MONETARY POLICY COMMITTEE REPORT TO PARLIAMENT

2017•2

Monetary Policy Committee report to Parliament

18 January 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 (Althingi) 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 December 2017. The following report discusses the work of the Committee between July and December 2017.

Table 1. Central Bank of Iceland interest rate decisions in H2/2017 (%)

Date	*Current accounts*	*Seven-day term deposits*	*Collateral-ised loans*	*Over-night loans*
13 Dec.	4.00	4.25	5.00	6.00
15 Nov.	4.00	4.25	5.00	6.00
4 October	4.00	4.25	5.00	6.00
23 August	4.25	4.50	5.25	6.25

Monetary policy formulation

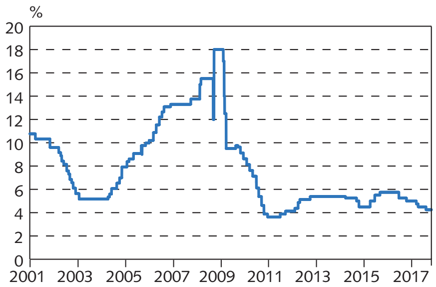
According to the Act on the Central Bank of Iceland, the Central Bank's principal objective is to promote price stability. This objective is further described in the joint declaration issued by the Bank and the Icelandic Government on 27 March 2001 as an inflation target of 2½% in terms of the consumer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

The MPC bases its decisions in part on an analysis of current economic conditions and the outlook for the economy as presented in the Bank's *Monetary Bulletin*. The MPC's statements and minutes, enclosed with this report, contain the arguments for the Committee's decisions in the latter half of 2017.

Chart 1

Central Bank of Iceland key interest rate[1]

Daily data 3 January 2001 - 29 December 2017



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

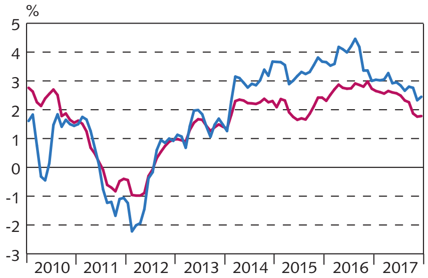
Developments from July to December 2017

The MPC kept the Bank's interest rates unchanged at its meeting in August but decided to lower them by 0.25 percentage points in October. Then the Committee kept interest rates unchanged at the November and December meetings, leaving the Bank's key rate – i.e., the rate on seven-day term deposits – at 4.25% at year-end 2017, down from 4.5% in June, when the last report was sent to Parliament,

Chart 2

Real Central Bank of Iceland interest rates[1]

January 2010 - December 2017



— 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]

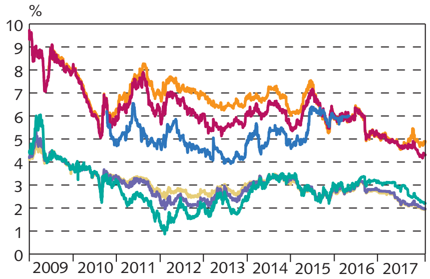
1. From 2010 to May 2014, the nominal policy rate was the average of the current account rate and the maximum rate on 28-day CDs. From May 2014, the policy rate has been the seven-day term deposit rate.
2. Until January 2012, according to twelve-month inflation, one-year business inflation expectations, 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 December 2017



— RIKB 16 103 — HFF 150224

— RIKB 19 0226 — HFF 150434

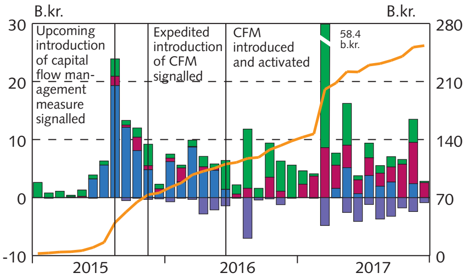
— RIKB 25 0612 — HFF 150644

Source: Central Bank of Iceland.

Chart 4

Capital flows due to registered new investments

January 2015- December 2017



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.

and 5% at year-end 2016. The Bank's interest rates have only once been lower since the inflation target was adopted in 2001.[1]

The monetary stance as measured in terms of the Bank's real rate eased in H2/2017, after the reduction in the Bank's nominal interest rates and a rise in several measures of inflation expectations. In terms of the average of various measures of inflation and inflation expectations, the Bank's real rate was 1.7% at the end of December, as opposed to 2.6% at the end of June. The Bank's real rate in terms of twelve-month inflation has also fallen, from 3% at the end of June to 2.3% at the end of the year.

Nominal Treasury bond yields began rising towards the end of summer 2017 and rose steeply after the fall of the Government in mid-September. The increase was greatest at the long end of the yield curve, and the spread between long and short Treasury bonds widened by about ½ a percentage point. The increase appears to stem primarily from a temporary rise in risk premia on long-term interest rates, as it receded to an extent over the course of the year. At the end of the year, the yield on most nominal Treasury bonds lay in the 4.8-5% range, an increase of 0.1-0.4 percentage points since the end of June. Indexed bond yields were more stable; however, they have fallen by as much as 0.8 percentage points since the end of June, in line with the Bank's real rate, and lay in the 1.8-2.2% range at the end of December.

New inflows of foreign currency for investment in the domestic Treasury bond market have been relatively stable since they resumed after the liberalisation of almost all of the capital controls in March 2017. They have been much less than before the Bank's capital flow management measure was activated in June 2016, however. In H2/2017, they totalled about 18 b.kr., including 10.8 b.kr. invested in Treasury bonds and 7.2 b.kr. deposited in special reserve accounts in accordance with Central Bank rules. At the same time, outflows of capital previously imported for new investment in the bond market have increased. Net inflows invested in domestic bonds totalled only 7.2 b.kr. in H2.

Exchange rate volatility increased during the summer. The exchange rate began to fall in early June, after having risen by 10½% year-to-date. It remained relatively stable during the autumn, however, and then rose somewhat beginning in the second half of September. Exchange rate volatility has therefore subsided again as the foreign exchange market has adjusted to the new environment of free movement of capital. In trade-weighted terms, the króna was 4.2% weaker at the year-end than at the end of June, and about 0.7% weaker than at the beginning of 2017.

The Central Bank reduced its intervention in the foreign exchange market in late winter 2017, as the MPC was of the view that the foreign exchange reserves were large enough and that the exchange rate reflected underlying fundamentals. The Committee reiterated that the Bank would continue to intervene in the market

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. Other Central Bank interest rates have been lowered correspondingly, as can be seen in Table 1.

to mitigate exchange rate volatility as needed. The Bank's foreign exchange transactions in H2 were negligible: it bought currency from market makers for about 1.5 b.kr. and sold currency for about 1.1 b.kr. The Bank's net foreign currency purchases since end-June have therefore totalled around 0.4 b.kr. The Bank's foreign exchange market activity accounted for 2% of market turnover, as opposed to 53% over the same period in 2016.

CPI inflation measured 1.8% in 2017, the fourth year in a row with average inflation of 2% or less. This is the longest episode of such low and stable inflation since the economic crisis of the early 1990s. Twelve-month inflation measured 1.9% in December, up from 1.5% in June 2017. Underlying inflation has also risen by most measures since the MPC submitted its last report to Parliament, measuring 0.5-2¼% in December.

In H2, inflation was driven mainly by rising house prices, as has been the case in the recent past. The twelve-month rise in the housing component of the CPI peaked at 19% in summer 2017 but had tapered off to 12% by December. The rise in house prices has lost pace in the past few months, and the difference between inflation including and excluding housing has narrowed. The CPI excluding housing had fallen by 1.6% year-on-year in December. The decline in various imported goods prices, such as clothing and footwear, plus the reduction in airfares made a strong downward impact on the CPI in H2. Private services prices had risen by 0.5% year-on-year in December but were unchanged year-on-year in June. Increased competition with online retailers and the entry of international retail giants into the domestic market may have reduced exchange rate pass-through from the summer 2017 depreciation. Domestic goods prices had risen by 1% year-on-year in December but had fallen by 1.6% between years in June. Domestic inflationary pressures have therefore increased by this measure in the recent past.

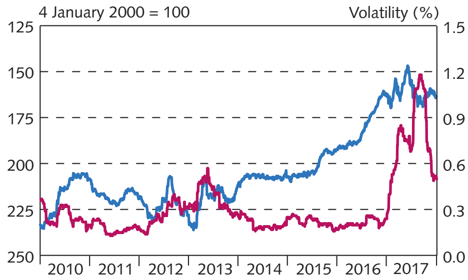
According to the Central Bank baseline forecast published in *Monetary Bulletin* on 15 November, inflation will ease up to the target over the course of 2018 and remain close to target for most of the forecast horizon. The effects of imported deflation and domestic inflationary pressures from the housing and labour markets will continue to offset one another, although the difference between them has narrowed in the recent term.

One of the main tasks of monetary policy in recent years has been to control inflation expectations and bring them down to the Bank's inflation target. Inflation expectations have been broadly in line with the target since late 2016 but have risen marginally since June, when the MPC submitted its last report to Parliament. They seem to be increasingly better anchored to the target, as can be seen in the relatively limited impact of last summer's depreciation of the króna on long-term expectations. According to recent surveys, market agents and corporate executives expect inflation to measure at or below 2.5% in one year's time, and households expect it to measure just under 3%. 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 2017, the five- and ten-year breakeven inflation rate

Chart 5

Exchange rate and volatility of the króna

Daily data 4 January 2010 - 29 December 2017



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

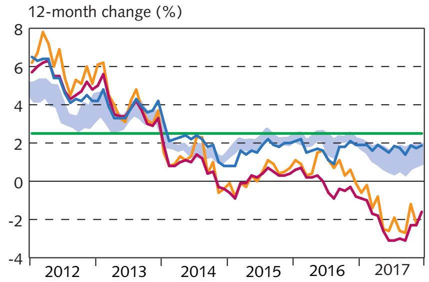
Volatility of the króna (right)[2]

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

Chart 6

Headline and underlying inflation[1]

January 2012 - December 2017



CPI

CPIXH

HICP

Inflation target

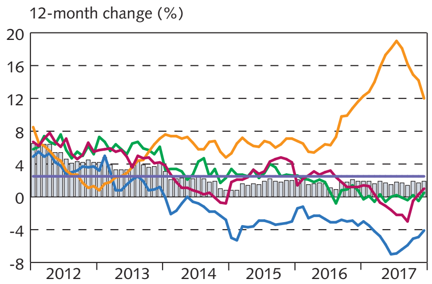
Interquartile range of underlying inflation

1. Underlying inflation measured using core indices (indices excluding the effects of indirect taxes, volatile food items, petrol, public services, and owner-occupied rent) and statistical measures (weighted median, trimmed mean, and a dynamic factor model).
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 7

Imported and domestic inflation[1]

January 2012 - December 2017



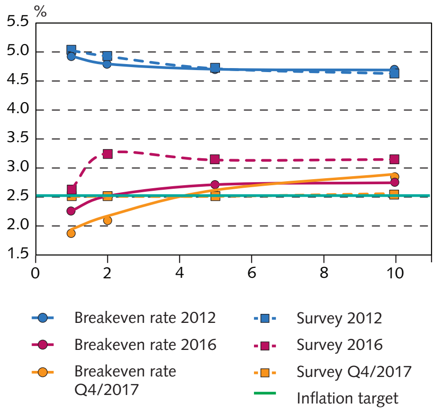
CPI
Imported prices (29%)
Domestic goods (14%)
Housing (26%)
Private services (22%)
Inflation target

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

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.

measured 2.8-3.1%, some 0.7-0.8 percentage points higher than at the end of June.

In the MPC's view, demand pressures in the economy have called for a tight monetary stance so as to ensure medium-term price stability. However, because of developments in inflation and inflation expectations, together with signs of diminishing demand pressures, the Committee was of the view that there was scope for a rate cut in October. National accounts figures from December showed stronger growth in domestic demand than had been assumed in the Bank's November forecast, however. At its December meeting, the MPC therefore agreed that the outlook was for continued strong demand pressures, which called for a tight monetary stance. Members also agreed that, if fiscal policy in 2018 proved more accommodative than had been assumed in November, it would require a tighter monetary stance than would otherwise be needed. Committee members agreed that, in the coming term, the monetary stance would depend on economic developments, including fiscal policy and the results of wage settlements.

Accompanying documents

The following documents are enclosed with this report:

1. Monetary Policy Committee statements from July to December 2017.
2. Minutes of Monetary Policy Committee meetings from July to December 2017.
3. The Governor's address on interest, indexation, and households' position, given at a meeting of VR, Akranes trade union and the Homes Association on 7 October 2017.
4. Governor's speech, given at the Iceland Chamber of Commerce's monetary policy meeting, 16 November 2017.
5. Central Bank Chief Economist's speech on economic developments and prospects, given at a meeting of the Icelandic Federation of Trade on 5 September 2017.
6. Central Bank Chief Economist's speech on economic developments and monetary policy formulation, given at the University of Iceland on 19 September 2017.
7. "Fluctuations in the ISK exchange rate in international context". Box 1 in *Monetary Bulletin* 2017/4.
8. "Special reserve requirement on capital inflows". Box 2 in *Monetary Bulletin* 2017/4.
9. 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. 22/2017
23 August 2017

Statement of the Monetary Policy Committee
23 August 2017

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

The outlook is for GDP growth to be strong this year, as it was in 2016, albeit somewhat weaker than was forecast in the May issue of *Monetary Bulletin*. GDP growth is driven in particular by growth in tourism and private consumption; furthermore, the outlook is for fiscal easing this year.

Inflation was marginally lower in Q2 than was projected in May. It measured 1.8% in July, up from 1.5% in June. Underlying inflation appears to have continued to fall, however. The króna has depreciated since the MPC's last meeting but remains almost 8% stronger than it was a year ago. As before, opposing forces affect the inflation outlook, with the appreciation of the króna in the past year and low global inflation offsetting domestic inflationary pressures. The gap between domestic price developments – housing costs in particular – and external factors has continued to widen in recent months, exacerbating uncertainty about the near-term inflation outlook.

Since the MPC's last meeting, short-term inflation expectations have risen slightly, probably reflecting the impact of the recent depreciation of the króna. Long-term inflation expectations are broadly unchanged, however, according to the Central Bank's most recent survey of market agents' expectations. The long-term breakeven inflation rate in the bond market has risen in the past few days, although it has been well in line with the inflation target over the quarter to date.

Demand pressures in the economy call for a tight monetary stance so as to ensure medium-term price stability. The foreign exchange market has been volatile, and there are signs that changes in external trade and the housing market could be in the offing. It is too early to draw conclusions about the scope and implications of such changes, however. The Bank's real rate has eased slightly since the last MPC meeting but, under current conditions, appears to be at a level ensuring inflation broadly at target. The monetary stance in the coming term will be determined by economic developments and actions taken in other policy spheres.

No. 24/2017
4 October 2017

Statement of the Monetary Policy Committee
4 October 2017

The Monetary Policy Committee (MPC) of the Central Bank of Iceland has decided to lower the Bank's interest rates by 0.25 percentage points. The Bank's key interest rate – the rate on seven-day term deposits – will therefore be 4.25%.

The outlook is for GDP growth to be weaker this year than in 2016, in part because growth in tourism has eased. The rate of GDP growth will nevertheless be robust. There are signs that demand pressures in the economy have begun to subside.

Inflation has fallen somewhat in the past two months, measuring 1.4% in September. Measures of underlying inflation are even lower, and falling. The exchange rate of the króna is broadly unchanged since the MPC's last meeting, after falling during the summer, and is 4.5% higher than it was a year ago. Measures of inflation expectations remain in line with the inflation target. In the past few months, fluctuations in the exchange rate have had relatively little impact on inflation and only transitory effects on inflation expectations.

Demand pressures in the economy call for a tight monetary stance so as to ensure medium-term price stability. Developments in inflation and inflation expectations and diminishing demand pressures indicate, however, that the Bank's real rate is sufficient at present to keep inflation broadly at target. The monetary stance in the coming term will be determined by economic developments and actions taken in other policy spheres.

No. 25/2017
15 November 2017

Statement of the Monetary Policy Committee
15 November 2017

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 *Monetary Bulletin* 2017/4, GDP growth will slow significantly this year, and more than the Bank projected in August. It is forecast at 3.7%, down from last year's GDP growth rate of 7.4%, as a result of a slowdown in export growth, after several strong years, and a pickup in import growth.

The outlook is for inflation to align with the target in mid-2018 and stay close to target for the remainder of the forecast horizon. House price inflation has eased, which will contribute to lower headline inflation if the trend continues. Counteracting this are the diminishing effects of a strong króna. The króna has appreciated since the last MPC meeting, and exchange rate volatility has eased in recent months. Inflation expectations are well in line with the target, and fluctuations in the exchange rate during the year have had limited impact on inflation and inflation expectations.

There are indications that the output gap may have peaked. Significant demand pressures remain, however, which calls for a tight monetary stance so as to ensure medium-term price stability. Reduced demand pressures and an improved inflation outlook are consistent with the MPC's expectations in October, and the Bank's real rate is broadly as it was after the October interest rate decision. The current monetary stance appears sufficient at present to keep inflation broadly at target. Whether this turns out to be the case in the coming term will depend on economic developments, including fiscal policy and the results of wage settlements.

No. 27/2017
13 December 2017

Statement of the Monetary Policy Committee
13 December 2017

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 newly published national accounts, GDP growth in the first nine months of the year measured 4.3%, more than previous figures had indicated. As a result, the outlook for 2017 as a whole is for stronger GDP growth than was forecast in the November *Monetary Bulletin*. Export growth continues to ease, while domestic demand is growing faster than previously projected, owing in part to more fiscal slack in 2017 than was previously expected.

Inflation measured 1.7% in November and has fluctuated between 1½% and 2% for some time. House price inflation continues to ease. Other things being equal, this will contribute to lower headline inflation, although it will be offset by the waning effects of past appreciation of the exchange rate. The foreign exchange market has been well balanced since the last MPC meeting, and the exchange rate of the króna has been broadly stable. Inflation expectations remain well in line with the target, and the Bank's real rate has been largely unchanged in recent months.

The outlook is for continued strong demand pressures in the domestic economy. This calls for a tight monetary stance, and if fiscal policy in 2018 proves more accommodative than was assumed in November, it will require a tighter monetary stance than would otherwise be needed. In the coming term, the monetary stance will depend on economic developments, including fiscal policy and the results of wage settlements.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, August 2017

Published 6 September 2017

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 21 and 22 August 2017, during which the Committee discussed economic and financial market developments, the interest rate decision of 23 August, and the communication of that decision.

I Economic and monetary developments

Before turning to the interest rate decision, members discussed the domestic financial markets, financial stability, the outlook for the global economy and Iceland's international trade, the domestic economy, and inflation, with emphasis on information that has emerged since the 14 June interest rate decision, as published in the updated forecast in *Monetary Bulletin* 2017/3 on 23 August.

Financial markets

Between meetings, the króna depreciated by 8% in trade-weighted terms. Over this same period it fell 4.8% against the US dollar, 9.2% against the euro, and 5.6% against the pound sterling. Between meetings, the Bank bought foreign currency for 1.1 b.kr. and sold currency for 4.6 b.kr., for a net sale of 3.5 b.kr. (30 million euros). The Central Bank's transactions accounted for 7% of total turnover in the foreign exchange market.

In terms of the Central Bank's real rate, the monetary stance had eased between meetings. The Bank's real rate in terms of the average of various measures of inflation and inflation expectations had fallen by 0.2 percentage points since just after the Bank's rate reduction in June, to 2.3%.

Interest rates in the interbank market for krónur had changed in line with the Bank's key rate between meetings. Turnover in the market had been limited over the summer, totalling 5.4

b.kr. between meetings, but had been considerably greater year-to-date than over the same period in 2016.

Yields on nominal Treasury bonds fell slightly following the reduction in the Bank’s key rate in June, but the decline reversed for the most part in July. In particular, yields on long-term bonds had risen between meetings. Yields on indexed Treasury and Housing Financing Fund (HFF) bonds declined by up to 0.5 percentage points between meetings.

The commercial banks’ nominal deposit and lending rates were 0.2-0.5 percentage points lower than before the Committee’s June meeting. The pension funds’ nominal lending rates also declined between meetings. The pension funds’ indexed lending rates declined marginally between meetings, in line with yields on indexed Treasury and HFF bonds, while the commercial banks’ indexed lending rates were unchanged.

Risk premia on Treasury foreign obligations were virtually unchanged between meetings. The CDS spread on the Treasury’s five-year US dollar obligations was 0.8%, while the spread between the Treasury’s eurobonds and comparable bonds issued by Germany was approximately 1 percentage point.

Financial institutions’ analysts had all expected that the Bank’s interest rates would be held unchanged in August, noting that the exchange rate of the króna had fallen somewhat between MPC meetings and that exchange rate volatility had increased, leading to a rise in the breakeven inflation rate in the bond market, a poorer inflation outlook, and a decline in the real rate.

According to the Bank's market expectations survey, carried out in mid-August, respondents expected the Bank’s key rate to be lowered by 0.25 percentage points at the MPC’s August meeting and to be held unchanged for the two years thereafter. At the time the survey was conducted, about 67% of respondents considered the monetary stance appropriate, as opposed to 43% in the last survey.

Annual growth in money holdings has gained pace in the past year, exceeding nominal GDP growth in Q2. M3 adjusted for deposits held by failed financial institutions grew by 8.1% year-on-year in Q2/2017. As was the case last year, growth in money holdings is due largely to increased household deposits, although corporate deposits also grew between years.

After adjusting for the Government’s debt relief measures, the total stock of credit system loans to resident borrowers grew by roughly 3½% year-on-year in Q1, and by just over 4% after adjusting for the effects of exchange rate movements on the foreign-denominated credit stock. As before, credit growth is due to increased lending to households and businesses, with lending to both sectors rising year-on-year by roughly 4% in Q2.

The Nasdaq OMXI8 index had fallen by 4.6% between meetings but had risen by 2.2% since the beginning of the year. Turnover in the NASDAQ Iceland main market totalled 400 b.kr. over the first seven months of the year, about 25% more than over the same period in 2016.

Global economy and external trade

According to the International Monetary Fund’s (IMF) July forecast, the global GDP growth outlook is unchanged from the Fund’s April forecast. Global GDP growth is projected at 3.5% this year and 3.6% next year. Uncertainty about the outlook is considered to have receded, as the economic recovery in the eurozone and Japan has exceeded expectations. The IMF revised its GDP growth forecasts for the UK and the US downwards, however. The outlook for growth in world trade has also improved for this year, particularly for advanced economies. Growth is now projected at 4%. Inflation in developed countries is forecast at 1.9% this year and 1.8% next year, about 0.1 percentage points below the April forecast. Among Iceland's main trading partners, GDP growth is projected at 2%, or 0.1 percentage point above the April forecast, whereas the forecast for 2018 is unchanged at 1.9%.

According to preliminary figures from Statistics Iceland, Iceland's goods trade generated a 21.3 b.kr. deficit in July and a 108 b.kr. deficit in the first seven months of the year. The deficit over the same period in 2016 was 72 b.kr. Export values rose by 5.9% year-on-year at constant exchange rates, while import values rose 18%. Industrial export values rose by 16%, whereas marine product export values contracted by 8%. Strong growth in imports is due in particular to growth of one-fifth in imports of investment goods, commodities, and operational inputs.

The listed global market price of aluminium had risen by nearly 10% since the June meeting and by 28% year-on-year. Foreign currency prices of marine products rose by about 0.7% month-on-month in June and have risen by 7% year-on-year.

In terms of relative consumer prices, the real exchange rate measured 100.8 points in July, a decline of 4.8% month-on-month but a year-on-year increase of 18.8% in the first seven months of the year. The rise is due almost entirely to the nominal appreciation of the króna, as inflation has been about the same as the trading partner average.

The domestic real economy and inflation

According to the Statistics Iceland labour force survey (LFS), total hours worked increased by 2.1% year-on-year in Q2, considerably less than had been assumed in the Bank's May forecast. The number of employed persons rose by 1.8%, and the average work week lengthened slightly. After adjusting for seasonality, the labour participation rate and the employment rate declined, but both were still high, and close to their pre-crisis peak.

Seasonally adjusted unemployment was broadly in line with the May forecast in Q2, measuring 2.5%, the lowest since Q2/2008.

Other indicators suggested increased demand in the labour market. Migration figures showed that the increase in foreign nationals equalled 2.1% of the population aged 20-59 in H1/2017, a larger rise than in all of 2016. About ¾ of this year's increase is due to an unusual surge in immigration taking place in Q2. The number of workers on the pay-as-you-earn register rose by 4.8% during the quarter, and there was continued robust growth in the number of workers on behalf of temporary employment agencies and foreign service companies.

The wage index was virtually unchanged in July, after having risen by 3.1% between quarters in Q2, when contractual pay rises for a majority of workers took effect. The year-on-year increase measured 7.2% in July, whereas real wages rose 5.3% in terms of the index.

Key indicators of developments in private consumption in Q2 and the beginning of Q3 suggest that private consumption may grow more this year than previously forecast. Payment card turnover was up nearly 13% year-on-year in the first seven months of the year. New motor vehicle registrations are also rising briskly, albeit less rapidly than in 2016.

The Gallup Consumer Confidence Index fell slightly month-on-month in July, to 108.5 points. All sub-indices fell during the month, especially those measuring expectations for the next six months and the assessment of the current economic situation.

Statistics Iceland's nationwide real estate price index, published at the end of July, rose 1.9% month-on-month when adjusted for seasonality and by 24.2% year-on-year. The capital area real estate price index, calculated by Registers Iceland, rose by 0.2% month-on-month in July when adjusted for seasonality, and by 19% year-on-year. The number of registered purchase agreements nationwide fell year-on-year, by 5.2% over the first seven months of the year and by just over 21% in July. The average time-to-sale for residential property in the greater Reykjavík area was 2.8 months in July, over half a month longer than during the same period in 2016.

The CPI fell by 0.02% month-on-month in July. Twelve-month inflation measured 1.8% and had risen by 0.3 percentage points since the MPC's June meeting. The CPI excluding housing had fallen by 3.1% since July 2016, however, and the HICP fell by 1.9% over the same period. Most measures of underlying inflation declined in July, however, and lay in the 0.4-1.5% range.

Summer sales were one of the major determinants of inflation in July, although they were offset by rising owner-occupied housing costs and seasonal spikes in airfares. Private services prices rose by 0.2% year-on-year in July, but the price of imported goods apart from alcoholic beverages and tobacco fell by 8% over the same period.

According to the Central Bank's survey of market agents' inflation expectations, conducted in mid-August, participants expect inflation to measure 2.4% in one year. This is 0.2 percentage points more than in the previous survey, taken in May. Survey participants' inflation expectations two years ahead had declined, however, from 2.6% in the last survey to 2.5%. Furthermore, market agents expect inflation to average 2.6% over the next ten years, the same as in the May survey. The ten-year breakeven inflation rate in the bond market had risen during the days preceding the MPC meeting. It averaged 2.3% in Q2 and has hovered in the 2.3-2.9% range in Q3 to date.

According to the forecast published in *Monetary Bulletin* on 23 August 2017, the inflation outlook is broadly unchanged from the May forecast. Inflation is expected to measure 2% in the latter half of this year and rise to the target by mid-2018. As in the Bank's previous forecasts, the higher exchange rate and increased demand pressures in the economy tend to offset one another. The impact of both factors has receded in comparison with the May forecast, but next year the effects of an exchange rate below the May forecast will be stronger. As a result, inflation is expected to be higher than was projected in May. Inflation is projected to peak at just over 3% late in 2018 and then begin to subside to the target.

Domestic demand has grown rapidly, and GDP growth has been strong, measuring 7.2% in 2016, and is set to remain robust this year. It is projected to measure 5.2% for 2017 as a whole, about 1 percentage point less than was forecast in May, primarily because of a less favourable outlook for external trade than was assumed at that time. As in the Bank's previous forecasts, GDP growth is expected to ease still further over the next two years, as it approaches its long-term trend rate.

Job creation has been strong, concurrent with rapid growth in economic activity, and unemployment has declined. Nearly half of firms have had difficulty filling available positions, and an increasing number are operating at capacity. Increased labour demand has been met to a considerable degree with importation of labour, which has increased rapidly in the recent term.

Assumptions about wage developments are similar to those in May. As was the case then, it is assumed that agreements made this year will be accommodated within the scope provided for under the SALEK agreement and will not trigger a review of private sector wage settlements in February 2018. Because labour productivity is expected to increase less in 2017 than was previously projected, unit labour costs will rise more, or by 5.5% instead of the previously forecast 5%. The outlook for the remainder of the forecast horizon is broadly unchanged, however, and the rise is projected at close to 5% per year.

According to the forecast, the output gap that opened up early in 2015 will disappear during the forecast horizon. The output gap is projected at just under 3% of potential output this year, about the same as in 2016 but slightly less than was forecast in May.

II The interest rate decision

The Governor reported to the Committee on work done in connection with the review of the statutory and technical foundations for the capital flow management measure. He also reported on the Bank's analysis of developments in the foreign exchange market year-to-date.

The MPC discussed the monetary stance in view of the most recent information on the economy and the decline in the Bank's real rate between meetings. Members discussed whether the monetary stance was appropriate in view of the inflation outlook, as the Committee had decided in June to lower the Bank's key rate by 0.25 percentage points, partly because the Bank's real rate had risen between meetings and entailed a somewhat tighter monetary stance than the Committee had intended and considered sufficient to support medium-term price stability.

In this context, the Committee took into consideration the Central Bank's new forecast, published in *Monetary Bulletin* on 23 August, according to which the outlook is for robust GDP growth this year, as in 2016, albeit somewhat less than had been forecast in May. The forecast assumed that GDP growth would be driven in particular by growth in tourism and private consumption; furthermore, the outlook was for fiscal easing this year.

Members discussed developments in inflation, which had been marginally lower in Q2 than had been projected in May. They also noted that inflation had risen in July, although underlying inflation appeared to have continued to fall. As before, the Committee was of the view that the opposing forces that had affected inflation over the past year would cause considerable uncertainty about the inflation outlook. In particular, they observed that the gap between domestic price developments – housing costs in particular – and external factors had continued to widen in recent months. The appreciation of the króna in the past year and low global inflation had offset domestic inflationary pressures, but there was uncertainty about both further ahead.

The Committee discussed the depreciation of the króna since the June meeting. The opinion was expressed that the appreciation early in the spring had probably entailed a temporary overshooting that had reversed in part in recent months; therefore, the impact was probably limited. It was considered likely that increased demand for hedging instruments and changing exchange rate expectations had had an increased effect on exchange rate developments following the liberalisation of the capital controls. It was also pointed out that, in spite of the depreciation, the króna was still nearly 8% stronger just before the August meeting than it had been a year earlier, and that it was broadly the same as at the end of 2016.

