SEÐLABANKI ÍSLANDS

MONETARY POLICY COMMITTEE REPORT TO PARLIAMENT

2018•1

Monetary Policy Committee report to Parliament

5 July 2018

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 13 June 2018. The following report discusses the work of the Committee between January and June 2018.

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 first half of 2018.

Developments from January to June 2018

Central Bank interest rates have been unchanged since January, when the MPC's last report was submitted to Parliament. At the end of June, the Bank's key interest rate – that is, the seven-day term deposit rate – was 4.25%.[1]

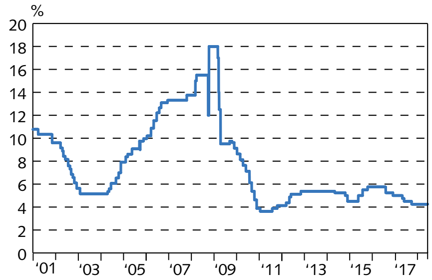
Table 1. Central Bank of Iceland interest rate decisions in H1/2018 (%)

Date	*Current accounts*	*Seven-day term deposits*	*Collateral-ised loans*	*Over-night loans*
13 June	4.00	4.25	5.00	6.00
16 May	4.00	4.25	5.00	6.00
14 March	4.00	4.25	5.00	6.00
7 February	4.00	4.25	5.00	6.00

Chart 1

Central Bank of Iceland key interest rate[1]

Daily data 3 January 2001 - 29 June 2018



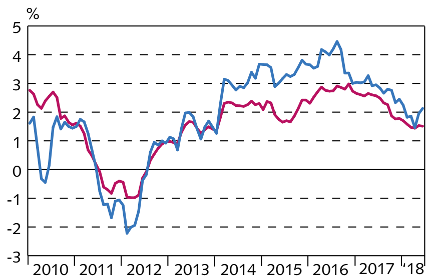
1. The Central Bank's key interest rate is defined as follows: the 7-day collateralised lending rate (until 31 March 2009), the rate on deposit institutions' current accounts with the Central Bank (1 April 2009 - 30 September 2009), the average of the current account rate and the rate on 28-day certificates 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.

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.

Chart 2

Real Central Bank of Iceland interest rates[1]

January 2010 - June 2018



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

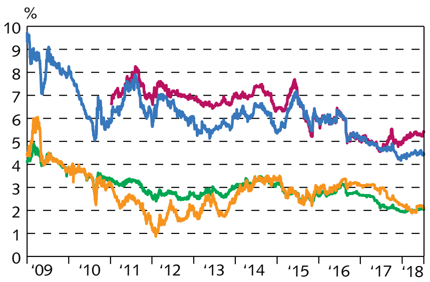
— Real Central Bank of Iceland interest rate in terms of various measures of inflation and inflation expectations[2]

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 - 29 June 2018



Nominal Treasury bond maturing in:

— 2019 — 2031

HFF bond maturing in:

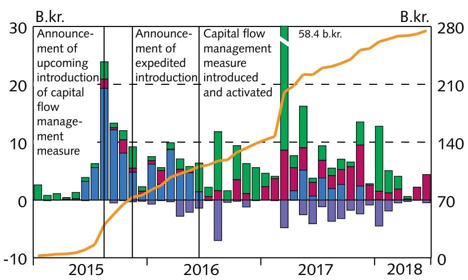
— 2024 — 2044

Source: Central Bank of Iceland.

Chart 4

Capital flows due to registered new investments

January 2015 - June 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.

At the beginning of June, the Monetary Policy Committee of the Central Bank of Iceland decided to change the arrangements for credit institutions' minimum reserve requirements so as to divide the reserve requirement into two parts: a fixed 1% non-remunerated reserve requirement and a 1% reserve requirement of the type that has been in place heretofore, currently bearing 4% interest (i.e., the rate on current accounts with the Bank). The objective of these changes was to offset the cost to the Central Bank in implementing monetary policy while the international reserves are large and the interest rate differential with abroad remains wide. These changes were not intended to affect the monetary stance. At its June meeting, the MPC was of the opinion that the change had not had such an effect, nor had it affected developments in the financial markets (cf. Attachment no. 2).

The monetary stance as measured in terms of the Bank's real rate eased in the first half of 2018, concurrent with a rise in inflation and several measures of inflation expectations. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 1.4% at the end of June, as opposed to 1.7% at the end of December 2017. The Bank's real rate in terms of twelve-month inflation fell by 0.7 percentage points over the same period, to 1.6% at the end of June.

Nominal Treasury bond yields began to rise towards the end of 2017, after having declined since the end of September. Yields on ten-year bonds were 5.4% at the end of June, or about 0.4 percentage points higher than at the end of December. Yields on indexed Treasury and Housing Financing Fund bonds rose from end-2017 through end-April 2018, after having declined for two years beforehand. The increase reversed quickly at the end of April, however, and the yield on the longest indexed Treasury bonds was around 2% at the end of June, or about 0.1 percentage points higher than at the end of 2017.

Capital inflows for new investment totalled just under 30 b.kr. in H1/2018, and outflows of capital that had previously been imported for new investment totalled just under 8 b.kr. New investment in the domestic bond market has been negligible year-to-date. Inflows into listed equities, which are not subject to the Central Bank's special reserve requirement, have also contracted during the year, while inflows into other investments have increased. Capital released from the special reserve requirement during the period has mostly been reinvested.

The temporary volatility following the liberalisation of the capital controls in March 2017 has receded, and it appears that foreign currency flows to and from Iceland have become more balanced. Volatility spiked temporarily in June, however, at about the time of the Arion Bank hf. initial public offering. In trade-weighted terms, the króna was 0.5% stronger at the end of June than at the end of 2017, and about 3.7% weaker than it was a year ago. In line with the Central Bank's declared objective of intervening primarily to mitigate excess short-term exchange rate volatility, the Bank has not traded in the interbank foreign exchange market in 2018 to date.

Inflation increased in Q1/2018 and rose slightly above the Bank's inflation target in March, after having been below target for four years running. It measured 2.6% in June, up from 1.9% in December 2017. Inflation excluding housing rose faster than headline inflation in H1/2018, measuring 1.1% in June, as opposed to -1.6% in December 2017. Underlying inflation has also risen, and the median of various measures of underlying inflation was 2.9% in June, as compared with 1.8% in December 2017.

House price inflation had eased by end-2017, after having been the main driver of headline inflation in recent years. In H1/2018, however, it picked up strongly once again, particularly in regional Iceland, and was the main driver of developments in the CPI during the period. The twelve-month rise in house prices nationwide measured just under 7% in June, down from 15% in December. Global oil prices have risen considerably in the recent term, and in June, domestic petrol prices had risen by over 17% year-on-year. Private services prices have been broadly unchanged in the recent past, with a twelve-month rise of 0.8% in June.

Inflation averaged 2.3% in Q2/2018, just below the baseline forecast of 2.4% as published in *Monetary Bulletin* on 16 May. Inflation is expected to rise over the course of the year, measuring 2.9% in Q4, and then taper off again in 2019 and hover around the target for the remainder of the forecast horizon. In comparison with the February forecast, this reflects the offsetting expectations of a higher exchange rate well into 2019 versus a larger increase in wage costs and a slightly wider output gap early in the forecast horizon.

According to recent surveys, market agents expect inflation to measure 2.6% in one year's time, while corporate executives and households expect it to measure 3-3½%. Household inflation expectations have risen by 0.5 percentage points since January, when the last MPC report was sent to Parliament. For the first time, corporate executives and households were asked about long-term inflation expectations. Executives expect inflation to average 3% over the next five years, while households expect it to measure 3.5%. Furthermore, market agents expect it to average 2.6% in the next five and ten years, which is unchanged since the last report. At the end of June 2017, the five- and ten-year breakeven inflation rate measured 3.2-3.4%, some 0.4 percentage points higher than at the end of December 2017.

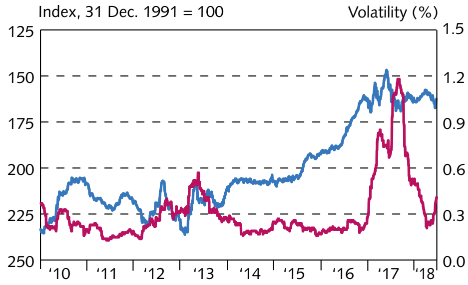
At the MPC's June meeting, it emerged in the discussion that, although Q1/2018 output growth appeared stronger than had been forecast, indicators from the labour market and the tourism industry suggested that the adjustment of the economy could prove more rapid than had previously been assumed. In addition, inflation had subsided more in May than had been forecast. The deviations were small, however, and did not give cause for a formal response; instead, it was appropriate to await further developments.

The outlook is for the positive output gap to narrow. Nevertheless, Committee members agreed that a tight monetary stance was still needed in light of rapid demand growth and underlying pressures in the labour market.

Chart 5

Exchange rate and volatility of the króna

Daily data 4 January 2010 - 29 June 2018



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

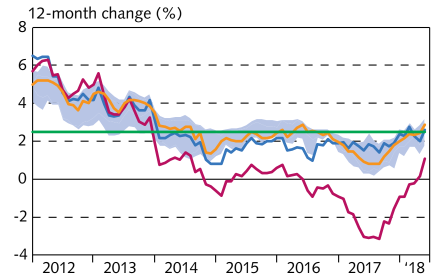
Volatility of the króna (right)[2]

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 - June 2018



CPI

CPIXH

Measures of underlying inflation, median value

Inflation target

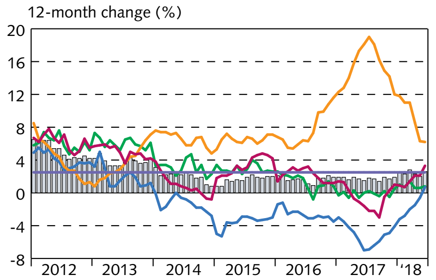
High-low range of underlying inflation

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 - June 2018



CPI

Imported prices (31%)

Domestic goods (12%)

Housing (26%)

Private services (23%)

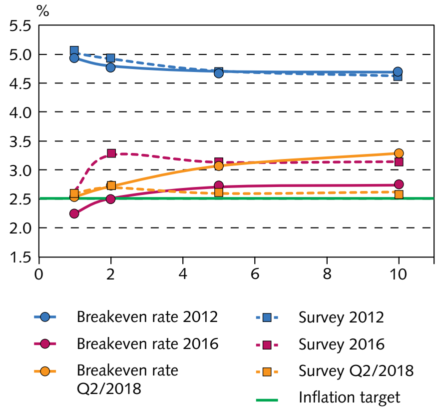
Inflation target

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.

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.

Accompanying documents

The following documents are enclosed with this report:

1. Monetary Policy Committee statements from January to June 2018.
2. Minutes of Monetary Policy Committee meetings from January to June 2018.
3. Statement on the special reserve requirement on capital inflows, 14 March 2018.
4. Press release on changes to credit institutions' minimum reserve requirements, 5 June 2018.
5. Deputy Governor's speech on monetary policy, delivered at a meeting of the Reykjavík/East Reykjavík Rotary Club on 27 March 2018.
6. "Special reserve requirement on capital inflows and private sector financing conditions", Box 1 in *Monetary Bulletin* 2018/2.
7. 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. 2/2018
7 February 2018

Statement of the Monetary Policy Committee
7 February 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 Central Bank's new macroeconomic forecast, published in the February *Monetary Bulletin*, the outlook is for GDP growth to be somewhat weaker in 2017 and 2018 than was forecast in November. This is largely because exports grew more slowly than expected last year although it is offset to a degree by stronger domestic demand growth in both years, which stems mainly from increased investment and a more accommodative fiscal stance.

Inflation rose from 1.9% in December to 2.4% in January, mainly because of increased house prices in regional Iceland. Underlying inflation also rose somewhat. In the past six months, house price inflation has subsided, but the effects of previous appreciation of the króna have tapered off. This trend will probably continue in the near term. The króna has been broadly stable since the MPC's last meeting, as the foreign exchange market has been well balanced. The outlook is for inflation to remain close to target over the forecast horizon, and on the whole, inflation expectations have been in line with the target for some time.

The high real exchange rate has slowed export growth, and the outlook is for the positive output gap to narrow. Nevertheless, a tight monetary stance is needed to contain rapid domestic demand growth, in part because the outlook is for a less restrictive fiscal stance than previously expected. Furthermore, the outcome of wage settlements is still uncertain.

No. 5/2018
14 March 2018

Statement of the Monetary Policy Committee
14 March 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 national accounts published by Statistics Iceland on 9 March 2018, year-2017 GDP growth measured 3.6%, which is close to the Bank's forecast as published in the February *Monetary Bulletin*.

Inflation measured 2.3% in February, down from 2.4% in January. Underlying inflation also declined slightly. The year-on-year rise in house prices has eased, and the effects of previous appreciation of the króna have diminished. This trend will probably continue in the near term. The króna has appreciated since the last MPC meeting, and the foreign exchange market has remained well balanced. The inflation outlook is broadly unchanged since the last meeting, although inflation expectations appear to have risen marginally. It is too soon, however, to determine whether inflation expectations have become less firmly anchored to the Bank's inflation target.

The high real exchange rate has slowed export growth, and the outlook is for the positive output gap to narrow. Nevertheless, a tight monetary stance is needed in order to contain rapid domestic demand growth. The recent decision not to terminate wage settlements reduces the short-term risk of unsustainable wage increases, but there are still underlying pressures in the labour market.

No. 6/2018
16 May 2018

Statement of the Monetary Policy Committee
16 May 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 Central Bank's new macroeconomic forecast, published in the May issue of *Monetary Bulletin*, the outlook is for GDP growth to ease between 2017 and 2018, owing to weaker export growth and less rapid increase in domestic demand. Output growth has developed in line with the Bank's February forecast and, as was projected then, is expected to ease further in the next two years.

Inflation measured 2.5% in Q1/2018 and 2.3% in April. Underlying inflation is similar. Therefore, inflation has been broadly in line with the Bank's 2½% inflation target in recent months. The year-on-year rise in house prices has eased further, and the opposing effects of previous appreciation of the króna on inflation have diminished. This trend will probably continue in the near term. The exchange rate of the króna has been broadly stable since the last MPC meeting, and the foreign exchange market has remained well balanced. Neither the inflation outlook nor inflation expectations have changed to any marked degree since the Committee's last meeting.

The outlook is for the positive output gap to narrow. Nevertheless, a tight monetary stance is still needed in order to contain rapid demand growth. The short-term risk of unsustainable wage increases has receded, but there are still underlying pressures in the labour market.

No. xx/2018
13 June 2018

Statement of the Monetary Policy Committee
13 June 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 preliminary national accounts figures recently published by Statistics Iceland, GDP growth measured 6.6% in Q1/2018, well above the growth rate in H2/2017. Although this is slightly higher than the Central Bank projected in May, overall developments are in line with the Bank's forecast. GDP growth is still expected to ease this year, 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 fell to 2% in May, but in recent months both headline and underlying inflation have been close to the Bank's 2½% inflation target. The year-on-year rise in house prices continues to ease, and the opposing effects of previous appreciation of the króna have diminished. 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. On the whole, inflation expectations appear consistent with the target.

The outlook is for the positive output gap to narrow. Nevertheless, a tight monetary stance is still needed in light of rapid demand growth and underlying pressures in the labour market.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, February 2018

Published 21 February 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 February 2018, during which the Committee discussed economic and financial market developments, the interest rate decision of 7 February, 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 December 2017 interest rate decision, as published in the updated forecast in *Monetary Bulletin* 2018/1 on 7 February.

Financial markets

Between meetings, the króna depreciated by 0.3% in trade-weighted terms. Over this same period it fell 1.3% against the euro and 0.8% against the pound sterling, but rose by 4% against the US dollar. 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 had eased since the MPC's December meeting. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 1.6%, or 0.2 percentage points lower than in December. In terms of twelve-month inflation, it was 1.8% and had fallen by 0.7 percentage points.

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

Nominal Treasury bond yields had risen by as much as 0.4 percentage points since the December meeting. Yields on longer bonds had risen most, and the spread between long and short bonds had therefore widened. Yields on long-term indexed Treasury and Housing Financing Fund bonds had also risen slightly, while yields on shorter indexed bonds had fallen. Furthermore, financial institutions' deposit and lending rates had developed broadly in line with Central Bank rates between meetings.

Measures of risk premia on the Treasury's foreign obligations declined in December after Fitch Ratings upgraded Iceland's sovereign credit rating to A and the Treasury issued a new eurobond. The CDS spread on the Treasury's five-year US dollar obligations had fallen by 0.1 percentage points, to 0.6%, while the spread between the Treasury's eurobonds and comparable bonds issued by Germany had fallen by almost 0.3 percentage points, to 0.5 percentage points.

