MONETARY POLICY COMMITTEE REPORT TO PARLIAMENT

2018 • 2

Monetary Policy Committee Report to Parliament

21 January 2019

The Act on the Central Bank of Iceland stipulates that the Monetary Policy Committee (MPC) of the Central Bank of Iceland shall submit to Parliament (Alþingi) a report on its activities twice a year and that the contents of the report shall be discussed in the Parliamentary committee of the Speaker's choosing.

The Act requires that the MPC meet at least eight times each year. Since the last Report was sent to Parliament, the Committee has held four regular meetings, most recently on 12 December 2018. The following report discusses the work of the Committee between July and December 2018.

Table 1. Central Bank of Iceland interest rate decisions in H2/2018 (%)

Date	*Current accounts*	*Seven-day term deposits*	*Collateral-ised loans*	*Over-night loans*
12 Dec.	4.25	4.50	5.25	6.25
7 Nov.	4.25	4.50	5.25	6.25
3 Oct.	4.00	4.25	5.00	6.00
29 Aug.	4.00	4.25	5.00	6.00

Monetary policy formulation

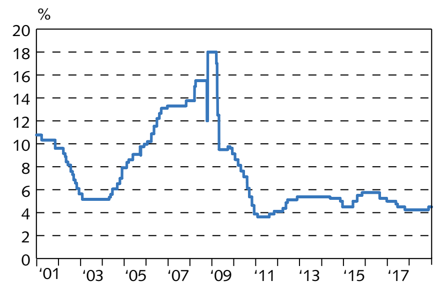
According to the Act on the Central Bank of Iceland, the Central Bank's principal objective is to promote price stability. This objective is further described in the joint declaration issued by the Bank and the Icelandic Government on 27 March 2001 as an inflation target of 2½% in terms of the consumer price index. Furthermore, the Act stipulates that the Central Bank shall promote the implementation of the economic policy of the Government to the extent that it does not consider this policy inconsistent with its main objective of price stability. The Bank shall also promote financial stability. By law, the MPC takes decisions on the application of the Bank's monetary policy instruments; furthermore, the MPC's decisions shall be based on a thorough and careful assessment of developments and prospects for the economy, monetary policy, and financial stability.

The MPC bases its decisions in part on an analysis of current economic conditions and the outlook for the economy as presented in the Bank's *Monetary Bulletin*. The MPC's statements and minutes, enclosed with this report, contain the arguments for the Committee's decisions in the latter half of 2018.

Chart 1

Central Bank of Iceland key interest rate[1]

Daily data 3 January 2001 - 31 December 2018



1. The Central Bank's key interest rate is defined as follows: the 7-day collateralised lending rate (until 31 March 2009), the rate on deposit institutions' current accounts with the Central Bank (1 April 2009 - 30 September 2009), the average of the current account rate and the rate on 28-day certificates of deposit (1 October 2009 - 20 May 2014), and the rate on 7-day term deposits (from 21 May 2014 onwards).
Source: Central Bank of Iceland.

Developments from July to December 2018

The MPC kept the Bank's interest rates unchanged at its meetings in August and October but decided in November to raise the Bank's key rate (the rate on seven-day term deposits) by 0.25 percentage points, to 4.5%.[1] Until then, the Bank's interest rates had been

1. The key rate is the interest rate that is the most important determinant of short-term market rates and therefore is the best measure of the monetary stance. At present, this is the seven-day term deposit rate.

unchanged since early October 2017. At the last meeting of the year, in December, the MPC decided to keep interest rates unchanged, and the Bank's key rate was therefore 4.5% at the end of 2018.

In June 2016, the Bank introduced a capital flow management measure, a special reserve requirement (SRR) entailing that 40% of new inflows of foreign currency for investment in high-yielding deposits and electronically registered bonds and bills issued in krónur must be held in a non-remunerated account with the Central Bank for one year. At the beginning of November 2018, the ratio was lowered to 20%, as conditions had developed that permitted a reduction in the SRR, with a narrowing interest rate differential and a lower exchange rate of the króna. Furthermore, it was announced at the beginning of December 2018 that a bill of legislation changing the implementation of the SRR was to be presented. The proposed amendment allows for increased flexibility in the form of the special reserve requirement on new inflows of foreign currency, but it does not provide for changes in the holding period or the special reserve ratio.

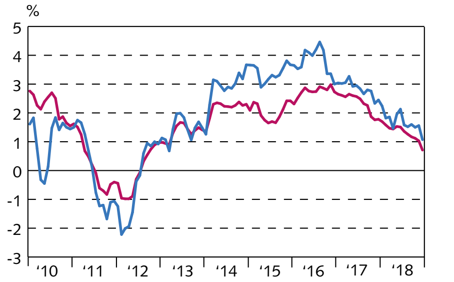
The monetary stance as measured in terms of the Bank's real rate eased in the latter half of 2018, concurrent with increased inflation and inflation expectations. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 0.6% at the end of December, as opposed to 1.4% at the end of June. The Bank's real rate in terms of twelve-month inflation fell by 0.8 percentage points over the same period, to 0.8% at the end of the year.

Yields on nominal Treasury bonds began to rise in late 2017 and continued to do so until November 2018, when they began to fall. Interest rates on 10-year bonds were about 5.5% at the end of 2018, about the same as at the end of June. Since the first half of 2018, yields on indexed Treasury and Housing Financing Fund bonds have fallen in line with the reduction in the Central Bank's real rate, and the yield on the longest indexed Treasury bonds was about 1.6% at the end of December, or 0.4-0.5 percentage points lower than in June.

Capital inflows for new investment totalled just over 13 b.kr. in H2/2018, and outflows of capital that had previously been imported for new investment in the bond market totalled about 13 b.kr. New investment in the domestic bond market increased marginally from the first half of the year but was still considerably less in 2018 than in 2017. Inflows into listed equities, which are not subject to the Central Bank's special reserve requirement, and inflows into other investments contracted from the first half of the year, while capital outflows have increased. Most of the capital released from the special reserve requirement during the period has been reinvested.

The exchange rate of the króna remained relatively stable in H1/2018, but in early September it began to fall and exchange rate volatility to increase. The slide in the exchange rate was due to some extent to temporary uncertainty about domestic airline WOW Air's financing in early September. The macroeconomic factors that had generally driven the appreciation of the króna in recent years appeared to have given way as well. Terms of trade had deteriorated, and export growth had slowed. The operating environment in the tourism industry had grown more difficult, and the outlook was for a

Chart 2
Real Central Bank of Iceland interest rates[1]
January 2010 - December 2018

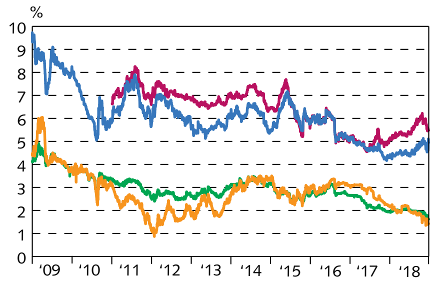


Real Central Bank of Iceland interest rate in terms of twelve-month inflation

Real Central Bank of Iceland interest rate in terms of various measures of inflation and inflation expectations[2]

1. From 2010 to May 2014, the nominal policy rate was the average of the current account rate and the maximum rate on 28-day CDs. From May 2014, the policy rate has been the seven-day term deposit rate.
2. Until January 2012, according to twelve-month inflation, one-year business inflation expectations, one-year household inflation expectations, the one-year breakeven inflation rate, and the Central Bank forecast of twelve-month inflation four quarters ahead. From February 2012 onwards, according to the above criteria, plus one-year market inflation expectations based on a quarterly Central Bank survey.
Sources: Gallup, Statistics Iceland, Central Bank of Iceland.

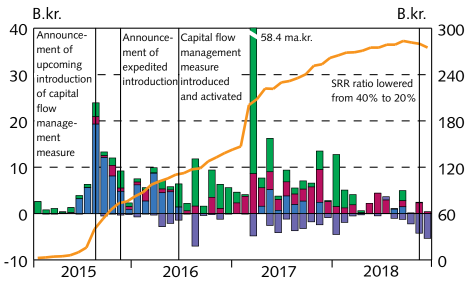
Chart 3
Bond yields
Daily data 2 January 2009 - 28 December 2018



Nominal Treasury bond maturing in:
2019
2031
HFF bond maturing in:
2024
2044

Source: Central Bank of Iceland.

Chart 4
Capital flows due to registered new investments
January 2015 - December 2018



Capital inflows into government bonds (left)
Capital inflows into listed shares (left)
Other capital inflows (left)[1]
Capital outflows (left)
Cumulative net capital flows (right)

1. Other inflows in March 2017 derive almost entirely from non-residents' acquisition of a holding in a domestic commercial bank.
Source: Central Bank of Iceland.

slowdown in output growth in H2/2018. By the time the exchange rate of the króna bottomed out in late November, it had fallen by over 13% in trade-weighted terms since end-June. In December, the depreciation reversed in part, however, and by the end of the year the exchange rate was about 7% lower than at end-June. Even though volatility of the króna increased in the latter half of the year, the króna does not stand out in international comparison. Compared to the euro and several smaller advanced countries' currencies, the spread between the highest and lowest exchange rates in 2018 was widest in Iceland, but there was little difference between Iceland, Australia, and New Zealand. This difference can change considerably from one year to another.[2]

In line with the Central Bank's declared objective of intervening primarily to mitigate excess short-term exchange rate volatility, the Bank traded in the interbank foreign exchange market four times in H2/2018. It bought foreign currency for 0.4 b.kr. and sold it for about 3.3 b.kr., which accounted for about 3% of total foreign exchange market turnover during the period.

It was announced in early December that there were plans to release the last of the offshore króna assets that were locked in by the capital controls in the aftermath of the financial crisis. The resolution of such a legacy problem unrelated to current underlying economic conditions should not be allowed to lower the exchange rate of the króna; therefore, the Bank will intervene in the foreign exchange market, in line with previous statements.[3]

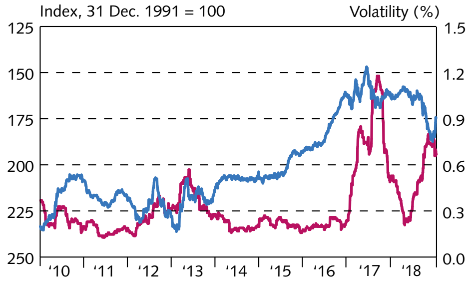
In terms of the consumer price index, inflation measured 2.7% in 2018, as compared with 1.8% in 2017. Inflation was close to the target until autumn 2018, but picked up rapidly in the last months of the year, rising well above the Bank's inflation target. It measured 3.7% in December, up from 2.6% in June. Inflation excluding housing rose faster than measured inflation, from 1.1% in June to 2.7% in December. Underlying inflation has also risen, and the median of various measures of underlying inflation was 3.7% in December, as compared with 2.9% in June.

Most components of the consumer price index rose in H2/2018. Increased imported goods prices following the depreciation of the króna had the most impact. The rise in house prices in H2 was similar to that in H1, although the pace of twelve-month house price inflation had continued to ease until autumn 2018. House prices nationwide were up nearly 7% in December, the same as in June. Global oil prices peaked in early October, at more than 50% above prices in early October 2017. By the year-end, however, they were a fourth below end-2017 prices. Domestic petrol prices had risen 9% year-on-year in December, as opposed to a just over 17% year-on-year increase in June.

Chart 5

Exchange rate and volatility of the króna

Daily data 4 January 2010 - 31 December 2018



Trade-weighted exchange rate of the króna (inverted left axis)[1]

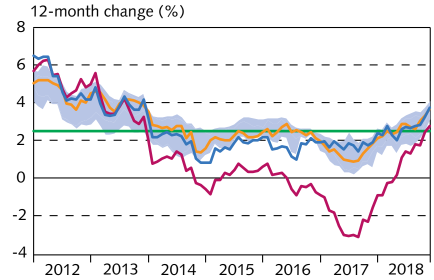
Volatility of the króna (right)[2]

1. Price of foreign currency in terms of the króna. Inverted axis shows a stronger króna as a rise. 2. Volatility is measured by the standard deviation of daily changes in the past 3 months.
Source: Central Bank of Iceland.

Chart 6

Headline and underlying inflation[1]

January 2012 - December 2018



CPI

CPIXH

Measures of underlying inflation, median value

Inflation target

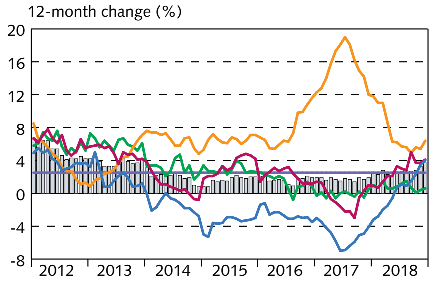
High-low range of underlying inflation

1. Underlying inflation measured using a core index (which excludes the effects of indirect taxes, volatile food items, petrol, public services, and real mortgage interest expense) and statistical measures (weighted median, trimmed mean, a dynamic factor model, and a common component of the CPI).
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 7

Imported and domestic inflation[1]

January 2012 - December 2018



CPI

Imported prices (31%)

Domestic goods (12%)

Housing (26%)

Private services (22%)

Inflation target

1. Imported inflation is estimated using imported food and beverages and the price of new motor vehicles and spare parts, petrol, and other imported goods. The figures in parentheses show the current weight of these items in the CPI.
Sources: Statistics Iceland, Central Bank of Iceland.

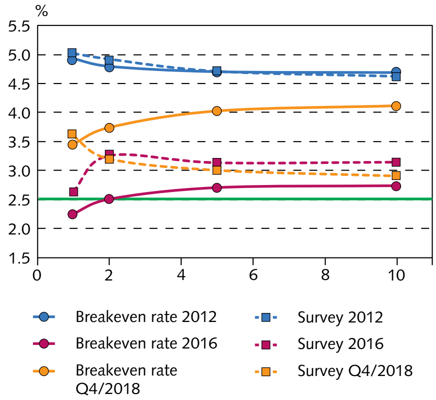
2. See further detail in a press release published 18 January 2019.

3. As was stated in the Minutes of the Monetary Policy Committee published 26 December 2018, in this context the Central Bank would take into consideration that there were signs that the recent currency depreciation had pushed the real exchange rate below its equilibrium value. MPC members agreed that it was likely that the depreciation represented in part an undershooting stemming from greater pessimism in the market than was warranted.

Chart 8

One- to ten-year inflation expectations[1]

Period averages



1. Inflation expectations 1, 2, 5, and 10 years ahead, estimated from the breakeven inflation rate in the bond market and market survey responses. Period averages.
Source: Central Bank of Iceland.

Inflation averaged 3.3% in Q4/2018, just above the baseline forecast of 3.2% as published in *Monetary Bulletin* 2018/4 on 7 November. According to the forecast, the inflation outlook had deteriorated since the August forecast, owing mainly to the depreciation of the króna, but also to the expectation that the output gap would be wider through mid-2020 than had been assumed in August. According to the forecast, inflation will fall to the target beginning in H2/2020.

Inflation expectations had risen by most measures since the MPC's last report to Parliament, submitted in July. According to recent surveys, market agents expected inflation to measure 3.6% in one year's time, and households and corporate executives expected it to measure 4%. Executives also expected it to average 3% over the next five years, while households expected it to average 3.5%, which is unchanged from the time the last report was sent to Parliament. In addition, market agents expected inflation to average about 3% in the next five and ten years, as opposed to 2.6% in the survey conducted in May 2018. In Q4/2018, the five- and ten-year breakeven inflation rate was about 4%, which was just under 1 percentage point higher than in Q2.

The MPC has reiterated that it has both the will and the tools necessary to keep inflation at target over the long term, and members agree that if inflation expectations continue to rise and remain persistently at a level above the target, it will call for a tighter monetary stance. Other decisions, particularly those relating to the labour market and fiscal policy, will then affect the sacrifice cost in terms of lower employment.

Accompanying documents

The following documents are enclosed with this report:

1. Monetary Policy Committee statements from July to December 2018.
2. Minutes of Monetary Policy Committee meetings from July to December 2018.
3. Central Bank Chief Economist's presentation at the conference *The 2008 Global Financial Crisis in Retrospect*, held at the University of Iceland on 31 August 2018.
4. Central Bank Chief Economist's presentation on economic developments and prospects, given at a meeting of the Icelandic Federation of Trade on 11 September 2018 (in Icelandic).
5. Deputy Governor's speech on monetary policy and financial stability, given at Reykjavík University on 12 October 2018.
6. Press release on the amended Rules on Special Reserve Requirements for New Foreign Currency Inflows, 2 November 2018.
7. Governor's speech, given at the Iceland Chamber of Commerce's monetary policy meeting, 8 November 2018.
8. Press release on amending bill of legislation - liberalisation of capital controls on offshore króna holders and reserve requirement on capital inflows, 7 December 2018.
9. Press release on the foreign exchange market, exchange rate

developments, and international reserves 2018, 18 January 2019.

10. Report on responses to some of the proposals from the task force on the review of monetary policy.
11. Joint declaration by the Government and the Central Bank on inflation targeting, March 2001.

On behalf of the Central Bank of Iceland Monetary Policy Committee,

Már Guðmundsson

Governor of the Central Bank of Iceland
and Chair of the Monetary Policy Committee

Accompanying documents

No. 12/2018
29 August 2018

Statement of the Monetary Policy Committee
29 August 2018

The Monetary Policy Committee (MPC) of the Central Bank of Iceland has decided to keep the Bank's interest rates unchanged. The Bank's key interest rate – the rate on seven-day term deposits – will therefore remain 4.25%.

According to the Bank's new macroeconomic forecast, published in the August *Monetary Bulletin*, GDP growth will measure 3.6% this year, as it did in 2017. This is slightly stronger than the Bank had forecast in May. The improved outlook stems primarily from a more favourable contribution from net trade, which outweighs weaker growth in domestic demand. GDP growth is still expected to ease, with weaker export growth and a less rapid increase in domestic demand. Developments in house prices and indicators from the labour market point in the same direction.

Inflation measured 2.3% in Q2/2018 but had increased to 2.7% by July. Inflation excluding housing has risen as well, and the difference between measures of inflation including and excluding housing has narrowed considerably. The year-on-year rise in house prices continues to ease, but the opposing effects of the previous appreciation of the króna have diminished and petrol prices have risen. This trend will probably continue in the near term. The króna has depreciated slightly since the last MPC meeting, but the foreign exchange market has remained well balanced.

Indicators imply that long-term inflation expectations have risen somewhat above the target. The MPC reiterates that it has both the will and the tools necessary to keep inflation at target over the long term. If inflation expectations continue to rise and remain persistently at a level above the target, it will call for a tighter monetary stance. Other decisions, particularly those relating to the labour market and fiscal policy, will then affect the sacrifice cost in terms of lower employment.

The near-term monetary stance will depend on the interaction between a narrower output gap, wage-setting decisions, and developments in inflation and inflation expectations.

No. 14/2018
3 October 2018

Statement of the Monetary Policy Committee
3 October 2018

The Monetary Policy Committee (MPC) of the Central Bank of Iceland has decided to keep the Bank's interest rates unchanged. The Bank's key interest rate – the rate on seven-day term deposits – will therefore remain 4.25%.

According to preliminary national accounts figures, GDP growth in 2017 and H1/2018 was stronger than had been assumed in the August *Monetary Bulletin*. The positive output gap may therefore have been wider than previously projected. On the other hand, high-frequency indicators and surveys suggest that demand growth may subside more rapidly than previously assumed.

Inflation rose quarter-on-quarter in Q3/2018, in line with the August forecast. Inflation excluding housing has risen as well, and the difference between measures of inflation including and excluding housing has narrowed considerably. The year-on-year rise in house prices continues to ease, but this is offset by a sizeable increase in import prices in the recent term. This partly reflects the rapid rise in global oil prices. The króna has depreciated since the last MPC meeting, and exchange rate volatility increased in September, in part due to uncertainty about one of Iceland's major airlines' financing.

Survey measures of inflation expectations are unchanged since the last MPC meeting, whereas the breakeven inflation rate in the bond market has risen. Inflation expectations appear to be somewhat above the target by all measures. The MPC reiterates that it has both the will and the tools necessary to keep inflation at target over the long term. If inflation expectations continue to rise and remain persistently at a level above the target, it will call for a tighter monetary stance. Other decisions, particularly those relating to the labour market and fiscal policy, will then affect the sacrifice cost in terms of lower employment.

The near-term monetary stance will depend on the interaction between a narrower output gap, wage-setting decisions, and developments in inflation and inflation expectations.

No. 15/2018
7 November 2018

Statement of the Monetary Policy Committee
7 November 2018

The Monetary Policy Committee (MPC) of the Central Bank of Iceland has decided to raise the Bank's interest rates by 0.25 percentage points. The Bank's key interest rate – the rate on seven-day term deposits – will therefore be 4.5%.

GDP growth in 2017 and H1/2018 was stronger than previously estimated. Even though growth is expected to slow down in H2, it is forecast at 4.4% for 2018 as a whole, according to the November *Monetary Bulletin.* This is nearly 1 percentage point more than the Bank forecast in August. GDP growth is projected to ease in the coming term and the positive output gap is expected to close.

Inflation measured 2.8% in October. The difference between measures of inflation including and excluding housing is close to its smallest in over four years. The year-on-year rise in house prices continues to ease, but this is offset by a sizeable increase in import prices in the recent term. This partly reflects the rise in global oil prices, although the króna has also depreciated since August.

The outlook is for inflation to continue rising and be somewhat above the target next year. In addition, inflation expectations have risen recently and are now above target by all measures. The inflation outlook has therefore deteriorated, but on the other hand, the outlook is for growth in economic activity to ease faster than previously expected.

Higher inflation and inflation expectations in recent months have lowered the Central Bank's real rate more than is desirable in view of current economic developments and prospects. As a result, it is necessary to raise the Bank's key rate now.

The near-term monetary stance will depend on the interaction between a narrower output gap, wage-setting decisions, and developments in inflation and inflation expectations.

The MPC reiterates that it has both the will and the tools necessary to keep inflation at target over the long term. If inflation expectations continue to rise and remain persistently at a level above the target, it will call for a tighter monetary stance. Other decisions, particularly those relating to the labour market and fiscal policy, will then affect the sacrifice cost in terms of lower employment.

No. 19/2018
12 December 2018

Statement of the Monetary Policy Committee
12 December 2018

The Monetary Policy Committee (MPC) of the Central Bank of Iceland has decided to keep the Bank's interest rates unchanged. The Bank's key interest rate – the rate on seven-day term deposits – will therefore remain 4.5%.

According to the recently published national accounts, GDP growth measured 5% for the first nine months of the year, slightly more than the Central Bank had assumed in its November forecast.

Inflation has risen over the course of the year, in line with the forecast, measuring 3.3% in November. The main driver of the increase was the steep rise in import prices in recent months, as the króna has depreciated by over 11% year-to-date.

This depreciation and concerns about upcoming wage settlements have shown in expectations of a further rise in inflation. The monetary stance as measured by the Central Bank's real rate has therefore eased again. On the other hand, there are signs that the positive output gap will continue to narrow in the near term. In addition, the rise in inflation expectations since the last MPC meeting is still by and large limited to short-term expectations, and the depreciation of the króna has slowed.

It has recently been announced that there are plans to release the last of the offshore króna assets that were locked in by the capital controls in the aftermath of the financial crisis. The resolution of such a legacy problem should not be allowed to lower the exchange rate of the króna; therefore, the Central Bank will intervene in the foreign exchange market, in line with previous statements. In this context, the Bank will also take into consideration that there are signs that the recent currency depreciation has pushed the real exchange rate below its equilibrium value.

The near-term monetary stance will depend on the interaction between a narrower output gap, wage-setting decisions, and developments in inflation and inflation expectations.

The MPC reiterates that it has both the will and the tools necessary to keep inflation at target over the long term. If inflation expectations continue to rise and remain persistently at a level above the target, it will call for a tighter monetary stance. Other decisions, particularly those relating to the labour market and fiscal policy, will then affect the sacrifice cost in terms of lower employment.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, August 2018

Published 12 September 2018

The Act on the Central Bank of Iceland stipulates that it is the role of the Monetary Policy Committee (MPC) to set Central Bank interest rates and apply other monetary policy instruments. Furthermore, the Act states that “[m]inutes of meetings of the Monetary Policy Committee shall be made public, and an account given of the Committee’s decisions and the premises upon which they are based.” In accordance with the Act, the MPC has decided to publish the minutes of its meetings two weeks after each interest rate decision. The votes of individual Committee members will be made public in the Bank’s *Annual Report*.

The following are the minutes of the MPC meeting held on 27 and 28 August 2018, during which the Committee discussed economic and financial market developments, the interest rate decision of 29 August, and the communication of that decision.

I Economic and monetary developments

Before turning to the interest rate decision, members discussed the domestic financial markets, financial stability, the outlook for the global economy and Iceland’s international trade, the domestic economy, and inflation, with emphasis on information that has emerged since the 13 June 2018 interest rate decision, as published in the updated forecast in *Monetary Bulletin* 2018/3 on 29 August.

Financial markets

Between meetings, the króna appreciated by 1.1% in trade-weighted terms. Over this same period it fell 0.5% against the US dollar but rose by 0.3% against the euro and 3.4% against the pound sterling. The Central Bank conducted no transactions in the interbank foreign exchange market between meetings.

In terms of the Central Bank’s real rate, the monetary stance eased slightly since the June meeting. In terms of the average of various measures of inflation and inflation expectations, the Bank’s real rate was 1.3%, or 0.3 percentage points lower than in June. In terms of twelve-month inflation, it was 1.5% and had fallen by 0.7 percentage points.

Interest rates in the interbank market for krónur were virtually unchanged between meetings, and turnover in the market amounted to 18 b.kr. during that period.

Yields on long-term nominal Treasury bonds had risen by 0.4-0.5 percentage points since the June meeting, but yields on indexed Treasury and Housing Financing Fund (HFF) bonds had declined by 0.1-0.4 percentage points. One of the three large commercial banks' indexed mortgage lending rates had fallen by 0.05 percentage points between meetings, and one bank's deposit rates had fallen by 0.05 percentage points. Average interest rates on pension funds' loans to members were broadly unchanged since the MPC's June meeting.

The short-term interest rate differential versus the US and the euro area was virtually unchanged between meetings, at 2.4 and 5 percentage points, respectively. The long-term interest rate differential versus the US and Germany had widened by 0.3 percentage points, to 2.8 and 5.3 percentage points, respectively.

Measures of the risk premium on the Treasury's foreign obligations were largely unchanged since the MPC's June meeting. The CDS spread on the Treasury's five-year US dollar obligations was just over 0.7%, while the spread between the Treasury's eurobonds and comparable bonds issued by Germany was 0.4-0.6 percentage points.

Financial institutions' analysts had projected that the Bank's interest rates would be held unchanged in August, citing, among other things, the rise in inflation and inflation expectations, the slowdown in economic activity, and uncertainty about upcoming wage settlements.

According to the Central Bank's quarterly survey of market agents' expectations, carried out in mid-August, respondents expect the Bank's key interest rate to be held unchanged at 4.25% for the next two years, as they did in the last survey, taken in May. At the time the survey was conducted, 81% of respondents considered the monetary stance appropriate, as opposed to 77% in the last survey. About 19% of respondents considered it too tight, whereas no one considered it too loose.

