figure 1, the rolling 100-day standard deviation of daily rates of change has remained at a moderate level of between 0.3 and 0.7 percent – slightly lower than in the previous three years.)

The second exchange rate policy component is exemplified by the programme of regular sales of FX announced by the CBI in September 2020. This stated objectives of this programme were "to deepen the market and improve price formation." During the eight month period that this program was in place, the CBI sold over €459mn of FX (about ISK 70 billion) from its FX reserves, an amount approximately equal to about 7 percent of the reserves or 2 percent of GDP. Net purchases under the market stabilization component amounted to €434mn -- almost as much again as in the regular sales programme.

FX intervention also has monetary policy implications. The MPC discusses FX intervention policy and its minutes include observations such as "the real exchange rate of the krona was probably below its equilibrium level, at the same time as inflation was above the target" (August 2020). However, it appears that the MPC was not the decider of the September 2020 programme of regular FX sales.

The danger with a policy that leans against market pressure for a weaker currency is that the central bank may not be able to sustain its desired rate for the currency, with the result that the policy has to be abandoned and the rate allowed to fall precipitously. In fact, this has not happened in 2020-21. The parameters of the regime (which are not published) proved to have been not too unrealistic during this period.

Exchange rate pass-through has been declining over the years, possibly as long-term inflation expectations became better anchored.

While confounding factors clearly preclude a simple relationship between exchange rate and interest rate it is interesting to note that generally speaking during the period under review the ISK has been weak when nominal Icelandic interest rates have been low, and *vice versa* (Figure 2).

Use of the balance sheet

Foreign exchange intervention is one of the policy uses of the central bank sheet, and it has an impact on liquidity conditions. Other important policy tools affecting the balance sheet that were used in the period under review, in addition to the liberalization of central bank credit, include the reduction in reserve requirement and the asset purchase programme (often called QE).

Reserve requirement The lowering of reserve requirements in March 2020 released about ISK 20 billion of bank reserves. As indicated below this is a rather modest relaxation, far less in size than the later tightening measure through FX intervention (mentioned below).

QE Although the programme for purchasing Government bonds was announced already in March 2020 with an overall envelope of ISK 150 bn (about 5% of GDP), it did not get

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intentions—especially considering that interest rate policy was highly accommodating at the time. It suggests that there could be greater internal precision on the goals of foreign exchange intervention and the terms on which stabilizing intervention is delegated.

underway until May 2020 and not at any significant scale until November 2020.[7] The total purchases added ISK 19 bn to bank liquidity, most of it in four months: November-December 2020 and March and May 2021. This was just a fraction of the announced envelope. Purchases have not been made since August 2021. Again, this total is much lower than the size of the FX regular sales programme which was running about the same time. Buying Government bonds has the effect of offsetting the contractionary impact of sales of FX, perhaps up to one-for-one in value terms—indeed, this use of QE to sterilize FX intervention was discussed by the MPC when the QE programme was decided in March 2020. QE also changes the maturity profile of the CBI's balance sheet and, as was noted by the MPC, can thereby influence the slope of the yield curve.[8] With its policy rate down to 0.75% by November 2020, preparation for the use of QE was not an unreasonable precaution for the CBI, though it had clearly not reached the lower bound of interest rate.[9] These aspects of QE are not discussed in detail in the MPC minutes during the operation of QE; it may not be a mischaracterization to suggest that the CBI's decision to announce a QE program was really a declaration of intent not to forego use of this instrument of monetary expansion if that proved necessary, rather than a commitment to make large purchases.

The expansionary stance in liquidity provision through reserve requirements and QE (partly offset by FX intervention) may have been maintained a little longer than necessary. After all, as a group the banks were not short of liquid assets. In fact, although aggregate bank liquid assets, expressed as a ratio of domestic assets (or liabilities), declined from about 10 per cent at March 2020, they remained above 5 per cent throughout the period under review (Figure 3). Anyway these expansionary measures were in the end quantitatively negligible.

While well understood by senior staff, the whole issue of bank liquidity deserves to be more clearly unpacked in CBI policy discussions and communication. There is a clear distinction between LCR and NSFR ratios, which, like the review of the internal liquidity adequacy assessment process (ILAAP), are *micro*-prudential tools, and the overall level of ISK liquidity in the economy, which aims at *macro*economic stability.

LCR and NSFR which are (and should be) supervised by the supervision staff, are designed from the perspective of ensuring that *each bank* is insulated from liquidity shocks.[10]

- LCR is a ratio required to be maintained by each bank for the purpose of ensuring its ability to withstand unanticipated withdrawals.

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[7] Non-resident investors sold a large share of their Treasury bond position in November 2020. Should the CBI have been ready to implement QE more quickly? It can be argued that this has become a standard tool for any central bank operating close to the lower bound of its policy interest rate. The CBI was never before close to the lower bound. Besides, much of the stabilizing effect of the asset purchase programme was achieved by its announcement as a backstop; not much more was achieved through the actual purchases.

[8] Indeed, it was central banks whose short-term policy rates were approaching the effective lower bound that began to use QE during the post-2008 financial crisis as a means of supplementing the expansionary impact of monetary policy. The 2020 asset purchases by the Federal Reserve were designed to restore market functioning rather than to flatten the yield curve, which distinguishes them from some of the earlier "QE" asset purchases.

[9] Though it is suggested that QE was mainly of value as a signal of liquidity availability. The purchases were not actually necessary.

[10] In accordance with Article 83 of Act 161/2002 on Financial Undertakings.

- NSFR defines for each bank a required level approved liquid assets as a percentage of a composite measure of that bank's exposure to withdrawals. These are both micro-prudential tools related to individual banks.

As is fully acknowledged by the CBI, the *overall* level of bank claims on the CBI is determined by CBI monetary policy actions. This level not only indicates how far the banking system as a whole is away from running out of cash, but (more importantly) also provides a pool on which an expansion of aggregate bank credit can be built. Reserve requirements imposed by the MPC effectively sterilize part of this pool to limit the degree to which it can be used to expand aggregate credit, thereby helping to steer aggregate demand in the economy. The optimal aggregate level of bank liquidity is not determined by aggregating LCR or NSFRs.

Clearly, the MPC should retain the authority to impose liquidity requirements on the banks supplementary to, and potentially defined in a different way to the LCR and NSFR requirements; the supervision staff should, however, be in charge of the supervision of the latter ratios, as well as of the review of the ILAAP.

Impact of expansionary measures on mortgage credit and housing

Did the expansionary measures of 2020 succeed in supporting aggregate demand; did they fuel a subsequent property price increase? In the complex economic environment created by the pandemic with its activity and travel shutdowns, supply chain interruptions and expansive fiscal measures, convincingly disentangling the role of domestic monetary policy measures from other factors is challenging.

As far as transmission through bank credit is concerned, credit to businesses, which had stabilized before the pandemic, began to dip during late 2020 and well into 2021, before rebounding quite strongly from the end of 2021. Bank credit to households, however, began to accelerate from mid-2020 and was growing strongly at double-digit annual rates through all of 2021 and into 2022. The easy availability of bank liquidity, and the low nominal interest rates, do seem to have fuelled demand for bank credit in 2020 and 2021, especially mortgage credit, although household debt-to-income averages have not moved by much.

Furthermore, there was a strong preference for nominal ISK-denominated loans, which grew from less than ISK 0.4 trillion in March 2020 to more than ISK 1 trillion by the end of 2021, whereas there was a modest decline in indexed mortgages outstanding (Figure 4). (As is known from earlier CBI staff research the transmission of CBI policy rate changes to indexed mortgage rates is rather weak). The monthly percentage change in non-indexed residential mortgage credit outstanding jumped from an average of about 2 per cent pre-pandemic to 9 per cent in July and 10 per cent in October of 2020 (Figure 5). The low nominal interest rates thus appear to have had a predictable knock-on effect on housing prices. While these developments are being tracked from the financial stability point of view (and there has been a slowdown in 2022), their impact on aggregate demand and price developments should clearly not be neglected.

The mix of indexed and nominal mortgage credit, and between floating and fixed rates, is discussed in the CBI's Financial Stability Report. It may be that it deserves to come even more to the fore in the monetary policy discussions, given the relevance for housing prices and their importance in Icelandic inflation. Of course the indexed mortgage is a useful instrument especially for first-time buyers, inasmuch as it smooths real mortgage payments. But indexed mortgage rates are less clearly influenced by CBI action (Figure 6). Having such a large and variable share of index-linked mortgages in the system weakens the ability of monetary policy to stabilize the economy and maintain control of inflation.

Determination of the yield on index-linked bonds (fixed and floating) and their impact on macroeconomic stability and price control deserve greater analytical attention by the CBI, even if direct intervention in these markets will not normally be warranted.

Movements in housing prices deserve special attention in the formulation of monetary policy decisions. This is because of the importance of housing price inflation, the sensitivity of housing markets to the instruments of monetary policy, and the particular way in which housing enters the Icelandic CPI.[11] As this area overlaps with the mandate of the Financial Stability Committee (FSN), it will continue to be important to ensure adequate mechanisms fully involving both Committees (MPC and FSN) for ensuring coordination of corrective policy action in this area.

Whereas the MPC under the old legislation could recommend on all policy central bank instruments relevant to its mandate (which included financial stability), the new legislation specifies the instruments that are under the control of the MPC and these seem to exclude some instruments that are clearly relevant to price stability. The example of capital flow restrictions, for which the deciders are the Governor and the Deputy Governors, was mention to us. In such cases, all decisionmakers should share their deliberations with the others. For example, the MPC and FSN could have joint seminars, perhaps on a six-monthly basis, so that each can more fully understand the analysis and plans of the other. Existing informal channels should thus be augmented by formal institutional arrangements for joint discussions, as was done in the emergency conditions of the early months of the pandemic.

3. Forecasting and Analysis

The CBI's Monetary and Economics Department have had long and internationally respected experience of analysing macroeconomic developments, making forecasts and preparing policy options for the MPC. The Monetary Bulletin, appearing four times a year, covers the relevant economic developments in a sufficiently comprehensive manner.

Staff prepare two main macroeconomic forecasts per year, with two lighter updates between. As in all central banks, these forecasts and scenarios are not wholly model-based, but are developed in an eclectic manner that draws on an extensive trawl of information. Staff have used various models, relying mainly on a traditional macro model for forecasting, and using a DSGE model called "DYNIMO" mainly for checking consistency of policy simulations.[12]

During this unusually volatile period for the world economy, forecasting price inflation and the level of economic activity has been more than hazardous. Before the outbreak of the

[11] The particular approach used to incorporate housing prices in Iceland's CPI means that CPI inflation reacts especially quickly and strongly to sharp movements in housing prices. Because of this unusual feature, the CBI should continue to examine trends and forecasts in other price indices as complementary measures of price pressures.

[12] Because the policy interest rate is endogenized in the staff's models, the fact that the actual policy rate decided by the MPC has tracked lower than the modelled rate partly explains why inflation has tracked higher than forecast.

pandemic, CBI expected 2020 to be a year of rather weak growth at about 1 percent per annum; in the event there was a decline of more than 7 percent in that year, as was already foreseen by the time the second Monetary Bulletin of 2020 was published. The question then shifted to how far and how fast this output loss would be recovered. Monetary Bulletin 2020/2 envisaged GDP in 2022 at just 1 percent below its 2019 level. During 2021 and 2022 this increased fitfully to the latest value of about 2 percent *above* the 2019 level.

The forecast error for cumulative inflation 2020-2 was much larger. At the start of 2020 CBI forecast a cumulative 6 percent rise in prices during 2020-2, well below the 17 percent rise now expected for that period. Interestingly, at every Monetary Bulletin after the pandemic broke out the inflation forecast for the current calendar year was higher than that for the following year, whereas each year actually saw progressively higher inflation (Figure 7). (Many other central banks had equally disappointing inflation forecasting experience.) The current forecast of a decline in inflation in 2023 and 2024 may survive better.

4. Decision-making and Communication

The MPC's working methods have been long-established and seem to have continued to operate in a reasonably satisfactory manner over the past three years. As mentioned above, coordination and dialogue between these two Committees should be enhanced. It is not enough to say that the Governor and Deputy Governors that sit on both Committees establish a sufficient bridge—to think so is to unduly downgrade the expectation of what the outside members can bring. All monetary policy decisions should be formally approved by the MPC before being announced.