Financial institutions' analysts had all projected that the Bank's interest rates would be held unchanged in February, citing the decline in the real rate between meetings and the continued uncertainty about the outcome of wage settlements.

According to the Central Bank survey carried out in late January, market agents expected the Bank's key rate to be kept unchanged at 4.25% over the next two years. At the time the survey was conducted, about 68% of respondents considered the monetary stance appropriate, as opposed to 59% in the last survey. A roughly equal number of respondents considered the monetary stance too tight versus too loose.

M3 adjusted for the deposits of the failed financial institutions grew by 7.1% year-on-year in Q4/2017, below the growth rate in Q2 and Q3 but well above estimated nominal GDP growth. Household deposits are still increasing rapidly, while growth in financial sector deposits has eased.

The stock of credit system loans grew by 6.3% year-on-year in nominal terms in Q4/2017, after adjusting for the Government's debt reduction measures. Corporate lending grew by 9% in nominal terms in Q4, while household lending grew by 5.3% year-on-year, about the same as in Q3.

The Nasdaq OMXI8 index had risen by 4.4% between meetings. Turnover in the main market totalled 53 b.kr. in January, 6.6% more than over the same period in 2017.

Global economy and external trade

According to the forecast published by the International Monetary Fund (IMF) in January, the global GDP growth outlook has improved from the Fund's October forecast. The IMF estimates global GDP growth at 3.9% in both 2018 and 2019, or 0.2 percentage points more in each of the two years than according to its October forecast. Growth is expected to be stronger in advanced economies, particularly the US, Japan, and the euro area. The forecast for world trade was also revised upwards for both years. The inflation outlook for industrialised countries has been revised upwards as well, with inflation forecast at 1.9% this year and 2.1% in 2019. Inflation in emerging and developing countries is expected to be somewhat higher in both 2018 and 2019 than was projected in October. The *Consensus Forecasts* projections for 2018 GDP growth among Iceland's trading partners had increased by 0.1 percentage points between meetings, to 2.3%, while the inflation outlook was unchanged.

The deficit on goods trade totalled 26.6 b.kr. in December, the largest deficit since July 2006, at constant exchange rates. According to preliminary figures from Statistics Iceland, it measured 5.4 b.kr. in January. In 2017, the goods account deficit totalled 178 b.kr., as opposed to 95 b.kr. in 2016. Import values rose by 21% year-on-year at constant exchange rates in 2017, while export values rose by 8%. Last year's growth in imports was due for the most part to an increase in imports of passenger cars, commodities, and operational inputs, whereas the increase in exports is due primarily to manufacturing exports.

The listed global market price of aluminium had risen by 10% between MPC meetings, and the average price in January was up about 24% year-on-year. Preliminary figures from Statistics Iceland suggest that foreign currency prices of marine products declined month-on-month in December and fell by 2.2% year-on-year in Q4/2017. Overall, marine product prices fell by 1% year-on-year in 2017. Global oil prices have risen virtually unimpeded since the summer and, in January 2018, were 24% higher, on average, than in January 2017.

In terms of relative consumer prices, the real exchange rate rose by 11.8% year-on-year in 2017. By the same metric, it measured 98 points in January. It had fallen by 1% between months but risen by 1.2% between years. The year-on-year increase was due entirely to the nominal appreciation of the króna, as inflation in Iceland was broadly similar to inflation in main trading partner countries.

The domestic real economy and inflation

As expected, the reduction in total hours worked and in the labour participation rate measured in Statistics Iceland's Q3/2017 labour force survey (LFS) reversed in Q4, as job creation remained strong according to pay-as-you-earn (PAYE) records and labour importation remained robust. According to the LFS, total hours worked increased by 0.8% year-on-year in Q4/2017. The rise was due to a 1.4% increase in the number of employed persons, as the average work week grew shorter by 0.6%. The seasonally adjusted labour participation rate rose by nearly a percentage point between quarters, and the employment rate rose by ½ a percentage point. Both the participation rate and the employment rate declined by nearly a percentage point between 2016 and 2017.

Seasonally adjusted unemployment measured 3% in Q4/2017, an increase of 0.4 percentage points between quarters. It measured 2.8% in 2017 as a whole, as opposed to 3% in 2016. Unemployment as measured by the Directorate of Labour (DoL) was 2.2% in 2017 and had fallen by 0.1 percentage points between years.

Other indicators suggested stronger demand for labour. Preliminary figures on the number of workers on the pay-as-you-earn (PAYE) register showed a 3.6% year-on-year increase in October, and net migration of persons aged 20-59 was positive by 0.6% of the population. Net migration was positive by 3.8% for the year as a whole, the largest single-year increase ever measured. Employees of employment agencies and foreign services firms accounted for 1% of the labour force as of year-end 2017, an increase of 57% between years.

The wage index rose by 0.2% month-on-month in December 2017 and by 6.9% year-on-year, and real wages according to the index were 4.8% higher during the month than they were at the same time in 2016. The wage index rose by 6.8% between annual averages in 2017, and real wages grew by 5%.

Indicators of private consumption in Q4/2017 imply that household demand continued to increase year-on-year during the quarter, albeit somewhat slower than in H1.

The Gallup Consumer Confidence Index fell month-on-month in January, to 121.5 points. All sub-indices fell during the month, especially those measuring consumers' assessment of the economic situation and expectations six months ahead. The decline in January reversed the previous months' rise in the index.

Statistics Iceland's nationwide house price index, published at the end of January, rose by 0.6% month-on-month after adjusting for seasonality, and by 14.5% year-on-year. The capital area house price index, calculated by Registers Iceland, declined by 0.2% month-on-month in December when adjusted for seasonality, but rose by 13.7% year-on-year. The twelve-month rise in house prices therefore continues to ease, after peaking at nearly 24% in May. In 2017, the Registers Iceland index rose by an average of 18.9% from the previous year, and the number of registered purchase agreements nationwide fell by 6.4% between years, while the number of flats advertised for sale rose markedly. The average time-to-sale for residential property in the greater Reykjavík area therefore lengthened slightly between 2016 and 2017, to just over 2 months.

The CPI rose by 0.27% month-on-month in December 2017 and then fell by 0.09% in January. Twelve-month inflation measured 2.4%, an increase of 0.6 percentage points since the Committee's December meeting. The CPI excluding the housing component had declined by 0.9% since January 2017, however. Measures of underlying inflation suggested that it had risen in January and lay in the 1⅓-2½% range.

Seasonal sales pushed the CPI downwards in January, as usual, but were offset by rising house prices and annual price list increases. The increase in house prices was due in particular to rising prices in regional Iceland. Private services prices have risen by 1% between years, whereas in November they had fallen by 0.5%.

According to the Bank's most recent survey, market agents' one- and two-year inflation expectations have risen slightly since November, to 2.6-2.7%. Their long-term inflation expectations appear broadly unchanged, however; survey respondents expected inflation to average 2.6% in the next five and ten years. The breakeven inflation rate in the bond market has risen since the MPC's December meeting, however, and the five- and ten-year breakeven rate has averaged 2.8-3.1% in Q1/2018 to date. The increase could reflect a rise in the risk premium, although it is not impossible that long-term inflation expectations have inched upwards.

According to the forecast published in *Monetary Bulletin* on 7 February 2018, inflation will be close to target throughout the forecast horizon. It has risen since mid-2017, measuring 1.8% in Q4/2017 and 2.4% in January 2018. Inflation expectations also appear broadly consistent with the target. For much of this year, inflation will be higher than was forecast in November, but from end-2018 onwards it will be somewhat lower. This is mainly because the output gap is projected to be smaller than was assumed in November, owing to weaker output growth in 2017 and 2018 and the prospect of more rapid growth in the working-age population.

According to the 2018 National Budget, the fiscal stance will tighten this year, but somewhat less than was projected in the Bank's November forecast. The tightening is estimated at 0.8% of GDP, as opposed to an estimate of 1.3% in November. The new Government's fiscal strategy for the upcoming five years was presented in December. Even though it is assumed that the Treasury will be operated at a surplus over the period, the strategy entails significant fiscal easing relative to the strategy presented by the previous Government in January 2017. The assessment of the fiscal stance in the Bank's February forecast indicates that, in 2017-2020, the stance will ease by as much as 2% of GDP relative to the Bank's November forecast.

Because export growth has eased, GDP growth has retreated from its 2016 peak. According to preliminary figures from Statistics Iceland, it measured 4.3% in the first three quarters of 2017.

It is estimated at 3.4% for the year as a whole, slightly below the November forecast, owing primarily to the more rapid decline in export growth. The outlook for 2018 is similar, with GDP growth projected at 3.2%, marginally below the November forecast. As in November, GDP growth is expected to ease slowly towards its long-term trend rate over the next two years. In spite of weaker GDP growth in 2017 and 2018, domestic demand growth has been stronger than previously anticipated, at an estimated 7% in 2017 and a projected 4.4% this year. This stronger demand growth is due primarily to more rapid investment growth and greater fiscal easing than previously forecast.

Wages and related expenses are expected to rise by 6.5% this year, about the same as in 2017. Labour productivity is estimated to have grown somewhat more slowly in 2017 than was projected in November, and the forecast for this year has also been revised downwards. As a result, unit labour costs are forecast to rise more than previously assumed, or by 4.3% in 2017 and 5.5% in 2018. As in the November forecast, the rise in unit labour costs will slow down in the next two years, to just under 3% by 2020.

Large-scale importation of labour has offset rapid demand growth and caused the output gap to narrow from the late-2016 peak. Because of slower GDP growth in 2017 and 2018, the output gap will be somewhat narrower than was projected in November. As before, it is assumed to have peaked in 2016 and is expected to close by the end of the forecast horizon.

II The interest rate decision

The Governor reported to the Committee on the status of ongoing work on the review of the statutory and technical foundations for the capital flow management measure.

The MPC discussed the monetary stance in view of the most recent information on the economy and the marginal decline in the Bank's real rate between meetings. The Committee discussed whether the monetary stance was appropriate in view of the inflation outlook, as it had decided in December to keep interest rates unchanged even though recent national accounts figures showed that domestic demand growth was stronger and the economy's adjustment to its long-term trend rate could prove more gradual than had been forecast in November.

In this context, members took into consideration the Bank's updated macroeconomic forecast, published in *Monetary Bulletin* on 7 February, according to which the outlook was for GDP growth to be somewhat weaker in 2017 and 2018 than was forecast in November. Members noted that, according to the forecast, this was because exports grew more slowly than expected last year, while domestic demand growth would be stronger in both years. Committee members agreed that this stemmed from increased investment and a more accommodative fiscal stance.

The Committee discussed developments in inflation, which had risen from 1.9% in December to 2.4% in January, mainly because of increased house prices in regional Iceland. It emerged that there was considerable uncertainty about how to interpret this increase: whether it was a one-off measurement deviation or an indication of an underlying trend in the housing market. On the other hand, underlying inflation had also risen, although it remained below target. It was pointed out that, in spite of the rise in house prices in regional Iceland, house price inflation had subsided and the effects of past appreciation of the króna had tapered off, as the MPC had previously expected. The Committee was of the view that this trend would continue in the near term.

Members agreed that the inflation outlook was largely unchanged since the last meeting and that inflation appeared set to remain close to target over the forecast horizon. The Committee considered it positive that, on the whole, inflation expectations had been in line with the target for some time. Although the breakeven inflation rate in the market had risen, it was probably due to an increase in the risk premium. Furthermore, the MPC noted that the foreign exchange market had been well balanced since the last meeting and the exchange rate broadly stable. It was pointed out that inflation was at target, which was positive, although the probability that it would be below target in the near future had receded. The slack abroad had narrowed, and import prices could therefore rise rapidly. It was mentioned in the discussion that there was no reason to respond to minor deviations in inflation from target, as long as the fluctuations were moderate and inflation expectations remained at target.

Given that there had been no major changes since the last forecast, none of the MPC members saw compelling reason to change interest rates at present. Members agreed that the outlook was for the positive output gap to narrow in the coming term. As the MPC had assumed, the high real exchange rate had slowed export growth in the recent past. There was some discussion, however, of the uncertainties in the forecast. It emerged that the economy's adjustment to equilibrium appeared to be taking place even faster than had been assumed in the November forecast. It was pointed out that the adjustment could prove even more rapid if the influx of tourists should ease more quickly than the forecast provided for, or if terms of trade deteriorated significantly. Others emphasised that the adjustment could also be overestimated in the forecast, as the slowdown in GDP growth in 2017 stemmed mainly from unique factors relating to the pharmaceuticals industry. It was also pointed out that investment was often underestimated in the first national accounts figures, as had come to light, for example, in December.

The Committee agreed that strong growth in domestic demand was attributable in part to fiscal easing, which was unnecessary given the business cycle position, as some demand pressures remained. Some members were of the view that the fiscal stance could turn out more accommodative than estimated, which can happen during times of rapid growth in Treasury revenues. It emerged that, although pressures had eased due to importation of production factors, it was appropriate to bear in mind that less slack in Europe could make it more difficult to recruit foreign workers. Furthermore, the outcome of wage settlements could prove less favourable than was assumed in the forecast. Members noted that the pace of the global economic recovery could have considerable implications for the domestic economy in the longer term.

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.

Members agreed that a tight monetary stance was needed to contain rapid domestic demand growth, in part because the outlook was for a less restrictive fiscal stance than previously expected. Furthermore, the outcome of wage settlements is still uncertain.

The following Committee members were in attendance:

Már Gudmundsson, Governor and Chairman of the Monetary Policy Committee

Arnór Sighvatsson, 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.

Rannveig Sigurdardóttir wrote the minutes.

The next Statement of the Monetary Policy Committee will be published on Wednesday 14 March 2018.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, March 2018

Published: 28 March 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 12 and 13 March 2018, during which the Committee discussed economic and financial market developments, the interest rate decision of 14 March, 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 February 2018 interest rate decision.

Financial markets

Between meetings, the króna appreciated by 1.5% in trade-weighted terms. Over this same period it appreciated by 1.5% against the euro, 1.4% against the pound sterling, and 1% against the US dollar. 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 was broadly the same as at the time of the MPC's February meeting. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 1.5%, or 0.1 percentage points lower than in February. In terms of twelve-month inflation, it was 1.9%.

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

When the Committee met in March, yields on nominal Treasury bonds were similar to those seen at the time of the February meeting. Yields on long-term indexed Treasury and Housing

Financing Fund bonds were also largely unchanged, while yields on shorter indexed bonds had fallen by 0.2 percentage points. Furthermore, financial institutions' deposit and lending rates had developed broadly in line with Central Bank rates between meetings.

The short-term interest rate differential vis-à-vis the US had narrowed by 0.3 percentage points since the February meeting, to 2.5 percentage points, whereas the differential versus the euro area was virtually unchanged at 5 percentage points. The long-term interest rate differential vis-à-vis both economies was also virtually unchanged between meetings, at 2.4 percentage points and 4.7 percentage points, respectively.

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

Financial institutions' analysts had all projected that the Bank's interest rates would be held unchanged in February, noting that little had changed since the MPC's last interest rate decision and that the newly published national accounts had been in line with the Bank's February forecast.

M3 adjusted for the deposits of the failed financial institutions grew by 6.3% year-on-year in January, below the growth rate in the three preceding quarters. Household deposits continued to increase rapidly, while growth in corporate and financial sector deposits had slowed.

The stock of credit system loans grew by 6.3% year-on-year in nominal terms in January, after adjusting for the Government's debt reduction measures. Corporate lending increased by 8.7% year-on-year in nominal terms, while household lending grew by 5.5% year-on-year, about the same as in Q4/2017.

The Nasdaq OMXI8 index had risen by 3.5% between meetings. Turnover in the main market totalled 109 b.kr. during the first two months of the year, 19% less than over the same period in 2017.

Global economy and external trade

Iceland's external goods trade generated a deficit of 10.9 b.kr. for the first two months of the year, as opposed to a deficit of 20.6 b.kr. over the same period in 2017. Export values rose by 39% year-on-year at constant exchange rates, while import values rose 19%. The substantial increase in export values reflects the fishermen's strike in 2017, as marine product export values rose by 67% year-on-year in the first two months of 2018. Import growth in 2018 to date is mainly attributable to a 94% increase in imports of fuels and lubricants. All components of imports show robust year-on-year growth, apart from transport equipment imports, whose value had contracted by 9% between years.

The listed global market price of aluminium had fallen by nearly 5% between meetings, but the average February price was up 18% year-on-year. However, foreign currency prices of marine products, according to the marine product price index calculated by Statistics Iceland, rose by 1% between months in January, and by 2.6% between years. Oil prices had fallen by nearly 4% between meetings.

