IV The domestic real economy

GDP grew 4.1% year-on-year in H1/2016, driven by growth in domestic demand and exports. Terms of trade have improved strongly and boosted domestic incomes and wealth, which, together with fiscal easing, have supported household demand. The outlook is for 5% GDP growth this year and 4½% next year, and domestic demand is expected to grow even more strongly. Imports have also grown rapidly, supported by growth in domestic demand and a rising real exchange rate. As a result, the current account surplus will deteriorate swiftly. The labour market situation reflects increasing economic activity, with labour demand growing rapidly in the recent past and unemployment declining. There is a shortage of labour in most sectors, and an increasing number of firms consider themselves to be operating at full capacity. Importation of labour has eased the pressure on domestic resources, however. The current forecast assumes greater labour importation, and the output gap is therefore not expected to grow as large as was previously believed. On the other hand, weak productivity growth in recent years gives rise to questions about whether Iceland's long-term trend growth rate is overestimated.

GDP growth and domestic private sector demand

Domestic demand has been stronger than was assumed in August ...

GDP growth measured 4.1% in H1/2016, driven mainly by strong growth in private sector demand. Total consumption and investment grew by a combined 10.2% during H1, somewhat more than was assumed in the August forecast, owing mainly to stronger-than-expected business investment and private consumption. Export growth was robust, but imports grew even more rapidly, owing to buoyant domestic demand and the rising real exchange rate. The contribution from net trade was therefore more negative than had been forecast in August. Despite this, H1/2016 GDP growth turned out 0.5 percentage points stronger than projected (Chart IV-1).

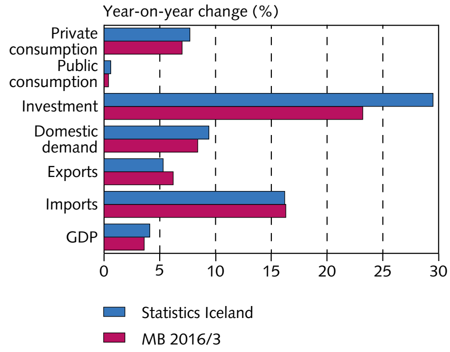
GDP has increased by 22% from its post-crisis trough and is almost 6% above its pre-crisis peak; however, the composition of GDP has changed considerably since the years just before the crisis struck. During the aftermath of the crisis, the share of private sector domestic demand declined alongside a contraction in private consumption and investment. Exports played a leading role during the recovery phase, but as time has passed since the crisis, private consumption and investment have grown more important and their share in GDP has risen (Chart IV-2).

... and GDP growth is expected to reach its post-crisis peak this year

The outlook for the latter half of the year is affected in particular by the assumption that exports will pick up and GDP growth will strengthen, even though the contribution from net trade will remain negative. On the other hand, business investment is expected to grow somewhat

Chart IV-1

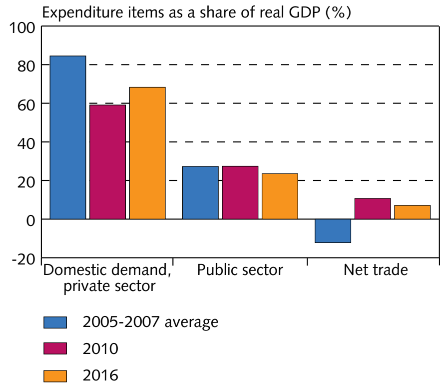
National accounts H1/2016



Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-2

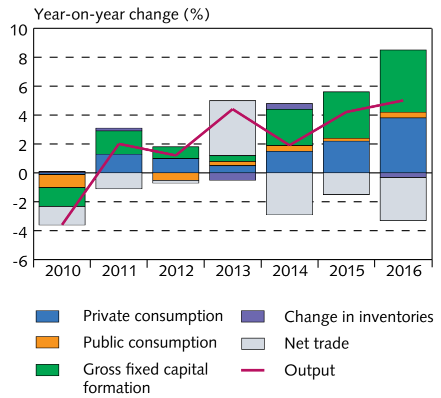
Composition of GDP pre- and post-crisis[1]



1. Private sector domestic demand consists of private consumption plus business and residential investment. Public sector demand consists of public consumption and investment. Net trade is exports in excess of imports. Central Bank baseline forecast 2016.
Sources: Statistics Iceland, Central Bank of Iceland.