Members also discussed whether it would be desirable to intervene more frequently in the foreign exchange market so as to mitigate exchange rate movements further. The Bank has substantially reduced its foreign exchange market activity after the virtually complete liberalisation of the capital controls in mid-March. The Bank's transactions in the market have aimed primarily at stopping spirals from emerging in the market. It was noted that it could prove difficult to intervene more actively in the market, as strong opposing forces were at work, making it difficult to distinguish between volatility and underlying exchange rate trends. The opinion was expressed that fluctuations in the exchange rate were likely to diminish from their recent levels, as revaluation and the shift towards a new post-liberalisation equilibrium were further advanced than before. The market was still in the rebalancing process, however. Many important events had taken place in a relatively short period of time, and when shocks were large, the ripple effect would take longer to subside.

The Committee also discussed developments in inflation expectations, as short-term expectations had risen slightly since the previous meeting. Members were of the view that the rise in short-term inflation expectations probably reflected the recent depreciation of the króna to some extent. The longer-term breakeven inflation rate in the bond market had also risen in the past few days, although it had been well in line with the Bank's inflation target during the quarter to date. It was pointed out that a rise in the breakeven inflation rate need not mean that long-term inflation expectations were rising. It could also reflect a rise in the inflation risk premium or other determinants of bond market pricing. Long-term inflation expectations were broadly unchanged, according to the Bank's recent market expectations survey. It was pointed out as well that by most measures, inflation expectations were at target. Committee members were of the view that these two factors were a sign of enhanced credibility of monetary policy, although it was not a given that expectations would remain at target in the event of a further steep depreciation of the króna followed by a temporary inflation spike.

The Committee discussed whether to keep interest rates unchanged or to lower them. All members agreed that clear signs of demand pressures in the economy called for a continued tight monetary stance so as to ensure medium-term price stability. At the last two meetings, members had agreed to lower the Bank's key rate in spite of the demand pressures in the economy, as the rise in the real rate between MPC meetings had entailed a somewhat tighter monetary stance than the Committee had intended and considered sufficient to support price stability over the medium term. Now, however, the monetary stance had eased, as the Bank's real rate had fallen since the June meeting as a result of a rise in inflation and inflation expectations. Nevertheless, members did not consider it necessary to raise the key rate in order to maintain an unchanged monetary stance between meetings, as demand pressures in the economy were now expected to be weaker than previously forecast and inflation expectations had thus far withstood the volatility in the foreign exchange market.

In addition, members emphasised that there was considerable uncertainty about recent developments in external trade and the housing market, which could indicate weaker growth and a smaller output gap. As a result, it was too early to draw conclusions about the scope and implications of such changes. It was pointed out that the housing supply appeared to be increasing and the average time-to-sale was on the rise. There was still some uncertainty about the upcoming wage settlements and about whether the current contracts would be subject to a review early next year. Inflation expectations were relatively stable, and all were at target. It would therefore be appropriate to wait and see how the situation developed.

The Committee was of the view that although the Bank's real rate had declined slightly since the last meeting, it appeared under current conditions to be consistent with inflation at target. One member was of the opinion, however, that there might possibly be scope for a further rate cut. This member pointed out that there was more than 3% deflation in terms of the CPI excluding housing, and that the rise in the housing component was due not to low interest rates but to limited supply, which stemmed from other causes.

In view of the discussion, the Governor proposed that the Bank's interest rates be held unchanged. The Bank's key rate (the seven-day term deposit rate) would remain 4.5%, the current account rate 4.25%, the seven-day collateralised lending rate 5.25%, and the overnight lending rate 6.25%. All Committee members voted in favour of the proposal. One member would have preferred to lower rates by 0.25 percentage points but was nonetheless willing to vote in favour of the Governor's proposal.

Members agreed that in the coming term, the monetary stance would be determined by economic developments and actions taken in other policy spheres.

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 4 October 2017.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, October 2017

Published 18 October 2017

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 2 and 3 October 2017, during which the Committee discussed economic and financial market developments, the interest rate decision of 4 October, and the communication of that decision.

I Economic and monetary developments

Before turning to the interest rate decision, members discussed the domestic financial markets, financial stability, the outlook for the global economy and Iceland's international trade, the domestic economy, and inflation, with emphasis on information that has emerged since the 23 August interest rate decision.

Financial markets

Between meetings, the króna depreciated by 0.3% in trade-weighted terms. Over the same period it was virtually unchanged against the US dollar and the euro but fell by 3.4% against the pound sterling. Between meetings, the Central Bank conducted no transactions in the interbank foreign exchange market. The Bank's net foreign exchange purchases year-to-date totalled 70 b.kr. (600 million euros), or about 24% of total turnover for the period.

In terms of the Central Bank's real rate, the monetary stance had eased slightly between meetings. The Bank's real rate in terms of the average of various measures of inflation and inflation expectations had fallen by 0.2 percentage points between meetings, to 2.1%.

Interest rates in the interbank market for krónur were unchanged between meetings. Turnover in the market totalled 6.2 b.kr. between meetings, but about 123.2 b.kr. year-to-date, much more than over the same period in 2016.

Nominal Treasury bond yields rose somewhat after the last MPC meeting and again after the collapse of the Government in mid-September. The rise reversed in part following the publishing of the September CPI, just before the October meeting, but was still as much as 0.3 percentage points higher than at the August meeting. Yields on indexed Treasury and Housing Financing Fund (HFF) bonds had also risen by up to 0.2 percentage points between meetings.

The commercial banks' non-indexed deposit and lending rates were unchanged between meetings. The banks' comparable indexed lending rates and the pension funds' fixed rates on indexed loans to fund members were also broadly unchanged. Non-indexed lending rates and variable rates on the pension funds' indexed loans fell slightly between meetings, however.

Risk premia on Treasury foreign obligations were virtually unchanged between meetings. The CDS spread on the Treasury's five-year US dollar obligations was 0.8%, while the spread between the Treasury's eurobonds and comparable bonds issued by Germany was approximately 1 percentage point.

Financial institutions' analysts had all projected that the Bank's interest rates would be held unchanged in October, mainly on the grounds that the collapse of the Government had exacerbated uncertainty about the near-term fiscal stance and caused a marked rise in the breakeven inflation rate in the bond market.

M3 adjusted for the deposits held by the failed financial institutions grew by 8.9% year-on-year in August, about the same as in previous months. As was the case last year, growth in money holdings is due largely to increased household deposits.

Lending to resident entities has also increased. After adjusting for the Government's debt relief measures, the total stock of credit system loans to resident borrowers increased by 5.4% year-on-year in August, and by just over 6% if the foreign-denominated credit stock is calculated at constant exchange rates. As before, credit growth is due to an increase in lending to households and businesses. Lending to households increased by 5% year-on-year in August, after adjusting for the Government's debt relief measures, and loans to businesses by 7.3%. Calculated at constant exchange rates, the stock of corporate loans rose by approximately 10% year-on-year in August, much more than in the first half of the year.

The Nasdaq OMXI8 index had fallen by 4.3% between meetings and by 2.2% since the beginning of the year. Turnover in the NASDAQ Iceland main market totalled approximately 450 b.kr. over the first eight months of the year, about 21% more than over the same period in 2016.

Global economy and external trade

Iceland's external goods trade generated a deficit of 120 b.kr. in the first eight months of the year, as opposed to a deficit of 79 b.kr. over the same period in 2016. Export values rose by 8% year-on-year at constant exchange rates, while import values rose 17%. Export growth was due to 16% growth in industrial goods exports, whereas marine product exports contracted by 6%. Import growth stemmed mainly from a 22% increase in imports of commodities and operational imports, a 44% rise in passenger car imports, and a 15% rise in investment goods imports.

The listed global market price of aluminium was unchanged since the August meeting, and the average price in September was up almost a third year-on-year. Foreign currency prices of marine products were also unchanged between months in August but had risen by 2.5% year-on-year.

In terms of relative consumer prices, the real exchange rate had fallen three months in a row in September, by a total of 8.8% since June. The decline is due primarily to a 9% nominal depreciation of the króna, but offsetting that, inflation in Iceland was about 0.2 percentage points above the trading partner average. On the other hand, the real exchange rate was still 15.7% higher in the first eight months of the year than it was in the same period of 2016.

The domestic real economy and inflation

According to preliminary figures published by Statistics Iceland in September, GDP growth measured 3.4% in Q2/2017. During the quarter, 6.7% growth in domestic demand was offset by a negative contribution from net trade, with import growth measuring 16.2%, far outpacing export growth, which measured 8%. During the first half of the year, GDP growth measured 4.3%, driven mainly by private consumption and exports.

GDP growth was weaker in H1 than had been forecast in the August *Monetary Bulletin*, which provided for 5.6% growth during the half. The main reason for the deviation is a more negative contribution from net trade, owing to the combined effect of weaker exports and stronger imports than had been forecast. Consumption and investment grew more strongly than forecast, but this was offset by the contribution from inventory changes, which was smaller than expected. Growth in domestic demand as a whole was therefore close to the forecast, or 5.2% instead of the projected 5.4%.

In Q2/2017, the current account surplus totalled 16.3 b.kr., or 2.6% of GDP. This is a smaller surplus than in the previous quarter and in the same period in 2016. The balance on services was positive by 60.5 b.kr., and the balance on primary and secondary income was 1.6 b.kr., whereas the goods account showed a deficit of 45.8 b.kr.

Key indicators of developments in private consumption in Q3 suggest that household demand growth remains strong. On the other hand, leading indicators imply that growth will ease in coming quarters. The Gallup Consumer Confidence Index measured 106.8 points in September, about 25 points lower than a year earlier. The big-ticket index, which measures households' planned major purchases, measured 69.3 points, a decline of 2.5 points between measurements.

According to the fiscal budget proposal for 2018, Treasury performance is expected to be in line with the estimate according to the fiscal strategy for 2018-2022. The performance target for 2017 according to that year's budget is to be ensured with extraordinary dividend payments by the commercial banks in the amount of 20.3 b.kr. In assessing the fiscal stance, such one-off items are excluded; therefore, this year's cyclically adjusted primary balance corrected for one-off items declines by 0.8% of GDP from the estimate published in *Monetary Bulletin* 2017/2. The fiscal easing between 2016 and 2017 amounts to 1.9% of GDP. The fiscal stance is expected to tighten by a total of 1.7% of GDP in 2018.

According to the results of Gallup's autumn survey, conducted in September among Iceland's 400 largest firms, respondents were very upbeat about the current economic situation but considerably more pessimistic about the outlook six months ahead than they were in the summer survey, carried out in May. Their attitudes were also markedly more pessimistic than in the spring survey. About 70% of respondents considered the current situation good, and about 24% considered it neither good nor poor. Some 7.5% of executives were of the view that economic conditions would improve in the next six months, and 64% expected conditions to remain unchanged (i.e., good). In all sectors, however, executives' attitudes were more negative than they were either in May or in September 2016. In particular, executives in the fishing and construction sectors were more pessimistic about the situation six months ahead than other executives were. Sentiment among executives in specialised services firms deteriorated most from the summer survey. About 29% of respondents expected conditions to be worse in six months' time, as opposed to just under 10% a year earlier. Attitudes towards domestic demand were considerably less positive than before, while attitudes towards external demand were unchanged from the summer survey.

According to the autumn survey, there was an increase in the number of firms that expect their EBITDA to shrink in the next six months compared to the spring survey. The EBITDA index fell by 15 points between surveys, and the number of firms expecting their EBITDA to rise in the next six months was roughly equal to the number expecting them to decline. Sentiment among executives in transport, transit, tourism, and retail and wholesale trade deteriorated the most. The investment index also fell somewhat from the previous measurement, and there, too, the change was greatest among transport, transit, and tourism companies.

According to the seasonally adjusted results of the autumn survey, the share of respondents interested in adding on staff in the next six months exceeded the share interested in downsizing by 17 percentage points. This is 6 percentage points less than in the summer survey and 19 percentage points less than in the survey a year ago. Sentiment was most positive among executives from firms in transport, transit, and tourism. In these sectors, firms interested in recruiting exceeded the share interested in downsizing by 40 percentage points. Attitudes were most pessimistic among companies in the fishing industry, where 15 percentage points more firms were considering laying off staff than recruiting, while the same ratio in the retail and wholesale trade sector was 5 percentage points. In other sectors, the ratio of firms interested in recruiting net of the share wanting to downsize lay in the range of 15-26 percentage points.

After adjusting for seasonality, 35% of executives considered themselves understaffed, about 5 percentage points less than in the previous survey. This ratio had been close to 40% for more than a year. It was highest in the construction industry, where almost half of executives considered themselves short-staffed, and lowest in financial services, where 17% considered themselves short-staffed. In other sectors it ranged between 28% and 40%.

Half of executives were of the view that their firms would have trouble responding to unexpected demand, after adjusting for seasonality. This share was slightly lower than in the surveys conducted this past summer and in autumn 2016. About 68% of construction company executives were of the opinion that it would be difficult to respond to unexpected demand, whereas the smallest share was in retail and wholesale trade, at 29%. In other sectors, the ratio lay in the 44-55% range.

The wage index rose by 0.2% month-on-month in August and by 7.2% year-on-year. Real wages in terms of the index had risen by 5.3% year-on-year in August.

Statistics Iceland's nationwide real estate price index, published at the end of September, rose by 4.7% quarter-on-quarter in Q3 when adjusted for seasonality, and 22.5% year-on-year. The capital area real estate price index, calculated by Registers Iceland, rose by 1.2% month-on-month in August when adjusted for seasonality, and by 19.1% year-on-year. The pace of the twelve-month increase has eased somewhat since peaking at 23.5% in May. The number of purchase agreements registered nationwide declined by 5.1% year-on-year in the first eight months of 2017. The average time-to-sale for flats in the greater Reykjavík area was about 2.5 months in August, as compared with 2 months in August 2016.

The CPI rose by 0.14% month-on-month in September, after rising 0.25% in August. Twelve-month inflation measured 1.4% and had fallen by 0.4 percentage points since the MPC's August meeting. The CPI excluding the housing component had declined by 3.1% year-on-year in September, however. Most measures of underlying inflation suggested that it had declined in September and lay in the 0.3-1.9% range.

The drivers of the increase in the CPI in September were rising house prices and end-of-sale effects. These were offset by the seasonal decline in international airfares and a drop in food prices, which had declined by a total of 5% year-on-year by September. Private services prices had fallen by 0.4% between years, and services inflation had subsided since the last meeting.

According to Gallup's autumn survey, conducted in September, household inflation expectations rose between surveys, to 3% one year ahead and 3.2% two years ahead. Corporate executives' inflation expectations also rose between surveys, with respondents expecting inflation to measure 2.4% one year ahead. Their two-year inflation expectations were unchanged, however, at 3%. The five- and ten-year breakeven inflation rates in the bond market rose after the Government collapsed in mid-September, but the increase had reversed by end-September, when the five-year rate measured 2.6% and the ten-year rate 2.9%.

II The interest rate decision

The Governor reported to the MPC on the authorities' ongoing work in connection with the review of the monetary policy framework. In addition, the Deputy Governor updated the Committee on the work underway 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 decline in the Bank's real rate between meetings. Members discussed whether the monetary stance was appropriate in view of the inflation outlook, as the Committee had decided in August to keep interest rates unchanged even though the monetary stance had eased between meetings, due to indications of weaker output growth and a narrower output gap than had previously been assumed.

Committee members were of the view that the information that had emerged between meetings pointed in the same direction. According to the national accounts for H1/2017, the outlook is for GDP growth to be weaker in 2017 than in 2016, and weaker than had been forecast in the August *Monetary Bulletin*. There were clear signs that growth in tourism had eased. Gallup's autumn survey also indicated that corporate executives were more pessimistic than they had been in the previous survey. Furthermore, labour demand appeared somewhat weaker and the shortage of workers smaller, albeit still significant. The year-on-year rise in house prices had continued to ease. It was mentioned that labour demand was greatest in the sectors that had been hiring foreign workers. In Committee members' opinion, the adjustment to sustainable GDP growth seemed more rapid than they had previously expected, although it was considered clear that the growth rate would remain robust. Committee members agreed that because of this, it would be possible to keep inflation at target with a lower real interest rate.

The Committee discussed the disinflation of the previous two months. Inflation had measured 1.4% in September, and measures of underlying inflation suggested that inflation was even lower, and falling. Some members emphasised the fact that inflation excluding the housing component was negative, and one member stressed that by this measure, the real rate was high. On the other hand, it was pointed out that based on the same kind of argument, real disposable income had risen even more if income was deflated by the headline CPI. In the discussion, it was also pointed out that because inflation is due almost entirely to rising housing costs, there was a significant likelihood that it would subside still further when the rise in housing costs eased, as signs already indicated, or when house prices began to fall again. Real house prices were already at a historical high, which increased the likelihood of such a development. Committee members agreed that housing inflation stemmed not from low interest rates but from excess demand. The supply of housing had begun to rise, however, and because of this the rise in house prices could slow markedly. It was also mentioned that if the exchange rate of the króna reached a new equilibrium at its current level, which was higher than it was a year ago, it was unlikely to push inflation towards the target.

The Committee discussed recent developments in the exchange rate, which had been broadly unchanged since the August meeting, after falling during the summer. It was still 4.5% higher than it had been a year earlier, however. The Central Bank had not considered it necessary to intervene in the foreign exchange market between meetings. Short-term exchange rate volatility had receded, which the Committee considered a possible indication that the foreign exchange market was rebalancing after the liberalisation of the capital controls.

MPC members considered it positive that all measures of inflation expectations remained broadly in line with the inflation target. Members considered it an indication of enhanced credibility of monetary policy that the fluctuations in the exchange rate in the past few months, and even the depreciation of the króna during the summer, had had relatively little impact on inflation and only transitory effects on inflation expectations. It was pointed out that the rise in the breakeven inflation rate in the bond market following the collapse of the Government stemmed from a rise in risk premia and not in inflation expectations, as the increase had reversed quickly.

The MPC also noted that growth in credit and money holdings somewhat outpaced nominal GDP growth. Members agreed that such credit growth could be a danger sign that should be monitored closely but that it was too early to conclude that this was the case, as excess growth was still relatively limited. One member noted that credit growth was concentrated mainly in loans to businesses, some of it to construction companies, which was conducive to restoring equilibrium in the housing market. On the other hand, the increased supply of housing enhanced the likelihood of household credit growth later on.

The Committee also discussed the impact on monetary policy of the fall of the Government and the forthcoming elections. In the Committee's view, increased uncertainty – political and otherwise – could contain demand if it caused households and businesses to exercise caution. Increased uncertainty could also lead to cross-border capital outflows, which could cause the exchange rate to fall and could call for changes in interest rates. In the MPC's opinion, however, there were no clear signs of capital outflows due to these factors as yet. On the other hand, members were of the view that there was some risk that as a consequence of the election campaign, the cyclically adjusted Treasury balance could deteriorate, which would call for higher interest rates than would otherwise be needed. It was mentioned as well that increased credibility of monetary policy made it easier for the Committee to look through the temporary impact of increased political unrest now than it had been, for example, when the Government fell in 2016, as there was now less risk that such temporary unrest would affect long-term inflation expectations.

The Committee discussed whether to keep interest rates unchanged or lower them. Members agreed that demand pressures in the economy called for a tight monetary stance so as to ensure medium-term price stability. On the other hand, the Committee agreed that developments in inflation and inflation expectations, together with clear signs of diminishing demand pressures, provided the scope to lower interest rates by 0.25 percentage points. Members were of the view that, with that reduction, the Bank's real rate would suffice to keep inflation broadly at target. The main arguments expressed at the meeting in favour of unchanged interest rates were related to uncertainty about the fiscal stance in the wake of the coming elections.

In view of the discussion, the Governor proposed that the Bank's interest rates be lowered by 0.25 percentage points, which would lower the key rate (the seven-day term deposit rate) to 4.25%, the current account rate to 4%, the seven-day collateralised lending rate to 5%, and the overnight rate to 6%. All Committee members voted in favour of the proposal.

Members agreed that in the coming term, the monetary stance would be determined by economic developments and actions taken in other policy spheres.

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 15 November 2017.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, November 2017

Published 29 November 2017

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

The following are the minutes of the MPC meeting held on 10 and 14 November 2017, during which the Committee discussed economic and financial market developments, the interest rate decision of 15 November, and the communication of that decision.

I Economic and monetary developments

Before turning to the interest rate decision, members discussed the domestic financial markets, financial stability, the outlook for the global economy and Iceland's international trade, the domestic economy, and inflation, with emphasis on information that has emerged since the 4 October interest rate decision, as published in the new forecast and analysis of uncertainties in *Monetary Bulletin* 2017/4 on 15 November.

Financial markets

Between meetings, the króna appreciated by 3.3% in trade-weighted terms. Over this period it appreciated by 2.5% against the US dollar, 2.8% against the euro, and 3.8% against the pound sterling. The Central Bank bought foreign currency in the amount of about 362 m.kr. (EUR 3 million) between meetings, and its net foreign exchange purchases year-to-date have totalled 70.3 b.kr. (603 million euros). Central Bank transactions accounted for just under 22% of total foreign exchange market turnover for the period.

In terms of the Central Bank's real rate, the monetary stance was virtually unchanged since right after the publication of the October interest rate decision. The Bank's real rate in terms of the average of various measures of inflation and inflation expectations had fallen by 0.1 percentage points between meetings, to 1.8%.

Interest rates in the interbank market for krónur fell in line with the Central Bank interest rate cut in October. Turnover in the market totalled 600 m.kr. between meetings and about 123.8 b.kr. year-to-date, a significant increase over the same period in 2016.

Nominal Treasury bond yields had fallen in line with the Central Bank interest rate cut in October and fell still further in the first half of November. As a result, they were about ½ a percentage point lower than at the time of the October meeting. Yields on comparable indexed bonds had fallen between meetings, by 0.1-0.4 percentage points.

The commercial banks' nominal deposit and lending rates declined broadly in line with the October reduction in the Bank's key rate. Interest rates on comparable indexed loans were unchanged, however. The average rate on pension funds' loans to members were also virtually unchanged between meetings.

Risk premia on Treasury foreign obligations were virtually unchanged between meetings. The CDS spread on the Treasury's five-year US dollar obligations was about 0.8%, while the spread between the Treasury's eurobonds and comparable bonds issued by Germany was approximately 1 percentage point.

Financial institutions' analysts had all projected that the Bank's interest rates would be held unchanged in November, citing in particular the reduction in the real rate between meetings and the continued uncertainty about the near-term fiscal stance.

M3 adjusted for the deposits held by the failed banks grew by 8.3% year-on-year in Q3, about the same as in the previous quarter. As was the case last year, growth in money holdings in Q3 is due largely to increased household deposits, although it was broader-based.

Growth in lending to resident entities has continued to gain pace. After adjusting for the Government's debt relief measures, the total stock of credit system loans to resident borrowers increased by 5½% year-on-year in Q3, as opposed to approximately 3½% in the first two quarters of the year. The Q3 growth rate was about 6½% if the foreign credit stock is calculated at constant exchange rates. As before, credit growth is due to an increase in lending to households and businesses. Lending to households increased by nearly 5½% year-on-year in Q3, after adjusting for the Government's debt relief measures, and loans to businesses by almost 7%, the strongest growth rate since just after the financial crisis. Calculated at constant exchange rates, the stock of corporate loans rose by approximately 9½% year-on-year in Q3.

The Nasdaq OMXI8 index had risen by 2.1% between meetings and was broadly unchanged from the beginning of the year. Turnover in the NASDAQ Iceland main market totalled about 550 b.kr. over the first ten months of the year, about 13.5% more than over the same period in 2016.

Global economy and external trade

According to preliminary figures from Statistics Iceland, Iceland's goods trade generated a 9.8 b.kr. deficit in October, as opposed to a surplus of 1.8 b.kr. in October 2016, at constant exchange rates. Import growth had picked up since the October meeting, after a slowdown during the summer following a surge in the spring. In the past two months, the value of imports excluding ships and aircraft had increased by 35% year-on-year, the strongest two-month growth rate since February 2006. The spurt in import growth is due in particular to an increase in the value of imported investment goods, petrol, and lubricants. At the same time, nominal export growth has eased, owing to slower growth in manufacturing and marine product export values. Iceland's external goods trade generated a deficit of 149 b.kr. for the first ten months of the year, as opposed to a deficit of 79 b.kr. over the same period in 2016. Export values grew by 7% at constant exchange rates over the period, while import values rose 20%.

Global aluminium prices were unchanged since the October meeting, although the average October price was up 28% year-on-year. Preliminary figures on foreign currency prices of marine products indicate that prices fell by 1.3% between quarters in Q3, after having risen by just over 1% in Q2. Oil prices had risen by 12.5% between meetings and were up by over a third year-on-year.

In terms of relative consumer prices, the real exchange rate had risen by 2.4% month-on-month in October, to 98.9 points, after an 8.8% decline between June and September. The year-on-year increase in October was 4%. It is due primarily to a 3.5% nominal appreciation of the króna, but in addition, inflation in Iceland was about 0.5 percentage points above the trading partner average. In October, the real exchange rate was 21% above its twenty-five year average, and over the first ten months of 2017 it was up by 14% year-on-year.

The domestic real economy and inflation

The wage index rose by 2.1% between quarters in Q3, and by 7.3% year-on-year, and real wages in terms of the index were 5.5% higher in Q3/2017 than in Q3/2016.

Leading indicators of developments in private consumption suggest that developments in Q3 were broadly similar to those in H1/2017. Payment card turnover increased by just under 13% during the quarter, and the number of new motor vehicle registrations increased by 29%.

The Gallup Consumer Confidence Index rose 18.5 points month-on-month in October, to 125.3, which is 19 points lower than at the same time in 2016. Optimism among households had receded in recent months, after historically high measurements earlier in the year.

Statistics Iceland's nationwide real estate price index, published in late October, was virtually unchanged month-on-month when adjusted for seasonality but had risen 18.9% year-on-year. The capital area real estate price index, calculated by Registers Iceland, rose by 0.5% month-on-month in September when adjusted for seasonality, and by 19.6% year-on-year. The year-on-year rise in real estate prices has eased somewhat since peaking in May at 23.5%. The number of purchase agreements registered nationwide declined by 7% year-on-year in the first nine months of 2017. The average time-to-sale for flats in the greater Reykjavík area was about 3.2 months in September, as compared with 1.7 months a year earlier.

The CPI rose by 0.5% month-on-month in October, and twelve-month inflation measured 1.9%. Headline inflation had therefore risen by 0.5 percentage points since the October meeting. The CPI excluding the housing component had declined by 2.3% year-on-year, however. Measures of underlying inflation suggested that it had risen between months and lay in the ½-2% range.

The main factor in the CPI rise in October was a surge in food prices. The cost of owner-occupied housing fell marginally between months, however – the first month-on-month decline in over two years. Private services prices had risen by 0.2% year-on-year in October.

Market agents' short- and long-term inflation expectations had been broadly unchanged in recent months. According to the Central Bank survey carried out in early November, market agents expect inflation to measure 2.5% in one year, two years, and (on average) over the next five and ten years. The breakeven inflation rate in the bond market had changed little between meetings, with the five-year breakeven rate measuring 2.5% and the ten-year rate 2.8%.

According to the forecast published in *Monetary Bulletin* on 15 November 2017, inflation will rise to 1.9% in Q4/2017. If the forecast materialises, inflation will average 1.8% over the year as a whole and 2017 will be the fourth consecutive year with average inflation measuring 2% or less. This is the longest episode of such low and stable inflation since the economic crisis of the early 1990s. The baseline forecast assumes that inflation will inch upwards toward the target over the course of next year and will be close to target for the bulk of the forecast horizon. The outlook is for inflation to be lower than was forecast in August for most of the forecast horizon, mainly because the output gap is expected to be smaller and unit labour costs are expected to rise less than previously thought.

According to the baseline forecast, the exchange rate of the króna will continue to rise early in the forecast horizon. This technical assumption concerning the exchange rate is affected, on the one hand, by the GDP growth outlook and the interest rate differential with abroad, and on the other, by the estimated equilibrium real exchange rate of the króna, which is considered to have risen in the recent term, concurrent with improved terms of trade, a larger current account surplus, and improvements in Iceland's external position. The revised estimate of the equilibrium real exchange rate suggests that the real exchange rate is close to equilibrium or perhaps slightly below it. But this assumption is subject to considerable uncertainty. There is also significant uncertainty about capital flows to and from Iceland, which could affect short-term exchange rate developments. No signs of large-scale capital outflows have been seen since the capital controls were lifted earlier this year.

According to the baseline forecast, GDP growth among Iceland's main trading partners will measure 2.2% this year, a marginal improvement from the last forecast. The most important factor is the strong economic recovery in the eurozone, although the GDP growth outlook in the US is considered slightly improved. On the other hand, indicators suggest that GDP growth in the UK will be weaker than previously forecast. As in August, output growth among Iceland's trading partners is expected to weaken slightly next year, to an annual average of 2% over the next three years.

In 2016, terms of trade for goods deteriorated by just over 2%, whereas overall terms of trade improved. This trend looks set to continue this year: terms of trade for goods will deteriorate by another 2%, while overall terms of trade will improve by nearly 1%. This is less favourable than was forecast in August and is due primarily to much lower marine product prices in Q3/2017, plus a more rapid rise in oil and commodity prices, although more favourable developments in aluminium prices pull in the opposite direction. According to the forecast, terms of trade for goods will continue to weaken in the next few years, while for goods and services combined they will remain broadly unchanged.

In H1, exports of goods and services grew by just over 6% year-on-year, and the outlook is for broadly similar growth for the year as a whole. Although the growth rate has eased in comparison with that a few years ago, it remains robust, particularly given that growth in trading partner demand has averaged roughly 3% annually in recent years. It is somewhat below the August forecast, however, because services exports grew less in H1 than previously assumed and are expected to grow less strongly for the remainder of the year.

The poorer outlook for exports in 2017 is due to marine product export growth, which was much weaker than expected in Q3, as it has taken longer than expected to make up the production losses from the fishermen's strike early in the year. In addition, this year's silicon exports are expected to be weaker than previously estimated. As in the Bank's previous forecast, export growth is expected to slow down still further in the next few years.

GDP growth measured 10.4% in H2/2016, but preliminary figures from Statistics Iceland indicate that it slowed markedly in the first half of this year. It measured 5.2% in Q1 and then subsided still further in Q2, to 3.4%. The decline in GDP growth was foreseeable to an extent, given developments in exports. It was steeper, however, than had been assumed in the August forecast, which provided for 5.6% GDP growth in H1/2017, whereas Statistics Iceland's preliminary figures indicate a growth rate of 4.3%. GDP growth for the year as a whole will be weaker than previously forecast, or 3.7% instead of 5.2%. The outlook for the next two years is broadly unchanged, however: GDP growth is forecast to measure 3.4% in 2018, which is similar to this year's growth rate and slightly above the August forecast, and then ease towards long-term trend growth and measure approximately 2.5% per year in 2019 and 2020.

