



# MONETARY BULLETIN

2018 • 3

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The objective of the Central Bank of Iceland's monetary policy is to contribute to general economic well-being in Iceland. The Central Bank does so by promoting price stability, which is its main objective. In the joint declaration made by the Government of Iceland and Central Bank of Iceland on 27 March 2001, this is defined as aiming at an average rate of inflation, measured as the twelve-month increase in the CPI, of as close to 2½% as possible.

Professional analysis and transparency are prerequisites for credible monetary policy. In publishing *Monetary Bulletin* four times a year, the Central Bank aims to fulfil these principles.

*Monetary Bulletin* includes a detailed analysis of economic developments and prospects, on which the Monetary Policy Committee's interest rate decisions are based. It also represents a vehicle for the Bank's accountability towards Government authorities and the public.

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**Icelandic letters:**

ð/Ð (pronounced like th in English this)

þ/Þ (pronounced like th in English think)

In *Monetary Bulletin*, ð is transliterated as d and þ as th in personal names, for consistency with international references, but otherwise the Icelandic letters are retained.

# Statement of the Monetary Policy Committee

## 29 August 2018

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

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

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

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

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

## Monetary Bulletin 2018/3<sup>1</sup>

Although output growth is still expected to be robust among Iceland's main trading partners, the global output growth outlook has deteriorated slightly since the May issue of *Monetary Bulletin*. In addition, financial conditions in emerging market economies have grown tighter with the rise in US interest rates and the appreciation of the US dollar.

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

The rise in total hours worked has lost pace, and labour importation, although still strong, appears to have peaked. Seasonally adjusted unemployment measured 2.9% in Q2, and the number of firms having difficulty recruiting or responding to unexpected demand has fallen. Tension appears to be subsiding in the labour market and in the economy as a whole. The output gap remains positive, however, and according to the Bank's forecast it will not close until very late in the forecast horizon.

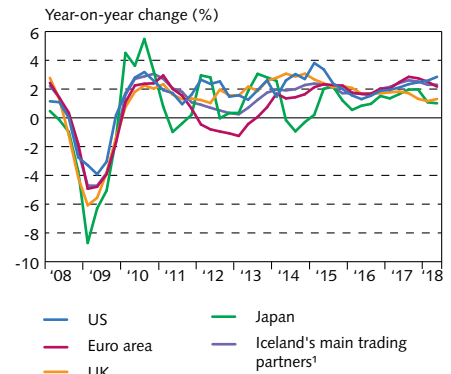
Inflation measured 2.3% in Q2, but by July it had risen by nearly 1 percentage point year-on-year, to 2.7%. Underlying inflation has risen as well, to 2.9% in July, according to the median of various measures. In addition, both short- and long-term inflation expectations have risen. The inflation outlook well into 2019 has deteriorated since the May forecast. Inflation is projected to measure 2.8% in Q3/2018 and about 3% from Q4 through mid-2019, whereupon it is expected to ease back to the target.

1. The analysis appearing here is based in large part on the Bank's assessment of economic developments, published in May 2018 in *Monetary Bulletin* 2018/2, and on the updated forecast presented in this report. It is based on data available as of 24 August. As usual, the updated forecast is based on the risk assessment from the previous forecast.

## The global economy and terms of trade

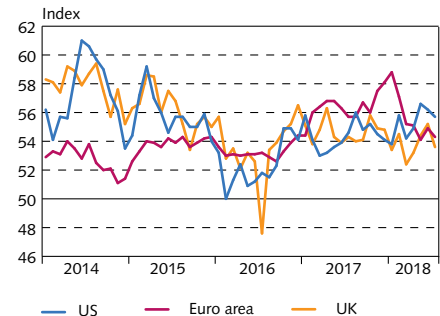
- GDP growth among Iceland's main trading partners is estimated at 2.3% in H1/2018. Although this is below the forecast in the *May Monetary Bulletin*, it is among the strongest growth rates since 2010. GDP growth turned out weaker in nearly all trading partner countries, but particularly in Brazil, Japan, the UK, and Denmark. It slowed slightly in the euro area but picked up still further in the US, where it reached a three-year high.
- Leading indicators and international GDP growth forecasts continue to suggest solid growth in the global economy but indicate that the outlook is slightly weaker than in the spring. According to the International Monetary Fund's (IMF) latest forecast, global economic uncertainty has increased, as has the risk that GDP growth will decline again because of the danger of escalating tariffs and a trade war.
- The rise in US interest rates and the appreciation of the dollar have caused tightened financial conditions in many emerging market economies (EME) because of widespread dollar-denominated debt. Capital has flowed out of those economies, and their currencies have weakened. This has been particularly noticeable in Turkey, which is also struggling with high inflation and an overheated economy. The contagion of the currency crisis in Turkey has exacerbated difficulties in some other EMEs.
- Trading partners' GDP growth is projected to average 2.3% this year, some 0.1 percentage points below the May forecast. The poorer outlook for this year is due primarily to weaker output growth in the euro area, the UK, and Denmark. The output growth outlook is also slightly weaker for the next two years, particularly because of a poorer outlook for the eurozone. The forecast for trading partners' imports changes accordingly.
- Trading partner inflation appears likely to exceed the forecast in the *May Monetary Bulletin*. In Q2, it averaged 2%, somewhat above expectations, owing mainly to a steep rise in petrol prices during the quarter. Headline inflation among Iceland's trading partners is forecast to average 1.9% this year, 0.1 percentage points more than was forecast in May.
- The US Federal Reserve Bank raised interest rates by 0.25 percentage points in June, in line with increased demand growth and inflation, to 1.75-2%. The Federal Reserve has also continued to scale down its bond holdings. Interest rates have also been raised by 0.25 percentage points in the UK and Canada, in accordance with market agents' expectations. The European Central Bank (ECB) has held its key interest rate steady, however, and has signalled that it will remain unchanged at least until autumn 2019. The ECB has announced, however, that it will cut back on its monthly net bond purchases beginning in October 2018 and is considering ending them in December.

Chart 1  
Global GDP growth  
Q1/2008 - Q2/2018



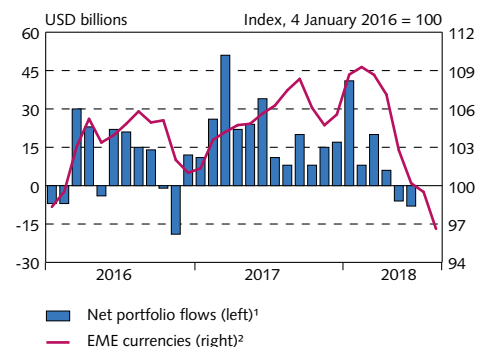
1. Q2/2018 GDP growth based on Central Bank baseline forecast. Sources: Thomson Reuters, Central Bank of Iceland.