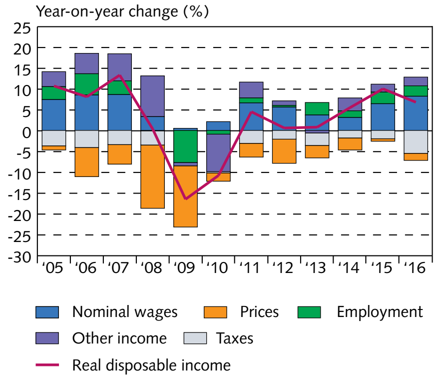
Chart IV-3

GDP growth and contribution of underlying components 2010-2016[1]



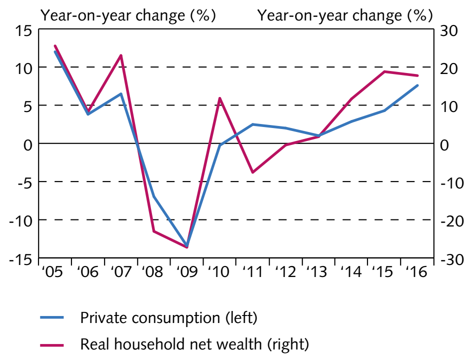
1. Central Bank baseline forecast 2016.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-4
Real disposable income and its main components 2005-2016[1]



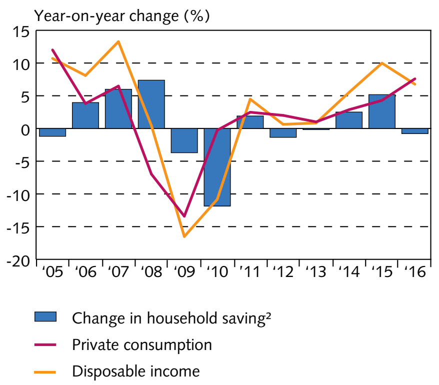
1. Central Bank baseline forecast 2015-2016. The contribution of the main underlying components in annual changes in real disposable income is calculated based on each component's weight in disposable income. The combined contribution of underlying components does not add up to the total change due to rounding and incomplete income accounts for households from Statistics Iceland.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-5
Private consumption and household wealth 2005-2016[1]



1. Central Bank baseline forecast 2016. Net wealth is the sum of households' housing and financial wealth (excluding pension rights), net of household debt (year-end figures).
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-6
Private consumption and disposable income 2005-2016[1]



1. Central Bank baseline forecast 2016. 2. Change in the ratio of disposable income to private consumption.
Sources: Statistics Iceland, Central Bank of Iceland.

less, although domestic demand growth will continue to be strong. If these projections materialise, GDP growth will be about 5% this year – the strongest since 2007 – in spite of a sizeable negative contribution from net trade (Chart IV-3). In coming years, private consumption is expected to be the component of domestic demand that will contribute most to GDP growth, and the drain from net trade is expected to ease. GDP growth is forecast at 4½% in 2017 and close to 3% per year in 2018 and 2019, somewhat outpacing the August forecast.

Households' position has strengthened markedly …

Households' position has improved significantly in the recent past, and real disposable income rose by 10% in 2015 alone, mainly because of steep nominal pay hikes and a higher employment level, together with low inflation. This is the largest increase in real household income since 2007. By 2015, real disposable income had risen by 23% from the post-crisis trough in 2010, yet in spite of this surge, it was still some 8½% below the 2008 peak. It is interesting to note how limited an impact other types of income (including financial income) have had on the recent rise in disposable income as compared with 2005-2007 (Chart IV-4). Households' improved situation also shows in their equity position. Between 2014 and 2015, households' net wealth grew by almost 19% in real terms (Chart IV-5). This is due in large part to the boost in housing equity as a result of deleveraging and rising real estate prices (see also Chapter III).

… and household demand has picked up

The developments described above have continued in 2016, and households are upbeat about their situation. Private consumption growth outpaced GDP growth in H2/2015 and has continued to do so this year. It measured 7.7% in H1/2016, and Q2 saw the strongest year-on-year growth rate in a single quarter since Q1/2008. Furthermore, there are indications that this trend continued in Q3, and the forecast assumes that private consumption will grow by 7.6% this year, well in excess of the Bank's previous estimate. If this projection proves correct, private consumption will have grown by nearly 15% during the period 2014-2016, or an average of 5% per year. At the same time, real net household wealth has grown by nearly 19% per year, contributing about one-fifth to the increase in private consumption.

In the past two years, household saving has increased markedly in spite of rapid private consumption growth (Chart IV-6). According to the forecast, households will reduce their saving in 2016 and 2017, but the ratio of private consumption to GDP will still be below its historical average.

Surge in business investment in H1/2016

Business investment has picked up strongly in the past two years, as has its share in GDP. After the financial crisis, business investment as a share of GDP remained broadly stable at 10%, but since 2014 it has grown swiftly. In the first half of 2016, it accounted for 17% of GDP, on the back of a volume increase of more than 37% year-on-year. The bulk of the increase is due to general business investment, as it is clear that increased household demand and the booming tourism sector have stimulated firms' investment needs.

As has previously been discussed in *Monetary Bulletin*, the composition of business investment has changed in the past two years, with construction playing an increasingly important role. This is in line with indicators from surveys taken among executives, including their assessment of the economic outlook and their staffing needs. Investment in construction is therefore expected to remain strong this year.

