Strong GDP growth and rising exchange rate in 2016 driven by exports and terms of trade[1]

GDP growth is considered to have picked up slightly in leading advanced economies in the latter half of 2016, and there is increased optimism about the global economy. Oil and major commodity prices have risen, and global inflation is on the rise. Increased optimism about the economic outlook and expectations of higher inflation have led to a marked increase in long-term interest rates in the US, with rates in other developed countries following suit.

In spite of the rise in oil and commodity prices, the outlook is for a further improvement in Iceland's terms of trade this year. Indeed, improved terms of trade and rapid growth in tourism have been the main drivers of Iceland's economic recovery. Exports are estimated to have grown by just over 10% in 2016. Of that total, activity in the tourism industry grew by over 37% in real terms and has quadrupled since 2010. These two factors are the main reasons for the nearly 12% appreciation of the króna in 2016. They have also led to a steep rise in domestic income and wealth and fostered rapid growth in domestic demand. In the past two years, fiscal easing has leaned in the same direction, and the National Budget for 2017 indicates that the pattern will continue this year. Pulling in the other direction are the monetary restraint provided by the Bank's interest rates and the anchor for inflation expectations created by monetary policy.

Year-2016 GDP growth is estimated at 6%, a full percentage point more than was assumed in the November *Monetary Bulletin*. The deviation is due primarily to business investment and services exports, both of which were much stronger in the first nine months of the year. GDP growth is also expected to be strong this year, or around 5⅓%, but to gradually slow towards the 2½-3% range over the next two years. GDP growth both in 2016 and over most of the forecast horizon is stronger than was forecast in November and will therefore put greater strain on domestic resources and result in a wider output gap. The labour market will be tighter, with rapid job creation and unemployment under 3%. In addition, the labour participation rate has risen above its pre-crisis peak, albeit offset by significant importation of foreign labour. Domestic inflationary pressures are therefore considerable, and stronger than was forecast in November. Pulling in the other direction are low global inflation and a rising exchange rate. The króna is stronger than was forecast in November, and the outlook is for it to be stronger over the forecast horizon. Therefore, the inflation outlook has improved slightly since November, in spite of the prospect of larger output gap. Inflation is projected to measure about 2% through mid-2017 and then inch upwards, reaching the target in the latter half of the year. It looks set to rise temporarily above target as the forecast horizon progresses, once the effects of the higher exchange rate subside, but to be close to target by the end of the horizon.

1. The analysis appearing here is based in large part on the Bank's assessment of economic developments, published in November 2016 in *Monetary Bulletin* 2016/4, and on the updated forecast presented here. It is based on data available in early February.

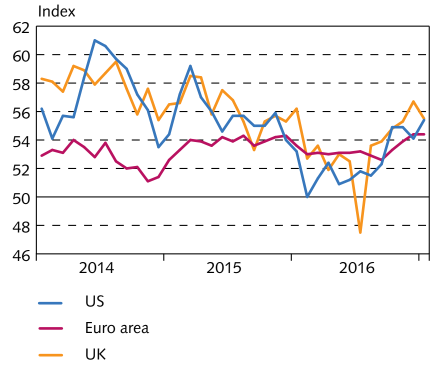
The global economy and terms of trade

- Year-2016 GDP growth among Iceland's trading partners is estimated at 1.6%, as was projected in the November *Monetary Bulletin*. In the US, GDP growth for the year was 1.6%, slightly above the November forecast but 1 percentage point less than in 2015. This slowdown is due mainly to weak investment, although private consumption growth has been strong. Year-2016 GDP growth is estimated at 1.7% in the euro area but is projected to be slightly higher in the UK, or 2%. Growth measured 1% in Denmark and a mere 0.7% in Japan and Norway. Sweden appears to have fared much better, with a growth rate of 3.2%.
- Since the publication of the November *Monetary Bulletin*, key economic indicators for the US have been somewhat more favourable than market agents had expected, and leading indicators of GDP growth have risen in spite of a temporary dip in December, in the wake of the interest rate hike by the US Federal Reserve Bank. Expectations of stimulative fiscal measures and a boost in infrastructure investment have bolstered the short-term GDP growth outlook during the post-election period, but by the same token, the new president's statement concerning international trade agreements have exacerbated uncertainty further ahead.
- Rising purchasing managers' indices (PMI) in the euro area and the UK also suggest an improving growth outlook. The rise has been particularly swift in the UK, following a steep drop in the wake of the Brexit referendum last summer. As in November, it is therefore assumed that GDP growth will remain sluggish among Iceland's main trading partners but gain momentum slightly, averaging 1.7% this year and rising to 1.9% by 2019. The outlook for trading partner imports, however, has been revised downwards, in line with international institutions' forecasts of weaker growth in world trade.
- Increased optimism about GDP growth and expectations of higher inflation in the wake of the US presidential election caused US Treasury bond yields to spike. Yields on 10-year Treasury bonds have risen by 0.7 percentage points since early November, and term premia have turned positive again. Long-term interest rates have since risen in many other countries, and the global stock of outstanding government bonds with negative yields has shrunk by a fourth since August 2016.
- Inflation has eased upwards in Iceland's main trading partner countries as economic activity picks up and oil and commodity prices rise. It measured 2.1% in the US in December, up from around 1% in mid-2016. Inflation has risen in the eurozone as well. It measured 1.8% in January, after hovering around 0% in mid-2016. It has risen in the UK as well, in part due to the depreciation of the pound sterling. Prices have also begun to rise in Japan, after a steady decline over most of last year. As in the Bank's November forecast, trading partner inflation is projected

Chart 1

Leading indicators of GDP growth[1]

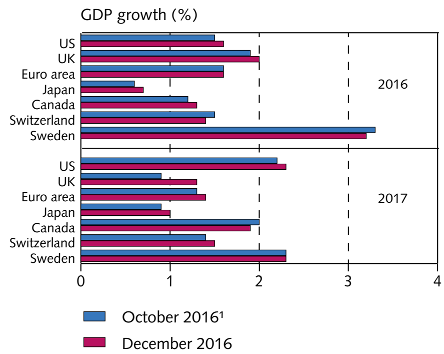
January 2014 - January 2017



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 contraction.
Source: Bloomberg.