Chart 2  
Leading indicators of GDP growth<sup>1</sup>  
January 2014 - July 2018



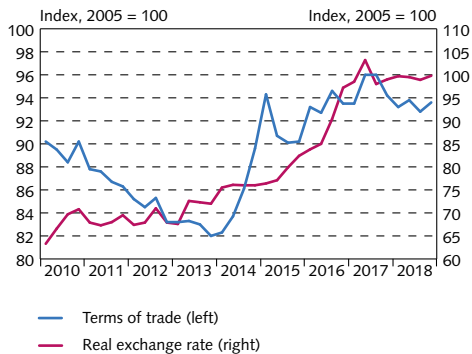
1. Markit composite purchasing managers' index (PMI). The index is published monthly and is seasonally adjusted. An index value above 50 indicates month-on-month growth, and a value below 50 indicates a contraction. Source: Thomson Reuters.

Chart 3  
Capital flows and exchange rates in emerging market economies  
January 2016 - August 2018



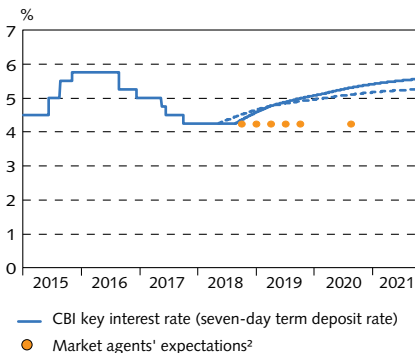
1. Net capital inflows for investment by non-residents in emerging market economies (EME). Data through June 2018. 2. JP Morgan Emerging Market Currency Index. Monthly averages; data through 24 August 2018. Sources: Bank of England, Thomson Reuters.

Chart 4  
Terms of trade and real exchange rate<sup>1</sup>  
Q1/2010 - Q2/2018



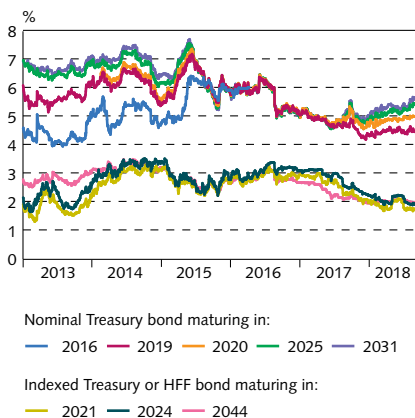
1. Q2/2018 terms of trade based on Central Bank baseline forecast.  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 5  
Central Bank of Iceland key interest rate and expected developments<sup>1</sup>  
1 January 2015 - 30 September 2021



1. The Central Bank's key interest rate and Treasury bond yields were used to estimate the yield curve. Broken lines show forward market interest rates prior to MB 2018/2. 2. Estimated from the median response in the Central Bank's survey of market agents' expectations concerning the collateralised lending rate. The survey was carried out during the period 13-15 August 2018.  
Source: Central Bank of Iceland.

Chart 6  
Nominal and indexed bond yields  
Daily data 2 January 2013 - 24 August 2018



Source: Central Bank of Iceland.

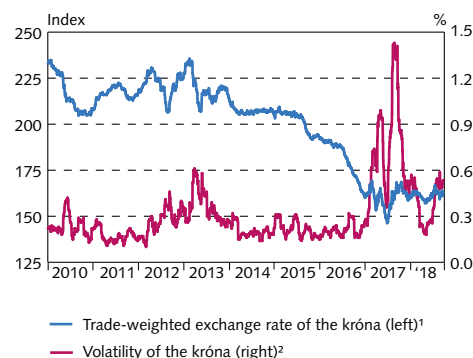
- Futures prices and international forecasts indicate that oil prices will rise by nearly one-third this year, on top of last year's increase of almost a fourth. The increase this year is larger than was assumed in the Bank's May forecast, mainly because of steeper price increases in Q2. Aluminium and other commodities prices have also risen, as was expected in May. Marine product prices have risen as well, after falling by 0.8% last year.
- Terms of trade deteriorated significantly in Q1/2018. Despite a turnaround in Q2, they are expected to worsen in 2018 as a whole by 1.8%, more than was forecast in May. This is due to a larger rise in petrol prices and a surge in alumina prices following a production shutdown in Brazil. Import prices in general have also risen. The real exchange rate in terms of relative consumer prices has remained relatively stable year-to-date but was 1.5% lower year-on-year in the first seven months of 2018. As in May, terms of trade are expected to improve and the real exchange rate to rise marginally over the next two years.

## Monetary policy and domestic financial markets

- The Central Bank's key interest rate has been unchanged at 4.25% since the beginning of October 2017, but the Bank's real rate has continued to fall. It was 1.3% in terms of the average of various measures of inflation and one-year inflation expectations (down by 0.2 percentage points since May) but 1.5% in terms of twelve-month inflation (down by 0.4 percentage points since May).
- The arrangements for credit institutions' minimum reserve requirements with the Central Bank was changed at the beginning of June so as to divide the reserve requirement into two parts: a fixed non-remunerated 1% reserve requirement, and a 1% reserve requirement of the type that has been in place heretofore, currently bearing 4% interest. This change was not intended to affect the monetary stance, and there are no signs that it has affected market interest rates or developments in the financial markets.
- According to the Central Bank survey carried out in August, market agents expect the Bank's key rate to be kept unchanged at 4.25% over the next two years. The forward yield curve is still slightly upward-sloping, however.
- Yields on the longest nominal Treasury bonds are now 5.6% and have risen by 0.4 percentage points since May. Yields on shorter bonds have risen a bit less, and the yield curve has therefore become slightly steeper. At the same time, yields on indexed Treasury and Housing Financing Fund (HFF) bonds fell slightly and the breakeven inflation rate in the bond market therefore risen (see the discussion of inflation expectations later in this report).

