Monetary Bulletin 2019/2[1]

The past few years have been unusually favourable for the Icelandic economy. Terms of trade have improved markedly, and exports have surged, particularly those related to tourism. These positive shocks have boosted incomes, enabling Icelandic households and businesses to deleverage and strengthen their equity position. Domestic economic activity has grown rapidly at the same time.

But the outlook has clouded over. Terms of trade have deteriorated, and the increase in tourist arrivals lost pace rapidly in 2018, not least after airline WOW Air began to scale down its operations late in the year. It was clear early this year that tourist numbers would decline year-on-year in 2019, and with WOW Air's collapse they will fall still further. This is compounded by the capelin catch failure and the generally poorer outlook for marine product exports. Therefore, the outlook is for a nearly 4% contraction in goods and services exports this year, a substantial change from the Bank's February forecast.

The GDP growth outlook for 2019 has changed markedly as a result. Output growth is estimated to have slowed even further in Q1 and is expected to contract in Q2. It is forecast to fall by 0.4% for the year as a whole, the first year-on-year contraction in GDP since 2010. The baseline forecast assumes, however, that the economic contraction will be relatively brief and that GDP growth will rebound to 2½% in 2020.

Job growth has been strong in recent years, but the outlook is for job numbers to decline well into this year. Unemployment will rise as a result and is estimated to average 3.9% for 2019 as a whole, nearly 1 percentage point above the February forecast. The positive output gap that had opened up with the strong GDP growth of the past several years is therefore expected to close more rapidly than previously projected, and a slack to develop later this year.

Inflation rose following the depreciation of the króna last autumn, peaking at 3.7% in December. It fell to 3.1% in Q1/2019 but rose again in April, to 3.3%. Inflation expectations have fallen as well, after rising in 2018. Inflation is expected to pick up slightly until mid-year, albeit less than was assumed in February. The outlook is also for lower inflation throughout the forecast horizon than was projected in February. Inflation is expected to align with the target in mid-2020 and then dip temporarily below it late in the year. The changed inflation outlook is due primarily to the sharp turnaround in the economy, which is offset in part by a larger rise in unit labour costs and import prices. Uncertainty about the inflation outlook has receded since private sector wage agreements were finalised. The negotiated pay rises for this year are broadly in line with the February forecast, but wage increases in 2020 and 2021 are larger than was assumed. Because of this, together with the prospect of weaker productivity growth, unit labour costs are now forecast to rise more than previously projected.

1. The analysis presented in this *Monetary Bulletin* is based on data available in mid-May.

I Economic outlook, key assumptions, and main uncertainties

Central Bank baseline forecast

Global output growth outlook continues to deteriorate

Global GDP growth declined as 2018 progressed, measuring 3.6% for the year as a whole, or 0.2 percentage points less than in 2017. The GDP growth outlook for 2019 has also deteriorated. For example, the International Monetary Fund (IMF) forecasts this year's global output growth rate at 3.3%, some 0.4 percentage points below its October 2018 forecast. The outlook for 2020 has deteriorated as well, although the Fund expects growth to pick up slightly between years.

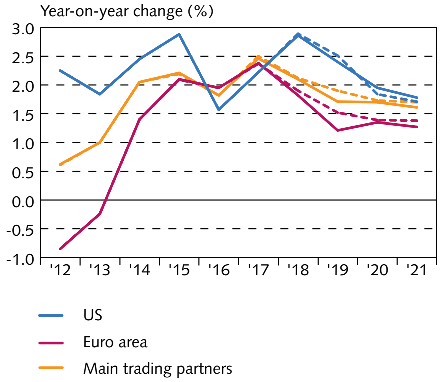
In Iceland's main trading partner countries, GDP growth averaged 2.1% in 2018. Growth eased over the course of the year, however, as the slack in trading partner economies narrowed. The outlook for 2019 has worsened in comparison with the February forecast (Chart I-1). Trading partners' GDP growth is now expected to average 1.7% this year, as opposed to 1.9% in the February forecast and 2.2% in the November 2018 forecast. The GDP growth outlook for the eurozone has been revised downwards by 0.3 percentage points since February, and weaker growth is also projected in the US, the UK, and Japan. Trading partner growth is expected to remain around 1.7% per year in 2020 and 2021. Further discussion of the global economy can be found in Chapter II, and uncertainties in the global outlook are discussed later in this chapter.

Króna relatively stable year-to-date and expected to hold broadly unchanged over the forecast horizon

After a virtually uninterrupted improvement beginning in mid-2014, terms of trade started to deteriorate in mid-2017. The deterioration through end-2018 totalled 7.5%, with most of it taking place in H2/2018. Last year's erosion in terms of trade, measuring 3.9%, is due in large part to a 30% rise in oil and alumina prices, although it was offset in part by a fairly robust rise in key exported goods prices. This is 1.3 percentage points more deterioration than was assumed in the February forecast (Chart I-2). As in February, terms of trade are projected to improve by an average of ½% per year from 2019 through 2021, owing to a continued rise in exported goods prices and a decline in oil and alumina prices. If this forecast materialises, terms of trade will be 1½% weaker by the end of the forecast horizon than was projected in February.