Business investment expected to be stronger in 2016 than previously projected …

Business investment is still expected to grow strongly this year, albeit less than in 2015 (Chart IV-7). The year-on-year reduction in growth is due to investment in ships and aircraft, which is expected to grow more modestly this year, after an increase of 79% in 2015. Pulling in the opposite direction is other business investment, including general business investment, which is expected to account for ¾ of this year's increase in total business investment (Chart IV-8). Energy-intensive investment is projected to grow somewhat less in 2016 than was assumed in previous forecasts, while other types of investment are expected to grow more rapidly. On the whole, business investment is expected to grow by just over 27% this year, some 3 percentage points more than was forecast in August, mainly because H1/2016 investment has outpaced the August forecast. The Bank's investment survey also indicates that, to an increasing degree, firms are financing investment expense with borrowed funds.

… but to slow markedly in 2017

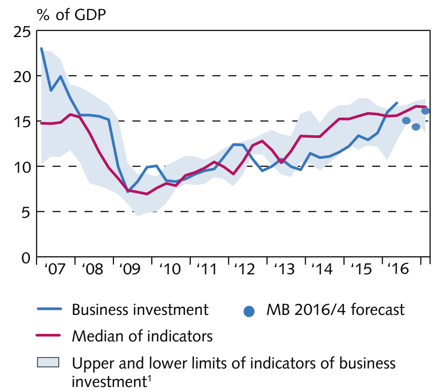
According to the Bank's investment survey, most sectors expect to step up their investment activity in 2016 in comparison with 2015 (Table IV-1). The increase is expected to be most pronounced in the tourism and transport sectors, while the services sector expects a contraction. On the whole, growth is projected at nearly one-fifth, somewhat less than was indicated by a comparable survey carried out this spring. For the first time, the survey asks about year-2017 investment plans. The most pronounced difference in responses is that businesses in the fish-

Table IV-1 Survey of corporate investment plans (excluding ships and aircraft)[1]

Largest 102 (101) firms Amounts in ISK billions	*2015*	*2016*	*2017*	*Change between 2015 and 2016 (%) (last survey)*	*Change between 2016 and 2017 (%)*
Fisheries (17)	12.2	13.7	9.3	12.0 (28.1)	-32.3
Industry (17)	4.3	4.8	5.3	11.6 (8.1)	10.8
Wholesale and retail sale (23)	7.4	9.0	8.2	22.0 (7.1)	-9.4
Transport and tourism (8)	18.2	28.2	26.5	55.0 (86.9)	-6.0
Finance/Insurance (9)	4.1	5.4	7.2	32.2 (51.7)	31.8
Media and IT (7)	7.3	7.1	7.4	-2.5 (-0.4)	4.1
Services and other (21)	16.4	15.0	14.2	-8.5 (-5.2)	-5.3
Total 102 (98)	69.9	83.3	78.1	19.1 (30.6)	-6.3

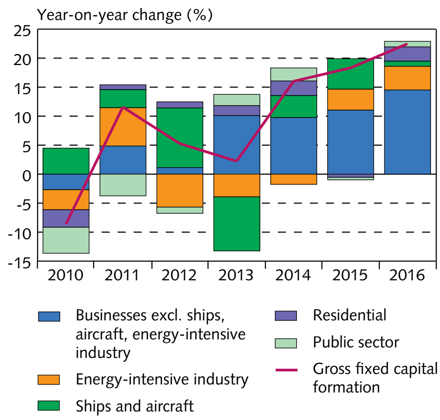
1. In parentheses is a comparison with the last survey, in which respondents from 101 firms were asked about investment plans for 2015-2016 (*Monetary Bulletin* 2016/2).
Source: Central Bank of Iceland.

Chart IV-7
Indicators of business investment
Q1/2007 - Q1/2017



1. The indicators are imports of investment goods at constant prices and responses to four questions from the Gallup survey of Iceland's 400 largest companies. The questions centre on executives' assessment of (a) the economic outlook six months ahead, (b) how they expect domestic demand for their goods or services to develop in the next six months, (c) whether they expect their company's investment to increase year-on-year in the current year, and (d) whether they expect their margins to increase year-on-year. In assessing the range, all variables are rescaled so that their average and standard deviation are the same as those for business investment. Two-quarter moving averages. Indicators are lagged by two quarters.
Sources: Gallup, Statistics Iceland, Central Bank of Iceland.