Chart 2

GDP forecasts for 2016 and 2017

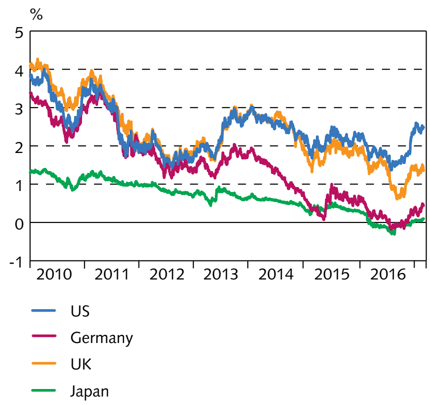


1. Forecasts used in MB 2016/4.
Source: Consensus Forecasts.

Chart 3

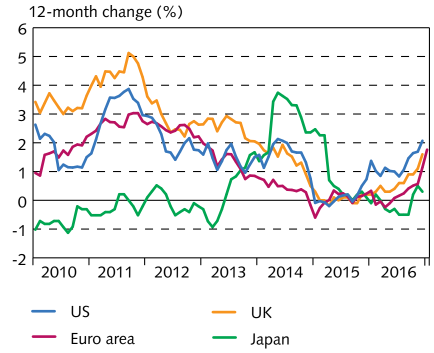
10-year government bond yields in selected industrialised countries

1 January 2010 - 3 February 2017



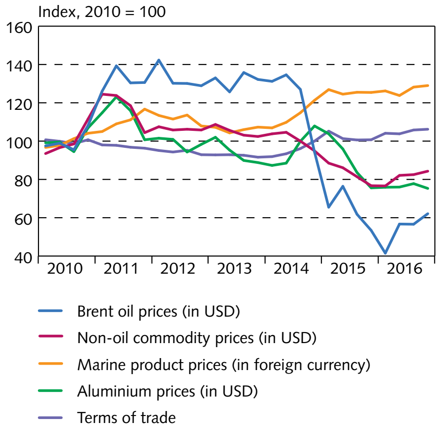
Source: Macrobond.

Chart 4
Inflation in selected industrialised countries
January 2010 - January 2017



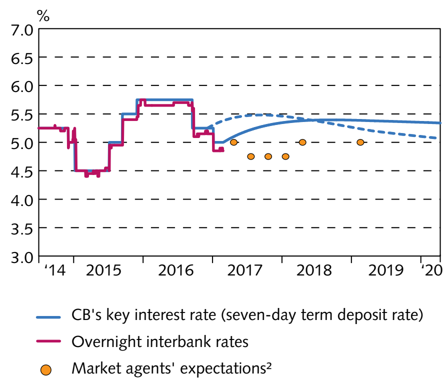
Source: Macrobond.

Chart 5
World price development and terms of trade[1]
Q1/2010 - Q4/2016



1. Foreign currency prices of marine products are calculated by dividing marine product prices in Icelandic krónur by the trade-weighted exchange rate index. Foreign currency prices of aluminium products are calculated by dividing aluminium prices in Icelandic krónur by the exchange rate of the USD. Terms of trade in Q4/2016 are based on *Monetary Bulletin* baseline forecast 2017/1.
Sources: Bloomberg, Statistics Iceland, Central Bank of Iceland.

Chart 6
Central Bank of Iceland key interest rate and expected developments[1]
Daily data 1 June 2014 - 31 March 2020



1. Interbank interest rates and Treasury bonds were used to estimate the yield curve. Broken lines show forward market interest rates from MB 2016/4. 2. Estimated from the median response in the Central Bank's survey of market agents' expectations of collaterlised lending rates. The survey was carried out during the period 30 January - 1 February 2017.
Source: Central Bank of Iceland.

to continue rising, to 1.8% this year and close to 2% in the two years thereafter.

- Global oil prices are now 56 US dollars per barrel, some 53% above the January 2016 trough. The rise has come in the wake of the OPEC countries' decision to cut back on production, although it also reflects the improved global economic outlook. The increase in oil prices is somewhat larger than was assumed in the Bank's November forecast, and the same can be said of other commodity prices, which are expected to rise by over 1 percentage point more in 2017 than was projected in November. The outlook for aluminium prices has improved as well. On the other hand, the forecast for marine product prices is broadly unchanged since November. On the whole, terms of trade are expected to improve this year by 1.9%, which is 0.7 percentage points more than was forecast in November. Last year's improvement in terms of trade is also estimated to have been larger than was assumed in November, or 3.1% instead of the forecasted 2.8%. Terms of trade are expected to remain virtually unchanged in the next two years, which represents a slight improvement from the last forecast.

- In terms of relative consumer prices, the real exchange rate rose by 12.9% year-on-year in 2016 and was nearly 10% above the 25-year average. The increase was greater in terms of relative unit labour costs, or 18%, and the real exchange rate thus measured was a full 16% above its long-term average.

Monetary policy and domestic financial markets

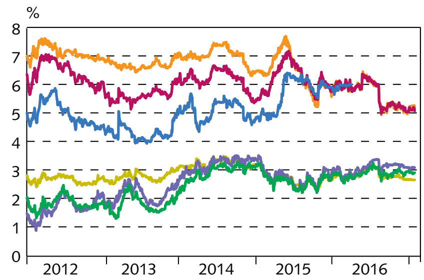
- The Central Bank's Monetary Policy Committee (MPC) decided at its November meeting to keep the Bank's interest rates unchanged but lowered them by 0.25 percentage points at the December meeting. Prior to the publication of this *Monetary Bulletin*, the Bank's key interest rate – the rate on seven-day term deposits – was 5%, down from 5.75% in August 2016. The Central Bank's real rate has also fallen. In terms of the average of various measures of inflation and one-year inflation expectations, it had fallen by 0.4 percentage points since the November *Monetary Bulletin*, to 2.6%, but ranged between 2½% and 3% in 2016. The decline is similar in terms of current twelve-month inflation, and the real rate thus measured is now 3.0%.

- According to the Central Bank's survey of market agents' expectations, carried out in late January, respondents expect the Bank's key rate to be cut by 0.25 percentage points in H1/2017 but to rise again to 5% in early 2018 and then remain unchanged throughout the forecast horizon. This is a lower rate path than respondents expected in a corresponding survey conducted in November 2016 and is also lower than what the forward interest rate curve suggests.[2]

2. Forward rates seem to suggest that market participants expect rates to rise in the near future, but this reflects the use of interbank rates for the short end of the yield curve.