Indications that growth in economic activity is moderating can be found in the labour market. According to the Statistics Iceland labour force survey (LFS), the number of jobs rose by 1.8% in Q2 but stood still in Q3. Because of a reduction in average hours worked, total hours contracted in Q3, for the first time since 2012. This is surprising because the number of foreign nationals migrating to Iceland is still rising fast, as is the working-age population. It is not impossible that this reflects in part a measurement problem with the LFS; therefore, the results should be interpreted with some caution. It is clear, however, that growth in labour demand has subsided. Unemployment is still falling, to a seasonally adjusted rate of 2.3% in Q3.

For the remainder of the year, total hours are expected to rise broadly as they have in 2017 to date, or just over 1%. This is a considerably slower growth rate than was forecast in August. As a result, the employment rate will be almost 1 percentage point lower this year than previously estimated, a difference that will remain for the rest of the forecast horizon. Unemployment is forecast to average 2.6%, a reduction of 0.4 percentage points year-on-year and almost 6 percentage points from its late 2010 peak. The large-scale importation of labour is expected to hold back wage increases, and the equilibrium unemployment rate is therefore lower than previously thought. As a result, measured unemployment will rise somewhat more slowly in coming years than previously forecast, to just over 3% by the end of the forecast horizon.

Wages have risen steeply in the recent term, mitigating the deflationary effects of imported deflation and the appreciation of the króna. Increased labour productivity also counteracts the effects of wage increases on inflation. Unit labour costs are forecast to rise by nearly 4% this year. However, this is subject to considerable uncertainty, which is related to possible errors in measuring the foreign labour force in Iceland. Underestimating the foreign labour force leads to an overestimation of labour productivity and an underestimation of unit labour costs. Unit labour costs are projected to rise by about 5% per year in 2018 and 2019, much more than is consistent with 2.5% inflation over the medium term. By 2020 the rise in wage costs is expected to be better aligned with the target. The outlook is for unit labour costs to rise less in 2017 than was projected in August but to rise broadly in line with the August forecast in the next few years.

Because of Statistics Iceland's revision of GDP growth figures for the past few years, the output gap is estimated to have been larger at year-end 2016 than was assumed in the Bank's August forecast. The prospect of weaker GDP growth this year means that the output gap is expected to be smaller, however. It is estimated to measure just under 2% of potential output by the end of the year, down by about 1 percentage point from the August forecast. As was the case in August, it is expected to narrow further and virtually disappear by end-2020.

The 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 an assessment of activities in individual markets and how monetary policy is transmitted to the real economy. All of these factors are subject to uncertainty. Changes in key assumptions could lead to developments different from those provided for in the baseline forecast.

Inflation could rise higher than is provided for in the baseline example. Unemployment is very low, for instance, and many wage settlements are set to expire soon. As a result, contractual wage increases could turn out larger than is assumed in the baseline forecast, and wage drift could be underestimated. Because firms have at best limited scope for pay increases – particularly firms in the tradable sector – there is a risk that large wage rises will pass more quickly and more strongly through to prices than they did following the last wage settlements, when improved terms of trade gave companies greater ability to absorb cost increases. The assumptions in the baseline forecast concerning continued appreciation of the króna through 2018 and slower rises in house prices could also prove incorrect. Demand pressures in the economy could be underestimated, in part because of an overestimation of growth in potential output, which is considered to have been well above its historical average in the recent term as a result of strong importation of production factors. Demand pressures could also prove to be underestimated if the fiscal stance eases more than is assumed in the baseline forecast. All of this could test the newly established anchor for inflation expectations.

Inflation could also 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 a weaker recovery of global oil and commodity prices could also dampen domestic economic activity and prolong the impact of imported deflation on domestic inflation. The rise in house prices could slow more abruptly than is assumed in the forecast. The impact of increased international competition on domestic retailers' scope to raise prices could also be underestimated. Although the baseline forecast attempts to account for the effects of strong factor importation, potential output could nevertheless be underestimated and the inflationary pressures based on the cyclical position of the economy could therefore be overestimated.

II The interest rate decision

The MPC discussed the Bank's most recent *Financial Stability* report; they also discussed financial institutions' position and risks to the financial system.

Committee 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 virtually unchanged between meetings. Members also discussed whether the monetary stance was appropriate in view of the inflation outlook, as the Committee had decided to lower the Bank's key rate by 0.25 percentage points in October in response to signs of diminishing demand pressures in the economy.

In this context, the MPC took account of the Central Bank's new macroeconomic forecast, published in *Monetary Bulletin* on 15 November, according to which GDP growth would slow significantly this year. This easing was more pronounced than the Bank had projected in August, but consistent with the Committee's assessment at its October meeting. According to the forecast, this was a result of a slowdown in export growth, after several strong years, and a pickup in import growth. Some members were of the opinion that some indicators implied that economic activity had not slowed as much as was suggested by the data underlying the forecast. In this context, it was pointed out that the first national accounts figures commonly underestimated investment. Furthermore, credit growth had gained pace in the recent term.

Committee members discussed developments in inflation, including the fact that inflation had been below target for nearly four years and, according to the forecast, would align with the target in mid-2018 and stay close to target for the remainder of the forecast horizon. They noted the slowdown in house price inflation, which had been the main driver of inflation during this period of below-target inflation. The Committee's assessment was that if this trend continued, it would offset the diminishing effects of the appreciation of the króna. It was pointed out that, based on the most recent figures, the difference between inflation measures with and without housing had begun to narrow.

Members also noted that the króna had appreciated since the last meeting. They considered it positive that exchange rate volatility had eased in recent months, inflation expectations were in line with the inflation target, and exchange rate movements during the year had had limited impact on inflation and inflation expectations.

The MPC discussed the easing of the fiscal stance in 2017 and the two preceding years, although the fiscal budget proposal for 2018 indicated that this should reverse in part in the years to come. They considered the fate of the budget proposal highly uncertain, however, and were of the view that further fiscal easing in coming years would require a correspondingly tighter monetary stance.

Members agreed that most indicators implied that the output gap had peaked but would remain relatively wide. They were of the view that this would call for a continued tight monetary stance so as to ensure medium-term price stability. The Committee considered reduced demand pressures and an improved inflation outlook broadly consistent with its expectations at the October meeting, when it had decided to lower the Bank's key rate; furthermore, the Bank's real rate was broadly the same as it had been after the October interest rate decision. In view of this, no members saw any reason to change interest rates at present.

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

MPC members agreed that the current monetary stance appeared sufficient at present to keep inflation broadly at target. Whether this would turn out to be the case in the coming term would depend on economic developments, including fiscal policy and the results of wage settlements.

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 December 2017.

The Monetary Policy Committee of the Central Bank of Iceland

Minutes of the Monetary Policy Committee meeting, December 2017

Published 27 December 2017

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 December 2017, during which the Committee discussed economic and financial market developments, the interest rate decision of 13 December, and the communication of that decision.

I Economic and monetary developments

Before turning to the interest rate decision, members discussed the domestic financial markets, financial stability, the outlook for the global economy and Iceland's international trade, the domestic economy, and inflation, with emphasis on information that has emerged since the 15 November interest rate decision.

Financial markets

Between meetings, the króna depreciated by 1.6% in trade-weighted terms. Over this same period it fell 1.3% against the US dollar, 1.8% against the euro, and 3.0% against the pound sterling. The Central Bank conducted no transactions in the interbank foreign exchange market between meetings. The Bank's net foreign exchange purchases year-to-date have totalled 70.3 b.kr. (603 million euros). Central Bank transactions have accounted for just under 21% of total foreign exchange market turnover this year.

In terms of the Central Bank's real interest rate, the monetary stance was broadly unchanged since the MPC's November meeting, and the Bank's real rate in terms of the average of various measures of inflation and inflation expectations was still about 1.8%.

Interest rates in the interbank market for krónur were unchanged between meetings. There was no turnover in the market during this period, but turnover year-to-date totalled 123.8 b.kr., a significant increase over the same period in 2016.

Treasury bond yields were broadly unchanged between meetings. Nominal Treasury bond yields had risen by as much as 0.1 percentage point, but yields on most indexed Treasury and Housing Financing Fund bonds had declined by 0.1 percentage point. Furthermore, financial institutions' deposit and lending rates were virtually unchanged since the November meeting.

Risk premia on Treasury foreign obligations had declined marginally between meetings. The CDS spread on the Treasury's five-year US dollar obligations had fallen by 0.1 percentage point, to 0.7%, while the spread between the Treasury's eurobonds and comparable bonds issued by Germany had fallen by nearly 0.3 percentage points, to around 0.8 percentage points.

Most financial institutions' research departments expected that the Bank's interest rates would be held unchanged in December, although some expected a 0.25-point reduction. As grounds for unchanged interest rates, they cited the virtually unchanged inflation outlook; the newly published national accounts, which showed that GDP growth in the first nine months of 2017 had outpaced the Central Bank's November forecast; and that uncertainty persisted concerning the near-term fiscal stance and the results of wage agreements. Weaker growth in exports and private consumption than had been forecast in November was considered the main rationale for a rate cut.

Broad money growth had eased slightly. M3 adjusted for the deposits held by the failed banks grew by 6.7% year-on-year in October but had grown 8.3% in Q3. Annual growth in household deposits was still rapid, while growth in corporate and financial company deposits had slowed.

Growth in lending to resident entities remained robust. After adjusting for the Government's debt relief measures, the total stock of credit system loans to resident borrowers increased in nominal terms by just under 6% year-on-year in October, as opposed to 5½% in Q3. The October growth rate was about 6½% if the foreign credit stock is calculated at constant exchange rates. As before, credit growth is due to an increase in lending to households and businesses. Nominal lending to households increased by 5% year-on-year in October, after adjusting for the Government's debt relief measures, and nominal lending to businesses by 8%. Calculated at constant exchange rates, the stock of corporate loans had grown by approximately 9½% year-on-year in October.

The Nasdaq OMXI8 index had fallen by 4.4% between meetings and by 4.6% since the beginning of the year. Turnover in the NASDAQ Iceland main market totalled around 600 b.kr. over the first eleven months of the year, about 14% more than over the same period in 2016.

Global economy and external trade

According to the Organisation for Economic Co-operation and Development's (OECD) November forecast, GDP growth and world trade will be stronger in 2017 and 2018 than in the OECD's June forecast. Global GDP growth for 2017 and 2018 is projected at 3.6% and 3.7%, respectively, about 0.1 percentage points above the OECD's June forecast for both years. The forecast for 2017 GDP growth among Iceland's main trading partners has been revised upwards by 0.3 percentage points, to 2.3%. The forecast for 2018 has also been revised upwards, to 2.2%. Trading partners' GDP growth according to the OECD forecast outpaces the Central Bank's November forecast of 2.2% this year and 2% next year. The

OECD revised its inflation forecast for Iceland's trading partners downwards by 0.2 percentage points, to 1.8%, whereas the forecast for 2018, also 1.8%, is unchanged.

According to preliminary figures from Statistics Iceland, Iceland's goods trade generated a 13 b.kr. deficit in November and a 156 b.kr. deficit in the first eleven months of the year, at constant exchange rates. The deficit over the same period in 2016 was 88 b.kr. Export values rose by 9% year-on-year at constant exchange rates, while import values rose 21%. Three-month growth in imports measured 30%, the strongest since July 2006. The surge in import growth is due in particular to an increase in the value of imported transport equipment, petrol, lubricants, and investment goods. At the same time, nominal export growth has eased, owing especially to slower growth in marine product export values.

The listed global market price of aluminium had fallen by just over 4% since the MPC's November meeting, and the average November price was up more than 21% year-on-year. Preliminary figures on developments in foreign currency prices of marine products indicate that prices rose between months in October but declined by 0.6% year-on-year in the first ten months of 2017. Oil prices had risen by 1.8% between meetings and 14% between years.

In terms of relative consumer prices, the real exchange rate rose 1.1% month-on-month in November, to 99.3 points. It had risen by 3.2% from the September trough. Over the first eleven months of 2017, the real exchange rate rose 13% year-on-year because the nominal exchange rate rose 13.3% and inflation in Iceland was 0.1 percentage points below the trading partner average.

The domestic real economy and inflation

According to preliminary figures published by Statistics Iceland in December, GDP growth measured 3.1% in Q3/2017. Domestic demand grew by 10.7% during the quarter, as consumption and investment grew by 8.6% between years. The contribution of inventory changes was therefore unusually pronounced during the quarter. Exports were virtually unchanged year-on-year, while imports grew by 11.6%, and the contribution from net trade was therefore negative. For the first nine months of the year, GDP growth measured 4.3%, reflecting the offsetting effects of 7.4% growth in domestic demand and the negative contribution from net trade. The main drivers of GDP growth for the period were private consumption and services exports.

GDP growth in the first three quarters of 2017 outpaced the forecast in the November *Monetary Bulletin*. The main reason is that the contribution from inventory changes was considerably stronger than expected in Q3, investment grew more rapidly, and revised national accounts figures showed H1/2017 GDP growth at 4.9%, up from the previous estimate of 4.3%.

The current account balance was positive by 68.1 b.kr., or 9.9% of GDP, in Q3/2017. This is less than in Q3/2016, when the surplus measured 15.3% of GDP. The surplus for the quarter was due to a 118 b.kr. surplus on services trade, which was offset by a 47 b.kr. deficit on goods trade and a 2 b.kr. deficit on primary and secondary income. The revision of previously published figures showed that the surplus was about 1 b.kr. smaller in H1/2017.

The robust current account surplus during the quarter, plus favourable price and exchange rate effects, resulted in a positive net international investment position (NIIP) amounting to 4.3% of GDP, whereas the NIIP had been negative in Q2. Restructuring of pharmaceuticals companies led to significant changes in external assets and liabilities. Pharmaceuticals companies’ assets declined by 365 b.kr. (14% of GDP) and their liabilities fell by 340 b.kr. (13% of GDP) in Q3.

In Q4 to date, key indicators of private consumption, such as payment card turnover and new motor vehicle registrations, suggest that household demand is still growing strongly. Leading indicators such as retail executives’ expectations concerning domestic demand are also stronger than in Q3. Furthermore, the Gallup Consumer Confidence Index was higher, on average, in October and November than in Q3. In November the index measured 124, about 9 points lower than in November 2016, despite having risen since Q3.

According to the results of Gallup’s winter survey, carried out in November and December among Iceland’s 400 largest companies, executives were very upbeat about the current economic situation and less pessimistic about the outlook six months ahead than in the autumn survey. They were slightly less positive than in the summer survey, however. About 73% of respondents considered the current situation good, and about 23% considered it neither good nor poor. Just under 11% of executives expected economic conditions to improve in the next six months, and about 65% expected conditions to remain unchanged (i.e., good). Executives in all sectors except transport, tourism, and manufacturing were more optimistic than in September, while in all sectors except fishing they were more pessimistic than they were a year ago. Executives in manufacturing, fishing, transport, and tourism were more pessimistic than others about the outlook six months ahead, with sentiment among transport and tourism executives deteriorating the most since the autumn survey. Just over 24% of respondents expected conditions to be worse in six months’ time, slightly more than in the survey taken a year ago. Attitudes towards domestic demand were slightly more optimistic than in the autumn survey, while attitudes towards foreign demand were considerably more positive.

According to the winter survey, firms interested in recruiting staff in the next six months outnumbered those planning redundancies by about 15 percentage points, after adjusting for seasonality. The spread is somewhat narrower than in the autumn survey and about 14 percentage points narrower than in last year's winter survey. Sentiment was most pessimistic in the fishing industry, where firms planning redundancies outnumbered those planning to recruit by 18 percentage points, whereas sentiment was most positive in transport, transit, and tourism, where the share of firms planning to recruit outnumbered those planning to downsize by almost 50%. In other sectors, the share of companies planning to recruit was larger than the share planning to lay off staff by 15-22 percentage points.

After adjusting for seasonality, about 32% of executives considered themselves short-staffed, a slight decline since the last survey. The ratio was highest in the construction industry, where 40% of executives considered themselves understaffed, and lowest in retail and wholesale trade, where 19% of executives reported difficulties in filling available positions. In other sectors, the ratio lay in the 22-38% range.

About 53% of executives reported that they would have difficulty responding to unexpected demand, after adjusting for seasonality. This was a slightly higher ratio than in the autumn survey. About ⅔ of executives in the fishing and construction sectors were pessimistic about their ability to respond to an unexpected increase in demand. The least strain on production factors was in retail and wholesale trade, where about a third of executives said they would have difficulty responding to unexpected demand. In other sectors, the ratio lay in the 36-57% range.

The wage index rose by 0.1% month-on-month in October and by 7.2% year-on-year, and real wages according to the index were up 5.2% year-on-year in October.

Statistics Iceland's nationwide real estate price index, published at the end of November, rose 0.7% month-on-month when adjusted for seasonality, and by 18.1% year-on-year. The capital area real estate price index, calculated by Registers Iceland, rose by 0.7% month-on-month in October, adjusted for seasonality, and by about 17.6% year-on-year. The twelve-month rise in real estate prices therefore continues to ease, after peaking at nearly 24% in May. The number of purchase agreements registered nationwide declined by 6.4% year-on-year in the first ten months of 2017. The average time-to-sale for flats in the greater Reykjavík area was about 2.7 months in October, as compared with 1.8 months in October 2016.

The CPI declined by 0.16% month-on-month in November, and twelve-month inflation measured 1.7%. It had fallen by 0.2 percentage points between months. The CPI excluding the housing component had declined by 2.3% year-on-year, however. Most measures of underlying inflation suggested that it had risen in November and lay in the 0.7-2% range.

Reduced international airfares had the strongest effect in November, or about 0.2 percentage points. Reduced clothing and footwear prices also had a considerable impact, which is unusual in November. The clothing and footwear component has fallen nearly 9% between years. Offsetting this was an increase in the cost of owner-occupied housing in November, although the pace of the increase in this component has continued to ease in the recent term. Private services prices have fallen by 0.5% between years, and services inflation has subsided since the last meeting.

According to Gallup's winter survey, conducted in November and December, household inflation expectations were virtually unchanged since the autumn survey, at just under 3%, and their two-year expectations had fallen by 0.2 percentage points between surveys, to 3%. In a comparable survey among corporate executives, respondents expected inflation to measure 2.5% one year ahead and 3% two years ahead. Their expectations were broadly unchanged from the autumn survey. The breakeven inflation rate in the bond market has changed little since the MPC's November meeting, with the five-year breakeven rate measuring about 2.6% and the ten-year rate about 2.8%.

II The interest rate decision

The Governor updated the Committee on work beginning within the Bank on a review of all of the Bank's policy instruments.

Committee 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 also discussed whether the monetary stance was appropriate in view of the inflation outlook, as the Committee had decided at its November meeting to keep the Bank's key rate unchanged because most indicators implied that the output gap had peaked.

The MPC discussed the newly published national accounts, which assessed GDP growth for the first nine months of the year at 4.3%, more than previous figures had indicated. In the Committee's opinion, the national accounts suggested that GDP growth for the year as a whole would be stronger than was forecast in the November *Monetary Bulletin*. Members also agreed that the composition of GDP growth was less favourable than had been forecast in November, as export growth continued to ease, while domestic demand grew faster, owing in part to more fiscal slack in 2017 than had previously been expected.

The Committee agreed that the inflation outlook was broadly unchanged since the previous meeting, as headline inflation measured 1.7% in November and had fluctuated between 1½% and 2% for some time. Members considered it a positive sign that house price inflation had continued to ease, which, other things being equal, should contribute to lower inflation, although it would be offset by the waning effects of past appreciation of the króna. It was also pointed out that because GDP growth in Europe had firmed up, it was likely that imported deflation would be less than it had been in the recent term.

Committee members considered it positive that the foreign exchange market had been well balanced since the last MPC meeting. The exchange rate of the króna had been broadly stable, and exchange rate volatility had receded. Furthermore, recent measurements indicated that inflation expectations remained well in line with the target, and the Bank's real rate had been largely unchanged in recent months.

The Committee discussed whether to change interest rates or hold them unchanged. It was highlighted in the discussion that signs of diminishing demand pressures in the economy had been the main reason for the rate cut in October. National accounts figures now 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. It was pointed out that new figures showed that H1 GDP growth had been more in line with the Bank's August forecast. It was noted as well that, as had often happened before, investment had been underestimated in the first national accounts release, and the latest figures indicated that it was growing rapidly. One of the reasons for the uptick in domestic demand was a sizable fiscal stimulus. It was therefore likely that year-2017 GDP growth would exceed previous forecasts. The view was expressed that the probability of a further reduction in interest rates had subsided. MPC members leaned towards keeping interest rates unchanged, but one member was of the view that there could even be grounds for a rate hike. The Committee agreed that it was appropriate to hold rates unchanged for the present and await further data.

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.

The committee agreed that the outlook was for continued strong demand pressures in the domestic economy, which called for a tight monetary stance. Members also agreed that, if fiscal policy in 2018 proved more accommodative than had been assumed in November, it would require a tighter monetary stance than would otherwise be needed. Committee members agreed that, in the coming term, the monetary stance would depend on economic developments, including fiscal policy and the results of wage settlements.

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 7 February 2018.

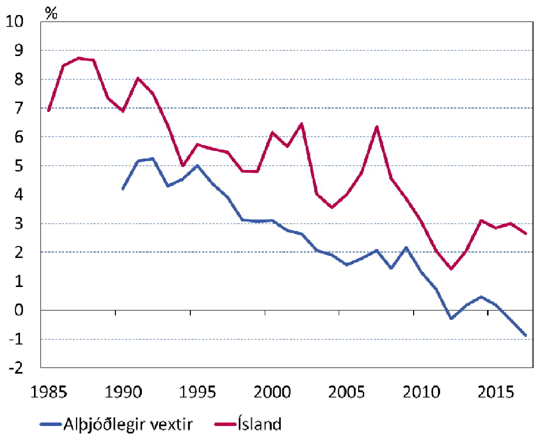
SEÐLABANKI ÍSLANDS

Vextir, verðtrygging og staða heimilanna

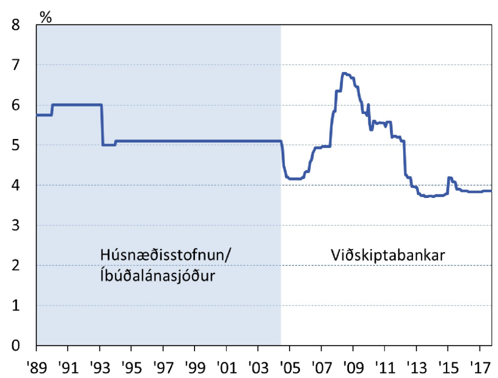
Már Guðmundsson seðlabankastjóri
Fundur um vexti og verðtryggingu
Háskólabíó 7. október 2017

Langtíma raunvextir hafa lækkað á alþjóðlegum vettvangi og einnig hér á landi

Verðtryggðir ríkisskuldabréfavextir 1985-2016[1]

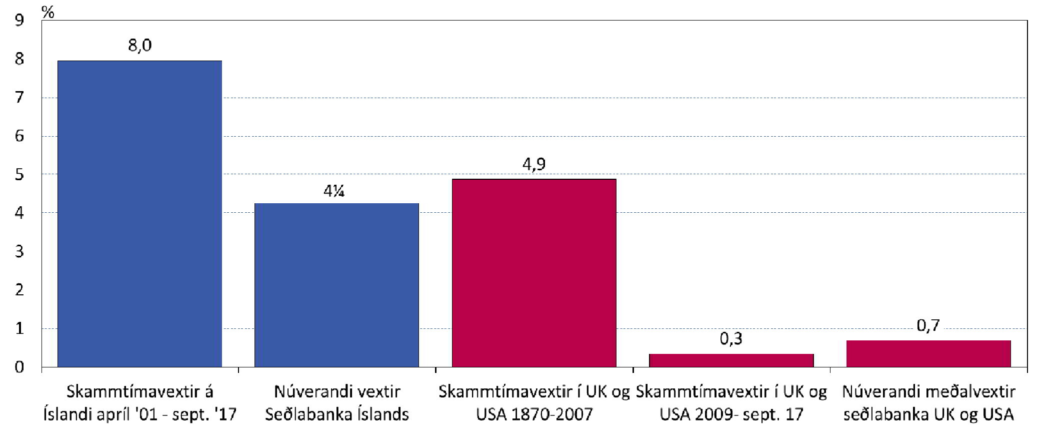


Vextir verðtryggðra íbúðalána frá 1989



1. Verðtryggðir langtíma ríkisskuldabréfavextir (10-20 ára). Alþjóðlegu vextirnir eru einfalt meðaltal fyrir Bandaríkin (frá 1999), Bretland og Þýskaland. Íslensku gögnin eru samsett úr gögnum um frumútboð spariskírteina og ávöxtun íbúðabréfa og verðtryggðra ríkisbréfa. Talan fyrir 2017 er meðaltal fram til loka september.
Heimildir: Englandsbanki, Seðlabanki Bandaríkjanna, Seðlabanki Evrópu, Íbúðalánasjóður, Seðlabanki Íslands.

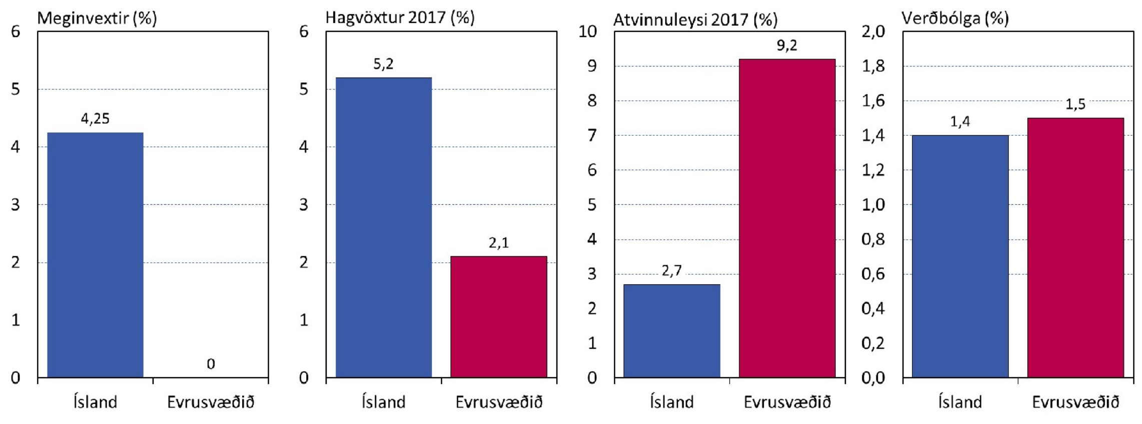
Seðlabankavextir eru lágir hér á landi í innlendu og alþjóðlegu sögulegu samhengi



Núverandi meginvextir Seðlabanka Íslands og meðaltal meginvaxta seðlabanka Bretlands og Bandaríkjanna og meðaltal skammtímavaxta á millibankamarkaði í þessum þremur löndum yfir ólík tímabil.
Heimildir: Jorda, O., M. Schularick og A. M. Taylor (2014). „The great mortgaging: Housing finance, crises, and business cycles", National Bureau of Economic Reserach, NBER Working Paper Series, nr. 20501, Seðlabanki Íslands.

Vaxtamunur gagnvart viðskiptalöndum endurspeglar mismunandi efnahagsástand

Ísland og evrusvæðið: vextir og aðrar hagstærðir[1]



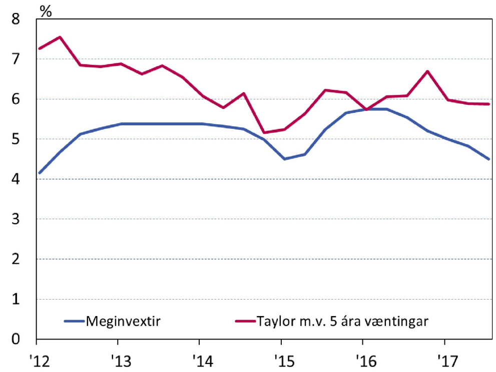
1. Meginvextir þann 6. október 2017 en spá *Peningamála* 2017/3 fyrir hagvöxt og atvinnuleysi á Íslandi en septemberspá *Consensus Forecasts* fyrir evrusvæðið. Tölur fyrir verðbólgu eru ársverðbólga í september 2017.
Heimildir: Consensus Forecasts, Hagstofa Íslands, Seðlabanki Íslands.

Núverandi seðlabankavextir með þeim lægstu sem verið hafa síðan verðbólgumarkmið var tekið upp, sérstaklega með tilliti til efnahagsástands

Meginvextir Seðlabanka Íslands[1]

Janúar 2001 - október 2017

Vextir Seðlabankans og reiknaðir viðmiðunarvextir[2]

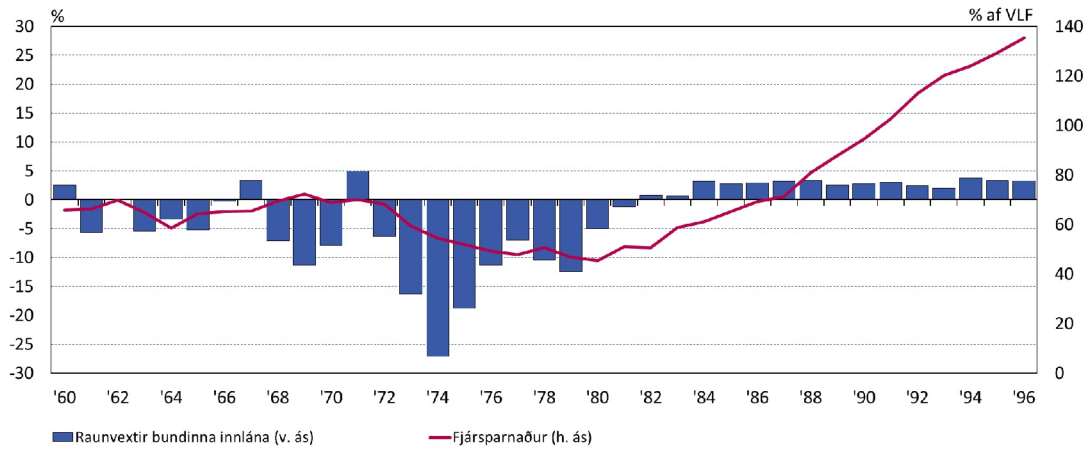


1. Meginvextir Seðlabankans eru vextir á 7 daga veðlánum fram til 31. mars 2009, vextir á viðskiptareikningum innlánsstofnana í Seðlabankanum frá 1. apríl 2009 til 30. september 2009, meðaltal vaxta á innlánsreikningum og á 28 daga innstæðubréfum frá 1. október 2009 til 20. maí 2014 og vextir á 7 daga bundnum innlánum frá 21. maí 2014. Mánaðarleg meðaltöl. Gögn til og með 6. október 2017. 2. 1. ársfj. 2012 – 3. ársfj. 2017. Taylor-vextir eru reiknaðir út frá jöfnunni: $i = (r^* + \pi) + 0{,}5(\pi - \pi^T) + 0{,}5y$ þar sem i eru Taylor-vextirnir, r^* eru jafnvægisraunvextir (gert ráð fyrir að séu 2% á tímabilinu), π er verðbólguvæntingar, π^T er verðbólgumarkmiðið og y er framleiðsluspenna (*Peningamál* 2017/3). Notast er við verðbólguvæntingar út frá könnun meðal markaðsaðila.