Annual growth in M3 measured 6.3% in Q2/2018, after adjusting for deposits held by the failed financial institutions, about the same as in Q1. As before, the increase is due largely to growth in household deposits. After adjusting for the effects of the Government's debt relief measures, the stock of credit system loans to domestic borrowers grew in nominal terms by 8.1% year-on-year in Q2/2018. Over the same period, household lending grew by 6.3% year-on-year and corporate lending by 11.5%.

The Nasdaq OMXI8 index had fallen by 7.2% between meetings. Turnover in the main market totalled 296 b.kr. during the first seven months of the year, about 26% less than over the same period in 2017.

Global economy and external trade

According to the International Monetary Fund's (IMF) July forecast, global GDP growth is projected to measure 3.9% in 2018 and 2019. This is in line with the Fund's April forecast. In July, however, the IMF expected GDP growth to be more unevenly distributed across economies (both industrialised and emerging/developing countries) than in April. The GDP growth outlook for the US is unchanged since April, whereas growth is expected to ease in the eurozone, Japan, and the UK. Financial conditions have tightened in many emerging and developing economies, and in the IMF's opinion, the GDP growth outlook has deteriorated, owing in part to rising oil prices, rising US interest rates, the appreciation of the US dollar, and mounting tensions in global trade. On the other hand, the outlook is for increased GDP growth among oil-exporting emerging and developing countries. The Fund was also of the view that global economic uncertainty had increased since April and that it is now more likely that GDP growth will turn out less than forecast because of the increased risk of escalating tariffs and a trade war. This is reflected in the IMF's forecast for world trade. The Fund expects world trade to increase by 4.8% this year and 4.5% in 2019, or 0.2-0.3 percentage points below the April forecast, owing primarily to reduced growth in industrialised countries. Inflation among industrialised countries is projected at 2.2% in 2018 and 2019, about 0.2-0.3 percentage points above the April forecast.

According to preliminary figures from Statistics Iceland, Iceland's goods trade generated a 101 b.kr. deficit in the first seven months of the year, at constant exchange rates. The deficit over the same period in 2017 was 110 b.kr., also at constant exchange rates. Export values rose by 13.6% year-on-year at constant exchange rates, owing mainly to an increase in the value of marine products and industrial goods, aluminium in particular. The rise in marine product export values was due to base effects from the fishermen's strike in early 2017, which caused a sharp contraction in goods exports. Growth in import values has eased significantly, after measuring 7.7% year-on-year at constant exchange rates in the first seven months of 2018. Furthermore, in the past three months, import values have contracted slightly between years, falling to the weakest year-on-year growth rate since 2013. The main difference is in the contraction in passenger car import values.

Between MPC meetings, the listed global price of aluminium fell by 9.6% and was similar to the price seen at the same time last year. Preliminary figures from Statistics Iceland indicate that foreign currency prices of marine products were up 3.9% year-on-year in the first seven months of 2018. The global price of oil was 76 US dollars per barrel just before the MPC meeting. It had fallen slightly between meetings but was up by 48% compared with the same time in 2017.

In terms of relative consumer prices, the real exchange rate had risen 0.5% month-on-month in July, but had fallen 1.6% year-on-year. At that time, it was just over 20% above its 25-year average but 6.6% below its June 2017 peak. In the first seven months of 2018, it was down by 1.5% compared with the same period in 2017, as the nominal exchange rate of the króna was 1.8% lower and inflation in Iceland was about 0.4 percentage points above the trading partner average.

The domestic real economy and inflation

According to the Statistics Iceland labour force survey (LFS), total hours worked increased by 0.6% year-on-year in Q2. According to the LFS, the number of jobs grew by 1.3% year-on-year, whereas the increase according to the pay-as-you-earn (PAYE) register was 3%. The employment rate fell between years but has hovered around 80% since peaking in Q3/2016. Seasonally adjusted unemployment measured 2.9% in Q2 and was broadly unchanged from the previous quarter.

Net migration of foreign nationals aged 20-59 was positive in H1 by 1.7% of the population, about the same as in H2/2017. In Q2, importation of workers via temporary employment agencies and foreign services companies was down about one-fifth from its peak.

In Q2, the wage index rose by 2.4% between quarters and by 6.5% year-on-year, and real wages were just over 4% higher than in the same quarter of 2017.

Key indicators of developments in private consumption at the beginning of Q3 suggest that household demand is on the wane, as it has been throughout the year.

The Gallup Consumer Confidence Index fell markedly between months in August, to 87.3, its lowest in over three years. All components of the index fell during the month, by 12-18 points.

Statistics Iceland's nationwide house price index, published in July, rose 0.7% month-on-month when adjusted for seasonality and by 6.2% year-on-year. The capital area house price index, calculated by Registers Iceland, rose by 0.3% month-on-month in July, adjusted for seasonality, and by 5.2% year-on-year. The twelve-month rise in real estate prices has picked up again, after tapering off virtually without interruption since May 2017, when prices in greater Reykjavík were up by nearly 24% between years. The number of purchase agreements registered nationwide in the first seven months of the year rose by 5.3% year-on-year, and the average time-to-sale for flats in greater Reykjavík was 2.3 months in July, as opposed to 2.5 months a year earlier. About 1,150 flats were advertised for sale in greater Reykjavík in August, down from 1,350 in August 2017.

The CPI rose by 0.04% month-on-month in July. Twelve-month inflation measured 2.7% and had risen by 0.7 percentage points between MPC meetings. The CPI excluding housing had risen by 1.4% since July 2017, and inflation thus measured has risen more rapidly than headline inflation in the recent past. The median value of various measures of underlying inflation was 2.9% in July, an increase of 0.4 percentage points since May.

The rise in house prices and airfares had a strong impact in July, offset by seasonal sales. The twelve-month rise in owner-occupied housing costs has continued to ease, however, measuring just under 6% in July. Imported goods prices were up 1.1% year-on-year, owing largely to the steep rise in petrol prices.

Market agents' short- and long-term inflation expectations have risen in recent months. According to the Central Bank survey carried out in mid-August, respondents expect inflation to measure 3% both one and two years ahead. They also expect inflation to average 2.8-3% over the next five and ten years, which is 0.2-0.4 percentage points more than in the May survey. The breakeven inflation rate in the bond market has also inched upwards in recent months. The ten-year breakeven rate has averaged 3.5% in Q3 to date, as opposed to 3.3% in Q2/2018 and 2.8% in Q3/2017.

According to the forecast published in *Monetary Bulletin* on 29 August 2018, the inflation outlook well into 2019 has deteriorated since the Bank's May forecast. Inflation measured 2.3% in Q2, but by July it had risen by nearly 1 percentage point year-on-year, to 2.7%. Underlying inflation has also risen somewhat. In addition, both short- and long-term inflation expectations have risen. Inflation is projected to measure 2.8% in Q3/2018 and about 3% from Q4 through mid-2019, whereupon it is expected to ease back to the target.

Iceland's external conditions have developed broadly in line with the May forecast, and the economic outlook is largely unchanged. Tourism appears set to grow more slowly this year than was forecast in May, but this is offset by considerably stronger growth in marine product exports. According to the forecast, the outlook is for stronger export growth, which will counterbalance the poorer outlook for terms of trade. GDP growth is projected to measure 3.6% this year, as it did in 2017. This is slightly above the May forecast, owing to a more favourable contribution from net trade, albeit offset by weaker growth in domestic demand. As in the Bank's previous forecasts, GDP growth is projected to ease in the next two years, measuring 2.7% in 2019 and then picking up slightly to 3% in 2020.

The assumptions concerning near-term wage developments have changed little since May. Unit labour costs are projected to rise somewhat less this year than was previously estimated, however, as the outlook is for stronger productivity growth. The increase in unit labour costs is expected to measure 5½% this year and then taper off to just over 5% in 2019 and 2½% in 2020. The rise in total hours worked has lost pace, and labour importation, although still strong, appears to have peaked. The number of firms having difficulties recruiting workers or responding to unexpected demand has begun to fall. Tension appears to be subsiding in the labour market and in the economy as a whole. The output gap remains positive, however, and according to the forecast it will not close until very late in the forecast horizon.

II The interest rate decision

The Governor updated Committee members on discussions with ministers and the Ministerial Committee on Economic Affairs and Financial System Restructuring on how the work carried out following the report from the committee reviewing the monetary policy framework might proceed, although conclusions have yet to be reached. In the near future, the MPC will review and formulate a position on the review committee's proposals. In this context, the MPC is planning to meet with the review committee.

MPC members discussed the monetary stance in view of the most recent information on the economy and the decline in the Bank's real rate between meetings. They discussed whether the monetary stance was appropriate in view of the inflation outlook, as they had decided in June to keep interest rates unchanged because the outlook had been broadly unchanged between meetings.

In this context, Committee members took account of the Central Bank's updated macroeconomic forecast, published in *Monetary Bulletin* on 29 August, according to which GDP growth will be slightly stronger in 2018 than the bank had forecast in May. Committee members noted that according to the forecast, increased growth stemmed primarily from a more favourable contribution from net trade, which outweighed weaker growth in domestic demand. The MPC agreed that GDP growth was still expected to ease, with weaker export growth and a less rapid increase in domestic demand. The Committee also considered that developments in house prices and indicators from the labour market pointed in the same direction.

The MPC discussed developments in inflation, which measured 2.3% in Q2/2018 but had increased to 2.7% by July. Members noted that inflation excluding housing had risen as well, and the difference between measures of inflation including and excluding housing had narrowed considerably. As the Committee had expected, the year-on-year rise in house prices had continued to ease, and the opposing effects of the previous appreciation of the króna had diminished and petrol prices had risen. MPC members agreed that this trend would probably continue in the near term. Members also noted that the króna had depreciated slightly since the last MPC meeting, but that the foreign exchange market had remained well balanced.

They noted in particular that indicators implied that long-term inflation expectations had risen somewhat above the target. It emerged in the discussions that there was uncertainty about how to interpret the rise in inflation expectations. Some members considered it possible that uncertainty about the future monetary policy framework had already begun to de-anchor long-term inflation expectations. Higher inflation in the recent term and uncertainty in the labour market could also affect expectations, particularly in the short run. The MPC reiterated that it had both the will and the tools necessary to keep inflation at target over the long term, and members agreed that if inflation expectations continued to rise and remained persistently at a level above the target, it would call for a tighter monetary stance. It also emerged during the discussion that other decisions, particularly those relating to the labour market and fiscal policy, would then affect the sacrifice cost in terms of lower employment. It was pointed out that there was the risk that wage settlements would be inconsistent with the inflation target, but also that Government measures in connection with wage settlements might not be fully funded, resulting in a weakening of the fiscal stance. MPC members noted as well that inflation had risen by all measures and the inflation outlook well into 2019 had deteriorated since the Bank's May forecast. They agreed that developments in inflation would depend in large part on how well the anchor held in the near future. It emerged in the discussion that the increased credibility of monetary policy played a key role in the past several years' success, and that it was important to respond if inflation expectations were clearly becoming unmoored.

There was some discussion of the easing of the monetary stance since the last MPC meeting. Members agreed that tension in the labour market and the economy was subsiding. There were also indications that the adjustment of the economy could prove more sudden if, for instance, tourist numbers declined faster than was assumed in the forecast.

In view of the discussion, the Governor proposed that the Bank's interest rates be held unchanged. The Bank's key rate (the seven-day term deposit rate) would remain 4.25%, the current account rate 4%, the seven-day collateralised lending rate 5%, and the overnight lending rate 6%. All Committee members voted in favour of the proposal.

MPC members agreed that the near-term monetary stance would depend on the interaction between a narrower output gap, wage-setting decisions, and developments in inflation and inflation expectations.

The following Committee members were in attendance:

Már Gudmundsson, Governor and Chairman of the Monetary Policy Committee

Rannveig Sigurdardóttir, Deputy Governor

Thórarinn G. Pétursson, Chief Economist

Gylfi Zoëga, Professor, external member

Katrín Ólafsdóttir, Assistant Professor, external member

In addition, a number of Bank staff members attended part of the meeting.

Karen Áslaug Vignisdóttir wrote the minutes.

The next Statement of the Monetary Policy Committee will be published on Wednesday 3 October 2018.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, October 2018

Published: 17 October 2018

The Act on the Central Bank of Iceland stipulates that it is the role of the Monetary Policy Committee (MPC) to set Central Bank interest rates and apply other monetary policy instruments. Furthermore, the Act states that "[m]inutes of meetings of the Monetary Policy Committee shall be made public, and an account given of the Committee's decisions and the premises upon which they are based." In accordance with the Act, the MPC has decided to publish the minutes of its meetings two weeks after each interest rate decision. The votes of individual Committee members will be made public in the Bank's *Annual Report*.

The following are the minutes of the MPC meeting held on 1 and 2 October 2018, during which the Committee discussed economic and financial market developments, the interest rate decision of 3 October, and the communication of that decision.

I Economic and monetary developments

Before turning to the interest rate decision, members discussed the domestic financial markets, financial stability, the outlook for the global economy and Iceland's international trade, the domestic economy, and inflation, with emphasis on information that has emerged since the 29 August 2018 interest rate decision.

Financial markets

Between meetings, the króna depreciated by 4.7% in trade-weighted terms. Over this same period it fell 5.4% against the US dollar, 3.9% against the euro, and 5.8% against the pound sterling. The Central Bank's foreign currency sales in the domestic foreign exchange market totalled 9 million euros (1.2 b.kr.) between meetings, or roughly 4% of total market turnover.

In terms of the Central Bank's real rate, the monetary stance was broadly the same as at the time of the MPC's August meeting. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 1.2%, similar to the real rate in August. In terms of twelve-month inflation, it was 1.5%.

Interest rates in the interbank market for krónur were virtually unchanged between meetings, and turnover in the market amounted to 3 b.kr. during that period.

Yields on long-term nominal Treasury bonds had risen by 0.2 percentage points since the August meeting, but yields on indexed Treasury and Housing Financing Fund (HFF) bonds were unchanged. Interest rates on two of the three large commercial banks' non-indexed mortgage loans had risen by 0.1-0.3 percentage points between meetings. Average rates on pension funds' non-indexed loans to fund members had risen by just under 0.2 percentage points since the MPC's August meeting.

The short-term interest rate differential versus the US and the euro area was virtually unchanged between meetings, at 2.3 and 5 percentage points, respectively. The long-term interest differential versus the US and Germany was also virtually unchanged, at 2.8 and 5.4 percentage points, respectively.

Measures of the risk premium on the Treasury's foreign obligations were largely unchanged since the MPC's August meeting. The CDS spread on the Treasury's five-year US dollar obligations was about 0.7%, while the spread between the Treasury's eurobonds and comparable bonds issued by Germany was approximately 0.5-0.6 percentage points.

Financial institutions' analysts had projected that the Bank's interest rates would be held unchanged in October, citing, among other things, the rise in inflation and inflation expectations, the slowdown in economic activity, and uncertainty about upcoming wage settlements.

After adjusting for deposits held by the failed financial institutions, annual growth in M3 measured about 9% in August, the strongest growth rate since January 2016. As before, the increase is due largely to growth in household deposits. After adjusting for the effects of the Government's debt relief measures, the stock of credit system loans to domestic borrowers grew in nominal terms by 8½% year-on-year in July. Over the same period, household lending grew by just under 7% year-on-year and corporate lending by 11%.

The Nasdaq OMXI8 index had risen by 0.8% between meetings. Turnover in the main market totalled 361 b.kr. during the first nine months of the year, about 27% less than over the same period in 2017.

Global economy and external trade

Iceland's goods trade generated a deficit of 114.5 b.kr. in the first eight months of the year, at constant exchange rates. The deficit over the same period in 2017 was approximately 116 b.kr., also at constant exchange rates. Export values rose by 14.4% year-on-year at constant exchange rates, owing mainly to an increase in the value of marine products and industrial goods, aluminium in particular. Import values increased by 10.5% year-on-year over the same period, due primarily to stronger imports of fuels and lubricants, commodities and operational inputs, and investment goods. The import value of passenger cars has declined between years, however.

The listed global price of aluminium was broadly unchanged between MPC meetings, but was slightly higher than at the same time in 2017. Preliminary figures from Statistics Iceland indicate that foreign currency prices of marine products were up 4.4% year-on-year in the first eight months of 2018. The global price of oil had risen by 13% between MPC meetings, to about 86 US dollars per barrel. Oil prices had risen by over a fourth year-to-date and by more than 50% since October 2017.

The real exchange rate in terms of relative consumer prices fell by 3.5% month-on-month in September, when it was nearly 17% above its twenty-five year average but about 9% below its June 2017 peak. In the first nine months of 2018, it was down by around 1% compared with the same period in 2017, as the nominal exchange rate of the króna was 1.4% lower and inflation in Iceland was about 0.5 percentage points above the trading partner average.

The domestic real economy and inflation

According to preliminary figures published by Statistics Iceland in September, GDP growth measured 7.2% in Q2/2018. Domestic demand grew 6.6% year-on-year during the quarter. Exports grew by 0.8% between years, while imports contracted by 0.4%; therefore, the contribution from net trade was positive. In H1/2018, GDP growth measured 6.4%, as domestic demand grew by 6.2% and export growth outpaced import growth.

GDP growth in Q2 far outpaced the August forecast of 4.6%. In addition, Statistics Iceland revised Q1 GDP growth figures; therefore, the deviation from the August forecast was considerably smaller for H1 growth, which measured 6.4%, whereas the August forecast assumed 5.6%. Even though business investment was somewhat stronger in H1 than was forecast in August, consumption and investment spending turned out in line with the forecast. Imports also grew somewhat less than projected, while the contribution from net trade was broadly consistent with the forecast. Most of the deviation in GDP growth from the August forecast is therefore due to a much stronger contribution from inventory changes. Upon review of previous figures, year-2017 output growth was revised upwards from 3.6% to 4%.

The current account balance was positive by 1.6 b.kr. in Q2, a considerably smaller surplus than in the same quarter of 2017, when it measured 11.9 b.kr. The contraction in the surplus is due largely to a smaller surplus on services trade. Furthermore, the goods account deficit was larger than it was a year ago, and the balance on primary and secondary income was more strongly negative.

Private consumption grew somewhat less than forecast in Q2, and the pace of growth has eased in the past year. Key indicators of private consumption growth in Q3 suggest that this trend will continue. The Gallup Consumer Confidence Index has fallen rather rapidly in recent months, to 85.3 points by September, some 21.5 points below the value a year earlier.

According to the assumptions in the fiscal budget proposal for 2019, Treasury performance is expected to be in line with the estimate according to the fiscal strategy for 2019-2023. The target for 2018 revenues according to that year's budget is ensured with extraordinary dividend payments by the commercial banks in the amount of just over 6 b.kr. The estimate of the fiscal stance does not take account of such one-off items. The unadjusted primary balance is projected to decline by up to 1 percentage point of GDP between 2018 and 2019. The extent to which this entails fiscal easing in 2019, as was forecast in *Monetary Bulletin* 2018/2, will depend on how much the output gap narrows. A new assessment of developments in the output gap and the fiscal stance will be available when the MPC meets in November.

According to the results of Gallup's autumn survey, conducted in September among Iceland's 400 largest firms, respondents' assessment of the current economic situation was relatively positive, but somewhat less so than in the surveys taken this summer and in autumn 2017. Executives were also more downbeat about the outlook six months ahead than they were in the summer and in 2017. About 45% of respondents considered the current situation good, and about 43% considered it neither good nor poor. About 54% of executives were of the view that economic conditions would deteriorate in the next six months, and just under 42% expected conditions to remain good. About 4% of respondents expected conditions to improve in the next six months. Pessimism among executives has therefore increased considerably since May and since last year. Executives' outlook on domestic demand was also much more negative than in the summer 2018 and autumn 2017 surveys, whereas their expectations concerning foreign demand were unchanged. In comparison with the summer survey, expectations concerning domestic demand deteriorated most among executives in the construction and industry/manufacturing sectors.

According to the survey, just over a third of firms expected their profit margins to remain broadly unchanged between 2017 and 2018, whereas the share that expected their margins to narrow was much larger than in the spring survey. Among the latter group were executives in transport, transit, tourism, and specialised services. In all sectors except construction and utilities, sentiment towards the operational outlook was considerably more negative than in the spring survey.

According to the survey, firms interested in recruiting staff in the next six months outnumbered those planning redundancies by 4 percentage points, after adjusting for seasonality. This is broadly similar to the percentage in the summer survey but 13 percentage points lower than in the survey taken a year ago. The most positive executives were those in the specialised services sector, where firms planning to recruit outnumbered those planning redundancies by 17 percentage points. As before, sentiment was most negative in the fishing industry, where firms interested in laying off staff outnumbered those planning to recruit by 24 percentage points, as well as in transport, transit, and tourism, where the share was 22 percentage points.

After adjusting for seasonality, about one-fifth of executives considered themselves short-staffed, about 5 percentage points less than in the summer survey and 15 percentage points less than in the survey from a year ago. The share was largest in construction and in industry/manufacturing, with 30% of firms considering themselves understaffed. It was smallest in the financial services sector, where 8% of firms considered themselves understaffed, although a similar share of companies in retail and wholesale trade, transport, transit, and tourism considered themselves short-staffed.

Just under half of executives reported that they would have difficulty responding to unexpected demand, after adjusting for seasonality. This was 5 percentage points more than in the summer survey but about the same as in the autumn 2017 survey. Two-thirds of executives in the specialised services sector reported that they would have difficulty responding to unexpected demand, as opposed to only just over fourth in the transport, transit, and tourism sector. In other sectors, the same ratio ranged between 34% and 57%.

The wage index fell by 0.1% month-on-month in August and rose by 6% year-on-year. Real wages were 3.3% higher than at the same time in 2017.

Statistics Iceland's nationwide house price index, published in September, declined 0.3% month-on-month when adjusted for seasonality, but rose 5% year-on-year. The capital area house price index, calculated by Registers Iceland, rose by 0.2% month-on-month in August when adjusted for seasonality, and by 4.1% year-on-year. The twelve-month rise in real estate prices has therefore continued to ease, after peaking at nearly 24% in 2017. The number of purchase agreements registered nationwide in the first eight months of the year increased by 7.3% year-on-year, and the average time-to-sale for flats in greater Reykjavík was 1.7 months in August, as opposed to 2.4 months a year earlier. Just over 800 flats were advertised for sale in greater Reykjavík in September, down from nearly 1,500 in September 2017.

The CPI rose by 0.24% month-on-month in September, after rising 0.2% in August. Twelve-month inflation measured 2.7% and was unchanged since the MPC's last meeting. The CPI excluding housing had risen by 1.8% since September 2017 and by 0.4 percentage points between meetings. The median value of various measures of underlying inflation was 2.6% in September, a decline of 0.3 percentage points since July.

The reduction in international airfares made a strong impact in September but was offset by end-of-sale effects. The rise in owner-occupied housing costs has continued to lose pace, after measuring 4.7% in September, the smallest twelve-month increase since September 2013.

According to Gallup's autumn survey, households' inflation expectations one year ahead measured 3.5%, virtually the same as in the summer survey but about 0.4 percentage points higher than in February. Their expectations five years ahead were unchanged between surveys, at 3.5%. According to Gallup's autumn survey among corporate executives, respondents' one- and five-year inflation expectations were unchanged between surveys, both measuring 3%. The five- and ten-year breakeven inflation rate in the bond market was 3.7-4% just before the MPC meeting, after rising by 0.2 percentage points since the August meeting and nearly 1 percentage point since the beginning of the year.

II The interest rate decision

The Governor reported on the International Monetary Fund (IMF) mission's 13-25 September visit and the key findings from that visit, which was part of the Fund's annual review of economic developments and prospects in Iceland. The Governor also updated the MPC on ideas concerning the next steps in the implementation of the capital flow management tool. Furthermore, the Deputy Governor reported on meetings that she had had with the social partners.

The MPC discussed the monetary stance in view of the most recent information on the economy and the fact that the Bank's real rate had remained broadly unchanged between meetings. They discussed whether the monetary stance was appropriate in view of the inflation outlook, as they had decided in August to keep interest rates unchanged, partly because the Bank's new forecast was broadly in line with the May forecast.

Members discussed the recently released preliminary national accounts figures, which indicated that GDP growth in 2017 and H1/2018 was stronger than had been assumed in the August *Monetary Bulletin*. The Committee agreed that the positive output gap may therefore have been wider than previously projected. On the other hand, high-frequency indicators and surveys suggested that demand growth might subside more rapidly than previously assumed. It emerged in the discussion that private consumption growth had probably subsided more rapidly than expected in the recent term, but that investment had outpaced expectations.

The MPC discussed developments in inflation, which rose quarter-on-quarter in Q3/2018, in line with the August forecast. Inflation excluding housing had risen as well, and the difference between measures of inflation including and excluding housing had narrowed considerably. Members noted that the year-on-year rise in house prices had continued to ease, but that it was offset by a sizeable increase in import prices in the recent term. This partly reflected the rapid rise in global oil prices. It emerged in the discussion that this surge in oil prices had strong direct and indirect effects on measured inflation, which the MPC should ignore insofar as they did not spread to long-term inflation expectations. The Committee also noted that the króna had depreciated since the last MPC meeting, and exchange rate volatility increased in September, in part due to uncertainty about one of Iceland's major airlines' financing.

Members noted that survey measures of inflation expectations were broadly unchanged since the last MPC meeting, whereas the breakeven inflation rate in the bond market had risen. Members discussed concerns about the recent rise in long-term inflation expectations, and that inflation expectations appeared to be somewhat above the target by all measures. It was pointed out that uncertainty about upcoming wage settlements could have prompted a rise in inflation expectations. The MPC reiterated that it had both the will and the tools necessary to keep inflation at target over the long term, and members agreed that if inflation expectations continued to rise and remained persistently at a level above the target, it would call for a tighter monetary stance. Members also agreed that other decisions, particularly those relating to the labour market and fiscal policy, would then affect the sacrifice cost in terms of lower employment.

Although output growth in 2017 and H1/2018 appeared stronger than had been forecast, indicators from the labour market and the tourism industry suggested that the adjustment of the economy could take place more quickly than had previously been assumed. These factors were therefore pulling in opposite directions as regards the outlook further ahead, but Committee members agreed that the overall situation had not changed materially since the previous meeting. As a result, they were of the view that a rate response was not warranted; instead it was appropriate to await further developments. One member pointed out, however, that the rise in inflation expectations could not be ignored for long and that, other things being equal, it would be necessary to tighten the monetary stance; however, in view of the uncertainty involved, this member agreed that it was appropriate at that time to await further developments.

In view of the discussion, the Governor proposed that the Bank's interest rates be held unchanged. The Bank's key rate (the seven-day term deposit rate) would remain 4.25%, the current account rate 4%, the seven-day collateralised lending rate 5%, and the overnight lending rate 6%. All Committee members voted in favour of the proposal.

MPC members agreed that the near-term monetary stance would depend on the interaction between a narrower output gap, wage-setting decisions, and developments in inflation and inflation expectations.

The following Committee members were in attendance:

Már Gudmundsson, Governor and Chairman of the Monetary Policy Committee

Rannveig Sigurdardóttir, Deputy Governor

Thórarinn G. Pétursson, Chief Economist

Gylfi Zoëga, Professor, external member

Katrín Ólafsdóttir, Assistant Professor, external member

In addition, a number of Bank staff members attended part of the meeting.

Karen Áslaug Vignisdóttir wrote the minutes.