- Bond market yields have developed in line with the Central Bank's key rate. Yields on nominal Treasury bonds are broadly unchanged since November but have fallen by 0.6-0.8 percentage points since just before the Central Bank's rate cut in August. Yields on short and long Treasury bonds are very similar and are close to the Bank's key rate. Yields on indexed Treasury and Housing Financing Fund (HFF) bonds have fallen slightly since November and are as much as 0.3 percentage points lower than in August. The Central Bank's interest rate cuts have therefore been transmitted to nominal and real market rates. Financial institutions' non-indexed deposit and lending rates have also declined, although their indexed interest rates remain unchanged.
- Foreign currency inflows in connection with new investment in the domestic bond market have been negligible since the Central Bank's capital flow management measure was activated last June, but inflows related to other assets – in particular, direct investment in Icelandic companies – have continued.
- Even though Standard & Poor's has recently upgraded Iceland's sovereign credit rating to A- and Fitch Ratings has changed the outlook from stable to positive, the risk premium on the Republic's foreign obligations is broadly the same as in November. The CDS spread has declined marginally, while the spread between interest rates on Icelandic Treasury bonds in foreign currency and comparable government bonds issued by Germany and the US is virtually unchanged since November. Interest premia on the domestic commercial banks' international bond issues have continued to decline, however.
- The exchange rate of the króna rose virtually without interruption from mid-2016 until early December. For the most part, this reflected trade-related foreign currency inflows stemming from growth in exports, which in turn were due primarily to increased activity in tourism and improved terms of trade. The exchange rate has fallen since the beginning of December, however, possibly stemming in part from reduced foreign exchange revenues as a result of the fishermen's strike and the seasonal drop in foreign currency inflows from tourism and related sectors at the beginning of 2017. This could also reflect capital outflows related to the recent authorisation for pension funds' foreign investments and the additional step towards general liberalisation of the capital account taken at the start of this year. Capital outflows have been moderate so far, however.
- The Central Bank scaled back its foreign currency purchases in December, after two very active months in the foreign exchange market. In 2016 as a whole, the Bank's net foreign currency purchases totalled just over 386 b.kr., an increase of 40% year-on-year. The Bank's foreign exchange reserves grew by 163 b.kr. in 2016, to a year-end total of 815 b.kr.
- As in the November forecast, it is assumed that the króna will appreciate over the forecast horizon. The trade-weighted

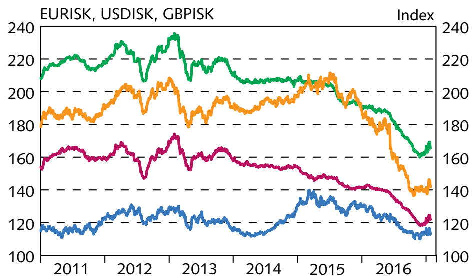
Chart 7
Nominal and indexed bond yields
Daily data 2 January 2012 - 3 February 2017



Nominal Treasury bond maturing in:
2016 2019 2031
Indexed Treasury or HFF bond maturing in:
2021 2024 2044

Source: Central Bank of Iceland.

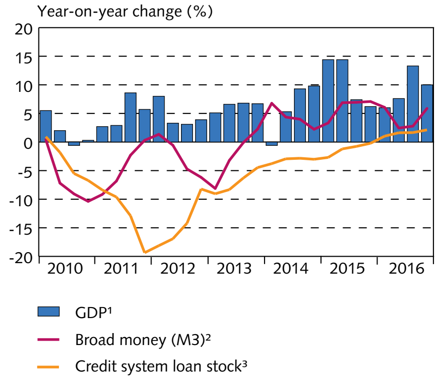
Chart 8
Exchange rate of foreign currencies against the króna
Daily data 3 January 2011 - 3 February 2017



USD (left) EUR (left)
GBP (left)
Average exchange rate - narrow TWI (right)

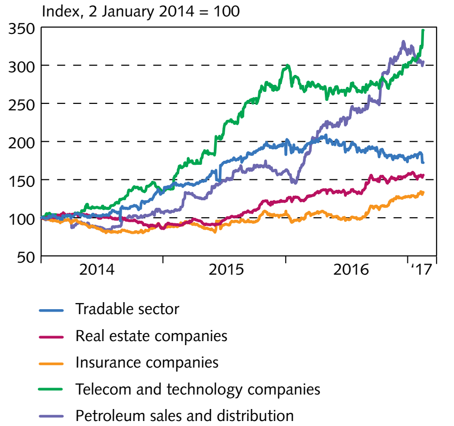
Source: Central Bank of Iceland.

Chart 9
Money holdings, lending and nominal demand
Q1/2010 - Q4/2016



1. Q4/2016 GDP is from the baseline forecast in *Monetary Bulletin* 2017/1. 2. Excluding deposits owned by financial undertakings in winding-up proceedings. 3. Loans to resident entities, excluding the Treasury and financial undertakings in winding-up proceedings. Adjusted for reclassification and for the Government's debt relief measures.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 10
Share prices by sector[1]
Daily data 2 January 2014 - 3 February 2017



1. Average change in share price of listed companies in selected sectors, adjusted for dividend payments and share capital reductions.
Source: Nasdaq Iceland.

exchange rate index (TWI) is projected to average 163 points this year, which corresponds to just under a 2% appreciation from the current level. According to the forecast, the króna will continue to strengthen and the TWI will be around 152 by 2019. This is about 3% stronger than was projected in the November forecast.

- Year-on-year growth in M3 has gained pace, although it is still below nominal GDP growth. After adjusting for deposits held by deposit institutions in winding-up proceedings, M3 grew by 5.9% year-on-year in Q4/2016. As was the case last year, growth in money holdings is due largely to increased household deposits, although corporate deposits also increased between years. At the same time, the stock of credit system loans grew by just over 2%, after adjusting for the Government's debt relief measures. The growth rate was somewhat more rapid, or just under 4%, if the stock of foreign-denominated loans is also adjusted for exchange rate movements. Credit growth is due to an increase in lending to businesses and households. Pension funds' loans to households have increased significantly, and their share of new household lending now exceeds that of deposit institutions. HFF lending has continued to contract, however, and the combined increase in credit system lending to households is still relatively small, or about 2.8% year-on-year in Q4/2016.

- Capital area house prices rose by 15% year-on-year in December and rent prices by nearly 8%. The number of purchase agreements grew 6.2% year-on-year in 2016, and the average time-to-sale is now just under two months. The price increases are probably due to increased purchasing power and a shortage of housing, the latter of which can be attributed to weak residential investment in recent years and the surge in private rentals to tourists. At the same time, share prices have fallen, with the OMXI8 almost 4% lower than at the time of the November *Monetary Bulletin*. Icelandair shares fell in price by one-fourth in early February, following an earnings alert that had a marked effect on share prices in the stock exchange.

- On 1 January 2017, amendments to the Foreign Exchange Act, no. 87/1992, entered into force. The new amendments expanded individuals' and businesses' authorisations for foreign investment, in accordance with the third phase of the authorities' capital account liberalisation strategy, introduced in June 2015. With these amendments, residents and non-residents are authorised to transfer deposits and securities to and from Iceland, to trade in securities abroad, and purchase or withdraw foreign currency in cash, up to a maximum of 100 m.kr.

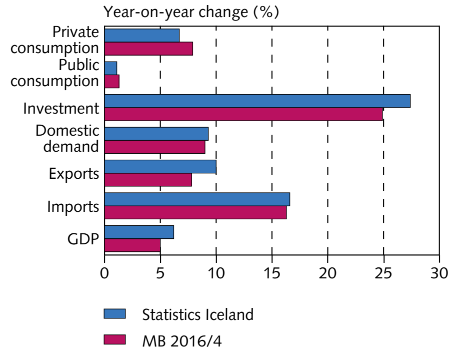
- Household and corporate debt was virtually unchanged in Q3/2016, after adjusting for the effects of exchange rate movements on businesses' foreign-denominated loans, and non-performing loan ratios continue to decline. Corporate insolvencies increased in 2016, in part because of delays in insolvency filings in relation to the strike among capital area Commissioners' employees early in 2015. The ratio of insolvencies to the total number of firms is now broadly at the level seen in recent years, apart from 2015.