Heimild: Seðlabanki Íslands.

Handstýrðir vextir og mikil verðbólga grófu undan fjársparnaði landsmanna – verðtrygging sneri þeirri þróun við.

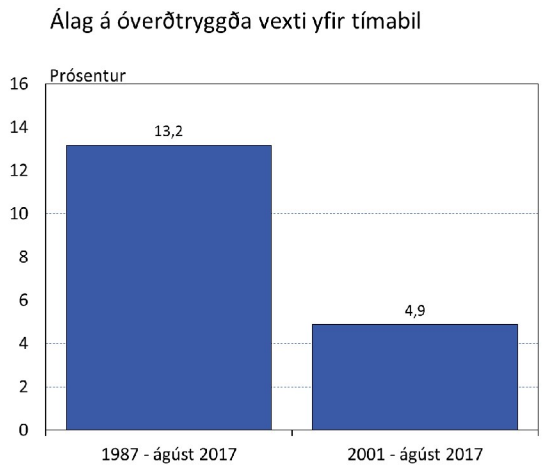
Raunvextir og fjársparnaður 1960-1996[1]

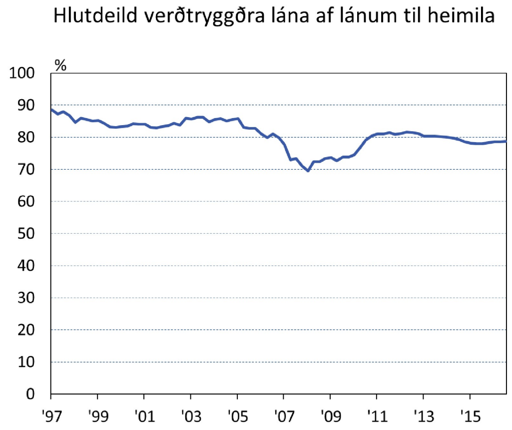


1. Fjársparnaður er innlendur sparnaður sem inniheldur bæði frjálsan og kerfisbundinn fjársparnað.

Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

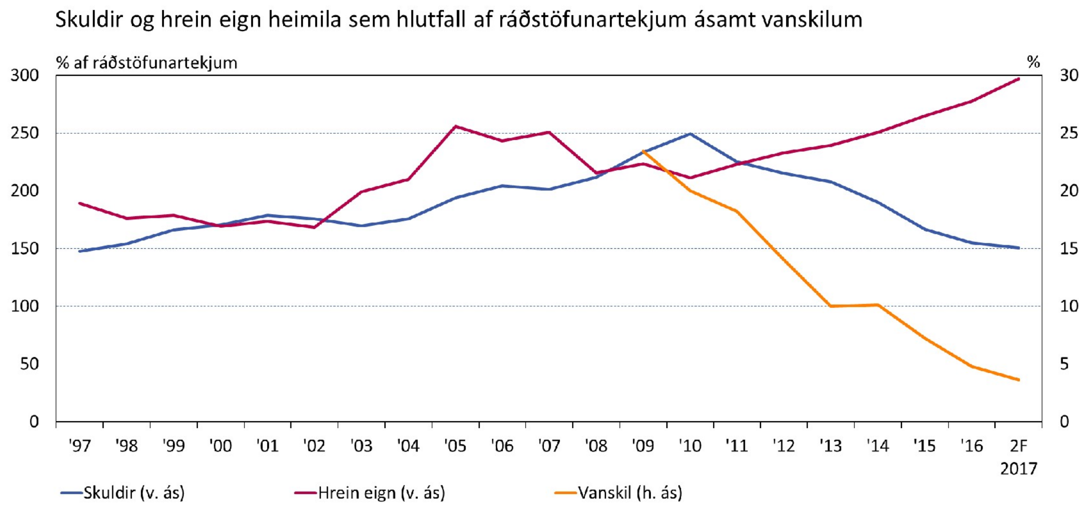
Óverðtryggð lán hafa verið dýrari fyrir lántakandann





Heimild: Seðlabanki Íslands.

Eigna og skuldastaða heimilanna hefur ekki verið betri en nú í langan tíma



Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

Monetary policy: achievements and challenges

Már Guðmundsson, Governor of the Central Bank of Iceland.
Monetary policy meeting of the Iceland Chamber of Commerce, held at Gamla Bíó in Reykjavík on 16 November 2017

Madame Chairman, honoured guests,

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

In my speech at this same meeting last year, I noted that the Icelandic economy had seldom been stronger, as we were experiencing the combined effects of robust GDP growth, full employment, large rises in real wages, below-target inflation, a current account surplus, a strong international investment position, and lower private sector debt than had been seen in years. At that time, we had also achieved a historical milestone in bringing inflation expectations back to target by most measures. The outlook was positive as well, with the prospect of continued strong GDP growth, a current account surplus, and target-level inflation throughout the forecast horizon.

But there were concerns, too: the potential for overheating, the possible overvaluation of the króna, and the uncertainty about what would happen after the general liberalisation of the capital controls.

Now, one year later, the economy is still very strong, yet some important changes have taken place – changes that in some respects have reduced the potential risks to price stability and financial stability.

First of all, the vast majority of the capital controls have been lifted, and these risks have not materialised. Short-term exchange rate volatility did indeed increase, but this was expected, and it was not pronounced enough to cause financial instability, as I will discuss further in a moment. And exchange rate volatility has subsided this autumn.

Second, the historical achievement of monetary policy, which was on the horizon last year, has now been confirmed much more convincingly. The credibility of monetary policy has increased, as can be seen perhaps most clearly in inflation expectations, which are now much more firmly anchored to the target. It is not least this that made it possible to lower the Bank's key interest rate by a full percentage point in this one year, even though demand pressures in the economy were growing until recently and interest rates were already low in historical context in 2016, after adjusting for the business cycle position. I explained this in detail in my speech last year.

Third, GDP growth appears to be approaching its long-term trend rate more rapidly than previously anticipated, and indications that the positive output gap has already peaked have grown stronger. As a result, the likelihood of overheating has receded, although economic policy mistakes and decisions made in the labour market could certainly increase that likelihood once again.

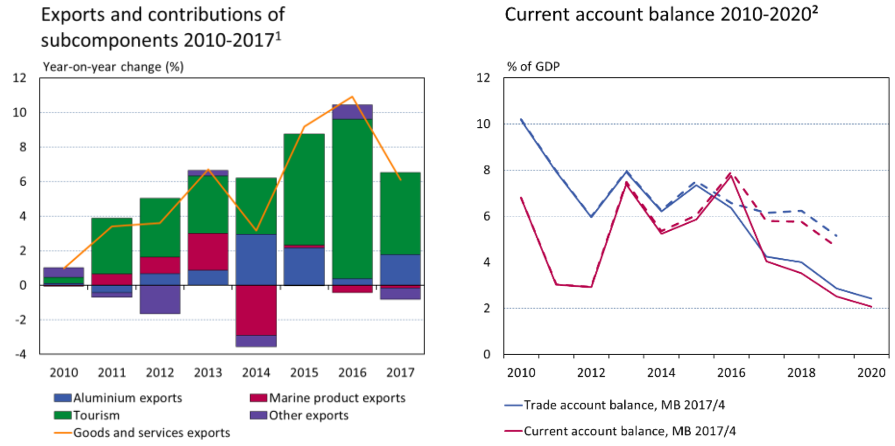
As was the case in 2016, the economic outlook is positive, according to the Central Bank's baseline forecast, published yesterday. GDP growth will slow over the next three years, but this is both desirable and inevitable. The current account surplus will be smaller than previous forecast, but a surplus will remain. There will be full employment, an real wages will rise more over the entire period than can be expected in the long run. Inflation will converge with the target in mid-2018 and remain close to target for the rest of the forecast horizon. This is one of the best inflation forecasts I have seen in my entire career. But it is a baseline forecast, and unforeseen external shocks, economic policy, and decisions made in the labour market could easily change the situation significantly.

Current situation and outlook

Let us now take a closer look at several aspects of the current economic situation and outlook.

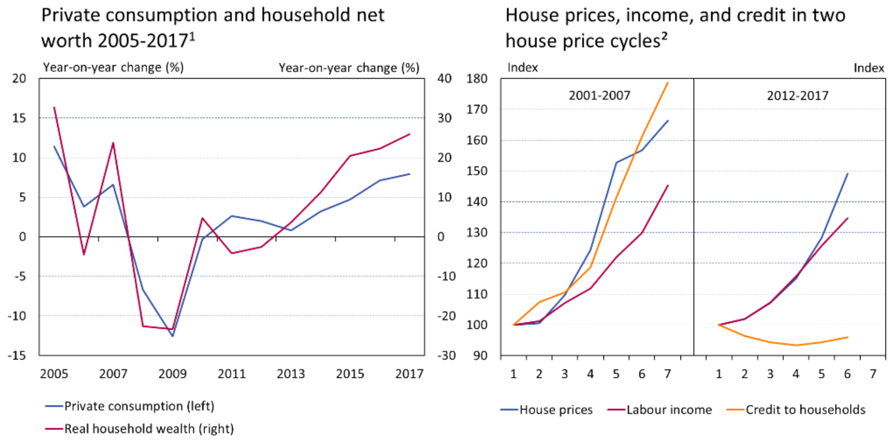
Chart 1 shows how export growth has slowed this year from its 2016 peak yet remains robust. The combination of weaker export growth and increased imports explains the year-on-year slowdown in GDP growth. It also explains the narrower current account surplus, although a deterioration in terms of trade is also a factor. The current account surplus is projected at 2% of GDP by the end of the forecast horizon and could easily be eroded by a surge in demand and/or lower export revenues.

Chart 1



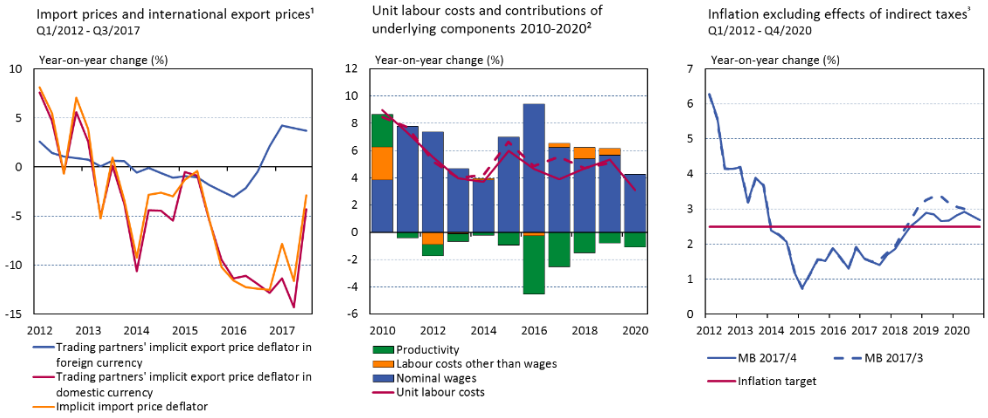
As Chart 2 shows, both private consumption growth and rising house prices are due mainly to increased real incomes and households' improved financial position. This differs greatly from the situation in pre-crisis Iceland, where increased household leverage played a leading role, but as can be seen in the chart on the right, lending to households has not increased in real terms since 2012.

Chart 2



The fact that inflation has been low in recent years despite steep rises in wages and house prices stems primarily from two things: on the one hand, positive supply shocks in the form of strong export growth and improved terms of trade, which have pushed the exchange rate of the króna upwards, and on the other hand, price deflation in international goods trade. Import prices have therefore fallen steeply in krónur terms, as can be seen at the left in Chart 3. What would happen when this imported deflation turned around was always a source of concern. Such a development now appears to be on the horizon, as can be seen in the chart. But fortunately, the rise in unit labour costs seems to be losing pace, as can be seen in the chart at the centre, and house prices appear to have peaked. The inflation outlook is therefore favourable, as can be seen in the chart at the right, which looks past the changes in value-added tax that could possibly be implemented in the near future.

Chart 3



"Missing" inflation

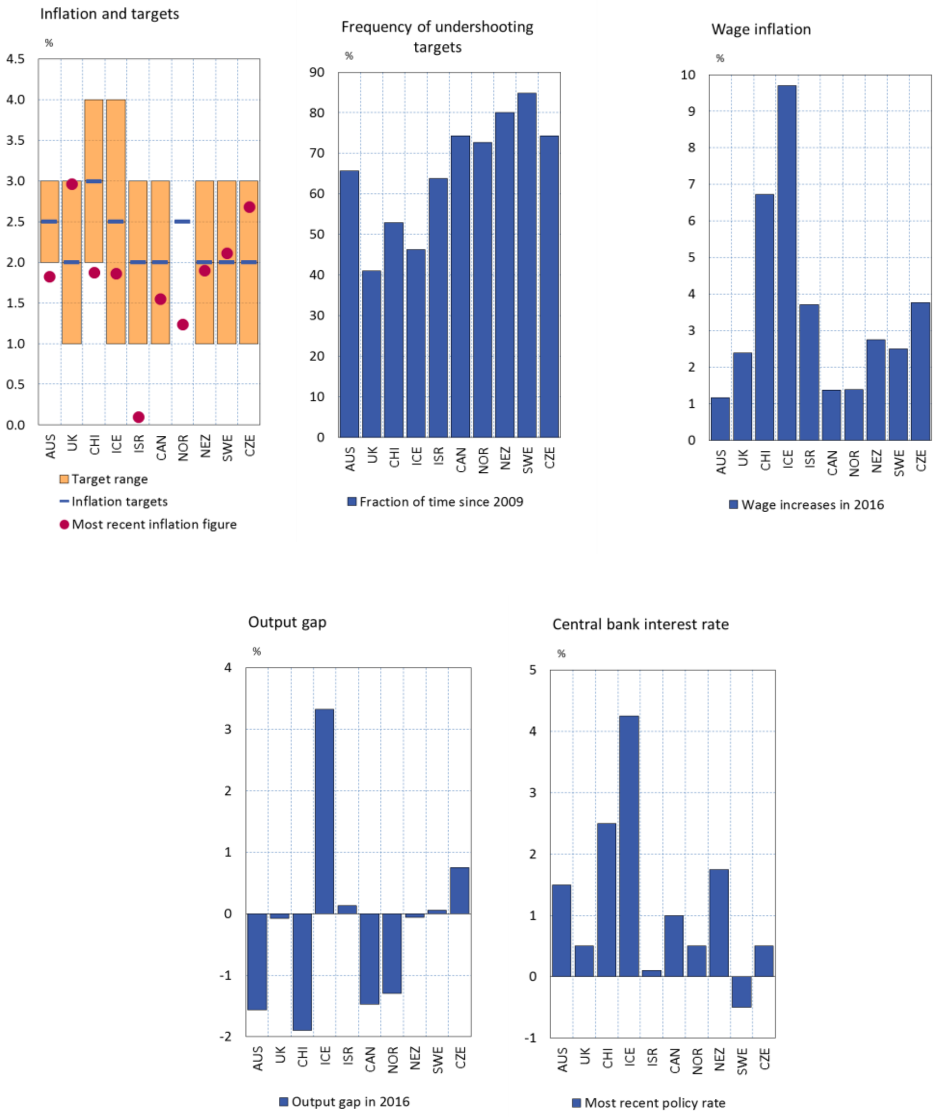
Headline inflation has been below the Central Bank's target for nearly four years, even though the negative output gap closed and then turned positive some time ago and wages have risen well in excess of what, in an average year, would be deemed consistent with the inflation target.

This is not a unique case, however. In international circles, there is widespread discussion of "missing" inflation, which generally refers to the fact that wage rises are astoundingly small given the business cycle position in the country concerned. For example, countries as dissimilar as the US and Sweden are considered to be at full employment, yet wage increases are smaller than is consistent with the inflation target. In some countries, such as the US, this may be partly because the slack in the labour market is actually larger than conventional measurements indicate, as the labour participation rate is historically rather low. But this does not tell the whole tale, and in some countries it is not a very robust explanation. Given how widespread this phenomenon is, and given that it is in some respects independent of domestic conditions and economic policy, there are a number of indications that global factors such as increased cross-border mobility of labour and other production factors, international value chains, and the existence of a large excess labour force in some emerging market economies play an important role in it.

An underestimated slack in the labour market is hardly a factor in Iceland, as the labour participation rate is at a historical high and wage rises are substantial. Labour importation and indirect pressures from an unutilised lower-income labour force in other countries have clearly had a dampening effect on wage increases, however. Even so, inflation is low. This is true of other economies as well. But it is less of a puzzle than wage developments in industrialised countries overall: global trends have been favourable to them, as can be seen in improved terms of trade and rising exchange rates. It is well known that this can create conditions where strong GDP growth and sizeable pay rises can coincide for a time with low inflation. And one difference between Iceland and many other industrialised economies is that in other countries there have been concerns that inflation expectations would fall too steeply and become anchored below target.

In order to place Iceland in this context, let us look at Chart 4, which gives some relevant metrics for several small and medium-sized inflation-targeting countries.

Chart 4

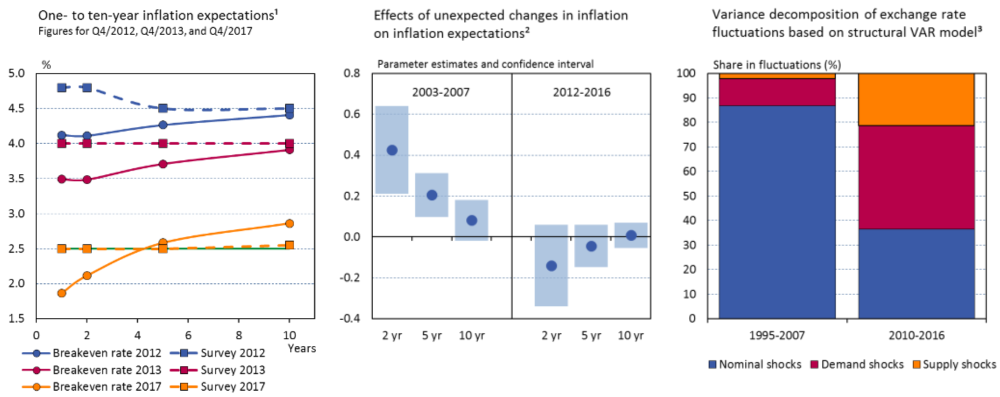


In this context, some of the discussion has centred on the extent to which low inflation is a problem if it is paired with robust GDP growth and full capacity utilisation, particularly if these are a result of positive supply shocks. In that case, perhaps the problem lies in how the inflation target is presented and understood. This will call for more flexibility and a longer horizon for the target, which was one of the proposals explored in the Central Bank's 2010 report on monetary policy in post-capital controls Iceland.[1]

Monetary policy milestones

I mentioned earlier the success we have had with monetary policy – success that was visible a year ago and is even more obvious now. This past September, the Central Bank of Iceland issued a *Special Publication* entitled *Monetary policy based on inflation targeting: experience since 2001 and post-crisis changes.*[2] In addition to discussing the topics in the title, the report maps out this success with monetary policy. Chart 5 shows what that entails: inflation expectations are at target, unexpected changes in inflation that strongly affected short- and long-term inflation expectations in the past no longer do so, and movements in the exchange rate of the króna function much more as shock absorbers and less as sources of shocks than they used to. In short, monetary policy with a flexible exchange rate is much more successful now than it had been before 2012, when the Bank published its report entitled *Iceland's currency and exchange rate policy options*.[3]

Chart 5



[1] *Special Publication* no. 4, Monetary Policy in Iceland after capital controls. Report from the Central Bank of Iceland to the Minister of Economic Affairs, December 2010: https://www.sedlabanki.is/library/Skraarsafn/Serrit/Peningastefnan_eftir_hoft.pdf

[2] *Special Publication* no. 11. Monetary policy based on inflation targeting: experience since 2001 and post-crisis changes, September 2017: https://www.sedlabanki.is/library/Skraarsafn/Serrit/Serrit_nr_%2011.pdf

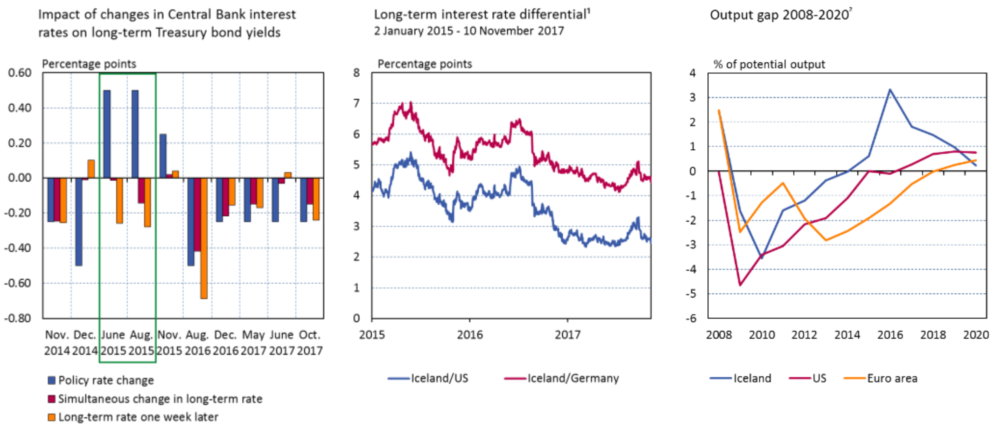
[3] *Special Publication* no. 7. Iceland's currency and exchange rate policy options, September 2012: https://www.sedlabanki.is/library/Skraarsafn/EMU-skýrsla/Valkostir%20Íslands%20í%20gjaldmiðils-%20og%20gengismálum.pdf

Capital flow management tool

There have been proposals in the media recently to the effect that the special reserve requirement on foreign capital inflows for investment in the bond market and in high-yielding deposits be immediately reduced or even eliminated. In a Box in the newly published *Monetary Bulletin*, the Bank discusses this special reserve requirement. It does not agree with these proposals.

The special reserve requirement has functioned as intended, and monetary policy transmission along the interest rate channel has improved, as can be seen at the right in Chart 6. Without it, monetary policy transmission would have been shifted in greater measure to the exchange rate channel, leading to a stronger appreciation and increased exchange rate volatility, which would not have been terribly popular under current conditions. Although the goal is to lift the special reserve requirement, conditions do not warrant it as yet. It will probably be necessary to scale it back in increments as demand pressures in the domestic economy recede and growth in trading partner countries gathers more momentum. Current forecasts indicate that this will happen, as can be seen at the right in the chart. Long-term interest rates will reflect this, and the long-term interest rate differential will narrow.

Chart 6



Another important factor is that it is unclear what benefit the investments affected by the capital flow management measure have for Iceland at present. The Treasury's borrowing need is limited in historical context, and strictly speaking, the Treasury does not need the funds generated by the bonds in question. If the special reserve requirement were not in effect, the Central Bank would probably have to hold larger foreign exchange reserves so as to mitigate the risk associated with carry trade-related inflows and the potential for sudden outflows. This would be quite costly, as the global market returns on the reserves are unusually low at present. At the same time, foreign investors can expect attractive returns on Icelandic Treasury bonds, and the more stable the króna, the greater the risk-adjusted interest rate differential. In order to reduce that differential, the Central Bank would therefore need to allow increased exchange rate fluctuations, which would also exacerbate the risk faced by residents. Under current conditions, it can even be argued that for the Icelandic economy, the net benefit from such inflows is negative.

Nevertheless, the aim is to lift the special reserve requirement as soon as conditions warrant it and that it will not, as a general rule, be used under normal conditions. Even so, the Central Bank has considered it important to be able to activate it if the need arises. The special reserve requirement would then be a third line of defence, to support conventional economic policy and micro- and macroprudential tools.

In order for this to be possible after the capital controls have been lifted in full, a new statutory foundation (other than the Foreign Exchange Act) must be found for the special reserve requirement, which is primarily a monetary and macroprudential policy instrument. Furthermore, the efficacy of the special reserve requirement must be ensured once speculative derivatives trading in krónur has been re-authorised, as full liberalisation implies. The Central Bank is currently reviewing the technical foundations for the special reserve requirement and preparing proposals for statutory amendments pertaining to its application.

Exchange rate fluctuations

The new issue of *Monetary Bulletin* contains a Box on fluctuations in the exchange rate of the króna in international context. That article presents several points that should be borne in mind in any discussion of monetary policy and possible modifications to the monetary policy framework, including exchange rate policy. They are as follows:

- Short-term exchange rate volatility increased just after the capital controls were lifted, as had been expected and as the Monetary Policy Committee had pointed out in advance in its statements. This volatility has subsided in recent months (see the right side of Chart 7).
- If we look beyond the aftermath of the pegged exchange rate regime, the financial crisis, and the capital controls regime, it cannot be seen that the short-term fluctuations of the Icelandic króna have been vastly larger than other Nordic krónur that have flexible exchange rates, or commodity-exporters' currencies. These currencies also have periods of peak volatility.
- Long real exchange rate cycles are a well-known phenomenon, also in countries with a fixed nominal exchange rate (Chart 8).
- As has previously been noted, exchange rate movements have been more effective as shock absorbers in recent years than they were previously. Although more effective and more credible monetary policy plays a part in this, what is probably more important is that the capital controls – and now,

the capital flow management measure – have mitigated volatile capital flows, which can undermine economic stability, as experience has shown.

Chart 7

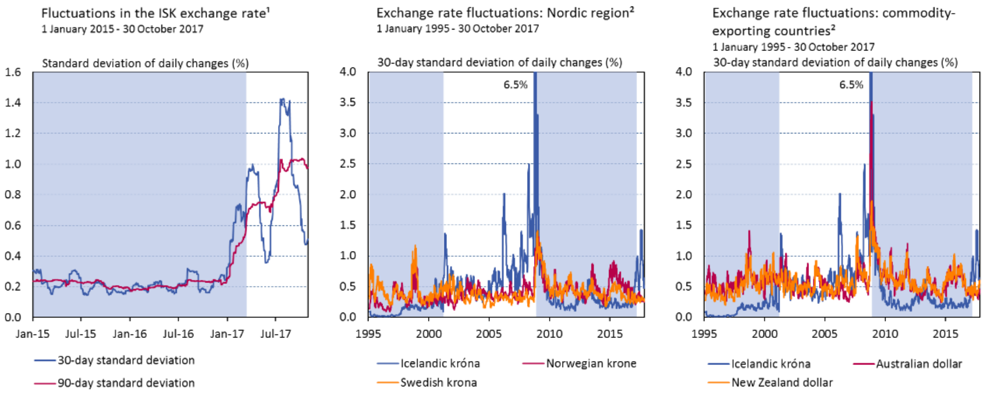
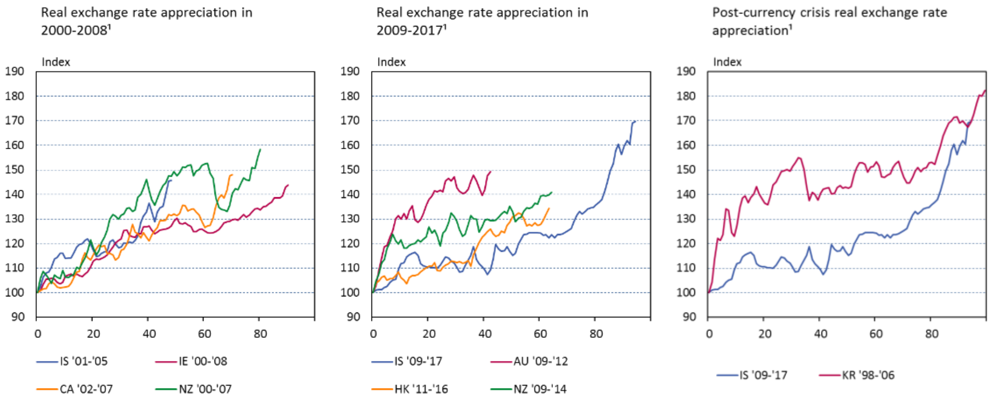


Chart 8



Review of the monetary policy framework and currency and exchange rate policy options

In closing, I would like to focus on the ongoing review of Iceland's monetary policy framework and currency and exchange rate policy options.

In the recent past, I have emphasised how important it is that this discussion should take into account what monetary policy can and cannot do. In the long run, monetary policy can deliver price stability, and in the short run it can also mitigate the effects of shocks and reduce fluctuations in output and employment. But monetary policy cannot have a long-term impact on the real exchange rate. As such, it can do little to mitigate the crowding-out effect of strong growth in a new export sector. If it tried to, the effect would be only temporary, and it would come at the expense of sacrificing the objectives with which monetary policy has been entrusted – objectives that it can achieve. Industrial and fiscal policies can have such a real impact over the long term, however, and it is to them that concerned parties should turn.

But it is possible to choose from among various options on the spectrum between a rigid peg and a free-floating exchange rate. And it is possible to adopt another currency, either unilaterally or in bilateral or multilateral cooperation.

These were the options explored in the Central Bank's 2012 report.[4] The conclusion was that a unilateral peg with unrestricted capital flows could run aground, as it did in so many economies after capital movements were liberalised further in the 1980s and 1990s. A firmer peg such as a currency board could pose risks to financial stability, and the same was considered true of unilateral adoption of another currency. It was deemed highly uncertain – and actually unlikely – that bilateral adoption of another currency would be on offer anywhere.

That left two possibilities: joining the eurozone after a negotiated agreement and continuing with a flexible exchange rate and an inflation target. The problem was that there were drawbacks to both. The financial crisis had uncovered flaws in the design of the eurozone, and it also came to light that political support for eurozone membership was lacking. Independent monetary policy and a flexible exchange rate had not been very successful.

Has something changed? The euro area is still putting in place the reforms deemed necessary for it to function smoothly, and it does not seem to me that political support for membership has increased significantly since the Bank's report was issued. But various reforms have been made to monetary policy conduct in Iceland, and financial stability policy has been vastly improved. Much of what I have called *inflation targeting plus* has already been put in place. And in the past few years, we have seen that independent monetary policy can work effectively, also in Iceland. This is where we are now. That need not mean that we will be here for the indefinite future. There is no eternal monetary solution, and various options develop over time.

[4] See reference in Footnote 3.