The next Statement of the Monetary Policy Committee will be published on Wednesday 7 November 2018.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, November 2018

Published 21 November 2018

The Act on the Central Bank of Iceland stipulates that it is the role of the Monetary Policy Committee (MPC) to set Central Bank interest rates and apply other monetary policy instruments. Furthermore, the Act states that "[m]inutes of meetings of the Monetary Policy Committee shall be made public, and an account given of the Committee's decisions and the premises upon which they are based." In accordance with the Act, the MPC has decided to publish the minutes of its meetings two weeks after each interest rate decision. The votes of individual Committee members will be made public in the Bank's *Annual Report*.

The following are the minutes of the MPC meeting held on 5 and 6 November 2018, during which the Committee discussed economic and financial market developments, the interest rate decision of 7 November, and the communication of that decision.

I Economic and monetary developments

Before turning to the interest rate decision, members discussed the domestic financial markets, financial stability, the outlook for the global economy and Iceland's international trade, the domestic economy, and inflation, with emphasis on information that has emerged since the 3 October interest rate decision, as published in the new forecast and analysis of uncertainties in *Monetary Bulletin* 2018/4 on 7 November.

Financial markets

Between meetings, the króna depreciated by 6.3% in trade-weighted terms. Over this same period it fell 7.5% against the pound sterling, 6.9% against the US dollar, and 5.9% against the euro. The Central Bank intervened in the foreign exchange market once during this period, selling foreign currency in the amount of 9 million euros (1.2 b.kr.), or roughly 4% of total market turnover.

In terms of the Central Bank's real rate, the monetary stance had eased since the MPC's October meeting. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 0.8%, or 0.3 percentage points lower than in October. In terms of twelve-month inflation, it was 1.4%.

Interest rates in the interbank market for krónur were virtually unchanged between meetings, and there was no turnover in the market during that period.

Yields on most nominal Treasury bonds had risen by 0.1-0.3 percentage points since the October meeting, but yields on some indexed Treasury and Housing Financing Fund (HFF) bonds had declined by 0.2 percentage points. Average rates on pension funds' non-indexed loans to fund members had risen by nearly 0.3 percentage points since the October meeting, but other mortgage lending rates were broadly unchanged.

In terms of three-month interbank rates, the interest rate differential versus the euro area was virtually unchanged between meetings, at 5 percentage points, but the spread versus the US had narrowed by 0.2 percentage points, to 2.1 percentage points. The long-term interest rate spread had narrowed slightly, measuring 2.6 percentage points versus the US and 5.3 percentage points versus Germany.

Measures of the risk premium on the Treasury's foreign obligations had fallen marginally since the MPC's October meeting. The CDS spread on the Treasury's five-year US dollar obligations was just over 0.6%, while the spread between the Treasury's eurobonds and comparable bonds issued by Germany was 0.5-0.7 percentage points.

Financial institutions' analysts had projected that the Bank's interest rates would be either held unchanged or raised in November, citing, among other things, the slowdown in economic activity, and uncertainty about upcoming wage settlements. The main rationale for a rate hike, however, was the rise in inflation and inflation expectations.

Most market agents appeared to expect a rate hike, according to the Central Bank's quarterly survey, carried out in late October. Survey respondents expected the Bank's key rate to be raised by 0.25 percentage points in Q4/2018, followed by further increases in 2019. They also expected the key rate to rise to 5% by late 2019 and then begin to fall again. Moreover, 40% of respondents considered the monetary stance too loose at present, whereas no respondents were of this opinion in the August survey. About 48% of respondents considered the monetary stance appropriate, as compared with 81% in the previous survey. The share who considered the monetary stance too tight was 12%, down from 19% in the previous survey.

Annual growth in M3 measured just under 8½% in Q3/2018, after adjusting for deposits held by the failed financial institutions, its strongest in about a decade. As before, growth in M3 stemmed primarily from increased household deposits, although the financial sector's share in the growth rate has increased as well. After adjusting for the effects of the Government's debt relief measures, the stock of credit system loans to domestic borrowers grew in nominal terms by 9% year-on-year in Q3/2018. Over the same period, household lending grew by just over 7% year-on-year and corporate lending by 12½%.

The Nasdaq OMXI8 index had risen by 2.8% between meetings. Turnover in the main market totalled 401 b.kr. during the first ten months of the year, about 27% less than over the same period in 2017.

Global economy and external trade

According to preliminary figures from Statistics Iceland, Iceland's goods trade generated a 11.7 b.kr. deficit in October, as opposed to a deficit of 1.5 b.kr., at constant exchange rates, in October 2017. The deficit for the first ten months of the year was 104.7 b.kr. in 2018, as compared with 102 b.kr. in 2017. Export values rose by 11.3% year-on-year at constant exchange rates, owing mainly to an increase in the value of marine products and industrial goods, aluminium in particular. Import values increased by 9.8% year-on-year over the same period, due primarily to higher values of imported fuels and lubricants, commodities and operational inputs, and investment goods. The import value of passenger cars has declined between years, however. In the past three months, imports have grown by 13.6% year-on-year at constant exchange rates, a more rapid pace of growth than in the summer. The three-month growth rate was considerably slower than that measured earlier this year and for most of 2017.

Between MPC meetings, the listed global price of aluminium fell by just over 6% and was more than 9% below the price seen last year at this time. Preliminary figures from Statistics Iceland indicate that foreign currency prices of marine products were up 4.8% year-on-year in the first nine months of 2018. The global price of oil had fallen by 17.5% between MPC meetings, to about 71 US dollars per barrel. However, by the time of the November meeting it had risen by about 6% year-to-date and about 10% since the beginning of November 2017.

The real exchange rate in terms of relative consumer prices fell by 4.5% month-on-month in October, when it was about 11.5% above its twenty-five year average but 13.4% below its June 2017 peak. In the first ten months of 2018, it was down by 1.6% compared with the same period in 2017, as the nominal exchange rate of the króna was 2% lower and inflation in Iceland was 0.5 percentage points above the trading partner average.

The domestic real economy and inflation

According to the Statistics Iceland labour force survey (LFS), total hours worked increased by 4.3% year-on-year in Q3/2018. The number of employed persons rose by 4.1%, and the average work week lengthened slightly. The labour participation rate rose by 0.4 percentage points year-on-year, to 81.7%, after adjusting for seasonality. The employment rate rose accordingly between years, to a seasonally adjusted 79.5%.

Seasonally adjusted unemployment measured 2.6% in Q3/2018, after declining by 0.3 percentage points from the previous quarter, but was unchanged between years.

Figures on net migration in Q3 show that importation of foreign workers is still strong, although it has receded from last year's peak level. Net migration was positive by 1% of the population during the quarter, and the number of foreign nationals living in Iceland has increased by 2.7% of the population year-to-date.

The wage index rose by 1.7% between quarters in Q3, and by 6.1% year-on-year, and real wages were 4.1% higher in Q3 than in the same quarter of 2017.

Leading indicators of developments in private consumption in Q3 suggest that the growth rate had eased since the first half of the year. During the quarter, growth in payment card turnover eased, domestic turnover in particular, and the number of new motor vehicle registrations declined.

The Gallup Consumer Confidence Index measured 92.1 in October and had risen between months, after falling in the two months beforehand. The greatest difference was an improvement in expectations six months ahead, which had fallen steeply since the summer. The index has fallen by over 33 points year-on-year.

Statistics Iceland's nationwide house price index, published in October, rose 0.6% month-on-month when adjusted for seasonality and by 5.8% year-on-year. The capital area house price index, calculated by Registers Iceland, rose by 0.4% month-on-month in September when adjusted for seasonality, and by 3.9% year-on-year. The twelve-month rise in real estate prices is at its smallest since May 2011. The number of purchase agreements registered nationwide in the first nine months of the year rose by 6.6% year-on-year, and the average time-to-sale for flats in greater Reykjavík was 1.6 months in September, as opposed to 2.9 months a year earlier. About 840 flats were advertised for sale in greater Reykjavík in October, as compared with just over 1,500 in October 2017.

The CPI rose by 0.57% month-on-month in October. Twelve-month inflation measured 2.8% and had risen by 0.1 percentage points between MPC meetings. The CPI excluding the housing component had risen by 1.7% year-on-year in October. In terms of the median of various measures, underlying inflation was 3% in October, about 1.8 percentage points higher than in the same month of 2017. This is the highest it has been by that measure since January 2014.

The increase in new vehicle prices was the main driver of the rise in the CPI in October, and the upward impact month-on-month was the strongest since July 2008. Housing and food prices also rose in October, with a decline in road tolls pulling in the opposite direction.

According to the Central Bank survey conducted in late October, market agents expected inflation to measure 3.6% one year ahead, or 0.6 percentage points more than in the August survey, and 3.2% two years ahead, an increase of 0.2 percentage points between surveys. They also expected inflation to average 3% over the next five and ten years, which is broadly unchanged from August but about ½ a percentage point higher than a year ago. The breakeven inflation rate in the bond market has also risen recently. Just before the MPC meeting, the five- and ten-year breakeven rate was 4.1-4.2%, after having risen by 0.2-0.4 percentage points since the October meeting and nearly 1½ percentage points in the preceding year.

According to the forecast published in *Monetary Bulletin* on 7 November 2018, the inflation outlook has deteriorated since the Bank's August forecast. Inflation has been close to the target for most of 2018. It measured 2.7% in Q3 and 2.8% in October. Underlying inflation has risen as well, and long-term inflation expectations are now 3% or more by all measures. Because of the recent depreciation of the króna and the wider output gap early in the forecast horizon, the inflation outlook into H1/2020 has deteriorated since the August forecast. Inflation is expected to exceed 3% through 2019 and remain above the target until H2/2020.

The króna has depreciated in recent weeks and is now about 10% weaker against the average of other currencies than it was at the time of the August *Monetary Bulletin*. It is also nearly 8% weaker in Q4 to date than was projected in August. The króna is now at its lowest in more than two years. This decline is due to several interlinked factors, but the onset of the current slide can probably be traced to some extent to the temporary uncertainty about WOW Air's financing in the first week of September. In addition, the macroeconomic factors that have generally driven the appreciation of the króna in recent years appear to have given way as well. Terms of trade have deteriorated, and export growth has slowed. The operating environment in the tourism industry has grown more difficult, and it appears as though GDP growth has lost pace in H2/2018. All of these factors, together with growing concerns about upcoming wage negotiations, appear to have contributed to investor pessimism, which in turn has led to a depreciation of the króna. The baseline forecast assumes that the exchange rate will remain broadly at its year-to-date average for the remainder of the forecast horizon. This entails a trade-weighted exchange rate index (TWI) about 3% lower, on average, in 2018 than in 2017, and a further 3% decline in 2019.

Global GDP grew by 3.7% in 2017, the strongest growth rate since 2011. It has softened slightly in 2018 to date, however, and the outlook has deteriorated marginally. Among

Iceland's main trading partners, GDP growth averaged 2.4% in 2017, the strongest since 2010. It is projected to ease slightly this year, to an average of 2.2%, and fall still further, to 1.8% by 2020.

After a marked improvement over the previous four years, terms of trade for goods and services deteriorated by 4.5% year-on-year in Q2/2018, owing largely to rising oil and alumina prices. The outlook is for a nearly 2% deterioration in terms of trade in 2018 as a whole, broadly as was forecast in August. In 2019, however, terms of trade are expected to remain unchanged instead of improving by 2%, as was forecast in August.

Exports are expected to grow by 3.9% year-on-year, somewhat below the average for the past three years but similar to the 2011-2014 average. This year's growth rate is due largely to just over 10% growth in marine product exports. Due to a contraction in the transport and services component of services exports in H1/2018, services exports are now expected to grow somewhat less than was forecast in August. In 2019, export growth will ease further, primarily because growth in marine product exports will give way to a contraction.

GDP growth measured 4% in 2017, about 0.4 percentage points more than Statistics Iceland's earlier figures had suggested. It was stronger than previously projected in H1/2018 as well. Growth was projected at 5.6% in the Bank's August forecast but measured 6.4%. The deviation is due primarily to a large increase in inventories in H1 and an unexpected contraction in goods imports. The outlook is for GDP growth to slow markedly in H2 and measure 4.4% for the year as a whole. As in the August forecast, GDP growth is expected to measure just over 2½% in the next three years.

Total hours worked are estimated to increase by 2.3% this year. In spite of a more than 2% increase in the number of jobs this year, the outlook is for the employment rate to fall by nearly 1 percentage point year-on-year, owing to the prospect of a more than 3% increase in the working-age population. Seasonally adjusted unemployment measured 2.6% in Q3. It is forecast to rise to 3% in 2019 and 3.3% by 2021, close to the level deemed consistent with price stability.

According to the Bank's forecast, wages per hour are projected to rise by an average of 7.8% this year. The outlook is for productivity growth of just over 2%; therefore, unit labour costs are projected to rise by just over 5½%, about the same as in the August forecast but more than in the past two years. The year-on-year rise in wages is expected to slow down during the forecast horizon, in line with weaker labour productivity growth, rising unemployment, and a negligible improvement in terms of trade. The rise in unit labour costs will therefore contract from 5½% this year and in 2019 to 2½% in 2021.

As is discussed above, GDP growth was stronger in 2017 and H1/2018 than previously projected. As a consequence, the output gap was slightly larger at year-end 2017 than was assumed in August, and the outlook is for it to be about 1 percentage point larger at the end of 2018. As the forecast horizon progresses, however, the gap will narrow faster than was forecast in August, and it will have virtually closed by the end of the horizon.

The Bank's baseline forecast reflects the assessment of the most likely economic developments during the forecast horizon. It is based on forecasts and assumptions concerning developments in the external environment of the Icelandic economy, as well as assessments of the effectiveness of individual markets and how monetary policy is transmitted to the real economy. All of these factors are subject to uncertainty. Changes in key assumptions could lead to developments different from those provided for in the baseline forecast.

Inflation could turn out higher than in the Bank's baseline forecast. The most important risk factor is uncertainty about the upcoming wage settlements. Although the baseline forecast already assumes relatively sizeable pay increases even though the wage share is above its historical average, it is not impossible that wage settlements will provide for even larger increases or that wage drift will be greater than assumed, not least in view of the fact that unemployment is still low and tension in the labour market remains. Various other factors could pull in the same direction, causing inflation to turn out higher than in the baseline forecast. For example, global oil prices have soared in the recent past, and the possibility of a further increase cannot be ruled out, opposite to the assumption in the baseline forecast. Although the risk of a depreciation of the króna due to a deterioration in external conditions, as was discussed in the Bank's previous risk assessment, has already materialised in part, the króna could continue to weaken instead of remaining broadly at the current level for the remainder of the forecast horizon, as the baseline forecast assumes. By the same token, house price inflation could pick up again if growth in mortgage lending continues to gain momentum. Furthermore, the strength of the economy in H1/2018 could indicate that the output gap will be more persistent than is currently assumed, particularly if the fiscal stance eases more than is forecast. Inflation could also rise higher and remain more persistent if long-term inflation expectations do not fall back to the target.

Neither can the possibility be excluded that inflation will turn out lower than is assumed in the baseline forecast. The króna could appreciate again, for example, if external conditions improve. The trade dispute between the US and China could also undermine global economic activity, which could weaken Iceland's exports and result in weaker GDP growth than in the baseline forecast. Moreover, productivity growth could be underestimated, and this could cause the output gap to narrow faster than is assumed in the baseline.

II The interest rate decision

The Committee discussed the status of the work underway following the report from the task force on monetary policy and the next steps, as the position on the task force's recommendations is being formulated. In this context, the MPC is planning an extraordinary meeting in December. The Committee also discussed the market's response to the decision to lower the special reserve requirement (SRR), announced on 2 November, and the next steps in that matter. Conditions had developed that permitted a reduction in the SRR, with a narrowing interest rate differential and a lower exchange rate of the króna, and the SRR was therefore lowered from 40% to 20%. There was some uncertainty about the impact the reduction would have, as there is little experience in Iceland of this type of capital flow management measure. In addition, Committee members discussed the Bank's most recent *Financial Stability* report; they also discussed financial institutions' position and risks in the financial system.

The MPC discussed the monetary stance in view of the most recent information on the economy and the decline in the Bank's real rate between meetings. They discussed whether the monetary stance was appropriate in view of the inflation outlook, as the Committee had decided at its October meeting to keep the Bank's key rate unchanged, partly because the overall situation had not changed materially since the previous meeting and it was deemed appropriate to await further indicators because of the high level of uncertainty.

In this context, Committee members took account of the Central Bank's new macroeconomic forecast, published in *Monetary Bulletin* on 7 November, according to which GDP growth in

2017 and H1/2018 was stronger than previously estimated. Committee members noted that even though growth was expected to slow down in H2, it was forecast at 4.4% for 2018 as a whole, nearly 1 percentage point more than the Bank had forecast in August. Members agreed that the outlook for the coming term was for GDP growth to ease and the output gap to close. Even so, GDP growth would remain just over 2½%, close to the level that would allow the economy to grow without importing labour. It was pointed out that recent news of Icelandair's acquisition of WOW Air had mitigated the uncertainty about disturbances in air travel, at least for the short term.

The Committee discussed developments in inflation, which measured 2.8% in October. Members noted that the difference between measures of inflation including and excluding housing was close to its smallest in over four years. The year-on-year rise in house prices had continued to ease, but it was offset by a sizeable increase in import prices in the recent term. This partly reflected the rise in global oil prices. The MPC also noted that the króna had depreciated since August. There was some discussion of the main reasons for this, and members agreed that the beginning of the depreciation episode could be traced to an extent to temporary uncertainty about WOW Air's financing in the first week of September. They were of the view that this may have triggered a reassessment of developments and prospects, as the macroeconomic factors that had been the key drivers of the appreciation of the króna had given way. The factors mentioned included terms of trade, which had deteriorated; export growth, which had slowed; and the prospect of weaker output growth in H2. On the other hand, it was pointed out that a lower real exchange rate could be favourable for tourism companies' operations. The exchange rate of the króna could also be falling because of the marked decline in real interest rates in the recent term. Exchange rate volatility had increased in recent months, and it emerged that this could be related to less firmly anchored long-term inflation expectations. It was pointed out as well that domestic financial market unrest coincided with increased uncertainty in global financial markets.

Committee members noted that according to the forecast, the inflation outlook had deteriorated relative to the August forecast. The outlook was for inflation to continue rising and be somewhat above the target next year. The MPC was also of the view that the recent rise in inflation expectations and the fact that expectations were now above target by all measures gave cause for concern. On the other hand, the outlook was for growth in economic activity to ease faster than previously expected, which could, in the Committee's view, offset the poorer inflation outlook. As before, the main uncertainty was the upcoming wage negotiations, and even though the Bank's forecast assumed sizeable pay increases, it was not impossible that wage settlements would provide for even larger increases or that wage drift would be greater than assumed. It was also pointed out that there was the risk that Government measures in connection with the wage settlements might not be fully funded, resulting in an easing of the fiscal stance.

The MPC emphasised that higher inflation and inflation expectations in recent months had lowered the Bank's real rate more than was desirable in view of current economic developments and prospects. It was pointed out that because one of the main changes since the October meeting was the marked deterioration in the inflation outlook, there were no grounds to wait before tightening the monetary stance. The risk assessment in the inflation forecast also indicated that risk was concentrated on the upside in the first half of the forecast horizon. Furthermore, the recent rise in inflation expectations could indicate that expectations had grown less securely anchored to the target. All members agreed that it was necessary to raise the Bank's key rate now, and they discussed whether it should be raised by 0.25 percentage points or 0.5 percentage points.

The main rationale for raising the key rate by 0.25 percentage points was the considerable uncertainty about how rapidly GDP growth would ease and how the króna would respond to a rate hike and the reduction in the SRR. The conditions could exist for a somewhat lower real rate than would otherwise be warranted, depending on developments in these factors and others, although not to the degree that had already materialised. As a result, it would be more cautious to take a smaller step now. The next steps would be determined by developments. The main rationale for raising the key rate by 0.5 percentage points, however, was that the inflation outlook had worsened materially and inflation expectations had risen such that a 0.25-point increase would not suffice, as the monetary stance would still be looser than at the time of the October meeting even after such a rate hike. In addition, the Bank's real rate was extremely low given the fact that the output gap remained positive.

In view of the discussion, the Governor proposed that the Bank's interest rates be increased by 0.25 percentage points, which would raise the key rate (the seven-day term deposit rate) to 4.5%, deposit rates (current account rates) to 4.25%, the seven-day collateralised lending rate to 5.25%, and the overnight rate to 6.25%. Four members voted in favour of the Governor's proposal. One member voted against the Governor's proposal, voting instead to raise rates by 0.5 percentage points.

In the Committee's view, the near-term monetary stance would depend on the interaction between a narrower output gap, wage-setting decisions, and developments in inflation and inflation expectations.

The MPC reiterated that it had both the will and the tools necessary to keep inflation at target over the long term, and members agreed that if inflation expectations continued to rise and remained persistently at a level above the target, it would call for a tighter monetary stance. Other decisions, particularly those relating to the labour market and fiscal policy, would then affect the sacrifice cost in terms of lower employment.

The following Committee members were in attendance:

Már Gudmundsson, Governor and Chairman of the Monetary Policy Committee

Rannveig Sigurdardóttir, Deputy Governor

Thórarinn G. Pétursson, Chief Economist

Gylfi Zoëga, Professor, external member

Katrín Ólafsdóttir, Assistant Professor, external member

In addition, a number of Bank staff members attended part of the meeting.

Karen Áslaug Vignisdóttir wrote the minutes.

The next Statement of the Monetary Policy Committee will be published on Wednesday 12 December 2018.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, December 2018

Published 26 December 2018

The Act on the Central Bank of Iceland stipulates that it is the role of the Monetary Policy Committee (MPC) to set Central Bank interest rates and apply other monetary policy instruments. Furthermore, the Act states that "[m]inutes of meetings of the Monetary Policy Committee shall be made public, and an account given of the Committee's decisions and the premises upon which they are based." In accordance with the Act, the MPC has decided to publish the minutes of its meetings two weeks after each interest rate decision. The votes of individual Committee members will be made public in the Bank's *Annual Report*.

The following are the minutes of the MPC meeting held on 10 and 11 December 2018, during which the Committee discussed economic and financial market developments, the interest rate decision of 12 December, and the communication of that decision.

I Economic and monetary developments

Before turning to the interest rate decision, members discussed the domestic financial markets, financial stability, the outlook for the global economy and Iceland's international trade, the domestic economy, and inflation, with emphasis on information that has emerged since the 7 November 2018 interest rate decision.

Financial markets

Between meetings, the króna depreciated by 1.2% in trade-weighted terms. Over this same period it fell 1.6% against the euro, 1.8% against the US dollar, but appreciated by 1.5% against the pound sterling. The Central Bank intervened in the foreign exchange market once during this period, selling foreign currency in the amount of 6 million euros (0.8 b.kr.), or about 5% of total market turnover.

In terms of the Central Bank's real rate, the monetary stance eased since the November meeting. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 0.8%, or 0.3 percentage points lower than just after the November meeting. In terms of twelve-month inflation, it was 1.2% and had fallen by 0.5 percentage points between meetings.

Interest rates in the interbank market for krónur rose in line with the Central Bank's rate hike in November, but there was no turnover in the market during this period.

Yields on long-term nominal Treasury bonds had fallen by 0.2 percentage points since the November meeting, and yields on indexed Treasury and Housing Financing Fund (HFF) bonds had declined by 0.1-0.2 percentage points. The average interest rate on pension funds' non-indexed fixed-rate loans to fund members had risen by slightly less than 0.1 percentage points since the November meeting, and the average rate on non-indexed fixed-rate mortgage loans had risen by just under 0.5 percentage points. Over the same period, the average rate on indexed fixed-rate mortgage loans had fallen slightly.

In terms of three-month interbank rates, the interest rate differential versus the euro area had widened by 0.2 percentage points between meetings, to 5.2 percentage points, but the spread versus the US was virtually unchanged at 2.1 percentage points. The long-term interest rate differential versus Germany was broadly unchanged between meetings, at 5.4 percentage points, whereas the spread versus the US had widened by 0.2 percentage points, to 2.7 percentage points.

Measures of the risk premium on the Treasury's foreign obligations had risen marginally since the MPC's November meeting. The CDS spread on the Treasury's five-year US dollar obligations was just over 0.6%, while the spread between the Treasury's eurobonds and comparable bonds issued by Germany was 0.6-0.8 percentage points.

Financial institutions' analysts had projected that the Bank's interest rates would be held unchanged, citing, among other things, the prospect of weaker economic activity in the coming term, declining oil prices, and uncertainty about the impact of legislative amendments lifting capital controls on holders of offshore krónur and changes in the implementation of the special reserve requirement on capital inflows.

After adjusting for deposits held by the failed financial institutions, annual growth in M3 picked up relative to the first half of the year, measuring nearly 10½% in October. As before, growth in M3 stemmed primarily from increased household deposits, although the financial and commercial sectors' share in the growth rate has increased as well. After adjusting for the impact of the Government's debt relief measures, the stock of credit system loans to resident borrowers had grown in nominal terms by 10% in October, but if the stock of foreign-denominated loans is held at constant exchange rates, it grew by just over 9%. Over the same period, household lending grew by just over 7% year-on-year and corporate lending by 14%, whereas the growth rate adjusted for exchange rate movements was 12%.

The Nasdaq OMXI8 index had fallen by 2.2% between meetings. Turnover in the main market totalled 459 b.kr. during the first eleven months of the year, about 23% less than over the same period in 2017.

Global economy and external trade

According to the Organisation for Economic Co-operation and Development's (OECD) November forecast, global output growth will remain relatively robust, although it has peaked and will taper off in the next few years. In many countries, unemployment is lower now than before the financial crisis and labour shortages have begun to surface, although inflation has been moderate. At the same time, however, growth in world trade and investment has slowed in the wake of rising protective tariffs, while many emerging economies have been beset by increased capital outflows and falling currency exchange rates. The OECD forecasts, that global output growth will measure 3.7% this year, or 0.1 percentage points less than was forecast in May, and then taper off to 3.5% in 2019, some 0.4 percentage points below the last forecast. The OECD forecast for 2018 GDP growth among Iceland's main trading partners has been revised downwards by 0.2 percentage points, to 2.1%. The forecast for 2019 has also been revised downwards, to 2.1%. According to that forecast, trading partners' GDP growth will be weaker in 2018 than was assumed in the Central Bank's November forecast of 2.2%. The OECD revised its inflation forecast for Iceland's trading partners upwards by 0.1 percentage points in both 2018 and 2019, to 2% and 2.1%, respectively.

According to preliminary figures from Statistics Iceland, Iceland's goods trade generated a 17.7 b.kr. deficit in November, as opposed to a deficit of 12.4 b.kr., at constant exchange rates, in November 2017. The deficit for the first eleven months of the year was 181.7 b.kr. in 2018, as compared with 174 b.kr. in 2017. Export values rose by 10.5% year-on-year at constant exchange rates, owing mainly to an increase in the value of marine products and industrial goods. At the same time, import values increased by 9.1%, due primarily to an increase in the value of imported fuels and lubricants and commodities and operational inputs. The import value of passenger cars has declined between years, however.

Listed global aluminium prices remained virtually unchanged between MPC meetings but were just over 2% lower than at the same time in 2017. Preliminary figures from Statistics Iceland indicate that foreign currency prices of marine products were up 4.9% year-on-year in the first ten months of 2018. Global oil prices rose year-on-year by slightly more than 40% in the first three quarters of 2018. They peaked at just over 86 US dollars per barrel in early October, nearly 30% higher than at the end of 2017 and a full 50% higher than in early October 2017. Since then, they have fallen once again, to about 60 US dollars per barrel by the time of the MPC's December meeting, or about a third below the early-October price. At the time of the December meeting, oil prices were about 9% below mid-December 2017 prices.