Throughout the period the CBI communicated effectively. The communication of monetary policy decisions has been a strength of the CBI for several years. The informative and well-prepared quarterly Monetary Bulletins appear (in two languages!) as soon as the MPC's decision is announced. The accessibility of monetary policy communication to the general public is said even to have improved over the past few years.

The MPC was unanimous in the easing period. In the tightening period, on five of the ten meetings one or two members indicated their preference for a more rapid increase in rates, but agreed to support the Governor's proposal. Especially when there is some explicit difference of views, it is especially important that all communication (e.g. at the press conference, etc.) clarifies which statements are personal and which are fully endorsed by the Committee as a whole. Communication should respect the individual views of the members of the Monetary Policy Committee, and make any necessary distinctions. A more detailed formal communications strategy setting out principles to be followed by all the members of the MPC should be agreed, including with regard to such matters as forward guidance. Indeed, this could also apply to the other decision making Committees.

Financial Stability and Regulation

Summary

In what has been a dramatically turbulent economic period in Iceland as elsewhere, financial stability has been well-maintained in Iceland over the past three years.

Thanks to a regulatory structure that is consistent with international best practice and European law, the systemically important banks entered the period satisfying high capital ratios.

The early 2020 pandemic shock was met with a timely release of the countercyclical buffer. Nor was there any undue delay in reinstating that buffer when the balance of needs shifted in mid-2021.

Emerging issues in the housing market were appropriately addressed with the introduction of DSTI limits applying both the mortgage loans of banks and those of the larger pension funds; the timing of these measures was somewhat slowed by the perceived need to obtain a more secure legislative framework.

Stress tests continued to be carried out on the systemic banks by the Central Bank on an annual basis, as is the practice in many countries now. Varying the shape of the stress from year to year helps build the Central Bank's awareness of potential stability vulnerabilities. Comparable analysis of the larger pension funds could also help throw light on any systemic vulnerabilities in a sector which in Iceland accounts for what is, in an international comparison, an unusually large part of the financial system. The pension system warrants a special focus from a financial stability point of view to understand under what circumstances pension funds could potentially amplify market volatility and distortions.

The Central Bank has developed econometrics-based financial cycle indicators which may help in providing early warning of heighten vulnerabilities. Wisely, though, it does not rely too heavily on this approach, which may neglect novel sources of risk.

The Bank has continued to publish a high quality Financial Stability Report on a twice-yearly basis. This provides extensive information about developments in different segments of the financial sector, including some informative deep dives, for example into the payments system (in the most recent Report), and other relevant material such as information about the annual banking stress test and the evolution of the financial cycle indicators.

1. Decision Making and Governance

The Financial Stability Committee (FSN) of the Central Bank of Iceland makes the macroprudential decisions. The FSN consists of the Governor and all three Deputy Governors of the Central Bank and three external members. An observer attends from the Ministry of Finance. The Governor chairs the meetings.

The Chair calls a preparation meeting three weeks in advance of the FSN meeting were the Chair and vice-chair of the committee, other internal members and Directors discuss what topics are the most important currently, which presentations should be prepared and who should present. Furthermore, if any special topics or data are important for the discussion or if something needs to be followed up from the last meeting.

The external members of the FSN have skills and experience in macroprudential matters. The role of the external members is to bring in their own expertise, each from different background. The external members feel that they participate actively in the debates, their views are respected and taken into account in the discussions in and the conclusions of the Committee meetings. By having staff presentations on the topics prior to the formal Committee meeting the workload on Committee members seems to be manageable, especially when these presentations address questions raised in advance by the external members.

The FSN interacts with monetary policy and financial supervisory functions through the common internal members (Governor and Deputy Governors). Staff members from different policy functions attend the Committee meetings or the preparations, make presentations and answer questions. The Central Bank has also some cross-divisional working groups in relevant financial stability matters like collaborating for macro stress tests.

The FSN receives for its meetings a lot of material which assesses the financial cycle and the economic outlook from the point of view of the financial stability in a comprehensive way. In addition to an analysis of financial system and the economy as a whole, stress tests of banks are carried out. The financial stability situation is also illustrated through indicators like the financial cycle indicator and the domestic systemic risk indicator. The approach to estimating the parameters of the financial cycle and judging current conditions follows good international practice. These statistical indicators are treated as just as one source of information about financial stability, and are not used as hard triggers of policy. The FSN's decisions are based on the comprehensive set of information available to the Committee.

It is natural to wonder whether the fact that macroprudential tools are deployed on the decision, not of the Governor or a Deputy Governor, but of a Financial Stability Committee with external members, might slow action at a time of crisis. However, the Committee has already displayed commendable speed in releasing capital buffers at the outset of the pandemic; that experience at least suggests that delay is not pre-ordained by the decision-making structure.

2. Prudential tools

The Icelandic micro and macroprudential toolkit seems to be comprehensive and in line with what exists in European comparators. (For convenience, in this section we list the micro-prudential capital and liquidity tools together with those normally considered as macroprudential.) The toolkit includes both cyclical and structural tools and these tools have been actively used. Some of the structural not only enhance the overall resilience of the financial system and its borrowers, but have important side-effects on macroeconomic developments such as housing prices.

The *structural tools* available include capital requirements for systemic risk (SyRB), for a financial undertaking's systemic importance (O-SII) and for capital conservation (CCoB) in addition to the leverage ratio.[13] These all are intended to ensure that each financial firm has enough capital to withstand shocks and can continue to provide financial services in times of stress. In addition there are requirements for sufficient liquidity (LCR) and stable funding

[13] The legal underpinning for the Central Bank to enforce bank capital buffers goes back at least to Article 86 of Act 161/2002 on Financial Undertakings.

(NSFR). The CBI has decided on some modifications of LCR and of NSFR to cover different asset classes e.g. assets in foreign currencies.

The systemic risk buffer has been in place since April 2016 and has been set at 3% of the domestic risk exposure. As cross-border activities of the Icelandic financial system are limited, the systemic risk buffer is applied to over 90% of the risk. This requirement is based on risks of the relatively undiversified real economy and its small size. The requirement is reviewed at least bi-annually.

Due to their size and systemic importance, each of the three big banks has been categorised as an “other systemically important institution” (O-SII) (the “other” refers to the fact that they are not considered “globally” significant), which adds a further capital requirement of 2% of risk-weighted assets (also in effect since April 2016). The O-SII buffer requirement has been based on the EBA guidelines taking into account not only banks’ size of total assets and domestic importance but also their operations complexity and cross-border activities, interconnectedness and importance in the foreign exchange market. The requirement is reviewed at least once a year.

The capital conservation buffer (CCoB) is set by the law at 2.5% of risk-weighted assets and has been in place since the beginning of 2017. This has been set to improve the resilience of banks to cover credit losses in times of stress.

In addition, banks are subject to “Pillar Two” requirements reflecting specific risks identified through supervision. The assessment is done through the Supervisory Review and Evaluation Process (SREP) which covers comprehensively all activities and risk areas of a systemically important bank. Currently the required Pillar Two requirements vary between the three systemically important banks from 2.5 to 3.5% of risk-weighted assets.[14] The SREP is carried out annually on each systemically important bank.

The leverage ratio requirement is at 3% of total exposures by the law transposing the CRD IV directive in Iceland. This ratio ensures sufficient capital to cover potential shocks like other capital requirements but it is differs from those as it is calculated on the book value of total exposures, and not on the (smaller) risk-weighted base.

All three main banks have capital well above the ratio that these requirements imply. As a result they are not currently subject to the restrictions on profit distribution that would operate if they were not meeting the CCoB.

When assessing use of capital requirements, it is important to note that Icelandic banks rightly follow the standardised risk weight calculation. This results to somewhat higher capital requirements in relation to the banks’ total assets and thus stronger equity capital levels of banks than in many other countries.

Two long-standing mechanisms to limit bank exposure to exchange rate fluctuations are defined in the so-called “Rules on Foreign Exchange Balance” (No. 784/2018) (which for example limits net open positions to be less than 10% of own funds) and the “Rules on Derivative Transactions in Which the Icelandic Króna Is Specified in a Contract Against Foreign Currency” (N. 765/2021) (which limits the use of FX exposure through derivatives).

[14] For Islandsbanki, 2.6%; for Arion, 3.5%; and for Landsbanki, 3.4%.

These rules on FX exposures are rather more restrictive than is now common in advanced economies, but understandably so. The derivatives rule, though less limiting since the rule change in 2021, does mean that very large capital market transactions undertaken by non-financial Icelandic firms may still not be easily hedged in a thin market.

The CBI has used its *macroprudential tools* quite vigorously to deal with emerging cyclical issues during the period under review. The cyclical tools include the countercyclical capital buffer (CCyB), the loan-to-value ratio (LTV) and the debt service-to-income ration (DSTI).[15]

The countercyclical capital buffer (CCyB) was first applied in 2016 and took effect a year later at the value of 1%. Over the next two years it was raised in steps. In May 2019 it was 1.75% and then increased to 2% in February 2020. During the time when the economy was operating strongly, it was a good time to build the countercyclical buffer. But almost immediately, the outbreak of the pandemic caused a sharp deterioration in the prospects for loan repayment and profitable banking business. This prompted the CBI to move quickly to release this buffer, lowering the rate to zero in March 2020. The early activation of the buffer was based not only analysing the credit-to-GDP gap, which would have resulted in inaction, but also on real estate prices, credit dynamics and other indicators of cyclical systemic risks.

The lowering of the ratio was in line with international practice and fully consistent with the dynamic use of this instrument, helping to ensure that capital requirements do not operate in a pro-cyclical way to amplify the downturn.[16] Gradually, the economy recovered, especially with the return of tourism. By September 2021 the actual and prospective condition of the banks was a lot better than had been feared eighteen months earlier. Accordingly it was time to decide an increase the CCyB; an increase back to 2% was announced to take effect from the following September (2022). At this rate, Iceland currently has the highest CCyB in effect in the EEA, though several other countries have announced increases to 2% or 2½% to take effect at the end of 2022 or during 2023. The dynamic use of the CCyB in this period was well-judged. As a cyclical tool, the requirement is reviewed on a quarterly basis, at minimum.

The borrower-based cyclical tools used by the Central Bank limit the loan-to-value ratio (LTV) and debt service-to-income ratio (DSTI) of household mortgages issued by the main banks and pension funds.[17] These tools, which can be considered as having both structural and cyclical characteristics, are operated under powers originally specified in Act 118/2016. Both of the borrower based tools have been used actively in order to safeguard the resilience of the household debtors and these are applicable to mortgage loans from banks and pension funds. Both of the ratios are tightened according to developments in the housing and financial markets.

The LTV was introduced in July 2017 with the general maximum rate set at 85% and at 90% for first-time-buyers. The ratio was tightened first in June 2021 to 80% for other than first-

[15] In accordance with Act no. 118/2016 on mortgage lending to customers.
[16] SREP driven increases in capital requirements – a responsibility of the FMEN – were also put on hold when the pandemic broke out. At that time also, the FMEN wisely “urged financial institutions to exercise restraint and postpone planned dividend payments.”
[17] The DSTI has a margin of manoeuvre in line with best international practice.

time-buyers and then further in June 2022 for first-time-buyers to 85%. The LTV has been used actively paying attention to the risks of household indebtedness.

Although having a DSTI rule in place would have been useful from some date in 2020, given that the uptick in housing demand and prices, partly driven by the easing of interest rates (as discussed above), had started quite early in the pandemic, the DSTI rule was activated by the CBI only in September 2021 and the ratio was set at 40% for first-time-buyers and 35% for others. This delay reflected some uncertainty concerning the legislative authority for imposing it; this doubt was removed by a legislative amendment in mid-2021, and the DSTI was imposed with effect from December 2021.

The DSTI was also tightened in June 2022. The DSTI ratio remained at 35% for first time buyers and 40% for others, but the calculation of the ratio was refined by requiring that the interest rate used would be no less than a certain minimum. Also existing maximum loan maturities of indexed mortgages were tightened for calculating the ratio, from 30 to 25 years. Without the minimum interest rates the requirement would have enabled a substantial increase (especially of index-linked debt) in the low interest rate environment. After the introduction of the minimum interest rates and tightening of the maximum maturity, a substantial decrease in new high DSTI lending has occurred.