SEÐLABANKI ÍSLANDS

Ástand og horfur í efnahagsmálum

Fyrirlestur hjá Félagi atvinnurekenda
5. september 2017

Þórarinn G. Pétursson
Aðalhagfræðingur Seðlabanka Íslands

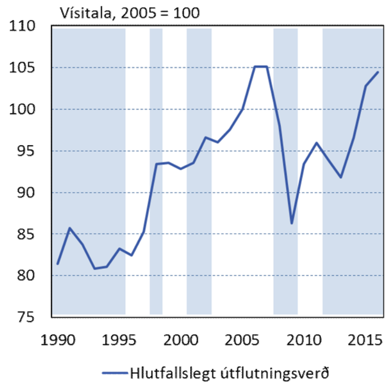
Félag atvinnurekenda

Staða efnahagsmála og horfur fyrir næstu ár

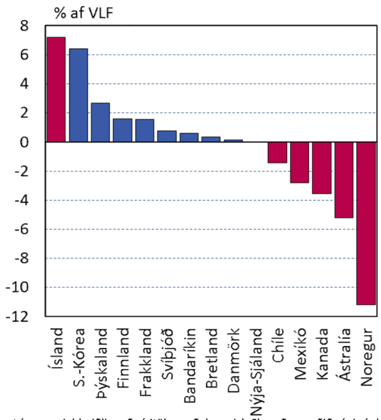
Hagstæð ytri skilyrði sem rekja má til ytri búhnykkja

- Hlutfallslegt útflutningsverð hækkaði um 17% 2014-16 – óvenjulegt í ljósi hægs alþjóðlegs hagvaxtar … skilar sér í mesta viðskiptakjarabata meðal OECD-ríkja
- Útflutningur hefur einnig vaxið hratt: drifinn áfram af vexti ferðaþjónustu – sem hefur hátt í fjórfaldast að umfangi síðan 2010

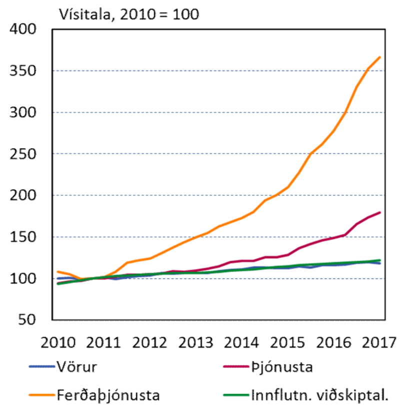
Útflutningsverð og alþjóðlegur hagvöxtur 1990-2016[1]



Viðskiptakjaraáhrif í 15 OECD-ríkjum 2014-2016[2]



Útflutningur og alþj. eftirspurn[3]
1. ársfj. 2010 - 1. ársfj. 2017

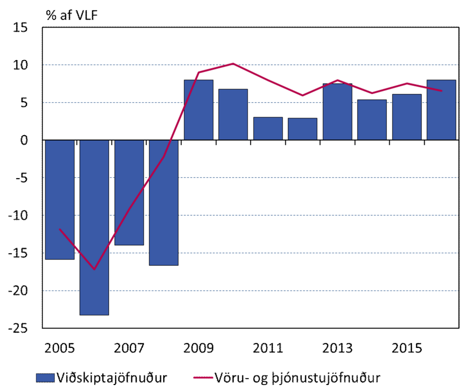


1. Útflutningsverð Íslands í hlutfalli við útflutningsverð helstu viðskiptalanda (fært í sama gjaldmiðli með vísitölu meðalgengis). Skyggða svæðið sýnir ár þar sem heimshagvöxtur er undir 25 ára meðaltali (1992-2016). 2. Mismunur kaupmáttar útflutnings og útflutningsmagns í hlutfalli af VLF fyrra árs. Samtals áhrif fyrir árin 2014-2016. Þau lönd sem eru flokkuð sem hrávöruútflytjendur miðað við vægi hrávöru í hreinum útflutningi eru táknuð með rauðlitum súlum. 3. Fjögurra ársfjórðunga hreyfanlegt meðaltal.
Heimildir: Hagstofa Íslands, Macrobond, OECD, Sameinuðu þjóðirnar (UNCTAD), Seðlabanki Íslands.

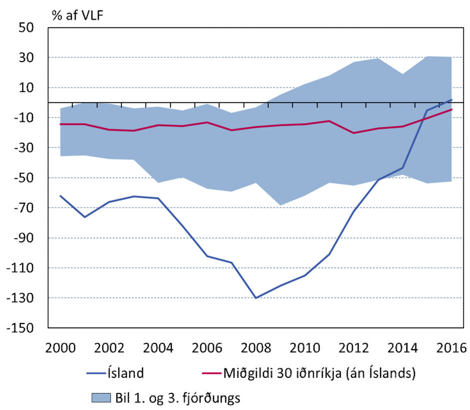
Ytri staða þjóðarbúsins hefur tekið stakkaskiptum

- Uppsveiflan fyrir fjármálakreppu var fjármögnuð með erlendu lánsfé: mikill viðskiptahalli og sífellt vaxandi erlendar skuldir …
- … alger umskipti nú: verulegur viðskiptaafgangur í hátt í áratug og hrein erlend staða var í árslok 2016 orðin jákvæð í fyrsta skipti frá upphafi mælinga

Viðskiptajöfnuður 2005-2016[1]



Hrein erlend staða 2000-2016[2]



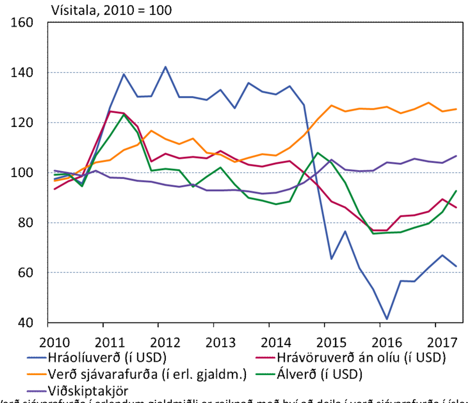
1. Undirliggjandi viðskiptajöfnuður (án áhrifa fallinna fjármálafyrirtækja 2008-2015 og lyfjafyrirtækisins Actavis 2009-2012 á jöfnuð frumþáttatekna. Einnig hefur verið leiðrétt fyrir óbeint mældri fjármálaþjónustu (FSIM) fallinna fjármálafyrirtækja. 2. Tölur fyrir árin 2008-2014 fyrir Ísland byggjast á mati á undirliggjandi hreinni erlendri stöðu.
Heimildir: Alþjóðagjaldeyrissjóðurinn, Hagstofa Íslands, Seðlabanki Íslands.

Vísbendingar um hægari útflutningsvöxt

- Vísbendingar eru um að viðskiptakjör hafi batnað meira á H1 en spáð var í PM 17/2 og horfur hafa batnað fyrir árið í heild
- Hins vegar var vöxtur útflutnings hægari á Q1 og horfur fyrir árið í heild eru lakari …
- … ástæðan liggur í hægari vexti í ferðaþjónustu – og þar eru vísbendingar um möguleg vatnaskil

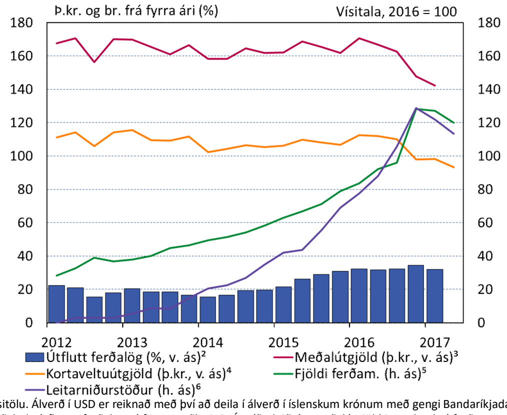
Hrávöruverð og viðskiptakjör[1]

1. ársfj. 2010 - 2. ársfj. 2017



Vísbendingar um umsvif í ferðaþjónustu

1. ársfj. 2012 - 2. ársfj. 2017



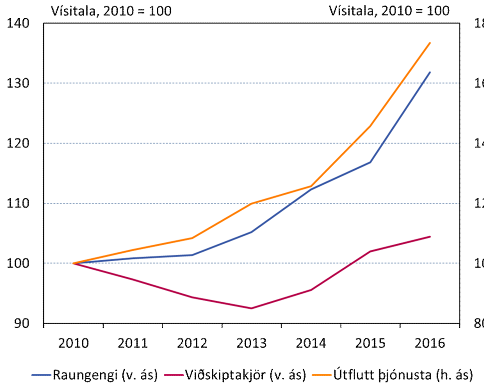
1. Verð sjávarafurða í erlendum gjaldmiðli er reiknað með því að deila í verð sjávarafurða í íslenskum krónum með gengisvísitölu. Álverð í USD er reiknað með því að deila í álverð í íslenskum krónum með gengi Bandaríkjadals. Viðskiptakjör fyrir 2. ársfjórðung 2017 byggjast á grunnspá PM 2017/3. 2. Ársbreyting fjögurra ársfjórðunga hreyfanlegs meðaltals útfluttra ferðalaga á föstu verðlagi. 3. Árstíðarleiðrétt meðalútgjöld innanlands á ferðamann samkvæmt gögnum um þjónustuútflutning. 4. Árstíðarleiðrétt kortaveltuútgjöld á hvern ferðamann (án millilandaflugs og opinberra gjalda). 5. Árstíðarleiðréttar brottfarir erlendra ferðamanna um Keflavíkurflugvöll. 6. Þáttalíkan sem tekur saman tíðni fimm ólíkra leitarniðurstaðna sem tengjast ferðalögum til Íslands samkvæmt Google leitarvélinni (árstíðarleiðrétt).

Heimildir: Alþjóðagjaldeyrissjóðurinn, Google Trends, Hagstofa Íslands, ISAVIA, Rannsóknarsetur verslunarinnar, Seðlabanki Íslands.

Gengið lækkar eftir mikla hækkun í fyrra

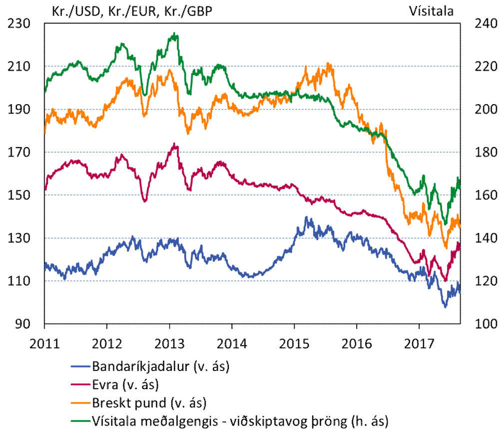
- Gengi krónunnar hækkaði töluvert meginhluta síðasta árs … í takt við mikinn útflutningsvöxt og bætt viðskiptakjör
- Það hefur hins vegar lækkað nokkuð undanfarið og sveiflur hafa aukist: gengið er lítillega lægra en það var um áramótin og ríflega 10% lægra en það var hæst snemma í júní – það er hins vegar enn tæplega 7% hærra en það var á sama tíma í fyrra

Raungengi, viðskiptakjör og útflutningur 2010-2016



Gengi erlendra gjaldmiðla gagnvart krónu

Daglegar tölur 3. jan. 2011 - 31. ágúst 2017

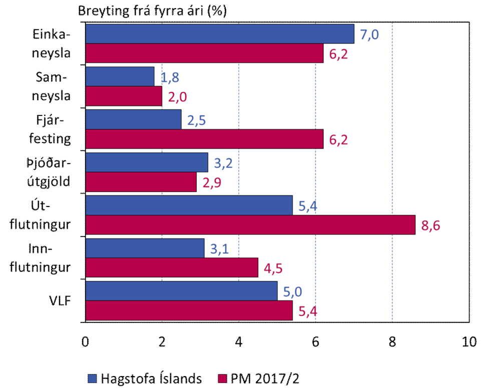


Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

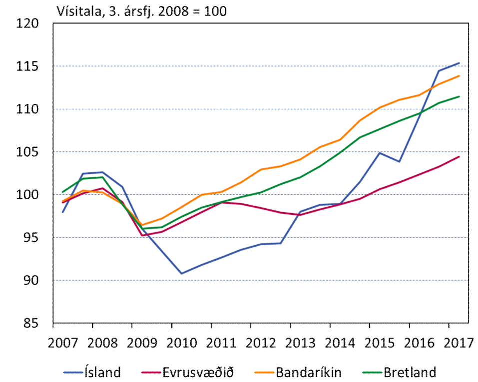
Hagvöxtur hefur verið verulegur …

- Hagvöxtur í fyrra var 7,2% og kemur í kjölfar 4,1% hagvexti 2015 – mun meiri hagvöxtur en í öðrum þróuðum ríkjum
- Nokkuð hægði á hagvexti á Q1 vegna áhrifa sjómannaverkfalls á útflutning og birgðir – í takt við spá bankans
- VLF hefur vaxið um tæplega 30% frá því að hún náði lágmarki snemma 2010 – komin tæplega 13% yfir fyrra hámark

Þjóðhagsreikningar fyrir fyrsta ársfjórðung 2017



VLF á Íslandi og í helstu viðskiptalöndum[1]
1. ársfj. 2007 - 1. ársfj. 2017

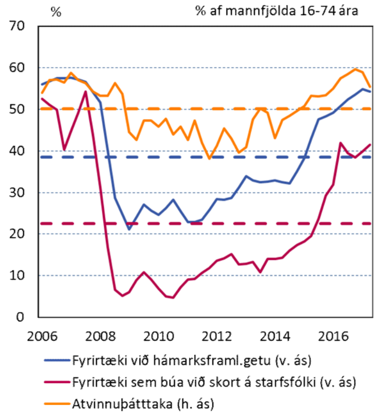


1. Meðaltal árstíðarleiðréttra árshluta. Árstíðarleiðrétt gögn fyrir Ísland frá Seðlabanka Íslands. Gögn fyrir 2. ársfjórðung á Íslandi byggjast á spá *Peningamála* 2017/3.
Heimildir: Hagstofa Íslands, OECD, Seðlabanki Íslands.

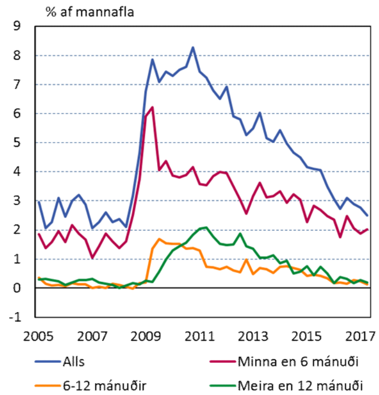
… og vaxandi spenna í þjóðarbúinu

- Viðvarandi skortur á starfsfólki, atvinnuþátttaka sögulega há og fyrirtækjum sem starfa við eða umfram fulla framleiðslugetu heldur áfram að fjölga … atvinnuleysi komið í 2,5% og hefur ekki verið minna síðan á Q2/2008
- Vaxandi spenna í þjóðarbúinu – en á móti vegur mikill innflutningur á erlendu vinnuafli

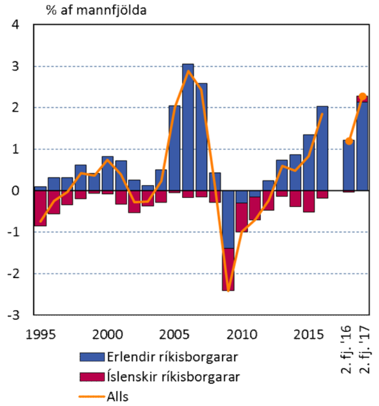
Nýting framleiðsluþátta og atvinnuþátttaka[1]



Atvinnuleysi eftir tímalengd[2]
1. ársfj. 2005 - 2. ársfj. 2017



Aðfluttir umfram brottflutta 1995-2017[3]

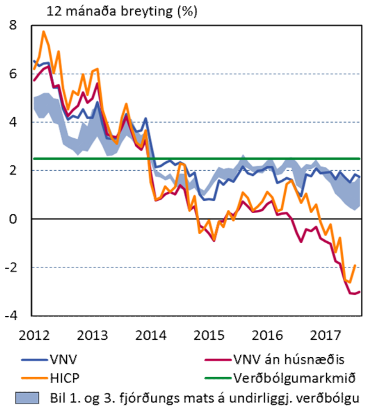


1. Mælikvarðar á nýtingu framleiðsluþátta eru úr viðhorfskönnun Gallup meðal 400 stærstu fyrirtækja landsins en atvinnuþátttaka samkvæmt vinnumarkaðskönnun Hagstofunnar. Árstíðarleiðréttar tölur fyrir tímabilið 1. ársfj. 2006 - 2. ársfj. 2017. Brotalínur sýna meðalhlutföll tímabilsins. 2. Árstíðarleiðréttar tölur. 3. Búferlaflutningar fólks á aldrinum 20-59 ára í hlutfalli af mannfjölda sama aldurshóps í upphafi árs. Árlegar tölur 1995-2016 og uppsafnaðar tölur frá áramótum á 2. fjórðungi áranna 2016 og 2017.
Heimildir: Gallup, Hagstofa Íslands, Seðlabanki Íslands.

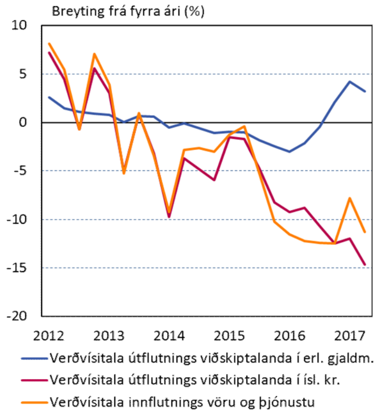
Verðbólga við eða undir markmiði í tæplega 4 ár …

- Verðbólga var 1,7% í ágúst og hefur verið á bilinu 1,5-2% undanfarið ár – undirliggjandi verðbólga mælist minni á flesta mælikvarða og án húsnæðis mælist mikil lækkun verðlags
- Sem fyrr vegast á áhrif hækkunar á gengi krónunnar og hækkunar á launakostnaði á framleidda einingu

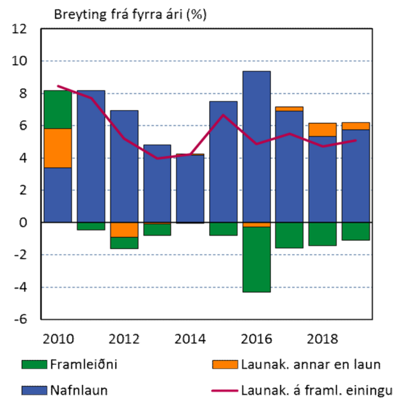
Mæld og undirliggjandi verðbólga[1]
Janúar 2012 - ágúst 2017



Innflutningsverð og alþj. útfl.verð[2]
1. ársfj. 2012 - 2. ársfj. 2017



Launakostnaður á framl. einingu og framlag undirliða 2010-2019[3]

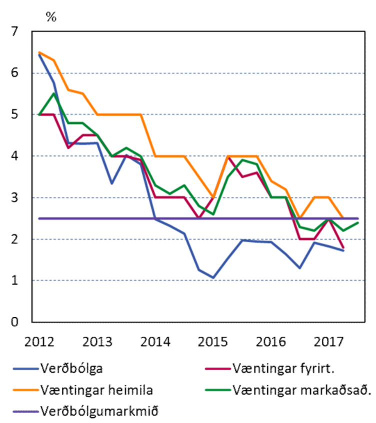


1. Skyggða svæðið inniheldur bil 1. og 3. fjórðungs mats á undirliggjandi verðbólgu þar sem hún er mæld með kjarnavísitölum sem undanskilja sveiflukennda matvöruliði, bensín, opinbera þjónustu, reiknaða húsaleigu, áhrif breytinga á óbeinum sköttum og raunvöxtum húsnæðislána en einnig með tölfræðilegum mælikvörðum eins og vegnu miðgildi, klipptum meðaltölum og kviku þáttalíkani. 2. Grunnspá Seðlabankans 2. ársfj. 2017. 3. Framleiðniaukning kemur fram sem neikvætt framlag til hækkunar á launakostnaði á framleidda einingu. Grunnspá Seðlabankans 2015-2019.
Heimildir: Hagstofa Íslands, Thomson Reuters, Seðlabanki Íslands.

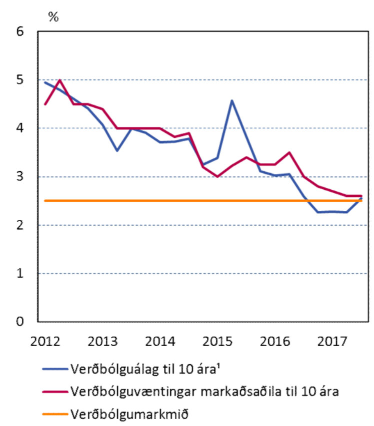
… og kjölfesta verðbólguvæntingar hefur styrkst

- Skammtímaverðbólguvæntingar heimila, fyrirtækja og markaðsaðila við eða nálægt markmiði …
- … hið sama má segja um langtímaverðbólguvæntingar: markaðsaðilar búast við 2½% verðbólgu næstu 5-10 ár …
- … þótt verðbólguálagið hafi hækkað nokkuð undanfarið – 10 ára álagið er 2,6% að meðaltali það sem af er Q3

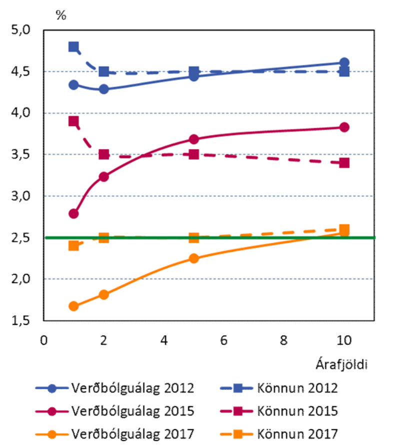
Verðbólga og árs verðbólguvæntingar
1. ársfj. 2012 - 3. ársfj. 2017



Langtímaverðbólguvæntingar
1. ársfj. 2012 - 3. ársfj. 2017



Verðbólguvæntingar til 1-10 ára[2]
Mælingar á 3. ársfj. 2012, 2015 og 2017

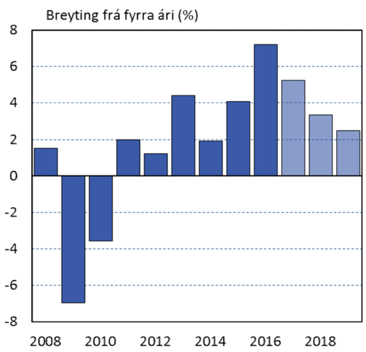


1. Talan fyrir 3. ársfjórðung 2017 er meðaltal það sem af er fjórðungnum. 2. Verðbólguvæntingar til 1, 2, 5 og 10 ára út frá verðbólguálagi á skuldabréfamarkaði (ársfjórðungsleg meðaltöl) og könnun meðal markaðsaðila.
Heimildir: Gallup, Hagstofa Íslands, Seðlabanki Íslands.

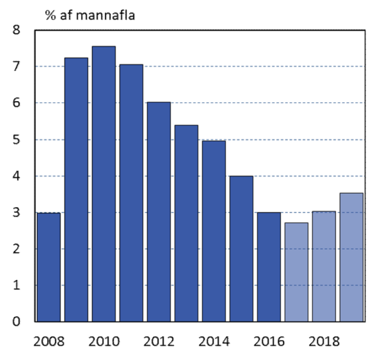
Efnahagshorfur samkvæmt spá PM 2017/3

- Horfur eru á 5,2% hagvexti í ár … minnkar smám saman í langtíma leitnivöxt
- Atvinnuleysi verður að meðaltali 2,7% í ár en eykst síðan smám saman í langtímajafnvægi
- Verðbólga þokast upp í 2% á H2/2017 og í markmið um mitt næsta ár … eykst í um 3% seint á árinu en hjaðnar síðan í markmið

Hagvöxtur 2008-2019[1]

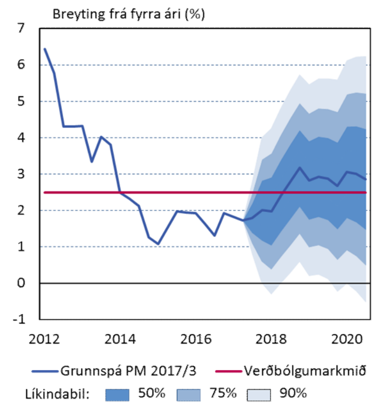


Atvinnuleysi 2008-2019[1]



Verðbólguspá og óvissumat

1. ársfj. 2012 - 3. ársfj. 2020



1. Grunnspá *Peningamála* 2017/3. Ljóslitar súlur sýna spátímabilið 2017-2019.
Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

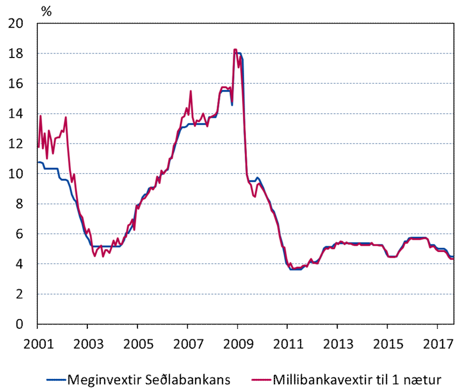
Félag atvinnurekenda

Peningastefnan

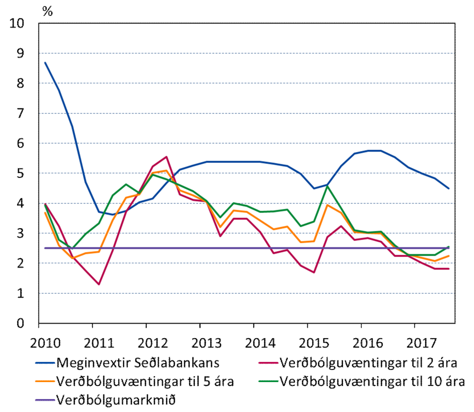
Vextir Seðlabankans hafa farið lækkandi

- Meginvextir Seðlabankans eru nú 4,5% og hafa því lækkað um 1,25 prósentur frá sama tíma í fyrra … þeir hafa einungis einu sinni verið lægri á þessari öld
- Vaxtabreytingar undanfarin ár hafa fyrst fremst litast af því að ná tökum á verðbólguvæntingum

Vextir Seðlabankans og markaðsvextir[1]
Janúar 2001 - ágúst 2017



Meginvextir og verðbólguvæntingar[2]
1. ársfj. 2010 - 3. ársfj. 2017

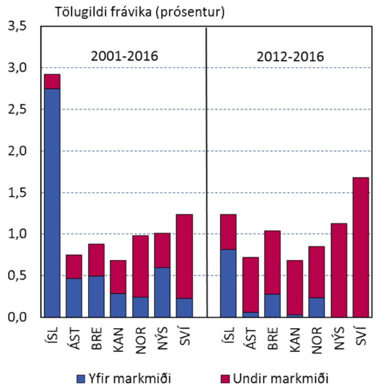


1. Meginvextir Seðlabankans eru vextir á 7 daga veðlánum fram til 31. mars 2009, vextir á viðskiptareikningum innlánsstofnana í Seðlabankanum frá 1. apríl 2009 til 30. september 2009, meðaltal vaxta á innlánsreikningum og á 28 daga innstæðubréfum frá 1. október 2009 til 20. maí 2014 og vextir á 7 daga bundnum innlánum frá 21. maí 2014. Mánaðarleg meðaltöl. 2. Verðbólguvæntingar metnar með verðbólguálagi á skuldabréfamarkaði. Talan fyrir 3. ársfj. 2017 er meðaltal það sem af er fjórðungnum.
Heimild: Seðlabanki Íslands.

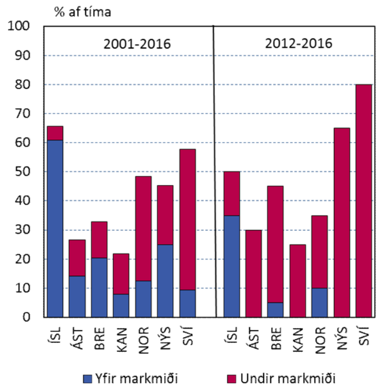
Frávik frá markmiði hafa minnkað undanfarin ár …

- Frá 2001 hafa frávik verðbólgu frá markmiði verið bæði verið stór og tíð … lakari árangur en meðal annarra landa
- Árangurinn hefur batnað töluvert undanfarin 5 ár: meðalfrávik hafa minnkað töluvert og stór frávik eru mun fátíðari en áður …
- … ekki einungis yfirskot heldur einnig undirskot – sem er nauðsynlegt ef verðbólga á að meðaltali að vera í markmiði

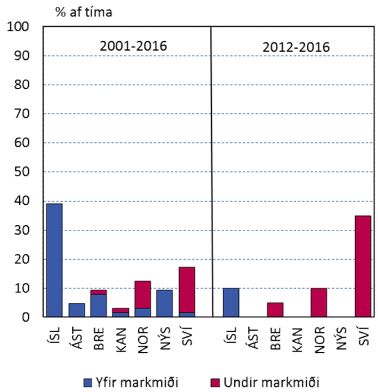
Meðalfrávik frá verðbólgumarkmiði[1]



Frávik umfram 1 prósentu frá markmiði[2]



Frávik umfram 2 prósentur frá markmiði[3]

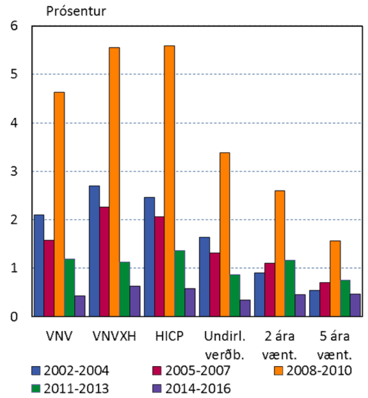


1. Tölugildi meðalfrávika frá verðbólgumarkmiði (út frá mælikvarða á verðbólgu sem verðbólgumarkmið hvers lands miðast við) og hlutfallslegt framlag frávika yfir og undir markmiði. 2. Tíðni frávika umfram 1 prósentu frá verðbólgumarkmiði (út frá mælikvarða á verðbólgu sem verðbólgumarkmið hvers lands miðast við) og hlutfallslegt framlag frávika yfir og undir markmiði. 3. Tíðni frávika umfram 2 prósentur frá verðbólgumarkmiði (út frá mælikvarða á verðbólgu sem verðbólgumarkmið hvers lands miðast við) og hlutfallslegt framlag frávika yfir og undir markmiði.
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar“, *Sérrit* nr. 11 (væntanlegt).