In terms of relative consumer prices, the real exchange rate rose 1.3% month-on-month in February and had risen by 3.4% from the September 2017 trough. In February, it was 21.5%

above its 25-year average but 6% below its June 2017 peak. In the first two months of 2018, it was 0.9% higher than over the same period in 2017, due to the 0.7% nominal appreciation of the króna and to the fact that inflation in Iceland was 0.2 percentage points above the trading partner average.

The domestic real economy and inflation

According to preliminary figures published by Statistics Iceland in March, GDP growth measured 1.5% in Q4/2017 and 2.5% in H2/2017. Domestic demand grew by 4.4% year-on-year during the quarter, as consumption and investment grew by 4.8%. After an unusually strong Q3, the contribution from inventory changes was negative in Q4/2017. Exports grew by 7½%, but imports grew considerably more, or by 15.4%, and the contribution of net trade to GDP growth was therefore negative.

GDP growth measured 3.6% in 2017, reflecting the offsetting effects of 6.8% growth in domestic demand and the negative contribution from net trade. GDP growth was driven mainly by private consumption and services exports, and was in line with the Bank's February forecast of 3.4%. While services exports grew more strongly than expected, the contribution from inventory changes was weaker, and the two items more or less offset one another. Consumption and investment grew broadly in line with the Bank's forecast.

The current account balance was positive by 93 b.kr., or 3.7% of GDP, in 2017. The surplus on goods and services trade was smaller in 2017 than in 2016, and the balance on primary and secondary income was considerably weaker, as developments in the primary income balance were extremely favourable in 2016. The forecast in the February *Monetary Bulletin* assumed that the current account surplus would amount to 3.5% of GDP in 2017. The larger-than-expected surplus was due to stronger-than-projected services exports in Q4.

Key indicators of developments in private consumption in Q1 to date suggest that household demand is still growing strongly, although it may ease from the level seen in the recent term. Leading indicators, such as retail executives' expectations concerning domestic demand, are somewhat weaker than in the previous quarter. The Gallup Consumer Confidence Index has also fallen in recent months.

According to the results of Gallup's spring survey, conducted in February among Iceland's 400 largest firms, respondents' attitudes towards the current economic situation were very positive. Their attitudes towards the six-month outlook were more pessimistic than in the winter survey, however, but about the same as in the autumn survey. About 70% of executives considered the current situation good, and about one-fourth considered it neither good nor poor. Just under 8% of executives were of the view that economic conditions would improve in the next six months, and just under 62% expected conditions to remain good. About 30% of respondents expected conditions to be worse in six months' time, somewhat more than in December and in February 2017. Survey participants' views on domestic demand were not significantly more negative than in the winter survey but were much more negative than in the survey conducted a year ago.

According to the survey, a smaller number of firms expect their profit margins to decline in the near future, and about half of firms expect their margins to be broadly unchanged from 2017. Attitudes towards the operational outlook were more positive than in the autumn survey, particularly among executives in transport, transit, tourism, and fishing companies. Over half of executives expected their firms' investment level to be about the same this year as in 2017. The share who expected investment to increase this year was largest among executives in transport, transit, and tourism, at 35%.

According to the survey, firms interested in recruiting staff in the next six months outnumbered those planning redundancies by 17 percentage points, adjusted for seasonality. This is similar to the share measured in the winter survey but lower than in the survey taken a year ago. Sentiment continued to be most positive in transport, transit, and tourism, where firms planning to recruit outnumbered those planning redundancies by about 24 percentage points, whereas sentiment was most negative in the fishing industry, where firms interested in downsizing outnumbered those planning to recruit by about 10 percentage points. In other sectors, firms interested in recruiting exceeded the share interested in downsizing by 13-23 percentage points.

As in the winter survey, a third of executives considered themselves understaffed, after adjusting for seasonality, whereas the same ratio was 6½ percentage points higher in the survey taken a year ago. About 47% of manufacturing executives considered themselves short-staffed. The shortage of workers was least pronounced in the financial and insurance sector, where 8% of executives considered themselves understaffed. In other sectors, the same ratio ranged between 27% and 36%.

After adjusting for seasonality, 52% of respondents were of the view that their firms would have difficulty responding to unexpected demand, broadly unchanged from the winter survey. Nearly 70% of executives in the fishing industry considered themselves likely to have difficulty responding to unexpected demand, as were just over a third of executives in the financial and insurance sector. In other sectors, the ratio lay in the 40-60% range.

The wage index rose by 0.4% month-on-month in January and by 7.3% year-on-year. Real wages rose by 4.8% from the previous year.

According to preliminary figures from Statistics Iceland, wages and related expenses totalled 64.8% of gross factor income in 2017, about 3½ percentage points above the 20-year average. The ratio rose by 3.8 percentage points between years, somewhat more than was assumed in the Bank's February forecast.

Statistics Iceland's nationwide house price index, published in February, rose 0.5% month-on-month when adjusted for seasonality and by 13.4% year-on-year. The capital area house price index, calculated by Registers Iceland, rose by 0.7% month-on-month in January, when adjusted for seasonality, and by 12.8% between years. The twelve-month rise in house prices has slowed markedly after peaking at nearly 24% in May 2017. The number of purchase agreements registered nationwide fell by 6.6% year-on-year in January, when around 1,500 flats were advertised for sale, as opposed to around 800 in January 2017. The average time-to-sale for capital area housing was 2.4 months in January, more than a month longer than during the same period in 2017.

The CPI rose by 0.6% month-on-month in February. Twelve-month inflation measured 2.3% and had fallen by 0.1 percentage points since the February meeting. The CPI excluding the housing component had declined by 0.9% since February 2017. Most measures of underlying inflation suggested that it had declined in February and lay in the 1¼-2½% range.

The main drivers of the increase in the CPI in February were end-of-sale effects and rising house prices. Private services prices fell by 0.2% between months, primarily because of a reduction in international airfares, but have risen by 0.7% between years.

According to Gallup's spring survey, households' inflation expectations one year ahead measured 3% and were virtually unchanged from the winter survey, but their two-year expectations had risen by 0.5 percentage points between surveys, to 3.5%. In this survey, the first to include a question on households' long-term inflation expectations, respondents indicated that they expect inflation to average 3.5% over the next five years. According to Gallup's spring survey among executives, one-year inflation expectations had risen by ½ a percentage point from the previous survey, to 3%. The five- and ten-year breakeven inflation rate in the bond market has averaged 2.9-3.2% in Q1/2018 to date and is therefore broadly unchanged since the February meeting.

II The interest rate decision

The Governor updated the Committee on his recent meeting with Government ministers and the social partners. The Deputy Governor then reported to the Committee on the status of work on the review of the statutory and technical foundations for the capital flow management measure.

Committee members agreed that because the interest rate differential with abroad was still sizeable, it was advisable to keep the special reserve requirement (SRR) unchanged for the time being. Members agreed that the SRR had shifted monetary policy transmission more to the interest rate channel and that, without it, domestic interest rates would be lower, which was not desirable given the demand pressures in the economy. Available data indicated that the Bank's interest rate reductions had been transmitted normally to households and businesses, in terms of either lending rates or market rates. MPC members were also of the view that without the SRR, the exchange rate of the króna would be higher, which was not desirable, as the real exchange rate was very high in historical context and, if it rose much further, would exacerbate the risk of instability. Members agreed that conditions for modifying the SRR could develop in the coming term, if forecasts materialise.

The MPC discussed the monetary stance in view of the most recent information on the economy and the marginal 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 February to keep interest rates unchanged because the inflation outlook had been broadly unchanged between meetings.

Only a short time had passed since the previous meeting, and the information published in the interim largely supported the Committee's previous assessment of the economy and the appropriate monetary stance. Members noted that, according to newly published national accounts figures, the economic outlook had changed little since the Bank's last forecast, and year-2017 GDP growth had been well in line with that forecast.

They discussed developments in inflation, which had measured 2.3% in February, down from 2.4% in January. Underlying inflation had also declined slightly. This was in line with the last forecast. The year-on-year rise in house prices had continue to ease, and the effects of previous appreciation of the króna had diminished. In the MPC's view, the inflation outlook was broadly unchanged. Although the króna had appreciated between meetings, members agreed that the gap between domestic price developments and external factors would probably continue to grow narrower in the near future. The MPC considered it positive that the foreign exchange market had remained well balanced.

Members noted that inflation expectations appeared to have risen marginally. They considered it premature to draw the conclusion that inflation expectations had become less firmly anchored to the Bank's inflation target, however.

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.

In the MPC's opinion, the high real exchange rate has slowed export growth, and the outlook is for the positive output gap to narrow. Members agreed that nevertheless, a tight monetary stance would still be needed in order to contain rapid domestic demand growth. The MPC is of the view that the recent decision not to terminate wage settlements reduces the short-term risk of unsustainable wage increases, but there are still underlying pressures in the labour market.

The following Committee members were in attendance:

Már Gudmundsson, Governor and Chairman of the Monetary Policy Committee

Arnór Sighvatsson, 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.

Rannveig Sigurdardóttir wrote the minutes.

The next Statement of the Monetary Policy Committee will be published on Wednesday 16 May 2018.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, May 2018

Published: 30 May 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 14 and 15 May 2018, during which the Committee discussed economic and financial market developments, the interest rate decision of 16 May, 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 14 March 2018 interest rate decision, as published in the new forecast and analysis of uncertainties in *Monetary Bulletin* 2018/2 on 16 May.

Financial markets

Between meetings, the króna depreciated by 0.3% in trade-weighted terms. Over this same period it fell 0.4% against the pound sterling and 3% against the US dollar, but rose by 0.4% against the euro. 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 was broadly the same as at the time of the MPC's March meeting. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 1.5%, as it was in March. In terms of twelve-month inflation, it was 1.9%.

Interest rates in the interbank market for krónur declined slightly between meetings, but there was no turnover in the market during that period.

When the Committee met in May, yields on nominal Treasury bonds were up to 0.1 percentage points higher than at the time of the March meeting. Yields on long-term indexed Treasury and Housing Financing Fund bonds were broadly unchanged, while yields on shorter indexed bonds had risen by 0.3-0.4 percentage points. Furthermore, financial institutions' deposit and lending rates had developed broadly in line with Central Bank rates between meetings.

The short-term interest rate differential vis-à-vis the US had narrowed by 0.2 percentage points since the March meeting, to 2.3 percentage points, whereas the differential versus the euro area was virtually unchanged at 5 percentage points. The long-term interest rate differential versus the US had also narrowed slightly between meetings, to 2.2 percentage points, but the spread versus Germany was unchanged at 4.7 percentage points.

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

Financial institutions' analysts had all projected that the Bank's interest rates would be held unchanged in May, noting that little had changed since the MPC's last interest rate decision and that inflation had developed in line with expectations.

According to the Central Bank's quarterly survey of market agents' expectations, carried out in early May, respondents expected 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 January. At the time the survey was conducted, 81% of respondents considered the monetary stance appropriate, as compared with 68% in the last survey. About 19% of respondents considered it too tight, whereas no one considered it too loose.

Annual growth in M3 measured 6.2% in Q1/2018, after adjusting for deposits held by the failed financial institutions. This is weaker than in the three previous quarters. As in the recent past, the growth in money holdings is due primarily to an increase in household deposits, which grew by 10.3% year-on-year in Q1. The annual growth rate has averaged just under 10% since Q3/2016.

Growth in lending to resident entities has also increased. After adjusting for the effects of the Government's debt relief measures, the stock of credit system loans to resident borrowers grew by 6.9% year-on-year, the fastest pace in a decade. In Q1/2018, corporate lending increased by 9.7% year-on-year in nominal terms, and household lending by 5.7%.

The Nasdaq OMXI8 index had fallen by 1.9% between meetings. Turnover in the main market totalled around 187 b.kr. during the first four months of the year, nearly one-fourth less than over the same period in 2017.

Global economy and external trade

According to the forecast published by the International Monetary Fund (IMF) in April, the short-term economic outlook gives cause for increased optimism, yet some uncertainty remains, particularly as regards the long-term outlook. As in recent years, the Fund considers the global GDP growth risk profile to be tilted to the downside. Global output growth is expected to gain momentum, measuring 3.9% this year and next year. For both years, the GDP growth outlook has improved by 0.2 percentage points since the IMF's October forecast, with the improvement concentrated more in advanced economies than elsewhere.

The tax cuts in the US early this year are an important factor, as they explain about half of the GDP growth revision. Among Iceland's main trading partners, GDP growth is forecast to increase by 0.4 percentage points, to 2.5%. In both advanced and emerging economies, inflation is expected to be higher during the forecast horizon than was forecast in October. Year-2018 inflation is projected at 2% for Iceland's trading partners, as it was in October.

Iceland's external goods trade generated a deficit of 43.3 b.kr. for the first four months of the year, as opposed to a deficit of 45.5 b.kr. at constant exchange rates over the same period in 2017. Export values rose by 22% year-on-year at constant exchange rates, while import values rose 16%. Marine product export values increased by 34% year-on-year, owing to base effects from the fishermen's strike in early 2017, which caused a sharp contraction in goods exports. The year-on-year increase in imports in 2018 to date is due in particular to 56% growth in fuel imports, in addition to a 20% rise in the import value of transport equipment, ships and aircraft in particular. On the other hand, the surge in passenger car imports has eased.

The listed global market price of aluminium had risen by 11% between MPC meetings, and the average price in April was up 16% year-on-year. According to preliminary figures from Statistics Iceland, foreign currency prices of marine products rose between months in March, and the year-on-year rise in Q1 measured 3.1%. Oil prices have risen steadily since mid-2017, with the twelve-month increase measuring 22% in Q1/2018. Prices have fluctuated somewhat in the recent past, owing partly to increased geopolitical tension. In mid-May, the price of oil had risen to 77 US dollars per barrel, the highest since year-end 2014.

The real exchange rate in terms of relative consumer prices rose by 0.3% month-on-month in April, when it was about 24% above its twenty-five year average but 4% below its June 2017 peak. In the first four months of 2018, it was about 1% higher than over the same period in 2017, due to the 0.6% nominal appreciation of the króna and to the fact that inflation in Iceland was 0.4 percentage points above the trading partner average.

The domestic real economy and inflation

According to a parliamentary resolution on the fiscal strategy and fiscal plan for the next five years, which was presented before Parliament in December and early April, the fiscal stance for the period will ease more this year than was assumed in the Bank's February forecast. The primary Treasury surplus is expected to shrink this year, after adjusting for one-off items. After adjusting for the business cycle position, the fiscal stance is expected to tighten by 0.3% of GDP, which is 0.5 percentage points less than was forecast in February. As in February, the fiscal stance is expected to ease again in 2019, owing to the planned personal income tax and payroll tax cuts and the substantial increase in investment spending, which are estimated to lead to fiscal easing in the amount of 0.6% of GDP. Significant expenditure growth will also lead to some easing in 2020, albeit less than in 2019, or 0.3% of GDP. If this materialises, the fiscal stance will ease by a total of 0.9% of GDP over the next two years. This is about the same amount as was forecast in February, even though it is no longer assumed that the upper value-added tax bracket will be lowered.

According to the Statistics Iceland labour force survey (LFS), total hours worked increased in Q1 by 2.3% year-on-year, broadly in line with the average since the labour market recovery began. The rise in total hours reflected a 1.6% increase in the number of employed persons and a 0.7% increase in the length of the average work week. The seasonally adjusted labour participation rate measured 82% during the quarter, slightly below the previous quarter's figure but close to the long-term average. Similarly, the employment rate was unchanged between quarters, at 79.8%, and was 1 percentage point above its long-term average.

Seasonally adjusted unemployment measured 2.6% in Q1, broadly the same as in Q1/2017 but 0.5 percentage points less than in Q4/2017.

The labour supply is still increasing as foreign workers continue to arrive in Iceland. Net migration of foreign nationals aged 20-59 was positive by 0.8% of the population in Q1. Employees of temporary employment agencies and foreign services companies accounted for 1% of the working population during the quarter, or 0.3 percentage points more than in Q1/2017.

The wage index rose by 1% between quarters in Q1, and by 7.2% year-on-year, and real wages were 4.6% higher in Q1/2018 than in the same quarter of 2017.

Key indicators of developments in private consumption in Q1 suggest that growth was similar to that in H2/2017. Payment card turnover increased by just over 10½% year-on-year during the quarter, although the rise in new motor vehicle registrations has eased, probably due in part to car rental agencies.

The Gallup Consumer Confidence Index measured 116.4 in April. It was broadly unchanged between months but somewhat lower than in April 2017. The assessment of the current situation and the labour market declined somewhat month-on-month, whereas the assessment of the economy and expectations six months ahead rose slightly.