The tightening of borrower-based tools did lead to a fall in average LTV and DSTI ratios and may also have contributed to a slowing in the pace of housing price increases and maintaining resilience among borrowers and lenders in the mortgage market. Although these are considered as cyclical rules, inasmuch as the ratios can be, and have been, adjusted in light of market and cyclical conditions, they should probably be retained on a permanent basis.

The interaction between expansionary monetary policy action and a need for restraint on macroprudential grounds reinforces the desirability of relatively frequent joint discussions between the MPC and the FSN. Of course the fact that the Governor and two of the Deputy Governors sit on both of these Committees does help ensure coherence and consistency of decisions, the outside members should not be excluded from this sharing of understanding. After monetary policy moved into the tightening zone in mid-2021, both policies were moving in the same direction, but this need not always be the case. For example in late 2020 there could have been merit in tightening macroprudential policy even as monetary policy remained loose. It is not a question of one policy taking precedence over the other; each policy arm should take account of what the other is doing and is planning.

The joint discussions between the FMEN and the FSN are also necessary as some of the microprudential tools have been used for macroprudential purposes. The liquidity coverage ratio (LCR) has been used not only to ensure liquidity in ISK but also sufficient liquidity in foreign currencies. Similarly the net stable funding ratio (NSFR) sets requirement to limit mismatch between assets and liabilities and the extent to which credit institutions can rely on short term funding also in foreign currencies. In addition, there are rules limiting banks' foreign currency and derivative transactions which need to be viewed both from macroprudential and microprudential viewpoints.

At the current juncture there are effectively no international capital flow restrictions in Iceland.[18] Foreign exchange transactions, and cross-border movements of capital and payment are free. However, the CBI has been given the power to safeguard economic and financial stability by including controls on capital inflows under extraordinary circumstances. The use of the special measures is subject to ministerial approval.

3. Stress testing

The Central Bank carries out a stress test on the systemically important banks each year. The scenario is designed to represent a severe but plausible stress of a type considered to be relatively more likely deviation from the CBI's baseline macroeconomic projection. The most recent stress test had a scenario of narrowing interest rate spreads, price fall of all major asset classes, increased credit losses and deteriorated prospects for key economic sectors. The various elements of the stress are made public.

Based on macroeconomic scenario of the stress test, each of the three banks calculates the likely impact on its profitability. The Financial Stability Department of the CBI then completes the exercise following any necessary reconciliation between the estimates of the banks and of the CBI. The individual bank results are used as an input into the SREP process which determines the "Pillar Two" component of each bank's capital adequacy requirement. The individual bank results are not made public (this is a contrast with the EBA's annual stress test for the European Union's chief banks) but an overall summary of the sector's performance is published. In the most recent stress test covering a horizon from 2022 to 2024, the three systemically important banks passed without any problems, suggesting that the banking system would be able to absorb the modelled stress.

The Central Bank has also used (in 2020/21) a reverse stress test approach in which, instead of deciding on the magnitude of the macroeconomic stress, the exercise is used to estimate how big a stress could be absorbed by the banks without triggering a capital deficiency. This reverse test approach can be very informative inasmuch as it focuses the policymaker's mind on estimating the degree of robustness of the system rather than merely checking whether a relatively arbitrary threshold has been achieved.

In designing the annual stress test over a number of years, it would arguably be more instructive to design a sequence of contrasting stresses representing the different ways in which the economy could plausibly be hit by a severe shock (for example a volcano, a collapse in fishing industry, a property price collapse, another pandemic) rather than trying to guess which type of shock is least unlikely for the coming year. That way, over a period of a few years, the Central Bank could become more comprehensively aware of the types of shock to which the banks are least ready to absorb.

As is appropriate enhancing macroprudential security, banking is not the only focus. Enhancing resilience against specific systemic risks such as those related to cybersecurity and to financial infrastructures (especially the payments systems), including stress tests of these, are among the other topics that have been prominent in the Central Bank's Financial Stability work programme. There has been no significant disruption of payment services in recent years. However, it has been acknowledged that the threat posed to the payment systems is

[18] But pension funds are limited in the extent to which they can hold foreign assets; the allowed percentage is expected to be increased soon from 50%.

growing also due to increased number of cyberattacks. Thus steps have been taken towards the development of an independent domestic retail payment system.

One of the largest Icelandic insurance companies (Sjóvá) was included in a recent EIOPA stress test. Consideration should also be given to designing an appropriate stress test for all of the main pension funds. The size and penetration of the pension fund sector in the financial system and the economy as a whole is well appreciated by the Central Bank. This sector dominates the demand side of the bond market, especially in relation to inflation-indexed bonds. Such a test could be adapted from international models to take into account the country-specific elements of this sector, but the exercise of developing a good method of stress-testing for pension funds would in itself help focus the Central Bank's awareness of the systemic importance of ensuring that pension funds are managed in a safe and sound manner. In-depth analysis of the likely evolution of the pension fund sector and its investments over the years ahead would have the double pay-off of clarifying what strategic macroprudential approaches are desirable to ensure the stability of this sector and its influence on the health of the financial system, and of contributing to public debate about the role of this important sector in the economic as a whole.

4. Bank Recovery and Resolution

Recovery and resolution legislation in Iceland follows the model developed by the FSB and implemented in the EEA through the BRRD. While transposition of the latest update of this Directive is not yet complete, Iceland's recovery and resolution arrangements seem well advanced, not least because of the recent experience of bank resolution on a systemic scale in the GFC. Within the CBI, a small unit within the Financial Stability Department is chiefly responsible for this area, though of course there is close cooperation with the Banking Department. MREL requirements have been set and achieved. Resolution decisions would be taken by the Governor.

Recovery Plans Supposing a severe adverse economic shock resulting in a need to capitalise Icelandic banking system, the banks could seek additional capital from the international capital markets, or, locally, from the Icelandic pension funds (who are the largest institutional investors in Iceland and already holders of bank equity). Realistically, though, a shock that is large enough to threaten bank failure would not be conducive to raising equity from these sources. It seems that none of the banks have easily marketed subsidiaries or stand-alone units that could be sold to achieve any large increase in capital adequacy ratios. The use of public funds to recapitalize systemic banks is now limited by law.

Resolution. Realistically, then, so any stress large enough to threaten the likelihood of failure magnitude would likely move quickly through the recovery phase to resolution. Resolution plans have been prepared but not published.

The Icelandic Financial Institutions Guarantee Fund, which is a private foundation, manages funds needed for deposit insurance, securities market and resolution measures. Available funding is now distributed between resolution and deposit insurance, the reasonable expectation being that effective resolution would reduce the need for a deposit insurance payout even in the case of a failing insured entity. Indeed, current levels of funding are far in excess of required minima and indeed of European averages. As in other countries, these sums might not be enough to cover a large payout if one of the main banks had to be liquidated; however, it should be sufficient to meet temporary requirements in even quite a severe downturn.

5. Communication and Research

As with monetary policy, communication is an important aspect of efforts to protect systemic financial stability. As far as public communication is concerned, the CBI continues to publish a useful and informative Financial Stability Report twice yearly. It includes a detailed and well articulated description of developments relevant to assessment of financial stability. The reports of the banking stress test are also included and, in the period under review, there have been special features on a wide variety of topics including

- Capital flows and payment intermediation during the pandemic
- The international (Financial Action Task Force) appraisal of Iceland's anti-money laundering and terrorist financing measures (AML-CFT)
- Climate change and financial stability
- Banking spreads
- Use of different payment methods
- Financial market infrastructure
- Crypto assets
- Resolution and MREL

At another level, communication between the CBI as the chief agency charged with maintaining financial stability and the fiscal authority is also important. This happens through meetings of the Financial Stability Council which, since the merger, now only consists of two members, namely the Minister for Finance and the CBI Governor. There are quarterly meetings, timed to correspond with the calendar of the Financial Stability Committee. We agree with the view that it is important for each side to be aware of the other's concerns and plans so that, were urgent matters requiring action to bubble to the surface, there would be a degree of preparedness.

Parliamentary hearings also cover financial stability issues. To date, the Financial Stability Committee has been represented at these by the Governor and the Deputy Governor for Financial Stability. There could be advantage in one or more of the external members of the Financial Stability Committee attending also, potentially allowing a greater diversity of perspectives in this complex area to be aired.

While awareness of financial stability risks requires good market intelligence and an understanding of how both long-standing and novel markets work, statistical analysis of relevant data can also be helpful. The CBI has designed and estimated the parameters of an econometric model describing a financial cycle over the past century in Iceland. The model can be used to detect patterns of credit growth and other indicators which could flag heightened risks of a downturn. The Committee wisely does not rely too heavily on the outputs of such research efforts, but they have some value in designing and communicating policy; when a reliable financial cycle indicator is flashing, it may be easier to convince the general public of the need for restrictive measures.

Increased availability of loan-by-loan data on mortgage borrowing is opening up a new field of financial stability research in Iceland. Some use was made of this, for example, in estimating what proportion of new mortgage loans were likely to be constrained by the borrower based (LTV and DSTI) macroprudential restrictions that were being brought in during 2021. As more and more of this data becomes available over time, analysis should be able uncover more fine-grained influences on borrowers' financial distress. After all, in a downturn, it is typically not the median household that presents default risks, but households towards the tail of the distribution of stress factors. Devoting further resources to collection and analysis of microeconomic data of this type should yield benefits, for example providing a more robust basis for the choice of borrower-based measures: that could be helpful given how unpopular these measures can be.

Supervision

Summary

Supervision of banks, insurance companies and securities markets follow European regulatory standards and are planned in a well-structured risk-based framework. Resourcing appears to be sufficient to allow the supervisory arm to continue the work that it had been carrying out in the former structures. Some improvements in the flow of information between supervisory Departments and the rest of the Central Bank have been felt.

Pension fund regulation needs to be modernized if the Central Bank is to have the capacity to ensure that pension funds are well managed.

The decision-making structures at the most senior level are not working as smoothly as might be hoped. Changes will be needed, especially with regard to the FMEN.

1. Supervision of financial firms since the merger

The legal framework for regulation and supervision of financial firms has not been changed by the merger, except inasmuch as the decision-making authority has been transferred by the 2019 Act to the Central Bank. Indeed, as Article 2 of the Act states, the Financial Supervision Authority is part of the Central Bank. Can hoped-for improvements been detected? Has anything been lost in this transfer? These questions can only receive a partial answer so far.

As far as governance is concerned, it may be noted that the person who held the position of Director General of the FSA up to the merger was then appointed as "Deputy Governor for Financial Supervision", thereby providing a degree of continuity at the most senior level, though (as noted later) the new management structure of the Central Bank does not give a conventional management role to the Deputy Governors. Instead, the Department Directors now report directly to the Governor.

Examining what has changed, so far as the organization and resources of the supervision area is concerned, we note that the four key policy Departments of the FSA moved more or less intact across to the Central Bank. These are the Banking, Insurance and Pensions, Markets and Business Conduct, and Compliance and Inspection. Their Directors remained in place.[19] These Departments obtain support from the Human Resources, Information Technology, Operations, and Finance Departments and the General Secretariat—all of which operate across the entire Central Bank.[20]

We are reassured to note that staffing levels in the supervisory policy Departments have been maintained or increased since 2019. There is no suggestion of supervisory resources having been squeezed relative to what was available before the merger. Some cost efficiencies will have been obtained through the pooling of support services. The new organization's staff numbers are lower than the aggregate of the Central Bank and FSA before the merger, though there is no obvious way of quantifying the financial savings by comparing the overall

[19] Three of the Directors are still in position three years after the merger. (The fourth retired during 2021 in the normal course).

[20] The support Departments were merged and somewhat restructured. Not all Director-level staff of support Departments were retained in the merged organization.

operating costs, given that, pre-merger, the FSA's finances do not appear to have been separately reported publicly.

One expectation from the new merged arrangements was that duplication in the sourcing of information from supervised firms would be reduced and that the flow of information would improve between CBI staff concerned with financial supervision, and those concerned with financial stability and monetary policy. Organizational and technical work has been ongoing to achieve these objectives and, though much remains, despite the pandemic, progress has been made towards an integrated one-bank information technology system. The hoped-for reduction in duplication of data requests from the supervised firms has not yet materialized; this is partly because what seems to the recipient of a data request to be for essentially the same information can often differ in ways that are important for the proposed analytical use of the information. This problem is by no means unique to Iceland, and indeed the willingness of CBI staff to achieve streamlining through data sharing seems ahead of what is experienced in many other supervisory authorities around the world. Furthermore, senior staff report that they are finding useful insights from data and analysis shared across the different policy areas within the Central Bank. More generally it is reported that, for the most part, different policy Departments are working more closely together across the Central Bank than might have been expected. Thus, progress can be reported under this heading, as well as optimism that more can be achieved.