- Private sector financial conditions are largely as they were in November, after a marked improvement in the preceding quarters.

The domestic real economy

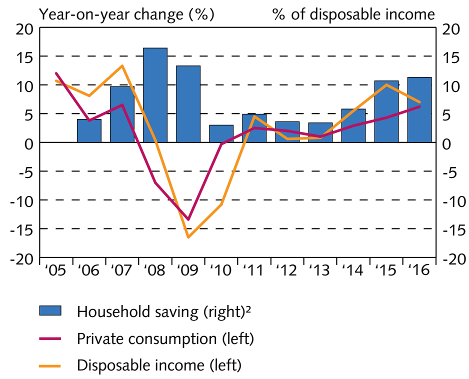
- According to preliminary figures from Statistics Iceland, GDP grew by 6.2% year-on-year in the first nine months of 2016, a full percentage point more than had been assumed in the November issue of *Monetary Bulletin*. Year-on-year GDP growth was even stronger in Q3, at 10.2%, which was 3.5 percentage points above the forecast. Stronger GDP growth in the first three quarters is due primarily to business investment and services exports, both of which grew considerably more in Q3 than had been assumed in the November forecast. Alongside this, Statistics Iceland revised its private consumption figures downwards, with a corresponding upward revision in service exports, reflecting a shift from consumer spending by residents to consumer spending by tourists.
- Household demand grew more strongly in 2016 than it had since the onset of the economic recovery in 2010, driven mainly by rising disposable income and household net worth. Consumer optimism increased markedly, with measurements for the year as a whole at their highest since 2007. In addition, it was considered likely that some steps had been taken towards satisfying an accumulated need to renew durable consumer goods during the year. In the Bank's November forecast, private consumption was projected to grow by 7.6% in 2016 and 6.6% in 2017. When the national accounts were revised, H1/2016 private consumption was adjusted downwards, which markedly affects estimates for the year as a whole. Private consumption growth is now estimated at 6.2% for 2016; however, projections for this year and next year have been revised slightly upwards from the November forecast.
- A comparison of private consumption in the Bank's forecast with developments in households' disposable income over the same period indicates that household saving may not have contracted in 2016, as was assumed in the November forecast. Instead, saving is estimated to have increased marginally, which is the main reason that private consumption is expected to grow slightly more than previously projected during the latter half of forecast horizon.
- In Q4/2016, annual growth in investment is estimated to have contracted in comparison with the first nine months of 2016, owing largely to base effects from Q4/2015. Total investment is estimated to have increased by over 23% in 2016, with contributions from all major subcategories. The three main components of investment are also expected to grow this year, although the

Chart 11
National accounts for Q1-Q3/2016



Sources: Statistics Iceland, Central Bank of Iceland.

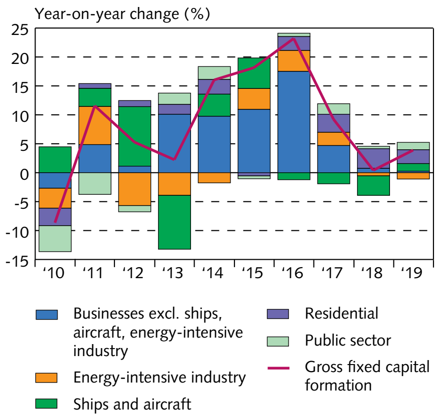
Chart 12
Private consumption, real disposable income, and household saving 2005-2016[1]



1. Central Bank baseline forecast 2016. 2. There is some uncertainty about Statistics Iceland's figures on households' actual income levels, as disposable income accounts are not based on consolidated income accounts and balance sheets. The saving ratio is calculated based on the Central Bank's disposable income estimates, as Statistics Iceland figures are rescaled to reflect households' estimated expenses over a long period.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 13

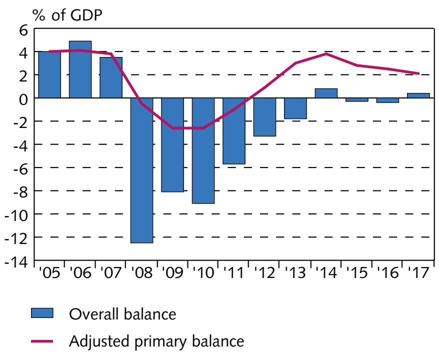
Gross fixed capital formation and contribution of main components 2010-2019[1]



1. Central Bank baseline forecast 2016-2019.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 14

Treasury balance 2005-2017[1]



1. The primary balance is adjusted for one-off revenues and expenditures (e.g., stability contributions from the settlement of the failed financial institutions, the accelerated write-downs of indexed mortgage loans, and pension reform payments). In 2016 the overall balance is adjusted for one-off items; i.e., the effects of the stability contributions, pension reform payments, and dividends in excess of the National budget. Central Bank baseline forecast 2016-2017.
Sources: Ministry of Finance and Economic Affairs, Statistics Iceland, Central Bank of Iceland.

overall growth rate will be considerably less for 2017 as a whole than it was for 2016, or just over 9%. Underlying this estimate are increased public investment and residential investment, the latter reflecting in particular the strong demand for residential housing and the recent surge in house prices. Pulling in the other direction is a marked slowdown in business investment, which is projected to grow by 6.5%, as opposed to nearly 30% in the past two years. It is assumed that investment growth will slow down still further next year, with a contraction in investment in the energy-intensive sector, although it will be offset by strong residential investment growth. The investment-to-GDP ratio will therefore fall from almost 22% in 2017 to 21% by 2019.

- The National Budget for 2017 was passed with a surplus of 0.9% of GDP. The surplus is slightly smaller than was provided for in the original budget proposal but similar to that approved in last spring's fiscal plan.[3] However, it is somewhat larger than in the November forecast, which assumed that expenditures according to the new transport strategy would be included in the fiscal budget. Because economic developments were more favourable than had been forecast, the cyclical portion of revenues increased upon the revision of the revenue projections. Increased revenue projections also result in an unchanged fiscal outcome in spite of discretionary measures taken by the authorities. On the revenues side, discretionary changes result in an 8 b.kr. reduction in revenues, which is offset by a 3.2 b.kr. increase in unit levies and bed-night taxes. Discretionary measures on the expenditures side include an 11 b.kr. increase in social security spending and a 4.6 b.kr. increase in investment over and above the fiscal plan (including the Dýrafjörður tunnel). Consolidation measures on the expenditures side total 1 b.kr. Discretionary measures in 2017 therefore weaken the performance by a total of 0.8% of GDP. The fiscal stance will therefore ease this year, but somewhat less than was projected in the Bank's November forecast. In coming years, general government expenditure growth is expected to be broadly at 2016 levels: public consumption is projected to grow by 1½% per year and the public investment-to-GDP ratio to remain around 3%.