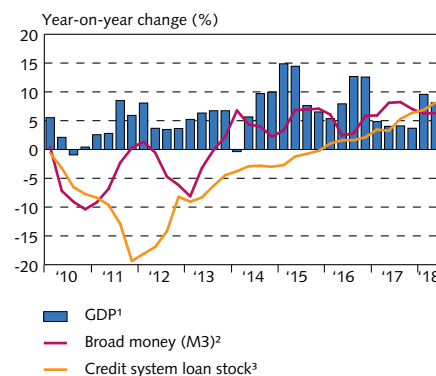
- The interest rate differential with abroad is narrowing as international interest rates rise. The risk premium on Treasury obligations has been broadly stable in the recent term, however. Inflows of foreign capital for new investment in listed equity securities have increased again after subsiding early in the year, but inflows into the domestic bond market are still negligible.
- The króna has depreciated by 2.0% in trade-weighted terms since just before the *Monetary Bulletin* in May. Exchange rate volatility has increased slightly this summer, whereas last autumn it declined after a brief surge following the liberalisation of the capital controls. Turnover in the interbank foreign exchange market has fallen sharply and the Central Bank has not intervened in the market since November 2017. This decline in turnover is attributable in large part to an improved balance between supply and demand for currency within the commercial banks, which is likely to have mitigated their need to enter the foreign exchange market.
- The exchange rate of the króna has been somewhat lower in Q3 to date than was assumed in the Bank's May forecast, and according to the baseline forecast it will remain so, as the baseline forecast assumes that the exchange rate will hold relatively steady over the forecast horizon.
- Growth in M3 measured 6.3% in Q2, similar to that in Q1. As before, the increase is due largely to growth in household deposits. Growth in credit system lending has gained pace, measuring 8.1% in Q2. Twelve-month growth in corporate lending measured 11.5% during the quarter, while household lending grew by 6.3%.
- Capital area house prices rose by 5.2% year-on-year in July and rent prices by more than 8%. The twelve-month rise in house prices has therefore picked up slightly after easing virtually without interruption since peaking in May 2017. The number of purchase agreements in the capital area was up nearly 10% year-on-year in the first seven months of 2018, and the proportion of first-time buyers rose to an all-time high. The number of flats available for sale therefore fell markedly from the peak at the beginning of the year.
- In spite of strong economic activity, share prices have risen only slightly in the past two years. The OMXI8 index began to fall in the latter half of June but then turned around in August and, just before the publication of this *Monetary Bulletin*, was back to virtually the same level as at the beginning of the year.
- The private sector debt-to-GDP ratio has remained relatively stable in the past two years. Non-performing loan ratios have fallen somewhat, while corporate insolvencies increased in number in H1/2018. Financial institutions' deposit and lending rates are broadly unchanged since May, and on the whole, private sector financial conditions are considered similar to those prevailing then.

Chart 7  
Exchange rate and volatility of the króna  
4 January 2010 - 24 August 2018



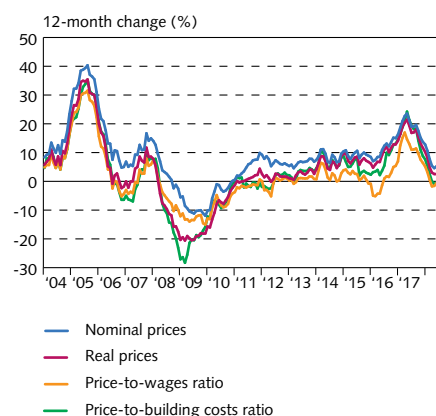
1. Price of foreign currency in terms of the króna. Narrow trade index. 2. 30-day standard deviation of daily changes in the trade-weighted exchange rate index.  
Source: Central Bank of Iceland.

Chart 8  
Money holdings, lending, and nominal demand  
Q1/2010 - Q2/2018



1. Q2/2018 GDP based on Central Bank baseline forecast. 2. Excluding deposits owned by failed financial institutions. 3. Loans to resident entities, excluding the Treasury, deposit institutions and failed financial institutions. Adjusted for reclassification and for the Government's debt relief measures.  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 9  
Capital area house prices  
January 2004 - July 2018



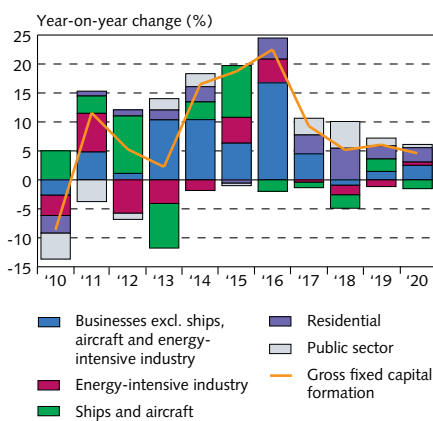
Sources: Statistics Iceland, Registers Iceland.

Chart 10  
National accounts for Q1/2018



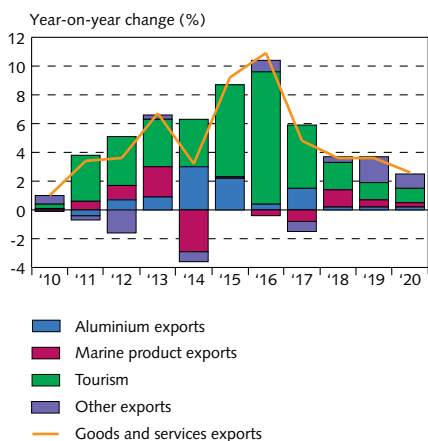
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 11  
Gross fixed capital formation and contribution of main components 2010-2020<sup>1</sup>



1. Central Bank baseline forecast 2018-2020.  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 12  
Exports and contribution of subcomponents 2010-2020<sup>1</sup>



1. Aluminium exports as defined in the national accounts. Tourism is the sum of "travel" and "passenger transport by air". Central Bank baseline forecast 2018-2020.  
Sources: Statistics Iceland, Central Bank of Iceland.