Statistics Iceland’s nationwide house price index, published in late April, declined 0.2% month-on-month when adjusted for seasonality, but rose 10.1% year-on-year. The capital area house price index, calculated by Registers Iceland, fell by 0.2% month-on-month in March when adjusted for seasonality but rose by 7.7% between years. The twelve-month rise in real estate prices therefore continues to ease, after peaking at nearly 24% in May 2017. The number of purchase agreements registered nationwide in the first three months of the year fell by 9% year-on-year, and the average time-to-sale for flats in greater Reykjavík was 2.6 months in March, as opposed to 1.2 months a year earlier. About 1,600 flats were advertised for sale in greater Reykjavík in April, up from just over 800 in April 2017.

The consumer price index (CPI) rose by 0.56% in March, and twelve-month inflation measured 2.8%. The CPI then rose by 0.04% month-on-month in April, however, bringing headline inflation back down to 2.3%, the same as at the time of the MPC’s March meeting. The CPI excluding the housing component had declined by 0.2% year-on-year, however. Underlying inflation was 2.3% in April, as was headline inflation, and was broadly unchanged from the time of the last MPC meeting, although it was 0.8 percentage points higher than in April 2017.

Developments in the CPI in April were driven mainly by rising petrol prices. The cost of owner-occupied housing declined between months, owing mainly to a decline in house prices in regional Iceland, which was somewhat unexpected in the wake of marked price increases in Q1.

Market agents’ short- and long-term inflation expectations have been broadly unchanged in recent months. According to the Central Bank survey carried out in early May, market agents expect inflation to measure 2.6% in one year and (on average) over the next five and ten years. Market agents’ long-term inflation expectations therefore appear broadly in line with the target. The breakeven inflation rate in the bond market was largely unchanged since the

MPC's March meeting, and the ten-year rate has measured 3.3% in Q2 to date. It is 1 percentage point higher than it was a year ago, however.

According to the forecast published in *Monetary Bulletin* on 16 May 2018, the inflation outlook is broadly unchanged from the Bank's February forecast. Inflation measured 2.5% in Q1/2018, after rising by 0.6 percentage points from the previous quarter. Underlying inflation has risen as well and, like headline inflation, is close to the Bank's inflation target. Inflation is expected to rise over the course of the year, measuring 2.9% in Q4, and then taper off again in 2019 and hover around the target for the remainder of the forecast horizon. This is similar to the assumptions in February, reflecting the expectation of a higher exchange rate well into 2019 versus a larger increase in wage costs and a slightly wider output gap early in the forecast horizon.

The króna has appreciated by 1½% versus the average of other currencies since the February *Monetary Bulletin* and has been a full 1% higher in Q2 to date than was assumed in February. According to the Central Bank's baseline forecast, the króna is expected to appreciate slightly more this year and be about 1½% above the 2017 average. As in February, it is assumed to continue strengthening next year, and the exchange rate path is therefore broadly unchanged. The rise in the equilibrium real exchange rate is considered to have played a major role in the recent appreciation of the króna; however, the real exchange rate is now estimated to be close to its equilibrium level.

Global GDP growth gained further momentum last year. It measured 3.8% in 2017, and among Iceland's main trading partners it was 2.4%, the strongest since 2010. This recovery has benefited the Icelandic economy, boosting exports strongly last year and further improving terms of trade. Last year's improvement in external conditions was slower, however, than in 2015-2016. In spite of the recent surge in aluminium prices, the outlook is for terms of trade for goods and services to deteriorate by 0.4% this year, after four years of uninterrupted improvement. The most important factor is a 20% rise in oil prices this year and an increase of nearly 6% in other commodities prices.

Growth in services exports slowed markedly in 2017, after booming in the years beforehand. Developments in tourism are the main factor in this trend, although growth in the sector has eased after the enormous growth of the recent past. As before, export growth is expected to ease during the forecast horizon, in line with a rising real exchange rate. Growth in tourism is expected to keep subsiding, although the slowdown will be offset by increased marine product exports, which are projected to grow by 4% this year, after shrinking by a similar amount last year and by a total of more than 16% over the past four years.

According to preliminary figures from Statistics Iceland, output growth measured 3.6% in 2017, which was well in line with the forecast in the February *Monetary Bulletin*. The GDP growth outlook for 2018 and the following two years is also largely unchanged. Growth is projected to measure 3.3% this year, close to last year's level, and then subside further in the next two years, approaching its long-term potential of just under 3%. This will be driven by weaker growth in exports and in private sector consumption and investment spending, but offset by increased public sector activity. Even though domestic demand growth will ease as well, it appears set to continue outpacing GDP growth, further narrowing the current account surplus.

Total hours worked are estimated to have increased by 2.2% this year and the employment rate to have declined marginally since 2017. As in the February forecast, it is assumed that total hours will rise more slowly in the coming two years, in line with slower GDP growth.

Unemployment is projected to remain broadly the same, on average, this year as in 2017, or 2.9%, and then inch upwards gradually to 3½%, the level considered consistent with price stability.

Wage costs seem to have risen more in 2017 than was assumed in the Bank's February forecast. This revision of last year's twelve-month wage increases also affects the measured twelve-month increase for this year. In addition, wage drift has been stronger year-to-date than was assumed in February. Estimates of productivity growth are broadly unchanged, however, and unit labour costs therefore appear to have risen more in 2017 than was projected in February. The increase is projected at 5.2% in 2017 and 6.7% in 2018. As in February, it is assumed that this rise in unit labour costs will ease over the next two years and converge with the inflation target by the end of the forecast horizon.

As in the Bank's February forecast, the output gap is considered to have peaked at year-end 2016. Revised GDP figures for the past few years increase the end-2016 output gap by ⅓ of a percentage point relative to the February forecast, however. Furthermore, the outlook for this year and next year is for a slightly wider gap, which will almost close in 2020, as was projected in February.

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 specific markets and on the transmission of monetary policy 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 uncertainty centres on near-term developments in wages. Although wage settlements were not terminated in February 2018, the underlying dissatisfaction with wages and income distribution remains, and this could lead to larger pay rises than the baseline forecast assumes, particularly given the current low unemployment and palpable tension in the labour market. Wage drift could also be underestimated. Various other factors could cause inflation to rise more during the forecast period than is provided for in the baseline example. For example, global inflation could rise faster and the króna could weaken more than is currently expected, house price inflation could prove more persistent, and demand pressures in the domestic economy could be underestimated, especially if the fiscal stance eases more than is anticipated. The strength of the recently achieved anchoring of inflation expectations will be of considerable importance in determining the impact of these factors on inflation.

Neither can the possibility be excluded that inflation will turn out lower than is assumed in the baseline forecast. The króna could appreciate more strongly than forecast – if external conditions prove more favourable, for instance. Weaker global GDP growth and lower global oil and commodity prices could further impede domestic economic activity and reduce import prices. In addition, house price inflation could subside faster than is currently forecast. The baseline forecast could also underestimate growth in productivity and potential output, thereby resulting in an underestimation of the speed at which the output gap narrows.

II The interest rate decision

Committee members discussed the Bank's most recent *Financial Stability* report. Also discussed were financial institutions' position and risks to the financial system. For some time, the Bank has been reviewing its policy instruments, including the general reserve requirement on deposit institutions' deposits with the Central Bank. The Committee discussed the status and upcoming steps of that work. The status of the review of the framework for the special reserve requirement (SRR) on capital inflows to Iceland was discussed as well. In this context, the MPC discussed the potential impact of the SRR on the transmission of monetary policy to other interest rates, a topic analysed in a Box in *Monetary Bulletin* 2018/2.

Members 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 unchanged between meetings. They discussed whether the monetary stance was appropriate in view of the inflation outlook, as they had decided in March to keep interest rates unchanged because the inflation outlook had been broadly unchanged between meetings.

In this context, the MPC took account of the Central Bank's new macroeconomic forecast, published in the May issue of *Monetary Bulletin*, which states that the outlook is for GDP growth to ease slightly between 2017 and 2018. Members noted that, according to the forecast, weaker export growth combined with a less rapid increase in domestic demand would be offset by increased public sector activity, and that GDP growth would be broadly in line with the Bank's February forecast. They noted as well that, as in February, the Bank's new forecast assumed that GDP growth would continue easing, as the Committee had intended with a tight monetary stance. They expressed concern, however, about the expected fiscal easing. Although GDP growth had slowed, there was not yet a need for stimulative public measures, as there was still a sizeable output gap. It was also mentioned that, although there were clear indications that GDP was easing, year-2017 activity could turn out stronger than currently estimated. For instance, based on historical experience, it was possible that investment in 2017 was underestimated.

The MPC discussed developments in inflation, which had been broadly in line with the Bank's 2½% inflation target in recent months. Although inflation had risen above the target in March, the Bank's forecast indicated that it would hover around the target over the forecast horizon. Members noted as well that underlying inflation was in the same range. As the Committee had expected, the year-on-year rise in house prices had eased, and the opposing effects of previous appreciation of the króna on inflation had diminished. The Committee was of the view that this trend would continue in the near term. Members also noted that the exchange rate of the króna had been broadly stable since the last MPC meeting, and the foreign exchange market had remained well balanced. The Committee's assessment was that neither the inflation outlook nor inflation expectations had changed to any marked degree since its last meeting. Nevertheless, the increase in inflation expectations by some measures gave cause for caution. Members agreed that developments in inflation would depend in large part on how well the anchor held in the near future.

Given that there had been no major changes since the Bank's last forecast, none of the MPC members saw reason to change interest rates at present. There was some discussion, however, of the uncertainties in the forecast. MPC members agreed that the greatest uncertainty centred on developments in the labour market during coming winter. The outcome of wage agreements could lead to considerably larger pay rises than were consistent with price stability. It was pointed out that attitudes in the labour market differed, however, and that some emphasised ensuring real wages. Furthermore, weaker GDP growth and higher unemployment could ease wage pressures. It was also pointed out that the adjustment of the economy could prove more rapid if, for instance, tourist numbers declined faster than was assumed in the forecast. A sharp contraction in tourism could either cause inflation to be higher than in the forecast or cause it to turn out lower. A downturn in the number of tourists visiting Iceland could cause the króna to weaken, leading to higher inflation, but reduced tourist demand for housing could also lower house prices, thereby causing lower inflation than was assumed in the forecast. In this context, it was also noted that the supply of flats under construction had increased, and although the impact of increased supply on house prices would not show immediately, it could begin to show as the year progressed. It was pointed out, that weaker export growth — and even a slight contraction — was unlikely to lead to undue pressures in the foreign exchange market and the financial system, as the current account was in surplus and exchange rate-linked lending to unhedged borrowers limited. Therefore, the adjustment of the exchange rate could contribute more fully to an appropriate adjustment of the economy to changed external conditions.

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.

In the Committee’s opinion, the outlook is for the positive output gap to narrow. Members agreed that nevertheless, a tight monetary stance would still be needed in order to contain rapid demand growth. Although the short-term risk of unsustainable wage increases had receded, members agreed that there were still underlying pressures in the labour market.

The following Committee members were in attendance:

Már Gudmundsson, Governor and Chairman of the Monetary Policy Committee

Arnór Sighvatsson, 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.

Rannveig Sigurdardóttir wrote the minutes.

The next Statement of the Monetary Policy Committee will be published on Wednesday 13 June 2018.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, June 2018

Published 27 June 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 11 and 12 June 2018, during which the Committee discussed economic and financial market developments, the interest rate decision of 13 June, 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 16 May 2018 interest rate decision.

Financial markets

Between meetings, the króna depreciated by 2.4% in trade-weighted terms. Over this same period it fell 3.1% against the US dollar, and by 2% against both the euro and 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 interest rate, the monetary stance was broadly the same as at the time of the MPC's May meeting. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 1.5%, as it was in May. In terms of twelve-month inflation, it was 2.2%.

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 non-indexed Treasury bonds had fallen somewhat since the May meeting, whereas yields on indexed Treasury and Housing Financing Fund (HFF) bonds had risen slightly. Interest rates on one of the three large commercial banks' non-indexed mortgage loans had risen between meetings, but the commercial banks' deposit rates were unchanged.

Average interest rates on pension funds' loans to members were broadly unchanged since the MPC's May 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 rate differential versus the US and Germany was also virtually unchanged at 2.3 and 4.8 percentage points, respectively.

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

Financial institutions' analysts had projected that the Bank's interest rates would be held unchanged in June, noting, among other things, that recently published figures from Statistics Iceland showed stronger GDP growth in Q1/2018 than the Bank had forecast in May and the situation in the labour market was broadly unchanged, as was the fiscal stance.

Annual growth in M3 measured 5.2% in April, after adjusting for deposits held by the failed financial institutions. This is stronger than in March but about 1 percentage point weaker than in Q1/2018. As in the recent past, the growth in money holdings is due primarily to an increase 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 7.4% year-on-year in April and by 6.9% in Q1/2018. Credit system lending to households increased in April by 6.4% year-on-year, or 0.7 percentage points more than in Q1 and just over 1 percentage point more than in Q4/2017. In April, corporate lending increased by 10.2% year-on-year in nominal terms, up from 9.7% growth in Q1.

The Nasdaq OMXI8 index had fallen by 0.5% between meetings. Turnover in the main market totalled around 228.4 b.kr. during the first five months of the year, about 28% less than over the same period in 2017.

Global economy and external trade

According to the forecast published by the Organisation for Economic Co-operation and Development (OECD) in May, global GDP growth will be somewhat stronger in 2018 and 2019 than in the OECD's November forecast. Growth is expected to increase from 3.7% in 2017 to 3.8% this year. For 2019, the OECD projects global output growth at 3.9%, some 0.3 percentage points more than in the November forecast, mainly due to the improved GDP growth outlook in the US. The outlook for world trade in 2018-2019 has also improved. For Iceland's main trading partners, the OECD forecasts somewhat stronger GDP growth than before in 2018 and 2019. It projects trading partner growth at 2.3% this year, followed by a slight decline in 2019, to 2.2%, which is nevertheless 0.2 percentage points more than was assumed in the November forecast. Inflation among Iceland's trading partners is forecast at 1.9% this year and 2% next year, or 0.1 percentage points more in both years than was forecast in November.

Iceland's external goods trade generated a deficit of 59 b.kr. for the first five months of the year, as opposed to a deficit of 71 b.kr. over the same period in 2017, at constant exchange rates. Export values rose by 16% year-on-year at constant exchange rates, while import values rose 8%. Marine product export values increased by one-fourth year-on-year, owing to base effects from the fishermen's strike in early 2017, which caused a sharp contraction in goods exports. Excluding ships and aircraft, the rapid growth in import values has eased significantly. Over the past three months, the twelve-month growth rate has been at its slowest since 2013, measuring 1.5%. The main difference is weaker growth in the import value of commodities and operational inputs, although the value of investment goods and passenger cars has also contracted year-on-year in the past three months.

Listed global aluminium prices remained virtually unchanged between MPC meetings but were just over one-fifth higher than at the same time in 2017. Preliminary figures from Statistics Iceland indicate that foreign currency prices of marine products rose between months in April and were up 5.5% year-on-year in the first four months of 2018. Global oil prices were 76 US dollars per barrel just before the MPC meeting. They had declined slightly between meetings but were up by 58% year-on-year.

The real exchange rate in terms of relative consumer prices fell by 1.7% month-on-month in May, when it was nearly 22% above its twenty-five year average but 5.7% below its June 2017 peak. In the first five months of 2018, it was virtually unchanged compared with the same period in 2017, although the nominal exchange rate of the króna was 0.5% lower and inflation in Iceland was about 0.4 percentage points above the trading partner average.

The domestic real economy and inflation

According to preliminary figures published by Statistics Iceland in June, annual GDP growth measured 6.6% in Q1/2018. Domestic demand grew by 6.8% year-on-year during the quarter, as consumption and investment grew by 6.4%. Exports grew by 10.2%, but imports grew slightly more, or by 10.9%, and the contribution of net trade to GDP growth was therefore negative during the quarter.

GDP growth in Q1/2018 was 0.7 percentage points stronger than had been forecast in the May *Monetary Bulletin*. The deviation was due mainly to stronger-than-expected investment (residential investment in particular), public consumption, and effects of inventory changes. On the other hand, private consumption growth and the contribution from net trade were weaker than expected.

The current account balance was positive by 0.3 b.kr. in Q1, a smaller surplus than in the same quarter of 2017, when it measured 5.7 b.kr. The smaller surplus than over the same period in 2017 is due to a smaller surplus on services trade, albeit offset by more favourable goods trade, particularly because of increased marine product export revenues. The deficit on the balance on primary and secondary income grew slightly, particularly because of a smaller surplus on the wage item, which consists of wages earned by Icelanders abroad net of foreigners' wages in Iceland.