Chart IV-8
Gross fixed capital formation and contribution of main components 2010-2016[1]



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

ing sector expect a contraction in investment apart from investment in ships. Overall, the survey suggests that there will be a contraction in general business investment in 2017; therefore, the forecast assumes a significant reduction in business investment growth as a whole.[1]

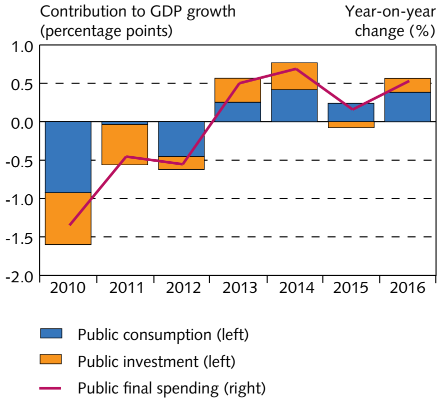
Residential investment growth to exceed previous projections throughout the forecast horizon

Residential investment grew 17% year-on-year in H1/2016, as opposed to the August forecast of 13%. Other indicators also imply that residential investment will grow faster in 2016 than was forecast in August; for example, a new survey taken in September by the Federation of Icelandic Industries suggests more housing starts in 2016-2018 than previously expected. Residential investment is therefore expected to grow in 2016 by 18%, some 10 percentage points more than was forecast in August. The growth rate for the next two years is expected to average about a fifth per year. The ratio of residential investment to GDP is projected at 4.7% by the end of the forecast horizon, more than ½ a percentage point above the long-term average.

Investment close to its long-term average during the forecast horizon

In comparison with other components of GDP, investment generated the second-largest contribution to GDP growth in 2011-2015 (exceeded only by exports), even though the investment-to-GDP ratio was well below its long-term average during the immediate aftermath of the financial crisis. In H1/2016, total investment grew by over 23% year-on-year and accounted for 22½% of GDP, some 1½ percentage points above the long-term average. Investment is expected to remain the most important driver of GDP growth this year, with a contribution of over 4 percentage points. Business investment is projected to slow down in the latter half of the forecast horizon, with offsetting effects from increased momentum in residential investment. If this forecast materialises, the investment-to-GDP ratio will be 21% by the end of the forecast horizon.

Chart IV-9
Public consumption and investment 2010-2016[1]



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

Public sector

Modest growth expected in public consumption

Since 2013, public consumption has grown by an average of 1.2% per year in real terms. Nominal public consumption growth has been much stronger, however, at 7.8% per year. This strong nominal growth rate has affected government sector performance and has required increased consolidation in order to meet performance targets. The targets have been met, in that real public consumption growth has never been this limited during a cyclical upswing. The forecast assumes a growth rate of 1.6% this year and a similar rate in coming years (Chart IV-9).

By the same token, annual growth in public investment has been relatively modest, or about 7½% per year since 2013, after having contracted by more than half in 2008-2012. According to the

1. Because this is the first survey of 2017 investment plans, it should be interpreted with caution, as firms' investment plans may still be in preparatory stages.

last *Monetary Bulletin*, public investment was expected to grow in line with overall growth in economic activity, at about 3% of GDP throughout the forecast horizon. The premises for the forecast have changed, however, with the approval of the new Transport Strategy, which provides for further investment in the amount of 0.4% of GDP per year, in addition to that included in the Government's five-year fiscal plan. As a result, investment growth will be stronger in 2017 than in recent years. In addition to this, the construction of the new Landspítalinn hospital will begin in 2019, as is provided for in the fiscal plan.

Fiscal budget proposal has yet to be presented

The fiscal budget proposal for 2017 has not yet been presented, and the new Government's fiscal policy for the coming years has yet to be publicised.[2] This issue of *Monetary Bulletin* is therefore based on the five-year fiscal policy and fiscal plan presented by the departing Government. That Government recently deviated from its fiscal plan in two major ways: on the one hand, with the Transport Strategy, and on the other, with increased funding for social security. Both of these measures are unfunded and therefore represent fiscal easing.

Treasury performance deteriorates from previous assessment

The combined cost effects of changes to the Transport Strategy and the social security system amount to more than 20 b.kr. per year, or nearly 1% of GDP. The outlook has therefore deteriorated in comparison with the Central Bank's previous projections, published in May in *Monetary Bulletin* 2016/2. It is uncertain whether special revenue-generating measures will be undertaken to finance these outlays; therefore, it is assumed that there will be a deficit on Treasury and public sector finances throughout the forecast horizon. There will be a primary surplus, but at the same time as the interest account balance improves, the primary surplus will deteriorate from 1.9% of GDP in 2016 to 1.1% in 2019. This forecast is subject to considerable uncertainty, however, as the 2017 fiscal budget proposal has not yet been presented (see also the discussion of uncertainties in Chapter I).

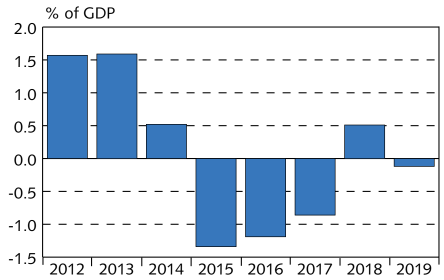
What is the fiscal stance at any given time?