## Demand and GDP growth

- GDP growth measured 6.6% in Q1/2018, according to preliminary figures from Statistics Iceland. Domestic demand growth measured 6.8%, with growth in private consumption and investment weighing heaviest. The contribution from net trade was more or less neutral during the quarter. Year-on-year GDP growth was 0.7 percentage points stronger than was assumed in the May forecast, mainly because of a stronger-than-projected contribution from residential investment and inventory changes. Offsetting this, private consumption was weaker and imports stronger than had been expected.
- Private consumption growth has eased after peaking in Q2/2017. In Q1/2018, it measured 5.9%, less than was forecast in the May *Monetary Bulletin*, and less than indicators such as payment card turnover had suggested. Leading indicators eased somewhat in Q2; therefore, private consumption growth is likely to keep slowing. In view of this, it is projected to be weaker this year than was forecast in May. It is expected to measure 5.6% this year and then average 3½% per year over the following two years.
- Investment grew by 11.6% in Q1/2018, some 2.6 percentage points above the May forecast. In line with that forecast, business investment grew by over 7%, with all of its main subcomponents increasing between years. Residential investment grew considerably more than was forecast, however, while public investment was weaker. Growth in general business investment (i.e., excluding investment in energy-intensive industry and ships and aircraft) turned out weaker than forecast, and the prospect of continued weaker growth is the main reason total investment is expected to grow more slowly this year than previously assumed. The outlook for the forecast horizon as a whole is broadly unchanged, however.
- The nominal value of public consumption in Q1 was well in line with the Bank's May forecast, but because the public consumption price deflator rose less than expected, volume growth turned out stronger than forecast. In view of this, public consumption growth in 2018 is projected to outpace the May forecast. Public investment is also forecast to grow more rapidly this year because of additional funding for road maintenance in the amount of 4.4 b.kr.
- The outlook is for marine product exports to grow this year by 7.5%, the strongest growth rate since 2013. It is 3.5 percentage points above the May forecast, owing mainly to increased catches in H1 and increased demersal quotas in the next fishing year, which begins in September. Goods exports will therefore grow faster this year than was forecast in May, offsetting the slowdown in services exports, which is due to a weaker growth in tourism than was previously projected. The slowdown in tourism growth is due in particular to weaker-than-projected growth in foreign tourist numbers in Q2, although passenger numbers in June and July continue to suggest a robust growth rate in the sector. Exports of



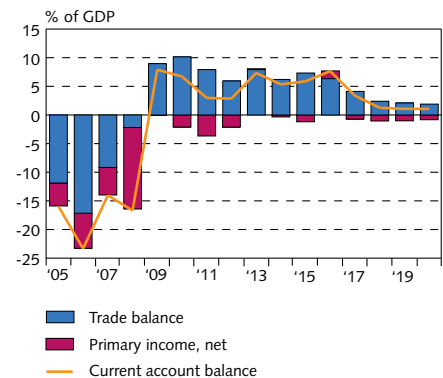
goods and services combined are expected to grow by 3.6% this year instead of the 3.3% provided for in the May forecast. The outlook is similar for 2019, whereas growth looks set to ease in 2020.

- Even though import growth was stronger in Q1 than had been forecast in May, the outlook is for weaker growth in 2018 as a whole, or 6% instead of the previously projected 7.7%. Weighing heaviest here is a more than 2% year-on-year contraction in goods imports in Q2, which is due mainly to reduced imports of industrial supplies and passenger vehicles. Import growth is expected to remain broadly unchanged next year and then ease somewhat in 2020.
- The surplus on goods and services trade measured 4.1% of GDP in 2017 but is expected to narrow to 2.4% this year and 2% in the two years following. This is a larger surplus than was forecast in May, owing to a more favourable contribution from net trade than was projected then, offset by poorer terms of trade. The current account surplus will develop similarly: it measured 3.4% of GDP in 2017 but will narrow to 1.3% this year and remain around that level for the rest of the forecast horizon.
- GDP growth is forecast to shrink to 4.6% in Q2 and measure 3.6% for the year as a whole, the same as in 2017. This is 0.3 percentage points stronger growth than was forecast in May, and the change is due to a more favourable contribution from net trade. Pulling in the other direction is the prospect of weaker growth in private consumption and investment, leading to a downward revision of domestic demand growth from 5.2% in May to 4.7%. As in the Bank's previous forecasts, GDP growth is expected to ease in the next two years, with a slowdown in domestic demand growth. GDP growth is projected at 2.7% in 2019 and about 3% in 2020.

## Labour market and factor utilisation

- According to the Statistics Iceland labour force survey (LFS), total hours worked increased by 0.6% year-on-year in Q2, somewhat less than was assumed in the Bank's May forecast. According to the LFS, the number of jobs grew by 1.3% year-on-year, whereas the increase according to the pay-as-you-earn (PAYE) register was 3%. The employment rate fell between years but has hovered around 80% since peaking in Q3/2016. Unemployment measured 3.6% in Q2, as was forecast in May, while seasonally adjusted unemployment measured 2.9% and was broadly unchanged from the previous quarter. The underemployment rate (i.e., part-time employed persons who would like to work more) declined between quarters, however, and is below the average from the last upswing.
- Although importation of foreign labour remains strong, it appears to have peaked. Net migration of foreign nationals aged 20-59 was positive in H1 by 1.7% of the population, about the same as

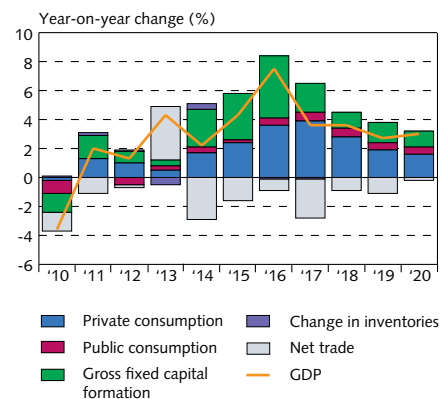
Chart 13  
Current account balance 2005-2020<sup>1</sup>



1. Including secondary income. Current account balance excludes the effect of the failed financial institutions (2008-2015) and the pharmaceuticals company Actavis (2009-2012) on primary income. Also adjusted for the failed financial institutions' financial intermediation services indirectly measured (FISIM). Central Bank baseline forecast 2018-2020.

Sources: Statistics Iceland, Central Bank of Iceland.

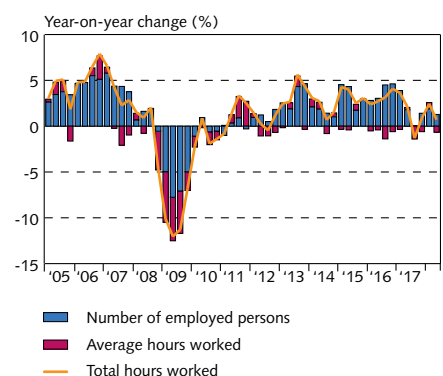
Chart 14  
GDP growth and contribution of underlying components 2010-2020<sup>1</sup>



1. Central Bank baseline forecast 2018-2020.

Sources: Statistics Iceland, Central Bank of Iceland.

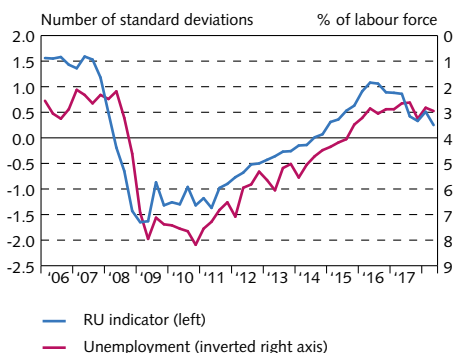
Chart 15  
Employment and hours worked<sup>1</sup>  
Q1/2005 - Q2/2018



1. Quarterly averages of monthly figures.

Source: Statistics Iceland.