In terms of relative consumer prices, the real exchange rate fell by 4% month-on-month in November, and by 11.9% year-on-year. In November, it was 7% above its 25-year average but 16.9% below its June 2017 peak. In the first eleven months of 2018, it was down by 2.5% compared with the same period in 2017, as the nominal exchange rate of the króna was 3.1% lower and inflation in Iceland was about 0.6 percentage points above the trading partner average.

The domestic real economy and inflation

According to preliminary figures published by Statistics Iceland in December, GDP growth measured 2.6% in Q3/2018. Domestic demand grew 0.5% year-on-year during the quarter. Exports grew by 5.1% between years, while imports grew by only 0.6%; therefore, the contribution from net trade was positive. In the first three quarters of the year, GDP growth measured 5%, as domestic demand grew by 4.3% and the contribution from net trade was positive by nearly 1 percentage point. GDP growth in 2018 to date slightly exceeded the forecast in the November *Monetary Bulletin*, which provided for 4.3% growth in the first three quarters of the year. Private consumption growth was stronger than forecast, albeit offset by weaker growth in investment. Consumption and investment spending therefore turned out broadly in line with the November forecast. The contribution from inventory changes was more than had been forecast, however, and therefore, domestic demand as a whole grew more than had been forecast in November, or 4.3% instead of the projected 3.8%. In the first nine months of the year, exports grew slightly more than had been projected in November, whereas imports developed broadly in line with the forecast. As a result, the contribution from net trade was largely as expected.

The current account surplus was 76.5 b.kr. in Q3/2018, as opposed to a surplus of 65 b.kr. at the same time in 2017. The larger surplus now is due mainly to a larger surplus on services trade, although the deficit on goods trade was also smaller. In spite of this, the current account surplus for the first three quarters of the year was smaller than in the same period of 2017, owing primarily to a smaller surplus on services trade in the first half of the year.

Key indicators of developments in private consumption at the beginning of Q4 suggest that private consumption growth will ease during the quarter. The Gallup Consumer Confidence Index has fallen somewhat in recent months, to 75.8 points by November, more than 48 points below the value a year earlier.

According to the results of Gallup's winter survey, conducted in December among Iceland's 400 largest firms, respondents' assessment of the current economic situation was neither positive nor negative, and therefore somewhat weaker than in the surveys taken this autumn and a year ago. Executives were also more downbeat about the outlook six months ahead than they were this autumn and in the winter 2017 survey. About 46% of respondents considered the current situation neither good nor poor, and about 31% considered it good. About 68% of executives were of the view that economic conditions would deteriorate in the next six months, and 27% expected conditions to be neither good nor poor. About 5% of respondents expected conditions to improve in the next six months. The number of pessimistic executives has therefore grown markedly since the autumn survey, when about half of respondents expected conditions to worsen, and since last year's winter survey, when just under one-fourth were of that opinion. Executives' outlook on domestic demand was also much more negative than in the surveys taken this autumn and in winter 2017, whereas their expectations concerning foreign demand have been unchanged from the survey taken in May 2018. The most marked deterioration in expectations about domestic demand between the autumn and winter surveys was among executives in retail and wholesale trade.

According to the seasonally adjusted results of the winter survey, the share of respondents interested in laying off staff in the next six months exceeded the share interested in recruiting by 18 percentage points. This is a marked turnaround since the autumn, when firms interested in recruiting slightly outnumbered those planning to downsize. Sentiment was most negative in industry and manufacturing, where firms interested in laying off staff outnumbered those planning to recruit by 42 percentage points. The only sector planning to add on staff was miscellaneous specialised services, where the number of firms planning to recruit exceeded the number planning redundancies by 5 percentage points.

After adjusting for seasonality, 18% of executives considered themselves short-staffed, a slight decline since the last survey. The ratio was highest in industry and manufacturing, where nearly a fourth of executives considered themselves short-staffed, and it was lowest in transport, transit, and tourism, where 5% of executives reported difficulties in filling available jobs.

The share of executives who reported difficulty in responding to unexpected demand declined by 7 percentage points between surveys, to 41%. The strain on production factors was least in transport, transit, and tourism, where just under one-fifth of executives reported difficulty in responding to unexpected demand. About 58% of executives in miscellaneous specialised services were pessimistic about responding to unexpected demand, whereas in other sectors, the ratio lay in the 31-45% range.

The wage index rose by 0.4% month-on-month in October and by 6.2% year-on-year, and real wages were 3.2% higher during the month than at the same time in 2017.

Statistics Iceland's nationwide house price index, published in November, rose 0.5% month-on-month when adjusted for seasonality, and by 5.7% year-on-year. The capital area house price index, calculated by Registers Iceland, rose by 0.7% month-on-month in October, adjusted for seasonality, and by about 4.1% year-on-year. The twelve-month rise in real estate prices has therefore held steady at about 4% since August. The number of purchase agreements registered nationwide in the first ten months of the year increased by 7.6% year-on-year, and the average time-to-sale for flats in greater Reykjavík was 1.4 months in October, as opposed to 2.6 months a year earlier. Just over 800 flats were advertised for sale in greater Reykjavík in November, down from more than 1,500 in November 2017.

The CPI rose by 0.24% month-on-month in November. Twelve-month inflation measured 3.3% and had risen by 0.5 percentage points between MPC meetings. Inflation is at its highest in five years. The CPI excluding the housing component had risen by 2.4% year-on-year in November. The difference between inflation including and excluding housing continued to narrow and is now at its smallest in over five years. In terms of the median of various measures, underlying inflation was 3.3% in November, nearly 2 percentage points higher than in the same month of 2017.

The seasonal decline in international airfares made the strongest impact on the CPI in November. Petrol and telephone services prices also fell. On the other hand, imported goods prices raised the CPI by 0.3 percentage points, with the increase in new motor vehicle prices weighing heaviest.

According to Gallup's winter surveys of household and corporate inflation expectations, respondents' one-year expectations had risen by 0.5-1 percentage point from the autumn survey, to 4%. Their expectations five years ahead were unchanged between surveys, however, at 3-3.5%. The five- and ten-year breakeven inflation rate in the bond market was 3.9% just before the MPC meeting, after falling slightly since the November meeting.

II The interest rate decision

The Governor discussed the recent bill of legislation on the release of the last of the offshore króna assets that were locked in by the capital controls in the aftermath of the financial crisis. He emphasised that the arrangements would be structured so as to ensure equal treatment and to avoid discriminating among foreign investors in offshore krónur that had been released at various points in time. In addition, it would be necessary to ensure that complexity be minimised so as to facilitate efficient supervision. Therefore, those offshore króna holders that had not owned their króna assets continuously since before the capital controls were introduced and wished to invest in Icelandic bonds would have to exit through the foreign exchange market and then re-enter, subject to the special reserve requirement.

In this context, Committee members discussed the Central Bank's intervention in the foreign exchange market. They agreed that the resolution of such a legacy problem that was unrelated to current underlying economic conditions should not be allowed to lower the exchange rate of the króna; therefore, the Bank would intervene in the foreign exchange market, in line with previous statements. In this context, the Bank would also take into consideration that there were signs that the recent currency depreciation had pushed the real exchange rate below its equilibrium value. MPC members agreed that it was likely that the depreciation represented in part an undershooting stemming from greater pessimism in the market than was warranted, which in turn was driven by expectations of further depreciation, a reassessment of the position of the economy, and uncertainty about operating conditions in the tourism sector.

The Committee also discussed the Central Bank's forthcoming report to the Prime Minister concerning the Bank's position on the proposals presented by the task force on monetary policy pertaining to changes in working procedures of the MPC and the Bank more generally.

Members discussed whether the monetary stance was appropriate in view of the economic situation and outlook, as the Committee had decided in November to raise the Bank's interest rates because higher inflation and inflation expectations had lowered the Bank's real rate more than was desirable in view of then-current economic developments and prospects.

MPC members discussed the recently published preliminary national accounts figures, according to which GDP growth measured 5% for the first nine months of the year, slightly more than the Central Bank had assumed in its November forecast. The Committee agreed that the positive output gap had possibly been somewhat larger than expected, but that developments had been broadly in line with the Bank's forecast.

Members discussed developments in inflation, which had risen over the course of the year, in line with the Bank's forecast, measuring 3.3% in November. The main driver of the increase was the steep rise in import prices in recent months, as the króna had depreciated by over 11% year-to-date. MPC members noted that this currency depreciation and concerns about upcoming wage settlements had shown in expectations of a further rise in inflation, as households' and businesses' short-term inflation expectations had risen since the Committee's November meeting. The monetary stance as measured by the Central Bank's real rate had therefore eased again. It emerged in the discussion that the Bank's real rate was about where it had been before the November policy rate hike. In the Committee's opinion, this was offset by signs that the positive output gap would continue to narrow in the near term. It was also pointed out that the likelihood of adverse effects in Iceland of the United Kingdom's exit from the European Union had increased in the recent term, as a result of increased uncertainty about the post-Brexit situation. Members noted that the rise in inflation expectations since the last MPC meeting was still by and large limited to short-term expectations, and the depreciation of the króna had slowed. At the meeting, they also discussed the possibility of raising general reserve requirements in response to the recent surge in credit growth.

The Committee discussed awaiting further developments and keeping interest rates unchanged versus raising them by 0.25 percentage points. The main rationale for keeping rates unchanged was that the decline in the real rate between meetings was due primarily to the short-term impact of the depreciation of the króna on inflation and short-term inflation expectations. Although developments in the real economy and inflation had been largely as was anticipated at the last MPC meeting and the economic outlook was broadly unchanged, the inflation outlook was probably more favourable than at the previous meeting, as oil prices had fallen in the recent term. Furthermore, there might be grounds for a lower real rate than would otherwise be justifiable, as high-frequency indicators and sentiment surveys had suggested greater pessimism, indicating that demand could taper off more quickly than previously expected. It was also mentioned that the probability of strikes in the new year had increased, which could cause the domestic economy to cool more quickly.

The main rationale for a rate hike was the need for a larger increase than had been decided in November, in view of higher underlying inflation and rising inflation expectations. Moreover, the real rate had fallen once again and was now back to the level prior to the November rate increase. As a result, the monetary stance was too loose, given that domestic demand had been stronger than forecast in Q3 and inflation expectations were above target by all measures. It was also pointed out that the recent decline in real rates, while there was still a positive output gap, could partly explain the depreciation of the króna.

In view of the discussion, the Governor proposed that the Bank's interest rates be held unchanged. The Bank's key rate (the seven-day term deposit rate) would remain 4.5%, the current account rate 4.25%, the seven-day collateralised lending rate 5.25%, and the overnight lending rate 6.25%. Four members voted in favour of the Governor's proposal. One member voted against the Governor's proposal, voting instead to raise rates by 0.25 percentage points.

In the Committee's view, the near-term monetary stance would depend on the interaction between a narrower output gap, wage-setting decisions, and developments in inflation and inflation expectations.

The MPC reiterated that it had both the will and the tools necessary to keep inflation at target over the long term, and members agreed that if inflation expectations continued to rise and remained persistently at a level above the target, it would call for a tighter monetary stance. Other decisions, particularly those relating to the labour market and fiscal policy, would then affect the sacrifice cost in terms of lower employment.

The following Committee members were in attendance:

Már Gudmundsson, Governor and Chairman of the Monetary Policy Committee

Rannveig Sigurdardóttir, Deputy Governor

Thórarinn G. Pétursson, Chief Economist

Gylfi Zoëga, Professor, external member

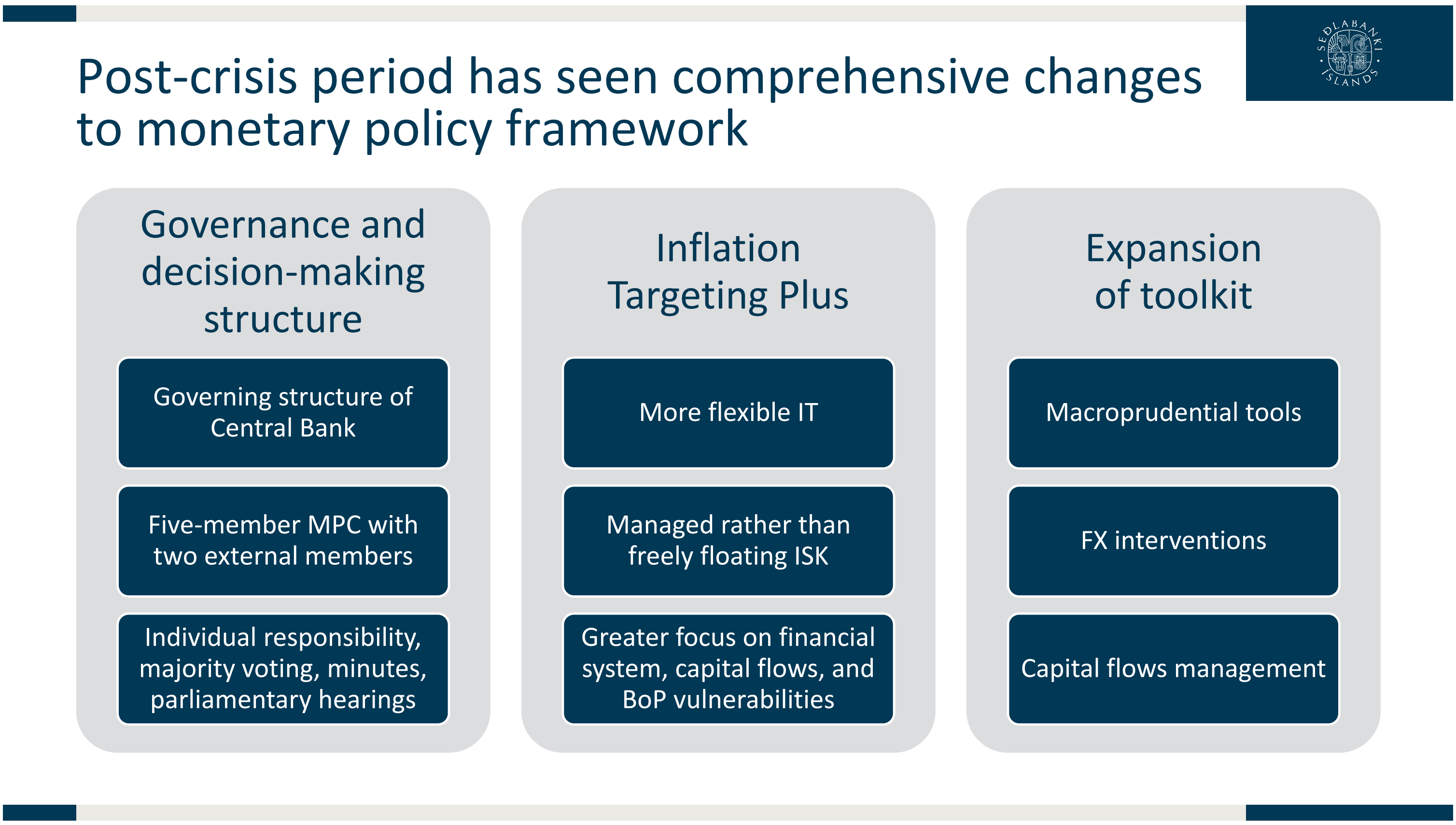
Katrín Ólafsdóttir, Assistant Professor, external member

In addition, a number of Bank staff members attended part of the meeting.

Karen Áslaug Vignisdóttir wrote the minutes.

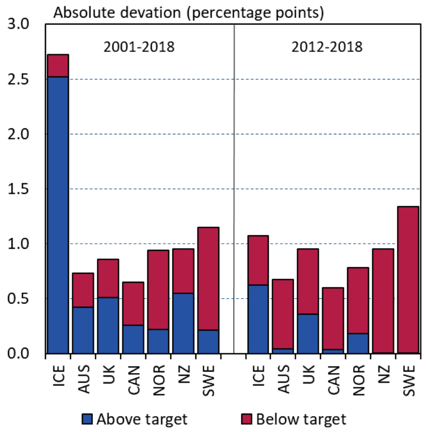
The next Statement of the Monetary Policy Committee will be published on Wednesday 6 February 2019.


SEÐLABANKI ÍSLANDS
Post-crisis monetary policy reform:
Learning the hard way
The 2008 Global Financial Crisis in Retrospect
30-31 August 2018
Thórarinn G. Pétursson
Chief Economist Central Bank of Iceland
The views expressed do not necessarily reflect those of the Central Bank of Iceland or the Bank's Monetary Policy Committee.

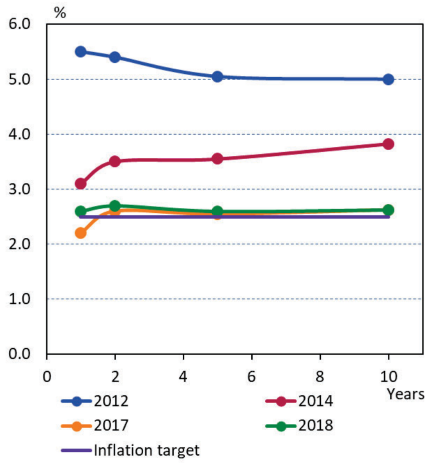

Post-crisis period has seen comprehensive changes to monetary policy framework
Governance and decision-making structure
Governing structure of Central Bank
Five-member MPC with two external members
Individual responsibility, majority voting, minutes, parliamentary hearings
Inflation Targeting Plus
More flexible IT
Managed rather than freely floating ISK
Greater focus on financial system, capital flows, and BoP vulnerabilities
Expansion of toolkit
Macroprudential tools
FX interventions
Capital flows management

Less frequent target misses, better anchored inflation expectations, and improved credibility

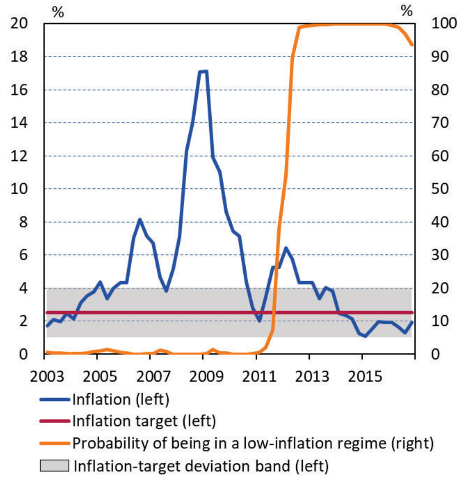
Average deviation from inflation target[1]
Q1/2001 - Q2/2018



One- to ten-year inflation expecations[2]
Observations for Q2 in 2012, 2014, 2017, and 2018



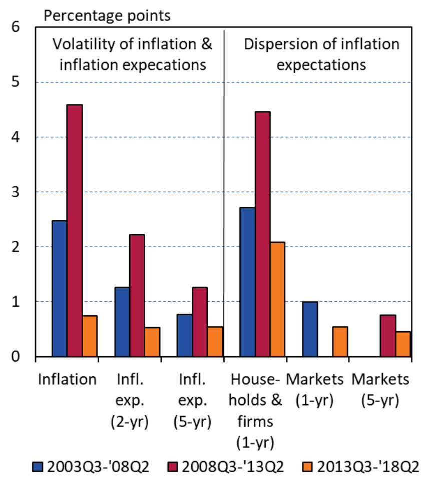
Probability of being in low-inflation regime[3]



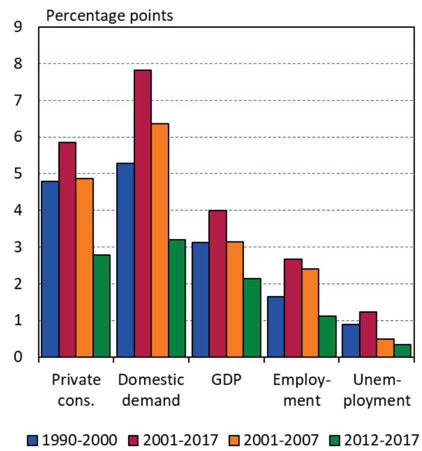
1. Average absolute deviation from inflation target (based on inflation target measure used by each country) and relative contribution of above- and below-target deviations. 2. 1-10 year inflation expectations from surveys among financial market participants. 3. Smoothed probability of being in a low-inflation regime based on an open economy, forward-looking Phillips curve, estimated with a two-regime Markov switching model.
Sources: Central bank websites, OECD, Statistics Iceland, Central Bank of Iceland, Thórarinn G. Pétursson (2018), "Disinflation and improved anchoring of long-term inflation expectations: The Icelandic experience", Central Bank of Iceland Working Paper no. 77.

Increased nominal and real stability, and more effective monetary policy

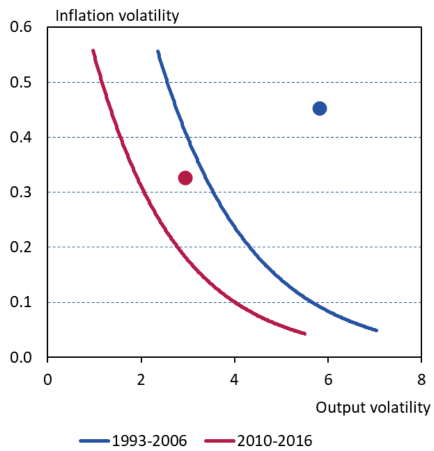
Inflation volatility and dispersion for three 5-year periods[1]



Volatility of key macro variables in different periods[2]



Monetary policy frontier[3]



1. Standard deviation of quarterly year-on-year CPI inflation and 2- and 5-year breakeven inflation expectations (from Q1/2003) and dispersion of survey-based inflation expectations of households and firms (simple average) and financial market participants. 2. Standard deviation of annual changes in various macro variables. 3. The efficient frontier shows pairs of standard deviations of inflation (deviations of annualised quarterly inflation from trend, π_t) and output (annualised quarterly GDP growth, y_t) which minimises the loss function $L = \sum_{t=0}^{\infty}(\lambda \pi_t^2 + (1-\lambda) y_t^2)$ for different values of λ. The dots show pairs of actual standard deviations of inflation and output. The data is seasonally adjusted, de-trended and Kalman filtered using the Central Bank of Iceland's DSGE model.
Sources: Gallup, Statistics Iceland, Central Bank of Iceland, Central Bank of Iceland (2017), "Monetary policy based on inflation targeting: Iceland's experience since 2001 and post-crisis changes", *Special Publication* no. 11.

SEÐLABANKI ÍSLANDS

Ástand og horfur í efnahagsmálum

Fyrirlestur hjá Félagi atvinnurekenda
11. september 2018

Þórarinn G. Pétursson
Aðalhagfræðingur Seðlabanka Íslands

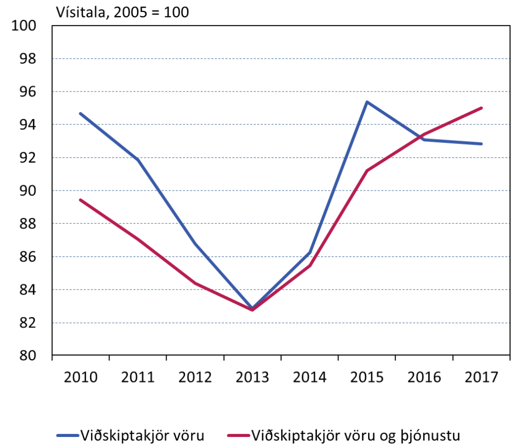
Félag atvinnurekenda

Staða efnahagsmála og horfur fyrir næstu ár

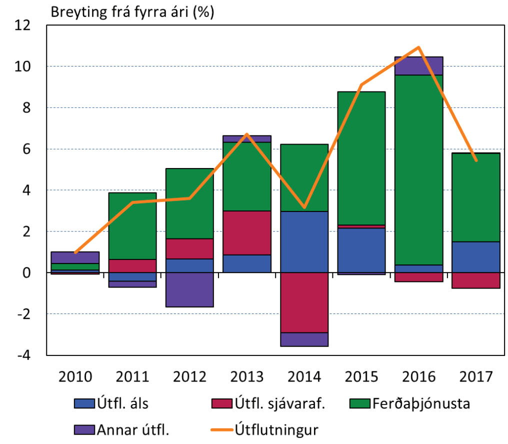
Sagan af búhnykkjunum tveimur

- Viðskiptakjör bötnuðu um 1,7% í fyrra og hafa samtals batnað um 15% frá 2013 – mun meiri bati en í öðrum OECD-ríkjum
- Útflutningur hefur aukist um þriðjung frá 2013 – drifinn áfram af gríðarlegum vexti ferðaþjónustu
- Áhrif að fjara út á H1/18: viðskiptakjör rýrnað um 2,5% og þjónustuútflutningur aukist um 3% (jókst um 9% '17 og 17% '15-'16)

Viðskiptakjör 2010-2017[1]



Útflutningur og framlag undirliða 2010-2017[1]

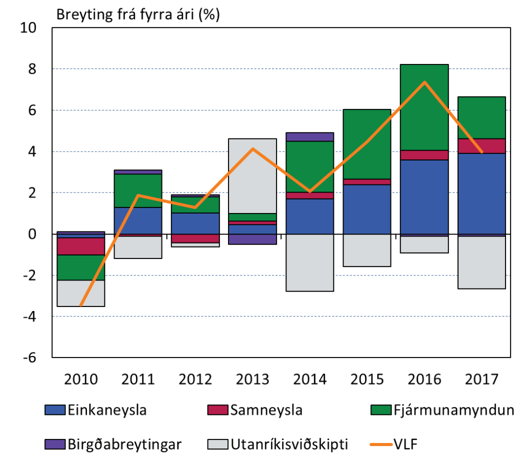


1. Álútflutningur skv. skilgreiningu þjóðhagsreikninga. Ferðaþjónusta er samtala á „ferðalögum“ og „farþegaflutningum með flugi“.
Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

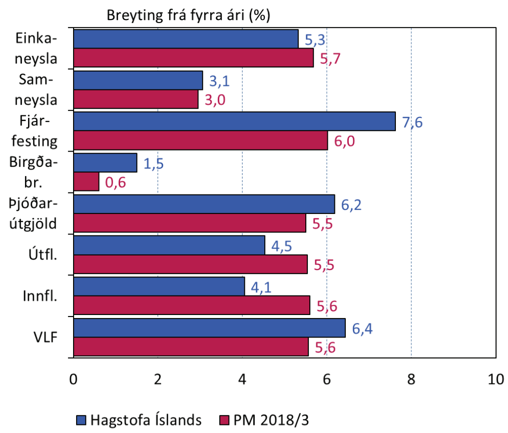
Hagvöxtur minnkar frá 2016 en er enn mjög mikill

- Mikill hagvöxtur undanfarin ár: 7,5% 2016 og 4% 2017: drifinn áfram af miklum vexti þjóðarútgjalda
- Mikill vöxtur þjóðarútgjalda einnig megindrifkraftur 6,4% hagvaxtar á fyrri hluta 2018 … 0,8 prósentum meiri hagvöxtur en spáð í PM 18/3: neyslu- og fjárfestingarútgjöld í takt við spá (5,3% í stað 5,1%) en áhrif birgðabreytinga mun meiri