- The new Government's fiscal strategy for the upcoming five years was presented at the end of January. The surplus assumed in the strategy is virtually the same as in the fiscal plan approved by the previous Government in August. Expenditures will be higher under the new strategy than under the old one, but revenues are expected to be higher as well. Even though it is assumed that the Treasury will be operated at a surplus, the fiscal strategy entails some fiscal easing when adjusting for the business cycle.

3. For the first time, the National Budget was presented in accordance with the new Act on Public Finances. Expenditures are now allocated to functions, and the outcome is published in accordance with the GFS standards, which are also used by Statistics Iceland. However, there are some differences between accounting methods used for certain items on the expenditures side. This is a vast improvement and provides a clearer view of the economic impact of central government finances.

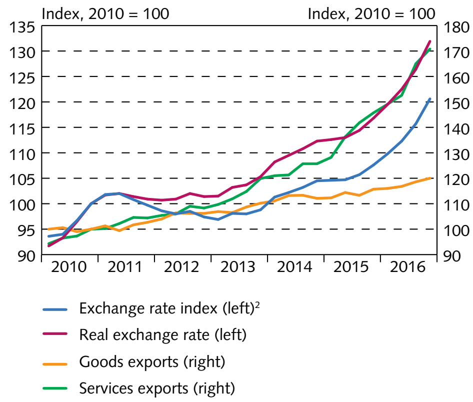
According to the Bank's baseline forecast, the 2017 outcome would have needed to be ½% of GDP more favourable than is implied in the fiscal strategy in order to maintain the same fiscal stance as in 2016. In 2018, the outcome is expected to improve by ½% of GDP, and if this materialises, the fiscal stance will then be similar to that in 2016.

- New figures from Statistics Iceland show that services exports grew much more strongly in 2016 than had previously been estimated. Statistics Iceland's preliminary figures indicate a year-on-year growth rate of about one-fourth in Q3/2016 and about 10% in the first three quarters combined. Economic indicators suggest a similar growth rate in Q4; therefore, exports are estimated to have grown by 10.2% over the year as a whole instead of the 7.8% provided for in the Bank's November forecast. The surge is due primarily to the boom in tourism, which is estimated to have grown in real terms by over 37% in 2016 as a whole. The tourism industry is also estimated to have expanded in real terms by a factor of four since 2010. Strong growth in tourism exports is one of the main causes of the appreciation of the króna in 2016.
- The outlook is also for stronger growth in exports this year, or 6.2% instead of the 3.5% provided for in the November forecast. As has been the case in the past year, the revision is due primarily to a larger-than-projected increase in foreign tourists visiting Iceland. Goods exports are also forecast to grow more strongly this year, as the outlook is for a smaller contraction in marine product exports, owing to increased catch quotas for Atlanto-Scandian herring (Norwegian Spring Spawning herring), which are expected to offset weak capelin catches. As in November, export growth is assumed to lose pace in the next two years, reflecting a rising real exchange rate and tepid growth in trading partner demand.
- The surge in domestic demand has been accompanied by strong growth in imports. Imports are estimated to have grown last year by 15.5%, which is in line with the Bank's November forecast, although the composition of imports was somewhat different than had been expected. The difference was mainly because imports of ships were considerably less in Q4 than had previously been projected. This was offset by stronger growth in services imports. It is still assumed that import growth will be strong this year, albeit somewhat less so than in the past two years.
- Even though export growth will be strong, the contribution of net trade to output growth will be negative in 2017, for the fourth year in a row. The trade surplus will therefore narrow this year, even though terms of trade will continue to improve. The trade surplus is estimated to have shrunk from 7.5% of GDP in 2015 to 6% last year. It is projected to remain at 6% for this year and next and then decline to 5½% in 2019. This is a considerably larger surplus throughout the forecast horizon than was forecast in November, owing to the combined impact of a more positive

Chart 15
Goods and services exports and global demand[1]
Q1/2010 - Q4/2016

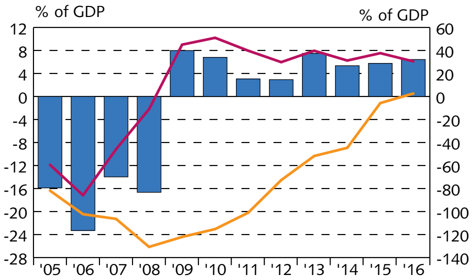
1. Four-quarter moving average. Export figures for Q4/2016 are from the baseline forecast in *Monetary Bulletin* 2017/1.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 16
Exchange rate of the króna and exports[1]
Q1/2010 - Q4/2016



1. Four-quarter moving average. Export figures for Q4/2016 are from the baseline forecast in *Monetary Bulletin* 2017/1. 2. The exchange rate index has been inverted so that a rising index represents an appreciation of the króna.
Sources: Statistics Iceland, Central Bank of Iceland.

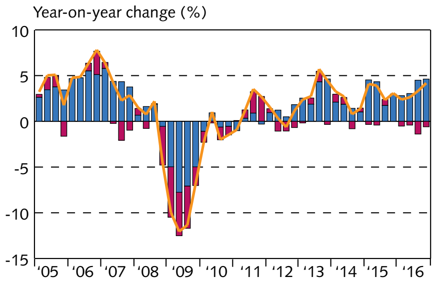
Chart 17
Current account and net external position
2005-2016



Current account balance (left)[1]
Trade balance (left)[1]
Net international investment position (right)[2]

1. Central Bank of Iceland baseline forecast 2016. Excluding the effects of DMBs in winding-up proceedings in 2008-2015 and the effects of pharmaceuticals company Actavis on the balance on income in 2009-2012. Also adjusted for the failed DMBs' financial intermediation services indirectly measured (FISIM). 2. In 2008-2015 the data is based on the underlying NIIP, that is adjusted for the effects of settlement of the DMBs in winding-up proceedings. NIIP data for 2016 is Q3 data.
Sources: Statistics Iceland, Central Bank of Iceland.

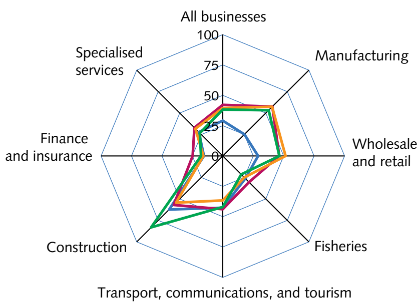
Chart 18
Employment and hours worked[1]
Q1/2005 - Q4/2016



Number of employed persons
Average hours worked
Total hours worked

1. Quarterly averages of monthly figures.
Source: Statistics Iceland.

Chart 19
Firms considering themselves short-staffed[1]
Share of businesses (%)



November 2015
May 2016
September 2016
December 2016

1. Seasonally adjusted figures.
Sources: Gallup, Central Bank of Iceland.

contribution from net trade and an improved outlook for terms of trade. The current account surplus will be around 4½% this year and next but just over 4% in 2019.