Chart 16  
Resource utilisation indicator and unemployment<sup>1</sup>  
Q1/2006 - Q2/2018

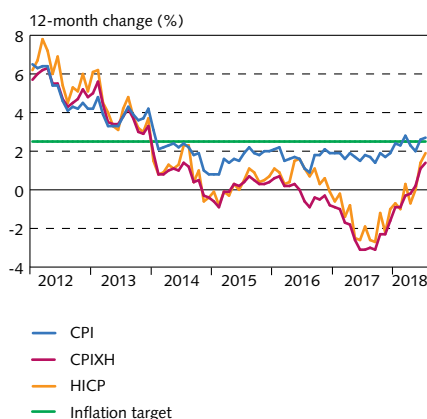


1. The resource utilisation indicator (RU indicator) is the first principal component of selected indicators of factor utilisation; it is scaled so that its mean value is 0 and the standard deviation is 1. A more detailed discussion can be found in Box 3 in *Monetary Bulletin* 2018/2. Unemployment is seasonally adjusted.  
Sources: Statistics Iceland, Central Bank of Iceland.

in H2/2017. In Q2/2018, importation of workers via temporary employment agencies and foreign service companies was down about one-fifth from its peak.

- According to Gallup's summer survey among executives from Iceland's 400 largest firms, carried out in May and June, the share of respondents interested in adding on staff in the next six months exceeded the share interested in downsizing by just over 5.5 percentage points, the lowest since the same time in 2015.
- According to the Gallup survey, just under a fourth of firms consider themselves short-staffed, the lowest ratio since autumn 2015. The number of firms considering themselves understaffed has declined most sharply in manufacturing, fishing, and transport and transit, whereas it has risen in the construction and retail and wholesale trade sectors. The number of firms reporting difficulties in responding to unexpected demand has also declined, both between surveys and between years. After adjusting for seasonality, 43% of respondents consider their firms to be operating at or above full capacity, about 3.5 percentage points above the historical average. All things considered, the resource utilisation (RU) indicator (see Box 3 in *Monetary Bulletin* 2018/2) implies that factor utilisation exceeds capacity but that the output gap has narrowed from its late-2016 peak.
- Total hours worked are expected to increase this year by 1.2%, or 1 percentage point below the May forecast. They are forecast to increase by 1½% in the next two years, slightly more than was projected in May. Unemployment is expected to average 3% this year and, as in the Bank's previous forecasts, to rise slightly as the forecast horizon progresses. Stronger GDP growth in 2018 and slower growth in the working-age population translate to a wider positive output gap this year than was forecast in May. As before, the output gap is expected to have nearly closed by the end of the forecast horizon.

Chart 17  
Various measures of inflation  
January 2012 - July 2018



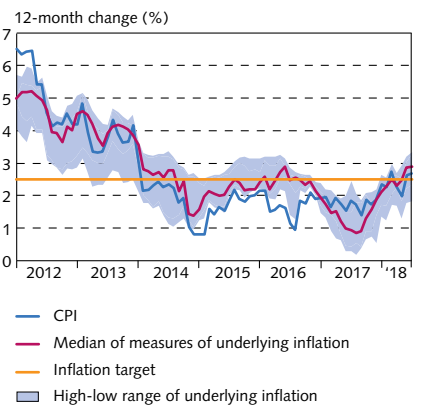
Sources: Statistics Iceland, Central Bank of Iceland.

## Inflation

- Inflation measured 2.3% in Q2/2018, slightly below the May forecast of 2.4%. The main drivers during the quarter were rising petrol and owner-occupied housing costs, plus rises in various private services items. In that category, the strongest increase was the rise in hotel and restaurant services and international airfares.
- The consumer price index (CPI) rose by 0.04% month-on-month in July, and twelve-month inflation measured 2.7%. Inflation had therefore risen since the previous *Monetary Bulletin* and was up by 0.8 percentage points year-on-year. The rise in house prices and airfares had a strong impact in July, offset by seasonal sales. Inflation excluding housing has risen faster than headline inflation in the recent term, measuring 1.4% in July, as opposed to -3.1% a year earlier. The HICP, which also excludes owner-occupied housing costs, had risen 1.9% year-on-year in July.

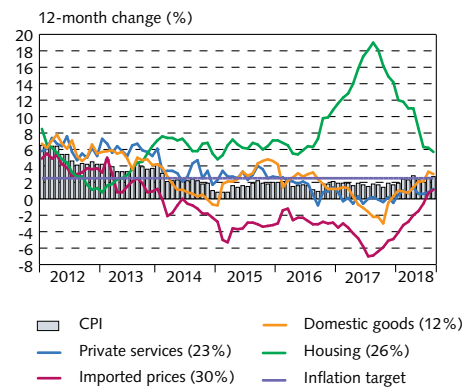
- Underlying inflation has also risen in recent months, and the median of various measures was 2.9% in July, up from 2.3% in April. The median has risen by 2 percentage points in the past twelve-months and is slightly above headline inflation at present.
- House prices have fluctuated somewhat in 2018 to date, particularly in regional Iceland. The twelve-month rise in owner-occupied housing costs has continued to ease, however, measuring just under 6% in July. At the same time, the increase in paid rent has gained pace, measuring nearly 5% in the past year. The proportional contribution of the housing component to twelve-month inflation has declined in the recent term and is now at its lowest in four years.
- The price of imported goods in the consumer price index has risen 1.1% in the past twelve months, with much of the increase due to the surge in petrol prices together with a year-on-year depreciation of the króna by just over 2% in July. The price of clothing, furniture, housewares, and several types of electronic equipment was lower this July than in the same month of 2017, however.
- Domestic goods prices have risen by 3% in the past twelve months. The same is true of producer prices of goods sold domestically, which had risen by 1.6% year-on-year in Q2, the first increase by that measure in two years.
- The pay increases provided for in the most recent wage agreements, which took effect in May and June, have shown in the Statistics Iceland wage index, as was assumed in the Bank's May forecast, and wage drift has been broadly as projected. The wage index rose by 2.4% between quarters and by 6.5% year-on-year. The assumptions concerning near-term wage developments have changed little since May. Unit labour costs are projected to rise somewhat less this year than was previously estimated, however, as the outlook is for stronger productivity growth. The increase in unit labour costs is expected to measure 5½% this year and then taper off to just over 5% in 2019 and 2½% in 2020.
- Short-term inflation expectations have risen by most measures. According to Gallup's summer survey, household inflation expectations one year ahead measured 3.4%, or 0.4 percentage points more than in the spring survey. Businesses' one-year inflation expectations were unchanged between surveys, however, at 3%. Market agents' inflation expectations had risen since May, to 3% both one and two years ahead.
- Market agents' long-term inflation expectations also rose between surveys. Market agents now expect inflation to average 2.8-3% over the next five and ten years, which is 0.2-0.4 percentage points more than in May. Corporate executives, like market agents, expect inflation to average 3% over the next five years. Households are rather more pessimistic, though, and expect inflation to measure 3.5% over the next five years. The breakeven inflation rate, which reflects inflation expectations in the bond