Hagvöxtur og framlag undirliða 2010-2017



Þjóðhagsreikningar fyrir fyrri hluta 2018

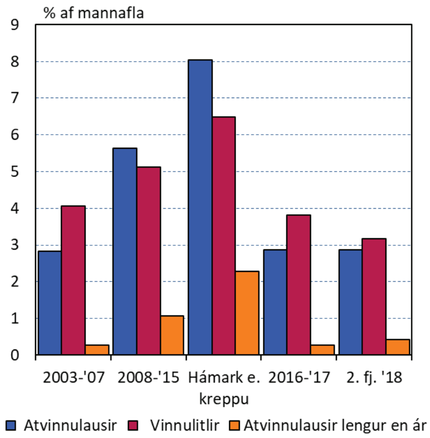


Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

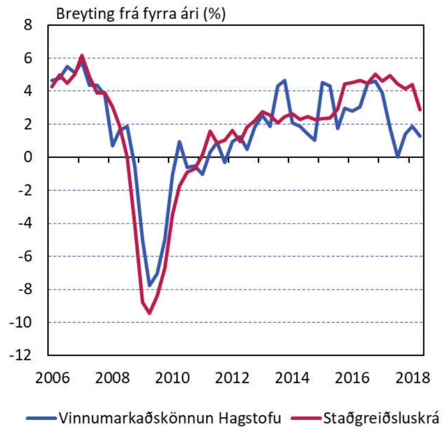
Spenna í þjóðarbúinu virðist hafa náð hámarki

- Árstíðarleiðrétt atvinnuleysi 2,9% á Q2: hefur minnkað mikið og er nú svipað og að meðaltali 2003-7 – eins og langtímaatvinnuleysi – en hlutfall vinnulítilla er komið um 1 prósentu undir það sem það var að meðaltali 2003-7
- Störfum heldur áfram að fjölga en hægar en áður og spenna í þjóðarbúinu virðist í rénum

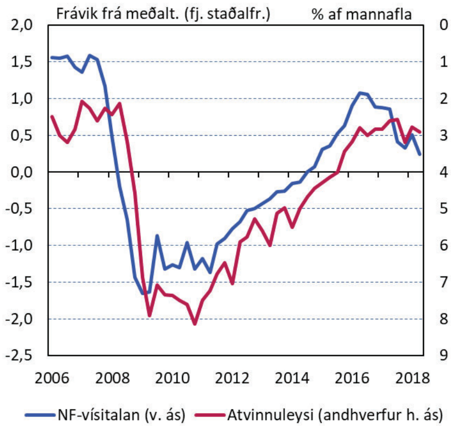
Atvinnulausir og vinnulitlir[1]



Fjöldi starfa[2]
1. ársfj. 2006 - 2. ársfj. 2018



Nýting framleiðsluþátta og atvinnuleysi[3]
1. ársfj. 2006 - 2. ársfj. 2018

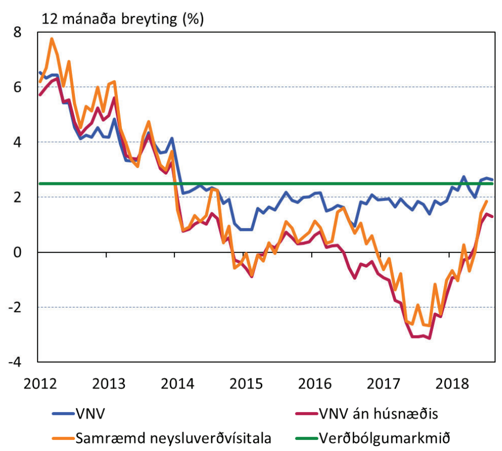


1. Vinnulitlir er starfsfólk í hlutastarfi sem vill vinna meira. Árstíðarleiðréttar tölur. 2. Fjöldi starfa skv. VMK eru ársfjórðungsleg meðaltöl mánaðarlegra gagna. Fjöldi starfa skv. staðgreiðsluskrá byggir á gögnum um 16-74 ára einstaklinga sem höfðu einhverjar tekjur af atvinnu sem gert er grein fyrir í uppgjöri ríkisskattstjóra um staðgreidda skatta, þ.á m. þeir sem voru í fæðingarorlofi frá vinnu og þeir sem eru með reiknað endurgjald. 3. Vísitala nýtingar framleiðsluþátta (NF-vísitalan) er fyrsti frumþáttur valinna vísbendinga um nýtingu framleiðsluþátta sem er skalaður til svo meðaltal hans er 0 og staðalfrávik 1 (sjá rammagrein 3 í *Peningamálum* 2018/2). Atvinnuleysi er árstíðarleiðrétt.
Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

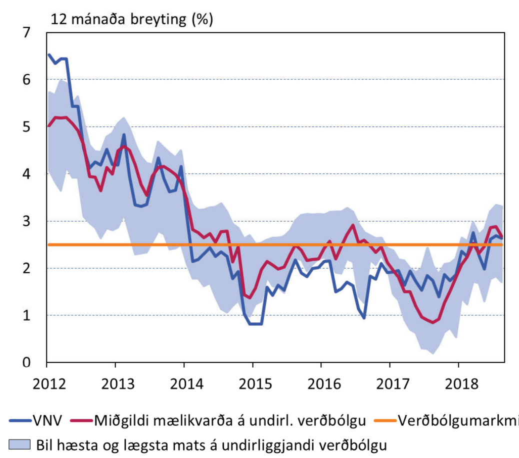
Aukin verðbólga en við markmið á flesta mælikvarða

- Verðbólga var 2,3% á Q2 en var komin í 2,6% í ágúst … hefur heldur aukist undanfarið – sérstaklega án húsnæðis … og mismunur á verðbólgu með og án húsnæðis hefur minnkað mikið
- Undirliggjandi verðbólga hefur einnig aukist: miðgildi mismunandi mælikvarða 2,7% í ágúst en var 0,8% fyrir ári

Verðbólga á ýmsa mælikvarða
Janúar 2012 - ágúst 2018



Mæld og undirliggjandi verðbólga[1]
Janúar 2012 - ágúst 2018

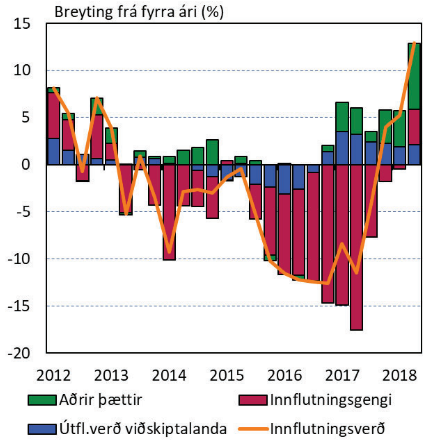


1. Undirliggjandi verðbólga er mæld með kjarnavísitölu (áhrif óbeinna skatta, sveiflukenndra matvöruliða, bensíns, opinberrar þjónustu og raunvaxtakostnaðar húsnæðislána eru undanskilin) og tölfræðilegum mælikvörðum (vegið miðgildi, klippt meðaltal, kvikt þáttalíkan og sameiginlegur þáttur VNV).
Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

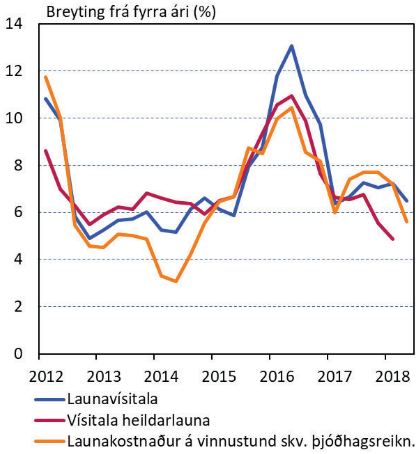
Áhrif innfluttrar verðhjöðnunar horfin

- Innflutningsverð tekið að hækka eftir því sem áhrif gengishækkunar fjara út og alþjóðleg verðbólga eykst (og álagning mögulega einnig að aukast) … á móti vega minni hækkun launa og hjöðnun húsnæðisverðbólgu …
- … en innlendur verðbólguþrýstingur enn töluverður: árstaktur launa og húsnæðisverðs enn yfir 5%

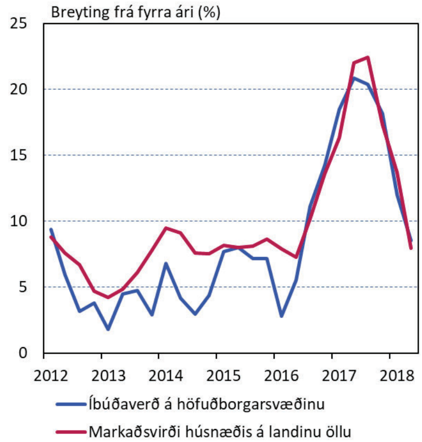
Innflutningsverðlag og áhrifaþættir[1]
1. ársfj. 2012 - 2. ársfj. 2018



Laun[2]
1. ársfj. 2012 - 2. ársfj. 2018



Húsnæðisverð
1. ársfj. 2012 - 2. ársfj. 2018

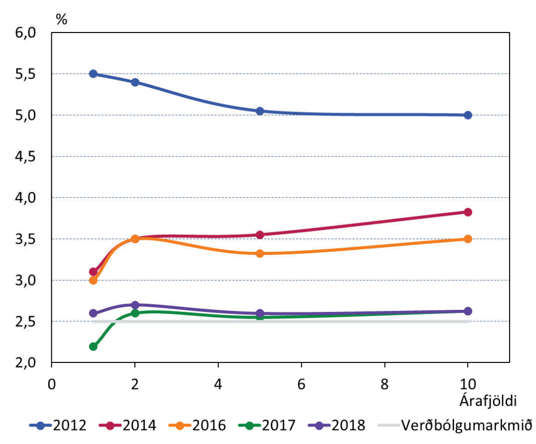


1. Útflutningsverð helstu viðskiptalanda er í erlendum gjaldmiðlum en innflutningsverð í íslenskum krónum. „Aðrir þættir“ eru mismunur hækkunar innflutningsverðs og samtölu hækkunar útflutningsverðs viðskiptalanda og gengisbreytinga. 2. Heildarlaun á greidda vinnustund út frá staðgreiðslugögnum frá ríkisskattstjóra og gögnum Hagstofunnar. Launakostnaður á vinnustund skv. þjóðhagsreikningum byggir á árstölum úr ársreikningum fyrirtækja. Ársfjórðungstölur eru fengnar með ECOTRIM með launavísitölu Hagstofunnar sem hliðsjónargögn.
Heimildir: Hagstofa Íslands, Þjóðskrá, Seðlabanki Íslands.

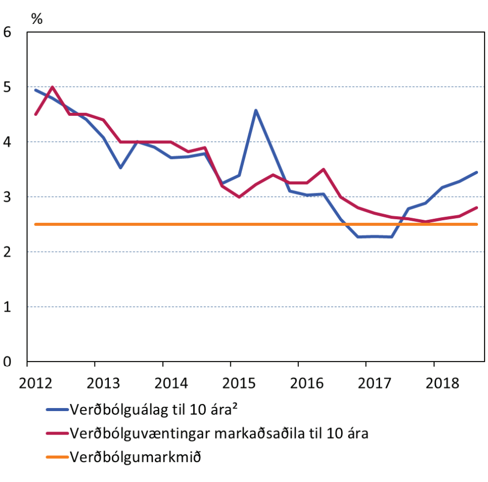
Verðbólguvæntingar teknar að hækka á ný

- Verðbólguvæntingar voru lengi vel töluvert fyrir ofan verðbólgumarkmið bankans en tóku að lækka smám saman frá 2012 og voru komnar í samræmi við markmiðið er líða tók á 2016 og hafa haldist þar síðan …
- … en svo virðist sem þær séu að hækka á ný: vísbending um að kjölfesta þeirra í markmiðinu sé að losna aftur?

Verðbólguvæntingar til 1-10 ára[1]
Mælingar á 2. ársfj. hvers árs



Langtímaverðbólguvæntingar
1. ársfj. 2012 - 3. ársfj. 2018

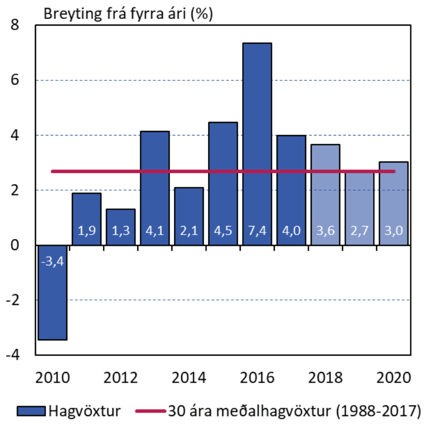


1. Verðbólguvæntingar til 1, 2, 5 og 10 ára út frá könnun meðal markaðsaðila. 2. Talan fyrir 3. ársfjórðung 2018 er meðaltal það sem af er fjórðungnum.
Heimild: Seðlabanki Íslands.

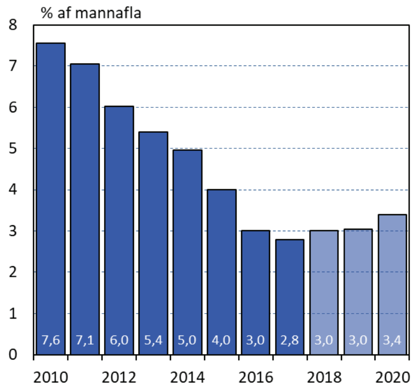
Efnahagshorfur samkvæmt spá PM 2018/3

- Gert ráð fyrir 3,6% hagvexti í ár og að hann minnki áfram næstu 2 ár (spá gerð fyrir birtingu Q2 og endurskoðun fyrri talna)
- Atvinnuleysi verður að meðaltali 3% í ár en eykst síðan smám saman í langtímajafnvægi
- Verðbólga talin aukast heldur er líður á árið og verði 2,7% á árinu öllu og haldist svipuð á næsta ári en þokist síðan í markmið

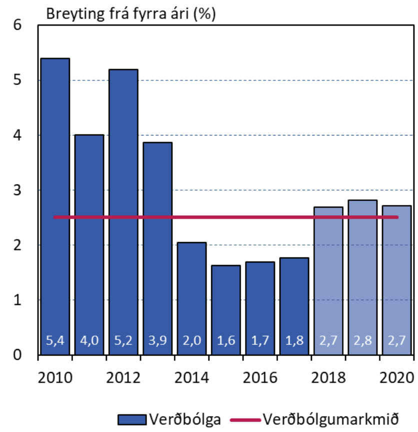
Hagvöxtur 2010-2020[1]



Atvinnuleysi 2010-2020[1]



Verðbólga 2010-2020[1]



1. Ljóslitar súlur sýna grunnspá *Peningamála* 2018/3 fyrir 2018-2020.
Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

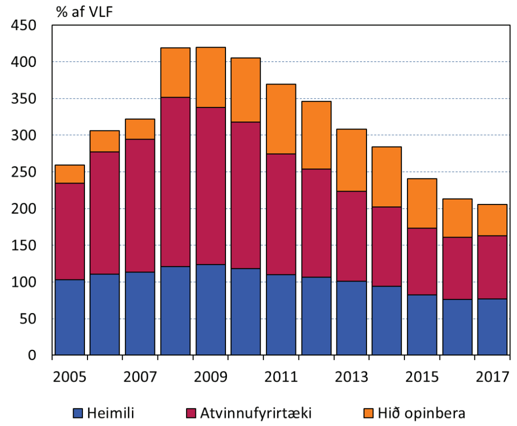
Félag atvinnurekenda

Viðnámsþróttur þjóðarbúsins nú og fyrir 10 árum

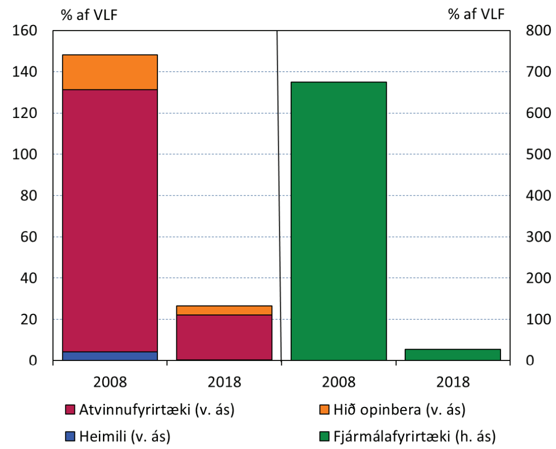
Mikil lækkun skulda – sérstaklega í erl. gjaldmiðlum

- Heimili og fyrirtæki voru orðin mjög skuldsett í aðdraganda fjármálakreppunnar og skuldir hins opinbera jukust mikið í kjölfar hennar … en skuldir allra geira hafa lækkað mikið undanfarin ár og eru með því minnsta sem hafa mælst
- Skuldir í erlendum gjaldmiðlum voru einnig gríðarlegar í aðdraganda kreppunnar en eru mun minni nú

Skuldir heimila, fyrirtækja og hins opinbera 2005-2017[1]



Skuldir í erlendum gjaldmiðlum[2]

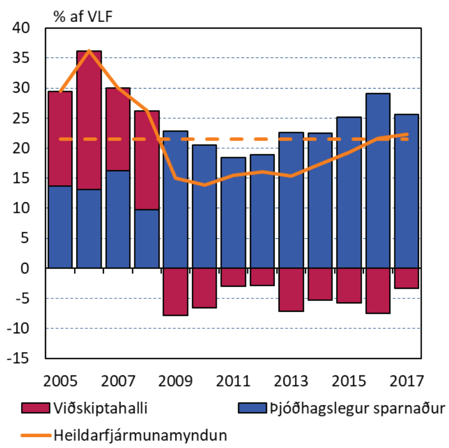


1. Skuldir við fjármálafyrirtæki og útgefin markaðsskuldabréf. Atvinnufyrirtæki án fjármálafyrirtækja (þar með talið eignarhaldsfélaga). 2. Skuldir í erlendum gjaldmiðlum eða tengdar erlendum gjaldmiðlum. Atvinnufyrirtæki án fjármálafyrirtækja (þ.m.t. eignarhaldsfélaga). 2008 tölur eru tölur fyrir september 2008 hjá heimilum og fyrirtækjum en fyrir ágúst 2008 hjá hinu opinbera. 2018 tölur eru tölur fyrir mars 2018 hjá heimilum og fyrirtækjum en fyrir ágúst 2018 hjá hinu opinbera (árslokaáætlun *Peningamála* 2018/3 hjá sveitarfélögum).
Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

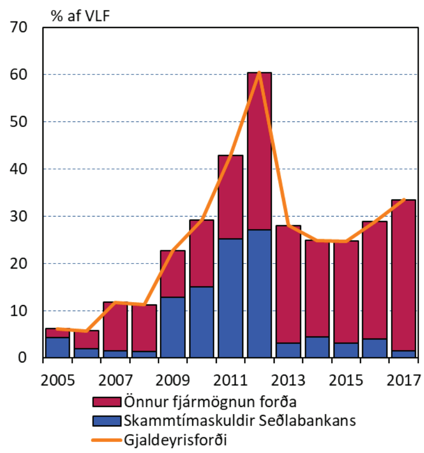
Efnahagsreikningur þjóðarinnar tekið stakkaskiptum

- Þjóðhagslegur sparnaður nógu mikill til að fjármagna innlend fjárfestingarumsvif og gott betur – ólíkt því sem var fyrir 10 árum
- Gjaldeyrisforðinn var mjög lítill í aðdraganda kreppunnar en er orðinn mun stærri nú …
- … og nú er Ísland í fyrsta sinn orðið hreinn lánveitandi gagnvart útlöndum

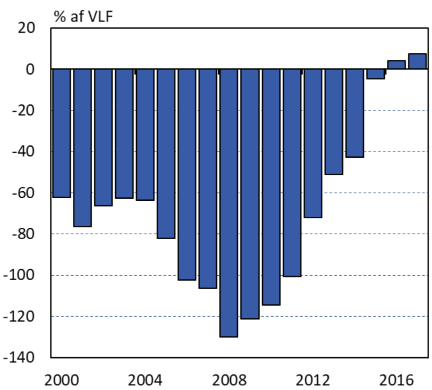
Fjárfesting, sparnaður og viðskiptajöfnuður 2005-2017[1]



Gjaldeyrisforði og fjármögnun hans 2005-2017[2]



Hrein erlend staða 2000-2017[3]

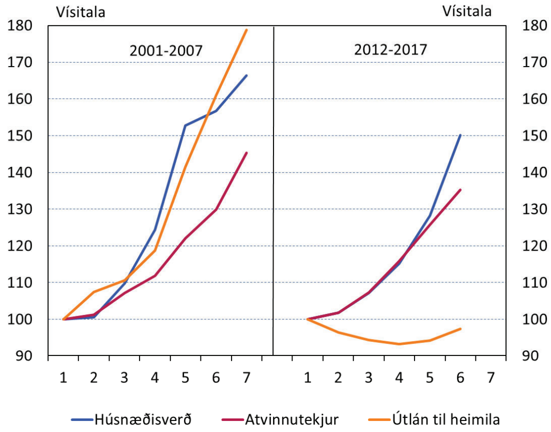


1. Rekstrarframlög talin með frumþáttatekjum. Viðskiptajöfnuður án áhrifa fallinna fjármálafyrirtækja 2008-2015 og lyfjafyrirtækisins Actavis 2009-2012 á jöfnuð frumþáttatekna. Einnig hefur verið leiðrétt fyrir óbeint mældri fjármálaþjónustu (FISIM) fallinna fjármálafyrirtækja. Undirliggjandi þjóðhagslegur sparnaður 2008-2015 þar sem byggt er á mati á undirliggjandi viðskiptajöfnuði. Brotalína sýnir 25 ára meðaltal fjárfestingarhlutfallsins (1993-2017).
2. Skammtímaskuldir eru gjaldeyrislán, verðbréf og innstæður. 3. Undirliggjandi hrein erlend staða 2008-2014.
Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

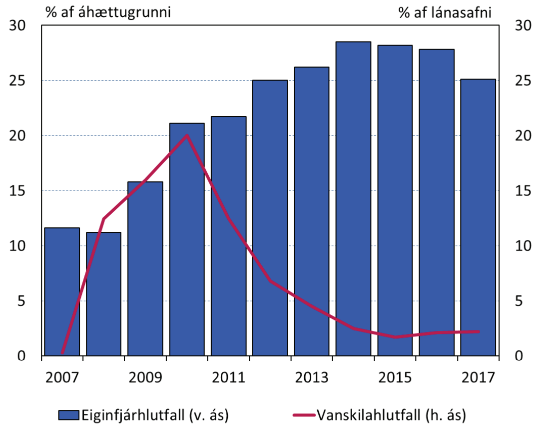
Húsnæðisverð og bankakerfið nú og síðast

- Grundvöllur núverandi hækkunarfasa húsnæðisverðs er allt annar en síðast: nú drifinn áfram af mikilli hækkun tekna frekar en mikilli skuldsetningu
- Vanskil í bankakerfinu hafa minnkað mikið og eiginfjárstaða bankanna er mjög sterk

Húsnæðisverð, tekjur og útlán í tveimur húsnæðisverðsuppsveiflum[1]



Eiginfjár- og vanskilahlutfall viðskiptabanka 2007-2017[2]



1. Húsnæðisverð í hlutfalli við almennt verðlag, kaupmáttur atvinnutekna (ráðstöfunartekna utan fjármagnstekna) eftir skatt og útlán til heimila á föstu verði (leiðrétt fyrir skuldalækkunaraðgerðum stjórnvalda frá 2009). Sýnd eru tvö hækkunarskeið húsnæðisverðs þar sem fyrsta ár tímabilsins (ár 1) er sett jafnt 100. 2. Eiginfjárhlutfall fyrir samstæður stærstu viðskiptabankanna. Tölur fyrir 2008 byggja á stofnefnahag endurreistu bankanna sem ákvarðaður var með samningum við kröfuhafa 2009. Vanskilahlutfall fyrir heimili og fyrirtæki sem hlutfall af brúttó lánasafni án niðurfærslna. Tölur fyrir 2007 eru áætlaðar út frá ársreikningum föllnu bankanna og fyrir 2008 út frá áætlun Seðlabankans.
Heimildir: Fjármálaeftirlitið, Hagstofa Íslands, Seðlabanki Íslands.

SEÐLABANKI ÍSLANDS

Monetary Policy and Financial Stability

Lecture for EMBA students

Rannveig Sigurðardóttir
Deputy Governor Central Bank of Iceland

Reykjavík University
12 October 2018

Roadmap for presentation

1. **The Central Bank;** objectives by law and staffing
2. **Monetary policy;** mandate, governance, implementation and performance
3. **Financial stability;** macroprudential framework and tools
4. **Recent and future decisions**

The Central Bank of Iceland

The Central Bank of Iceland

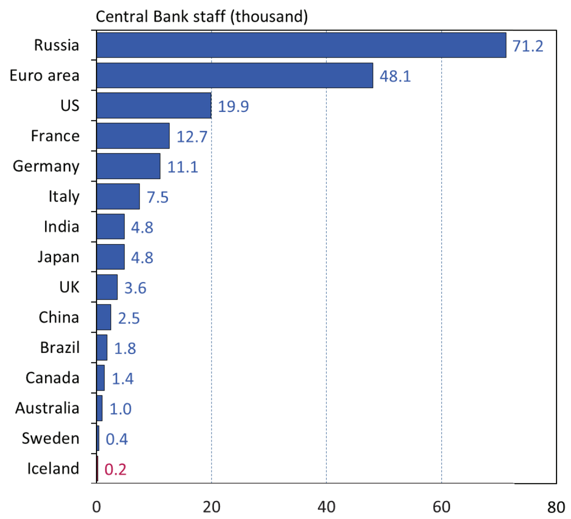
The Bank

- Established in its current form in 1961

Its staff

- Its staff level of 180 makes it one of the smallest central banks in the world …

Central Bank staff



The Central Bank of Iceland

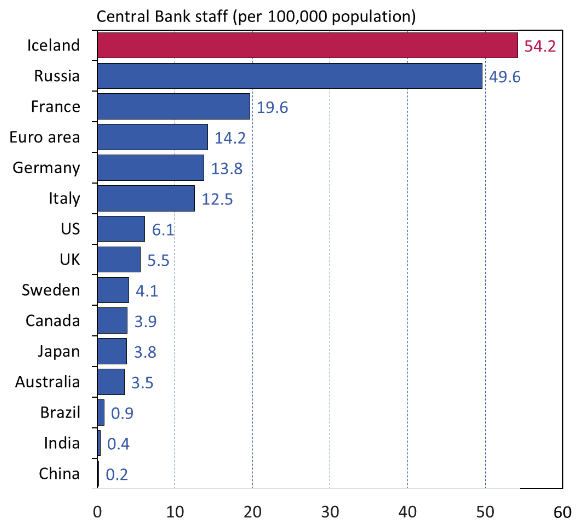
The Bank

- Established in its current form in 1961

Its staff

- Its staff level of 180 makes it one of the smallest central banks in the world …
- … but not per capita

Central Bank staff



Objectives and tasks according to law

The principal objective of the CBI

- is to promote price stability (2001)
- It shall also promote the implementation of the Government's economic policy **as long as it does not consider this inconsistent** with its main objective of price stability

It shall also promote financial stability (2013)

And undertake standard central banking tasks

- promote an efficient and safe financial system
- including payment systems domestically and with foreign countries
- maintain international reserves

Monetary policy

Mandate and governance

The inflation target

- Formal inflation target adopted in March 2001
- Agreement between the Government and the CBI
- CBI given full independence to apply its instruments to achieve its inflation target
- Price stability defined as a 2½% rise in the consumer price index (CPI) over a twelve-month period
- Keep inflation as close to the target as possible, on average
  - Deviation by more than 1½ percentage points in either direction, the Bank must submit a public report to the Government

The Monetary Policy Committee

Monetary Policy Committee

- Five member MPC with two external members
- Individual responsibility
- Majority voting

Accountability - transparency

- Minutes
- Submit reports to Althingi
- Parliamentary hearings

Monetary policy instruments

- Decisions on interest rates
- Transactions with credit institutions
- Reserve requirements
- Foreign exchange market transactions

MPC decisions based on

- Bank's objectives
- A thorough assessment of the current situation of and outlook for the economy and monetary issues and financial stability

Inflation targeting plus

More flexible inflation targeting

Managed rather than free floating ISK

Greater focus on

- financial system,
- capital flows, and
- BoP vulnerabilities

Expansion of the toolkit

FX interventions

Capital flows management

Macroprudential tools

FX intervention can be an important auxilary tool for monetary policy

Temporary factors 2014-2017

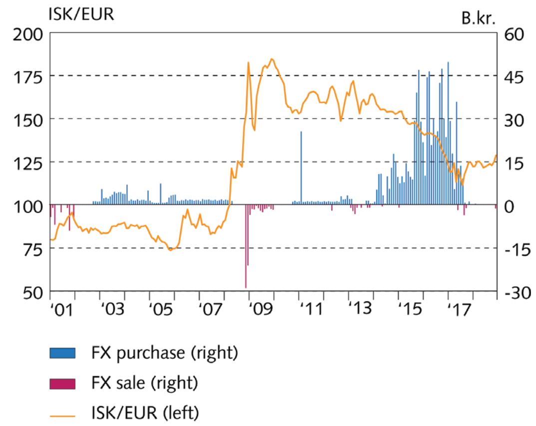
- Build up the Bank's foreign exchange reserves
- Lean against appreciation of the króna before capital account liberalisation

Main objective of FX interventions

- Reduce short-term exchange rate fluctuations

EUR/ISK exchange rate and Central Bank transactions in the foreign exchange market

January 2001- October 2018

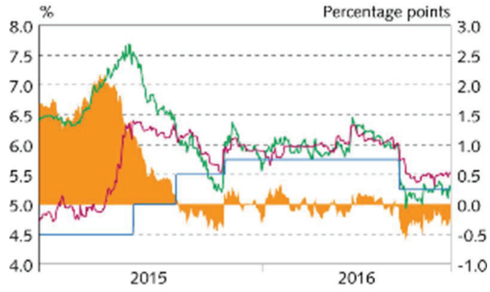


Heimild: Seðlabanki Íslands.