There are some risks in folding supervision into a central bank. These include the danger that supervisory action might be deferred if it risked compromising macroeconomic or financial stability. (To be sure, the risk can also go the other way: a tightening of monetary policy might be delayed by a central bank too concerned with ensuring that financial institutions remain financially healthy). In practice this risk has not materialized in Iceland to date (unless the decision to defer SREP in 2020 is counted), but decisionmakers should be made aware of it. Compromising one of the Central Bank's goals in order to more easily meet another is an approach that would be fraught with difficulties.

The Central Bank thus seems to be providing a solid home for the work of financial supervision. Even senior staff that transferred from the old FSA feel that the Central Bank brand strengthens the credibility and authority of financial supervision in Iceland.

2. Financial supervision in practice

The mission of the supervisory arm of the Central Bank is also unaltered from what was there before: "to promote a sound and secure financial market and to reduce the likelihood that the activities of supervised entities will result in losses for the general public". It is also noted that "healthy and sound operations are always the responsibility of the management of the company in question."

From the briefings and the policy documents we have received, we find that the approach to supervision is along the same lines as can be found in other supervisory authorities within the European Economic Area. EU/EEA legislation and regulation is transposed into Icelandic law (albeit with some delays) and implemented in Iceland. The CBI participates in the working programs of the three European Supervisory Authorities and taking parts in the ensuing peer reviews and surveys. The CBI is not, however, a member of the Single

Supervisory Mechanism of the ECB; therefore the three systemic banks are supervised in Iceland and not from the SSM.

The supervisory cycle is well structured and seems to reflect an approach to supervision that is in line with good international practice. Based on the Supervisory Strategy 2022-2024, the annual workplan is laid out in the project timetable for supervisory units. The process of preparing the timetable has had an important bottom-up dimension, with the selection of priorities strongly influenced by Department Directors and their staff before being signed-off by the Deputy Governor for Financial Supervision. The timetable for 2022 was considered by the Financial Supervision Committee on 20 January 2022, and approved at a meeting of the Governor of the Central Bank with the Deputy Governor for Financial Supervision and the Directors of supervisory Departments on 24 January 2022. This document provides staff and other stakeholders with clear priorities on what to work on. A clear and plausible hierarchy of firms in regard to their potential impact guides the risk-based allocation of supervisory resources. (The methodology for determining this hierarchy is currently under review.)

As a general rule, the quality of supervision in any country cannot be fully confirmed until long after the event. The effectiveness of a supervisory regime will eventually be seen in the frequency of financial firm failure, but such failures only emerge over time. Meanwhile, one can assess process and resources, seeking to confirm that the process is sufficiently intrusive and resources sufficient to do the job. The only general comment we would make on process is that, while the CBI's approach to micro-prudential supervision is rightly strong on ensuring legal compliance, this should not come at the expense of adequately interrogating business models for robustness, including awareness of climate change and other environmental, social and governance risks.

Generally speaking, the overall number of staff seems broadly in line with what one would expect in relation to the size of the financial sector in Iceland, although it is hard to compare with peers given the special nature and size of the country and its financial sector.

- The Banking Department, with 22 staff, supervises 32 firms—though three banks account for 94% of the sector's assets.
- The Insurance and Pensions Department has only 13 staff for 59 firms, not including firms passporting in from licenses elsewhere in the EEA. Although not as vulnerable in the same way as banks to liquidity shocks, these firms do manage in aggregate a very large block of assets (larger than the banking system) on behalf of current and future pensioners, and policy-holders. The sudden liquidity challenges recently faced by UK pension funds should remind everyone that this sector is not immune to problems. Against this background, the recent proposal to increase staffing of this Department seems appropriate.
- The Markets and Business Conduct Department has 16 staff, five of them assigned to business conduct supervision. There is no doubt that additional useful consumer protection work could be done with a larger allocation of staff to that side.
- The Compliance and Inspections Department has 25 staff roughly divided half-and-half between the important but quite different areas of legal supervision (licenses, suitability and qualified holder assessments, AML/CFT, etc.) and on-site inspection.

For prudential bank supervision, much work has been done over the past decade to improve procedures in line with evolving international practice. In 2014 the International Monetary Fund (IMF) made a number of important recommendations when they reviewed Iceland’s compliance with the Basel Core Principles of Banking Supervision (BCP). An IMF team is carrying out a new BCP Assessment in late 2022, which will provide a valuable detailed update on Iceland’s compliance in this area.

One of the most important parts of bank supervision relates to the risk assessments of the main banks: the so-called supervisory review and evaluation process (SREP). Among other things, this reviews each bank’s own internal capital adequacy assessment processes (ICAAP) and leads to the specification by the CBI of each bank’s additional “Pillar Two” capital requirement. This is a supervisory task and should continue to be steered by supervision arm, where the relevant expertise chiefly lies. Of course, there should be dialogue between the financial stability specialists and supervision staff, but it is the latter who are responsible for guiding the SREP and its associated decisions.

A simple piece of evidence suggesting that bank supervision in Iceland does go beyond the ritualistic we note that (as mentioned above) supervisory risk ratings and Pillar Two capital requirements do differ as between the three systemic banks.

Pension fund regulation and supervision is an area which is unusually important in Iceland because of the size of the assets under management (and the large number of persons heavily dependent on prudent management of these assets). The Central Bank is well aware of the importance here, but feels that its powers are limited because of the rather light legislative underpinning of its work in this area. There are some old-fashioned mechanical rules governing pension fund investments, but these would not guarantee prudent risk management and, while the Central Bank can provide guidance and advice to pension funds, it has little authority to insist on much of what it recommends. The Central Bank continues to recommend strengthening of the legislation on pension fund regulation (and also, for example, on the supervision of actuaries) (as the Financial Supervision Authority did before it), but little in this area has been proposed to the Althing by successive governments.

When it comes to on-site inspection, it is clear that careful attention is paid to the risk-based choice of topics and institutions to inspect. As summarized in the annual Supervision Report, emphasis is placed on “anti-money laundering and terrorist financing measures, as well as credit risk, operational risk, governance practices, and internal controls”. The number of onsite inspections fell to 18 in the pandemic year 2020 from 27 in the previous year but was back up to 27 in 2022. Recent on-site inspections that were carried out on each of the three systemic banks differed markedly from bank to bank in their focus. The larger insurance and pension firms are also subject to on-site inspection: for example three insurance companies and two pension funds were inspected in 2021. Since 2016, though, all on-site inspections have been flagged in advance to the regulated firms; it would seem advisable to take the opportunity to have some unscheduled inspections.

Suitability assessment of board members and senior executives of supervised entities staff is an important task for the supervisor. About a hundred such assessments are carried out annually and there are usually a few who do not pass the assessment.

Equally important is the assessment of entities intending to acquire qualified (i.e. large) ownership holdings in supervised entities: with heightened geopolitical tensions. It is good to learn that the CBI has decided to increase vigilance in this area to ensure that unsuitable ownership structures do not take control of supervised entities in Iceland as a way of penetrating the EEA.

Given Iceland's experience with bank failure, it is understandable that priority would be given to prudential matters over consumer protection. But the CBI is also active in the area of supervising market conduct.

Supervision of the securities market also follows the European model. The CBI investigates such matters as alleged cases of insider trading or inadequate information disclosure which come to its attention; in addition it supervises the ever-growing reporting requirements on participants in the securities market.

Supervised market conduct also includes consumer-facing business practices such as the wording of marketing materials. Indeed, one of the four fines imposed on firms in 2021 (and two of the seven in 2020) was for failings in this area.

It may be that more resources should be devoted to consumer protection area. To take just one example, protecting Icelandic households against the risks involved in crypto-currencies will likely remain a consumer protection issue rather than one involving widening the prudential regulatory perimeter to include crypto-currencies—though it will, of course be important for Iceland to keep abreast of emerging European regulatory practice in this field to ensure that no international regulatory loopholes emerge.

The fines imposed as penalties for violations identified by the CBI were not very large during 2020-1: the largest was ISK 87.7 million imposed on one of the systemic banks. This may adequately reflect the seriousness of the violations identified. The CBI should not hesitate to impose higher fines if this is warranted.

Annual supervision costs are budgeted in advance and recovered from the supervised firms. Having the firms pay for all or most of these costs helps ensure that the market activities of hard-to-supervise entities are not implicitly subsidized.[21] On one interpretation of the law, the CBI would not be allowed to increase spending on supervision beyond the budget even if an urgent need, unforeseen in the budget, was perceived. This would be an unfortunate situation, and appears to be unintended: the legal position should be cleared up to allow such spending.

3. The role of the Financial Supervision Committee

One important change that has occurred since the merger relates to the pattern and flow of deliberations and decision-making at the senior level and at the Financial Supervision Committee (FMEN), whose role is different from that of the old FSA Board in particular with less discussion of strategic policy matters.

The FMEN has outside members with experience and expertise on the relevant matters: The three outside members initially appointed had been the chair and two members of the former

[21] On the other hand, this charge-back regime might in theory lead to too much spending on supervision. In Finland, only 95% of costs are charged to industry, thereby preserving an incentive for the central bank to keep costs under control.

FSA Board. (One has since resigned). The FMEN meets monthly. Although the Act of 2019 specifies the membership of the FMEN as being two Deputy Governors and three outside members, it envisages the Governor taking a seat as its chair when the Committee

> "takes decisions on the adoption of rules of procedure pursuant to Article 16, Paragraph 2 of the Central Bank Act, when it takes decisions on entrusting the Deputy Governor for Financial Supervision to take non-major decisions, and when it takes decisions on systemically important financial institutions' equity, liquidity, and funding."

The Committee has approved Rules of Procedure which provides a more granular list of what these decisions would be. The Deputy Governor is the chair for other matters. As a general rule the, Governor does not sit in on meetings chaired by the Deputy Governor - unless they are deemed to have systematic importance for other areas of the Bank, as often occurs. Other senior staff also attend the meetings, including when decisions are being taken (and it has been suggested that this might inhibit the ability of the three outside members to make their voice adequately heard).

Although the 2019 Act specifies that the FMEN can delegate certain decisions to the Deputy Governor, the fact that the Deputy Governor does not (according to the organization chart adopted in 2020, and discussed further below) have any staff reporting to her makes such delegation to staff members legally and operationally insecure.

The 2021 Report of the Appraisal Committee (AC) on the working of the three CBI decision-making Committees identified a variety of problems in the operation of the FMEN.[22] We have found that these problems persist more than a year later and are unlikely to go away without external action.

The AC Report remarks that the legislative mandate of the FMEN is rather broad and requiring much delegation in practice. We agree that the number of administrative decisions concerning supervised entities that the FMEN has either to deal with or to delegate is large. The main items for decision on most agendas of FMEN meetings are decisions on specific cases. These include the granting of licenses; the approval of shareholders taking qualified holdings in a regulated firm; the imposition of administrative sanctions or penalties; and so on. Such cases require detailed advance staff preparation before being brought to the FMEN, at which point the value that can be added by outside members is inevitably small, especially when that would require a degree of close scrutiny that cannot be expected in what is often a very short interval of time between document circulation and meeting. In practice, therefore, much reliance for the necessary scrutiny is being placed on the Departmental Directors and their staff.

On the other hand, as far as strategic or policy matters are concerned, the mandate of the FMEN has been interpreted in a narrow sense. Policy matters seem to be largely excluded from their discussion.[23] There are important policy decisions to be made with substantial

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[22] This is the report specified in Temporary Provision VI of the 2019 Act and was prepared by a committee of experts chaired by Tryggvi Pálsson and also compromising Þórhildur Hansdóttir Jetzek and Jóhannes Karl Sveinsson.