Key indicators of tourism exports suggest that growth will be weaker than was forecast in the May *Monetary Bulletin*. In the first five months of the year, foreign tourist arrivals have increased by 6% year-on-year, but ISAVIA's passenger forecast, published in late May, assumes an 8% year-on-year decline over the summer months. This is a significant change from the company's previous passenger forecast, which assumed an increase of 4%. For 2018 as a whole, ISAVIA projects a 2.6% increase year-on-year, whereas in November 2017 it projected a rise of nearly 11%.

Private consumption growth eased in Q1 relative to H2/2017. Key indicators for Q2 to date imply that household demand will continue to lose pace, although it is still relatively strong.

The Gallup Consumer Confidence Index has also fallen in recent months and, in the first two months of the quarter, was somewhat lower than over the same period in 2017.

According to the results of Gallup's summer survey, conducted in May among Iceland's 400 largest firms, respondents' assessment of the current economic situation was relatively positive, albeit less so than in the surveys taken this spring and in May 2017. Executives were also more downbeat about the outlook six months ahead than they were in the spring and in 2017. About 60% of respondents considered the current situation good, and about 28% considered it neither good nor poor. Just under 7% of executives were of the view that economic conditions would improve in the next six months, and just under 54% expected conditions to remain good. About 40% of respondents expected conditions to be worse in six months' time, somewhat more than in February and in May 2017. Executives' assessment of domestic and foreign demand was also more negative than in the surveys taken this spring and a year ago. Executives in retail and wholesale trade were less optimistic about developments in domestic demand than they were a year ago, but more optimistic than in the spring survey.

According to the survey, firms interested in recruiting staff in the next six months outnumbered those planning redundancies by about 6 percentage points, after adjusting for seasonality. This is 11 percentage points less than in the spring survey and 17 percentage points less than in the survey from a year ago, and it is close to the long-term average. Executives in construction and miscellaneous specialised services were most optimistic, with firms interested in recruiting staff in the next six months outnumbering those planning redundancies by about one-fourth. As before, sentiment was most negative in the fishing industry, where firms interested in laying off staff outnumbered those planning to recruit by 29 percentage points. In other sectors, the share of companies planning recruitment net of those planning layoffs varied greatly, from being positive by 17 percentage points to being negative by 12 percentage points.

After adjusting for seasonality, about one-fourth of executives considered themselves short-staffed, about 8 percentage points less than in the spring survey and 14 percentage points less than in the survey from a year ago. The shortage of workers was greatest in the construction industry, where nearly half of executives considered themselves understaffed, whereas there was virtually no measured shortage in the financial and insurance sector.

About 43% of executives reported that they would have difficulty responding to unexpected demand, after adjusting for seasonality. This was about 9 percentage points less than in the spring survey and 12 percentage points less than in the summer 2017 survey. Just over 74% of construction industry executives reported that they would have difficulty responding to unexpected demand, as opposed to one-fourth of executives in transport, transit, and tourism.

The wage index rose by 0.3% month-on-month in April and by 7.3% year-on-year. Real wages were 4.9% higher than at the same time in 2017.

Statistics Iceland's nationwide house price index, published in late May, declined 0.3% month-on-month when adjusted for seasonality, but rose 7% year-on-year. The capital area house price index, calculated by Registers Iceland, rose by 0.1% month-on-month in April when adjusted for seasonality, but rose by 5.4% between years. The twelve-month rise in real estate prices has therefore continued to ease, after peaking in the greater Reykjavík area at nearly 24% in May 2017. The number of purchase agreements registered nationwide in the first four months of the year fell by 1% year-on-year, and the average time-to-sale for flats in greater

Reykjavík was 2.5 months in April, as opposed to 1.7 months a year earlier. Almost 1,600 flats were advertised for sale in greater Reykjavík in May, up from just over 1,000 in May 2017.

The consumer price index fell by 0.09% month-on-month in May. Twelve-month inflation measured 2% and had fallen by 0.3 percentage points since the MPC's last meeting. The CPI excluding housing had risen by 0.2% since May 2017 — the first positive inflation measurement by this criterion in two years. The median value of various measures of underlying inflation was 2.5% in May, an increase of 0.2 percentage points since April.

The decline in international airfares made the strongest impact on the CPI in May. The cost of owner-occupied housing also declined between months, for the second month in a row. The twelve-month rise in the housing component has eased significantly, to 6.3% in May.

Short-term inflation expectations have risen in recent months. According to Gallup's summer survey, household inflation expectations one year ahead measured 3.4%, or 0.4 percentage points more than in the spring survey. Households' two-year inflation expectations rose by a similar amount, to 4%. According to Gallup's summer survey of corporate inflation expectations, respondents' expectations one year ahead were unchanged at 3%, whereas their expectations two years ahead had risen by 0.5 percentage points between surveys, to 3.5%.

In this survey, executives were asked for the first time about long-term inflation expectations. Respondents indicated that they expect inflation to average 3% over the next five years. The five- and ten-year breakeven inflation rate in the bond market measured 2.9-3.2% just before the MPC meeting. It had fallen slightly since the May meeting but measured somewhat higher than at the turn of the year.

II The interest rate decision

The Deputy Governor updated the Committee on the status of the review of the framework for the special reserve requirement (SRR) on capital inflows to Iceland. The Committee also discussed the market response to the MPC's decision on 4 June to change the arrangements for credit institutions' general reserve requirement. The reserve requirement is to be divided into two parts: a 1% non-remunerated reserve requirement and a 1% reserve requirement of the type that had been in place heretofore. The changes are not intended to affect the monetary stance but to offset the cost borne by the Central Bank in implementing monetary policy while the international reserves are large and the interest rate differential with abroad remains wide. The Committee was of the opinion that this change had not affected either market developments or the monetary stance.

Members 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 unchanged between meetings. They discussed whether the monetary stance was appropriate in view of the inflation outlook, as they had decided in May to keep interest rates unchanged, mainly because the Bank's new forecast was broadly in line with the February forecast.

They discussed the preliminary national accounts figures recently published by Statistics Iceland, which showed that GDP growth in Q1/2018 was well above the growth rate in H2/2017. It was also slightly higher than the Bank projected in May. In Committee members' opinion, however, overall developments were broadly in line with the Bank's May forecast and reflected base effects from 2017 for the most part. The MPC still expected GDP growth to ease this year, with weaker export growth and a less rapid increase in domestic demand. The

Committee was of the opinion that developments in house prices and indicators from the labour market also pointed in the same direction.

The MPC also took account of developments in inflation, which had fallen to 2% in May, while both headline and underlying inflation had been close to the Bank's 2½% inflation target in the months beforehand. The year-on-year rise in house prices had continued to ease, and the opposing effects of previous appreciation of the króna had diminished. MPC members agreed that this trend would probably continue in the near term.

The króna had depreciated slightly since the last MPC meeting, but the foreign exchange market had remained well balanced. Members were of the opinion that, on the whole, inflation expectations appeared consistent with the target.

No members saw any reason to change interest rates at present. Only a short time had passed since the previous meeting, and the information published in the interim largely supported the Committee's previous assessment of the economy and the appropriate monetary stance.

It emerged in the discussion that, although Q1/2018 output growth appeared stronger than had been forecast, indicators from the labour market and the tourism industry suggested that the adjustment of the economy could prove more rapid than had previously been assumed. In addition, inflation had subsided more than had been forecast. The deviations were small, however, and did not give cause for a formal response; instead, it was appropriate 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.

In the Committee's opinion, the outlook is for the positive output gap to narrow. Members agreed that nevertheless, a tight monetary stance would still be needed in light of rapid demand growth and underlying pressures in the labour market.

The following Committee members were in attendance:

Már Gudmundsson, Governor and Chairman of the Monetary Policy Committee

Arnór Sighvatsson, 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.

Rannveig Sigurdardóttir wrote the minutes.

The next Statement of the Monetary Policy Committee will be published on Wednesday 29 August 2018.

14 March 2018

Governor's statement on the special reserve requirement on capital inflows, delivered at the press conference on the Bank's interest rate decision

In Monetary Bulletin 2017/4 (Box 2), published last November, the Bank stated that the special reserve requirement (SRR) on capital inflows would remain unchanged for the time being, as the interest rate differential with abroad was still sizeable. The Bank also noted that the SRR would be lowered as soon as conditions warrant it and that the general aim would be to keep it inactive whenever possible. This position has not changed, as little time has passed since then and the interest rate differential is broadly unchanged since November.

In the recent past, this position has been criticised, as have the design and implementation of the SRR. The Central Bank considers it appropriate to review this criticism so as to determine to what extent it is justified and, where it is justified, to examine possible remedies. The criticism lodged has been primarily of two kinds. First, it is asserted that the SRR has promoted higher interest rates and that diminishing demand pressures give cause to stimulate foreign investment rather than the reverse. In this context, it is even argued that the Bank's most recent interest rate reductions have not been transmitted to interest rates for households and businesses. Second, there has been criticism of the technical implementation of the SRR, the asset classes affected by it, and the potential adverse impact on the effectiveness of individual markets.

The argument that the SRR has led to higher interest rates in Iceland is not well grounded. The declared objective of the SRR was to shift monetary policy transmission more to the interest rate channel rather than to the exchange rate channel. So, in essence, critics are using the same argument against the SRR as was used in favour of its adoption! Without the SRR, interest rates in Iceland would probably be lower than they are at the moment, but the exchange rate of the króna would be higher, as monetary policy transmission would have been stronger through the exchange rate channel. The Bank's assessment is that, under current circumstances, this would be an unfortunate mix, as the real exchange rate is currently very high in historical context, and a further rise would bring with it increased risk and strain on export sectors. To be sure, these effects would probably be temporary, as both economic theory and empirical research indicate that capital flow management tools of this type do not have a long-term effect on the real exchange rate any more than monetary policy in general does. But under current conditions, even a temporary rise in the real exchange rate could do damage for quite some time and could exacerbate the risk of exchange rate instability further ahead.

With reference to the argument that current conditions warrant stimulative measures, it should be noted that although the positive output gap has begun to narrow, it remains sizeable, and there is no cause as yet to take steps to boost demand through foreign investment or by other means. Thus this is not a valid argument for easing the SRR at the present time. Such conditions could develop in the future, however.

At the Monetary Policy Committee (MPC) meeting held this week, the MPC reviewed detailed data on developments in interest rates on various loan forms available to households and businesses. The MPC also examined developments in bond market yields. The data do not back up the argument that Central Bank rate cuts have not been transmitted to other interest rates because of the SRR. Quite the contrary: transmission to lending rates and Treasury bond rates has been normal (see slide). This should come as no surprise because it is generally acknowledged that monetary policy transmission along the interest rate channel becomes stronger when tools such as the SRR are used. In this context, however, reference has been made to the rise in the interest premium on corporate bonds (i.e., the ratio of corporate bond rates to Government bond rates). It is difficult to see how this is caused by the SRR, however, as the imposition of a special reserve requirement on capital inflows should not change the relative rates on the bonds affected by it, particularly if inflows were not previously attracted to the bonds whose prices are falling. Perhaps other explanations are more apt here, such as increased counterparty risk, which manifests itself in falling share prices for the companies issuing the bonds and, in the case of real estate firms, the prospect of smaller rises in property prices. Furthermore, the pension funds could be reducing demand for these bonds, in part by stepping up foreign investment. Finally, it is worth noting that the bonds in question are indexed and have relatively limited turnover, and Central Bank interest rates always have less impact on indexed rates than on nominal rates and the SRR is irrelevant in that connection.

Other criticisms of the SRR pertain to technical design and to the asset classes affected by the requirement. The Central Bank considers it appropriate to review this and has begun to do so. The SRR’s boundaries were determined based on the effect intended, but issues pertaining to circumvention were also considered. This is the main reason the commitment period was set at only one year: in order to affect short-term investments, which were more likely to be undertaken for pure carry trade motives.

The Bank has examined these issues and will do so in greater depth in the near future, in connection with its work on setting policy for the future design of the SRR and the ongoing review of its implementation. The main reason for the review is the need to have the SRR available if conditions should warrant its application after the remaining capital controls have been lifted in full. Proposals are being prepared and could be implemented in the final months of this year; however, Parliament will have the last word on the matter. That could prove to be a good time to make further modifications to the SRR.

The main results of this work to date were presented at the MPC's last meeting, where other matters pertaining to the SRR were also discussed. By law, modifications to the SRR are made by the Central Bank, subject to the approval of the Minister of Finance and Economic Affairs. However, the Bank has considered it appropriate, in view of the close relationship between the SRR and monetary policy transmission, that modifications in the SRR be made only after consultation with the MPC.

In sum, the Bank is of the view that conditions do not yet warrant easing the special reserve requirement. However, conditions conducive to easing the SRR will develop in the coming term if forecasts materialise and foreign market conditions change in line with current expectations; perhaps those conditions will develop even sooner if Iceland's positive output gap narrows more quickly, and particularly if it closes and a slack develops. The Central Bank and the MPC monitor these conditions and will recommend responses as appropriate. In general, it can be said that the conditions in favour of easing the SRR will improve as the interest rate differential narrows, the exchange rate falls somewhat, and demand pressures subside.

Change in credit institutions’ minimum reserve requirements

The Monetary Policy Committee of the Central Bank of Iceland has decided to change the arrangements for credit institutions’ minimum reserve requirements so as to divide the reserve requirement into two parts: a fixed 1% reserve requirement bearing no interest, and a 1% reserve requirement of the type that has been in place heretofore, currently bearing 4% interest. The objective of these changes is to reduce the cost to the Central Bank in implementing monetary policy while the international reserves are large and the interest rate differential with abroad is wide. These changes are not intended to affect the monetary stance.

According to the Act on the Central Bank of Iceland, the Bank “may decide that credit institutions shall be obliged to maintain funds in reserve accounts with the Bank.” The Act also stipulates that the Monetary Policy Committee shall take decisions on credit institutions’ minimum reserve requirements, which are considered one of the Bank’s monetary policy instruments.

According to the current arrangements on minimum reserve requirements, the reserve amount is 2% of the reserve base for each entity subject to reserve requirements (i.e., commercial banks, savings banks, and credit institutions as defined in operating permits granted by the Financial Supervisory Authority). The reserve base on which the minimum reserve requirement is calculated comprises deposits and bonds with a residual maturity of two years or less and issued by the undertaking concerned. The calculation is based on the average reserve base for the two months immediately preceding. The reserve amount is the minimum daily average balance that an entity subject to reserve requirements must maintain over the reserve maintenance period, which extends from the 21st day of each month through the 20th day of the month immediately following. Each entity concerned may decide how it will fulfil its reserve requirements on the basis of the Rules that pertain. This arrangement for minimum reserve requirements was based on the European Central Bank’s framework and has broadly been in use in Iceland for about two decades. The interest rate on the required reserve amount has been the same as that on deposit-taking institutions’ current accounts with the Central Bank. Currently it is 4%.

At a special meeting held on 4 June 2018, the Monetary Policy Committee approved new Rules on Minimum Reserve Requirements and determined the interest rate on deposits held in reserve accounts. The changes entail dividing the reserve requirement into two parts: an average maintenance level (as has been in place hitherto) and a fixed reserve requirement. The fixed reserve requirement obliges entities subject to minimum reserve requirements to hold a minimum amount in a separate reserve account with the Central Bank at all times. The fixed reserve requirement amounts to 1% of the reserve base and bears no interest. The reserve requirement with averaging is 1% of the reserve base and currently bears 4% interest, as it did before this change.

Concurrent with this change, the provision in the Rules on Minimum Reserve Requirements authorising entities subject to reserve requirements to act as intermediaries for a third party's reserve requirements has been deleted from the Rules, owing to a lack of transparency associated with that provision. In addition, changes in wording were made where appropriate, although these changes do not otherwise affect the substance of the Rules.

These changes are not intended to affect the monetary stance. The objective of the changes is to reduce the cost to the Central Bank in holding large international reserves while the positive interest rate differential with abroad is as wide as it currently is, but without disturbing the monetary stance or the monetary policy transmission mechanism. The Monetary Policy Committee is of the opinion that the changes satisfy these requirements, as the marginal interest rate on the required reserves will remain the same as that on the banks' current accounts with the Central Bank and the reserve requirement with averaging will remain in effect for half of the reserve amount. In his speech at the Bank's Annual Meeting on 5 April 2018, the Governor signalled that changes of this type were forthcoming. The speech also contains further analysis of the cost borne by the Bank in maintaining large international reserves financed domestically and presented grounds for sharing that cost with other stakeholders. Overall, the impact of this measure on the banks' income is relatively limited. All else being equal, the banks' annual interest income could decline by 0.02% of their balance sheet.