Capital flow management measure

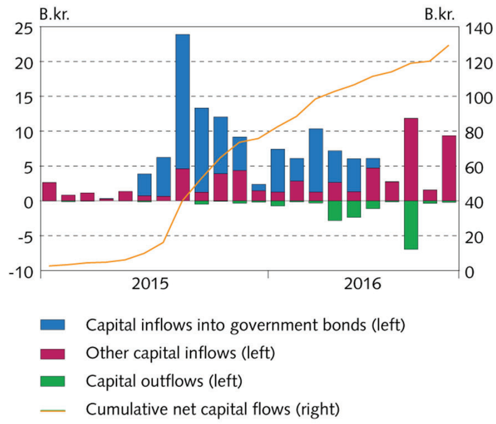
- Promote more effective monetary policy transmission
- Impede the build-up of systemic risks

Key Central Bank rate and nominal Treasury bond yields
Daily data 2 January 2015 - 11 November 2016



1. From 14 April 2016, Treasury bond maturing in 2017 instead of 2016.
Source: Central Bank of Iceland.

Capital flows
January 2015 - October 2016



Source: Central Bank of Iceland.

Monetary policy

Implementation

Monetary policy instruments

The principal monetary policy instrument is the Bank's interest rates on transactions with credit institutions

Other policy instruments

- Decisions on minimum reserve requirements
- Intervention in the foreign exchange market
- Special reserve requirements on capital inflows

Eligible for access to Central Bank facilities

- Commercial banks, savings banks, and diverse credit institutions

Primary instruments eligible as collateral

- Securities issued in Icelandic krónur by the Republic of Iceland

The interest rate corridor

- The key Central Bank interest rate – i.e., the rate that is most important in determining short-term market rates – may vary from time to time
- As a general rule, the Bank does not offer its counterparties deposits and loan facilities at the same time
- Deposit rates are the key rates when the system is rich in krónur – while lending rates bite the most when the system is short in krónur

Overnight lending rate 6%

7-day collateralised lending rate 5% (not offered today)

200 bp

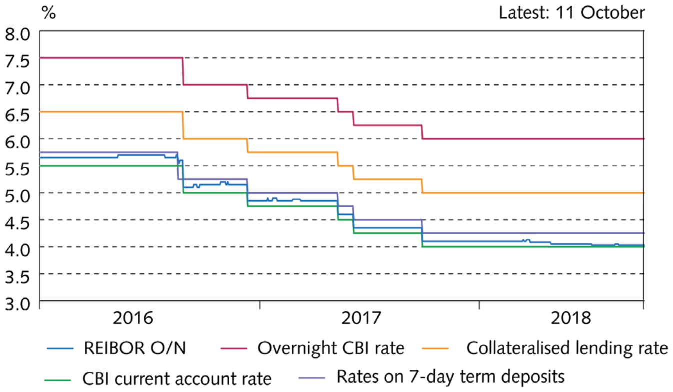
1-month term deposit rate 4.73% (rate of accepted bids)

7-day term deposit rate 4.25% - the Banks key rate

Current account rate 4%

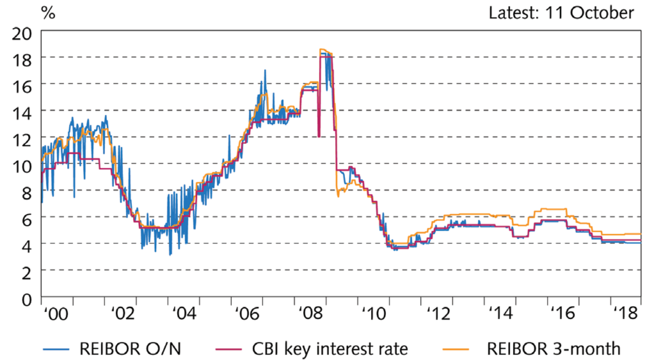
Money market interest rates

Central Bank of Iceland and
short-term market interest rates



Source: Central Bank of Iceland.

Central Bank key interest rate
and money market interest rates



Until April 2009, the Bank's effective policy rate was the seven-day collateralised lending rate, and from April to September 2009 it was the current account rate. From September 2009 to May 2014, the effective policy rate was the average of the current account rate and the maximum rate on 28-day CDs. From May 2014, the effective rate is the Bank's seven day term deposit rate. Weekly data.
Source: Central Bank of Iceland.

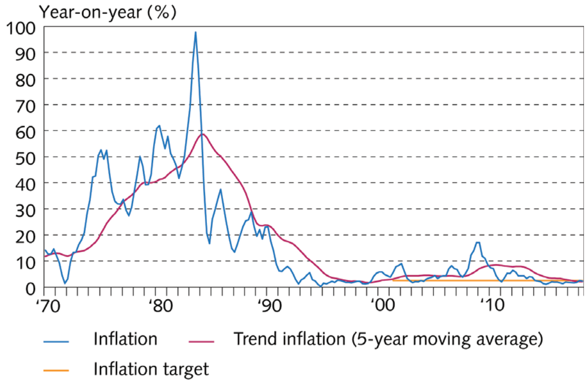
Monetary policy

Performance

Average inflation since 2001 - 4.8%

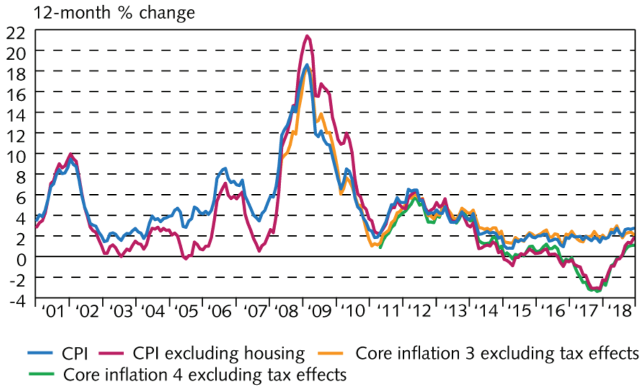
- Inflation more than 1 percentage points above target for roughly 60% of the period
- Inflation more than 2 percentage points from target in nearly 40% of instances

Inflation in Iceland 1970-2018



Sources: Statistics Iceland, Central bank of Iceland, Petursson (2018).

Inflation: various measures

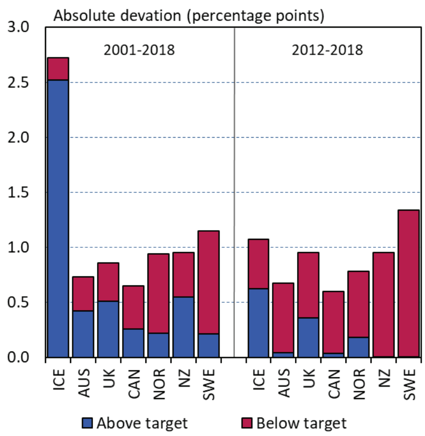


Core index 4 is the consumer price index excluding prices of agricultural products, petrol, public services and owner-equivalent rent. Monthly data.
Source: Statistics Iceland.

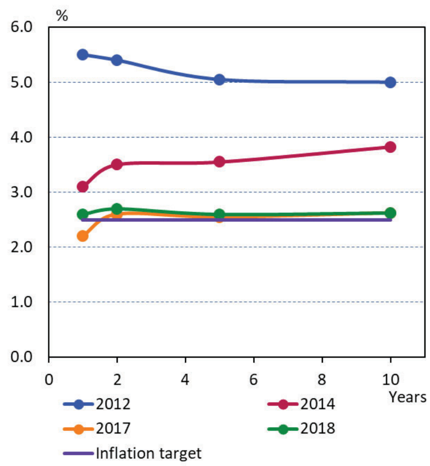
Note: Inflation is measured as the year-on-year change in the headline consumer price index. The shaded area shows the 5-year ±1 standard deviation of inflation. Data for 1970Q1-2018Q2.
Sources: Central Bank of Iceland, Statistics Iceland, author's calculations.

Less frequent target misses, better anchored inflation expectations, and increased real stability

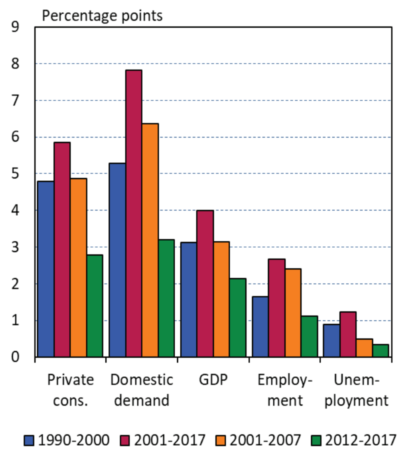
Average deviation from inflation target[1]
Q1/2001 - Q2/2018



One- to ten-year inflation expecations[2]
Observations for Q2 in 2012, 2014, 2017, and 2018



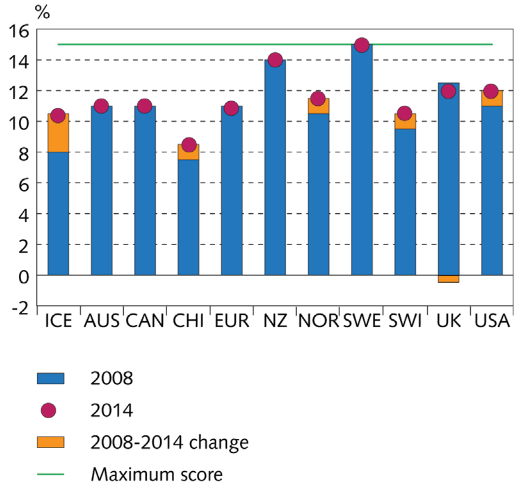
Volatility of key macro variables in different periods[2]



1. Average absolute deviation from inflation target (based on inflation target measure used by each country) and relative contribution of above- and below-target deviations. 2. 1-10 year inflation expectations from surveys among financial market participants. 3. Smoothed probability of being in a low-inflation regime based on an open economy, forward-looking Phillips curve, estimated with a two-regime Markov switching model.
Sources: Central bank websites, OECD, Statistics Iceland, Central Bank of Iceland, Thórarinn G. Pétursson (2018), "Disinflation and improved anchoring of long-term inflation expectations: The Icelandic experience", Central Bank of Iceland Working Paper no. 77.

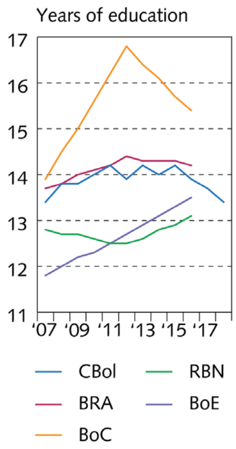
Greater transparency of monetary policy

Central bank transparency: Iceland and 10 other inflation-targeting central banks

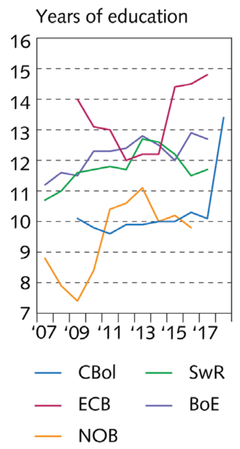


Source: Dincer and Eichengreen (2014).

Reading grade level of inflation report



Reading grade level of minutes



Sources: Qvigstad and Schei (2018), Haldane (2017), Pétursson (2018).

Financial stability

Macroprudential framework and tools

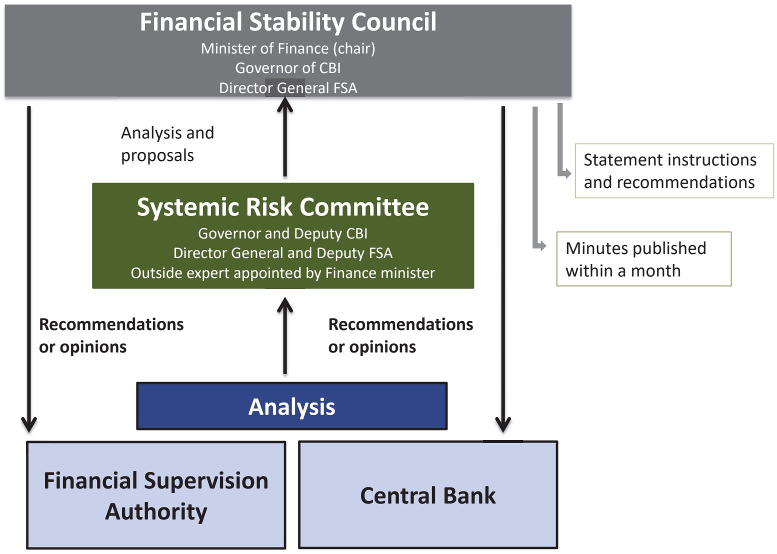
Macroprudential framework

Macroprudential policy

- system-wide supervision overseeing the financial system as a whole
- and the interactions between the units it comprises
- and the connections between the financial system and other parts of the economy

Formal cooperation between

- Central bank of Iceland
- Financial Supervision Authority
- Ministry of Finance and Economic Affairs



Macroprudential toolkit

Capital buffers have all been activated

- Countercyclical buffer: 1.25% (1.75% May 2019) (FSA after FSC recommendation)
- Systemic risk buffer: 3%/2% (FSA after FSC recommendation)
- Capital buffer on systemically important institutions: 2% (FSA after FSC recommendation)

Borrower based measures

- Loan to value LTV (FSA after FSC opinion)
- Debt service to income DSTI (FSA after FSC opinion)
- Restrictions on lending in foreign currencies (CB after FSC opinion)

Other tools

- Net open position in FX, LCR (Liquidity Coverage Ratio) in FX, NSFR (Net Stable Funding Ratio) in FX (CB)
- Capital Flow Management tool (CB by approval from Minister of Finance and Economic Affairs)

Capital buffers in action

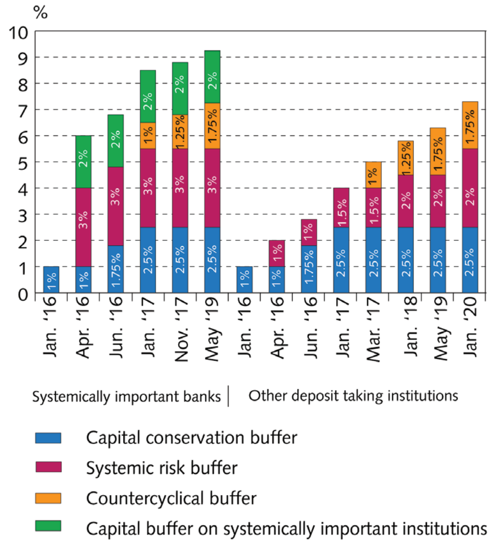
Capital buffers are intended

- Financial institutions must hold additional capital to other minimum capital requirements (8%)
- and a bank specific buffer set by FSA (3.2-4.9%)
- Capital buffers are intended to counter systemic risk and mitigate the impact of financial cycles on the real economy

Four capital buffers

- Capital conservation buffer
- Systemic risk buffer
- Countercyclical capital buffer
- Capital buffer for systemically important institutions

The introduction of capital buffers in Iceland



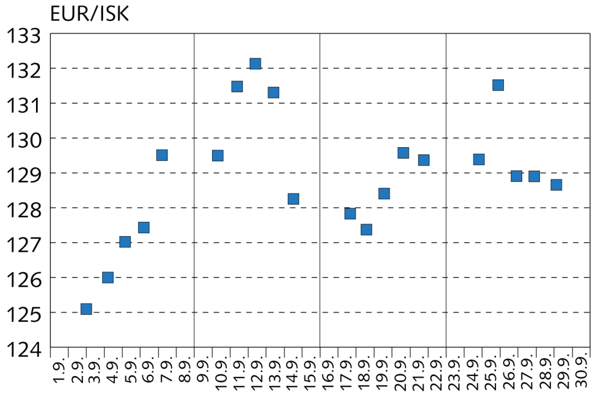
Source: Central Bank of Iceland.

Recent and future decisions

FX-intervention
What would you have done on 11 September?

Official exchange rate of the króna

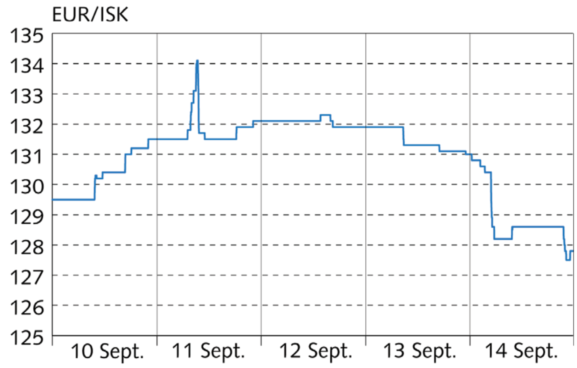
3 September - 28 September



Source: Central Bank of Iceland.

Iceland's interbank market for foreign exchange

10 September - 14 September



Source: Central Bank of Iceland.

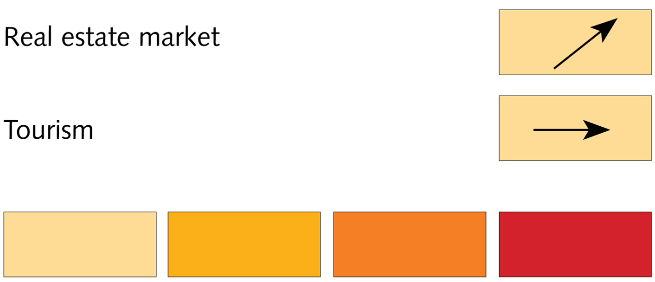
Key Risk Factors – Financial stability report 2018/1

- Risk in the financial system is still within moderate limits
- Signs of increasing risk appetite

- Residential real estate market: Although the pace has somewhat eased, real house prices are still at historical highs and households' housing debt continues to rise
- Commercial real estate market: Real prices are high in historical context and have risen well in excess of other economic indicators
- Tourism: As growth eases more uncertainty arises regarding possible overinvestment in the sector
- Risk attached to developments in tourism is closely connected to a disruption in the housing market
- Icelandic households' and businesses' financial position is still strong, and the banks are strong
- Monitoring risk arising from a renewal of core infrastructure elements in the financial system and the ability to defend against cyberattacks

Key risks

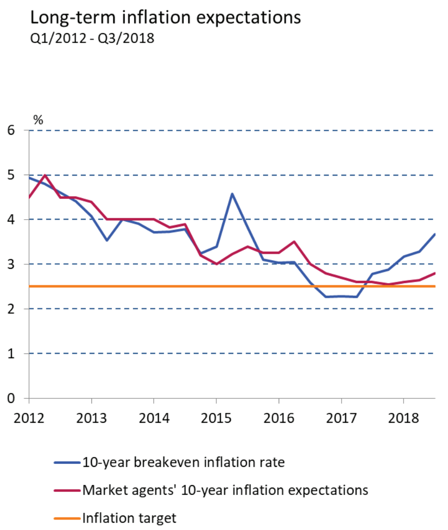
Current situation and changes from 2017/2



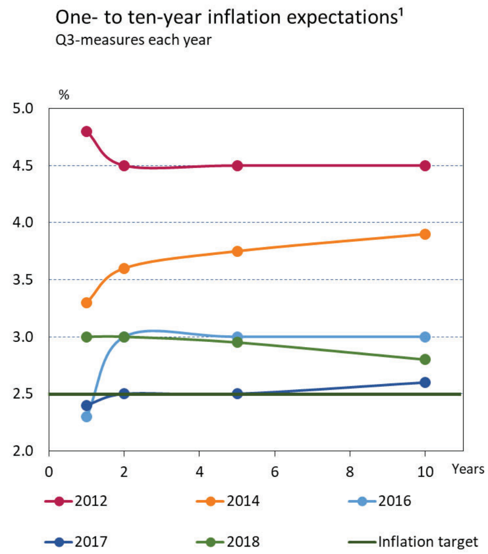
Possible systemic risk

Imminent systemic risk

Inflation expectations – properly anchored?

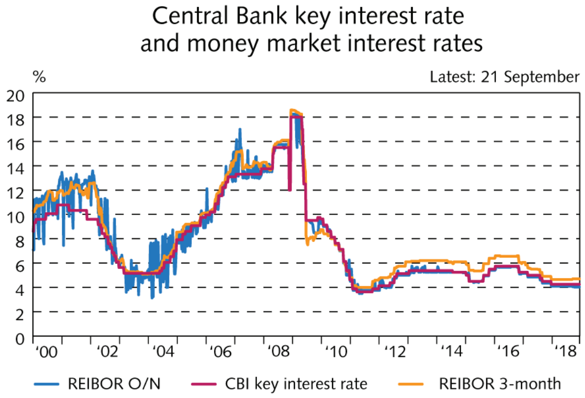


Source: Central Bank of Iceland.

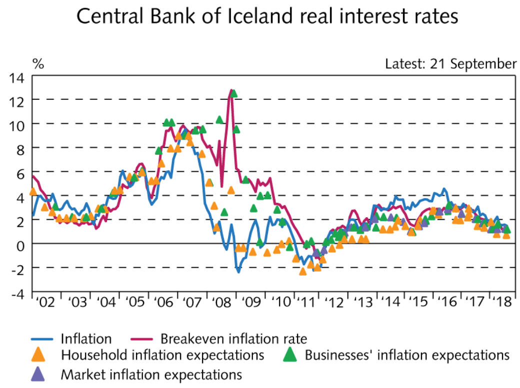


1. Inflation expectations 1, 2, 5, and 10 years ahead from market survey responses.
Source: Central Bank of Iceland.

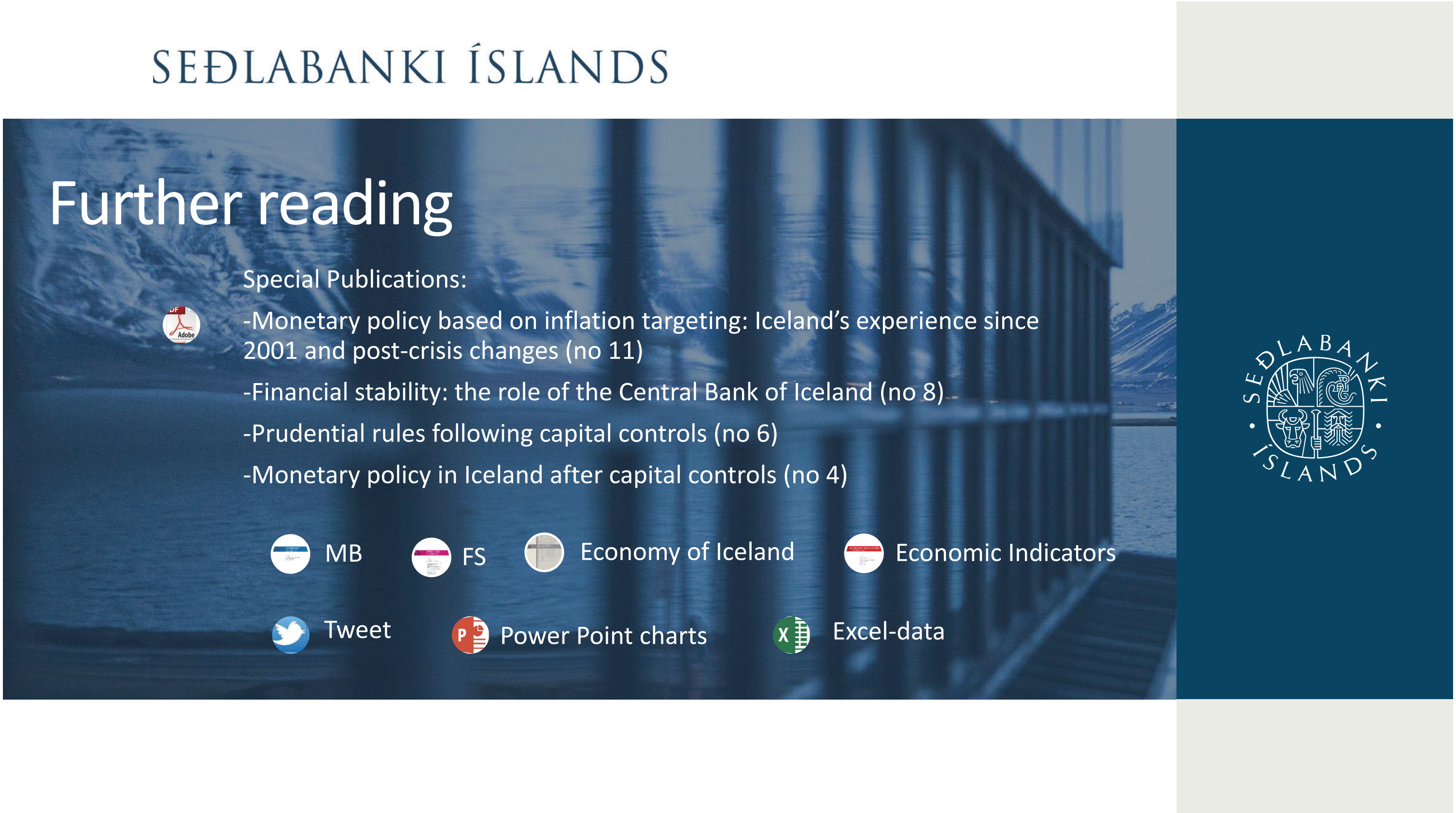
Unchanged CBI rates since October 2017 - but the Bank's real rate has fallen by 0.7 percentage points



Until April 2009, the Bank's effective policy rate was the seven-day collateralised lending rate, and from April to September 2009 it was the current account rate. From September 2009 to May 2014, the effective policy rate was the average of the current account rate and the maximum rate on 28-day CDs. From May 2014, the effective rate is the Bank's seven day term deposit rate. Weekly data.
Source: Central Bank of Iceland.