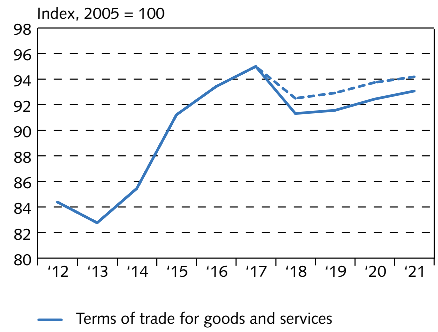
The króna depreciated by 13% from end-August through late November 2018, when the trade-weighted exchange rate was at its weakest. The slide began with news of WOW Air's mounting operational difficulties. It was fuelled further by increased pessimism about the output growth outlook, the erosion in terms of trade, and growing concerns about the outcome of wage negotiations. The króna seems to have been relatively unaffected by WOW Air's collapse in late March 2019, but it strengthened by nearly 3% after private sector wage agreements were signed in early April. On the whole, however,

Chart I-1
Global output growth 2012-2021[1]



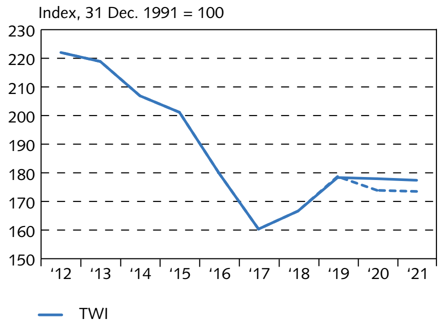
1. Central Bank baseline forecast 2019-2021. Broken lines show forecast from MB 2019/1.
Sources: OECD, Thomson Reuters, Central Bank of Iceland.

Chart I-2
Terms of trade 2012-2021[1]



1. Central Bank baseline forecast 2019-2021. Broken line shows forecast from MB 2019/1.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-3
Exchange rate 2012-2021[1]



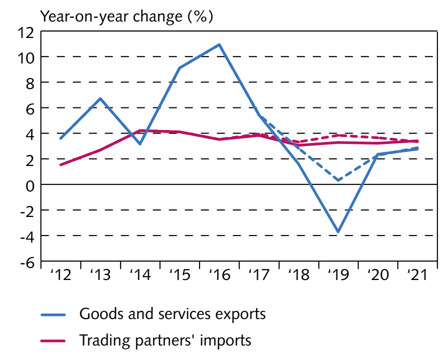
1. Narrow trade basket. Central Bank baseline forecast 2019-2021. Broken line shows forecast from MB 2019/1.
Source: Central Bank of Iceland.

the króna has been broadly stable in 2019 to date. It is now close to where it was just before the February *Monetary Bulletin* was published, although it was a full 1% weaker in Q1 than was forecast in February. It is expected to hold more or less steady at the current level throughout the forecast horizon. If this forecast materialises, the trade-weighted average exchange rate will be just over 2% lower in 2020 and 2021 than was forecast in February (Chart I-3). The prospect of a weaker króna reflects, among other things, the deterioration in the growth outlook since the last forecast and the expectation of lower domestic interest rates than before, as can be seen in both the Bank's market expectations survey and forward interest rates. Furthermore, the equilibrium real exchange rate (i.e. the real exchange rate that is consistent with internal and external balance in the economy) is estimated to have fallen concurrent with the collapse of WOW Air, the erosion in terms of trade, the failure of the capelin catch, and the generally poorer outlook for marine exports. Counteracting these factors is the prospect of a slower rise in international interest rates and the reduction in the special reserve requirement on capital inflows, both of which support the króna, other things being equal. Further discussion of uncertainties in the exchange rate outlook can be found later in this chapter, and developments in terms of trade and the exchange rate are discussed in Chapters II and III.

Exports set to contract markedly in 2019

Goods exports grew by 3.5% in 2018, in line with the February forecast. Services exports were flat year-on-year, however, whereas the February forecast had assumed 2.5% growth. The deviation from the forecast was due largely to a contraction in passenger transport by air in Q4, even though domestic airlines' passenger numbers continued to rise. The outlook has also deteriorated sharply for this year. The turnaround is especially striking in the tourism industry, mainly as a result of WOW Air's collapse. Tourist arrivals are now expected to be 10½% fewer in 2019 than in 2018, and services exports are therefore projected to contract by nearly 9%. This is a sharp revision from the February forecast, which assumed a contraction of 1.5%. The change is even greater in comparison with the November forecast, which assumed that services exports would grow by nearly 4% this year. The outlook for goods exports has also worsened, driven mainly by the capelin catch failure and reduced catch quotas for blue whiting, mackerel, and Norwegian summer-spawning herring. After a record year in 2018, marine exports look set to contract by 5.5% this year, some 4 percentage points more than was forecast in February. Therefore, the outlook is for combined goods and services exports to contract by 3.7% in 2019 instead of remaining broadly flat year-on-year, as in the February forecast (Chart I-4). Tourist numbers are expected to begin rising again in 2020, and relatively robust growth in services exports is a key component of the 2½% year-on-year growth in total exports in 2020 and 2021.

Chart I-4
Exports and global demand 2012-2021[1]



1. Central Bank baseline forecast 2019-2021. Broken lines show forecast from MB 2019/1.
Sources: Statistics Iceland, Thomson Reuters, Central Bank of Iceland.

Although export growth was weaker than expected in 2018 and the outlook for 2019 has deteriorated, the forecast for the trade balance is broadly unchanged since February. This is due primarily to a similar revision of the forecast for goods and services imports, which were virtually unchanged in 2018 and are expected to contract by 1% this year. The surplus on goods and services trade is forecast to shrink from 3.1% of GDP in 2018 to 1.9% this year and 1.3% by 2021 (Chart I-5). The current account surplus is expected to develop similarly, measuring about 1.3% of GDP this year and narrowing to just under 1% by 2021. Further discussion of exports and the external balance can be found in Chapter IV.