Chart 18  
Headline and underlying inflation<sup>1</sup>  
January 2012 - July 2018



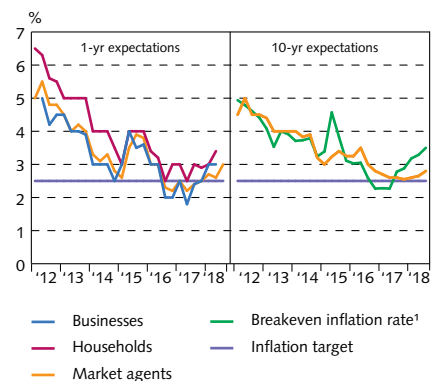
1. Underlying inflation measured using a core index (which excludes the effects of indirect taxes, volatile food items, petrol, public services, and real mortgage interest expense) and statistical measures (weighted median, trimmed mean, a dynamic factor model, and a common component of the CPI).  
Sources: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

Chart 19  
Imported and domestic inflation<sup>1</sup>  
January 2012 - July 2018



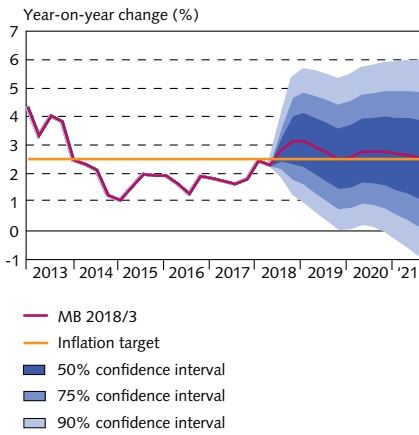
1. Imported inflation is estimated using imported food and beverages and the price of new motor vehicles and spare parts, petrol, and other imported goods. The figures in parentheses show the current weight of these items in the CPI.  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 20  
Inflation expectations  
Q1/2012 - Q3/2018



1. The Q3/2018 figure is the average for the quarter to date.  
Sources: Gallup, Central Bank of Iceland.

Chart 21  
Inflation forecast and confidence intervals  
Q1/2013 - Q3/2021

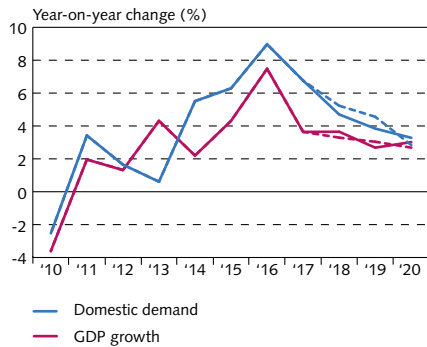


Sources: Statistics Iceland, Central Bank of Iceland.

market and a risk premium, has also inched upwards in recent months. The ten-year breakeven rate has averaged 3.5% in Q3 to date, as opposed to 3.3% in Q2/2018 and 2.8% in Q3/2017.

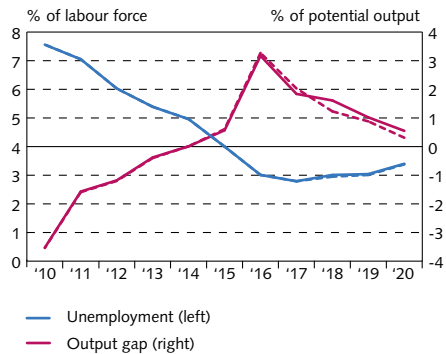
- Inflation looks set to be higher into H2/2019 than was forecast in May. This is due in large part to a poorer initial position, plus the expectation of a wider output gap and a lower exchange rate than was projected then. On the other direction, the rise in unit labour costs is expected to be weaker. Headline inflation is forecast to measure 2.8% in Q3 and then rise to 3.1% in Q4. It is expected to ease from mid-2019 onwards and remain close to the inflation target for the rest of the forecast horizon.
- The inflation outlook is subject to numerous uncertainties, and changes in important assumptions about domestic and global economic developments could cause inflation to diverge from the path presented here. As usual in the Bank's updated forecast, the risk assessment of the baseline forecast is unchanged from the previous forecast. The probability distribution of inflation is therefore unchanged from May, which implies that there is a 50% probability that inflation will be in the 1¾-3¾% range in one year and in the 1¼-4% range by the end of the forecast horizon.

Chart 22  
Domestic demand and GDP growth  
2010-2020<sup>1</sup>



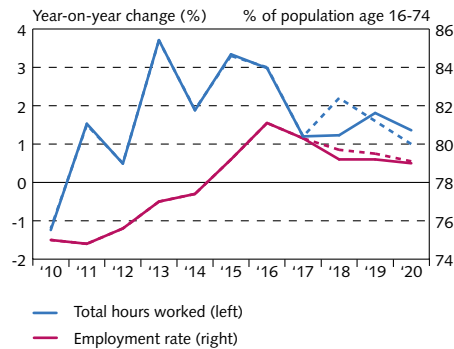
1. Central Bank baseline forecast 2018-2020. Broken lines show forecast from MB 2018/2.  
Sources: Statistics Iceland, Thomson Reuters, Central Bank of Iceland.