The new Rules on Minimum Reserve Requirements will take effect at the beginning of the next reserve maintenance period, Thursday 21 June 2018.

Governor's speech, delivered at the Central Bank's Annual Meeting, 5 April 2018.

The Rules on Minimum Reserve Requirements can be found here.

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

29. janúar 2018

Arnór Sighvatsson

Þrílemma, tvílemma eða málamiðlun á milli hornalausna[1]

Vandamál peningastefnu í litlu, opnu hagkerfi við óheftar fjármagnshreyfingar

Erindi flutt á fundi Rótarý-félags Reykjavíkur/austurbær 27. mars 2018

Eftir tímabil óstöðugleika í peningamálum Íslands í kjölfar fjármála- og gjaldeyriskreppunnar haustið 2008 hafa undanfarin ár einkennst af töluverðum stöðugleika, en að nokkru leyti í skjóli fjármagnshafta. Peningamálin standa nú að því leyti á tímamótum að verið er að taka síðustu skrefin í átt til óheftra fjármagnshreyfinga á ný. Af því tilefni og einnig vegna þess að hartnær öld er liðin frá því Ísland hvarf úr gjaldmiðilsbandalagi við Danmörku er við hæfi að líta um öxl og velta fyrir sér hvað hafi ráðið ákvörðunum um tilhögun peningamála þessa öld, hver árangurinn hafi verið, hvers vegna hann hafi verið eins og hann var og hvers sé að vænta í næstu framtíð.

Saga peningamála á Íslandi er þyrnum stráð. Oft hefur verið bent á að hin íslenska króna hafi tapað nánast öllum upphaflegum kaupmætti sínum gagnvart danskri móður sinni á öldinni sem senn er liðin frá því naflastrengurinn slitnaði á milli þeirra. Raungengi krónunnar, þ.e.a.s. hlutfallslegt verðlag eða kaupgjald miðað við helstu viðskiptalönd í sama gjaldmiðli mælt, hefur jafnframt sveiflast á víðu bili. Hæsta gildi raungengis á tímabilinu er 166% hærra en lægsta gildið. Sveiflur í raunhagkerfinu hafa einnig, af ýmsum ástæðum, verið verulegar.

Það er íhugunarvert að á þessu tímabili hefur tilhögun gengis- og peningamála spannað nánast alla flóru mögulegra afbrigða (nema e.t.v. myntráð). Það er einnig umhugsunarefni hve árangur ólíkra stefnumiða hefur reynst hverfull, a.m.k. ef stöðugt verðgildi gjaldmiðilsins er mælikvarðinn. E.t.v. endurspeglar þessi hverfulleiki óstöðugan auðlindagrundvöll íslenska þjóðarbúsins annars vegar og sífellda leit íslenskra stjórnvalda að peningastefnulausn á þeim vanda hins vegar. Því má þó ekki gleyma að þrátt fyrir þennan óstöðugleika hefur lífskjörum í landinu fleygt fram.

[1] Höfundur er aðstoðarseðlabankastjóri. Skoðanir sem hér koma fram eru höfundar og þurfa ekki að endurspegla skoðanir annarra nefndarmanna í peningastefnunefnd bankans.

Togstreitan á milli aðhalds og aðlögunar

Í leit sinni að heppilegustu tilhögun gengis- og peningamála standa stjórnvöld frammi fyrir ákveðinni togstreitu á milli tvíþætts hlutverks gengisstefnunnar: Annars vegar má nota sveigjanlegt gengi gjaldmiðils sem tæki til aðlögunar þegar efnahagur lands verður fyrir áföllum eða búhnykkjum, með það að augnamiði að stuðla að jafnvægi í raunhagkerfinu, t.d. að hamla því að utanaðkomandi áfall leiði til efnahagssamdráttar og aukins atvinnuleysis. Hins vegar getur stöðugt gengi gjaldmiðils verið mikilvægt tæki til þess að veita aðhald í hagstjórn og samningagerð á vinnumarkaði og stuðla þannig að verðstöðugleika. Tíðar gengisfellingar á 8. og 9. áratugum síðustu aldar eru dæmi um hið fyrrnefnda en gengisfestustefnan í kjölfar þjóðarsáttarsamninganna svokölluðu í byrjun 10. áratugarins eru dæmi um hið síðarnefnda.

Val stjórnvalda á milli aðlögunar og aðhalds er hvorki nýlegt fyrirbæri né bundið við Ísland. Ramminn um það hefur mótast af þróun viðskiptafrelsis í heiminum, hvort heldur með vörur og þjónustu eða fjármagn. Hið alþjóðlega peningakerfi sem mótaðist á árunum eftir síðari heimstyrjöldina, og oft er kennt við Bretton-Woods í New Hampshire, var í raun sveigjanlegt fastgengiskerfi, þar sem Bandaríkjadalur var gulltryggð kjölfesta, sem tryggði peningalegan stöðugleika, en smærri þjóðríki reyndu að öðlast hlutdeild í þeim stöðugleika með því að binda gengi gjaldmiðla sinna við Bandaríkjadal, en þó með ákveðnu svigrúmi til aðlögunar – þar sem Alþjóðagjaldeyrissjóðinn gegndi hlutverki úrskurðaraðila um hvort gengisskráning yrði aðlöguð eða tímabundið greiðslujafnaðarójafnvægi fjármagnað af sjóðnum og aðildarlöndum hans.

Valþröng stefnunnar í peninga- og gengismálum

Hið almenna viðhorf meðal hagfræðinga var, og er að miklu leyti enn, að stjórnvöld stæðu frammi fyrir ákveðinni valþröng: þ.e.a.s. að ekki væri mögulegt til lengdar að uppfylla eftirfarandi þrenn skilyrði samtímis:

1. að peningastefnan sé sjálfstæð (ath. hér er ekki verið að tala um sjálfstæði seðlabanka heldur getuna til að hafa áhrif á innlend peningaskilyrði),
2. að gengi gjaldmiðilsins sé stöðugt,
3. að fjármagnshreyfingar séu óheftar.

Tveir ofangreindra þátta gætu farið saman, en ekki allir þrír. Þetta hefur verið kallað „trilemma“ á ensku, sem þýðist illa, en ég kýs að kalla vandamálið einfaldlega „þrílemmu“.[2] Af því leiðir að þar sem fjármagnshreyfingar eru óheftar verða stjórnvöld, samkvæmt kenningunni, að velja annað hvort peningalegt sjálfstæði eða stöðugleika í gengismálum. Fjármagnshöft voru því að vissu leyti forsenda þess að sveigjanlegt fastgengiskerfi af því tagi sem kennt var við Bretton-Woods yrði trúverðugt, án þess að fela í sér algert framsal peningalegs fullveldis.

Endalok Bretton-Woods kerfisins og þróun peningakerfis Evrópuríkja

Eftir að hið dollaramiðaða Bretton-Woods fastgengiskerfi liðaðist í sundur snemma á 8. áratug síðustu aldar, af ástæðum sem ekki verða raktar hér, fóru stjórnvöld heims ólíkar leiðir. Sum kusu að fórna stöðugleika í gengismálum fyrir peningalegt sjálfstæði með óheftum fjármagnshreyfingum, önnur reyndu að halda í fastgengi af einhverju tagi með því að viðhalda fjármagnshöftum eða fóru einhverja millileið. Í Evrópu tóku millistór og smærri aðildarríki Evrópusambandsins (ESB) upp samflot í gengismálum með fastgengistengingu við þýska markið í stað Bandaríkjadals. Þýska markið var hins vegar látið fljóta gagnvart Bandaríkjadal. Þannig voru ákvarðanir í peningamálum flestra V-Evrópuríkja að miklu leyti framseldar til þýska seðlabankans, sem var sjálfstæðari og naut því meira trausts en aðrir evrópskir seðlabankar.

Samstarf Evrópuríkja í efnahags- og peningamálum varð stöðugt nánara og fjármagnshöftum var smámsaman aflétt. Þar með var grundvellinum kippt undan sjálfstæðri peningastefnu evrópsku þjóðríkjanna. Því má segja að flest Evrópuríki hafi gefið sjálfstæði í peningamálum upp á bátinn fyrir stöðugleika í gengismálum og frelsi til fjárfestingar yfir landamæri, en eftir því sem viðskiptafrelsi óx fiskur um hrygg varð óstöðugleiki í gengismálum og fjármagnshöft meira til trafala.

Framsal peningalegs valds til þýska seðlabankans, sem ákvað vexti með hliðsjón af efnahagsþróun í Þýskalandi án tillits til þarfa landanna sem tengdust þýska markinu, var hins vegar ekki vandkvæðalaust, hvorki efnahagslega séð né pólitískt. Efnahagslegi vandinn við þessa tilhögun kom berlega í ljós í kjölfar sameiningar þýsku ríkjanna. Aðhaldssöm peningastefna þýska seðlabankans miðaði að því að halda niðri verðbólgu í Þýskalandi í kjölfar sameiningarinnar. Hækkun þýska marksins sem af stefnunni leiddi kom hins vegar illa niður á útflutningi annarra Evrópuríkja sem höfðu bundið gjaldmiðla sína við þýska markið en voru í allt annarri stöðu en Þýskaland. Þessi vandkvæði

[2] Þessi niðurstaða, sem einnig hefur verið nefnd „inconsistant trinity“ eða „Mundell – Flemming tilemma“, er leidd af svokölluðu Mundell–Fleming líkani sem lýsir skammtímasambandi gengis, vaxta og framleiðslu. Sjá Mundell (1963). Capital mobility and stabilization policy under fixed and flexible exchange rates, Canadian Journal of Political Science, 29/4. Sjá einnig Fleming (1962). Domestic financial policies under fixed and floating exchange rates. IMF Staff Papers nr. 9.

styrktu rökin fyrir víðtækari peningalegum samruna og hugmyndir um evrópskt gjaldmiðilsbandalag fengu byr undir báða vængi.

Með stofnun Efnahags- og myntbandalags Evrópu (EMU) deildu löndin með sér peningalegu fullveldi, í stað þess að framselja það til þýska seðlabankans. Nýjum sjálfstæðum seðlabanka (ECB) var falin framkvæmd peningastefnu með hliðsjón af efnahagsþróun á svæðinu öllu, en ekki aðeins í Þýskalandi, eins og verið hafði. Þannig endurheimtu Evrópulöndin sem tóku þátt (þ.e.a.s. önnur en Þýskaland) að nokkru leyti fullveldi í peningamálum. Þau sem ekki tóku þátt fóru ólíkar leiðir, sum tímabundið en önnur til langframa, þ.á m. Norðurlöndin.

Valþröng Norðurlanda

Fyrri hluta 10. áratugar síðustu aldar losuðu Norðurlöndin um fjármagnshöft. Fljótlega varð ljóst að erfitt yrði að viðhalda stöðugu gengi fyrir tilstilli einhvers konar fastgengisstefnu, líkt og reynt hafði verið á Íslandi og öðrum Norðurlöndum fyrstu ár áratugarins (og frá miðjum 9. áratugnum í Danmörku), með aukinni áherslu á stöðugleika gagnvart þýsku marki eða evrópsku gjaldmiðilseiningunni (European Currency Unit, ECU), fyrirrennara evrunnar. Öll Norðurlöndin að Danmörku undanskilinni urðu frá að hverfa eftir tímabil efnahagslegs ójafnvægis, fjármagnsflótta og atlögu spákaupmanna. Ísland, Noregur og Svíþjóð kusu að láta gengi gjaldmiðla sinna fljóta en tóku upp verðbólgumarkmið til að veita peningastefnunni þá kjölfestu sem nauðsynleg er í öllum gjaldmiðlakerfum. Danmörk hélt áfram fastgengisstefnu, með þeim bakstuðningi ECB sem felst í aðild að Evrópsku gengistilhöguninni (European Exchange Rate Mechanism, ERM) eftir að EMU var stofnað, og Finnland (og síðar Eystrasaltsríkin þrjú) tók upp evru. Aukið frelsi til fjármagnshreyfinga neyddi því Norðurlöndin öll til að afsala sér öðru hvoru, sjálfstæðri peningastefnu (Danmörk, Finnland) eða gengisfestu (Svíþjóð, Noregur og Ísland).

Að Íslandi undanskildu hefur Norðurlöndunum öllum tekist að varðveita stöðugleika og kaupmátt gjaldmiðla sinna nokkuð vel þrátt fyrir ólíkan gengisramma. Gengi dönsku krónunnar hefur sveiflast innan þröngra vikmarka gagnvart evru, og áður þýska markinu (eða ECU), frá miðjum 9. áratug síðustu aldar. Árangur Noregs og Svíþjóðar, sem fórnuðu markmiðinu um gengisfestu fyrir sjálfstæði í peningamálum eftir að tilraunir þeirra til að reka svipaða fastgengisstefnu runnu út í sandinn á 10. áratugnum, hefur einnig þótt nokkuð góður, þótt Svíþjóð hafi glímt við ákveðinn verðhjöðnunarvanda og bæði löndin við ójafnvægi á fasteignamarkaði sem ekki sér fyrir endann á. Árangur Íslands hefur verið mun síðri sem alkunna er og því full ástæða til að íhuga ástæður þess.

Valþröng Íslands – hvað skýrir slakan árangur?

Í kringum síðustu aldamót, eftir að Ísland hafði skuldbundið sig samkvæmt 40. gr. EES-samningsins til þess að hafa í heiðri frelsi til fjármagnsflutninga innan EES-svæðisins, tóku íslensk stjórnvöld nokkuð ákveðna afstöðu til valsins á milli gengisstöðugleika og sjálfstæðrar peningastefnu, sem þrílemman boðar. Fljótlega eftir að fjármagnshreyfingar höfðu verið gefnar frjálsar völdu íslensk stjórnvöld sjálfstæða peningastefnu fram yfir stöðugleika í gengismálum, fyrst með því að auka sveigjanleika gengisskráningarinnar í áföngum, uns krónan var sett á flot um leið og formlegt verðbólgumarkmið var tekið upp árið 2001.[3] Um þetta val er þó enginn einhugur, hvorki á meðal hagfræðinga, stjórnmálamanna, atvinnulífsins eða almennings.

Víkjum nú aftur að hinum slaka árangri Íslands í peningamálum sl. öld. Þegar litið er yfir breytilega stöðu Íslands í hinum þunga straumi alþjóðlegra hræringa blasir við margbrotin mynd: Alþjóðlegar stefnur og straumar í efnahags- og peningamálum hafa jafnan borist fljótlega til Íslands, en þó má segja að Ísland hafi stundum verið hikandi þátttakandi í hinu alþjóðlega hagkerfi og fjármálamörkuðum. Yfir hartnær öld sem saga íslensku krónunnar spannar hafa fjármagnshöft af einhverju tagi oftast verið til staðar og líklega víðtækari en víðast hvar. Heimskreppa, síðari heimstyrjöldin og eftirstríðsárin leiddu til óstöðugleika sem erfitt þótti að ráða við án takmarkana á fjármagnshreyfingar af einhverju tagi, en oft var líka gengið mun lengra en brýna nauðsyn bar til. Aðeins um 13 ára skeið, árin 1995-2008, má segja að fjármagnshreyfingar á milli landa hafi verið algerlega óheftar. Fjármagnshöft voru svo innleidd að nýju í kjölfar fjármálakreppunnar árið 2008 og má segja að Ísland hafi eitt Evrópuríkja innleitt svo víðtæk höft, þótt ákveðnar takmarkanir hafi einnig verið teknar upp tímabundið í Grikklandi og á Kýpur. Undanfarið ár hafa fjármagnshreyfingar verið að mestu leyti óheftar á ný, þótt minniháttar hindranir, sem ég mun víkja að síðar, séu enn til staðar.

Tilhneiging til þess að leysa efnahagslegan vanda á Íslandi með höftum á fjármagnshreyfingar eða á kostnað gengisstöðugleika, nema hvort tveggja sé, vekur þá spurningu hvort um sé að ræða afleiðingu slælegrar hagstjórnar, gallaðrar umgjarðar peningastefnu, eða hvort vandinn risti dýpra og megi að einhverju leyti rekja til grunnra markaða eða annarra ágalla í grunngerð íslenska hagkerfisins, sem valdi því að erfitt er að höndla hverflyndi alþjóðlegra fjármagnsmarkaða.