Marked slowdown in domestic demand this year …

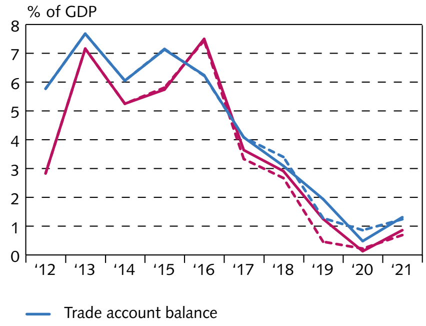
Private consumption grew by 3.3% in Q4/2018, down from more than 5% early in the year. The growth rate for 2018 as a whole was 4.8%, whereas the February forecast estimated it at 4.5%. Leading indicators imply that it slowed even further in Q1/2019. It is forecast to measure only 1.6% in 2019 as a whole, which would be the weakest private consumption growth since 2013 and well below the February forecast of 4% (Chart I-6). The slowdown is due mainly to weaker growth in real disposable income in 2018 and 2019, a much poorer employment outlook, and increased economic uncertainty now that the upswing of the past several years appears to be at an end. The outlook for the next two years is broadly unchanged, however, at just under 3% growth per year, as was forecast in February. To a significant extent, this reflects the impact of Government measures in connection with the private sector wage agreements, for without them, private consumption growth would be nearly 1 percentage point weaker per year in 2020 and 2021 (see Box 3).

Business investment began to contract in H2/2018, and for the year as a whole it shrank by 5.4%, somewhat more than was assumed in the February forecast (Chart I-7). Although total investment grew by 2.1% year-on-year, it has slowed markedly after averaging nearly 17% per year in 2015-2017. In 2018, growth in total investment was slightly below the February forecast, owing mainly to a stronger-than-projected contraction in general business investment (which excludes investment in energy-intensive industry and in ships and aircraft). The outlook is also for weaker investment activity this year than was forecast in February. To an extent, this reflects changes in aircraft imports planned for 2019 by Icelandair, as it is now clear that the aircraft will be leased and therefore will no longer be classified with investment and goods imports in the national accounts. Added to this is the sale of WOW Air's aircraft, which took place at the end of 2018 but showed up in Statistics Iceland's external trade figures in January and will therefore be deducted from investment in the Q1/2019 national accounts. Business investment is therefore projected to contract by 6.7% this year instead of growing by 4%, as was forecast in February. General business investment is expected to rise marginally, however, broadly as in the February forecast. Total investment will therefore contract slightly this year. The investment-to-GDP ratio will reach 22% this year and rise over the course of the forecast horizon, whereas the ratio of business investment to GDP will decline (Chart I-7).

Domestic demand, which reflects all public and private sector consumption and investment spending, developed in line with the February forecast in 2018, growing by 4.1%, well below the 2015-

Chart I-5

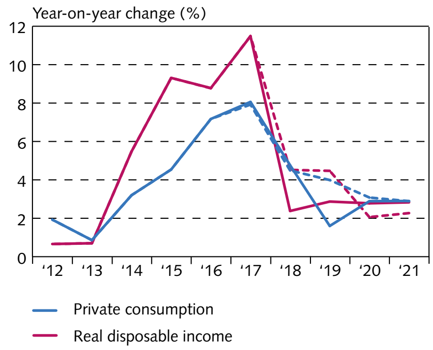
Current account balance 2012-2021[1]



1. Current account balance based on estimated underlying balance 2008-2015. Central Bank baseline forecast 2019-2021. Broken lines show forecast from MB 2019/1.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-6

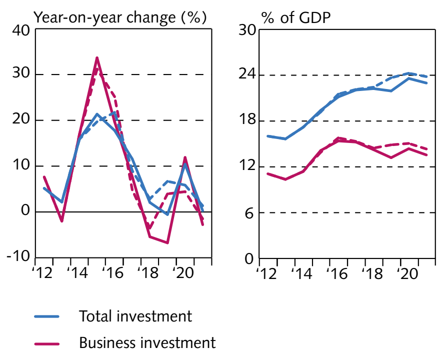
Private consumption and disposable income 2012-2021[1]



1. Central Bank baseline forecast 2019-2021. Broken lines show forecast from MB 2019/1.
Sources: Statistics Iceland, Central Bank of Iceland.

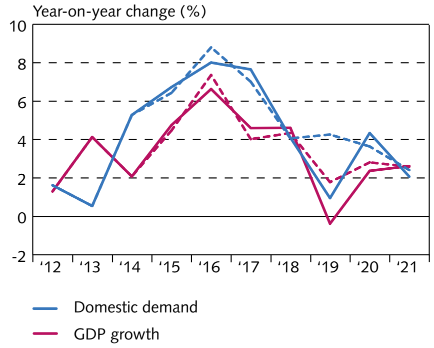
Chart I-7

Investment 2012-2021[1]



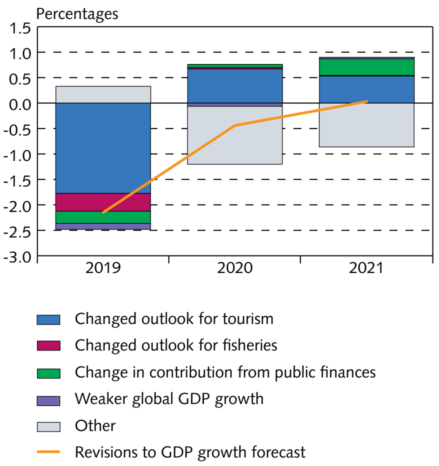
1. Central Bank baseline forecast 2019-2021. Broken lines show forecast from MB 2019/1.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-8
Domestic demand and GDP growth 2012-2021[1]



1. Central Bank baseline forecast 2019-2021. Broken lines show forecast from MB 2019/1.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-9
Revisions to the GDP growth forecast in *Monetary Bulletin*[1]



1. Change in GDP growth forecast between MB 2019/1 and 2019/2.
Source: Central Bank of Iceland.

2017 average of 7.5% per year. Growth eased as the year progressed and looks set to weaken even more in H1/2019, falling to only 1% for the year as a whole, more than 3 percentage points below the February forecast (Chart I-8). The outlook for the next two years is broadly unchanged, however. Further discussion of developments in private consumption, investment, and domestic demand can be found in Chapter IV.

… with the prospect of the first economic contraction since 2010

According to preliminary figures from Statistics Iceland, GDP growth measured 4% in Q4/2018, outpacing the February forecast. The growth rate for 2018 as a whole was 4.6%, which was 0.3 percentage points more than was forecast in February. The deviation is due to a more favourable contribution from net trade than was projected in February, while domestic demand growth was in line with the forecast.