Chart 23  
Unemployment and output gap 2010-2020<sup>1</sup>



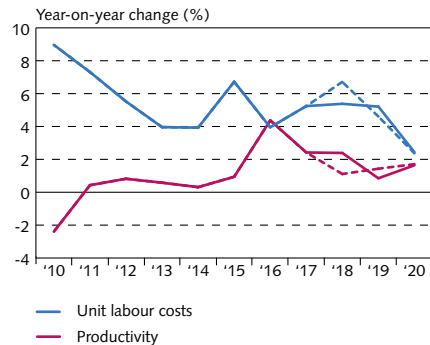
1. Central Bank baseline forecast 2018-2020. Broken lines show forecast from MB 2018/2.  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 24  
Total hours worked and employment rate  
2010-2020<sup>1</sup>



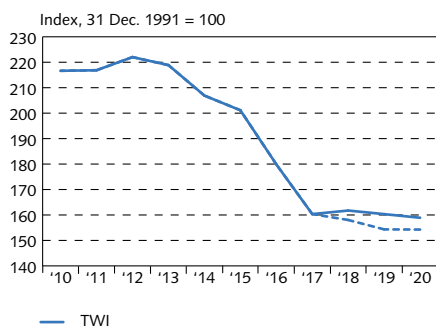
1. Central Bank baseline forecast 2018-2020. Broken lines show forecast from MB 2018/2.  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 25  
Unit labour costs and productivity 2010-2020<sup>1</sup>



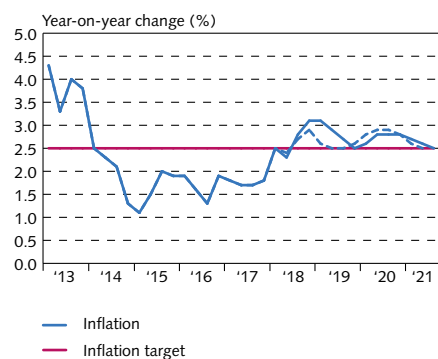
1. Productivity measured as the ratio of GDP to total hours worked. Central Bank baseline forecast 2018-2020. Broken lines show forecast from MB 2018/2.  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 26  
Exchange rate 2010-2020<sup>1</sup>



1. Narrow trade basket. Central Bank baseline forecast 2018-2020. Broken lines show forecast from MB 2018/2.  
Source: Central Bank of Iceland.

Chart 27  
Inflation<sup>1</sup>  
Q1/2013 - Q3/2021



1. Central Bank baseline forecast Q3/2018 - Q3/2021. Broken lines show forecast from MB 2018/2.  
Sources: Statistics Iceland, Central Bank of Iceland.

## Appendix 1

# Forecast tables

Table 1 GDP and its main components<sup>1</sup>

	2016	2017	2018	2019	2020
Private consumption	7.1 (7.1)	7.8 (7.8)	5.6 (6.3)	3.8 (3.8)	3.2 (3.1)
Public consumption	2.3 (2.3)	2.6 (2.6)	2.5 (1.9)	1.9 (2.0)	2.1 (2.1)
Gross capital formation	22.5 (22.5)	9.3 (9.3)	5.2 (6.5)	6.1 (8.9)	4.6 (2.9)
Business investment	26.4 (26.4)	4.3 (4.3)	-7.2 (-2.5)	4.0 (6.7)	2.6 (-0.3)
Residential investment	26.4 (26.4)	21.6 (21.6)	31.5 (24.7)	10.7 (13.2)	11.1 (11.8)
Public investment	-0.1 (-0.1)	23.4 (23.4)	31.9 (27.2)	7.5 (11.5)	3.1 (3.1)
Domestic demand	9.0 (9.0)	6.8 (6.8)	4.7 (5.2)	3.8 (4.6)	3.3 (2.8)
Exports of goods and services	10.9 (10.9)	4.8 (4.8)	3.6 (3.3)	3.6 (3.2)	2.6 (2.6)
Imports of goods and services	14.5 (14.5)	11.9 (11.9)	6.0 (7.7)	6.2 (6.6)	3.1 (2.9)
Gross domestic product (GDP)	7.5 (7.5)	3.6 (3.6)	3.6 (3.3)	2.7 (3.0)	3.0 (2.7)
GDP at current prices (ISK billions)	2,453 (2,453)	2,555 (2,555)	2,731 (2,719)	2,917 (2,897)	3,084 (3,061)
GDP at current prices (growth rate)	9.8 (9.8)	4.1 (4.1)	6.9 (6.4)	6.8 (6.6)	5.7 (5.7)
Total investment (% of GDP)	21.4 (21.4)	22.1 (22.1)	23.1 (22.9)	23.6 (23.7)	23.8 (23.5)
Business investment (% of GDP)	15.5 (15.5)	15.1 (15.1)	14.0 (14.2)	14.0 (14.3)	13.8 (13.6)
Gross national saving (% of GDP) <sup>2</sup>	29.2 (29.2)	25.6 (25.8)	24.4 (24.2)	24.7 (24.5)	24.9 (24.6)
Contribution of net trade to GDP growth (percentage points)	-0.8 (-0.8)	-2.7 (-2.7)	-0.9 (-1.7)	-1.1 (-1.4)	-0.2 (-0.1)

1. Year-on-year change (%) unless otherwise specified (figures in parentheses are from the forecast in *Monetary Bulletin* 2018/2). 2. The sum of investment, inventory changes, and the current account balance.

Sources: Statistics Iceland, Central Bank of Iceland.

Table 2 Global economy, external conditions, and exports<sup>1</sup>

	2016	2017	2018	2019	2020
Marine production for export	-2.0 (-2.0)	-3.9 (-3.9)	7.5 (4.0)	3.0 (2.0)	2.0 (2.0)
Aluminium production for export <sup>2</sup>	-3.0 (-3.0)	4.9 (4.9)	1.0 (1.0)	1.0 (1.0)	1.0 (1.0)
Foreign currency prices of marine products	0.2 (0.2)	-0.8 (-0.8)	3.5 (3.5)	3.0 (2.7)	2.0 (2.0)
Aluminium prices in USD <sup>3</sup>	-13.7 (-13.7)	20.3 (20.3)	10.0 (13.0)	2.0 (1.7)	1.0 (1.0)
Fuel prices in USD <sup>4</sup>	-15.6 (-15.6)	23.3 (23.3)	32.0 (19.9)	1.0 (-3.1)	-3.0 (-2.1)
Terms of trade for goods and services	2.4 (2.4)	1.7 (1.7)	-1.8 (-0.4)	2.0 (1.8)	0.2 (0.9)
Inflation in main trading partners <sup>5</sup>	1.0 (1.0)	1.7 (1.7)	1.9 (1.8)	1.8 (1.8)	1.8 (1.9)
GDP growth in main trading partners <sup>5</sup>	1.7 (1.8)	2.4 (2.4)	2.3 (2.4)	2.1 (2.2)	1.9 (2.0)
Main trading partners' imports <sup>5</sup>	3.5 (3.4)	4.1 (4.0)	4.1 (4.4)	4.2 (4.2)	3.5 (3.5)
Policy rates in main trading partners (%) <sup>6</sup>	0.1 (0.1)	0.2 (0.2)	0.5 (0.6)	0.9 (0.8)	1.0 (1.1)

1. Year-on-year changes (%) unless otherwise specified (figures in parentheses are from the forecast in *Monetary Bulletin* 2018/2). 2. According to Statistics Iceland's external trade data. 3. Forecast based on aluminium futures and analysts' forecasts. 4. Forecast based on fuel futures and analysts' forecasts. 5. Forecast based on Consensus Forecasts, Global Insight, IMF and OECD. 6. Forecast based on main trading partners' forward policy rates.