In general, it is broadly agreed that prudent fiscal policy involves automatic fiscal stabilisers that determine the policy stance at any given time, and that there is no need to apply special policy measures to this end. Because the tax burden rises with increased income, it rises during a cyclical upswing and declines during a cyclical downturn. Therefore, other things being equal, government revenues account for an increased share of GDP during a cyclical upswing. Conversely, government expenditure declines during a cyclical upswing, as spending on various benefits declines and nominal expenditures do not generally fluctuate in line with the business cycle. Therefore, as a share of GDP, government sector net revenue tends to rise during a cyclical upswing and fall during a downturn. In the absence of special fis-

2. For this reason, this *Monetary Bulletin* does not contain a special appraisal of next year's National Budget, as is usual in the November issue of *Monetary Bulletin*.

Chart IV-10

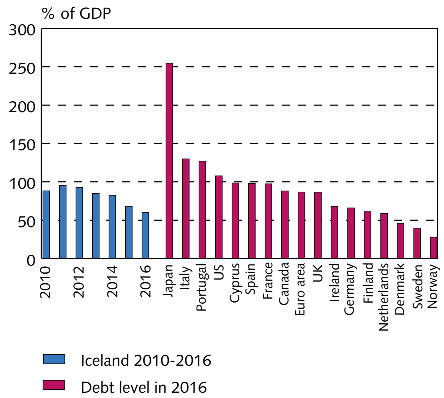
Change in central government cyclically adjusted primary balance 2012-2019[1]



1. Central Bank baseline forecast 2016-2019. Primary balance is adjusted for one-off revenues and expenditures (e.g., stability contributions, and the accelerated write-down of indexed mortgage loans).
Sources: International Monetary Fund, Ministry of Finance and Economic Affairs, Central Bank of Iceland.

Chart IV-11

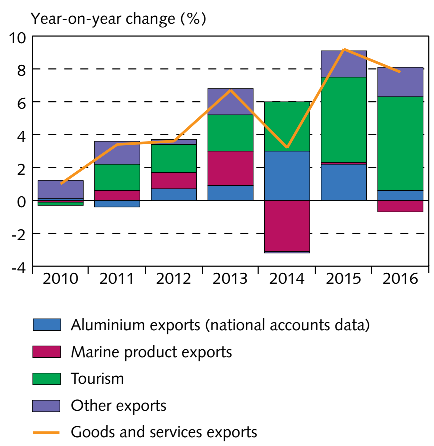
General government gross debt



Sources: International Monetary Fund, Ministry of Finance and Economic Affairs, Central Bank of Iceland.

Chart IV-12

Exports and contribution of subcomponents 2010-2016[1]



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

cal measures, the cyclically adjusted primary balance should therefore remain unchanged over the business cycle, as all changes in the fiscal balance can be explained by the cycle itself. This implies that all spending decisions entail fiscal easing unless they are fully financed. The same applies to revenue reductions not accompanied by commensurate spending cuts. This also means that the cyclically adjusted balance could deteriorate even though the headline balance improves, and the fiscal stance could ease in spite of a larger fiscal surplus.

Significant fiscal easing three years in a row

Excluding the stability contributions, Treasury performance is estimated to deteriorate in 2016 and then improve in the following two years. As is discussed later in this chapter, the slack in output is estimated to have disappeared in 2015 and a positive output gap to emerge this year. The cyclically adjusted primary balance will therefore deteriorate by 1.2% of GDP this year, in addition to last year's fiscal easing of 1.3%, making for a total easing of 2.5% of GDP in 2015-2016 (Chart IV-10), which is in line with the Bank's previous estimates. According to the forecast, the fiscal stance is expected to ease by a further 1% of GDP in 2017 and then be broadly neutral over 2018-2019.

Public debt to decline, but less than assumed in the Government's fiscal plan

The fiscal plan presented in spring 2016 provided for rapid reduction of debt. It also provided for the sale of the State's 30% holding in Landsbankinn during the then-current electoral term; however, the sale did not take place. The outlook for government net revenue has also worsened, so that the primary balance is expected to deteriorate. Furthermore, no payments were made towards the Treasury's debt to Part A of the Government employees' pension fund, as was assumed in a bill of legislation that was not passed before the end of the legislative session. Therefore, the baseline forecast assumes a slower rate of government debt reduction than the fiscal plan allows for (Chart IV-11).

External trade and the current account balance

Outlook for robust export growth in 2016 …

As is discussed above, exports have played a key role in the economic recovery, led by robust tourism-related services exports (Chart IV-12). This trend continued in H1/2016, with exports growing 5.3% year-on-year. Services exports grew more slowly than was forecast in August, however, owing both to Statistics Iceland's revision of 2015 figures and to weaker-than-expected growth in several subcomponents of services exports. Total export growth therefore turned out 1 percentage point less in H1 than was forecast in August, even though goods exports were stronger than previously anticipated.