[23] For example, the 2021 AC Report states of the FMEN "It is not intended to have a role in policy formulation", but does not substantiate this view.

potential impact on the effectiveness of supervision, e.g. prioritization of certain sectors or topics and of corresponding resources; the size of the budget; interpretation and implementation of EU legislation and soft law and regulations by the three ESAs. The 2019 Act is not clear on where the authority for this type of decision lies—and this issue has been debated within the FMEN . It seems that in practice such decisions are discussed in the FMEN but ultimately taken by either the Governor or the Deputy Governor for Financial Supervision.

In short, although it has certain additional responsibilities, it is our impression that the role of the FMEN is much reduced relative to that of the former FSA Board, despite the three (now two) outside members of the FMEN having been former members of the FSA Board. Burdening the Committee with a narrow scope including many mundane tasks misses much of the potential value added that external members can bring both in terms of diversity of perspectives and as a check on the overall policy approach designed by the staff. Whether or not this was intended by the legislator, it seems to have been a missed opportunity.

The four supervisory directors' responsibility for important tasks has probably increased relative to how things stood before the merger. This is because they now report directly to the Governor whose remit is much wider than just supervision. (In the former regime, they would have been answerable to the Director General and Deputy Director General of the FSA, whose work programme was entirely related to supervision.) For example, the Supervisory Review and Evaluation Process (SREP) for the banks is essentially finalized at director level, (being reviewed by a cross-departmental risk council) before submission to the FMEN for formal decision.

A smoothly functioning decision-making process would not get constantly bogged down, as the FMEN often has, in debates about who can vote, what matters can be discussed, who should be in the room for discussions and decisions, whether documents have been circulated in good time, and so on. This situation needs reform. The AC made some suggestions to address this problem and the Government has circulated draft legislative proposals.

One could imagine moving the FMEN in either of two broad directions: broadening or narrowing.

One direction (broadening) would explicitly give the FMEN a more expansive role on weighty strategic issues and take it more towards the functioning of the PRC at the Bank of England. The PRC has a broad agenda covering the full range of matters concerning micro-prudential policy. It is chaired by the Governor of the Bank of England, but a key member is the Chief Executive Officer of the Prudential Regulatory Authority (who is also a Deputy Governor of the Bank of England); he has managerial authority over the supervisory staff, to whom and through whom less important decisions can be safely delegated. A majority of the PRC are outside members (not staff members of the Bank of England).

Moving in this broadening direction in Iceland would involve at least taking a broad interpretation of the mandate of the FMEN, so that its deliberations could range over all strategic issues related to micro supervision and, importantly, assigning a fully conventional management role and executive authority to the relevant Deputy Governor, so that delegation to, and support from, the relevant supervisory staff could be assured in a coherent and speedy manner. It is vital that the CBI be able to make urgent and immediate decisions without delay, especially when it comes to supervisory matters.

The alternative (narrowing) direction of travel would recognize that most of the task of the supervisory arm of the Central Bank is in supervising and enforcing legislation and regulations that have been set by the Althing. As such, its discretion is limited and therefore there is less to be gained by widening the range of experience and perspectives that outside members can bring to a policy committee. At most, they could act as a counterweight to an unduly liberal interpretation by the staff vis-à-vis some case: even then, they will not normally be equipped to oppose successfully a detailed prepared staff position.

If this narrowing direction is chosen, then (as suggested by the AC Report) a fully internal decision-making process could replace the FMEN. In this case also, though, the complexity and range of topics to be decided would require assigning management of the relevant staff resources to the relevant Deputy Governor.

The Government has circulated draft legislation that (in line with an alternative suggestion of the AC Report) would specify in more detail than at present the scope of the FMEN's mandate. Although including some policy matters which have not been part of the FMEN's agenda in practice, given the narrow interpretation that has been given to its current mandate, the proposed new mandate more precisely limits the FMEN's scope. As such, it can on balance be considered a step in the second of the two directions (narrowing) we have identified above. The Government's proposal would also entail making the Governor chair of the FMEN.[24] This intermediate proposal would help deal with some of the issues that have arisen, and would offer greater legal security to the supervisory decisions taken by the Central Bank.

But the Government's proposal seems to us not to go far enough, and likely to leave a situation which is unlikely to endure in a satisfactory manner. If this (narrowing) is the direction of travel preferred by the Government, we would suggest that it should be pushed further to abolition of the FMEN Committee. After all, if there are to be no policy decisions, but only the proper implementation of existing laws and regulations, what has to be determined are essentially questions of whether regulatory requirements have been accurately satisfied. This is a matter of management and subject matter expertise, which can surely be entrusted to staff (including the Governor and the relevant Deputy Governor). Furthermore, urgent supervisory decisions can perhaps be more quickly implemented if reference does not have to be made to a committee with outside members.

Either way, though, the increased concentration of power in one person entailed by this direction of travel would need some countervailing governance adjustment as suggested in the next section.

[24] Making the Governor chair was recommended by the AC Report as a way of making the delegation of powers by the FMEN more legally secure. If the Deputy Governor had a clear management responsibility over the supervisory staff, this might not be so necessary.

Governance and Organization

Summary

The Central Bank of Iceland has accomplished the merger of the two precursor institutions speedily and effectively. Of course, building an integrated institution with fully efficient processes and oversight, and a shared institutional culture, is a long-term project

Two of the Committees in the new (and rather elaborate) decision-making structure have been functioning well. Even so, it is evident that the degree to which the committee system introduced in the 2019 Act has actually distributed effective power among different decision-makers is somewhat limited. Simply counting voting rights in the Committees does not capture the dynamics involved. And this will be even more so if the Government's proposed change in the mandate and governance of the FMEN is implemented, making the Governor the chair of that Committee.

The chosen post-merger management structure may have facilitated decisive steps to achieve the goals of the merger. But the senior management structure (in which the reporting line of each department director is directly to the Governor) involves too wide a span of control run. It also involves key-person risk. We have not seen, in other central banks that integrate supervision matters, a management structure that deviates so much from the governance structure; we do not think that it will serve well for the longer term. A more conventional management structure would be more effective.

As mentioned above, the mandate and governance of the Financial Supervision Committee (FMEN) is under review; some of the issues that have arisen around delegation and chairing could be more easily resolved in the context of a revised management structure. If this Committee is not to be given a more expansive policy role, but instead have a more narrowly defined mandate, there may be no need for external members: it could be replaced by a staff-level decision-making process. In any case alternative accountability arrangements would be needed, not least to avoid undue concentration of decision-making.

Although it has functioned adequately in the years since 2009, a structure with such a concentration of residual power in one individual, whoever they may be, should not be retained for the longer run. We recommend that some way should be found by the legislature of vesting residual powers in a group, which can then delegate these to the Governor; this would remove a potential source of vulnerability in the governance structure. In practice, the Governor would continue to be by far the dominant decision-maker, as is not inappropriate, but the structure would overall be more balanced..

The Supervisory Board could also exercise a stronger role. Although it is not the ultimate authority of the Bank, it is an important entity. We feel that more could be made of it; a reinforcement of its mandate might help.

1. What we have looked for.

Forming a new public policy institution through the comprehensive merger of two predecessors and aiming at the integration of its activities as an unitary entity is an ambitious undertaking. Effective governance of the new Central Bank of Iceland as defined by the 2019 legislation has been a major task which will continue to evolve well beyond the three years of operation which we have seen to date.

Governance of a public policy institution begins with the legislative framework that defines goals, powers and external reporting obligations of the institution as well as typically specifying the institution's decision-making bodies and elements of the management structure. Eligibility for appointment to the main decision-making bodies and the procedures for making such appointments are also typically laid out in legislation. The Icelandic Central Bank Act of 2019 follows this standard model.

When it comes to populating this legislative template for a national central bank, there are many different models from international experience on which to draw. Most countries seem to have arrived at their current systems partly through accidents of history and contrasting cultural traditions. No single model has emerged. To some extent this reflects the differences from country to country in the scope of the central bank's mandate and in the degree to which the central bank has been established on an independent basis, but the differences go deeper than that. Even within Europe, and even within the Nordic area, there are significant differences. Although, as mentioned, there are some obvious similarities with the Bank of England (especially the creation of three decision-making Committees), the 2019 legislative basis for the governance of the Central Bank of Iceland is unique. That is not necessarily a bad thing, but it does not follow from the multiplicity of models that work elsewhere that the choice of model is irrelevant.

Legislative provisions define only the skeleton of governance. The meat remains to be filled by the lived experience of the institution. And, whatever its skeleton, central banking experience tells us that effective governance will exhibit strengths along a number of dimensions, including the flow of information, the quality of analysis, the procedures of decision-making, the maintenance of trust, together with internalized norms and cultures of interaction within the organization. It is against this expectation that we have considered how the new Central Bank has emerged over the past three years.

Information. The Central Bank faces a constantly changing national and global economic and financial environment. Timely awareness of how conditions are changing is essential both in terms of macroeconomic developments (the prices of assets, goods and services, prices, interest rates and exchange rates, production, aggregate demand, employment and unemployment, credit, international payments, etc) and at the level of individual financial firms (capital, liquidity, market shares, product design, conduct, governance, operational efficiency, etc.). This demands collection or assembly of a vast range of data best understood by specialists who need to be facilitated and encouraged to interpret and share this information with relevant decisionmakers within the Bank.

Analysis. In the sophisticated economies of today, the kind of raw data that can be collected does not immediately point to the appropriate policy stance. This requires a reliable source of expert analysis which has to be adequate to answer the policy questions posed by the Central Bank's mandate. Managerial expertise in staffing the analytical functions and guiding the analysis is thus crucial.

Trust. Because of the multi-dimensional nature of its work, expertise in a central bank integrating financial supervision as does the CBI is necessarily distributed. The complexity of today's national and international financial regulations means that no-one knows it all, let alone has their finger on the pulse of the relevant local financial firms and markets. The state of the macroeconomy may be less opaque, but modelling potential future macroeconomic developments and the range of possibilities is something that also requires a team approach. Under these circumstances, the organization can work effectively only if there is a sufficiently strong network of trust to allow analysis and some decisions to be delegated. Of course trust is a matter of degree and has its limits. It must be earned, and the basis of the trust needs to be verified: these are inevitably a continuing challenge.

Decision-making (speed, robustness, formality, and review). At the heart of central banking are policy decisions, whether about the instruments of monetary and macro-prudential policy, or related to permissions requested by, or supervisory enforcement imposed on, regulated financial firms, for example. These decisions need to be timely yet robust. A decision delayed may be worse than no decision at all, but the consequences of a decision can be very consequential, whether for a regulated financial firm, or (in the case of monetary policy) for the economic well-being of the people of Iceland as a whole. Preparedness and expertise are crucial if both dimensions are to be satisfied. In the current complex and dynamic environment, appropriate delegation of decision making is a must. Important decisions should be processed with a degree of formality: the Central Bank has extensive powers, but their exercise can be challenged in court, and in that case adequate documentation of the considerations that were taken into account will be vital to maintaining the authority of the Central Bank. Many policy decisions involve fine judgements, and not all will work out as well as hoped. All public authorities should be open to internal review of past decisions, especially if they have been controversial or consequential.

Culture Applying to any public body, but especially relevant in conditions where two bodies with differing histories and cultures are merged, it is vital that constructive modes of interaction should be internalized by all staff. It goes without saying that transparency and integrity are *sine qua non*. The new institution’s culture should be one of openness to the ideas and mindsets of colleagues coming from different professional backgrounds and training, and who may have differing perceptions about the functioning of the financial sector. The present time continues to be a phase of learning across the “silos” of monetary and financial stability policy, prudential and conduct supervision.

International cooperation is an essential component of all areas of central banking and financial supervision. The related responsibilities and tasks are seldom doable without international coordination and implementation of internationally approved rules and practices. The organizational and governance arrangements at the CBI need to take this into account if it is to maintain contacts at the appropriate level of seniority with other central banks and supervisory authorities.

It is against this understanding of the key dimensions of governance that we have reflected on how the Central Bank of Iceland has evolved over the period since the merger.

2. The Committee Structure: MPC and FSN

The new legislation has introduced what has been seen as a rather elaborate structure of decision-making Committees.[25] The distribution of decision-making powers among three Committees is understood to have had the goal of avoiding a concentration of power in what

[25] The Committee structure has already been discussed in detail in the 2021 Report of the AC.

is now inherently a very powerful institution. Figure 8 shows how membership in the three Committees is divided between insiders (Governor and Deputy Governors) and outsiders.