- After eight years with a large current account surplus and with the recent settlement of the failed financial institutions' estates, Iceland has seen its external debt position change radically. The net international investment position (NIIP) is now positive for the first time since measurements began, after having been negative by over 130% of GDP in 2008.

- According to Statistics Iceland's labour force survey (LFS) for Q4/2016, the number of jobs increased year-on-year by 4.6%, much more than was assumed in the Bank's November forecast. The average work week continued to grow shorter, however, and total hours worked increased by 4.1%, in line with the forecast. The labour participation rate rose sharply during the year. By Q4/2016 it was above its pre-crisis peak, and the employment rate was very close to its pre-crisis high.

- Unemployment was somewhat lower in Q4/2016 than the Bank had forecast in November, measuring 2.5%, or 2.9% adjusted for seasonality. The seasonally adjusted rate is at its lowest since Q3/2008.

- Firms are still having difficulty staffing available jobs, in spite of significant importation of labour. According to Gallup surveys conducted among Iceland's 400 largest companies, the share of firms considering themselves short-staffed has hovered around 40% (after adjusting for seasonality) since spring 2016. The share of construction firms considering themselves understaffed rose by nearly 30 percentage points between the autumn and winter surveys, however, and is now about 83%, about 18 percentage points above the early-2006 peak. Companies are increasingly addressing worker shortages with imported labour: net migration of foreign nationals between ages 20 and 59 was positive by 2% of the population aged 20-59 years old in 2016, up from 1.3% at the same time in 2015.

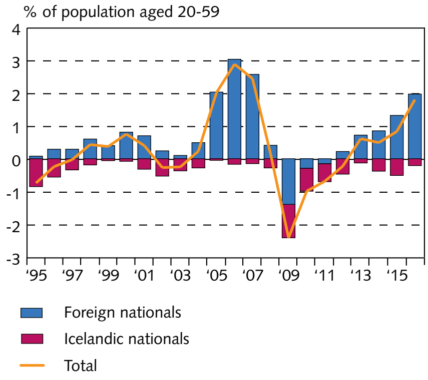
- The results of Gallup's winter survey indicate that labour demand will increase even further this year. Firms interested in recruiting staff in the next six months outnumbered those planning redundancies by about 30 percentage points. This is a somewhat smaller percentage than in the autumn survey, but the proportion is large in most sectors apart from the fishing industry. Total hours worked are expected to increase this year by 3.2%, about the same in 2016. As in November, it is assumed that the growth rate will ease in coming years, as GDP growth subsides, and the employment rate will remain just over 80% of the working-age population. In 2017, unemployment is expected to be below the November forecast, or 2.6% instead of the projected 3%, and then to rise gradually to its long-term equilibrium level as the forecast horizon progresses.

- The pay increases provided for in wage agreements have shown in the Statistics Iceland wage index, as was assumed in the Bank's November forecast, and wage drift has been broadly as projected. On the other hand, wages are expected to rise this year by about ½ a percentage point more than was forecast in November, in part because of newly approved wage settlements. As before, it is not assumed that the wage settlement review this February will lead to pay hikes in excess of those provided for in the baseline forecast. Labour productivity appears to have been somewhat stronger in 2016 than previously projected, at 2.9% instead of the 2% in the November forecast. The outlook for this year has also improved, mainly because of an improved GDP growth outlook. Unit labour costs will therefore rise by about 4% this year, on the heels of a 6½-7% increase in the past two years. Unit labour costs are also projected to rise significantly in the next two years, by an average of roughly 5% per year.
- The national accounts for the first nine months of 2016 indicate that economic activity was stronger last year than previously thought. Economic indicators also suggest buoyant GDP growth in Q4/2016, and it is therefore assumed that GDP growth in 2016 as a whole was considerably stronger than was forecast in November, or 6% instead of 5%. This is due mainly to increased business investment and services exports. This year, GDP growth is projected at 5.3%, some 0.8 percentage points more than was forecast in November, owing to stronger growth in domestic demand, business investment in particular. In the latter half of the forecast horizon, the pace of GDP growth is expected to ease to just under 2½-3% per year, which is in line with the Bank's last forecast.
- Rapid GDP growth has inevitably strained Iceland's domestic resources, although importation of labour and capital goods has pulled in the opposite direction. Firms' growing difficulties with staffing available positions have already been mentioned. In addition, some 40% of companies indicate that they are operating at or above capacity. The slack in the economy is considered to have disappeared some time ago and a growing positive output gap to have opened up. The output gap is estimated to have widened over the course of 2016 and to have been about 2.2% of potential output in 2016. The outlook is for it to grow still further this year and become wider than was forecast in November, as GDP growth in 2016 and 2017 is projected to be somewhat stronger than was assumed in the November forecast. As in the Bank's previous forecasts, the output gap is expected to narrow in coming years as GDP growth subsides.

Inflation

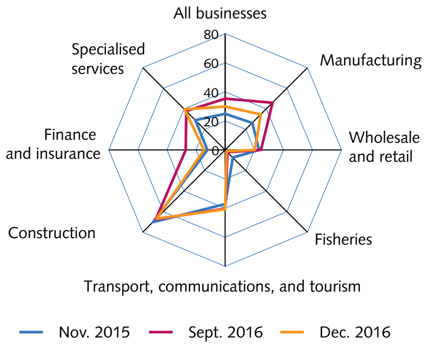
- Inflation has now been at or below the Central Bank's inflation target for three years running. In Q4/2016 it measured 1.9%, some 0.2 percentage points below the Bank's November forecast. In January it measured 1.9%, which is similar to the measurement

Chart 20
Net migration 1995-2016[1]



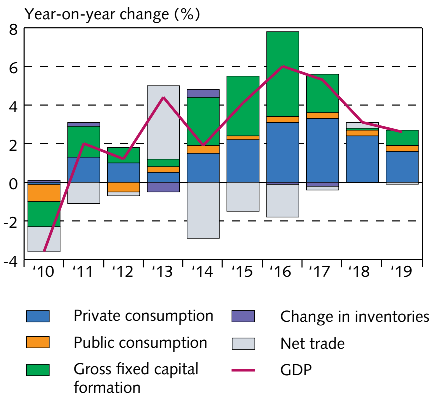
1. Migration of persons aged 20-59.
Source: Statistics Iceland.