Output growth is estimated to have slowed even further in Q1/2019, and GDP is expected to contract by just over 1% year-on-year in Q2. This is a marked change from the February forecast, owing to the above described external shocks recently hitting the economy. For the year as a whole, GDP is expected to fall by 0.4%, the first contraction in Iceland since 2010 (Chart I-8).[2] This is a major turnaround since February, when the Bank forecast 2019 output growth at 1.8%, and an even bigger shift from the November forecast, which estimated this year's growth at 2.7%. As Chart I-9 shows, the downward revision of the output growth forecast is driven mainly by the poorer outlook for tourism, although reduced marine product exports owing to this year's capelin catch failure weigh heavily as well. Added to this is the impact of slower trading partner growth, plus a revision of public expenditure growth since February. The baseline forecast assumes that the economic contraction will be relatively brief and that GDP growth will rebound to 2½% in 2020. Even so, this is below the growth rate forecast in February. Further discussion of developments in GDP growth can be found in Chapter IV.

Outlook for reduced job numbers and increased unemployment, with a slack opening in late 2019

Total hours worked increased by 1.8% year-on-year in Q1/2019, broadly in line with the February forecast. Job growth measured 2.6% but this was offset by a nearly 1% drop in average hours worked. Seasonally adjusted unemployment measured 3% in Q1, up by 0.4 percentage points from the previous quarter. Seasonally adjusted registered unemployment had risen to 3.5% by April, however, owing to a surge following the collapse of WOW Air and layoffs at companies that provided services to the airline. Thus, the outlook is for a noticeable rise in unemployment in Q2.

Because of the negative shocks that have hit the economy recently, job growth is much weaker than previously forecast. The outlook is for total hours worked to decline well into the year but remain

2. Previous recessions are discussed in Box 1. As is discussed in Box 2, the domestic economy is much better prepared to face negative shocks now than it was during the run-up to the 2008 crisis.

virtually flat between annual averages, whereas the February forecast assumed an increase of 1.4% (Chart I-10). The employment rate will therefore fall by 1½ percentage points relative to 2018, the third consecutive year-on-year decline. In the past two years, however, the labour participation rate has declined even further, and unemployment has therefore fallen. A drop in the participation rate is projected for this year as well, although it is expected to be smaller than the decline in the employment rate. As a result, unemployment will rise significantly. If this forecast materialises, unemployment will average 3.9% this year, 0.8 percentage points above the February forecast (Chart I-11). According to the forecast, it will subside again in 2020 and 2021 but remain well above the February forecast, and above the level considered consistent with price stability.

Because of Statistics Iceland's revision of historical GDP growth figures, the output gap is now estimated to have been larger in the past two years than previous figures indicated. This year's abrupt turnaround in economic activity means, however, that the output gap will close much more quickly than previously projected. The current baseline forecast assumes that an output slack will develop at the end of this year, but that it will close again by the end of 2020 (Chart I-11). It should be borne in mind that estimating the output gap is always subject to uncertainty, particularly at cyclical turning points like the present one. Further discussion of the labour market and factor utilisation can be found in Chapter V.

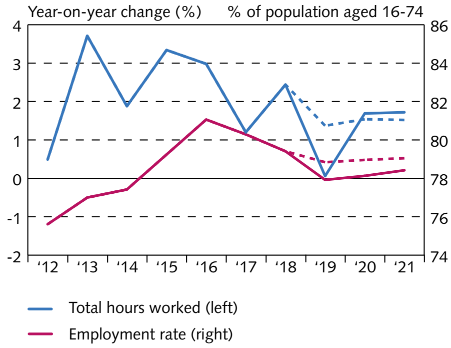
Inflation above target but expected to subside faster than previously forecast, aligning with the target in mid-2020

Inflation rose following the depreciation of the króna last autumn, peaking at 3.7% in December. It tapered off again in Q1/2019, averaging 3.1% during the quarter, 0.3 percentage points below the forecast in the February *Monetary Bulletin*. It bounced back up in April, however, to 3.3%. Inflation expectations also rose in 2018 but have fallen again, reflecting, among other things, the finalisation of private sector wage agreements providing for smaller wage hikes than many had expected. Households' and businesses' long-term inflation expectations have remained above 3%, while market agents' expectations have fallen to 2.7%. The breakeven inflation rate in the bond market has also subsided.

The year-2019 pay hikes provided for in the new wage agreements are broadly in line with the February forecast, but the wage rises for the two years following are somewhat larger (see Box 4). The outlook is also for weaker productivity growth than was projected in February and thus a larger increase in unit labour costs, which are now forecast to rise by 7% this year and 4% per year, on average, in 2020 and 2021 (Chart I-12).

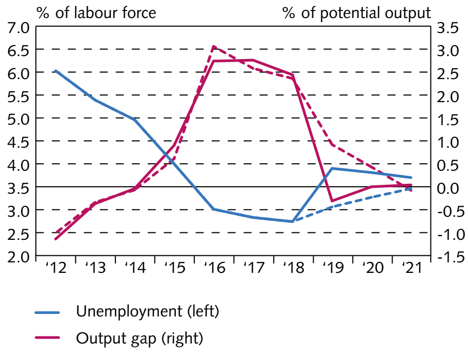
Because of the changed economic outlook, inflation is expected to be below the February forecast for the entire forecast horizon. It is forecast to peak at 3.4% in mid-2019 and ease to 3.1% in Q4, and then continue to taper off in 2020, reaching the target by mid-year and dipping below it later in the year (Chart I-13). The main reason for lower inflation than in the February forecast is the sudden turnaround

Chart I-10
Total hours worked and employment rate 2012-2021[1]