According to Statistics Iceland's external trade figures, the value of goods exports contracted year-on-year in the first nine months of 2016, owing to the appreciation of the króna. Exports of aluminium and marine products are expected to be weaker this year than was projected in August. On the other hand, other goods exports have been stronger than previously thought, rising by nearly a fourth year-on-year in H1/2016. On the whole, the forecast for goods exports is broadly unchanged from the last forecast, although the composition of exports has changed significantly.

Services exports grew by 9% in H1/2016 and are expected to maintain that pace in H2. Foreign tourists' departures from Iceland via Keflavík Airport were up by about a third year-on-year in the first nine months of 2016, and Iceland's largest airlines saw increased ticket sales and seat utilisation during the period. There will be some base effects in 2016 because of Statistics Iceland's revision of 2015 numbers, but services export volumes will be broadly in line with the August forecast. Goods and services exports are therefore forecast to grow this year by 8%, or nearly 1 percentage point less than was projected in August.

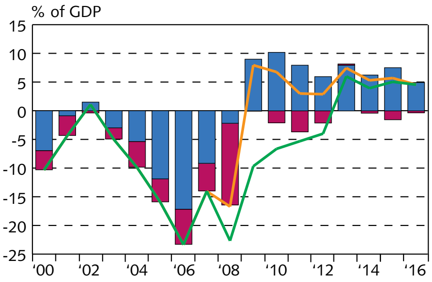
… and stronger import growth alongside a surge in domestic demand

Imports have grown rapidly in the recent term, alongside a surge in domestic demand, and the pace has picked up so far in 2016. In H1, imports grew by over 16% year-on-year, the strongest annual growth rate since H1/2006. This growth rate, which slightly outpaces domestic demand growth over the same period, is reflected in increased imports of consumer durables and investment goods, as well as in increased overseas travel by Icelanders. In addition to generally strong demand effects, it can be assumed that import growth is more robust than it would be otherwise because of the rise in the real exchange rate. Imports of consumer and investment goods have grown significantly year-to-date, and Statistics Iceland's external trade figures suggest that goods imports will continue to grow in the second half. Imports of passenger vehicles have increased in particular. This is due to two factors: the fleet needs renewal after a long period of limited investment, and the surge in tourism generates a substantial need for rental cars. Icelandic Tourist Board figures on Icelanders' departures via Keflavík Airport and Gallup's survey of Icelanders' overseas travel plans also indicate that tourism services imports will grow this year at about the rate assumed in the previous forecast. This is in accordance with households' increased purchasing power. On the whole, goods and services imports are expected to grow by about 15¾% this year, or 1 percentage point more than was projected in August. This is in line with the revision of domestic demand growth by a broadly similar amount.

Contribution from net trade becomes less negative over the forecast horizon

As is discussed above, both imports and exports have grown markedly in 2016. As is generally the case when domestic demand surges, import growth is strong enough that the overall contribution from net trade is negative. According to the forecast, it will be negative by about 3 percentage points of GDP this year, or about the same as in 2014. It is assumed that both import and export growth will lose momentum over the forecast horizon and that the contribution of net trade to output growth will be broadly neutral.

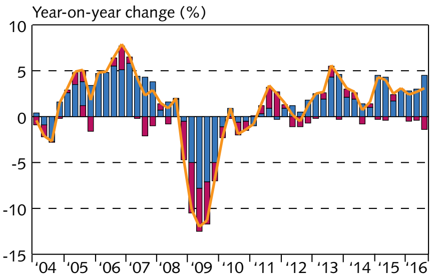
Chart IV-13
Current account balance 2000-2016[1]



Trade balance
Underlying primary income, net[2]
Underlying current account balance[2]
Measured current account balance

1. Including secondary income. Central Bank baseline forecast 2016.
2. Excluding the calculated income and expenses of DMBs in winding-up proceedings and the effects of pharmaceuticals company Actavis on the balance on income until 2012. Also adjusted for the failed DMBs' financial intermediation services indirectly measured (FISIM). With the settlement of the failed banks' estates in year-end 2015, there is no longer any difference between headline and underlying current account numbers.
Sources: Statistics Iceland, Central Bank of Iceland.

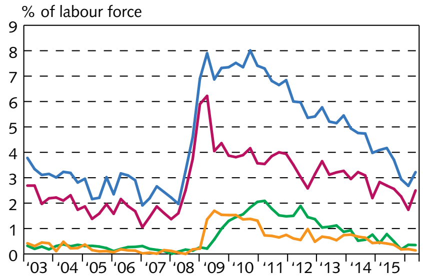
Chart IV-14
Employment and hours worked
Q1/2004 - Q3/2016



Number of employed persons
Average hours worked
Total hours worked

Source: Statistics Iceland.