It should be recalled that two of these Committees have a pre-history. A five-person monetary policy committee with two external members had already been in place since 2009 and this has been retained.[26] Furthermore, although the powers and responsibilities of the FMEN are narrower than that of the Board of Directors of the old FSA, the three external members that were appointed to the new Financial Supervision Committee (FMEN) were previously board members or alternates of the old FSA. Thus only the Financial Stability Committee (FSN), with its three external members, is a completely new decision-making Committee in the new Bank.[27]

The horizontal flow of information at the level of the senior decision-makers is promoted by the fact that each Committee has at least two of the Banks' Deputy Governors; all three sit on the FSN. The links are thus stronger between the FSN and the other two, which seems appropriate.

From our interviews with each of the members of the MPC and FSN we have formed the impression that debate is genuinely open and constructive, that information is provided by staff to members of the Committees as requested and as appropriate. For the MPC, which votes on a regular basis, with the voting made public in minutes, a degree of difference of opinion has been noted. Although all members voted for all fourteen interest rate changes that occurred in the period under review, on five occasions at least one member would have preferred a higher rate.[28] Similarly the members of FSN have influenced the final outcome of the meetings sometimes deviating from the original staff proposal. This suggests a healthy degree of engagement and avoidance of excessive group-think. The hope that external members would be "independent in state, in mind, and in appearance" seems to be fulfilled.

Decisions that fall to these Committees have generally been taken with appropriate deliberation and formality, though there were a one or two occasions during the stressed period in early 2020 when *ad hoc* steps seem to have been taken with at best *ex post* communication by the relevant Committee.

Even if the committee structure has thus been reasonably effective, the degree to which it has actually distributed power away from the Governor is somewhat limited. This may not be evident by looking at voting rights and legal powers, but seems clear to us as outside observers taking a holistic view. And it will be even more so if the proposed change in the mandate and governance of the FMEN is implemented, making the Governor the chair of that Committee.

After all, according to the law, the Governor directs and is responsible for the Bank's activities and operations and is authorised to take decisions on all Central Bank matters not

[26] With one membership change: the Bank's Chief Economist is no longer a member of the MPC (though he still presents the staff forecasts and analysis); instead, a seat is taken by the Deputy Governor in charge of Financial Stability).

[27] Up until the merger, the Governor and Deputy Governor of the CBI, the DG and Deputy DG of the FSA and a nominee of the Minister of Finance sat on a Systemic Risk Committee, but this did not have decision-making powers.

[28] These were external member Gylfi Zoega (on four occasions) and Deputy Governor Gunnar Jakobsson (on three occasions).

entrusted to others by law.[29] This is not new: it has been the case at the CBI since 2009.[30] It is not out of line with international practice for the Governor to hold extensive powers *de facto* but normally this is by delegation from a board or asupervisorybody, whereas in Iceland it is determined by law.[31] One could imagine circumstances when such power could result in poor decisions. While all senior decisionmakers have applied themselves assiduously to the task of taking decisions on the basis of the best available information and analysis, it remains an important challenge to ensure that a wide range of professional opinion is brought to bear on the matters requiring decisions and action from the Central Bank.

In such matters, what seems to the outside eye as a potential weakness in the design may not be readily evident to participants.

Although it has functioned adequately in the years since 2009, a structure with such a concentration of residual power in one individual, whoever they may be, should not be retained for the longer run. The channel of accountability through the Supervisory Board as currently designed is not enough, especially given the term and content of that Board's mandate. We recommend that some way should be found by the legislature of vesting residual powers in a group, which can then delegate these to the Governor; this would remove a potential source of vulnerability in the governance structure. In practice, the Governor would continue to be by far the dominant decision-maker, as is not inappropriate, but the structure would overall be more balanced..

3. Management Structures

As soon as the merger came into effect at the beginning of 2020, a new senior management structure was announced for the enlarged structure. Even though total employment at the Central Bank in its new form is almost 300, compared with about 175 before the merger, the end-2022 number of Departments is the same as in 2019, and far fewer than existed between the Central Bank and the FSA at the end of 2019.[32] The streamlining was effected quickly and decisively, despite some—likely inevitable—impact on staff morale and insecurity. The streamlining will have avoided overstaffing and duplication. On the other hand there can be no doubt that some subject matter expertise was lost through the terminations, even though the directors of surviving Departments had all served at that level in the precursor institutions.

[29] According to Article 3 of the Sedlabanki Act 2019: "The Governor the Central Bank directs and is responsible for the activities and operations of the Central Bank of Iceland and has decision-making power in all matters of the Bank that are not entrusted to others by law."
[30] We understand that, before 2009, residual powers at the CBI were held collectively by the three Governors.
[31] The three-committee model adopted in Iceland is often said to have been modelled on that of the Bank of England. But it is important to bear in mind that the Governor of the Bank of England has residual powers in the Bank of England only as the result of delegation of the Court of Directors of the Bank of England. The fact that the CBI does not have a board of directors is a fundamental difference in this respect and it concentrates power. Delegations can be revoked, whereas powers assigned in legislation can only be withdrawn by the legislature.
[32] Indeed, at that date there had been 13 director level positions at the Central Bank (to include the internal auditor, but excluding the subsidiary Greidsluveitan) and nine at the FSA (to include the DDG). The 2020-2022 structure had, on the same basis, 13 in total. This reduction reflected the consolidation of Human Resources, Information Technology and Administration, together with the placing of the staff of the legal departments into the General Secretariat, the merger of some Central Bank Departments (Statistics into Information Technology; Financial Market Infrastructure into Markets and Financial Stability).

There are now seven operational Departments, two of them focused on the classical central banking functions, monetary policy and financial market operations, one for financial stability, and four for supervision. Four support Departments and a General Secretariat, together with internal audit, make up the remainder of the Departments.[33] Clearly there are many effective ways of grouping these tasks; the current departmental structure seems coherent. Although a few Departments are still rather small, most Departments now engage a larger number of staff than they had before, more easily achieving critical mass of expertise which may help improve the quality of information flow and analysis.

However, we have concerns about the upward reporting structures of the Department Directors. The organization chosen by the Central Bank is quite unusual for a central bank that integrates supervisory matters. The Deputy Governors have no executive power over Department Directors. They are "meant to lead and guide". As a result, the twelve Department Directors and three Deputy Governors all report directly to the Governor (rather than having most of these reporting lines go through Deputy Governors, as would better reflect the practice in most central banks). This may have been a good interim model while the new merged organization was being built, but is unlikely to be the best way of running the Bank on a continuing basis.

There is much to be said for reconsidering this structure now. The span of control is much wider than employed in most organizations and risks slowing decisions and weakening the guidance provided to Department Directors. There is also the question of key-person risk if too much of the decision-making is funnelled through a narrow channel of authority. It is said by supervised firms that decisions from the Central Bank on supervisory matters have been considerably slower than was the case with the FSA.

Furthermore, leaving the Deputy Governors out of the chain of reporting for Departmental Directors inevitably weakens the flow of information to the decision-making Committees and limits the scrutiny and oversight of the work of Departments. Working as a team in the management of the institution as a whole, the Governor and Deputy Governors are likely to be more effective than any one individual could be.

Indeed, under current arrangements, the overall role of Deputy Governors is somewhat vague. It is true that they have been assigned a number of specific tasks, including chairing a number of standing staff steering groups, committees and workstreams covering cross-departmental issues; these are worthwhile initiatives. But, although each is in close contact with the senior staff members in their sphere of interest, they have no direct reports, no staff to manage. While they can exercise leadership through expertise, knowledge, influence and example, the fact that reporting lines go elsewhere surely compromises their ability to fulfil the Government's intention, in the legislation, that they should have professional oversight over the work of the Bank in their respective areas and that they should be responsible for the preparation of the meetings of the committee. Their portfolio of tasks looks more like the work programme of a senior advisor than that of a Deputy Governor and we wonder if it corresponds with what legislators had in mind, when they expanded the number of Deputy

[33] As far as gender balance is concerned, 6 of 13 director level positions are held by women, and 12 of 26 deputy directors.

Governors to three, assigning them to monetary policy, financial stability and financial supervision respectively and charged each of them to "oversee" matters relating to their area.

It is often at Deputy Governor level that the most important international contacts are maintained; this is the case at the CBI also. For this to work well, though, the CBI's staff at that level should evidently be as fully integrated into the operations and thinking of the CBI as are their international interlocutors.

The legislation states that decisions on organisation should be agreed by the Governor and the three Deputy Governors, but in practice this structure has to be seen as an initiative of the Governor (it was decided before one of the Deputy Governors had been appointed). While this structure had some advantages in ensuring a speedy integration of the various sections of the expanded and merged organization, it does not recommend itself for the long-term. The structure should be reconsidered; a new decision could be taken even during the mandate of the current Governor and Deputy Governors.

4. Supervisory Board

Although the Supervisory Board is not the ultimate authority of the Bank and although it is not part of its role to challenge the Bank's expert professional assessments, it is an important entity whose members are to act in their personal capacity and exclusively in the interest of ensuring that the Bank performs its mandate. We feel that more could be made of it; a reinforcement of its mandate might help—though this would have to be carefully navigated so that it does not undermine the independence of the CBI from political pressures.

The internal auditor reports to the Supervisory Board and this is potentially a highly important channel for ensuring that management of the Bank is being operated on a secure basis.

It should also be made clear that, if other channels should fail, it can be a recourse for any whistle-blower who might have evidence (for example) of excessive regulatory lenience. This should, however, apply only after the normal channels have been used.

The Supervisory Board could also take a more proactive approach seeking to resolve high-level issues that may arise between CBI and the Ministry of Finance, such as on the terms and conditions of the Governor and the Deputy Governors. After all, independence of the Central Bank clearly requires assurance that the remuneration of high decision-makers should not be subject to arbitrary downward revision by the Government; any such attempt should trigger a vigorous response from the Supervisory Board.

More generally, the Supervisory Board should not hesitate to report to Parliament if important difficulties cannot be resolved.

List of Main Recommendations

Monetary Policy

1. The price stability goal remains appropriate. Without diluting it, there could be clearer communication about the trade-off involved between the speed with which inflation can be brought back to target and the level of economic activity.
2. There should be greater internal precision on the goals of foreign exchange intervention and the terms on which stabilizing intervention is delegated. It is not clear that the challenge of integrating policy on the exchange rate with inflation targeting has yet been fully worked out.
3. The macroeconomic impact of shifts in the inflation-indexed bond market and indexed mortgage rates deserves continued attention in the monetary policy discussions.
4. All monetary policy decisions should be formally approved by the MPC before being announced. It is especially important that all communication (e.g. at the press conference) clarifies which statements are personal and which are fully endorsed by the Committee as a whole. A more detailed formal communications strategy setting out principles to be followed by all the members of the MPC should be agreed.

Financial Stability

5. Housing price developments—which have been very important in affecting targeted inflation—deserve more coordinated attention from the monetary and financial stability sides. The FSN should be encouraged to share its deliberations on the use of macroprudential instruments with the MPC, which in turn could express its views on the use of such instruments to the FSN.
6. The pension system warrants a special focus from a financial stability point of view to better understand under what circumstances pension funds could potentially amplify market volatility and distortions.
7. A sequence of contrasting stresses representing the different ways in which the economy could plausibly be hit by a severe shock should be used for the banking stress tests. More reliance should be placed on reverse tests.
8. Consideration should be given to designing an appropriate stress test for all of the main pension funds.

Micro-prudential Supervision

9. While the CBI's approach to micro-prudential supervision is rightly strong on ensuring legal compliance, this should not come at the expense of adequately interrogating business models for robustness, including awareness of climate change and other environmental, social and governance risks.
10. There should continue to be dialogue between the financial stability specialists and supervision staff, but it is the latter who should remain responsible for guiding the SREP and its associated decisions.
11. A strengthening of the legislation on pension fund regulation (and also, for example, on the supervision of actuaries), as has long been advocated by the CBI (and by the FSA before it), should be proposed by Government to the Althing.

12. Given heightened geopolitical tensions, increased vigilance seems desirable in the assessment of entities intending to acquire qualified (i.e. large) ownership holdings in supervised entities.
13. On one interpretation of the law, the CBI would not be allowed to increase spending on supervision beyond the pre-approved annual budget even if an urgent need, unforeseen in the budget, was perceived. This would be an unfortunate situation, and the legal position should be cleared up to allow that possibility.