According to 12-month inflation and 1-year inflation expectations. Real interest rates according to breakeven inflation rate on Treasury notes are calculated based on Treasury note (RIKB 13 0517) and Treasury bond (RIKS 15 1001) yields until June 2004, and on the difference between the nominal and indexed yield curves onwards (monthly average). Until April 2009, the Bank's effective policy rate was the seven-day collateralised lending rate, and from April to September 2009 it was the current account rate. From September 2009 to May 2014, the effective policy rate was the average of the current account rate and the maximum rate on 28-day CDs. From May 2014, the effective rate is the Bank's seven day term deposit rate. Monthly data.
Sources: Gallup, Statistics Iceland, Central Bank of Iceland.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Further reading
Special Publications:
-Monetary policy based on inflation targeting: Iceland's experience since 2001 and post-crisis changes (no 11)
-Financial stability: the role of the Central Bank of Iceland (no 8)
-Prudential rules following capital controls (no 6)
-Monetary policy in Iceland after capital controls (no 4)
MB
FS
Economy of Iceland
Economic Indicators
Tweet
Power Point charts
Excel-data
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Amended Rules on Special Reserve Requirements for New Foreign Currency Inflows

The Rules on Special Reserve Requirements for New Foreign Currency Inflows, no. 490/2016, have been amended with Rules no. 963/2018, as is stated in the announcement on the Law and Ministerial Gazette (Stjórnartíðindi) website. The Rules are set upon approval from the Minister of Finance and Economic Affairs and upon prior presentation to the Monetary Policy Committee and the Systemic Risk Committee. The amendments entail a reduction in the special reserve ratio provided for in the Rules, from 40% to 20%.

The special reserve requirement on capital inflows into the bond market and into high-yielding deposits was introduced in June 2016, with the aim of tempering and affecting the composition of foreign-denominated capital inflows into the domestic bond market and high-yielding deposits, and of strengthening the monetary policy transmission mechanism. Conditions have now developed that permit a reduction in the special reserve ratio, with a narrowing of the interest rate differential with abroad and a lower exchange rate.

It should be noted that the aforementioned amendments lead as well to a reduction on the special reserve amounts already held in accounts subject to the special reserve requirement, and investors that own such funds may request payment of the difference in the recalculated special reserve amount.

Further information on the amendments can be obtained from Governor Már Gudmundsson at the press conference on the Monetary Policy Committee decision, to be held at 10:00 hrs. on Wednesday 7 November 2018.

The Rules on Special Reserve Requirements for New Foreign Currency Inflows, no. 490/2016, amended.

A turning point

Már Gudmundsson, Governor of the Central Bank of Iceland
Chamber of Commerce Monetary Policy Meeting, Hilton Reykjavík Nordica, 8 November 2018

Mr. Chairman, honoured guests,

Once again, we gather here at the Iceland Chamber of Commerce's monetary policy meeting, which for years has been held after the Central Bank has published its autumn forecast and, in latter years, the Monetary Policy Committee's interest rate decision. I would like to thank the Chamber of Commerce for continuing this tradition and for giving me the opportunity to talk to you about monetary policy.

The economy is now at a turning point, with a strong upswing and below-target inflation giving way to weaker growth and increased inflationary pressures.

Underpinning the progress of the past few years were, on the one hand, a vast improvement in external conditions, which could be seen most clearly in improved terms of trade and a surge in the number of tourists visiting the country, on the one hand, and on the other, in economic policy that proved successful in historical context, keeping inflation under control and ensuring that the exchange rate of the króna was a shock absorber rather than a shock amplifier, as has sometimes occurred in the past.

Monetary policy was successful in bringing inflation — and thereafter, inflation expectations — back to the target after 2012, without sacrifice costs in terms of employment. Foreign exchange market intervention and capital controls, followed by the special reserve requirement on capital inflows into the bond market and high-yielding deposits, insulated the exchange rate from the effects of volatile capital movements, allowing it to develop relatively unhindered and in line with underlying economic conditions. The advantages of a flexible exchange rate therefore prevailed, while the disadvantages were mitigated.

This did not make for an uneventful journey, however, because even though the equilibrium exchange rate had clearly risen, it is always subject to considerable uncertainty at any given time, and the risk of overshooting was genuine. This risk may have materialised to some degree, but had the above-mentioned policy instruments not been applied, it would have materialised much more strongly, with the associated risk of an abrupt correction later on, which could have had adverse consequences for economic and financial stability.

This economic turning point stems from a turnaround in some of the factors that contributed to the upswing. The global economic situation is not as favourable to us. Terms of trade are deteriorating and not improving. The rise in tourist visits to Iceland has slowed markedly. Therefore, as compared with the last three years, growth in export revenues will ease considerably this year and in the years to come. GDP growth will be lower, as will the rise in our real income as a nation, no matter what we may decide about nominal pay increases in wage negotiations or about how we distribute such increases. This also means that the equilibrium exchange rate of the króna has probably fallen in the recent past, which in turn may partially explain the recent depreciation of the króna.

The deterioration in external conditions is not good news, of course, but we must place it in the context of the substantial improvement that has taken place in recent years. On the whole, however, this turning point is positive in a number of ways. The growth rate of the past few years was unsustainable, and it tested the capacity limits of the domestic economy.

According to the Central Bank forecast published yesterday, the landing will be a soft one. GDP growth will measure 2.6% over the next three years, close to the average level that will allow the economy to grow without importing labour. The positive output gap will narrow gradually and close by the end of the forecast horizon, which is in 2021. There will be virtually full employment for the entire period, and purchasing power will continue to rise. Inflation will rise above the target in 2019 but then remain close to the target for the rest of the forecast horizon, partly because the forecast assumes that interest rates will rise when inflation does.

Some observers might say that this is too good to be true. It could turn out that way, of course, but that would be because known or unknown risks not included in the forecast had materialised.

There are so many things that could happen in this regard. There could be economic policy mistakes; for instance, if the Central Bank's real rate declines more than is justified by fundamentals, or if fiscal policy provides a similar stimulus. Were this to happen, the output gap would remain open longer and inflation would be higher. The correction, when it came, would be steeper, and the adverse impact on GDP growth would be more pronounced.

The markets could undershoot or overshoot, derailing the economy at least temporarily. External shocks could strike as a result of trade disputes or further increases in oil prices, and indeed, the alternative scenario in the most recent *Monetary Bulletin* includes just such factors. Wage negotiations could result in broad-based pay rises far larger than the already sizeable ones provided for in the Bank's forecast. The inflation outlook would then deteriorate, which would call for interest rate hikes. GDP growth would weaken as a result, perhaps even ending in a contraction.

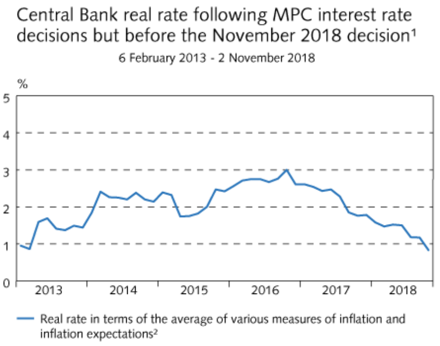
But there is always some uncertainty in both directions, and naturally, we could end up on the receiving end of positive shocks that improve the situation. But under these conditions, it is likely that the risk to GDP growth is tilted to the downside.

In this connection, it is important to remember that we have seldom, if ever, been as well prepared for adverse shocks as we are now. Our external assets exceed our external liabilities. Our international reserves are close to an all-time high and are almost entirely financed domestically. Public and private sector debt has fallen steeply relative to income in the past few years. Our banks are robust, with high capital ratios and abundant liquidity, and the Central Bank's newly published stress test indicates that they can withstand much more severe shocks than we currently consider likely. Unlike many other advanced countries, we have considerable scope for economic policy to respond to shocks, as Central Bank interest rates are well above zero and the government is operating at a surplus and is relatively well positioned with regard to debt. The exchange rate of the króna is still strong, although it has fallen in the recent term, and the real exchange rate is estimated to be broadly as it was in late summer 2016.

All in all, it can be said that our position is still relatively good, and nothing has yet happened to give cause for deep-seated pessimism.

Yesterday the Bank announced a 0.25% increase in its key interest rate, to 4.5%. This rate hike was decided in view of economic developments and prospects, including those described in the Bank's new forecast, and in view of the considerable decline in the Bank's real rate in recent months, which stems from rising inflation and inflation expectations. One of the factors the Monetary Policy Committee considers when it assesses the monetary stance is the Central Bank's real rate in terms of various measures of inflation and inflation expectations. This is illustrated in Chart 1, which shows that the real rate was 0.8% just before the last interest rate decision. This is lower than in 2013, when there was still a considerable slack in the economy. Of course, the progress made in anchoring long-term inflation expectations at the target — another term for enhancing the credibility of monetary policy — has made it possible, all else being equal, to keep inflation at target over the medium term at lower interest rates than would otherwise be required. But it is questionable whether a real rate of less than 1% will suffice for an economy at or above full employment, with inflation already above the target, with a positive output gap, and with GDP growth that is approaching equilibrium from above.

Chart 1



1. Until 21 May 2014, the Bank's key rate is based on the average of deposit rates and the maximum rate on 28-day certificates of deposit. From then onwards, the key rate is the rate on seven-day term deposits. 2. Until February 2012, the real rate is based on twelve-month inflation, one-year corporate inflation expectations, one-year household inflation expectations, the one-year breakeven inflation rate in the financial market, and the Central Bank forecast of twelve-month inflation four quarters ahead. From March 2012 onwards, it is also based on market agents' one-year inflation expectations according to the Central Bank's quarterly survey.
Sources: Gallup, Statistics Iceland, Central Bank of Iceland.

It cannot be said that the interest rate hike took the market by surprise. According to the Bank's survey of market agents' expectations, published on Monday, most respondents expected a 0.25 rate increase before the end of the year. The share of respondents who considered the monetary stance too loose had risen steeply since August, reaching 40%. And bond market activity in the wake of the rate hike did not indicate that the increase was unexpected.

Even so, the rate hike has been criticised by some of the social partners and some politicians. This suggests that the Monetary Policy Committee did not explain well enough that sometimes it is better to raise rates now so as to avoid a much larger rate increase later on. In view of this criticism, I think it appropriate to explain this more fully.

In general, Central Bank attempts to keep interest rates as low as possible — but as high as necessary — at any given time. What that optimum level is, however, depends on conditions, and it changes from one time to another. If Central Bank rates deviate from this optimum, the public will bear the expense. If they are higher than need be, inflation could fall below target and GDP growth would be weaker than it might be otherwise. If they are lower than need be, inflation could get out of hand and economic instability could take root. In that case, a much larger rate hike would be needed later on. So interest rates that are too high or too low do not come without costs to the general public.

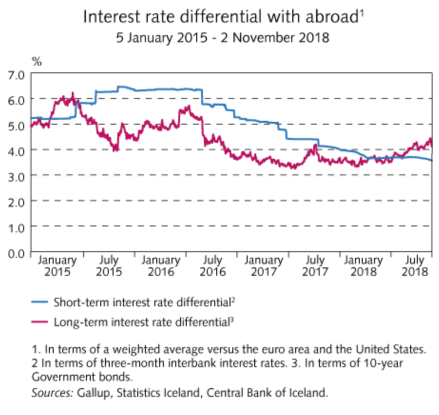
In this instance, it should not be forgotten that household mortgages tend to be long-term loans, and a majority of them are indexed to the CPI. If inflation is kept at target over the long term, these mortgage rates will be lower in the long run than they would be otherwise, even though an increase in short-term central bank rates might sometimes be required. A rate hike in the present that is consistent with current conditions contributes to lower interest rates further ahead. Sometimes this happens very quickly — for instance, short-term central bank rates rise, causing longer-term rates to fall because the rate hike results immediately in lower inflation expectations. There are a number of examples where a rise in central bank rates leads to lower long-term rates rather quickly.

In the speech I gave here two years ago, I showed that real interest rates have fallen steeply in the past two decades, both in Iceland and internationally. I pointed out that the longer inflation expectations remain at target, the longer the propensity to save remains high, the more domestic debt levels fall, and the longer we have a positive net external position, the longer this trend could continue in Iceland. That still applies today.

Last Friday, the Bank announced a reduction in the special reserve requirement (SRR) on capital inflows into the bond market and into high-yielding deposits, which was imposed in June 2016. The SRR was lowered because the interest rate differential with abroad has narrowed and the exchange rate of the króna has fallen. This was fully in accord with repeated statements by the Bank; i.e., that the premises for lowering the SRR would grow stronger, other things being equal, as the interest rate spread narrowed and the exchange rate fell.

When the SRR was introduced in June 2016, capital flows into the bond market had more or less clogged up the interest rate channel of monetary policy transmission. As a result, the effects surfaced primarily in a higher exchange rate. Because capital controls on outflows had not yet been lifted at that time, the risk existed of an overshooting of the exchange rate, with adverse repercussions for Iceland's tradable sector. In addition, it was considered unfortunate, and actually unnatural, that large carry trade positions should accumulate before those that had entered the economy before the crash had been released. The exchange rate of the króna was also rising, and rose even further thereafter, because of strong tourism-generated inflows through the current account. This, of course, had a crowding-out effect on other segments of the tradable sector. If this had been compounded by a steep rise in carry trade-related inflows, Iceland would have found itself in a more dangerous position, with increased risk of an abrupt correction later on and the associated impact on economic and financial stability. Because of the recent decline in the exchange rate, this risk has receded, and it could even be argued that the risk is currently in the other direction; i.e., that excessive pessimism and self-fulfilled expectations of a further depreciation in the króna could lead to undershooting.

Chart 2



The interest rate differential is still wide, however, as can be seen in Chart 2, particularly the long-term differential, which has only narrowed by 1 percentage point (and much less, if adjustments are made for CDS spreads). It would therefore have been imprudent to lower the SRR to zero now, and furthermore, there is limited experience of the impact of adjustments in capital flow management tools of this type.

However, this does not change the fact that the objective is to keep the SRR at zero whenever possible. We have said that this tool should be our third line of defence, after conventional economic policy (including intervention in the foreign exchange market) and conventional macroprudential tools. This is not to say that the SRR is some sort of emergency device, as distressed economies hardly need worry about excessive voluntary capital inflows.

The capital flow management tool, or CFM, is not a capital control in the sense that it restricts or halts certain capital flows explicitly, as was the case during the tenure of the comphrehensive capital controls on outflows. It changes the incentives for inflows — the shorter the investment horizon, the stronger the impact. But this brings some costs with it, in terms of Iceland's image and the effectiveness of its markets, and it would be better to do without the SRR if possible.

This prioritisation of policy tools is consistent with the position taken by the International Monetary Fund (IMF). The IMF has been of the view, however, that CFMs of this type should not be applied pre-emptively. This position has not been adequately argued, in my opinion. In this context, it should be borne in mind that the Fund's advice to Iceland on CFMs is based on a compromise by the IMF Executive Board in connection with the Fund's Institutional View (IV) on this topic. This compromise was difficult and is perhaps somewhat fragile, and therefore, the text of the IV may not be deviated from to any marked degree.

When the report from IMF staff was discussed by the Executive Board last year, however, Iceland received considerable support with the application of the CFM. Presumably, many saw that the CFM was not being substituted for appropriate conventional economic policy (which the IV recommends against) but the reverse: it was being used to make conventional economic policy possible.

The IMF does not have jurisdiction in this matter in Iceland; it can only advise. That is not the case with the EEA and the OECD, where we still have a special exemption from unrestricted movement of capital, and the question of whether those institutions would view the CFM as a macroprudential tool or a capital account restriction has not yet been put to the test.

The bottom line in all of this is that here in Iceland, we need to formulate an independent position on this matter, based on in-depth analysis and our own interests. In addition, these issues are garnering considerable attention internationally at present, including in the wake of a report by the Eminent Persons Group, requested by the G20 and presented in October 2018. In that report, it is recommended that the IMF revisit the IV and make it more flexible as regards CFMs like that currently in use in Iceland.

Honoured guests: I had not originally intended to speak at such length on economic developments and prospects and monetary policy conduct, but public discourse over the past few days changed that.

I also intended to discuss other changes that, in the long run, could be much more important than whether interest rates are currently a few basis points higher or lower. These changes fall into two categories. First are the changes that could take place following the Ministerial Committee's decision this autumn to commence work to improve the interactions between monetary policy and financial stability policy and to strengthen the framework and architecture of macroprudential policy and financial supervision. Second are the changes in payment intermediation caused by technological advances, among other factors — which, for example, have put the question of a possible electronic króna, or rafkróna, on the agenda. I have high hopes for these changes. But discussions of them must await another occasion.

Amending bill of legislation - liberalisation of capital controls on offshore króna holders and reserve requirement on capital inflows

This morning the Government agreed to present to Parliament a bill of legislation from the Minister of Finance and Economic Affairs, which provides for amendments to the Act on the Treatment of Króna-Denominated Assets Subject to Special Restrictions, no. 37/2016, and the Foreign Exchange Act, no. 87/1992.

<u>Liberalisation of capital controls on offshore króna holders</u>

The amendments to the Act on the Treatment of Króna-Denominated Assets Subject to Special Restrictions that are proposed in the bill of legislation entail permission for owners of offshore krónur either to close out their offshore króna positions in full by exchanging them for foreign currency in the onshore market or to hold them as unrestricted onshore króna assets in cases involving continuous ownership from the time before the capital controls were imposed. If the bill is passed into law, this will provide expanded authorisations for withdrawals from accounts subject to special restrictions. These expanded authorisations are of three types. First is a general authorisation for all holders of offshore krónur to release their offshore króna assets in order to purchase foreign currency and export it to an account abroad. Second is an authorisation for offshore króna holders that have owned offshore króna assets continuously since 28 November 2008 to release those offshore króna assets from the legal restrictions. Third is an authorisation for individuals to withdraw up to 100 m.kr. from accounts subject to special restrictions. The amendments proposed here are based on the requirement that the efficacy of the special reserve requirement on capital inflows not be undermined. Therefore, those offshore króna holders that have not owned their króna assets continuously since before the capital controls were introduced and wish to invest in Icelandic bonds must exit through the foreign exchange market and then re-enter, subject to the special reserve requirement. Otherwise, foreign investors would not all be treated equally.

The Act on the Treatment of Króna-Denominated Assets Subject to Special Restrictions, no. 37/2016, entered into force on 22 May 2016. The Act was an important element in the authorities' capital account liberalisation strategy. When the Act entered into force, it was foreseen that the restrictions it provided for would be temporary measures and that the authorities would once again aim to lift the capital controls on offshore króna assets once resident entities' asset portfolios had been better rebalanced and conditions allowed for liberalisation without excessive risk to economic and financial stability. The authorities have worked systematically and in various ways to solve the problem represented by offshore króna assets during the capital account liberalisation process, and the stock of offshore króna assets has been reduced substantially, or from 319 b.kr. to 84 b.kr. Economic conditions now warrant lifting the capital controls on offshore króna assets.

<u>Changes in implementation of the special reserve requirement on capital inflows</u>

The bill of legislation also proposes amendments to Temporary Provision III of the Foreign Exchange Act, which authorises the Central Bank of Iceland to impose special reserve requirements on capital inflows. This authorisation, passed into law in 2016, was an element in the authorities' capital account liberalisation strategy. The proposed amendment allows for increased flexibility in the form of the special reserve requirement on new inflows of foreign currency, but it does not provide for changes in the holding period or the special reserve ratio.

Until now, the parties concerned were required to satisfy the special reserve requirement by depositing funds to a term deposit account with a deposit institution. This arrangement is considered, among other things, to have complicated matters for investors interested in investing in Iceland, as in some instances they are not authorised to invest if they cannot sell the investment at any time. In order to respond to this, it is proposed that it be made possible to satisfy the special reserve requirement via repo transactions with Central Bank certificates of deposit. Furthermore, the new arrangement allows investors to release funds during the holding period by settling with a financial institution. It will remain possible to satisfy the special reserve requirement by depositing funds to a term deposit account in the same manner as before.

Further information can be obtained from Már Guðmundsson, Governor of the Central Bank of Iceland, at tel: +354 569-9600.

No. 18/2018
7 December 2018

Below are files containing answers to various questions regarding the amending bill:

Q & A on the proposed amendments to the Act on the Treatment of Króna-Denominated Assets Subject to Special Restrictions

Q & A on the proposed amendments to Temporary Provision III of the Foreign Exchange Act

No. 2/2019
January 18, 2019

Foreign exchange market, exchange rate developments, and international reserves 2018

The króna depreciated by 6.4% in 2018, and turnover in the interbank foreign currency market contracted sharply year-on-year. In H2/2018, the Central Bank sold currency in the interbank market three times, with the aim of mitigating fluctuations in the exchange rate of the króna. The Bank's net foreign currency sales in the market totalled 2.9 b.kr. during the year. The exchange rate was relatively stable in the first eight months of the year, and turnover was limited. The market grew turbulent in the autumn, partly because of uncertainty in the air transport sector, and the currency weakened. In December, the exchange rate rose again after a relatively sharp decline since the beginning of September. The Central Bank then bought currency in the interbank market for the first time in more than a year. At the beginning of November, an amendment was made to the special reserve ratio provided for in the Rules on Special Reserve Requirements for New Foreign Currency Inflows. The ratio was lowered from 40% to 20%. The international reserves amounted to 736 b.kr. at the year-end, or 26% of GDP.

Exchange rate developments and foreign exchange market transactions

The króna depreciated by 6.4% from the beginning to the end of 2018. It depreciated by 6.1% against the euro and by 10.2% against the US dollar. The króna bottomed out in November but was strongest in March. The spread between the highest and lowest listed exchange rate for the year was about 18.9%. Chart 3 shows intramonth exchange rate movements. The change was greatest in October, at 6.9%, and least in January, at 0.5%.

Table 2 shows key figures on fluctuations in the króna in 2018 and, for comparison purposes, corresponding figures for several advanced and small countries' currencies. The króna does not stand out in terms of volatility (measured in terms of the standard deviation of daily changes), but the spread between the highest and lowest exchange rates in 2018 was widest in Iceland. There was little difference, however, between Iceland, Australia, and New Zealand. The difference between the highest and the lowest rate could change considerably from one year to another.

In the first eight months of 2018, foreign exchange market turnover was limited, and the exchange rate of the króna was stable. At the beginning of September, the exchange rate began to fall and daily fluctuations to increase. The depreciation of the króna during the autumn was due in part to uncertainty in the air transport sector. Furthermore, the macroeconomic factors that had supported the exchange rate had begun to weaken to a degree.[1] After the proposed merger of Icelandair and WOW Air was announced, the market calmed down and daily fluctuations subsided. At the end of November, it was announced that the proposed merger would not take place, and soon thereafter it was announced that a foreign investor had been in discussions with WOW.

At the beginning of November, amendments were made to the special reserve ratio provided for in the Rules on Special Reserve Requirements for New Foreign Currency Inflows.[2] Conditions had developed that enabled the reduction of the special reserve ratio from 40% to 20%, owing to the decline in the exchange rate and the narrowing of the interest rate differential with abroad. In early December, the Government agreed to present to Parliament a bill of legislation from the Minister of Finance and Economic Affairs, amending the Act on the Treatment of Króna-Denominated Assets Subject to Special Restrictions, no. 37/2016, and the Foreign Exchange Act, no. 87/1992.[3] It is expected that the bill will be discussed in Parliament after the next legislative session begins later this month.

All of the Bank's transactions in the interbank foreign exchange market took place in the second half of the year. The Bank's first transaction of 2018 took place in September, the first intervention since November 2017. The Bank traded in the market on four days during the year, but in varying amounts on each day. The Bank sold currency three times and bought it once. After a relatively sharp increase in the exchange rate in December, the Bank bought foreign currency. It was the Bank's first foreign currency purchase in the market in over a year.

Turnover in the interbank foreign exchange market totalled 187.2 b.kr. (1,445 million euros) in 2018, a contraction of 54% since 2017. The Bank's turnover in the interbank market totalled 3.7 b.kr. (27 million euros), or 79.4 b.kr. less than in 2017. The Bank sold 3.3 b.kr. (24

[1] See *Monetary Bulletin* 2018/4: https://www.cb.is/library/Skraarsafn---EN/Monetary-Bulletin/2018/November-2018/Monetary%20Bulletin%202018-4.pdf

[2]Press release: Amendments to Rules on Special Reserve Requirements for New Foreign Currency Inflows: https://www.cb.is/publications/news/news/2018/11/02/Amended-Rules-on-Special-Reserve-Requirements-for-New-Foreign-Currency-Inflows/

[3]Press release: Amending bill of legislation – liberalisation of capital controls on offshore króna owners and special reserve requirements on capital inflows: https://www.cb.is/publications/news/news/2018/12/07/Amending-bill-of-legislation-liberalisation-of-capital-controls-on-offshore-krona-holders-and-reserve-requirement-on-capital-inflows/

million euros) but bought 0.4 b.kr. (3 million euros). The last time the Bank was a net seller in the interbank market was in 2009.

International reserves

The Bank's international reserves increased by roughly 49 b.kr. in 2018 and amounted to 736 b.kr. at year-end. In US dollar terms, however, they contracted by 0.3 billion dollars, to a total of 6.3 billion dollars at the year-end. At that time, the reserves totalled 26% of GDP and 38% of broad money holdings (M3), and they covered nine months' worth of goods and services imports.

The Bank's net foreign currency sales in the interbank market totalled 2.9 b.kr., and interest payments on central government foreign loans totalled 2.1 b.kr. Other foreign exchange transactions totalled 14.3 b.kr. Exchange rate movements increased the reserves by 60.3 b.kr. in krónur terms, and investment gains increased them by 5.1 b.kr.

At the end of 2018, the international reserves net of the Central Bank and central government's foreign-denominated debt were positive by 588 b.kr. as opposed to 587 b.kr. at the end of 2017. The Central Bank's foreign exchange balance – i.e., the difference between the Bank's foreign-denominated assets and liabilities – was positive by approximately 627 b.kr. at year-end 2018, as opposed to 587 b.kr. at the end of 2017.

Further information can be obtained from Már Guðmundsson, Governor of the Central Bank of Iceland, at tel: +354 569-9600.