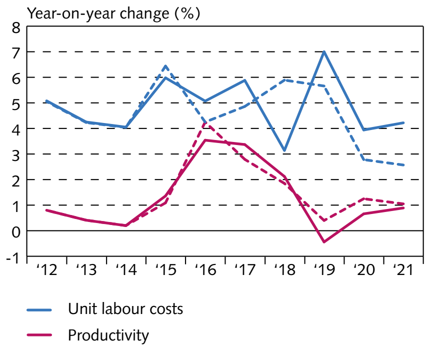
1. Central Bank baseline forecast 2019-2021. Broken lines show forecast from MB 2019/1.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-11
Unemployment and output gap 2012-2021[1]



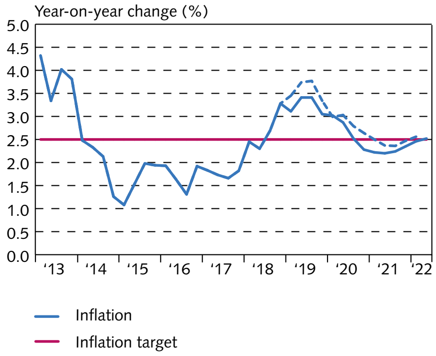
1. Central Bank baseline forecast 2019-2021. Broken lines show forecast from MB 2019/1.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-12
Unit labour costs and productivity 2012-2021[1]



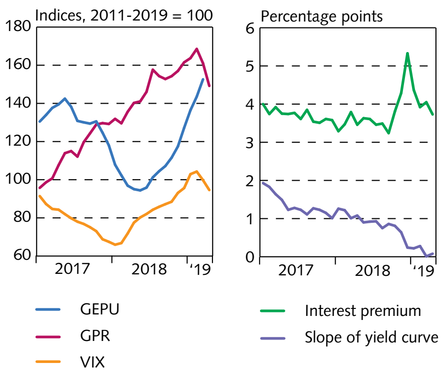
1. Productivity measured as GDP per total hours worked. Central Bank baseline forecast 2019-2021. Broken lines show forecast from MB 2019/1.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-13
Inflation[1]
Q1/2013 - Q2/2022



1. Central Bank baseline forecast Q2/2019-Q2/2022. Broken line shows forecast from MB 2019/1.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-14
Global economic uncertainty[1]
January 2017 - April 2019



1. The GEPU index of Baker *et al.* (2016) for global economic uncertainty, and the GPR index of Caldara and Iacoviello (2018) for geopolitical uncertainty. The VIX index measures underlying volatility in the S&P500 index. All indices are 12-month moving averages. The interest premium on speculative-grade US corporate bonds. The slope of the yield curve is the interest rate differential between 10-year US Treasury bonds and 3-month US Treasury bills.
Sources: Baker, Bloom, and Davis (2016), Caldara and Iacoviello (2018), FRED, Thomson Reuters.

in the economy, which can be seen in the output gap, which will close much faster than was projected in February. Pulling in the other direction, however, is the larger increase in unit labour costs and import prices. The uncertainties in the inflation forecast are discussed below. Developments in global prices are discussed in Chapter II, and domestic inflation and inflation expectations are discussed in Chapter VI.

Key assumptions and main uncertainties

The baseline forecast reflects the assessment of the most likely economic developments during the forecast horizon. It is based on forecasts and assumptions concerning domestic economic policy and Iceland's external environment. It is also based on an assessment of the effectiveness of individual markets and how monetary policy is transmitted to the real economy. All of these factors are subject to uncertainty. The discussion below explains the assumptions about domestic economic policy. It also lists several important uncertainties and explains how changes in key assumptions could lead to developments that deviate from the baseline forecast.

The fiscal stance and monetary policy

The fiscal stance in terms of changes in the cyclically adjusted Treasury primary balance was largely neutral in 2018. The outlook is for it to ease from this year through 2021, and by more than the Bank projected in November when the fiscal stance was last assessed. The easing is due to new discretionary measures on both revenues and expenditures sides that are over and above the assumptions in the current fiscal strategy, and to discretionary measures in connection with the private sector wage agreements (see Chapter IV and Box 3).

The Bank's key interest rate has been unchanged at 4.5% since November 2018, at which time it had fallen by 1.25 percentage points since August 2016 (see Chapter III). The baseline forecast is based on the assumption that, during the forecast horizon, the key rate will develop in line with the monetary policy rule in the Bank's macroeconomic model, which ensures that inflation will be broadly at target over the medium term.

Mounting global economic uncertainty

Global economic uncertainty has grown in the recent past (Chart I-14),[3] not least as a result of the trade disputes between the US and several of its trading partners, China in particular. Reciprocal tariff hikes have undermined world trade, adversely affected firms' investment plans, and acted as a drag on productivity growth. The risk is that the negative impact on the global economy will be amplified if the disputes persist or escalate further. For example, the US authorities are considering imposing tariffs on motor vehicle imports, which would have a severe impact on exports from countries such as Japan and

3. The chart shows measures of global economic policy uncertainty (the GEPU index) and geopolitical risk (the GPR index). See S. Baker, N. Bloom, and S. Davis (2016), "Measuring economic policy uncertainty", *Quarterly Journal of Economics*, 131, pp. 1593-1636, and D. Caldara and M. Iacoviello (2018), "Measuring geopolitical risk", Board of Governors of the Federal Reserve System, *International Finance Discussion Paper* no. 1222.

Germany, as well as a number of others involved in the car industry supply chain. Concerns are also growing about the economic recovery in the eurozone, which has softened in the recent past. This is due in large part to temporary production problems in the German motor vehicle industry and the aforementioned concerns about the impact of the trade dispute, although the fiscal situation in Italy and the mass protests in France are factors as well.