Governance

14. The mandate of the FMEN should be reconsidered.
    - One could imagine moving the FMEN in either of two different directions: broadening to include deliberations on all strategic policy issues related to micro supervision (as recommended in 2021 by the AC).
    - If the narrowing direction is chosen, then (as also suggested by the AC) a fully internal decision-making process could replace the FMEN. In this case also, though, the complexity and range of topics to be decided would require assigning management of the relevant staff resources to the relevant Deputy Governor. It is vital that the CBI be able to make urgent and immediate decisions without delay, especially when it comes to supervisory matters.
15. Although it has functioned adequately for the CBI in the years since 2009, a governance structure without much sharing of residual authority should not be retained for the longer run.

~~16.~~ The new senior management structure may have been a good interim model while the new merged organization was being built, but is unlikely to be the best way of running the Bank on a continuing basis. There is much to be said for reconsidering this structure now~~.~~

17. More could be made of the Supervisory Board. It could, for example, seek to resolve high-level issues that may arise between CBI and the Ministry of Finance. It should not hesitate to report to Parliament if important difficulties cannot be resolved.

Figures

(All of the data in the figures are calculated from published CBI sources)

Figure 1: Showing how the volatility of the exchange rate remained moderate

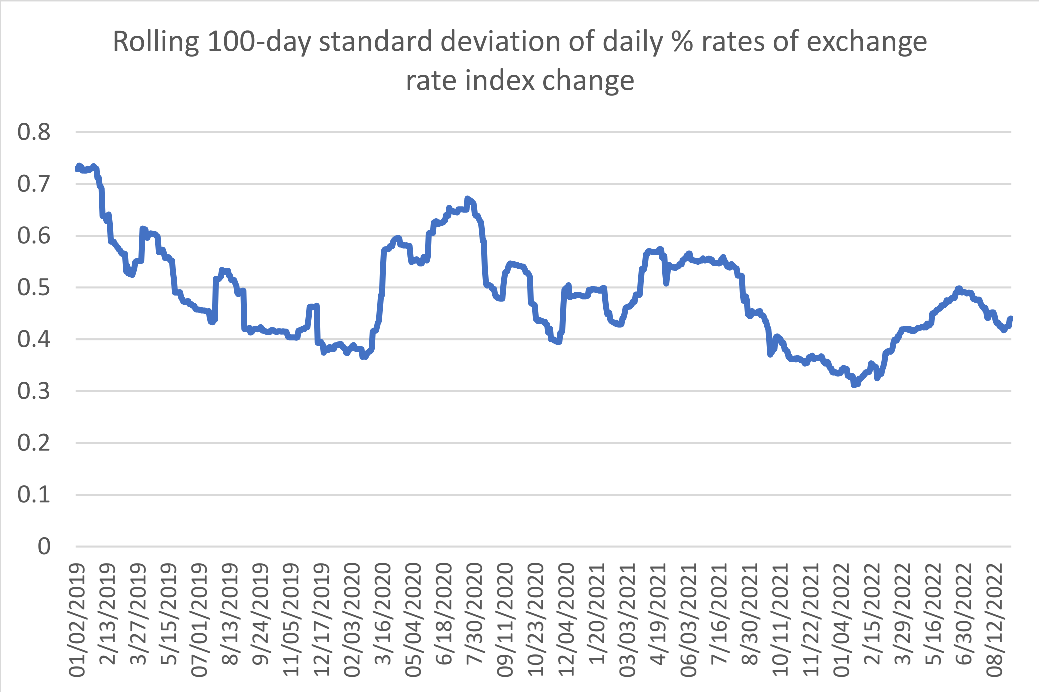


Figure 2: Showing how exchange rate and interest rate are inversely related

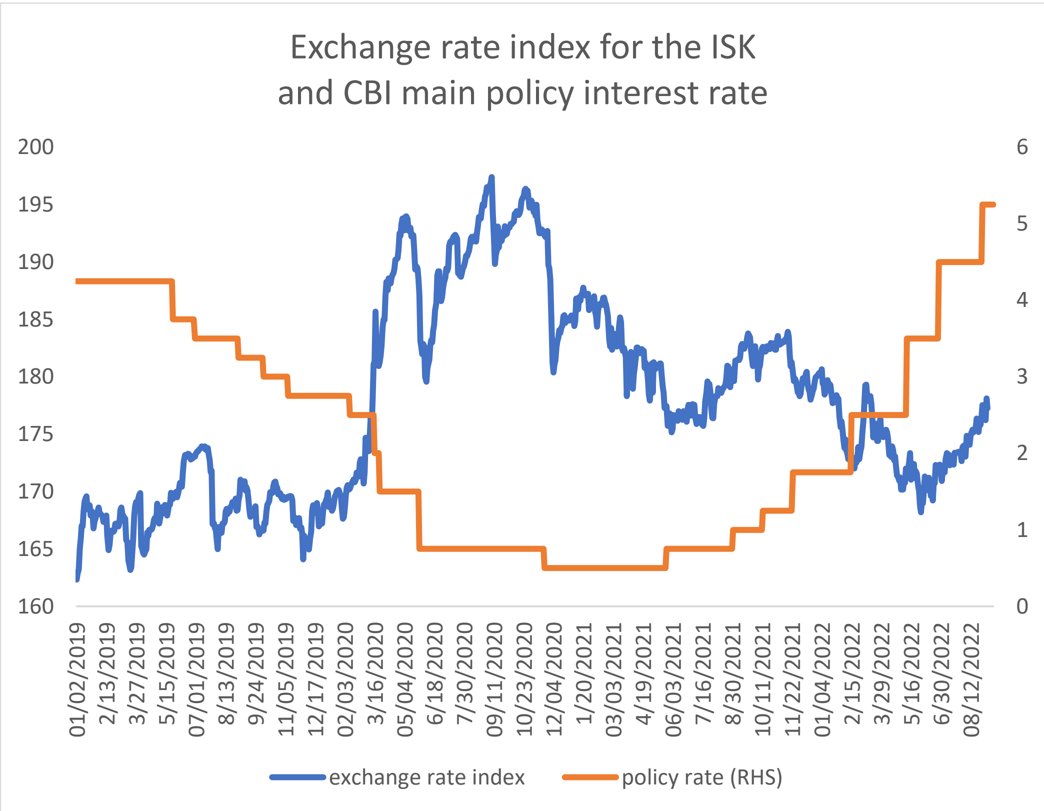


Figure 3: Showing how overall banking system liquidity has remained ample 2020-22

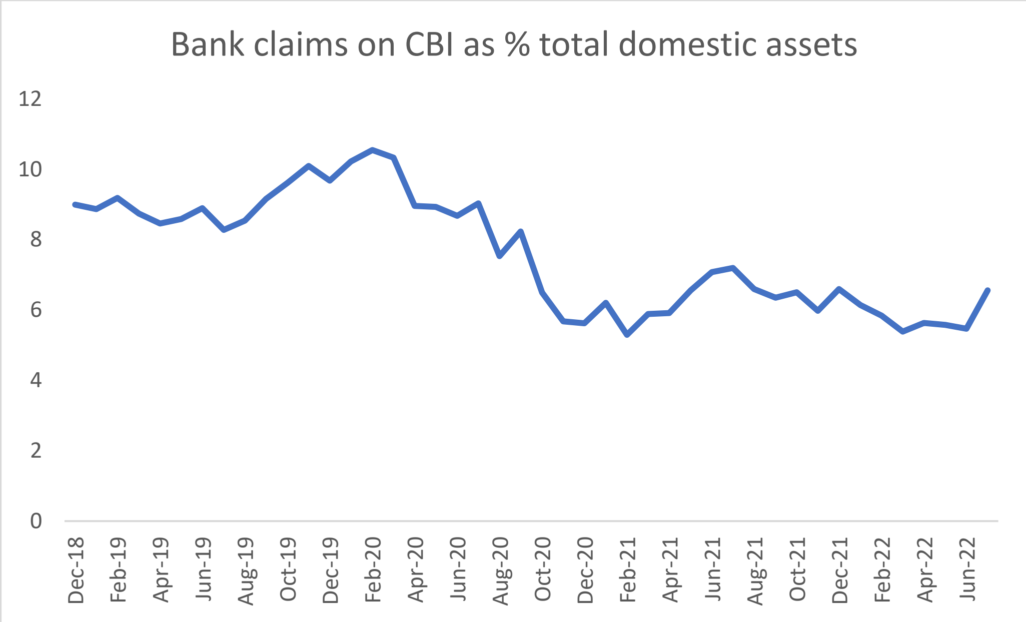


Figure 4: Showing the jump in non-indexed mortgage loans when interest rates were lowered

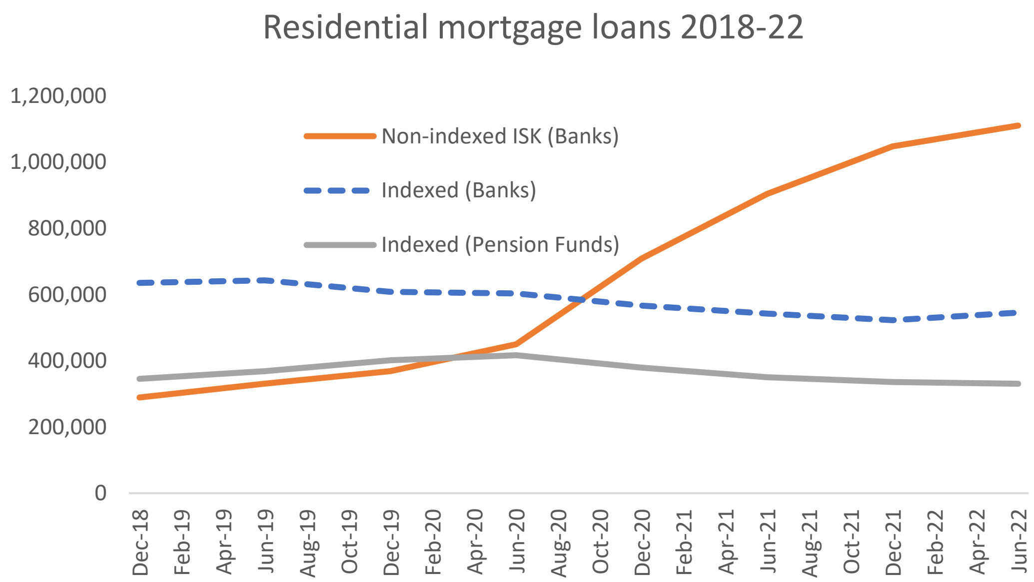


Figure 5: Showing the surge on overall mortgage loans when interest rates were lowered