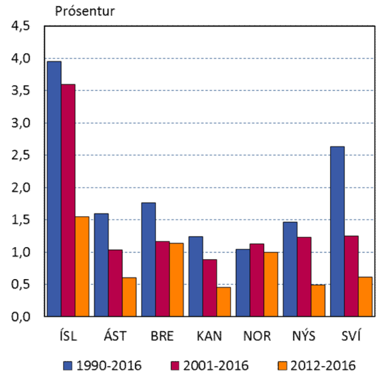
… og sveiflur í verðbólgu og -væntingum minnkað

- Bættur árangur við að halda verðbólgu í skefjum hefur m.a. skilað sér í því að sveiflur í verðbólgu og verðbólguvæntingum hafa minnkað frá því sem áður var … eru eftir sem áður meiri en í öðrum iðnríkjum en munurinn hefur minnkað mikið
- Hefur einnig skilað sér í minnkandi óvissu um framtíðar verðbólguhorfur

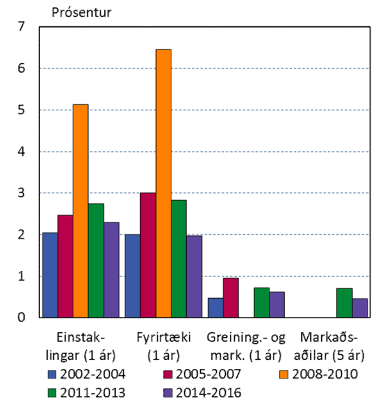
Sveiflur í verðbólgu og verðbólguvæntingum[1]



Sveiflur í verðbólgu 1990-2016[2]



Sundurleitni verðbólguvæntinga[3]

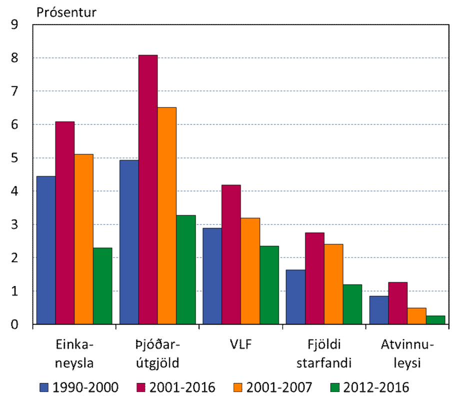


1. Staðalfrávik í mismunandi mælikvörðum á verðbólgu og verðbólguvæntingum fyrir 5 jafnlöng tímabil frá 1. ársfj. 2002 - 4. ársfj. 2017. Undirliggjandi verðbólga er metin með miðgildi sex tölfræðilegra mælikvarða (fimm klipptra meðaltala og vegins miðgildis). Notast er við verðbólguálag á skuldabréfamarkaði sem mælikvarða á verðbólguvæntingar til 2 og 5 ára (gögn einungis frá 2003). 2. Staðalfrávik í ársverðbólgu miðað við ársfjórðungsleg meðaltöl vísitölu neysluverðs. 3. Staðalfrávik í svörum um verðbólguvæntingar fyrir 5 jafnlöng tímabil frá 1. ársfj. 2002 - 4. ársfj. 2017 (línuleg brúun notuð þar sem mælingar vantar). Ekki voru gerðar kannanir meðal greiningar- og markaðsaðila frá miðju ári 2008 og fram til ársbyrjunar 2012. Frá þeim tíma eru langtímaverðbólguvæntingar einnig kannaðar.
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar", *Sérrit* nr. 11 (væntanlegt).

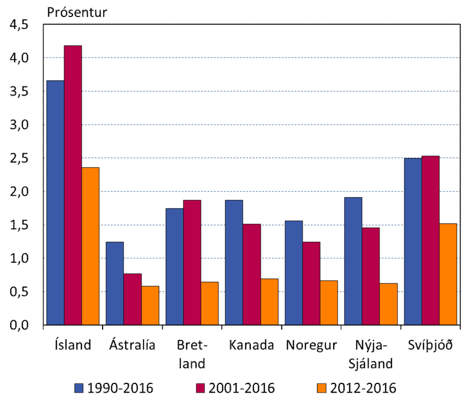
Hagsveiflur hafa einnig farið minnkandi …

- Hagsveiflur hafa einnig minnkað verulega hér á landi frá því sem áður var – hvort sem horft er á hagvöxt, innlenda eftirspurn eða vinnumarkað …
- … sveiflurnar eru þó eftir sem áður meiri en í öðrum iðnríkjum – en munurinn hefur minnkað verulega

Sveiflur í ýmsum hagstærðum 1990-2016[1]



Sveiflur í hagvexti 1990-2016[2]

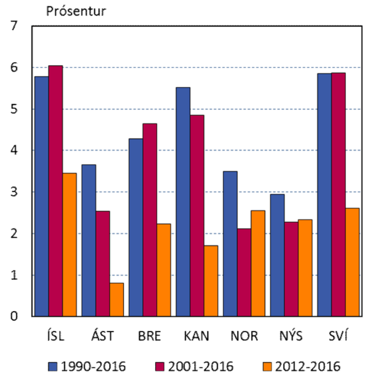


1. Staðalfrávik í ársbreytingu ýmissa þjóðhagsstærða. 2. Staðalfrávik í árshagvexti.
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar", *Sérrit* nr. 11 (væntanlegt).

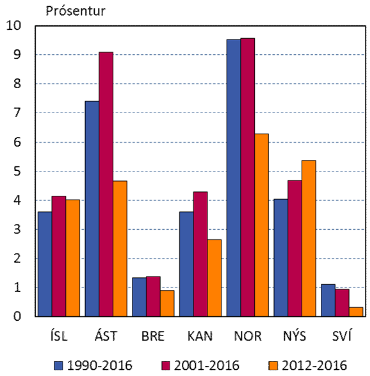
… með minni sveiflum í útflutningi og raunvöxtum

- Sveiflukennd ytri skilyrði eru oft nefnd sem ástæða meiri hagsveiflna hér á landi – eiga örugglega hlut að máli en þá einkum sveiflur í útflutningi fremur en í viðskiptakjörum …
- … en sveiflur í raunvöxtum vega einnig þungt – og aukin stöðugleiki þeirra er veigamikil ástæða minni hagsveiflna undanfarið

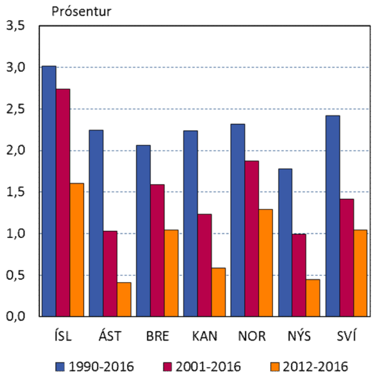
Sveiflur í útflutningi 1990-2016[1]



Sveiflur í viðskiptakjörum 1990-2016[2]



Sveiflur í langtímaraunvöxtum 1990-2016[3]

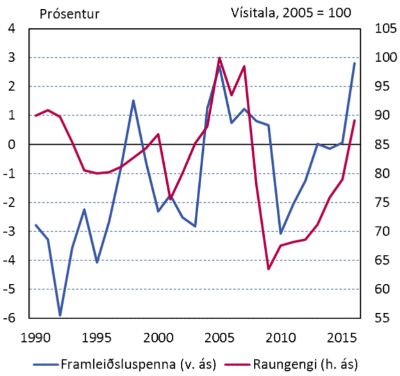


1. Staðalfrávik í ársbreytingu ársmeðaltals útflutnings vöru og þjónustu. 2. Staðalfrávik í breytingu ársmeðaltals viðskiptakjara. 3. Staðalfrávik ársfjórðungsmeðaltala langtímaraunvaxta (5-10 ára ríkisskuldabréfa) miðað við ársverðbólgu hvers tíma.
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar", *Sérrit* nr. 11 (væntanlegt).

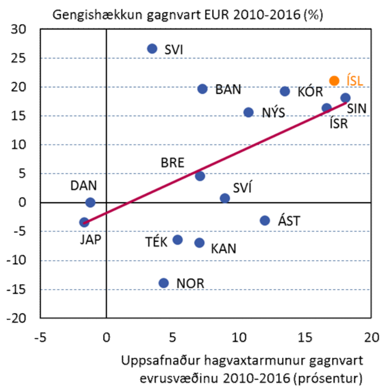
Aukin fylgni gengisbreytinga og hagsveiflna

- Gengi krónunnar hefur hækkað mikið undanfarin ár – en kemur ekki á óvart í ljósi efnahagsuppsveiflu
- Raungengissveiflur þekkjast hér eins og í öðrum litlum og opnum hagkerfum – ekki síst í þeim sem reiða sig á hrávöruframleiðslu … þekkjast jafnvel í löndum í myntbandalagi og sem notast við myntráð

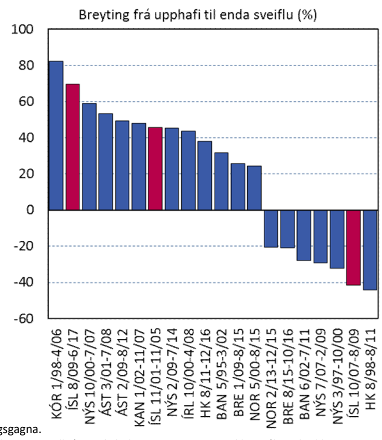
Hagsveiflan og raungengið 1990-2016[1]



Hagvöxtur og gengi í 15 iðnríkjum 2010-2016[2]

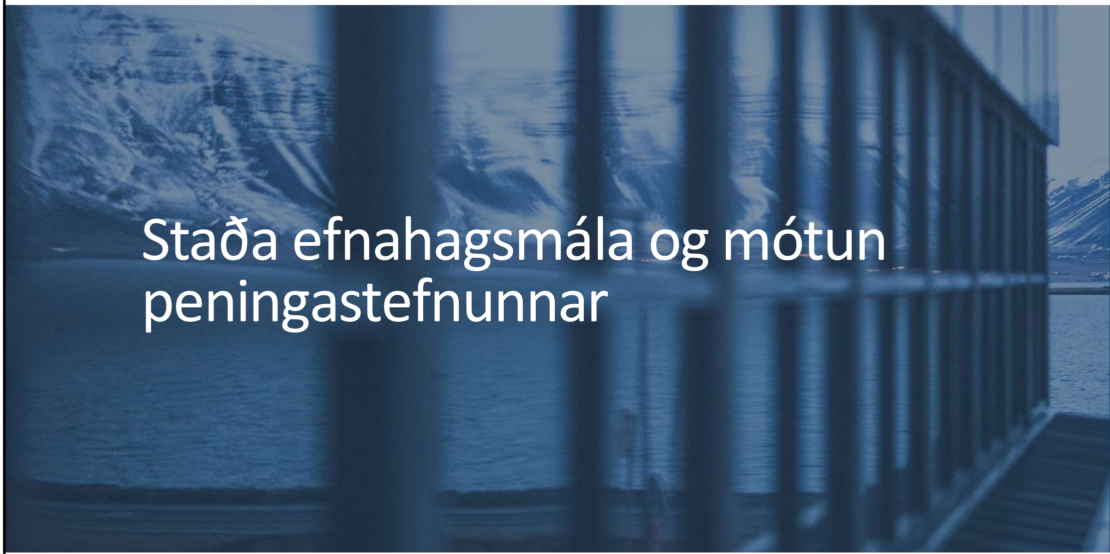


Tuttugu gengissveiflur í iðnríkjum frá 1995[3]



1. Mismunur framleiðsluspennu á Íslandi og í helstu viðskiptalöndum. Raungengi er miðað við hlutfallslegt neysluverðlag. Myndin sýnir ársmeðaltöl ársfjórðungsgagna.
2. Uppsafnaður hagvaxtarmunur er mismunur breytingar VLF frá 2010 til 2016 fyrir hvert land og fyrir evrusvæðið. Breyting á gengi gjaldmiðla gagnvart EUR er breyting milli ársmeðaltala 2010 og 2016. Hækkun táknar hækkun viðkomandi gjaldmiðils gagnvart EUR. 3. Breytingar í raungengi frá hápunkti (lágpunkti) til lágpunkts (hápunkts). Nánari skýringar á aðferðafræði er að finna í Seðlabanki Íslands (2017).
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar", *Sérrit* nr. 11 (væntanlegt).

SEÐLABANKI ÍSLANDS



Háskóli Íslands

19. september 2017

Þórarinn G. Pétursson

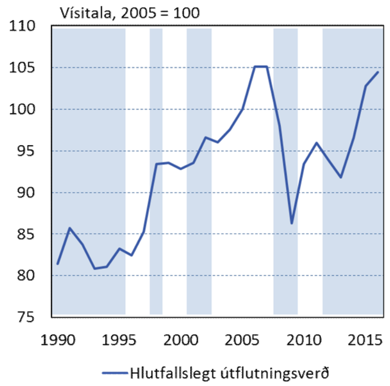
Aðalhagfræðingur Seðlabanka Íslands

Staða efnahagsmála

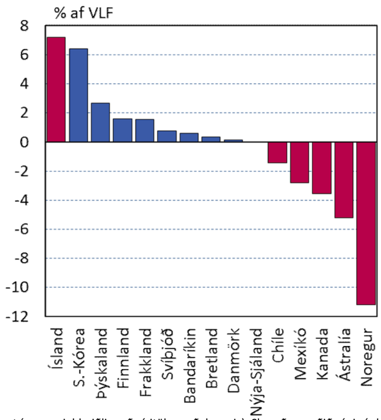
Hagstæð ytri skilyrði sem rekja má til ytri búhnykkja

- Hlutfallslegt útflutningsverð hækkaði um 17% 2014-16 – óvenjulegt í ljósi hægs alþjóðlegs hagvaxtar … skilar sér í meiri viðskiptakjarabata en meðal OECD-ríkja
- Útflutningur hefur einnig vaxið hratt: drifinn áfram af vexti ferðaþjónustu – sem hefur hátt í fjórfaldast að umfangi síðan 2010

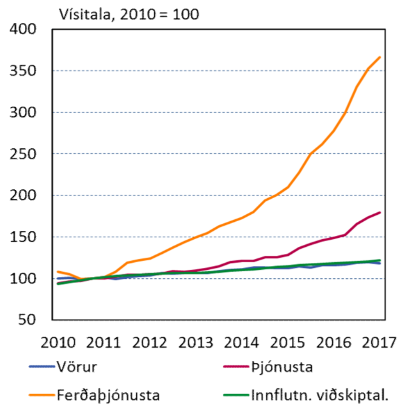
Útflutningsverð og alþjóðlegur hagvöxtur 1990-2016[1]



Viðskiptakjaraáhrif í 15 OECD-ríkjum 2014-2016[2]



Útflutningur og alþj. eftirspurn[3]
1. ársfj. 2010 - 1. ársfj. 2017

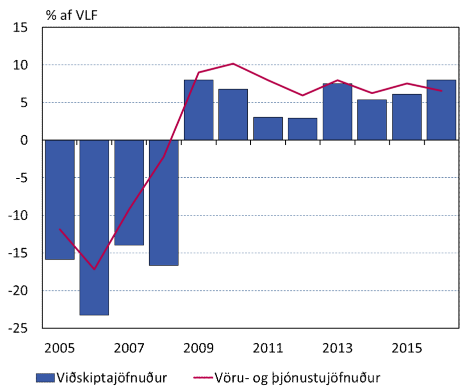


1. Útflutningsverð Íslands í hlutfalli við útflutningsverð helstu viðskiptalanda (fært í sama gjaldmiðli með vísitölu meðalgengis). Skyggða svæðið sýnir ár þar sem heimshagvöxtur er undir 25 ára meðaltali (1992-2016). 2. Mismunur kaupmáttar útflutnings og útflutningsmagns í hlutfalli af VLF fyrra árs. Samtals áhrif fyrir árin 2014-2016. Þau lönd sem eru flokkuð sem hrávöruútflytjendur miðað við vægi hrávöru í hreinum útflutningi eru táknuð með rauðlitum súlum. 3. Fjögurra ársfjórðunga hreyfanlegt meðaltal.
Heimildir: Hagstofa Íslands, Macrobond, OECD, Sameinuðu þjóðirnar (UNCTAD), Seðlabanki Íslands.

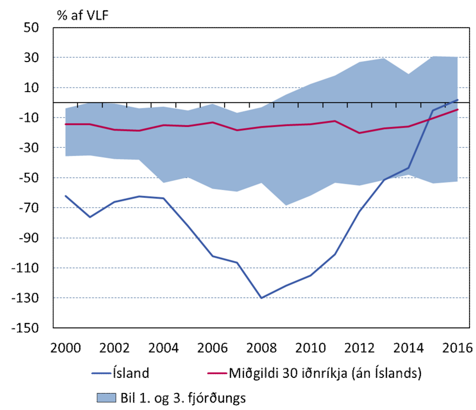
Ytri staða þjóðarbúsins hefur tekið stakkaskiptum

- Uppsveiflan fyrir fjármálakreppu var fjármögnuð með erlendu lánsfé: mikill viðskiptahalli og sífellt vaxandi erlendar skuldir
- Alger umskipti í núverandi uppsveiflu: verulegur viðskiptaafgangur í hátt í áratug og hrein erlend staða var í árslok 2016 orðin jákvæð í fyrsta skipti frá upphafi mælinga

Viðskiptajöfnuður 2005-2016[1]



Hrein erlend staða 2000-2016[2]

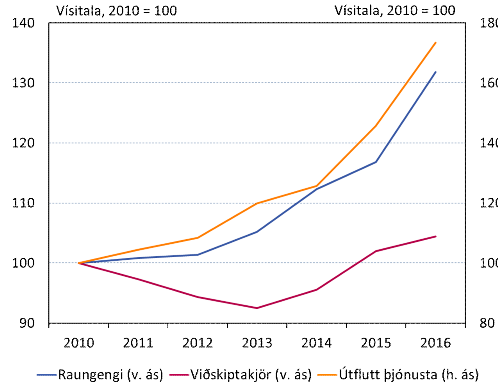


1. Undirliggjandi viðskiptajöfnuður (án áhrifa fallinna fjármálafyrirtækja 2008-2015 og lyfjafyrirtækisins Actavis 2009-2012 á jöfnuð frumþáttatekna. Einnig hefur verið leiðrétt fyrir óbeint mældri fjármálaþjónustu (FSIM) fallinna fjármálafyrirtækja. 2. Tölur fyrir árin 2008-2014 fyrir Ísland byggjast á mati á undirliggjandi hreinni erlendri stöðu.
Heimildir: Alþjóðagjaldeyrissjóðurinn, Hagstofa Íslands, Seðlabanki Íslands.

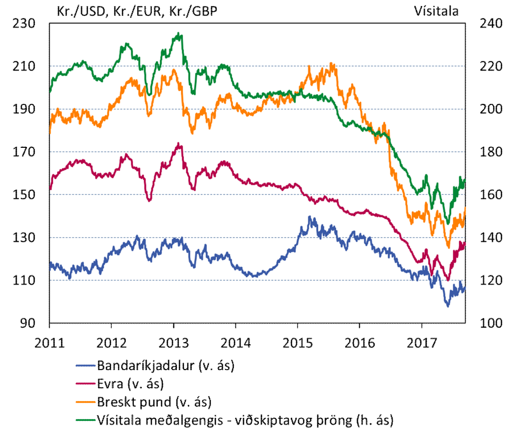
Gengi krónunnar lækkar eftir mikla hækkun í fyrra

- Gengi krónunnar hækkaði töluvert meginhluta síðasta árs … í takt við mikinn útflutningsvöxt og bætt viðskiptakjör
- Það hefur hins vegar lækkað undanfarið og sveiflur hafa aukist: gengið er um 2½% lægra en það var um áramótin og 12% lægra en það var hæst snemma í júní – það er hins vegar enn tæplega 5% hærra en það var á sama tíma í fyrra

Raungengi, viðskiptakjör og útflutningur
2010-2016



Gengi erlendra gjaldmiðla gagnvart krónu
Daglegar tölur 3. jan. 2011 - 15. september 2017

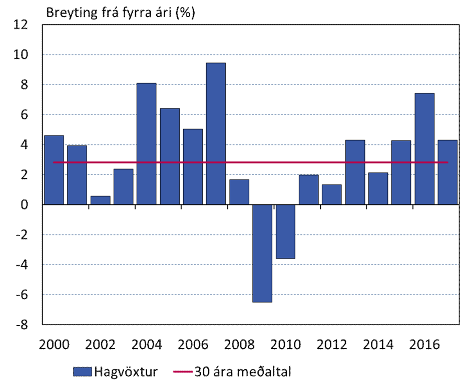


Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

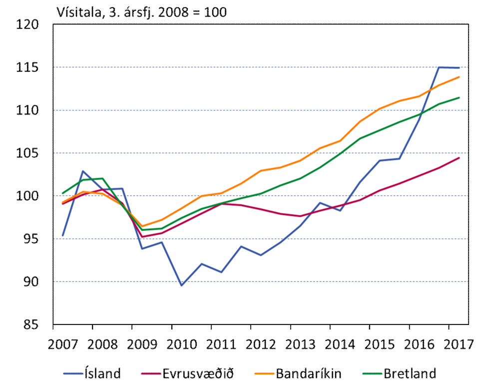
Hagvöxtur hefur verið verulegur …

- Hagvöxtur í fyrra var 7,4% og kemur í kjölfar 4,3% hagvexti 2015 – langt yfir meðalhagvexti og hagvexti í öðrum iðnríkjum
- Hagvöxtur var 4,3% á H1/2017 – nokkru minni en í fyrra – m.a. vegna áhrifa sjómannaverkfalls á Q1
- VLF hefur vaxið um 28% frá því að hún náði lágmarki snemma 2010 – komin ríflega 8% yfir fyrra hámark

Hagvöxtur 2000-2017[1]



VLF á Íslandi og í helstu viðskiptalöndum[2]
1. ársfj. 2007 - 1. ársfj. 2017

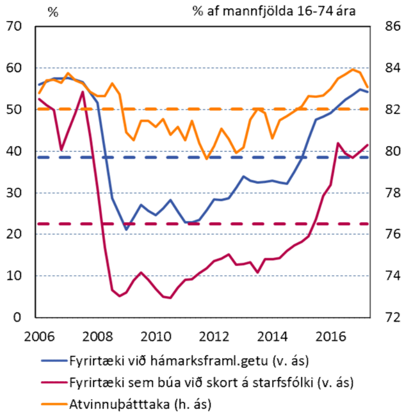


1. Hagvaxtartalan fyrir 2017 er fyrir fyrri hluta ársins. 2. Meðaltal árstíðarleiðréttra ársfjórðunga.
Heimildir: Hagstofa Íslands, OECD, Seðlabanki Íslands.

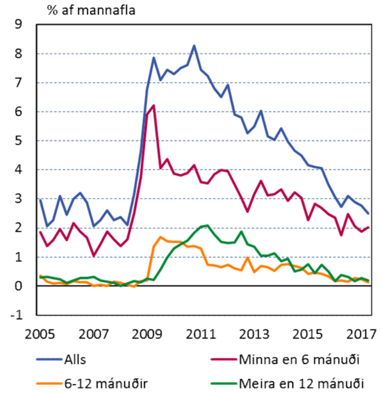
… og töluverð spenna hefur myndast í þjóðarbúinu

- Viðvarandi skortur á starfsfólki, atvinnuþátttaka sögulega há og fyrirtækjum sem starfa við eða umfram fulla framleiðslugetu heldur áfram að fjölga … atvinnuleysi komið í 2,5% og hefur ekki verið minna síðan á Q2/2008
- Vaxandi spenna í þjóðarbúinu – en á móti vegur mikill innflutningur á erlendu vinnuafli

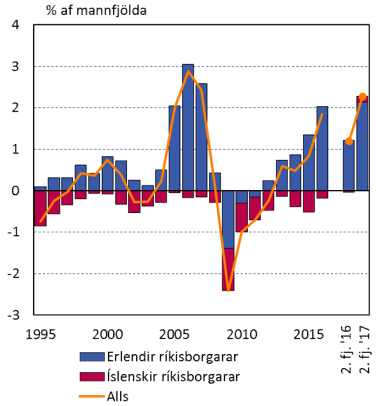
Nýting framleiðsluþátta og atvinnuþátttaka[1]



Atvinnuleysi eftir tímalengd[2]
1. ársfj. 2005 - 2. ársfj. 2017



Aðfluttir umfram brottflutta 1995-2017[3]

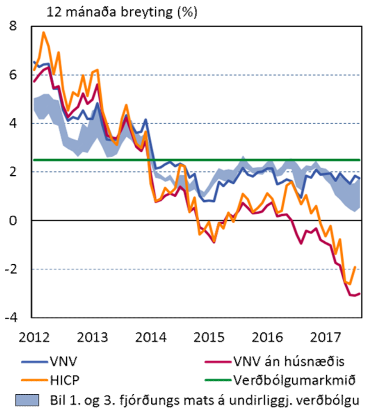


1. Mælikvarðar á nýtingu framleiðsluþátta eru úr viðhorfskönnun Gallup meðal 400 stærstu fyrirtækja landsins en atvinnuþátttaka samkvæmt vinnumarkaðskönnun Hagstofunnar. Árstíðarleiðréttar tölur fyrir tímabilið 1. ársfj. 2006 - 2. ársfj. 2017. Brotalínur sýna meðalhlutföll tímabilsins. 2. Árstíðarleiðréttar tölur. 3. Búferlaflutningar fólks á aldrinum 20-59 ára í hlutfalli af mannfjölda sama aldurshóps í upphafi árs. Árlegar tölur 1995-2016 og uppsafnaðar tölur frá áramótum á 2. fjórðungi áranna 2016 og 2017.
Heimildir: Gallup, Hagstofa Íslands, Seðlabanki Íslands.

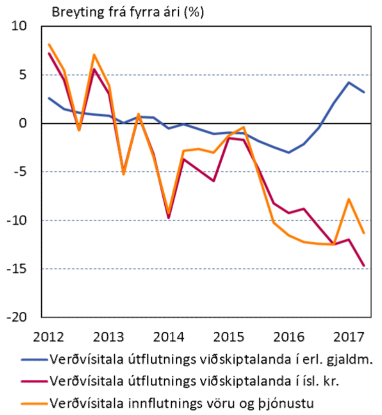
Verðbólga við eða undir markmiði í tæplega 4 ár …

- Verðbólga var 1,7% í ágúst og hefur verið á bilinu 1,5-2% undanfarið ár – undirliggjandi verðbólga mælist minni á flesta mælikvarða og án húsnæðis mælist mikil lækkun verðlags
- Sem fyrr vegast á áhrif innfluttrar verðhjöðnunar og hækkunar á launakostnaði á framleidda einingu

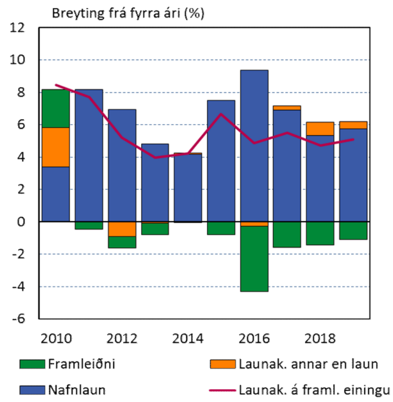
Mæld og undirliggjandi verðbólga[1]
Janúar 2012 - ágúst 2017



Innflutningsverð og alþj. útfl.verð[2]
1. ársfj. 2012 - 2. ársfj. 2017



Launakostnaður á framl. einingu og framlag undirliða 2010-2019[3]

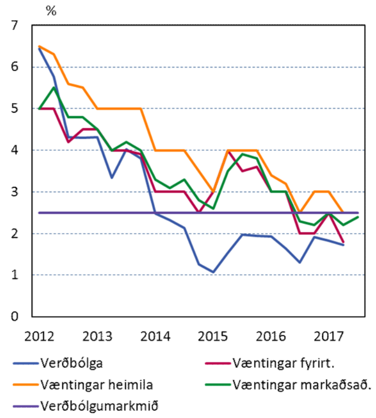


1. Skyggða svæðið inniheldur bil 1. og 3. fjórðungs mats á undirliggjandi verðbólgu þar sem hún er mæld með kjarnavísitölum sem undanskilja sveiflukennda matvöruliði, bensín, opinbera þjónustu, reiknaða húsaleigu, áhrif breytinga á óbeinum sköttum og raunvöxtum húsnæðislána en einnig með tölfræðilegum mælikvörðum eins og vegnu miðgildi, klipptum meðaltölum og kviku þáttalíkani. 2. Grunnspá Seðlabankans 2. ársfj. 2017. 3. Framleiðniaukning kemur fram sem neikvætt framlag til hækkunar á launakostnaði á framleidda einingu. Grunnspá Seðlabankans 2015-2019.
Heimildir: Hagstofa Íslands, Thomson Reuters, Seðlabanki Íslands.

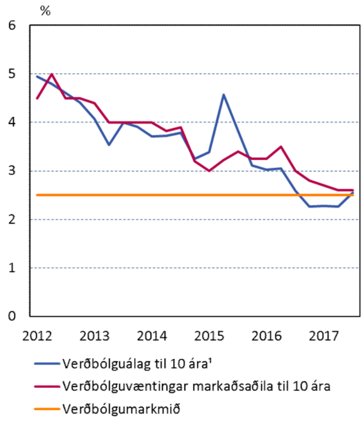
… og kjölfesta verðbólguvæntingar hefur styrkst

- Skammtímaverðbólguvæntingar heimila, fyrirtækja og markaðsaðila við eða nálægt markmiði …
- … hið sama má segja um langtímaverðbólguvæntingar: markaðsaðilar búast við 2½% verðbólgu næstu 5-10 ár
- Mikil breyting frá því sem áður var: virðist hafa tekist að skapa verðbólguvæntingum kjölfestu í verðbólgumarkmiðinu

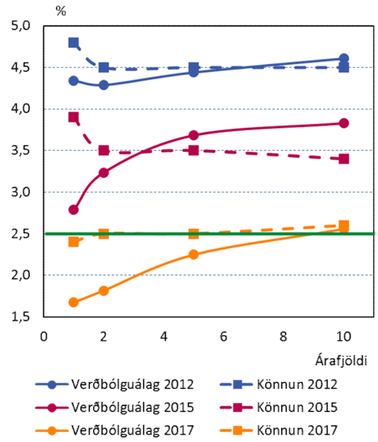
Verðbólga og árs verðbólguvæntingar
1. ársfj. 2012 - 3. ársfj. 2017



Langtímaverðbólguvæntingar
1. ársfj. 2012 - 3. ársfj. 2017



Verðbólguvæntingar til 1-10 ára[2]
Mælingar á 3. ársfj. 2012, 2015 og 2017



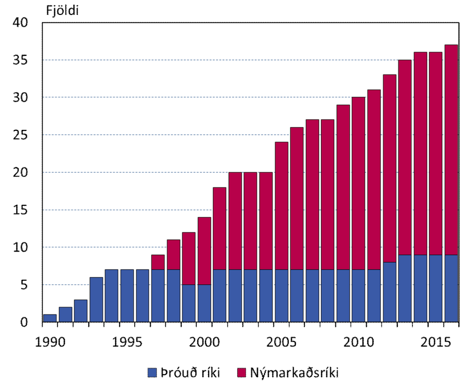
1. Talan fyrir 3. ársfjórðung 2017 er meðaltal það sem af er fjórðungnum. 2. Verðbólguvæntingar til 1, 2, 5 og 10 ára út frá verðbólguálagi á skuldabréfamarkaði (ársfjórðungsleg meðaltöl) og könnun meðal markaðsaðila.
Heimildir: Gallup, Hagstofa Íslands, Seðlabanki Íslands.