Increased global economic uncertainty has also surfaced in growing underlying asset price volatility, as can be seen, for instance, in the rise in the VIX implied volatility index in the past year, after a decline over the years before (Chart I-14). Elevated uncertainty is also reflected in rising corporate bond spreads. Spreads rose sharply in the US in late 2018, and while they fell again in early 2019, they are still higher than they were for much of last year. Furthermore, there are growing concerns that a new economic recession is in the offing, as can be seen, for instance, in the flattening of the US Treasury yield curve, which inverted for a short while — historically a harbinger of an imminent economic contraction in the US.

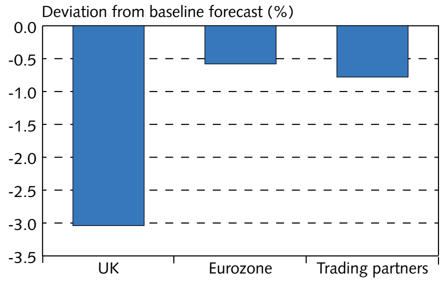
Leading indicators imply that the global economic recovery is losing steam. Although the global output growth outlook could firm up again if trade disputes are resolved satisfactorily, the risk that growth is overestimated in the Bank's baseline forecast has increased. If this materialises, GDP growth in Iceland could turn out weaker than is assumed in the baseline forecast (see, for instance, Chapter I in *Monetary Bulletin* 2018/4).

No-deal Brexit would adversely affect the global economy and growth in Iceland

Another important source of global economic uncertainty centres on Brexit; i.e., the UK's planned departure from the European Union (EU). The exit date was originally 29 March but was postponed until 12 April. Then, on 10 April, it was postponed again, until end-October 2019. It is hoped that the extra time will enable the British authorities to come to a decision about how they envision the exit process and what the UK's future relationship with the EU should be. The postponement has forestalled Britain's departure without an exit agreement, at least for a while, but depending on the outcome of a possible parliamentary election, a no-deal Brexit cannot be ruled out. Uncertainty about the entire process has already chilled British firms' optimism and investment plans and increasingly prompted UK households to defer house purchases. Many companies have moved their operations to the European mainland or are considering doing so, and signs that firms are hesitant to recruit staff are beginning to surface, especially in the services sector. As a result, output growth has slowed in the UK, and the growth outlook has deteriorated.

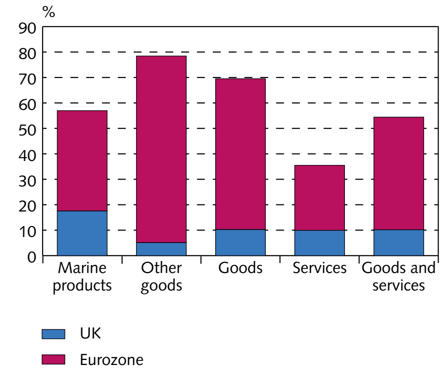
Virtually all studies of the macroeconomic impact of Brexit suggest that a no-deal Brexit would have an even greater negative effect on the British economy. Trade between the UK and the EU would probably become more costly and complicated, and cross-border supply chains would be disrupted. Both this and the impediments to cross-border movement of workers are likely to put a damper on pro-

Chart I-15
Impact of no-deal Brexit on GDP[1]



1. The impact of a no-deal Brexit on GDP in the UK, the eurozone, and Iceland's main trading partner countries, as compared with a baseline example in which the UK exits the EU with most of its current relationship with the EU intact for the next few years. The chart shows the accumulated impact on GDP 2019-2022.
Sources: NIESR, Central Bank of Iceland.

Chart I-16
Exports to the UK and the eurozone 2010-2017[1]



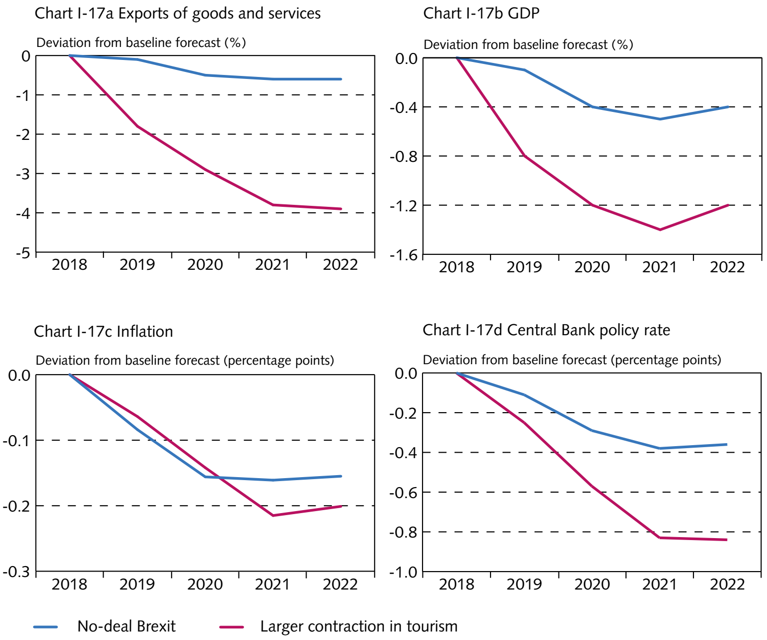
1. Share of goods and services exports to the UK and the eurozone. Averages for 2010-2017.
Source: Statistics Iceland.

ductivity growth and potential output in the UK. Added to this are increased uncertainty and rising risk premia on financial instruments, which would probably slow down domestic demand even further. In all likelihood, the pound sterling would depreciate, causing import prices to rise, and if inflation expectations became unmoored, the Bank of England could be forced to raise interest rates to keep inflation in check, thereby deepening the economic contraction. Britain's National Institute of Economic and Social Research (NIESR) has published an assessment of the macroeconomic impact of a no-deal Brexit on the UK economy. According to the Institute's findings, the pound sterling could weaken by roughly 10% and GDP in the UK could fall by a full 3% through 2022, as compared with an exit agreement retaining the better part of the UK and EU's current relationship in coming years (Chart I-15).[4] To some extent, the impact could spread to the eurozone; for instance, with a slowdown in investment and exports, although the effect would be much weaker than in the UK, which is considerably more dependent on the eurozone than the eurozone is on the UK. A no-deal Brexit would also affect other countries, Iceland included. Based on the NIESR study of the impact of a no-deal Brexit on economic activity in the UK and the euro area, GDP in the eurozone could contract by 0.6% over the period through 2022, while Iceland's trading partners' GDP could contract by 0.8%.