Reynsla Íslands sýnir að hvikular fjármagnshreyfingar geta brenglað virkni vaxtatækisins og leitt til þess að miðlun peningastefnu beinist fyrst og fremst í farveg gengisbreytinga, sem eru illfyrirsjáanlegar og stundum svo miklar og hraðar á grunnum mörkuðum að tjóni veldur í rekstri fyrirtækja og heimila. Þá kunna útlánvöxtur og eignaverðbólur

[3] Seðlabankinn greip þó til töluverðra inngripa árið 2001 þegar krónan féll skarpt eftir að hún fór á flot.

sem fjármagnsinnstreymið ýtir undir að hafa neikvæð áhrif á framleiðni.[4]

Þrílemma eða tvílemma?

Vandi Íslands leiðir hugann að því að undanfarin ár hefur rökræðan um hina ósamrýmanlegu þrenningu, þrílemmuna, tekið nýja stefnu. Ýmsir hafa haldið því fram að þrílemman svokallaða sé í raun tvílemma (e. dilemma), þ.e.a.s. að óheftar fjármagnshreyfingar á milli landa samrýmist í reynd *hvorki* sjálfstæði í peningamálum né föstu gengi – ekki aðeins öðru hvoru. M.ö.o. einhvers konar fjármagnshöft séu í raun forsenda hvort heldur sjálfstæðis í peningamálum eða stöðugs gengis. Ötulasti talsmaður þessa sjónarmiðs hefur verið franski hagfræðingurinn Hélène Rey (2015).[5]

Þótt þetta sjónarmið sé mjög umdeilt og flestir hagfræðingar vilji ekki ganga jafn langt og Hélène Rey, nýtur sú skoðun vaxandi fylgis á meðal hagfræðinga að fullkomlega frjálsar fjármagnshreyfingar geti sett stefnunni í peninga- og gengismálum óæskilega miklar skorður, sé það stefnan að halda í peningalegt sjálfstæði. Einhvers konar takmarkanir á fjármagnshreyfingar kunni því að auka svigrúm til skynsamlegrar hagstjórnar og séu jafnvel forsenda viðunandi stöðugleika í gengismálum og virkni peningalegra stjórntækja.[6]

Nýlegar rannsóknir á hinni íslensku fjármálasveiflu undirstrika þau takmörk sem alþjóðleg fjármálaskilyrði setja viðleitni stjórnvalda til að sníða innlend peningaleg skilyrði að innlendum aðstæðum.[7] Þessar rannsóknir sýna að íslenska fjármálasveiflan hefur fylgt hinni alþjóðlegu mjög náið um aldarskeið, óháð tilhögun peningamála hér á landi. Sjálfstæð peningastefna og sveigjanlegt gengi hafa ekki megnað að rjúfa þessi tengsl, en reyndar ekki heldur fjármagnshöft, sem er áhugavert í ljósi kenninga Hélène Rey.

[4] Sjá t.d. ágæta umfjöllun um áhrif fjármálasveiflunnar á framleiðni í Claudio Borio (2018). A blind spot in todays macroeconomics? Panel remark by Claudio Borio at BIS-IMF-OECD Joint Conference on „Weak productivity: the role of financila factors and policies“.

[5] Rey, Hélène (2015). Dilemma not trilemma: the global financial cycle and monetary policy independence. National Bureau of Economic Research. NBER Working Paper Nr. 21162.

[6] Afar gagnlegt yfirlit um vandamál peningastefnu við óheftar fjármagnshreyfingar er að finna í nýlegri bók eftir Gosh, Atish R., Jonathan D. Ostry og Mahvash S. Quereshi (2017). Taming the tide of capital flows, a policy guide, The MIT Press. Már Guðmundsson, seðlabankastjóri, hefur einnig ritað um alþjóðlega fjármálalega samþættingu og peningastefnu. Sjá t.d. Gudmundsson (2008). Finanical globalisation: key trends and implications for the transmisssion of monetary policy, BIS papers nr. 39.

[7] Bjarni G. Einarsson, Kristófer Gunnlaugsson, Þorvarður Tjörvi Ólafsson, og Þórarinn G. Pétursson (2017). The long history of financial boom-bust cycles in Iceland. *Revisiting Macro-Financial Linkages: Looking Back and Looking* Ahead. Proceedings of the 6th Bangko Sentral ng Pilipinas International Research Conference, maí 2017.

Hægt er að hugsa sér þrenns konar viðbrögð við þessum vanda: Í fyrsta lagi mætti leita liðsinnis fleiri stjórntækja til þess að hafa hemil á myndun óstöðugleika í þjóðarbúskapnum. Í öðru lagi mætti leita málamiðlana sem fela í sér fráhvarf frá hornalausnum þrílemmunnar. Þannig má hugsa sér tilhögun peningamála þar sem fjármagnshreyfingar eru að mestu leyti frjálsar en ekki alveg, gengið fljótandi en þó með töluverðum inngripum seðlabanka á gjaldeyrismarkaði, sem leiðir af sér nokkurt peningalegt sjálfræði, en ekki fullkomið. Í þriðja lagi mætti draga þá ályktun af hinum nánu tengslum innlendu fjármálasveiflunnar og hinnar alþjóðlegu að vænlegra sé að leita athvarfs í samtryggingu gjaldmiðilsbandalags og aðlagast þeim fjármálaskilyrðum sem ríkja í umheiminum fremur en að reyna að hafa áhrif á innlend fjármálaleg skilyrði, sem sagan virðist sýna að smitist inn hið íslenska hagkerfið burtséð frá tilhögun peningamála, jafnvel á tímum fjármagnshafta.

Geta hjálpartæki hjálpað?

Í kjölfar fjármála- og gjaldeyriskreppunnar, sem hófst hér á landi af fullum þunga haustið 2008, hefur farið fram endurmat á framkvæmd peningastefnu við skilyrði óheftra fjármagnshreyfinga og ýmsir lærdómar verið dregnir. Seðlabankinn hefur birt sín sjónarmið í ýmsum ritum á undaförnum árum.[8] Þar er m.a. leitað svara við þeirri spurningu hvort hægt sé að beita öðrum stjórntækjum til viðbótar við seðlabankavexti, sem er meginstjórntæki peningamála, þannig að þau leggist á sveif með peningastefnunni. Geri þau það þarf síður að hækka vexti svo mikið, í því skyni að halda aftur af innlendri eftirspurn, að það leiði til mikils vaxtamunar við útlönd og feli þar með í sér óæskilega sterkan hvata til skammtíma fjármagnshreyfinga til landsins, með tilheyrandi hættu á óstöðugleika.

Vonir standa til þess að með því að beita svo kölluðum þjóðhagsvarúðartækjum, t.d. takmörkun veðsetningar íbúðarhúsnæðis, takmörkun skuldsetningar miðað við tekjur eða eignir, eða með fjármálasveiflutengdum eiginfjáraukum á fjármálafyrirtæki, svokölluðum sveiflujöfnunarauka, takist að draga úr sveiflum, eða a.m.k. milda niðursveiflur. Almennt ættu strangari kröfur sem nú eru gerðar um eigið fé, laust fé og fjármögnun, strangari reglur um gjaldeyrisjöfnuð og heimild Seðlabankans til að takmarka veitingu gjaldeyrislána til óvarinna aðila að draga úr óæskilegum hliðaráhrifum sjálfstæðrar peningastefnu þegar innlend hagþróun er úr takti við umhverfið.

Ríkisfjármálastefna sem leggst á sömu sveif og peningastefnan gæti vissulega einnig stuðlað að meiri stöðugleika. Þar verður þó að stilla

[8] Seðlabanki Íslands (2010). Peningastefnan eftir höft. Seðlabanki Ísland, *Sérrit* nr. 4. Sjá einnig Sjá einnig Seðlabanka Íslands (2017). Peningastefna byggð á verðbólgumarkmiði: Reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar, *Sérrit* nr. 11.

væntingum í hóf, þrátt fyrir að ákvæði í lögum um opinber fjármál um fjármálastefnu og fjármálaráð horfi til framfara. Hægt er þó að ætlast til að ríkisfjármálastefnan leggist ekki á sveif með hagsveiflunni og magni hana, en hingað til hefur tilhneigingin hér á landi því miður verið sú að slakað sé á í opinberum fjármálum í uppsveiflu þegar tekjur aukast og hert að í niðursveiflu þegar tekjur dragast saman.

Engin ofangreindra úrræða eru þó líkleg til að koma fyllilega í veg fyrir að áhrif flóðs og fjöru á hinum alþjóðlega fjármagnsmarkaði gæti í svo ríkum mæli að valdið geti óstöðugleika í innlendu efnahagslífi. Því er full ástæða til þess að íhuga hvort fleiri leiðir séu færar til að koma í veg fyrir að óæskilega þung byrði falli á vaxtastefnu Seðlabankans við framkvæmd hagstjórnar.

Hornalausnir eða málamiðlun?

Finna má fleiri lausnir í lausnarmengi stefnusmiða en umræddar hornalausnir þrílemmunnar ásamt hjálpartækjum. Þýðir sveigjanlegt gengi t.d. að inngrip á gjaldeyrismarkaði í því augnamiði að jafna skammtímasveiflur eða koma í veg fyrir of mikil frávik frá áætluðu langtímajafnvægi skuli aflögð með öllu? Svo þarf ekki að vera eins og inngripastefna Seðlabankans undanfarin ár er dæmi um. Krónan flýtur en ekki án afskipta.[9]

Innan ramma almennt óheftra fjármagnshreyfinga er einnig hægt að hugsa sér ráðstafanir sem lægt geta mesta ofsann í fjármagnshreyfingum án þess að hindra þær með beinum hætti. Frá árinu 2016 hefur Seðlabankinn skv. ákvæðum í núverandi gjaldeyrislögum sett reglur um sérstaka bindiskyldu á móti nýju innstreymi erlends gjaldeyris til kaupa á skuldabréfum og hávaxta innstæðum í krónum. Reglurnar undirstrika að millistig á milli hornalausna þrílemmunnar geta verið mörg. Sérstaka bindiskyldan er mun vægara úrræði en þau víðtæku höft á fjármagnshreyfingar sem innleidd voru eftir bankahrunið. Í stað þess að leyfa algerlega óheftum fjármagnshreyfingum að hrekja stjórnvöld út í horn peningalegs sjálfstæðis annars vegar eða gengisstöðugleika hins vegar hefur Seðlabankinn beitt takmörkunum sem draga úr ávinningi (aðallega) erlendra aðila af fjárfestingu í krónum, en án þess að stöðva hana algerlega.

Vandinn er hins vegar sá að ekki er fyllilega ljóst hvort reglugerðarvald Seðlabankans, sem nú er grundvallað á gjaldeyrislögum, samræmist 40. grein EES-samnings til lengri tíma litið, sem kveður á um óheftar fjármagnshreyfingar. Seðlabankinn er þó að leggja mat á hvort svo geti

[9] Um þau sjónarmið sem haft geta áhrif á inngrip á gjaldeyrismarkaði fjallað höfundur um í pallborðið á nýlegri ráðstefnu í Jerúsalem. Sjá Arnór Sighvatsson (2017). Foreign Exchange Market Intervention in Iceland, *Introductory remarks for a panel debate at conference organised by the Bank of Israel, Swiss National Bank, and Centre for Economic Policy Research (CEPR) in Jerusalem on 7 – 8 December 2017: Foreign Exchange Market intervention: Conventional or Unconventional Policy*.

verið. Fyrir því má færa sterk rök að æskilegt væri að heimila slíkar reglur við ákveðnar aðstæður, enda gæti það minnkað líkur á því að grípa þyrfti til mun róttækari takmarkana á fjármagnshreyfingar, sem byggja á ákvæðum 43. greinar EES-samningsins, eins og gert var í kjölfar fjármálakreppunnar haustið 2008. Bindiskyldan ber því það einkenni stjórntækis á sviði þjóðhagsvarúðar að vera fyrirbyggjandi.

Á meðal þess sem þarf að meta áður en afstaða er tekin til þess hvort vænlegt sé að láta reyna á lögmæti sérstakrar bindiskyldu skv. EES-samningnum er hvort hægt sé að koma í veg fyrir sniðgöngu bindiskyldunnar þegar takmarkanir í núverandi gjaldeyrislögum á gerð afleiðusamninga sem ekki eru gerðir í tilefni áhættuvarna falla niður að lokinni heildarendurskoðun gjaldeyrislaga. Fyrir fjármálahrunið átti fjármagnsinnstreymi sér að miklu leyti stað fyrir tilstilli erlendra útgefenda krónuskuldabréfa með hátt lánshæfismat (AAA), en áhrifin á þjóðarbúskapinn, þ.m.t. áhrif útgáfunnar á miðlun peningastefnu, komu fram fyrir milligöngu íslenskra viðskiptabanka, sem gerðu skiptasamninga við erlenda milligönguaðila í þessum viðskiptum, með tilheyrandi áhrifum á innlendan útlánavöxt.

Fyrir því má færa rök að þessi tegund fjármagnsinnstreymis sé sérstaklega skaðleg vegna þess að útgáfa þessara öflugu erlendu aðila (með AAA lánshæfismat) á skuldabréfum í krónum opnar dyrnar fyrir fjárfestingu aðila sem eru algerlega ómeðvitaðir um áhættuna sem skapast þegar fjárfesting er orðin óeðlilega mikil miðað við þjóðarbúskapinn og ytri jöfnuður orðinn ósjálfbær, eins og gerðist fyrir fjármálakreppuna. Fyrir fjármálakreppuna nam skuldabréfastofninn meira en þriðjungi landsframleiðslu. Þegar tregðu fór að gæta á erlendum lánsfjármörkuðum á sama tíma og stórir skuldabréfaflokkar komu á gjalddaga brustu forsendur fyrir endurfjárfestingu skyndilega og herskari illa upplýstra fjárfesta ruddist á útganginn á sama tíma. Áhrifin á innlendan gjaldeyrismarkað voru óviðráðanleg. Sérstök bindiskylda miðar að því að koma í veg fyrir að þessar aðstæður komi upp á ný.

Miðjumoð árangursríkast?

Undanfarin ár hafa stjórnvöld talið heillavænlegast leita leiða til að styðja við peningastefnuna með fleiri tækjum fremur en treysta á hornalausnir þrílemmunnar. Líklega er vænlegast að halda áfram að feta þá slóð á næstu árum. Í því felst að áfram verði beitt virkum gjaldeyrisgripum í því skyni að stuðla að gengisstöðugleika, að því marki sem slíkt samrýmist verðbólgumarkmiðinu, en án þess að lýsa yfir opinberu gengismarkmiði, þjóðhagsvarúðartækjum verði beitt í því skyni að auka viðnámsþrótt fjármálakerfisins í niðursveiflu og jafna sveiflur. Við ákveðnar aðstæður mætti svo beita bindiskyldu á móti gjaldeyrisinnstreymi, ásamt strangari gjaldeyrisjafnaðarreglum. Eins og áður var nefnt er þanþol EES-samningsins hvað bindiskylduna varðar þó ekki fyllilega ljóst.

Ótímabært er að kveða upp dóm um árangur þeirrar stefnu sem fylgt hefur verið. Verðstöðugleiki hefur verið meiri undanfarin ár en jafnan áður í nýlegri peningasögu Íslands. Verðbólguvæntingar hafa einnig legið nær verðbólgumarkmiði Seðlabankans.[10] Hagstæð ytri skilyrði í þjóðarbúskapnum eiga hins vegar, auk peningastefnunnar, ríkan þátt í þessum árangri og því óvíst hve varanlegur árangurinn verður við óhagstæðari ytri skilyrði.

Óháð umgjörð peningamála er framkvæmd peningastefnu í mjög litlu og opnu hagkerfi, eins og hinu íslenska, þar sem innlenda fjármálakerfið er samþætt hinu alþjóðlega, að ýmsu leyti vandasamari en á stærri gjaldmiðilssvæðum. Vandinn liggur m.a. í því hve þjóðarbúskapurinn er næmur fyrir gengisbreytingum en innlendir gjaldeyris- og fjármálamarkaðir eru grunnir og eftir því næmir fyrir truflunum. Sé önnur hagstjórn á skjön við markmið peningastefnunnar magnast þessi vandi. Umræðan um bestu ráðstöfun æðruleysis, hugrekkis og dómgreindar andspænis þessum vanda mun því eflaust halda áfram um langa framtíð.