Chart 21
Firms planning recruitment net of firms planning redundancies within 6 months[1]
Share of businesses (%)



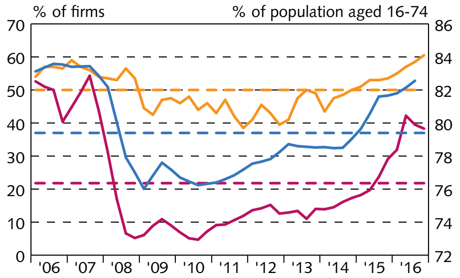
1. Seasonally adjusted figures.
Sources: Gallup, Central Bank of Iceland.

Chart 22
GDP growth and contribution of underlying components 2010-2019[1]



1. Central Bank baseline forecast 2016-2019.
Sources: Statistics Iceland, Central Bank of Iceland.

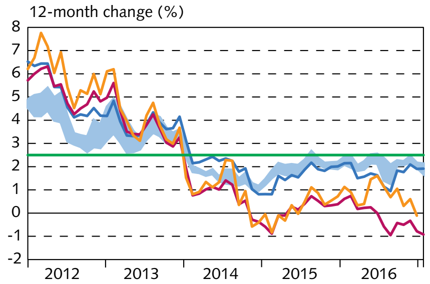
Chart 23
Capacity utilisation and labour participation[1]
Q1/2006 - Q4/2016



Firms operating near or above full capacity (left)
Firms reporting shortage of labour (left)
Labour participation (right)

1. Indicators of factor utilisation from the Gallup Sentiment Survey and labour participation from Statistics Iceland's Labour Force Survey. All data seasonally adjusted. Broken lines show period averages.
Sources: Gallup, Statistics Iceland, Central Bank of Iceland.

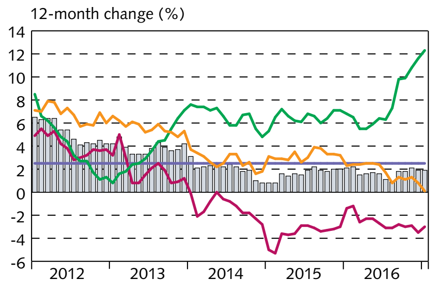
Chart 24
Headline and underlying inflation[1]
January 2012 - January 2017



CPI
CPI excluding housing
Harmonised index of consumer prices (HICP)
Inflation target
Interquartile range

1. The shaded area includes the interquartile range of estimates of underlying inflation; core indices that exclude the effects of tax changes, volatile food items, petrol, public services and owner-equivalent rent and statistical measures such as the weighted median, the trimmed mean and a dynamic factor model.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 25
Imported and domestic inflation[1]
January 2012 - January 2017



CPI
Imported prices (32%)
Domestic prices excluding housing (46%)
Housing (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. Domestic inflation is estimated using the price of domestic goods and the price of private and public services. The figures in parentheses show the current weight of these items in the CPI.
Sources: Statistics Iceland, Central Bank of Iceland.

before the publication of the November *Monetary Bulletin*. In 2016 it averaged 1.7%, close to the 2015 average of 1.6%.

- Measures of inflation that exclude housing costs show a much lower inflation rate: the CPI excluding housing declined by 0.9% year-on-year in January, and the price level according to the HICP declined by 0.1% year-on-year in December.

- Rising house prices and the appreciation of the króna have been the main determinants of the price level in the recent term. The deviation from the November forecast is due largely to the stronger-than-projected impact of the exchange rate on imported goods prices. This effect was particularly strong in December, when imported goods apart from alcoholic beverages and tobacco declined in price by 4% year-on-year. It was noteworthy that these price reductions affected most subcomponents of the CPI. In January, the price level fell by 0.6% month-on-month. Seasonal sales played a leading role in the decline, albeit somewhat less than in recent years. The impact of a stronger króna could be seen in the price of new motor vehicles, although there were offsetting effects from increases in various public levies, which raised the price of petrol, alcoholic beverages, and tobacco.

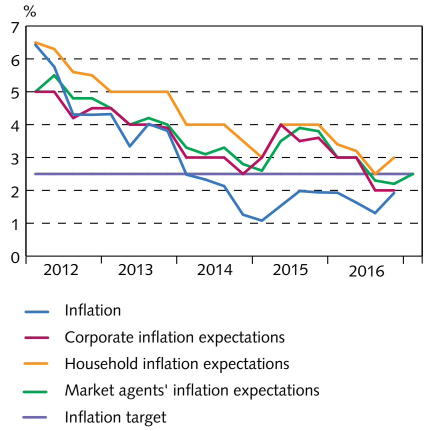
- The contribution of domestic goods to twelve-month inflation has shrunk, with their prices rising by 1.4% in the past year. The contribution of private services has also been limited, with prices falling by 0.3% over the same period. The rise in house prices tells a different story, however. In Q4/2016, imputed rent, which largely reflects developments in house prices, rose more rapidly than it had in preceding months, or by 13.3% year-on-year. In January, the year-on-year increase measured 15%.

- Underlying inflation is somewhat lower than at the time of the last *Monetary Bulletin*. In terms of core index 3 excluding tax effects (which excludes the impact of tax changes, as well as volatile food items, petrol, public services, and real mortgage interest expense), it measured 1.7% in January, as opposed to 2.1% in October. Most statistical measures of underlying inflation lie in the 1.7-2.1% range.

- According to the Gallup survey carried out in late November, households expected inflation to measure 3% in one year's time. This is ½ a percentage point higher than in the September survey. Corporate inflation expectations one year ahead were unchanged at 2%, however. According to the most recent market expectations survey, participants expect inflation to measure 2.5% in one year and 2.8% in two years. Market participants' long-term inflation expectations have continued to subside towards the inflation target, and respondents now expect inflation to average 2.7% over the next ten years, compared to 3.3% one year ago. Further signs that inflation expectations are more firmly anchored to target than before can be seen in the bond market, where the ten-year breakeven inflation rate has averaged 2.4% thus far in Q1/2017, down from 3% in Q1/2016.