About 10% of Iceland's exports go to the UK, and nearly 45% to the eurozone (Chart I-16). A no-deal Brexit could therefore have a tangible impact on Iceland's exports. This would be compounded by a nearly 1% rise in the real exchange rate due to the depreciation of the pound sterling, increased global uncertainty, and potential spillovers from rising interest rate spreads to financial conditions in Iceland. As Chart I-17 shows, exports of goods and services would contract marginally this year, and slightly more in 2020, when they would be ½% weaker than in the baseline forecast and remain there through end-2022. As Chart I-16 indicates, the UK market weighs more heavily in exports of marine products than in other goods exports; therefore, the fishing industry could be affected more than other export sectors. It is assumed here, though, that marine products can be sold readily in other markets, which limits the ultimate impact on marine export volumes. Marine product prices would decline by 3½% in foreign currency terms, however, in line with their historical relationship with global economic activity. Weaker export growth, poorer terms of trade, and elevated uncertainty would lower GDP growth in Iceland by 0.1 percentage points relative to the baseline forecast in 2019 and by 0.3 percentage points in 2020. GDP would therefore be about ½% below the level in the baseline forecast from 2020 onwards. With a higher real exchange rate and weaker growth in economic activity,

4. Therefore, some of the adverse effects of Britain's leaving the EU as opposed to remaining are incorporated into the baseline. See A. Hantzsche, A. Kara, and G. Young (2018), "The economic effects of the government's proposed Brexit deal", NIESR *National Institute Report*, 26 November 2018; A. Hantzsche, A. Kara, and G. Young (2019), "Prospects for the UK economy", NIESR *National Institute Economic Review*, no. 247; and J. S. Chadha, A. Hantzsche, A. Kara, and G. Young (2019), "Political cacophony and the 'Spring Statement'", NIESR *National Institute Policy Paper*, no. 011.

Chart I-17
Alternative scenario



Source: Central Bank of Iceland.

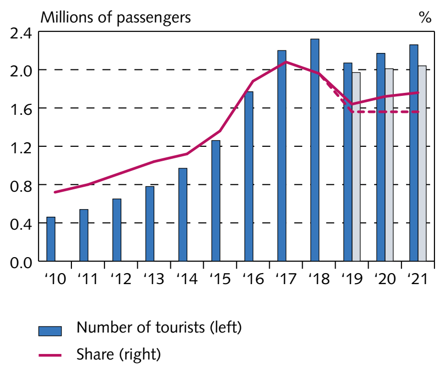
inflation would be marginally lower over the entire period, although a lower Central Bank key rate would mitigate contractionary effects.[5]

A cloudy outlook for the tourism industry

After surging in recent years, growth in tourism began to ease in 2018, and in the beginning of this year tourist arrivals started to decline. This is due in part to reduced activity by WOW Air, which had downsized its fleet of aircraft by almost half by the beginning of 2019. The company's insolvency in late March has exacerbated the contraction, and the outlook is now for tourist arrivals to decline by 10½% year-on-year, a full 8 percentage points more than was assumed in the February forecast. According to the current baseline forecast, visitor numbers will start to rise again in 2020, albeit much more slowly than in the past several years. The forecast assumes that arrivals will reach 2.3 million per year by the end of the forecast horizon; i.e., broadly the same number as in 2018. According to this, Iceland's share in travel and passenger transport among advanced European economies will fall from 0.52% in 2017 to 0.41% this year, and then rise again to 0.43% in 2020 (Chart I-18).[6]

The outlook is highly uncertain, however, and the possibility of a deeper contraction and slower recovery cannot be excluded; for instance, if the high real exchange rate causes a further drop in demand

Chart I-18
Tourism sector activity 2010-2021[1]



1. Central Bank baseline forecast 2019-2021. The light columns and the broken line show the alternative scenario assuming a slower recovery in the tourism sector. The chart also shows Icelanders' share in travel exports and passenger transport by air (in US dollars) among advanced European economies.

Sources: Icelandic Tourist Board, Isavia, Statistics Iceland, United Nations (UNCTAD), Central Bank of Iceland.

5. Clearly, this assessment is highly uncertain. The impact could turn out stronger, for instance, if disturbances to trade are more protracted and severe, or if uncertainty escalates still further. But it could turn out weaker if efforts to spark demand in the UK with stimulative policy measures prove successful. The impact assumed here is very similar to that described by the IMF (*World Economic Outlook*, Chapter 1, April 2019). According to the Fund's likeliest scenario, GDP could contract by just over 4% through 2021 in the UK, and by 0.5% in the eurozone.

6. Growth in tourism among other European countries is forecast to range between 3-4% per year (see the *UNWTO World Tourism Barometer*, January 2019).