[10] Sjá Þórarinn G. Pétursson (2018). Disinflation and improved anchoring of long-term inflation expectations: The Icelandic experience. Seðlabanki Íslands Working Paper nr. 77. Sjá einnig Seðlabanka Íslands (2017). Peningastefna byggð á verðbólgumarkmiði: Reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar, Sérrit nr. 11

In June 2016, the Central Bank of Iceland introduced a capital flow management measure (CFM) entailing a special reserve requirement (SRR) on a portion of new inflows of foreign currency to Iceland. The SRR serves as a macroprudential tool that can reduce the build-up of systemic risks stemming from excessive capital inflows.[1] At the time, however, a key objective of the SRR was to strengthen the transmission of Central Bank interest rate changes to other interest rates, as this transmission mechanism began to break down in the wake of increased foreign capital inflows into non-indexed Treasury bonds in H2/2015. A sign of the breakdown was that Treasury bond yields fell steeply even though the Central Bank's interest rates had been raised and the Bank's Monetary Policy Committee (MPC) had signalled that further rate hikes could be expected. Due to these inflows, the monetary stance was increasingly reflected in the appreciation of the króna, as was the case during the prelude to the financial crisis in 2008. This can cause problems, as monetary policy transmission is generally less predictable when it takes place through the exchange rate channel than through the interest rate channel. The introduction of the SRR delivered the intended results, and changes in Central Bank interest rates were reflected again in Treasury bond rates, unlike the situation in 2015 (Chart 1).

It has been asserted that this objective of the SRR has not been achieved except partially and that the adoption of the requirement itself has impeded monetary policy transmission and prevented the Central Bank's rate cuts since August 2016 from being transmitted to rates offered to households and businesses, unlike what has happened with Treasury bond rates. The argument is therefore that the SRR has caused too much monetary tightening and restricted resident borrowers' access to credit to an excessive degree. This Box examines these factors.

Interest rates on the commercial banks' covered bonds have developed broadly in line with Treasury bond rates

The secondary market for the commercial banks' covered bonds is considerably thinner than the domestic Treasury bond market, and the bonds themselves are much less liquid. Outstanding covered bonds have amounted to about 30% of the value of Treasury and Housing Financing Fund (HFF) bonds in the recent past, and turnover has been about 18% of Treasury and HFF bond turnover. On the whole, yields on covered bonds have developed in line with Government-guaranteed bond yields in recent years, as the Treasury bond market creates the basis for bond market pricing. Increased capital inflows in 2015 also led to a breakdown in the transmission of monetary policy to covered bond interest rates, even though the inflows had been invested only in Treasury bonds. As with Treasury bonds, it appears that monetary policy transmission to covered bond rates normalised again after the SRR was adopted. In general, yields on both short- and long-term nominal and indexed bonds have fallen in line with reductions in Central Bank rates in the recent past, which did not happen in 2015 (Charts 2 and 3). Since mid-2017, however, yields on indexed covered bonds have not fallen to the same degree as yields on comparable Treasury and HFF bonds. To some extent, this can probably be attributed to limited trading with covered bonds and a more homogeneous group of owners, both of which make prices

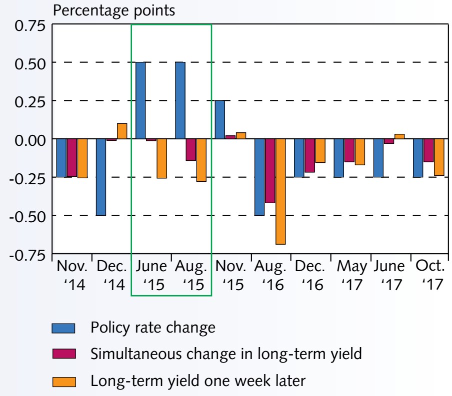
1. The rules on the SRR specify that 40% of new inflows of foreign currency for investment in high-yielding deposits and listed bonds and bills issued in krónur must be held in a non-interest-bearing account with the Central Bank for one year. Further discussion of the SRR can be found in Box 1 in *Monetary Bulletin* 2016/4 and Box 2 in *Monetary Bulletin* 2017/4.

Box 1

Special reserve requirement on capital inflows and private sector financing conditions

Chart 1

Impact of changes in Central Bank interest rates on Treasury bond yields

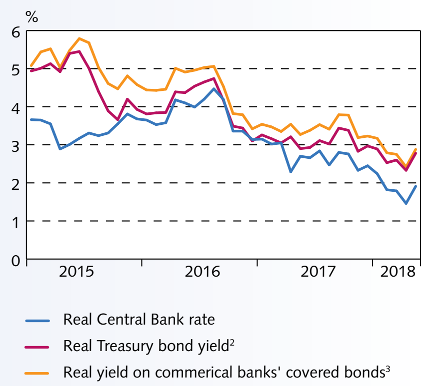


Source: Central Bank of Iceland.

Chart 2

Real Central Bank rate and real yields on non-indexed marketable bonds

January 2015 - May 2018[1]

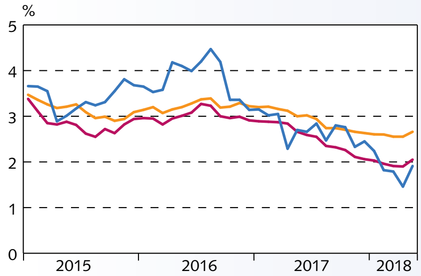


1. Based on data until 11 May 2018. 2. Five-year rate based on the estimated nominal yield curve. 3. Average yield on bonds maturing in 2019-2023.
Sources: Kodiak Pro, Central Bank of Iceland.

Chart 3

Real Central Bank rate and yields on indexed marketable bonds

January 2015 - May 2018[1]



Real Central Bank rate

Yield on Treasury and HFF bonds[2]

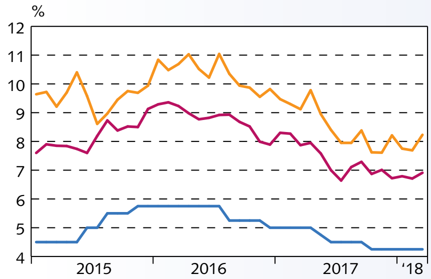
Yield on commercial banks' covered bonds[3]

1. Based on data until 11 May 2018. 2. Five-year rate based on the estimated real yield curve. 3. Average yield on bonds maturing in 2021-2034.
Sources: Kodiak Pro, Central Bank of Iceland.

Chart 4

Central Bank key rate and commercial banks' nominal lending rates[1]

January 2015 - March 2018



Central Bank key interest rate

New loans to corporate borrowers

New loans to households

1. The three large commercial banks' nominal lending rates, weighted average, by loan amount.
Source: Central Bank of Iceland.

stickier than Treasury and HFF bond prices. Furthermore, given that the pension funds hold the majority of covered bonds, less demand from them, concurrent with their increased foreign investment and emphasis on lending to fund members, could have had some impact and pushed yields higher than they would be otherwise. This is in line with the results of the Bank's recent survey of market agents, which indicate that respondents are of the opinion that indexed covered bond yields have not fallen as much as comparable Treasury and HFF bonds because of a relatively greater supply of covered bonds, a homogeneous group of investors, and decreased demand from pension funds.

Non-indexed lending rates to households have fallen in line with Central Bank rates ...

In the main, changes in Central Bank interest rates have been transmitted to rates offered to households in recent years, and this did not change after the SRR was activated (Charts 4 and 5). Credit institutions' non-indexed deposit and lending rates have fallen in line with Central Bank rates, as have variable rates on pension funds' indexed loans, which move broadly in line with indexed Treasury and HFF bond yields. On the other hand, changes in Central Bank rates have not been transmitted as effectively to other indexed rates, as the transmission mechanism is usually weaker in the case of longer-term indexed mortgage rates, and this did not change after the introduction of the SRR. Nevertheless, rates on the commercial banks' indexed loans to households have fallen in recent years and are close to an all-time low. Households' increased use of non-indexed loans and the pension funds' rising share in the mortgage lending market have strengthened the transmission of Central Bank rates to interest rates offered to households, and the SRR has not affected this in any way.

... and the SRR has not affected households' access to credit

There are no signs that the SRR has affected households' access to credit, either. As is discussed in Chapter III, credit system lending to households has grown by 5½% year-on-year in nominal terms in the recent past, as compared with annual growth of 1-2% for most of 2016 and virtually no growth at all in 2015, after adjusting for the effects of the Government's debt relief measures.

Rates on new loans to non-financial companies have moved broadly in line with Central Bank rates ...

The majority of new króna-denominated loans to non-financial companies are non-indexed variable-rate loans. Since the beginning of 2015, for instance, these have accounted for some 85% of the three large commercial banks' total lending to such companies (Table 1). As Charts 4 and 6 show, interest rates on these loans have fallen in line with the Bank's key rate. A further breakdown by maturity and loan amount shows that the average interest rate on all categories

Table 1 New króna-denominated loans from the three large commercial banks to non-financial companies (b.kr.)

Year	*Non-indexed*	*Indexed*	*Total*	*Variable-rate*	*Fixed-rate*	*Total*
2015	460.2	86.8	547.0	495.8	51.2	547.0
2016	461.0	76.4	537.4	515.7	21.7	537.4
2017	590.2	93.3	683.6	657.8	25.7	683.6
Total	1,511.4	256.5	1,768.0	1,669.4	98.6	1,768.0

Source: Central Bank of Iceland.

of non-indexed corporate loans has fallen in line with Central Bank rates, from one-year loans of less than 40 m.kr. to ten-year loans of more than 160 m.kr. On the other hand, there has been little change in rates on indexed corporate loans, but these loans are rare: since the beginning of 2015, for instance, indexed loans have accounted for only 15% of total corporate lending by the three large banks, and only 38% of those loans bear fixed interest. The share of other types of króna-denominated loans has also been negligible.

... and firms' access to credit appears normal

As is discussed in Chapter III, credit system lending to businesses has increased markedly in the recent term. In nominal terms, loans grew by 3.9% year-on-year in 2016 and 6.1% in 2017, after a continuous contraction between 2010 and 2015. In Q1/2018, nominal year-on-year growth measured 9.7%, the strongest in roughly a decade. In the recent past, credit growth has been concentrated in loans to companies in the services sector, particularly real estate firms, construction firms, and tourism-related companies, reflecting the strong investment activity in those sectors. Corporate investment has also been growing rapidly in the past few years (see Chapter IV). Based on these developments and given the overall demand pressures in the economy, it is difficult to argue that the adoption of the SRR has led to overly tight monetary policy or hindered domestic firms' access to credit.

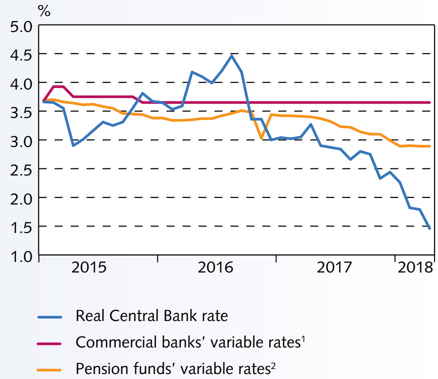
Corporate bond yields are broadly unchanged, however

The corporate bond market is very thin compared with the markets for Treasury bonds and the commercial banks' covered bonds, and most of the bonds are indexed to inflation. Corporate bond turnover has amounted to just about 1% of Treasury and HFF bond turnover in the recent term. Domestic firms' marketable bonds accounted for about 15% of total corporate debt at the end of 2017, and a large proportion of them were issued by Government-owned companies (Chart 7). Furthermore, there are few bonds with market making, which tends to hinder price formation in the market.

Among corporate bonds, turnover is greatest with real estate company bonds, whereas trading of other bonds is extremely sparse, and yields have been broadly unchanged. Real estate company bond yields have not moved in line with Central Bank rate cuts as comparable indexed Treasury and HFF bonds or commercial banks' covered bonds have. However, yields on real estate company bonds fell starting in H2/2017, albeit not as much as yields on other bonds (Chart 8). In addition to the inactivity in the market, there are other factors that complicate comparison. Unlike Treasury and HFF bonds, most real estate company bonds are redeemable, and multiple issuance of the same bonds when the length of time until they can be settled at par varies makes it difficult to compare them. In addition, market agents could consider counterparty risk elevated because house price inflation has slowed down, causing the companies' share prices to fall.

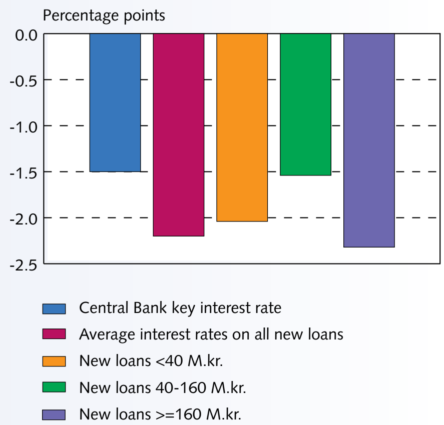
The characteristics of the corporate bond market, its limited size, and the homogeneity of the companies concerned make it difficult to assess the effectiveness of monetary policy transmission to corporate bond rates; however, it is clear that the transmission mechanism is less effective than for other bonds. Even so, this situation has changed little since the SRR was introduced, and the market has been relatively inactive for a long time, as a large proportion of domestic firms seek external financing through direct borrowing rather than through issuing bonds in the market.

Chart 5
Real Central Bank interest rate and indexed mortgage rates
January 2015 - April 2018



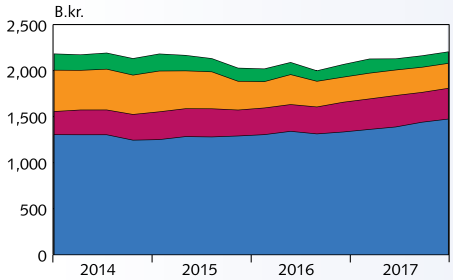
1. Simple average of the three large commercial banks' mortgage rates.
2. Simple average of the mortgage rates of Almenni Pension Fund, Frjálsi Pension Fund, Gildi Pension Fund, Lífeyrissjóður verslunarmanna, Lífsverk, The Pension Fund (Söfnunarsjóður lífeyrisréttinda).
Source: Central Bank of Iceland.

Chart 6
Impact of changes in Central Bank interest rates on corporate lending rates[1]
July 2016 - December 2017



1. Weighted average interest rate on the three large commercial banks' non-indexed variable-rate loans to non-financial companies. The interest rates are weighted to reflect the principal amount of the loans.
Source: Central Bank of Iceland.

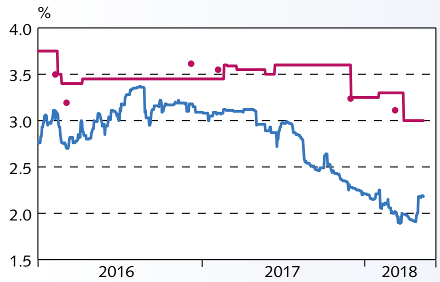
Chart 7
Non-financial corporate debt
Q1/2014 - Q4/2017



Debt to domestic financial institutions
Domestic marketable bonds
Debt to foreign financial institutions
Foreign marketable bonds

Source: Central Bank of Iceland.

Chart 8
Yields on indexed bonds issued by the Housing Financing Fund and Reitir Real Estate
1 January 2015 - 11 May 2018



HFF bonds maturing in 2024
Reitir bonds maturing in 2024
Results of new auctions of Reitir bonds maturing in 2024

Sources: Kodiak Pro, Reitir fasteignafélag hf., Central Bank of Iceland.

Summary

The introduction of the SRR in summer 2016 appears to have delivered the intended results and strengthened the transmission of changes in Central Bank rates to rates on Treasury bonds and the commercial banks' covered bonds, unlike the situation in 2015. Furthermore, the Bank's interest rate changes have been transmitted normally to most of the loan forms available to households and businesses since the SRR was activated. The effectiveness of the transmission mechanism varies by loan form, however, as before. As can be expected, transmission is strongest to non-indexed variable-rate loans to households and businesses, which is the most common type of corporate loan and is growing in popularity among households as well. Transmission to the commercial banks' indexed lending rates has been weaker.

It is difficult to find tenable grounds for the argument that the SRR has in some way affected these developments, as the effectiveness of monetary policy transmission to these loan forms has remained broadly unchanged since the SRR was activated. Changes in the Central Bank's interest rates have generally had less impact on indexed rates than on non-indexed rates, irrespective of the SRR. Furthermore, it is difficult to link developments in interest rate spreads on corporate bonds — i.e., interest rates on corporate bonds relative to Treasury bond rates — to the introduction of the SRR, as the SRR should not change the relative rates on the bonds falling within its scope, particularly if there was no history of inflows into these bonds beforehand. In fact, one of the main reasons the SRR applies to inflows into all electronically registered bonds is to minimise possible distortion in pricing of different types of bonds. There are probably other, more convincing explanations for developments in interest rate spreads on corporate bonds, as is discussed above. Finally, it is difficult to find data to support the assertion that the SRR adversely affects residents' access to credit financing, as growth in lending to households and business has been gaining momentum in the recent term and is at its strongest in a decade. By the same token, consumption growth has been strong, and business investment has grown rapidly in the recent past and appears likely to continue growing this year.

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.