Peningastefnan

Rammi peningastefnunnar

- Núverandi fyrirkomulag verðbólgumarkmiðs var tekið upp árið 2001: í takt við alþjóðlega þróun þar sem æ fleiri ríki hafa tekið upp þessa stefnu: nú 37 ríki – þar af 9 iðnríki og 28 nýmarkaðsríki (og 17 af 19 OECD-ríkjum sem hafa eigin gjaldmiðil)
- Breytingar í kjölfar fjármálakreppunnar með peningastefnunefnd og endurbótum á framkvæmd og útfærslu stefnu

Fjöldi ríkja þar sem peningastefnan byggist á formlegu verðbólgumarkmiði



Endurbætur verðbólgumarkmiðs

Aukin notkun gjaldeyrisinngripa

Notkun þjóðhagsvarúðartækja

Verðbólgumarkmið plús

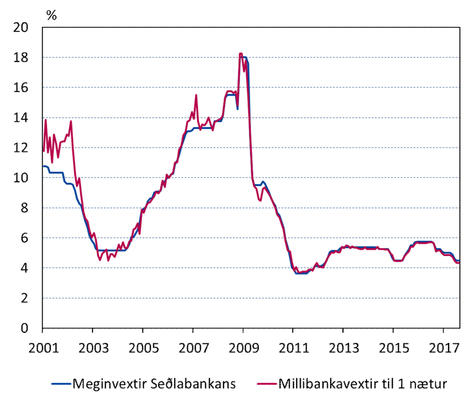
Heimildir: Hammond (2012), heimasíður seðlabanka, Seðlabanki Íslands.

Meginstjórntæki peningastefnunnar

- Með vöxtum sínum reynir Seðlabankinn að hafa áhrif á skammtíma- og langtímavexti á markaði
- Meginvextir Seðlabankans eru nú 4,5% og hafa því lækkað um 1,25 prósentur frá sama tíma í fyrra … þeir hafa einungis einu sinni verið lægri á þessari öld … og langtímavextir þeir lægstu síðan 1995

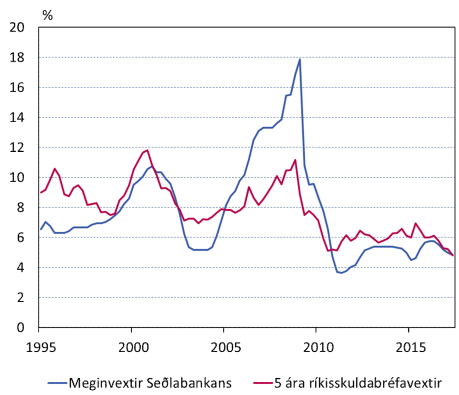
Vextir Seðlabankans og markaðsvextir[1]

Janúar 2001 - ágúst 2017



Vextir Seðlabankans og langtímavextir[2]

1. ársfj. 1995 - 2. ársfj. 2017



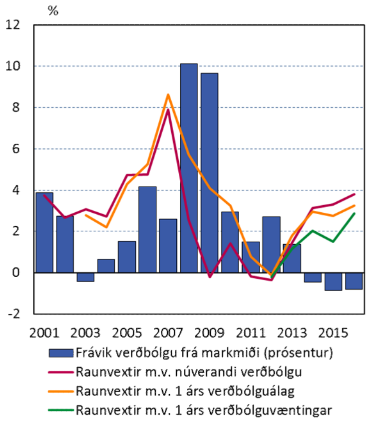
1. Meginvextir Seðlabankans eru vextir á 7 daga veðlánum fram til 31. mars 2009, vextir á viðskiptareikningum innlánsstofnana í Seðlabankanum frá 1. apríl 2009 til 30. september 2009, meðaltal vaxta á innlánsreikningum og á 28 daga innstæðubréfum frá 1. október 2009 til 20. maí 2014 og vextir á 7 daga bundnum innlánum frá 21. maí 2014. Mánaðarleg meðaltöl. 2. Fram til 2. ársfj. 2001 er notast við ríkisbréfavexti sem eru næstir því að vera til 5 ára en frá 2. ársfj. 2001 er notast við 5 ára vexti metna út frá ávöxtunarferli ríkisbréfa með Nelson-Siegel-aðferðinni.

Heimild: Seðlabanki Íslands.

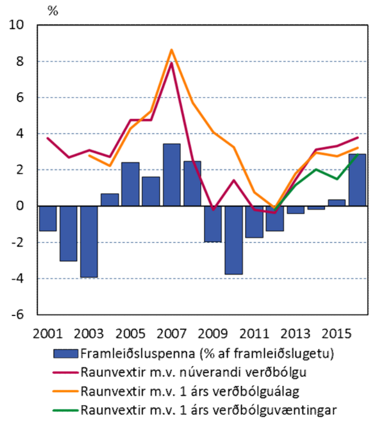
Vaxtaþróun og þróun efnahagsmála

- Vaxtaþróun hér á landi þarf að setja í samhengi við stöðu hagsveiflu og frávik verðbólgu frá markmiði
- Vaxtabreytingar undanfarin ár þarf einnig að setja í samhengi við baráttu við að skapa verðbólguvæntingum trausta kjölfestu: vextir hafa hækkað þegar væntingar taka að hækka og vextir lækka á ný þegar væntingar taka að lækka

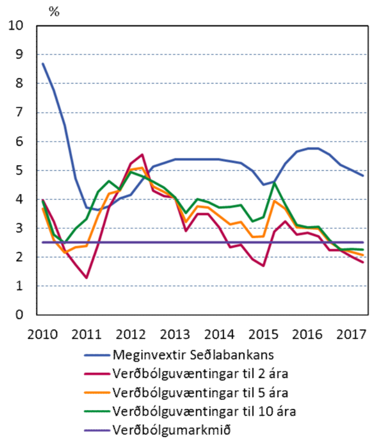
Raunvextir Seðlabankans og frávik verðbólgu frá markmiði 2001-2016



Raunvextir Seðlabankans og framleiðsluspenna 2001-2016



Meginvextir og verðbólguvæntingar[1]
1. ársfj. 2010 - 2. ársfj. 2017

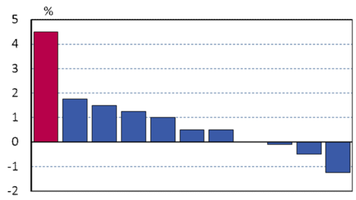


1. Verðbólguvæntingar metnar með verðbólguálagi á skuldabréfamarkaði.
Heimildir: Hagstofa Íslands, Seðlabanki Íslands.

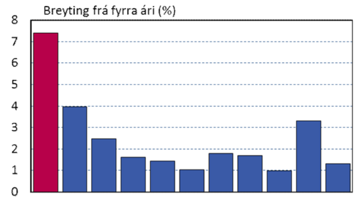
Vextir og hagsveifla í alþjólegu samhengi

- Vextir hér hærri en í öðrum iðnríkjum – þótt verðbólga sé svipuð: endurspeglar gjörólíka stöðu efnahagsmála: þótt alþjóðlegur hagvöxtur sé farinn að taka við sér er enn víða töluverður slaki til staðar og vöxtur nafneftirspurnar og launa hægur

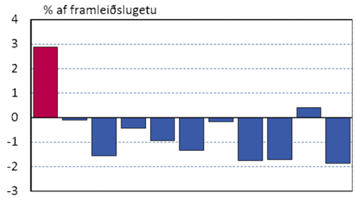
Meginvextir seðlabanka[1]



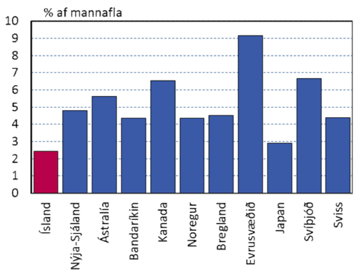
Hagvöxtur 2016



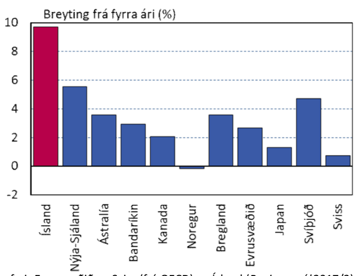
Framleiðsluspenna 2016[2]



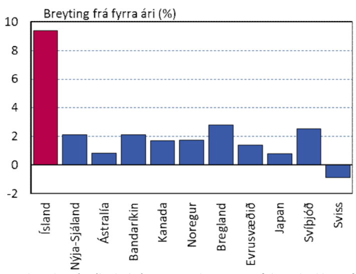
Atvinnuleysi 2. ársfj. 2017[3]



Vöxtur nafnvirðis VLF 2016



Launahækkanir 2016[4]

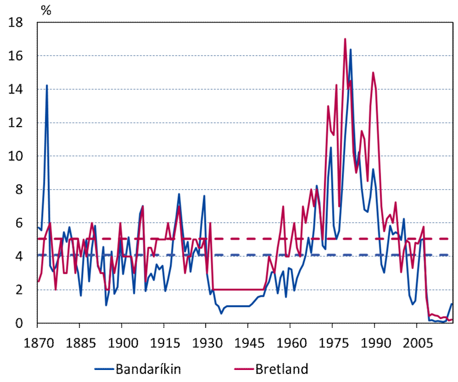


1. Nýjasta mæling. 2. Mat á framleiðsluspennu frá Alþjóðagjaldeyrissjóðnum nema fyrir Evrusvæðið og Sviss (frá OECD) og Ísland (*Peningamál* 2017/3). 3. Samræmd mæling árstíðarleiðrétts atvinnuleysis. 4. Nafnlaunahækkanir frá OECD nema fyrir Ísland (*Peningamál* 2017/3 og Nýja-Sjáland (*Monetary Policy Statement*, ágúst 2017).
Heimildir: Alþjóðagjaldeyrissjóðurinn, Hagstofa Íslands, heimasíður seðlabanka, OECD, Seðlabanki Íslands.

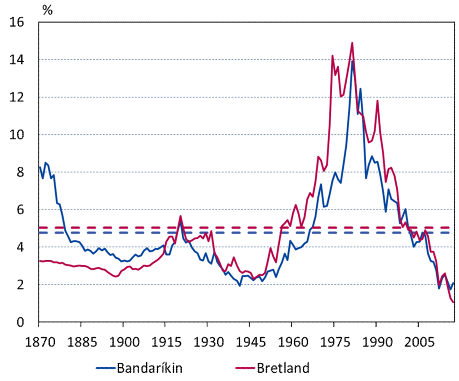
Alþjóðlegir vextir í sögulegu samhengi

- Vextir helstu iðnríkja eru nálægt núlli og hafa aldrei verið eins lágir: þeir eru vel undir sögulegu 4-5% meðaltali … sem er áþekkt því sem vextir á Íslandi eru í dag
- Vaxtamunur milli Íslands og annarra þróaðra landa endurspeglar því að stórum hluta óvenju lága alþjóðavexti

Skammtímavextir í Bandaríkjunum og Bretlandi 1870-2017[1]



Langtímavextir í Bandaríkjunum og Bretlandi 1870-2017[2]



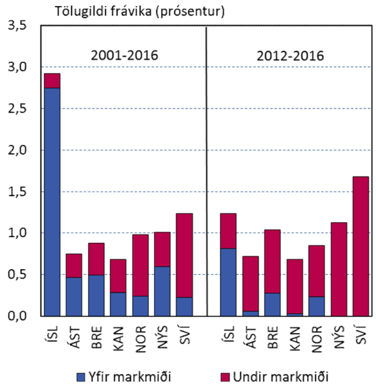
1. Samsett röð úr mismunandi skammtímavöxtum. 2. Vextir á 10 ára ríkisskuldabréfum. Tölur fyrir 2017 eru nýjustu tölur (snemma í september 2017). Brotalínur sýna meðaltöl tímabilsins 1870-2017.
Heimildir: Englandsbanki, Seðlabanki Bandaríkjanna, O. Jorda, M. Schularick og A. M. Taylor (2014), „The great mortgaging: Housing finance, crises, and business cycles“ *NBER Working Paper Series* no. 20501, M. Schularick og A. M. Taylor (2012), „Credit booms gone bust: Monetary policy, leverage cycles and financial crises“, *American Economic Review*, 102, 1029-1061.

Er árangur peningastefnunnar að batna?

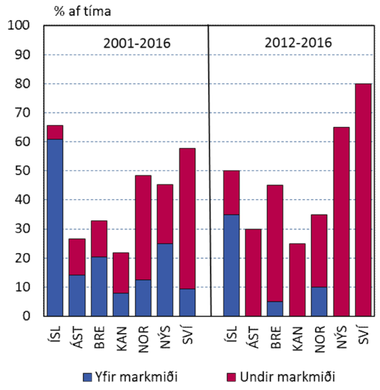
Frávik frá markmiði hafa minnkað undanfarin ár …

- Frá 2001 hafa frávik verðbólgu frá markmiði verið bæði verið stór og þrálát … lakari árangur en meðal annarra landa
- Árangurinn hefur batnað töluvert undanfarin 5 ár: meðalfrávik hafa minnkað töluvert og stór frávik eru mun fátíðari en áður …
- … nú ekki einungis yfirskot heldur einnig undirskot – sem er nauðsynlegt ef verðbólga á að meðaltali að vera í markmiði

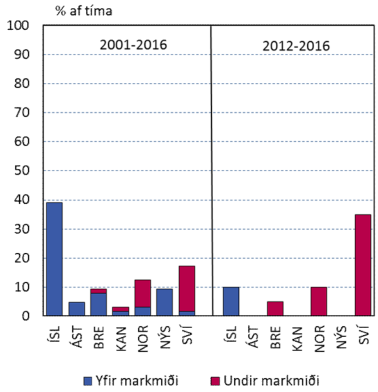
Meðalfrávik frá verðbólgumarkmiði[1]



Frávik umfram 1 prósentu frá markmiði[2]



Frávik umfram 2 prósentur frá markmiði[3]

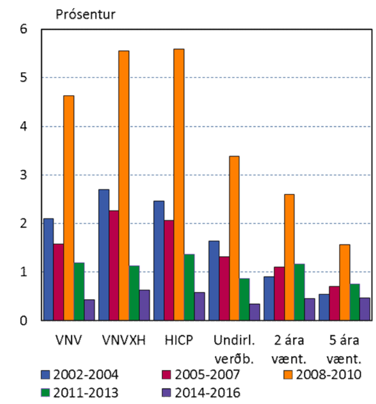


1. Tölugildi meðalfrávika frá verðbólgumarkmiði (út frá mælikvarða á verðbólgu sem verðbólgumarkmið hvers lands miðast við) og hlutfallslegt framlag frávika yfir og undir markmiði. 2. Tíðni frávika umfram 1 prósentu frá verðbólgumarkmiði (út frá mælikvarða á verðbólgu sem verðbólgumarkmið hvers lands miðast við) og hlutfallslegt framlag frávika yfir og undir markmiði. 3. Tíðni frávika umfram 2 prósentur frá verðbólgumarkmiði (út frá mælikvarða á verðbólgu sem verðbólgumarkmið hvers lands miðast við) og hlutfallslegt framlag frávika yfir og undir markmiði.
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: Reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar“, *Sérrit* nr. 11.

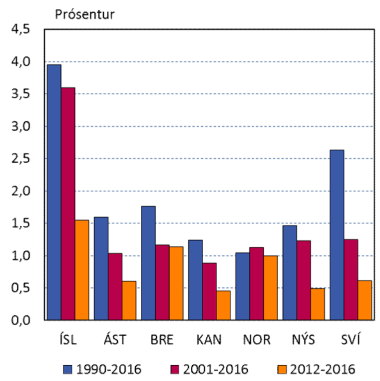
… og sveiflur í verðbólgu og -væntingum minnkað

- Bættur árangur við að halda verðbólgu í skefjum hefur m.a. skilað sér í því að sveiflur í verðbólgu og verðbólguvæntingum hafa minnkað frá því sem áður var … sveiflur eru eftir sem áður meiri en í öðrum iðnríkjum en munurinn hefur minnkað mikið
- Hefur einnig skilað sér í minnkandi óvissu um framtíðar verðbólguhorfur

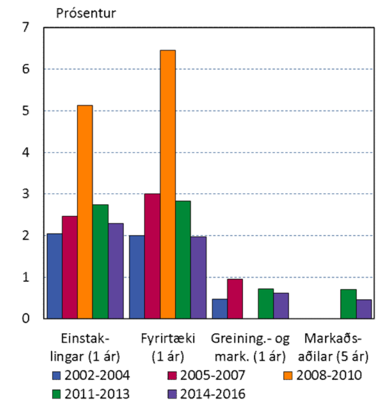
Sveiflur í verðbólgu og verðbólguvæntingum[1]



Sveiflur í verðbólgu 1990-2016[2]



Sundurleitni verðbólguvæntinga[3]

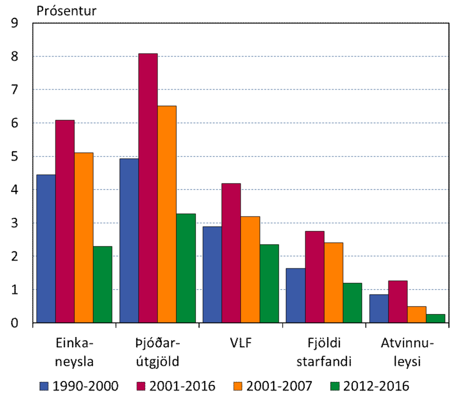


1. Staðalfrávik í mismunandi mælikvörðum á verðbólgu og verðbólguvæntingum fyrir 5 jafnlöng tímabil frá 1. ársfj. 2002 - 4. ársfj. 2017. Undirliggjandi verðbólga er metin með miðgildi sex tölfræðilegra mælikvarða (fimm klipptra meðaltala og vegins miðgildis). Notast er við verðbólguálag á skuldabréfamarkaði sem mælikvarða á verðbólguvæntingar til 2 og 5 ára (gögn einungis frá 2003). 2. Staðalfrávik í ársverðbólgu miðað við ársfjórðungsleg meðaltöl vísitölu neysluverðs. 3. Staðalfrávik í svörum um verðbólguvæntingar fyrir 5 jafnlöng tímabil frá 1. ársfj. 2002 - 4. ársfj. 2017 (línuleg brúun notuð þar sem mælingar vantar). Ekki voru gerðar kannanir meðal greiningar- og markaðsaðila frá miðju ári 2008 og fram til ársbyrjunar 2012. Frá þeim tíma eru langtímaverðbólguvæntingar einnig kannaðar.
Heimild: Seðlabanki Íslands (2017), „Peingastefna byggð á verðbólgumarkmiði: Reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar“, *Sérrit* nr. 11.

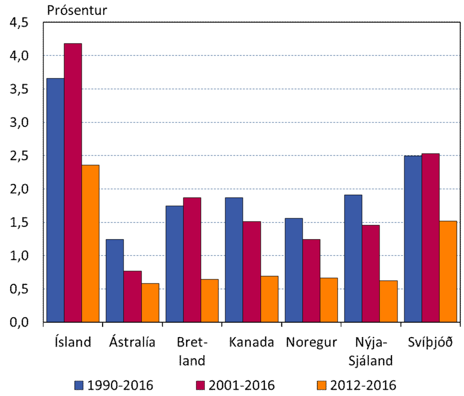
Hagsveiflur hafa einnig farið minnkandi …

- Hagsveiflur hafa einnig minnkað verulega hér á landi frá því sem áður var – hvort sem horft er á hagvöxt, innlenda eftirspurn eða vinnumarkað …
- … sveiflurnar eru þó eftir sem áður meiri en í öðrum iðnríkjum – en munurinn hefur minnkað verulega

Sveiflur í ýmsum hagstærðum 1990-2016[1]



Sveiflur í hagvexti 1990-2016[2]

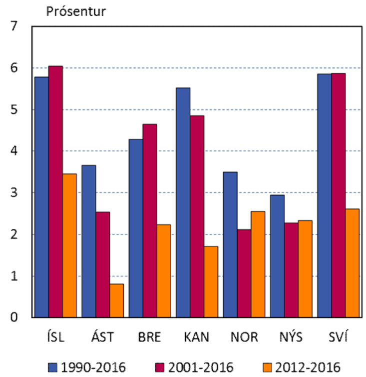


1. Staðalfrávik í ársbreytingu ýmissa þjóðhagsstærða. 2. Staðalfrávik í árshagvexti.
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: Reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar“, *Sérrit* nr. 11.

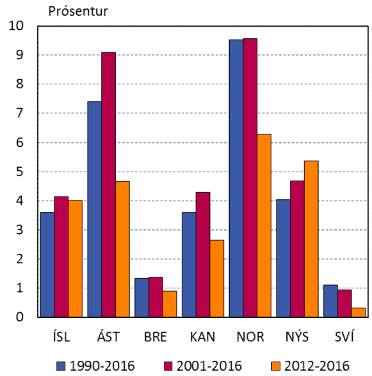
… með minni sveiflum í útflutningi og raunvöxtum

- Sveiflukennd ytri skilyrði eru oft nefnd sem ástæða meiri hagsveiflna hér á landi – eiga örugglega hlut að máli en þá einkum sveiflur í útflutningi fremur en í viðskiptakjörum …
- … en sveiflur í raunvöxtum vega einnig þungt – og aukin stöðugleiki þeirra er veigamikil ástæða minni hagsveiflna undanfarið

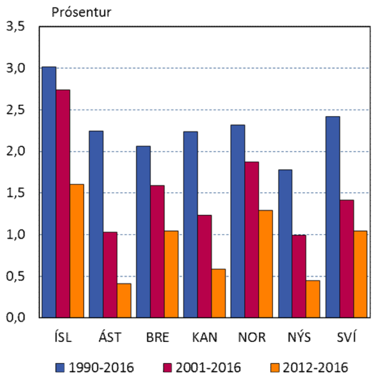
Sveiflur í útflutningi 1990-2016[1]



Sveiflur í viðskiptakjörum 1990-2016[2]



Sveiflur í langtímaraunvöxtum 1990-2016[3]

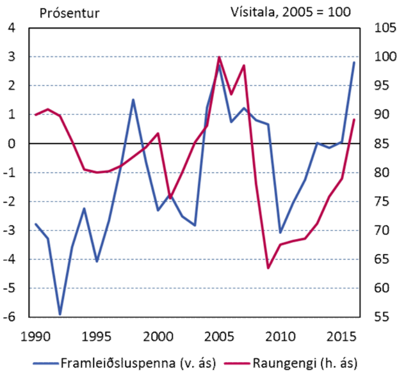


1. Staðalfrávik í ársbreytingu ársmeðaltals útflutnings vöru og þjónustu. 2. Staðalfrávik í breytingu ársmeðaltals viðskiptakjara. 3. Staðalfrávik ársfjórðungsmeðaltala langtímaraunvaxta (5-10 ára ríkisskuldabréfa) miðað við ársverðbólgu hvers tíma.
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: Reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar“, *Sérrit* nr. 11.

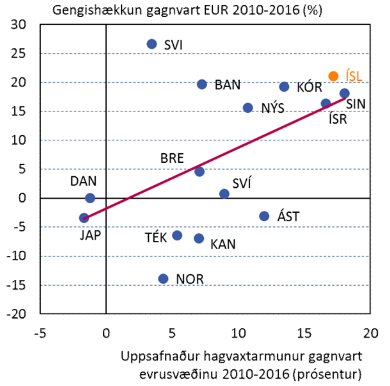
Aukin fylgni gengisbreytinga og hagsveiflna

- Gengi krónunnar hefur hækkað mikið undanfarin ár – en kemur ekki á óvart í ljósi efnahagsuppsveiflu
- Raungengissveiflur þekkjast hér eins og í öðrum litlum og opnum hagkerfum – ekki síst í þeim sem reiða sig á hrávöruframleiðslu … þekkjast jafnvel í löndum í myntbandalagi og sem notast við myntráð

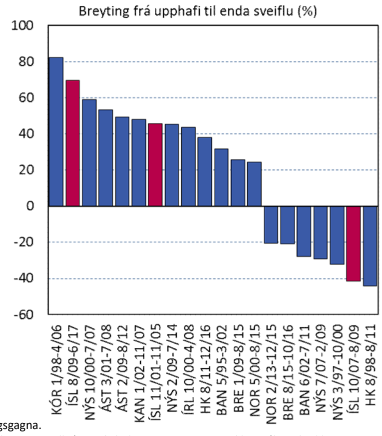
Hagsveiflan og raungengið 1990-2016[1]



Hagvöxtur og gengi í 15 iðnríkjum 2010-2016[2]



Tuttugu gengissveiflur í iðnríkjum frá 1995[3]

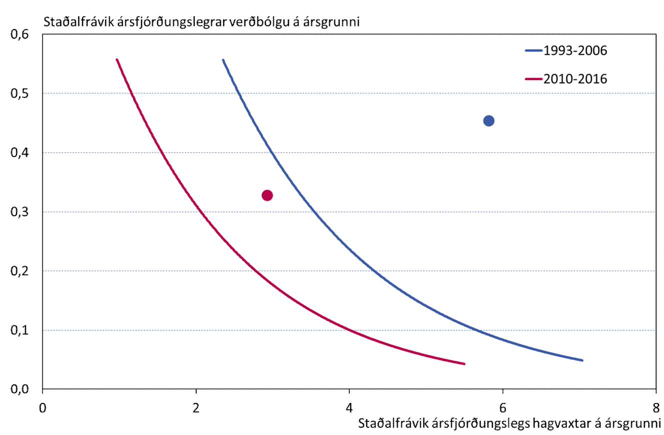


1. Mismunur framleiðsluspennu á Íslandi og í helstu viðskiptalöndum. Raungengi er miðað við hlutfallslegt neysluverðlag. Myndin sýnir ársmeðaltöl ársfjórðungsgagna.
2. Uppsafnaður hagvaxtarmunur er mismunur breytingar VLF frá 2010 til 2016 fyrir hvert land og fyrir evrusvæðið. Breyting á gengi gjaldmiðla gagnvart EUR er breyting milli ársmeðaltala 2010 og 2016. Hækkun táknar hækkun viðkomandi gjaldmiðils gagnvart EUR. 3. Breytingar í raungengi frá hápunkti (lágpunkti) til lágpunkts (hápunkts). Nánari skýringar á aðferðafræði er að finna í Seðlabanki Íslands (2017).
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: Reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar", *Sérrit* nr. 11.

Peningastefnan að ná betri árangri en áður

- Vísbendingar eru því um að peningastefnan sé orðin skilvirkari og að hún sé að ná meiri árangri en áður
- Mat á hagkvæmnisjaðri peningastefnunnar staðfestir það: hægt að ná hagstæðari samsetningu sveiflna í efnahagsumsvifum og verðbólgu en áður … og raunverlegar sveiflur í hagvexti og verðbólgu hafa færst nær því sem best er mögulegt

Hagkvæmnisjaðar peningastefnunnar[1]



1. Hagkvæmnisjaðarinn sýnir þau pör staðalfráviks verðbólgu og hagvaxtar (í prósentum) út frá DSGE-líkani SÍ sem lágmarkar $L = \lambda(\pi - \pi^{T})^2 + (1 - \lambda)(y)^2$ fyrir mismunandi λ á bilinu 0-1 að því gefnu að peningastefnan ákvarðist út frá einfaldri Taylor-reglu, þar sem π er verðbólga, π^T er verðbólgumarkmiðið og y er framleiðsluspenna. Punktarnir sýna pör staðalfráviks verðbólgu og hagvaxtar á þessum tímabilum. Notast er við árstíðarleiðrétt Kalman-síuð gögn.
Heimild: Seðlabanki Íslands (2017), „Peningastefna byggð á verðbólgumarkmiði: Reynslan á Íslandi frá árinu 2001 og breytingar í kjölfar fjármálakreppunnar", *Sérrit* nr. 11.

It is often argued that the Icelandic króna is much more volatile than the currencies of other advanced economies. The Icelandic foreign exchange market is certainly small, and there have been periods of wide fluctuations. Fluctuations were large, for instance, during the run-up to the financial crisis, when there were marked imbalances in the domestic economy, and they increased significantly during the crisis, when the króna collapsed. During periods of reasonable macroeconomic balance, exchange rate movements appear to be broadly similar to movements in the currencies of other advanced economies, and long exchange rate cycles like the recent appreciation episode in Iceland are well known in other countries. Furthermore, it appears that the króna's shock-absorbing capabilities have strengthened in the past few years.

Exchange rate volatility grew following capital account liberalisation but has subsided again

As Chart 1 shows, daily fluctuations in the exchange rate of the króna have increased year-to-date. The standard deviation of daily changes in the trade-weighted exchange rate index (TWI) averaged 0.2% in 2015 and 2016 but began to rise at the beginning of 2017, and volatility grew still further after most of the capital controls were lifted on 14 March. The thirty-day standard deviation of daily exchange rate movements peaked at nearly 1.5% this past summer, but it has been tapering off again in recent months and by the end of October had fallen to 0.5%, similar to that of the pound sterling and the New Zealand dollar, for example. The ninety-day standard deviation remains higher than it has been in recent years, but it, too, has begun to decline, albeit more slowly than the thirty-day standard deviation, as expected.

Fluctuations in the exchange rate of the króna in international context

Chart 2 shows fluctuations in the TWI from 1995 onwards, together with a comparison with other advanced economies' nominal effective exchange rates. It shows the thirty-day standard deviation, but the ninety-day deviation tells the same story. As is shown in the chart, fluctuations similar to movements in the Icelandic króna have been seen in other currencies, and they generally increase in connection with major global economic shocks such as the Asian crisis and the global financial crisis, but also in connection with other types of unrest, including the eurozone debt crisis and the Brexit referendum.