Table 1. Foreign exchange market, exchange rate, and international reserves

		2016	*2017*	*2018*
Exchange rate (-depreciation/+appreciation)	%	18.5%	-0.7%	-6.4%
Exchange rate volatility*	%	4%	13%	9%
FX market turnover	m.kr.	701,670	407,385	187,180
Central Bank turnover	%	55.1%	20.4%	2.0%
FX market purchases, Central Bank	m.kr.	386,242	76,672	401
FX market sales, Central Bank	m.kr.	0	6,419	3,279
Net purchases, Central Bank	m.kr.	386,242	70,253	-2,878
Foreign exchange reserves, in US dollars	USD millions	7,231	6,575	6,324
Foreign exchange reserves, in b.kr.	b.kr.	815.8	686.6	735.7
FX reserves financed domestically**	b.kr.	590	587	588
Central Bank foreign exchange balance***	b.kr.	608.7	587.3	627
Foreign exchange reserves, as % of GDP****	%	33%	26%	26%
Foreign exchange reserves, equivalent months of imports*****		10	8	9

*Standard deviation of daily exchange rate movements, annualised
**Foreign exchange reserves net of Central Bank and Treasury foreign debt
***Difference between assets and liabilities in foreign currency
****Based on Central Bank of Iceland year-2018 GDP forecast
*****Five-year average

Table 2. Exchange rate developments in 2018, selected currencies

	ISK	USD	NOK	GBP	CHF	SEK	AUD	CAD	NZD
Standard deviation of daily changes (%)	0.5	0.5	0.4	0.4	0,3	0.4	0.5	0.5	0.5
Change during the year (%)	-6.1	4.6	-1.2	-1.2	3.6	-3.9	-9.7	-7.9	-5.7
Spread between highest and lowest exchange rate (%)	17.3	11.2	6.1	5.1	6.9	9.5	15.3	10.8	15.3

ISK (Icelandic króna); USD (US dollar); NOK (Norwegian krone); GBP (British pound); CHF (Swiss franc); SEK (Swedish krona); AUD (Australian dollar); CAD (Canadian dollar); NZD (New Zealand dollar)
*The exchange rate of the Canadian, Australian, and New Zealand dollars is calculated vis-à-vis the US dollar. Other exchange rates are calculated vis-à-vis the euro. Calculations are based on data from the Central Bank of Iceland and Reuters.

Chart 1

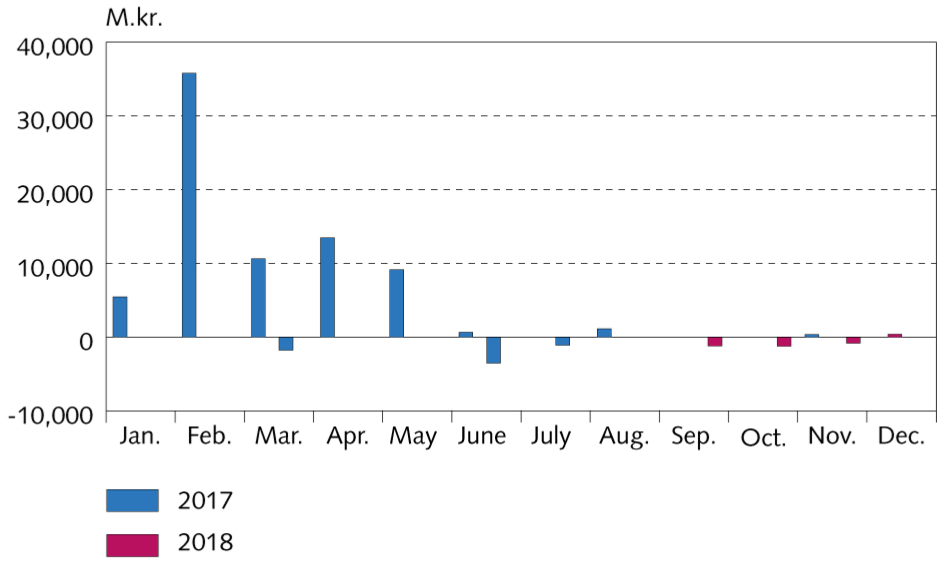
Exchange rate of the króna 2018

Narrow trade basket. A rise in the line indicates an appreciation, and a decline indicates a depreciation.

Source: Central Bank of Iceland.

Chart 2

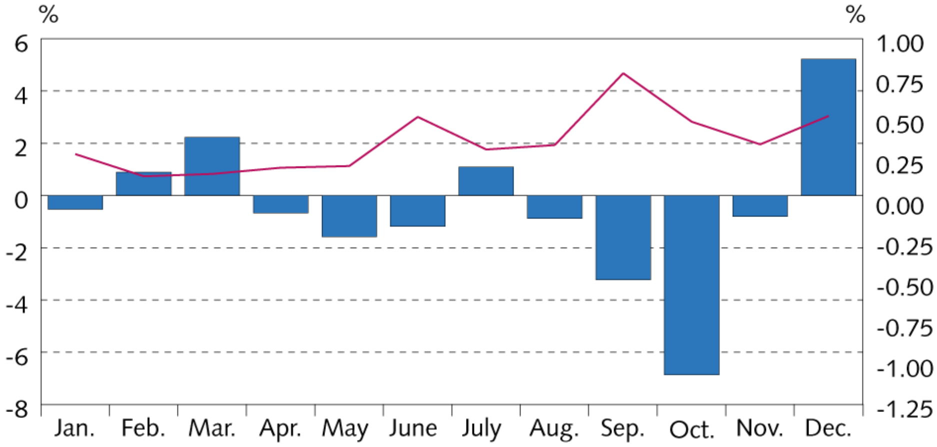
Central Bank foreign exchange market purchases and sales 2017-2018



Source: Central Bank of Iceland.

Chart 3

Monthly changes in exchange rate 2018



Monthly changes in exchange rate (left)

Monthly average of daily changes in exchange rate, absoulute values (right)

Source: Central Bank of Iceland.

27 December 2018

Responses to some of the proposals from the task force on the review of monetary policy

At the Monetary Policy Committee's (MPC) meeting earlier this month, the Committee discussed the Central Bank's forthcoming report to the Prime Minister concerning the Bank's position on the proposals presented by the task force on monetary policy pertaining to changes in working procedures of the MPC and the Bank more generally (Jónsson *et al*., 2018). The Bank's position on specific proposals can be found below.

Although this document is formally presented by the Central Bank, the text it contains represents the results of discussions within the MPC and is supported unanimously by the Committee. All proposals discussed here pertain to matters under the purview of either the MPC or the Governor of the Central Bank. The task force made other proposals as well, but their implementation requires statutory amendment, ministerial involvement, and/or revision of the agreement between the Government and the Bank.

Proposal 6: *The Central Bank of Iceland shall use the Reserve Bank of New Zealand's traffic light system to create clear ground rules for decision-making and communication of information on foreign exchange market intervention. Furthermore, there is need for a clearer and more transparent sterilisation policy in connection with intervention. Moreover, the Bank shall publish its assessment of the equilibrium real exchange rate on a regular basis.*

This proposal actually centres on two separate issues: i.e., the foreign exchange market intervention policy and the publication of additional information on the Bank's assessment of the equilibrium real exchange rate.

(1) Intervention in the foreign exchange market

The task force recommends that the Central Bank adopt the "traffic light system" used by the Reserve Bank of New Zealand (RBNZ), and it calls for a clear, transparent sterilisation policy.

The Central Bank agrees that it is necessary to explain the views underlying the Bank's foreign exchange market intervention as well as possible. The intervention policy may need to change over time, however, depending on the conditions prevailing in the economy and the financial system. The policy is discussed regularly by the MPC, which oversees intervention as a part of monetary policy. The intervention policy has also been explained in the Committee's statements and in Central Bank publications. For a while, intervention was aimed at building up Iceland's international reserves and mitigating the risk of an overshooting of the exchange rate during the prelude to capital account liberalisation, as was explained at the time. At present, however, the intervention policy aims at smoothing out excessive short-term volatility but does not pinpoint a specific exchange rate target. This has also been explained publicly.

In this context, it is appropriate to emphasise that there are limits on how predictable a central bank's foreign exchange market intervention can be without creating the risk that market agents will corner the central bank and profit on unilateral speculation. Experience has shown that it can be risky for central banks to draw a line in the sand in this way.

In the Central Bank's opinion, the suggestion that the Bank adopt the RBNZ's traffic light system is worth examining more closely, but it needs to be thought out more fully and experiences from other countries should be considered as well. Conditions in New Zealand are entirely different than those in Iceland, as the New Zealand dollar is one of the most-traded currencies in the world. The foreign exchange market there is deep, and the Reserve Bank of New Zealand is less concerned about short-term volatility. In small countries, however, it is much more common that foreign exchange market intervention aim at mitigating volatility than it focus on a given exchange rate. This is also true of Iceland.

As regards sterilisation of foreign exchange market intervention via market transactions by the Central Bank, it should be noted that sterilisation is largely built into monetary policy instruments, as short-term market interest rates have deviated very little from the Bank's key interest rate. This has been explained by the Bank, but it should probably be done more thoroughly.

The Central Bank will establish a working group whose task will be to submit recommendations to the MPC in H1/2019 on the intervention policy and information disclosure about its execution.

(2) Assessment of the equilibrium real exchange rate

The Bank reviews its assessment of the equilibrium real exchange rate while preparing each forecast and publishes the assessment regularly in *Monetary Bulletin* (most recently in Box 3 in *Monetary Bulletin* 2016/2). Furthermore, a historical assessment can be found in the Bank's QMM database, which is updated on the Bank's website following each forecast. The Bank has also been considering launching a new annual publication on Iceland's balance of payments, which would also contain further discussion of the equilibrium real exchange rate. In addition, the Bank intends to expand its research in this area and, in this context, plans to engage a foreign expert in H1/2019.

Proposal 8: *The Central Bank shall publish the policy rate path in Monetary Bulletin four times a year. In this way, it will be possible to strengthen market expectations and enhance transparency of the Bank's long-term interest rate policy.*

From the beginning of 2007 until the onset of the financial crisis in autumn 2008, the Bank published the policy rate path for its baseline forecast, together with confidence intervals. Early on, the publication of the interest rate path appeared to deliver results, in that market expectations concerning future developments in interest rates moved closer to the path in the baseline forecast, thereby strengthening the transmission of Central Bank rates to other interest rates (*Monetary Bulletin* 2007/3), but unclear ownership of the policy rate path seemed gradually to undermine the usefulness of publishing it. During the financial crisis, there were no premises for continued publication of the policy rate path, but when conditions normalised, it would have been possible to resume publication. By then, however, a multi-member Monetary Policy Committee with external members had been established, and the Committee was not convinced of the usefulness of publishing a policy rate path at that time. There are two primary reasons for this.

First of all, the forecast is prepared by the Economics and Monetary Policy Department, and it is the Bank and not the MPC that is responsible for it. The view has been expressed within the MPC that as long as this is the case, there is the risk that the conditions prevailing before the crisis will develop again; i.e., unclear ownership of the policy rate path could undermine the efficacy of publishing it. Furthermore, the publication of a policy rate path that differs fundamentally from the majority view of the MPC could create greater uncertainty in the market and exacerbate uncertainty about future developments in interest rates if, for instance, the forward guidance from the MPC majority runs counter to the published path.

As Table 1 indicates, some central banks in advanced economies publish a policy rate path with their baseline forecasts, but they are still in the minority. In all instances where the policy rate path is published, the macroeconomic and inflation forecast is the forecast of those who make interest rate decisions, not central bank experts' forecast; therefore, there should not be any inconsistency between the published path and rate-setting authorities' expectations about future developments in interest rates.

It appears that if this step were taken in Iceland, it would be necessary to shift ownership of the Bank's forecast preparation to the MPC. It is not clear, however, how this would work in a situation involving external MPC members.[1] It is clear, however, that such a change would call for a fundamental change in the forecast preparation process and the external MPC members' involvement with it. The forecast preparation process would be lengthened considerably, and the interest rate decision, the forecast, and the decision on the policy rate path would have to be prepared much earlier than they currently are – and well before the publication of the interest rate decision and *Monetary Bulletin*. It also appears clear that this would require much more work from external MPC members, as well as more time spent by them in the Bank.[2] This could be expected to require additional staffing for forecast preparation and support of the MPC.

[1]If this step were taken in Iceland, the Central Bank would actually become the first central bank to publish a policy rate path for an MPC with external members. Of the four central banks that publish a policy rate path, those in Sweden and the Czech Republic have internal members only. In the case of New Zealand, interest rates are formally determined by the Governor of the RBNZ alone, but there are plans to establish a monetary policy committee that will presumably include external members. In Norway as well, there are changes in the offing, but until now, the Governor of Norges Bank has decided the published interest rate path, even though interest rate decisions are taken by a multi-member committee that includes external members.

[2]This also gives rise to the question of how easy it would be to find outside experts with enough expertise to function as external Committee members if their participation required that they leave their full-time jobs.

Table 1. Information disclosure on future developments in central bank interest rates

Central bank	Arrangement
Australia	Does not publish own policy rate path[1]
US	Publishes individual committee members' assessment of interest rate outlook
UK	Does not publish own policy rate path[1]
ECB	Does not publish own policy rate path[1]
Japan	Does not publish own policy rate path[1]
Canada	Does not publish own policy rate path[2]
Norway	Publishes conditional policy rate path as part of baseline forecast
New Zealand	Publishes conditional policy rate path as part of baseline forecast
Sweden	Publishes conditional policy rate path as part of baseline forecast
Czech Rep.	Publishes conditional policy rate path as part of baseline forecast[3]

1. The forecast is based on forward interest rates, which can be determined from financial market rates, although forward guidance is sometimes provided. 2. The Bank of Canada bases its forecast on its own interest rate path, which is not published. Sometimes the BoC provides forward guidance, however. 3. The Czech National Bank's interest rate path which is published for three-month interbank rates.
Sources: Central bank websites and Hammond (2012).

The other reason for doubts within the MPC about the efficacy of publishing a policy rate path for the baseline forecast, at least at the present time, centres to a degree on a fundamental view of the nature of monetary policy during times of uncertainty. According to this view, monetary policy is not a "scientific" matter that can be solved using mathematical maximisation models, as is done in many textbooks. The uncertainty about many key variables is simply too great. Monetary policy is therefore more like risk management where an attempt is made to avoid costly errors. Publishing a policy rate path could suggest greater certainty than actually exists and could therefore be misleading.

An example of this is the uncertainty about the Bank's equilibrium interest rate. Of course, this uncertainty is not limited to Iceland during times when long-term real rates have gradually been declining and the equilibrium rate has probably been quite variable. The problem also centres on the fact that within the MPC, opinion varies greatly on what the equilibrium rate is, and members are concerned that publishing a single policy rate path would not help inform the market and the general public of probable developments in Central Bank interest rates.[3]

As Table 1 indicates, some central banks have used forward guidance to inform the market and the public of probable medium-term developments in interest rates instead of publishing a formal policy rate

[3]To address this, the US Federal Reserve Bank has opted to publish so-called dot plots showing individual committee members' expectations concerning future developments in interest rates and their long-term equilibrium. Opinion is divided on how useful this is, however, and taking such a step in Iceland would require a substantial investment in expert support for individual MPC members so as to enable them to prepare their own interest rate forecast (and thus their own macroeconomic and inflation forecast).

path.[4] This forward guidance entails specifying that interest rates will develop in a given way if economic developments align with the forecast. Sometimes, it is even specified how much rates will change or what they will be at a certain point in the future. Furthermore, forward guidance varies in form and frequency, but in most instances it is used when it is considered particularly necessary (such as in the past few years, when interest rates have widely been at or near their lower bounds). The same applies to Iceland: If the MPC has considered it warranted, it has signalled clearly that interest rates will develop in a given way in the coming term. A recent example can be seen in the MPC statements from the second half of 2015, when the Committee raised rates and stressed that further rate hikes would be forthcoming, all else being equal, after inflation and inflation expectations began to rise in the wake of large pay increases that spring.

Transparency is an important premise for successful monetary policy. On the other hand, care must be taken to ensure that publishing a policy rate path will actually enhance transparency and predictability of monetary policy. On the whole, the Central Bank does not consider it appropriate to publish a policy rate path for the baseline forecast at the present time, but it does not rule out the possibility of doing so in the future.[5] That said, it could be appropriate to examine whether the MPC's forward guidance could be further formalised and strengthened in some other way.

Finally, it is appropriate to stress that forward guidance or policy rate path publication as such is not a prerequisite for successful monetary policy. Successful monetary policy is based on forward-looking decision-making that responds systematically to economic conditions so as to ensure that inflation remains at target over the medium term. Therefore, "forward guidance" on future developments in interest rates consists of these systematic monetary policy responses. Circumstances could arise, however, where more detailed guidance on future developments in interest rates could enhance the impact of monetary policy, as has been the case in recent years, when central bank interest rates have been locked in at their lower bounds.

[4]In all instances, these interest rate forecasts are conditional, no matter whether they are based on forward guidance or a formal interest rate path; i.e., they depend on medium-term economic developments. As a result, they do not constitute a formal pledge (i.e., an unconditional forecast) of future developments in interest rates, although markets and the public sometimes misconstrue them as such.

[5]The foreign experts who were entrusted with assessing the monetary policy framework also recommend against publishing a policy rate path. See Andersson and Jonung (2018) and Honohan and Orphanides (2018).

Proposal 9: *The responsibilities of and support given to external Monetary Policy Committee members needs to be increased. Decision-making should be made more transparent with the publication of individual members' votes at the time of the decision. The Committee should give increased consideration to Delphic forward guidance in connection with interest rates.*

This proposal actually centres on two separate issues: first, expanding external MPC members' responsibilities and increasing the support provided to them, and second, further enhancing the transparency of monetary policy.

(1) Responsibilities of and support for external MPC members

MPC members bear responsibility for their decisions in that they must explain them publicly. By law, the MPC has submitted a twice-yearly report to Parliament, followed by a meeting with a Parliamentary committee to discuss the contents of the report. Often, one of the external MPC members has attended these meetings with the Governor and expressed his/her views there. Perhaps this channel for expression by external members could be formalised more fully. On the other hand, it is not in the Bank's power to decide to what extent MPC members attend Parliamentary committee meetings, and in recent years the MPC's time with the Economic Affairs and Trade Committee has grown increasingly shorter.

In response to the task force's suggestions on increased visibility and responsibility for external MPC members, the Committee has decided that beginning in 2019, external members will submit a separate annual report to Parliament after the full Committee's second report is sent. Thereafter, external members would be prepared to attend a Parliamentary committee meeting to discuss the contents of their report. Such an arrangement would give them a formal channel for clear communication of their own views on economic developments and monetary policy formulation.

Ever since the MPC was established, the Central Bank has attempted to provide external members with as much professional support as possible. During the prelude to each decision, all Committee members are sent a large volume of data, as well as appraisals and analyses. Members may also ask questions and request specific analyses. On the other hand, the Bank's Economics and Monetary Policy Department is relatively sparsely staffed, and the workload is heavy during each forecast preparation period.[6] As a result, it can be difficult to respond to

[6]As is mentioned in the task force's report, the department's staff is small in international comparison. Edwards' (2018) appraisal of the Central Bank's monetary

requests from MPC members – internal and external alike – within the specified time frame.

As a result, the Bank has decided to expand the Economics and Monetary Policy Department staff by one employee who will assist external MPC members with analysis, presentations, and other matters. The job description will specify that support for external MPC members shall take priority but that otherwise the employee will participate in the department's regular work.

(2) Enhanced transparency of monetary policy

Ever since the MPC began its work early in 2009, the minutes of its meetings have been published two weeks after each decision. This is a major departure from the previous arrangement and has greatly enhanced the transparency of monetary policy in Iceland.[7] As Table 2 indicates, this has placed the Central Bank in a category with most other inflation-targeting central banks, although there are some that still do not publish minutes of their meetings.

As can be seen in Table 3, whether and when individual committee members' votes are published varies greatly. The central banks in the US, UK, Japan, and Sweden have gone furthest in this respect, publishing the results of voting and each member's vote in the MPC statement. The Czech National Bank publishes this information in the minutes of the meeting, and the central banks in Australia, Canada, New Zealand, and Norway do not publish voting results or individual members' votes.[8]

Table 2. Publication of minutes

Central bank	Arrangement
Australia	Minutes published 2 weeks after decision
US	Minutes published 3 weeks after decision
UK	Minutes published concurrent with decision
ECB	Minutes published 4 weeks after decision
Japan	Minutes published 6-9 weeks after decision
Canada	Minutes not published
Norway	Short summary of minutes published on an irregular basis
New Zealand	Minutes not published
Sweden	Minutes published 2 weeks after decision
Czech Rep.	Minutes published 2 days after decision

Sources: Central bank websites and Hammond (2012).

policy framework notes in particular how much high-quality work this small department manages to do.

[7]International comparison shows that monetary policy transparency has increased significantly in Iceland in recent years and is now similar to that in, for example, Australia, the UK, Canada, and Norway. See Dincer and Eichengreen (2014) and Karen Áslaug Vignisdóttir (2016).

[8]This may change in Norway and New Zealand, however, where there are plans to establish monetary policy committees that may publish minutes and voting results.

The Central Bank of Iceland Monetary Policy Committee's arrangements are very similar to those in the Czech Republic, in that the voting results are published in the minutes of each meeting. In Iceland, however, the votes of individual members are not published until the *Annual Report* is released in the spring of the following year. The Bank agrees with the task force that it is appropriate to enhance monetary policy transparency in Iceland still further. The MPC has therefore decided that, beginning in 2019, each member's vote will be specified in the minutes of the meeting in question.

Table 3. Publication of individual MPC members' votes

Central bank	Arrangement
Australia	Does not publish information on individual votes
US	Individual members' votes published in interest rate announcement
UK	Individual members' votes published in interest rate announcement
ECB	Does not publish information on individual votes
Japan	Individual members' votes published in interest rate announcement
Canada	Does not publish information on individual votes
Norway	Does not publish information on individual votes
New Zealand	Does not publish information on individual votes
Sweden	Individual members' votes published in interest rate announcement
Czech Republic	Individual members' votes published in minutes

Sources: Central bank websites and Hammond (2012).

As regards the suggestion that the MPC consider Delphic forward guidance, reference is made to the discussion on Proposal 8 above.

Proposal 10: *The Central Bank shall contribute to increased information on monetary policy and the value of the inflation target, with the aim of enhancing the general public's understanding of the possibilities available and the limitations in place, and with the objective of contributing to greater consensus on policy.*

Transparency is an important premise for successful monetary policy. Transparency is no less important for enhancing understanding of the options available to monetary policy at any given time and of the reasons individual decisions have been made. Transparency is also an important foundation for the democratic authorisation that an independent central bank is granted to apply the instruments it has at its disposal, with the overall long-term interests of the country in mind.

Ever since the inflation target was adopted in 2001, the Central Bank has emphasised maximum transparency of its analyses, so that outside experts can assess the professional basis for the Bank's analysis and forecasting. On the other hand, it was clear that transparency about monetary policy decisions was lacking at first. This changed significantly, however, when the Central Bank Act was amended in 2009 and the Monetary Policy Committee established. In addition to publishing the minutes of its meetings, the MPC is required to submit a twice-yearly report to Parliament and to attend open Parliamentary committee meetings twice a year. Monetary policy transparency has therefore increased markedly in the past decade (see Dincer and Eichengreen, 2014, Karen Áslaug Vignisdóttir, 2016, and Qvigstad and Schei, 2018).

Furthermore, the Bank has made a concerted effort to make the material it releases on monetary policy both more accessible and more comprehensible. The Bank's main publication on economic developments and prospects, *Monetary Bulletin*, has been made shorter, and metrics of its readability indicate that the text published there is easier for the public to understand than it was previously (see Thórarinn G. Pétursson, 2018).

It can therefore be said that the Bank performs well in communicating information to experts and explaining the premises for its decisions (see, for example, Honohan and Orphanides, 2018). The Bank has also sought ways to communicate more effectively with the public, including by using social media and by publishing articles on monetary policy and economic affairs in the press. Presentations on monetary policy and the economy are also held regularly at upper secondary schools and universities, as well as various non-governmental organisations. Moreover, the Bank regularly receives visits from a wide range of groups and gives presentations to them on its activities. On the other hand, the Bank agrees wholeheartedly with the task force that it needs to do a better job at educating the public about monetary policy and inflation targeting. This is actually a challenge for all central banks, and worldwide efforts to find new ways to explain monetary policy frameworks and decisions are underway. To some extent, this task has ended up on the back burner at the Central Bank in recent years, owing to the heavy workload related to crisis resolution, particularly the liberalisation of the capital controls. The Bank has already begun work aimed at improving this aspect of its activities, but it is clear that additional funding and staff will be needed for information and public relations work. This will be included in its budget for 2019.

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March 27, 2001

Declaration on inflation target and a change in the exchange rate policy

(From March 27, 2001 – as amended by agreement between between the Prime Minister of Iceland and the Board of Governors of the Central Bank of Iceland on November 11, 2005, cf. Press release no. 35/2005)

On March 27, 2001 the Prime Minister and the Governors of the Central Bank of Iceland signed a declaration on changes in the framework of monetary policy in Iceland. The declaration is as follows:

The Government of Iceland and the Central Bank of Iceland have decided the following changes in the framework of monetary policy in Iceland, effective March 28, 2001:

(1) The main target of monetary policy will be price stability as defined below. The Central Bank shall also promote financial stability and the main objectives of the economic policy of the Government as long as it does not deem it inconsistent with the Bank's main objective of price stability.

(2) Rather than basing monetary policy on keeping the exchange rate within a fluctuation band, the Central Bank will aim at keeping inflation within defined limits as specified below.

(3) The change described above implies that the fluctuation limits for the króna are abolished. Nevertheless, the exchange rate will continue to be an important indicator in the conduct of monetary policy.

(4) The Government grants full authority to the Central Bank to use its instruments in order to attain the inflation target.

(5) Later this week, the Government will submit to Parliament a bill on a new Central Bank Act which, once enacted, will legally confirm the decisions described above on making price stability the main objective of monetary policy and on the independence of the Central Bank to use its instruments.

(6) The inflation target of the Central Bank will be based on 12-month changes in the consumer price index as calculated by Statistics Iceland. Statistics Iceland will also be asked to calculate one or more indices which may be used to assess the underlying rate of inflation, as will be further agreed between the Central Bank and Statistics Iceland. The Central Bank will take note of such indices in its assessment of inflation and in the implementation of monetary policy.

(7) The Central Bank will aim at an annual inflation rate of about 2½ per cent.

(8) If inflation deviates by more than 1½ percentage point from the target, the Central Bank shall bring it inside that range as quickly as possible. In such circumstances, the Bank will be obliged to submit a report to the Government explaining the reasons for the deviations from the target, how the Bank intends to react and how long it will take to reach the inflation target again in the Bank's assessment. The report of the Bank shall be made public.

(9) The Central Bank shall aim at attaining the inflation target of 2½ percent not later than by the end of 2003. In the year 2001, the upper Declaration on inflation target and a change in the exchange rate policy limit for inflation shall be 3½ percentage points above the inflation target but 2 percentage points above it in the year 2002. The lower limit for inflation will always be 1½ percentage point below the inflation target. Should inflation move outside the target range in 2001 and 2002, the Bank shall respond as set out in item 8 above.

(10) Despite the elimination of the fluctuation limits for the króna, the Central Bank will intervene in the foreign exchange market if it deems such action necessary in order to promote the inflation objective described above or if it thinks that exchange rate fluctuations might undermine financial stability.

(11) The Central Bank shall publish inflation forecasts, projecting inflation at least two years into the future. Forecasts shall be published in the Bank's Monetary Bulletin. This shall also contain the Bank's assessment of the main uncertainties pertaining to the inflation forecast. The Bank shall also publish its assessment of the current economic situation and outlook.

[Amended text by agreement between the Prime Minister of Iceland and the Board of Governors of the Central Bank of Iceland on November 11, 2005]

(12) The Central Bank shall in its publications explain how successful it is in implementing the inflation target policy. The Governors will also report to the Minister, the Government and committees of the Parliament on the policy of the Bank and its assessment of current economic trends and prospects.