Sources: Bloomberg, Consensus Forecasts, Global Insight, IMF, New York Mercantile Exchange, OECD, Statistics Iceland, Thomson Reuters, Central Bank of Iceland.

Table 3 Current account balance and its subcomponents<sup>1</sup>

	2016	2017	2018	2019	2020
Trade balance	6.3 (6.3)	4.1 (4.1)	2.4 (2.1)	2.1 (1.4)	1.9 (1.6)
Balance on primary income <sup>2</sup>	1.4 (1.4)	-0.7 (-0.5)	-1.0 (-0.8)	-1.0 (-0.7)	-0.8 (-0.6)
Current account balance	7.7 (7.7)	3.4 (3.7)	1.3 (1.3)	1.1 (0.8)	1.1 (1.0)

1. % of GDP (figures in parentheses are from the forecast in *Monetary Bulletin* 2018/2). 2. The sum of net primary and secondary income.

Sources: Statistics Iceland, Central Bank of Iceland.

Table 4 Labour market and factor utilisation<sup>1</sup>

	2016	2017	2018	2019	2020
Unemployment (% of labour force)	3.0 (3.0)	2.8 (2.8)	3.0 (2.9)	3.0 (3.0)	3.4 (3.4)
Employment rate (% of population aged 16-74)	81.1 (81.1)	80.3 (80.3)	79.2 (79.7)	79.2 (79.5)	79.0 (79.1)
Total hours worked	3.0 (3.0)	1.2 (1.2)	1.2 (2.2)	1.8 (1.6)	1.4 (1.0)
Labour productivity <sup>2</sup>	4.4 (4.4)	2.4 (2.4)	2.4 (1.1)	0.9 (1.4)	1.6 (1.7)
Unit labour costs <sup>3</sup>	4.0 (4.0)	5.2 (5.2)	5.4 (6.7)	5.2 (4.6)	2.4 (2.4)
Wage share (% of gross factor income)	61.9 (61.4)	64.8 (64.3)	66.2 (66.6)	67.0 (67.4)	66.8 (67.0)
Real disposable income	9.2 (9.2)	8.0 (8.0)	6.0 (7.2)	4.8 (4.9)	2.7 (2.3)
Output gap (% of potential output)	3.2 (3.3)	1.8 (2.0)	1.6 (1.2)	1.0 (0.9)	0.6 (0.3)

1. Year-on-year change (%) unless otherwise specified (figures in parentheses are from the forecast in *Monetary Bulletin* 2018/2). 2. GDP per total hours worked. 3. Wage costs divided by productivity.

Sources: Statistics Iceland, Central Bank of Iceland.

Table 5 Exchange rate and inflation<sup>1</sup>

	2016	2017	2018	2019	2020
Trade-weighted exchange rate index <sup>2</sup>	179.9 (179.9)	160.3 (160.3)	161.7 (158.0)	160.3 (154.3)	158.9 (154.3)
Real exchange rate (relative consumer prices) <sup>3</sup>	89.1 (89.1)	99.7 (99.7)	99.5 (101.9)	101.4 (105.1)	103.2 (106.0)
Real exchange rate (relative unit labour costs) <sup>3</sup>	85.8 (85.9)	99.9 (99.9)	102.4 (106.5)	106.7 (112.0)	107.8 (111.9)
Inflation (consumer price index, CPI)	1.7 (1.7)	1.8 (1.8)	2.7 (2.6)	2.8 (2.6)	2.7 (2.8)
Inflation (CPI excluding effects of indirect taxes)	1.7 (1.7)	1.5 (1.5)	2.6 (2.5)	2.8 (2.6)	2.7 (2.8)

1. Year-on-year (%) unless otherwise specified (figures in parentheses are from the forecast in *Monetary Bulletin* 2018/2). 2. Narrow trade-weighted basket (index, 31 December 1991 = 100). The index has been recalculated so that on 2 January 2009 it was assigned a value equivalent to that of the now-discontinued Exchange Rate Index. 3. Average 2005 = 100.

Sources: Statistics Iceland, Central Bank of Iceland.

Table 6 Quarterly inflation forecast (%)<sup>1</sup>

Quarter	Inflation (year-on-year change)	Inflation excluding effects of indirect taxes (year-on-year change)	Inflation (annualised quarter-on-quarter change)
		Measured value	
2017:3	1.7 (1.7)	1.4 (1.4)	1.0 (1.0)
2017:4	1.8 (1.8)	1.6 (1.6)	2.5 (2.5)
2018:1	2.5 (2.5)	2.4 (2.4)	2.5 (2.5)
2018:2	2.3 (2.4)	2.2 (2.3)	3.1 (3.4)
		Forecasted value	
2018:3	2.8 (2.7)	2.8 (2.6)	3.2 (2.2)
2018:4	3.1 (2.9)	3.1 (2.8)	3.7 (3.5)
2019:1	3.1 (2.6)	3.1 (2.6)	2.5 (1.5)
2019:2	2.9 (2.5)	2.9 (2.5)	2.2 (2.8)
2019:3	2.7 (2.5)	2.7 (2.5)	2.4 (2.4)
2019:4	2.5 (2.6)	2.5 (2.6)	2.8 (3.5)
2020:1	2.6 (2.8)	2.5 (2.7)	2.9 (2.3)
2020:2	2.8 (2.9)	2.7 (2.9)	3.0 (3.6)
2020:3	2.8 (2.9)	2.7 (2.8)	2.4 (2.0)
2020:4	2.8 (2.8)	2.7 (2.7)	2.9 (3.1)
2021:1	2.7 (2.6)	2.6 (2.5)	2.5 (1.6)
2021:2	2.6 (2.5)	2.6 (2.4)	2.8 (3.2)
2021:3	2.5	2.5	2.0

1. Figures in parentheses are from the forecast in *Monetary Bulletin* 2018/2.

Sources: Statistics Iceland, Central Bank of Iceland.