Chart IV-15
Unemployment by duration[1]
Q1/2003 - Q3/2016



Total
Less than 6 months
6-12 months
More than 12 months

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

Trade surplus larger in 2016 than was projected in August, but smaller for the remainder of the forecast horizon

The trade surplus amounted to 7.5% of year-2015 GDP. It has narrowed thus far in 2016 and is projected at about 5% of GDP for the year as a whole, which is broadly in line with the August forecast. The H1/2016 current account surplus amounted to 44 b.kr., or 3.9% of GDP, about the same as at the same time in 2015. The current account surplus for the year as a whole is projected at 4½% of GDP, nearly 1 percentage point less than in 2015 (Chart IV-13). This is a somewhat larger surplus than was provided for in the August forecast, owing to the improved outlook for the primary and secondary income balance. As in August, it is assumed that the current account surplus will narrow to about 3% of GDP in 2017 and then narrow further as the forecast horizon progresses. By the end of the forecast horizon, it is expected to be significantly smaller than has previously been projected, as the exchange rate is projected to be higher than in the previous forecast (see Chapter I). If the forecast materialises, national saving will equal about a fourth of GDP in 2016 but will decline to just over 22% by the end of the forecast horizon.

Labour market

Robust growth in labour demand ...

Labour use has grown substantially in the recent term, in line with increased economic activity, and unemployment has declined rapidly. According to the Statistics Iceland labour force survey (LFS), total hours worked rose by 3.2% year-on-year in Q3/2016, as in the August forecast. The rise in total hours can be attributed to a 4.5% increase in the number of employed persons, but the average work week was shortened by 1.2% (Chart IV-14). This recent trend towards a shorter work week is probably due in part to firms' having chosen to cut down on expensive overtime in response to costly wage settlements, opting instead to increase staffing levels. The impact of a strong rise in real wages probably shows as well in increased labour participation and a reduction in the number of people outside the labour market. Labour participation increased by 1.2 percentage point year-on-year in Q3 and is back to its early 2007 peak. The employment rate therefore rose by 2 percentage points and is rapidly approaching its pre-crisis high. Seasonally adjusted unemployment measured 3.1% in Q3, having declined by nearly a percentage point year-on-year (Chart IV-15).[3]

... and executives continue to expect further additions to staffing levels

The outlook is for labour demand to remain robust. According to Gallup's autumn survey, firms interested in recruiting staff in the next six months outnumbered those planning redundancies by nearly a third (Chart IV-16). This is broadly in line with the summer survey and about 15 percentage points more than in the survey carried out a year ago. The percentage is at its highest since 2007, as is the number of firms

3. Unemployment as registered by the Directorate of Labour (DoL) was lower, or 2.4%, in Q3, after adjusting for seasonality, and had declined by 0.6 percentage points between years.

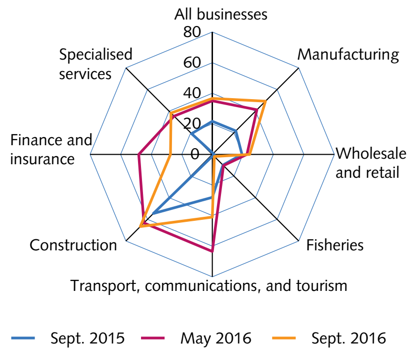
planning to hire workers in coming months. Only 4.5% of firms were interested in downsizing, the smallest share since H1/2007.

In comparison with the summer survey, the number of tourism companies considering recruiting declined relative to the number interested in downsizing, even after accounting for seasonality. This could be because many firms in the sector have already reached the staffing levels required, but it might also be an indication that a stronger króna has begun to affect tourism operators' business, which would be in line with the survey carried out by the Confederation of Icelandic Employers among its members in August. Demand for labour in the construction sector is as strong as in the summer survey, however, as firms interested in recruiting outnumbered those considering redundancies by nearly 70 percentage points, about the same share as in the past year.

Chart IV-16

Firms planning recruitment net of firms planning redundancies within 6 months[1]

Share of businesses (%)



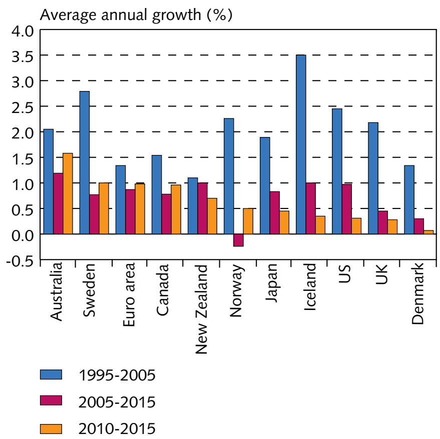
1. Seasonally adjusted figures.
Sources: Gallup, Central Bank of Iceland.

Weak productivity growth in the wake of the financial crisis ...