As can be expected, the króna fluctuated somewhat less than other currencies before 2001 – i.e., when the króna was pegged – and it was relatively stable while the capital controls were in effect. Volatility was more pronounced during the floating exchange rate period before the capital controls were introduced. However, it appears to have been affected primarily by the build-up to the financial crisis, a period of sizeable imbalances in the domestic economy and wide swings in all asset prices. There is no evidence that exchange rate volatility in Iceland was significantly greater than in other countries during the first years of inflation-targeting. This can be seen more clearly in Chart 3, which gives a comparison of exchange rate movements in Iceland with those in Norway and Sweden, both of which base their monetary policy on an inflation target. Until 2005, exchange rate fluctuations in the three countries were quite similar, but as 2005 progressed, the volatility of the Icelandic króna began to increase compared to the other two Nordic currencies. During the capital controls period, the Icelandic króna was less volatile, on average, than the Norwegian or Swedish currencies, but that pattern reversed after most of the controls were lifted. In the recent term,

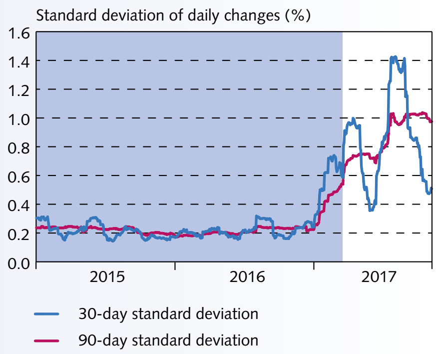
Box 1

Fluctuations in the ISK exchange rate in international context

Chart 1

Fluctuations in the ISK exchange rate[1]

1 January 2015 - 30 October 2017

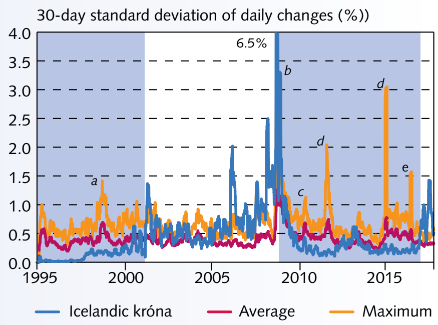


1. Exchange rate of the króna in terms of the trade-weighted exchange rate index. The shaded area shows the period while the capital controls were in effect.
Source: Central Bank of Iceland.

Chart 2

Exchange rate flutuations: industrialised countries[1]

1 January 1995 - 30 October 2017

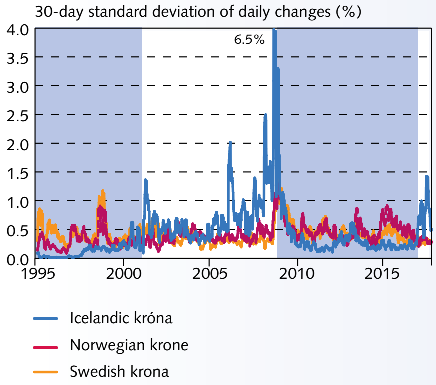


1. Exchange rate in terms of trade-weighted exchange rate index (from JP Morgan for currencies other than the Icelandic króna). Average and maximum fluctuations in the AUD, CAD, CHF, DKK, EUR (ECU before 1999), GBP, JPY, NOK, NZD, SEK, and USD. The first shaded area shows the pegged exchange rate period, and the latter shows the period while the capital controls were in effect. Several periods of greater volatility are indicated on the chart: *a*. Asian crisis. *b*. Global financial crisis *c*. Euro area debt crisis. *d*. Wide fluctuations in connection with the beginning and end of the Swiss central bank's attempts to limit the appreciation of the Swiss franc. *e*. Brexit referendum.
Sources: Thomson Reuters, Central Bank of Iceland.

Chart 3

Exchange rate fluctuations: Nordic region[1]

1 January 1995 - 30 October 2017

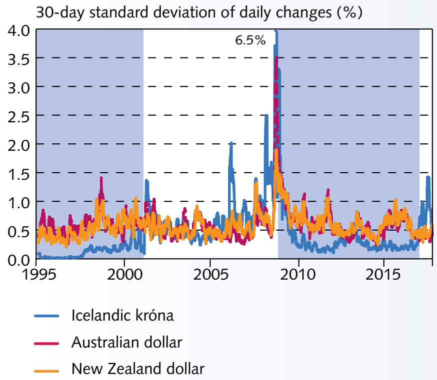


1. Exchange rate in terms of trade-weighted exchange rate index (from JP Morgan for currencies other than the Icelandic króna). The first shaded area shows the pegged exchange rate period, and the latter shows the period while the capital controls were in effect.
Sources: Thomson Reuters, Central Bank of Iceland.

Chart 4

Exchange rate fluctuations: commodity-exporting countries[1]

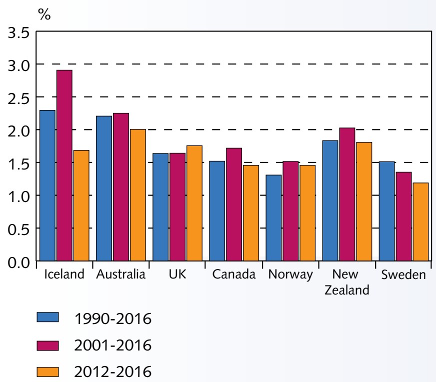
1 January 1995 - 30 October 2017



1. Exchange rate in terms of trade-weighted exchange rate index (from JP Morgan for currencies other than the Icelandic króna). The first shaded area shows the pegged exchange rate period, and the latter shows the period while the capital controls were in effect.
Sources: Thomson Reuters, Central Bank of Iceland.

Chart 5

Fluctuations in the real exchange rate 1990-2016[1]



1. Standard deviation of monthly changes in the real exchange rate (relative consumer prices).
Sources: Bank for International Settlements, Central Bank of Iceland.

however, fluctuations have been broadly similar for all three. A comparison with other commodity exporters such as Australia and New Zealand tells a similar tale: exchange rate fluctuations have long been similar in size to those in Iceland (Chart 4). Comparing fluctuations in real exchange rates in six small, advanced open economies that pursue the same type of monetary policy as Iceland also gives similar results. As Chart 5 shows, fluctuations in monthly changes in the real exchange rate are greater in Iceland over the entire period from 2001, but that period is strongly affected by the collapse of the króna during the financial crisis. In the past five years, fluctuations in Iceland have been similar to those in the other six countries.

Long real exchange rate cycles are quite common …

Discussions of exchange rate movements focusing only on short-term fluctuations – within a day or within a month, for instance – fail to capture the full picture. Currency exchange rates also have a tendency to rise or fall over long periods, and these exchange rate cycles are no less important – for exporters planning to move into new markets, for example. From 1995 to the present, three such cycles can be identified for the króna (see Central Bank of Iceland, 2017): from November 2001 through November 2005, when the real exchange rate rose by over 45%; from October 2007 through August 2009, when it fell by more than 41%; and most recently, from August 2009 through June 2017, when it rose by almost 70%. As Chart 6 indicates, such large and protracted movements in the real exchange rate are also known in other advanced economies. This can be seen even more clearly in Chart 7, which compares developments in the real exchange rate during the two appreciation episodes in Iceland with developments in several other countries.

Chart 7a shows the appreciation during the pre-crisis period at the beginning of this century. As the chart indicates, the rise in the real exchange rate in Iceland resembled that taking place over the same period in Canada and New Zealand. It was also very similar to that in Ireland, a member of the eurozone. Chart 7b shows that during the most recent appreciation episode after the financial crisis, the real exchange rate rose significantly in other countries as well. This is particularly the case for commodity-exporting countries such as Australia and New Zealand, yet even Hong Kong, which follows a currency board, was faced with sizeable increases in its real exchange rate, albeit not as steep as in Iceland. To an extent, the substantial increase in Iceland's real exchange rate reflects the economy's emergence from a deep post-crisis recession. It is not uncommon for a real exchange rate that falls sharply during a currency crisis (such as in Iceland) to rise markedly afterwards. This can be seen in Chart 7c, which compares the most recent appreciation episode with that in South Korea following the twin banking and currency crisis of the late 1990s.[1] In South Korea, the real exchange rate rose by just over 80% in slightly more than eight years, and in Iceland it rose by roughly 70% over a period just shy of eight years.

… and can be a necessary part of an economy's adjustment to shocks

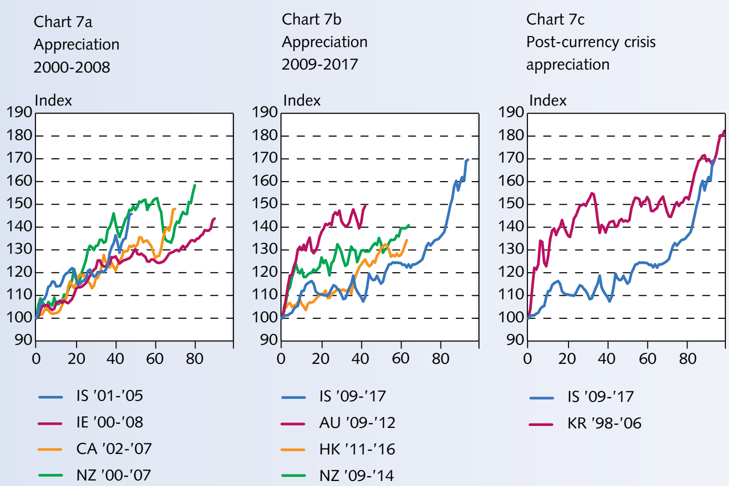
It is important that discussions of exchange rate fluctuations distinguish between exchange rate movements that reflect changes in relative underlying economic fundamentals, and exchange rate movements over and above those changes. The latter tend to exacerbate business cycle volatility, while the former are actually a desirable part of an economy's adjustment to economic shocks. Examples

1. In both countries, the real exchange rate had fallen by 40% during the crisis.

of negative external shocks include catch failures or a deterioration in terms of trade. In the wake of such shocks, the exchange rate of the króna should fall, other things being equal, which will cause the price of domestic production to decline relative to comparable foreign production. This works to offset the contractionary effects of the economic shock and mitigates its impact on employment and domestic economic activity. In addition, a currency depreciation lowers domestic real wages, improving the economy's competitive position and providing the economy with a cushion of resilience in the wake of the shock. Furthermore, imported goods and services become more expensive, shifting a larger share of domestic demand towards domestic production and supporting the economic recovery. The same thing happens when economic activity increases in the wake of a positive external shock such as an improvement in terms of trade and a surge in exports, or following stimulative economic policy actions such as fiscal easing. In this instance, the exchange rate should rise, all else being equal, thereby offsetting the increased economic activity by slowing down exports and boosting demand for imported goods and services, thereby shifting a portion of the economic recovery out of the domestic economy.[2] This interaction between the exchange rate and the business cycle in the past few years can be seen clearly in Chart 8, which shows how the exchange rate fell in the wake of the financial crisis, mitigating the contraction and supporting the economic recovery. With the robust GDP growth of the past two years, Iceland's economic recovery has picked up strongly in comparison with that in trading partner countries, and the real exchange rate has risen steeply so as to counteract these effects, thereby slowing the recovery and moving the economy towards a sustainable long-term growth path.

Chart 7

Long periods of real exchange rate appreciation in selected advanced economies[1]



1. The charts show developments in the real exchange rate from the beginning to the end of the appreciation period (first month = 0) in selected industrialised countries: Iceland (Nov. 2001 - Nov. 2005 and Aug. 2009 - Jun. 2017), Australia (Feb. 2009 - Aug. 2012), Hong Kong (Aug. 2011 - Dec. 2016), Ireland (Oct. 2000 - Apr. 2008), Canada (Jan. 2002 - Nov. 2007), New Zealand (Oct. 2000 - Jul. 2007 and Feb. 2009 - Jul. 2014), and South Korea (Jan. 1998 - Apr. 2006).
Sources: Bank for International Settlements, Central Bank of Iceland.

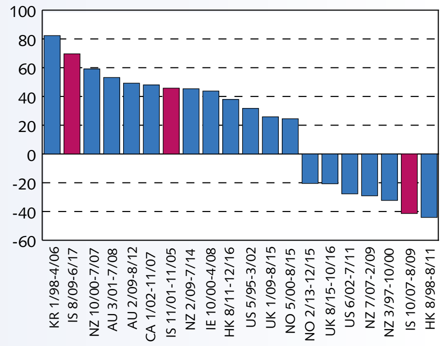
Exchange rate movements in recent years have acted as shock absorbers rather than a source of shocks

It can therefore be argued that the exchange rate movements of the past few years have served as shock absorbers and have there-

2. See, for example, the alternative scenario in *Monetary Bulletin* 2017/2, which describes the important role of a higher exchange rate in the economy's adjustment to the positive shocks of the past few years.

Chart 6

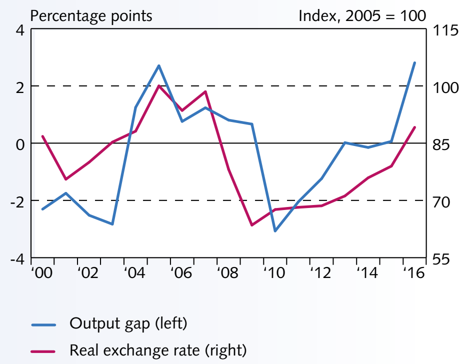
20 exchange rate cycles in advanced economies since 1995[1]



1. Changes in the real exchange rate from peak (trough) to trough (peak). The countries are Australia (AU), United States (US), United Kingdom (UK), Hong Kong (HK), Ireland (IE), Iceland (IS), Canada (CA), Norway (NO), New Zealand (NZ), and South Korea (KR).
Sources: Bank for International Settlements, Central Bank of Iceland.

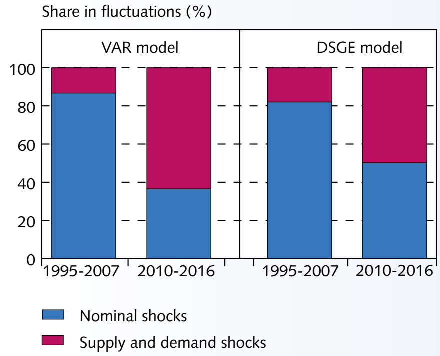
Chart 8

The business cycle and the real exchange rate 2000-2016[1]



1. Difference between output gap in Iceland and main trading partners.
Source: Central Bank of Iceland (2017).

Chart 9
Variance decomposition of exchange rate fluctuations[1]



1. The underlying structural shocks are estimated using a VAR model, on the one hand, and the Bank's DSGE model, on the other. This is explained in the main text.
Source: Central Bank of Iceland (2017).

fore been favourable, even though they have tested the resilience of firms and sectors faced with changes in external conditions. It has not always been thus, however: exchange rate movements have sometimes been a source of shocks (see Central Bank of Iceland, 2012, Chapter 13). But this appears to be changing (Central Bank of Iceland, 2017): until 2007, fluctuations in the exchange rate were attributable largely to nominal shocks, such as shocks to monetary policy and money velocity and shocks that can be attributed to the exchange rate itself (e.g., fluctuations in risk premia on the króna) and were due only to a limited degree to shocks to aggregate demand and supply (Chart 9).[3] This seems to have changed in the past few years. Aggregate demand and supply shocks now explain a much larger share of exchange rate fluctuations than before; therefore, the shock-absorbing capacity of the exchange rate appears to have increased. The sample period is short, however, and it is therefore appropriate to exercise caution when drawing conclusions about the findings. It is also appropriate to bear in mind that the capital controls were in place during this period, mitigating speculation-driven exchange rate movements. As a result, the possibility cannot be excluded that the weight of such speculation-generated fluctuations will increase now that the capital controls have been lifted.

Summary

Short-term fluctuations in the exchange rate of the króna increased somewhat after the capital controls were lifted earlier this year, but they have subsided again and are now similar to those in the first half of the 2000s, when the economy was well balanced internally and externally. They are also similar to the fluctuations in the currencies of other advanced economies. Longer exchange rate cycles, with the real exchange rate rising or falling steadily over a protracted period, are also typical in other countries. Three such cycles can be identified in Icelandic data from 1995 onwards, and similar patterns can also be seen in the real exchange rates of other advanced economies, particularly commodity exporters or those that have recovered from twin banking and currency crises. The currency appreciation of the past few years appears in large part to reflect Iceland's rapid economic recovery relative to its main trading partners, and it seems that the exchange rate performs its shock-absorbing role more effectively now than in the past.

References

Central Bank of Iceland (2012), "Iceland's currency and exchange rate policy options", *Special Publication* no. 7.

Central Bank of Iceland (2017), "Monetary policy based on inflation targeting: experience since 2001 and post-crisis changes", *Special Publication* no. 11.

3. Structural shocks are estimated using a VAR model, on the one hand, and the Central Bank's DSGE model, on the other (for further explanation, see Central Bank of Iceland, 2017). A three-dimensional structural VAR model containing GDP and public consumption (both variables relative to the eurozone) was used, together with the EURISK exchange rate. In order to identify structural shocks, it is assumed that supply shocks have a long-run effect on all three variables, that demand shocks have a long-run effect on public consumption and the exchange rate of the króna, and that nominal shocks only have a long-run effect on the exchange rate. In the DSGE model, nominal shocks are the sum of shocks to global inflation, domestic monetary policy, and risk premia on the króna; demand shocks are the sum of shocks to global demand, public sector demand, domestic consumers' preferences, and investment technology; and supply shocks are the sum of shocks to domestic and international pricing and domestic and international technological shocks.

Box 2

Special reserve requirement on capital inflows

Box 1 in *Monetary Bulletin* 2016/4 discusses the Central Bank's new capital flow management measure (CFM), which was introduced in June 2016. The CFM entails a special reserve requirement on a portion of new inflows of foreign currency to Iceland. The implementation of the special reserve requirement is based on the Foreign Exchange Act, no. 87/1992, and the statutory authorisation can be found in Temporary Provision III of that Act. With the Rules on Special Reserve Requirements for New Foreign Currency Inflows, no. 490/2016, which took effect on 4 June 2016, the Central Bank's authorisation to impose the special reserve requirement was exercised, but not to the full extent provided for in the Act.[1] According to the current Rules, 40% of new foreign currency inflows for investment in registered bonds and bills issued in krónur, as well as inflows into high-yielding deposits, must be held in a non-interest-bearing account with the Central Bank for one year.

Objectives

The objectives of introducing the special reserve requirement were to mitigate the risk that can accompany large-scale capital inflows and to promote more effective monetary policy transmission by attempting to temper cross-border inflows and affect their composition. The CFM is designed to mitigate the risk potentially associated with inflows related to carry trade; i.e., transactions undertaken in order to profit on the interest rate differential between Iceland and other countries. Inflows of this type can impede normal monetary policy transmission along the interest rate channel and have a detrimental impact on the exchange rate of the króna, thereby undermining monetary and financial stability. Tying up a portion of inflows for one year in a non-interest-bearing account cuts into the profit on such carry trade – the shorter the investment horizon, the stronger the effect. At the time the special reserve requirement was introduced, there was a wide interest rate differential between Iceland and other countries and therefore a strong incentive for carry trade. Trading of this type surged following the authorities' June 2015 announcement of their capital account liberalisation strategy (Chart 1 and Table 1). The associated capital inflows led, among other things, to a decline in long-term interest rates in spite of increased GDP growth and expectations of rising Central Bank interest rates at the time.

Impact

In the main, the special reserve requirement delivered the intended results. Inflows of capital for new investments in the domestic Treasury bond market virtually halted, and total inflows diminished. Inflows into assets not affected by the special reserve requirement increased after mid-2016, however, particularly foreign direct investment (FDI). The reserve requirement has probably had a negligible effect on FDI, however, as the lion's share of the increase stemmed from large long-term projects that had been decided upon before the CFM was introduced. It may have had some effect on inflows into the domestic stock market, which have increased this year, although this is not a given, as investment in stocks is different in nature than investment in Treasury bonds.

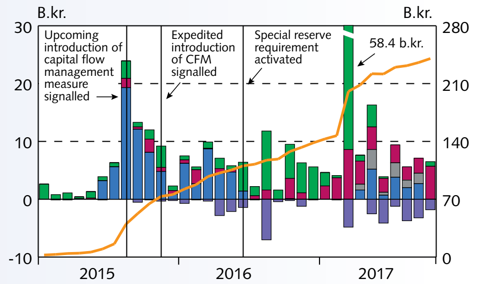
Furthermore, the transmission of monetary policy along the interest rate channel normalised after the measure was introduced, and changes in Central Bank interest rates are transmitted to the domestic Treasury bond market once again, unlike the situation in

1. Rules no. 490/2016 were amended on 16 June 2016, 1 November 2016, and 13 March 2017.

Chart 1

Capital flows due to registered new investments[1]

January 2015 - October 2017



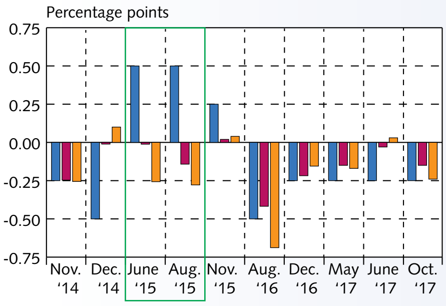
- Capital inflows into Government bonds (left)
- Capital inflows into listed shares (left)
- Other capital inflows (left)[2]
- Capital inflows into special reserve accounts (left)
- Capital outflows (left)
- Cumulative net capital flows (right)

1. Investment commencing after 31 October 2009 and based on new inflows of foreign currency that is converted to domestic currency at a financial instititution in Iceland. For further information, see the Foreign Exchange Act, no. 87/1992. 2. 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.

Chart 2

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



Policy rate change

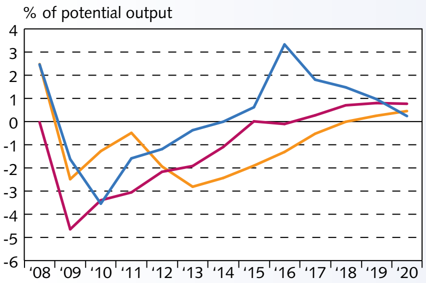
Simultaneous change in long-term rate

Long-term rate one week later

Source: Central Bank of Iceland.

Chart 3

Output gap 2008-2020[1]



Iceland

US

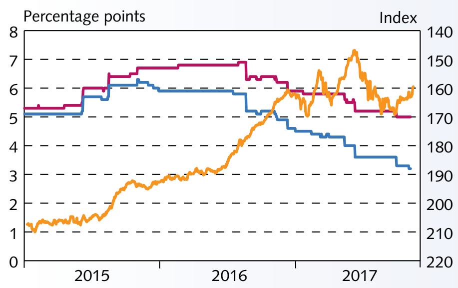
Euro area

1. Based on the Central Bank's *Monetary Bulletin* 2017/4 estimate for Iceland and the International Monetary Fund's estimate (*World Economic Outlook*, October 2017) for the US and the euro area.
Sources: International Monetary Fund, Central Bank of Iceland.

Chart 4

Short-term interest rate differential and ISK exchange rate[1]

2 January 2015 - 10 November 2017



Interest rate differential, EURISK (left)

Interest rate differential, USDISK (left)

Average exchange rate - narrow TWI (inverse right axis)

1. The difference between 3-month interbank rates.
Sources: Thomson Reuters, Central Bank of Iceland.

2015 (Chart 2).[2] Inflows into the domestic Treasury bond market began to increase again in April 2017, after most of the capital controls were lifted, but have been less than they were before the CFM was introduced in June 2016. At the same time, there was an increase in outflows of capital previously invested in the domestic bond market, and net inflows into domestic Treasury bonds therefore totalled only 7.4 b.kr. over the first ten months of 2017. As yet, the increase in inflows does not appear to have weakened the transmission of monetary policy along the interest rate channel.

Future arrangements

The special reserve requirement has now been in effect for over a year, and it is necessary to maintain it for a while to come. The liberalisation of most of the capital controls took place only a short time ago, and it is important not to jeopardise the success of the process. There is still a need for higher interest rates in Iceland than in trading partner countries, owing to differences in the business cycle position. There is an output gap in Iceland but a slack in most other advanced economies (Chart 3), and it looks as though interest rates in key currency areas worldwide will remain unusually low for some time (see also Chapters II and III). As a consequence, it is likely that there will be a significant interest rate differential between Iceland and its trading partners in the coming term. Added to the impact of the interest rate differential are the recent upgrades in Iceland's sovereign credit ratings from all three of the large international rating agencies, which make Icelandic Treasury bonds an even more attractive option for foreign investors.

There is strong worldwide demand for assets that combine high yields and relatively moderate risk. Iceland's bond and foreign exchange markets are tiny in comparison with this demand. As a result, the investment of even a miniscule portion of global asset portfolios in low-risk Icelandic bonds could severely shake Iceland's thin bond and foreign exchange markets, disturb the monetary policy transmission mechanism, and cause wide fluctuations in the exchange rate of the króna, as was the case during the prelude to the 2008 financial crisis. The probability of large and volatile inflows of this type is therefore non-negligible. In addition to potentially derailing monetary and financial stability, such inflows could impede the transmission of monetary policy via the interest rate channel. Iceland's experience from the years prior to the collapse of the financial system and the introduction of the capital controls shows that this risk is genuine.

The spread between short- and long-term interest rates in Iceland and its trading partners has narrowed since the CFM was adopted (Charts 4 and 5). This is due to rate cuts in Iceland, rising rates abroad, and a decline in risk premia on Iceland. If forecasts of a narrowing output gap in Iceland in the near term and the closure of the output slack in trading partner countries materialise (Chart 3), this trend should continue, thereby strengthening the conditions for scaling back the special reserve requirement.

It is important to reduce the special reserve requirement in conditions-based increments. Scaling it back too quickly could erode stability and undermine the effectiveness of monetary policy. Another important factor is that it is unclear what benefit investments affected by the CFM would have for Iceland at present. The

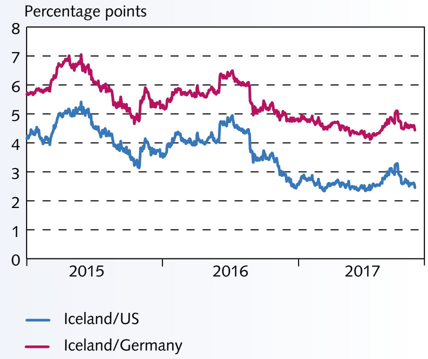
2. This is also consistent with information from the Central Bank's market expectations survey. According to the November 2015 survey, most respondents were of the opinion that the decline at the long end of the yield curve was related to capital inflows into the bond market. A year later, however, in the November 2016 survey, most participants considered the decline in bond rates in August 2016 related to reduced inflation expectations and expectations of lower Central Bank interest rates.

Treasury's borrowing need is limited in historical context, and strictly speaking, the Treasury does not need the funds generated by the bonds in question. If the special reserve requirement were not in effect, the Central Bank would probably have to hold larger foreign exchange reserves so as to mitigate the risk associated with carry trade-related inflows and the potential for sudden outflows. This would be quite costly, as global market returns on the reserves are unusually low at present. At the same time, foreign investors can expect attractive returns on Icelandic Treasury bonds – the more stable the króna is, the more attractive the returns will be. In order to reduce the risk-adjusted interest rate deferential, the Central Bank would therefore need to allow increased exchange rate fluctuations, which would also exacerbate the risk faced by residents. Under current conditions, it can even be argued that for the Icelandic economy, the net benefit of such inflows is negative.

Nevertheless, the aim is to lower the special reserve requirement to zero as soon as conditions warrant it and generally not apply it. However, the Central Bank considers it important to be able to activate it if the need arises. The special reserve requirement would then be a third line of defence, supplementing conventional macroeconomic policy and micro- and macroprudential tools.

In view of the above, it is necessary that the Central Bank retain the statutory authority to apply a special reserve requirement that could be activated at short notice to support monetary and macroprudential policies when there is elevated risk of excess carry trade-related capital inflows, with the associated risk to the domestic economy. In order for this to be possible after the capital controls have been lifted in full, a new statutory foundation (other than the Foreign Exchange Act) must be found for the special reserve requirement, which is primarily a monetary and macroprudential policy instrument. Furthermore, the efficacy of the special reserve requirement must be ensured once speculative derivatives trading in krónur has been re-authorised, as full liberalisation implies. The Central Bank is currently reviewing the technical foundations for the special reserve requirement and preparing proposals for statutory amendments pertaining to its application.

Chart 5
Long-term interest rate differential[1]
2 January 2015 - 10 November 2017



1. The difference between 10-year government bond yields.
Sources: Thomson Reuters, Central Bank of Iceland.

Table 1 Capital inflows (outflows) due to registered (sold) new investments (b.kr.)[1]

Quarter	*Treasury bonds*	*Special reserve accounts*[2]	*Listed shares*	*Un-registered equity*[3]	*Other*[4]	*Total*
2015:1	0.0 (0.0)		0.0 (0.1)	3.5 (0.0)	1.1 (0.0)	4.6 (0.1)
2015:2	3.2 (0.0)		0.2 (0.0)	1.7 (0.0)	0.4 (0.1)	5.6 (0.1)
2015:3	37.0 (0.3)		2.0 (0.0)	3.9 (0.0)	0.5 (0.1)	43.4 (0.5)
2015:4	13.8 (0.3)		3.6 (0.0)	4.2 (0.0)	1.9 (0.1)	23.5 (0.4)
2016:1	18.5 (0.7)		3.1 (0.0)	1.1 (0.0)	1.1 (0.1)	23.9 (0.9)
2016:2	10.3 (3.8)	0.0 (0.0)	1.5 (0.0)	5.4 (2.1)	2.1 (0.1)	19.3 (6.0)
2016:3	0.1 (7.0)	0.0 (0.0)	3.3 (0.0)	10.6 (0.0)	2.2 (0.0)	16.2 (7.1)
2016:4	0.0 (1.5)	0.1 (0.0)	4.7 (0.0)	12.5 (0.0)	4.1 (0.0)	21.3 (1.6)
2017:1	0.0 (2.4)	0.0 (0.0)	14.6 (2.4)	51.5 (0.0)	1.0 (0.0)	67.2 (4.9)
2017:2	7.4 (4.7)	4.9 (0.0)	10.2 (1.5)	4.6 (0.0)	0.4 (0.5)	22.7 (6.7)
2017:3	8.4 (3.7)	5.6 (0.0)	7.9 (3.5)	0.0 (0.8)	0.0 (0.0)	16.3 (8.1)
Total	98.8 (24.5)	10.7 (0.0)	51.2 (7.6)	98.9 (3.0)	15.0 (1.2)	264.0 (36.3)

1. New investment is investment undertaken in Iceland after 31 October 2009 and based on new inflows of foreign currency that is converted to domestic currency at a financial undertaking in Iceland. New investments and sales of such investments must be reported to the Central Bank of Iceland pursuant to the Foreign Exchange Act, no. 87/1992, and the Rules on Foreign Exchange, no. 200/2017. 2. According to Central Bank of Iceland Rules no. 490/2016, with subsequent amendments. 3. The majority of new investment in unlisted equity is foreign direct investment, apart from Q1/2017, when it was due almost entirely to non-residents' purchase of holdings in a domestic commercial bank. 4. Capital flows due to new investment in real estate, deposits, loans, funds, and other securities.
Source: Central Bank of Iceland.

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.