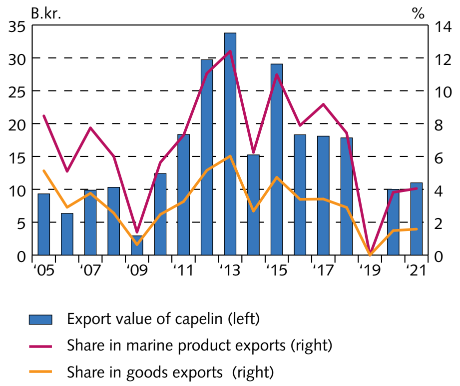
for travel to Iceland, if Icelandair cannot begin using its new Boeing 737 Max jets this summer, or if the reputational damage from WOW Air's collapse and the recent temporary strikes aimed at the tourism industry proves greater than is currently assumed. Chart I-18 depicts an alternative scenario in which tourist arrivals contract by 15% in 2019 instead of the 10½% in the baseline forecast and then recover at a slower pace than in the baseline over the ensuing two years. In that case, Iceland's share in travel and passenger transport in advanced European economies would fall to 0.39% this year and remain there, at roughly the same level as in 2015. Chart I-17 above shows how such developments in tourism could potentially affect the domestic economy. Exports would contract much more in 2019 and grow more slowly in the years to follow, and by 2022 they would be nearly 4% weaker than in the baseline scenario. Revenues would contract in comparison with the baseline scenario and domestic demand would be weaker. Weaker demand would also dampen imports, compounding the impact of export companies' reduced importation of inputs and the decline in the real exchange rate over the forecast horizon. GDP growth would be affected, albeit less than exports: output would contract by 0.8 percentage points more in 2019 than in the baseline forecast and growth would be 0.2-0.3 percentage points weaker in 2020 and 2021. Therefore, by 2022, GDP would be a full 1% lower than in the baseline forecast. The output slack would therefore be larger, offsetting the inflationary impact of a weaker króna. Inflation would be marginally lower each year than in the baseline example, and the Central Bank would be able to apply monetary policy to mitigate the economic impact of the shock. Later in the forecast period, the Bank's key rate would then be 0.8 percentage points lower than in the baseline.

Capelin catch failure could drag on longer than in the baseline forecast

The export value of capelin has been about 18 b.kr. per year in the past three years, just over 8% of total marine exports and 3% of total goods exports. According to the baseline forecast, however, there will be no capelin catch this year, and the lost export revenues will strongly affect communities relying on capelin fishing. The economy as a whole will feel the effects as well: growth in total goods and services exports will be 0.7 percentage points lower this year and GDP growth 0.4 percentage points lower. Although the February forecast assumed a downturn in the capelin catch, the actual contraction will be about 11 b.kr. more than was projected there.

According to the current baseline forecast, capelin fishing will resume in 2020, but catches will be smaller than was assumed in the February forecast, as well as being smaller than in recent years (Chart I-19). Obviously, this assumption is highly uncertain, not least if rising ocean temperatures cause capelin spawning grounds to move outside Iceland's fishing waters. In that case, the GDP growth outlook for the next two years could prove overly optimistic.

Chart I-19
Export value of capelin 2005-2021[1]



1. Central Bank baseline forecast 2019-2021.
Sources: Statistics Iceland, Central Bank of Iceland.

Exchange rate outlook uncertain

The baseline forecast assumes that the impact of WOW Air's collapse on the exchange rate has already largely materialised. Underlying pressures on the króna in connection with investors' concerns about the outcome of wage negotiations have also receded in the wake of a relatively favourable result. According to the baseline forecast, exchange rate movements in the coming term will be affected by the decline in the equilibrium real exchange rate, a weaker GDP growth outlook, and expectations of lower domestic interest rates, on the one hand, and a poorer global GDP growth outlook coupled with expectations of a slower rise in global interest rates, on the other. All of these are subject to considerable uncertainty, however, and exchange rate developments could easily deviate from the baseline forecast. For instance, market agents appear more pessimistic about the exchange rate well into 2020, according to the Central Bank's most recent survey, as they expect the króna to depreciate by 2½% against the euro into next year.

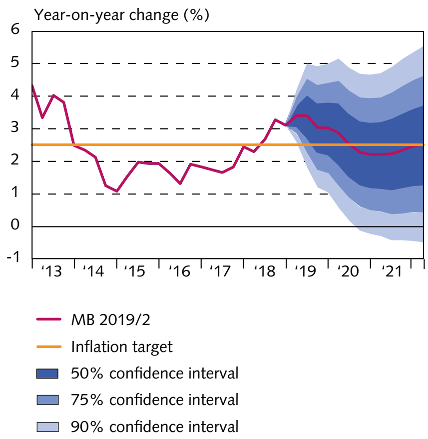
Uncertainty about the inflation outlook has subsided

Uncertainty about the inflation outlook has abated with the approval of private sector wage agreements. It has not disappeared entirely, however, as public sector wage settlements are still outstanding and could affect private sector agreements. Furthermore, there is always uncertainty about wage drift and about how far up the pay scale the generous pay rises for the lowest-paid workers will spread. The exchange rate of the króna is another important uncertainty. It is not impossible, for example, that some of the H2/2018 depreciation has yet to pass through to domestic inflation. In addition, the exchange rate assumptions in the baseline forecast could prove overly optimistic; e.g., if the shocks to the tourism industry prove long-lasting or if terms of trade deteriorate further. Demand pressures in the economy could also turn out more persistent than is currently assumed. By the same token, inflation could turn out higher than is forecast if inflation expectations start to rise again.

Nor can the possibility be excluded that inflation will turn out lower than is assumed in the baseline forecast. The króna could appreciate again, for instance, if external conditions improve. The global economic outlook could prove overly optimistic, and exports and GDP growth could therefore turn out weaker than is currently forecast. Moreover, productivity growth could turn out stronger than expected and the emerging spare capacity underestimated.

In order to reflect these uncertainties, Chart I-20 illustrates the confidence intervals of the forecast; i.e., the range in which there is considered to be a probability of up to 90% that inflation will lie over the next three years (the methodology is described in Appendix 3 in *Monetary Bulletin* 2005/1). Uncertainty about the inflation outlook is considered to have subsided since the last forecast, and the probability distribution is broadly symmetric, whereas in the most recent forecasts, inflation risk was skewed to the upside. There is a roughly 50% probability that inflation will be in the 2-3¾% range in one year and in the 1⅓-3¾% range by the end of the forecast horizon.

Chart I-20
Inflation forecast and confidence intervals
Q1/2013 - Q2/2022



Sources: Statistics Iceland, Central Bank of Iceland.