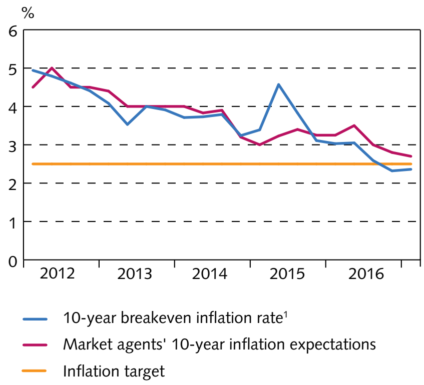
- The current baseline forecast provides for a higher exchange rate path than the November forecast, which implies a slight improvement in the inflation outlook over the majority of the forecast horizon. Inflation is projected to measure about 2% through mid-2017 and then rise gradually, reaching the target in the latter half of the year. Offsetting the impact of a rising exchange rate will be the widening output gap, which will cause inflation to rise above the target later in the forecast horizon, as the effects of the currency appreciation begin to taper off. According to the baseline forecast, inflation will peak at 2.9% in mid-2019. It will then begin to decline again and is expected to measure 2.7% in Q1/2020.
- As before, the inflation outlook is subject to a number of risks. There is significant uncertainty about wage agreements, and given the tension in the labour market, wage drift could be underestimated, particularly later on in the forecast horizon. Furthermore, private consumption could grow even faster than the forecast provides for, given the vast improvement in households' position. Moreover, firms may have exhausted their scope to absorb further cost increases. The rise in the housing component of the CPI may also be underestimated if the imbalances in the housing market grow more exaggerated. Demand pressures could also be underestimated if the fiscal stance is eased more than is assumed in the baseline forecast. Imported inflationary pressures could also be underestimated if, for instance, the fishermen's strike proves lengthy, which could weaken the exchange rate, or if oil prices rise more rapidly than is projected. Moreover, it is not certain how securely inflation expectations are anchored to the target.
- The inflation outlook could also be overestimated; for example, if global deflationary pressures turn out more persistent than is currently assumed, or if the króna appreciates even more than is forecast. Growth in domestic economic activity could be overestimated, too, if terms of trade deteriorate anew or export growth slows significantly. In addition, domestic inflationary pressures could be overestimated if productivity growth outpaces projections or if the impact of increased competition in the domestic retail market on pricing decisions is underestimated.
- Uncertainty about the inflation outlook is considered broadly unchanged since November, and the probability distribution of the forecast is roughly symmetric. There is a roughly 50% probability that inflation will be in the 1⅓-3½% range in one year and in the 1⅓-4% range by the end of the forecast horizon.

Chart 26
Inflation and inflation expectations one year ahead
Q1/2012 - Q1/2017



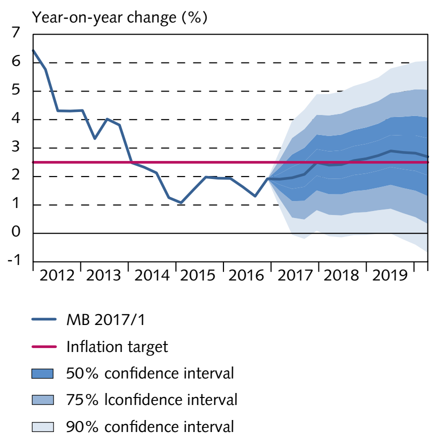
Sources: Gallup, Statistics Iceland, Central Bank of Iceland.

Chart 27
Long-term inflation expectations
Q1/2012 - Q1/2017



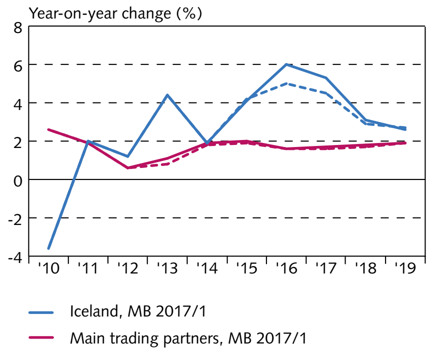
1. The value for Q1/2017 is the Q1 average to date.
Source: Central Bank of Iceland.

Chart 28
Inflation forecast and confidence intervals
Q1/2012 - Q1/2020



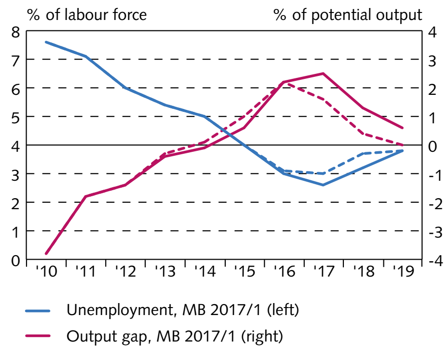
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 29
GDP growth in Iceland and trading partners 2010-2019[1]



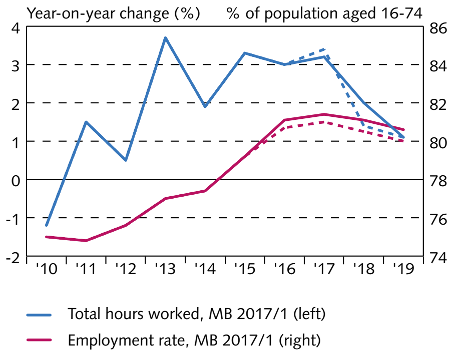
1. Central Bank baseline forecast 2016-2019. Broken lines show forecast from MB 2016/4.
Sources: Macrobond, Statistics Iceland, Central Bank of Iceland.

Chart 30
Unemployment and output gap 2010-2019[1]



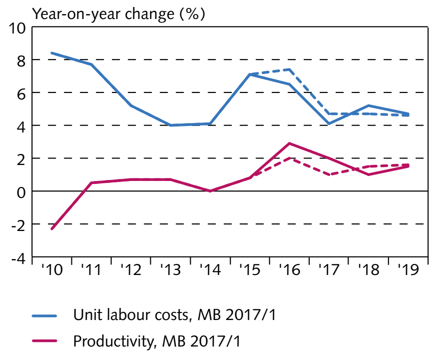
1. Central Bank baseline forecast 2016-2019. Broken lines show forecast from MB 2016/4.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 31
Total hours worked and employment rate 2010-2019[1]



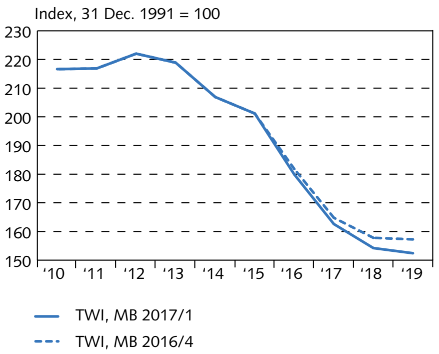
1. Central Bank baseline forecast 2017-2019. Broken lines show forecast from MB 2016/4.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 32
Unit labour costs and productivity 2010-2019[1]



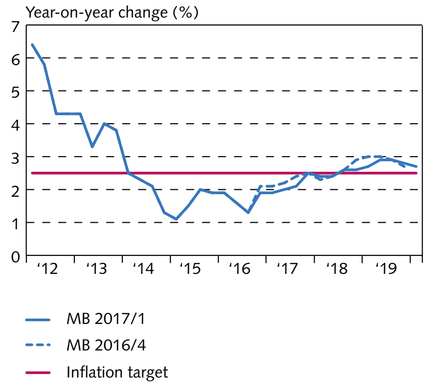
1. Productivity measured as GDP per total hours worked. Central Bank baseline forecast 2015-2019. Broken lines show forecast from MB 2016/4.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 33
Exchange rate 2010-2019[1]



1. Central Bank baseline forecast 2017-2019. Narrow trade basket.
Source: Central Bank of Iceland.

Chart 34
Inflation[1]
Q1/2012 - Q1/2020



1. Central Bank baseline forecast Q1/2017-Q1/2020.
Sources: Statistics Iceland, Central Bank of Iceland.