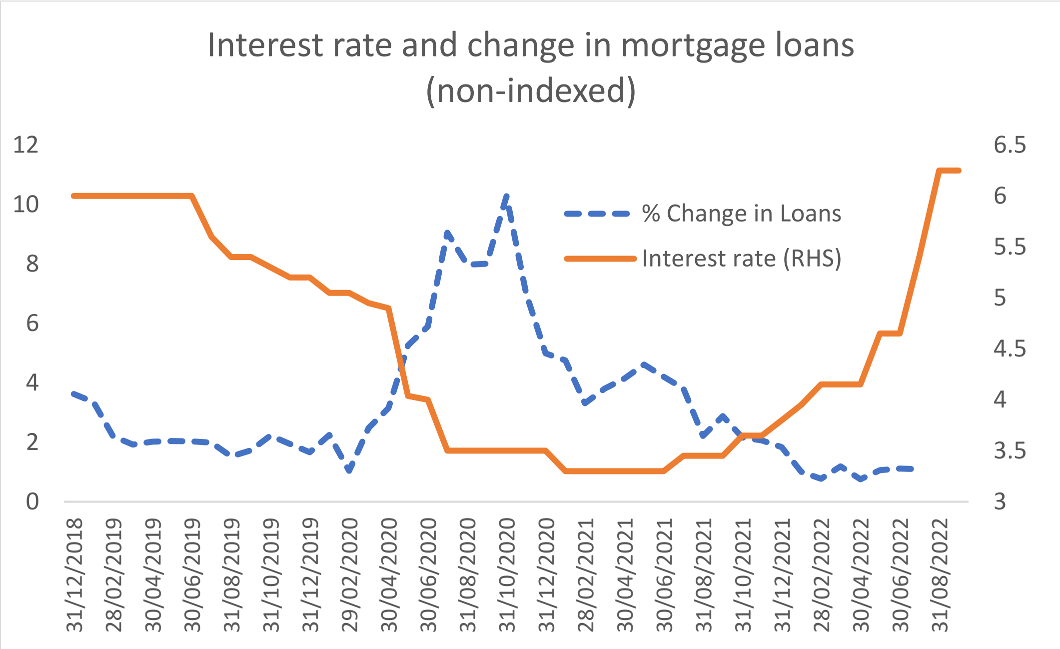


Figure 6: Showing how indexed interest rates moved much less than nominal rates

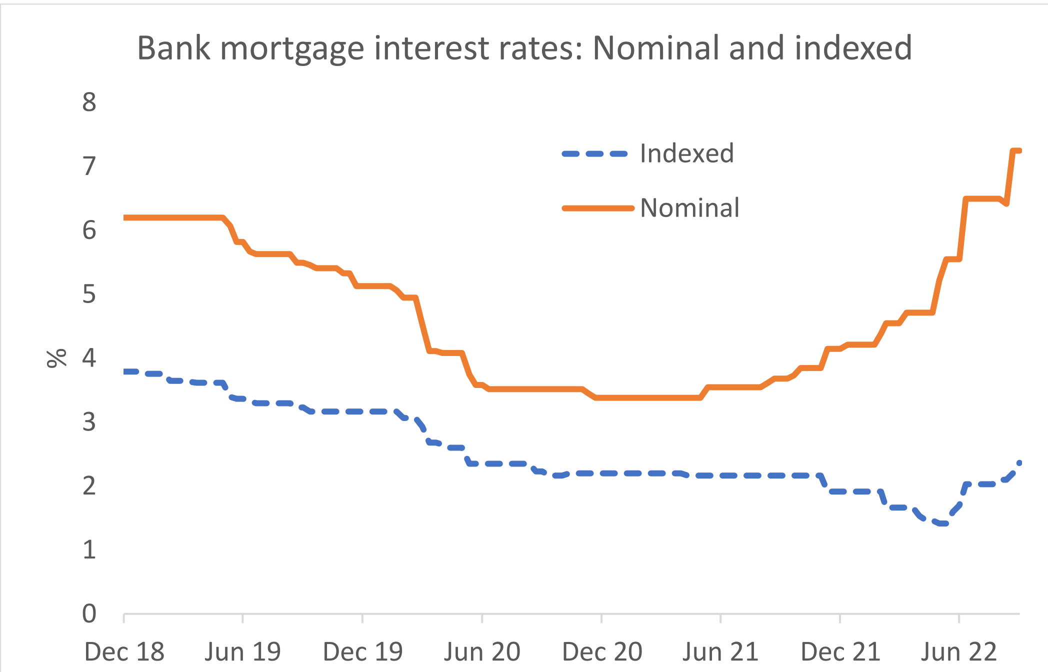


Figure 7: Showing repeated disappointment on inflation forecasts

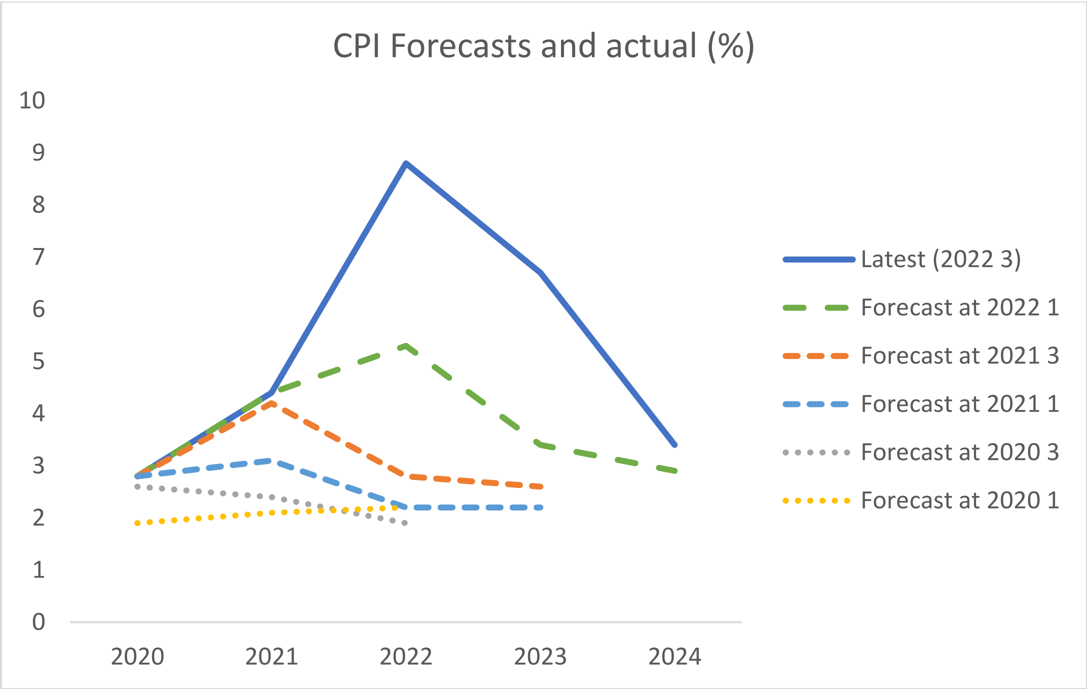
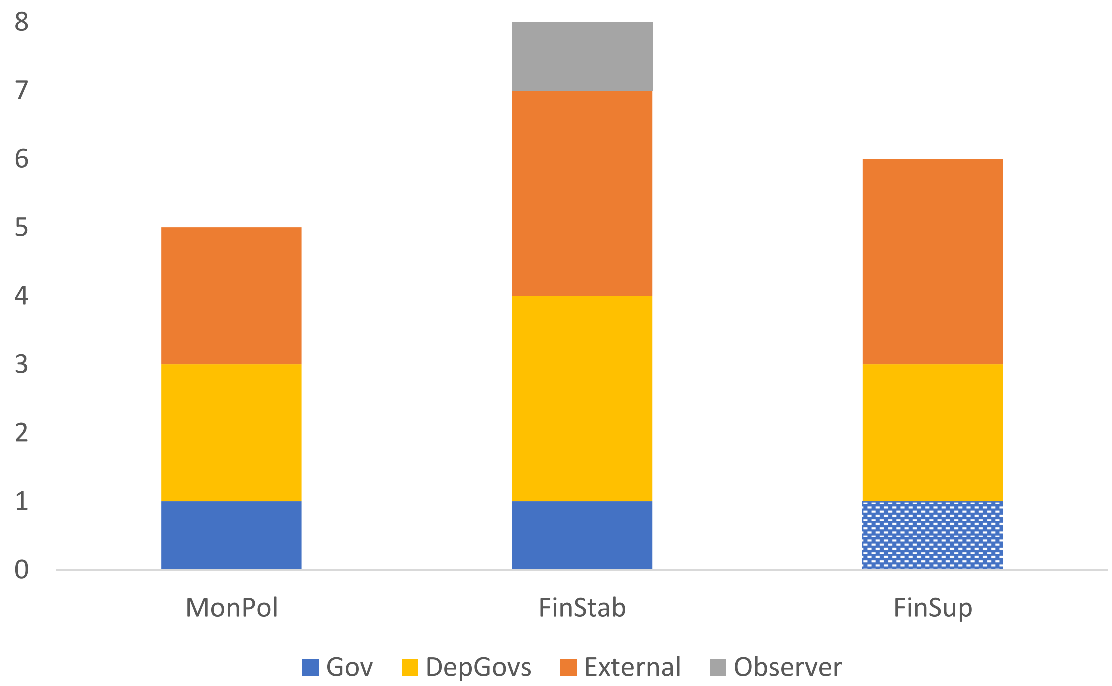


Figure 8: Showing the composition of decision-making Committees at the CBI



Appendix 1: List of Interviewees

Andri Fjeldsted
Arnaldur Sölvi Kristjánsson
Ásgeir Jónsson
Áslaug Árnadóttir
Ásta Þórarinsdóttir
Axel Hall
Benedikt Árnason
Bergsteinn Einarsson
Bjarni Benediktsson
Bjarni Þór Gíslason
Björk Sigurgísladótir
Björn Rúnar Guðmundsson
Björn Rúnar
Bryndís Ásbjarnardóttir
Elísabet Þórey Þórisdóttir
Elmar Ásbjörnsson
Erna Björk Sverrisdóttir
Finnur Sveinbjörnsson
Guðmundur Árnason
Guðmundur Birgisson
Guðmundur Kr. Tómasson
Guðrún S. Gunnarsdóttir
Guðrún Þorleifsdóttir
Gunnar Jakobsson
Gylfi Magnusson
Gylfi Zoega
Halldór Benjamín Þorbergsson
Harpa Jónsdóttir
Haukur Benediktsson
Herdis Steingrímsdóttir
Ingimundur Friðriksson
Íris Guðrún Ragnarsdóttir
Jón Guðni Ómarsson
Jón Sigurgeisson
Jón Þór Sturluson
Katrin Ólafsdóttir
Kristján Kristjánsson
Lilja Alfreðsdóttir
Logi Ragnarsson
Már Guðmundsson
Ólafur Sigurðsson
Páll Ásgeir Guðmundsson
Páll Friðriksson
Rannveig Júníusdóttir
Rannveig Sigurðardóttir
Rósa Björk Sveinsdóttir
Rúnar Guðmundsson
Rut Gunnarsdóttir
Sigríður Logadóttir
Stefanía Kolbrún Ásbjörnsdóttir
Sturla Pálsson
Thorarinn Pétursson
Þórunn Guðmundsdóttir
Tómas Brynjólfsson
Tryggvi Pálsson
Úlfar Stefánsson
Unnur Gunnarsdottir

Appendix 2: Terms of Reference

1. INTRODUCTION

1.1. Article 36 of the Act on the Central Bank of Iceland (here after referred to as the Act, the CBI or the Bank) stipulates that “every five years, the Minister shall task three impartial experts in the fields of monetary and financial economics and financial supervision to carry out an appraisal of the Central Bank of Iceland’s performance in the attainment of its objectives concerning price stability, financial stability, and the conduct of financial supervision.”

1.2. The appraisal shall also cover other aspects of the Bank’s operations, such as organisational structure, distribution of tasks, and authorisations.

1.3. The Team should aim to provide an overall appraisal of the Central Bank of Iceland’s performance in the attainment of its objectives, i.e. how successful the Bank has been in achieving the objectives of promoting price stability, financial stability, and sound and secure financial activities, cf. Article 2 of the Act.

1.4. According to Temporary Provision VII of the Act, the first appraisal shall be prepared by the end of 2022.

2. DESCRIPTION OF THE APPRAISAL

The Team is expected to focus its work on the following areas:

2.1. The use of the instruments of monetary policy mentioned in Article 10 of the Act to achieve the price stability objective.

2.2. The application and use of the following instruments of macroprudential policy:

- a) Capital buffers, cf. Article 86 of Act No. 161/2002 on Financial Undertakings.
- b) CBI Rules on liquidity and net stable funding based on Article 83 of the same Act.
- c) The setting of a loan to value (LTV) ratio of new loans and debt service to income (DSTI) ratio cf. Act no. 118/2016, on mortgage lending to consumers.
- d) CBI Rules on Foreign Exchange Balance, no. 784/2018.
- e) CBI Rules on Derivatives Transactions in which the Icelandic Króna is Specified in a Contract Against Foreign Currency, no. 765/2021.

2.3. The team may also evaluate the past use of a Capital Flow Measure (CFMs) and the potential for future use of such tools.

2.4. The broad conduct of the Bank‘s financial supervisory activities and the appropriateness of the supervisory framework.

2.5. The allocation of responsibilities and instruments between the three main policy committees with respect to best practice.

2.6. The effectiveness of the division of responsibilities between the Bank’s supervisory activities and its financial stability functions.

2.7. Evaluate whether other Central Bank tasks listed in Article 2, such as maintaining international reserves and promoting a safe, effective financial system, including domestic and cross-border payment intermediation, have been successfully carried out in a prudent manner.

2.8. Assess whether the Bank’s current organisational structure facilitates an efficient and sound decision making process.

2.9. Any other activity the team considers to be of importance for achieving the Bank’s mandate.