In spite of strong GDP growth and a labour shortage, productivity growth has been weak in Iceland in recent years. This slowdown in productivity is not limited to Iceland, however; similar trends have been seen in most advanced economies since the turn of the century and, more recently, among many emerging countries as well (Chart IV-17). Explaining this slowdown has proven difficult. During the immediate aftermath of the financial crisis, it was common to claim that firms had attempted to retain staff that they had trained even in spite of a decline in demand, but this explanation does not suffice as the economic recovery is underway or even well advanced, as in Iceland. It has also been argued that investment has been limited following the financial crisis, with corporate indebtedness and uncertainty about the economic outlook cited as important underlying causes. It has also been pointed out that, in many economies, low-productivity firms at the margin of exit have been able to limp along on low interest rates or public support aimed at maintaining employment levels. Another factor of possible significance for Iceland is the change in the composition of output, with lower-productivity sectors gaining in importance.

Chart IV-17

Productivity in selected industrialised countries[1]



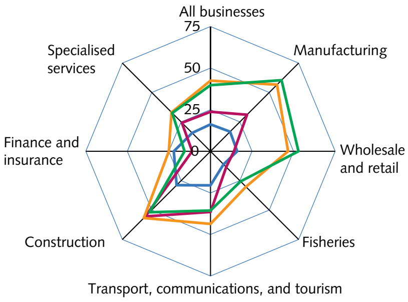
1. Productivity is constant price GDP per hour worked. Growth till 2014 for New Zealand and Japan.
Sources: OECD, Statistics Iceland, Central Bank of Iceland.

... although the slowdown in productivity actually began earlier

As Chart IV-17 shows, productivity had slowed down in most advanced economies before the financial crisis struck. This happened in spite of advances in computer and digital technology. Although the possibility cannot be excluded that the full impact of these advances has yet to emerge or that this technology has made it more difficult than before to measure productivity, this could indicate a deeper, more structural problem. If it is true, as has been maintained, that the low-hanging fruit of digital and computer technology has already been picked, this trend could prove to be a lasting one. It could also be that there is an increasing divergence in productivity growth among firms whose technological position differs, as there is a slowdown in the diffusion of new technology, and companies that are technological leaders capture a rising share of the global market on the basis of their leading position.[4] The recent slowdown in productivity growth could therefore be

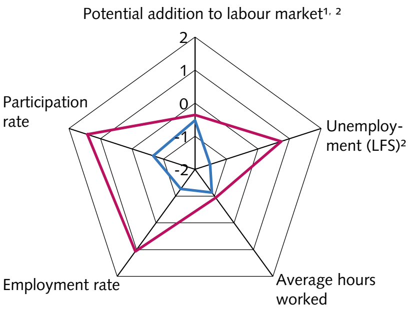
4. These and other related views are discussed in a recent OECD report entitled *The Productivity-Inclusive Nexus*, prepared for a ministerial meeting of member countries in June 2016.

Chart IV-18
Firms considering themselves short-staffed[1]
Share of businesses (%)



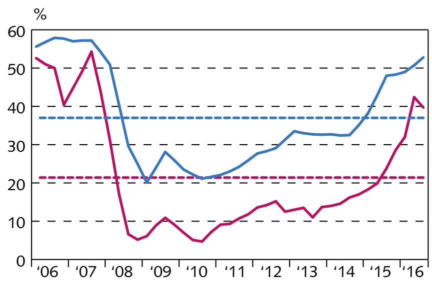
1. Seasonally adjusted figures.
Sources: Gallup, Central Bank of Iceland.

Chart IV-19
Indicators of labour market tension in the first 3 quarters of the year
Deviation from 2003-2016 average (number of standard deviations)



1. The percentage of the population of workinga age that (a) are seeking work but cannot begin work within two weeks; (b) could begin work within two weeks but are not looking for work; or (c) are underemployed.
2. Multiplied by -1 so that a negative deviation from the average indicates tension. 3. The year when labour market recovery began.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-20
Indicators of factor utilisation[1]
Q1/2006 - Q3/2016



1. According to Gallup Sentiment Survey among Iceland's 400 largest firms. Seasonally adjusted data. Data on the operation level relative to production capacity is reported semiannually. Quarterly data is generated via interpolation. Broken lines show period averages.
Sources: Gallup, Central Bank of Iceland.

an indication of weaker long-term productivity growth. If this is also the case in Iceland, it could indicate that the long-term trend growth rate of the economy is less than has generally been assumed.

Indicators of factor utilisation

Labour shortage broadly similar to that in early summer …

The share of firms considering themselves short-staffed in Gallup's autumn survey was similar to that in the summer survey, or about 40%, although it differed from one sector to another (Chart IV-18). In the specialised services, manufacturing, and retail and wholesale trade sectors, the number of firms considering themselves short-staffed rose between surveys, while it fell in other sectors. The share of tourism companies considering themselves understaffed declined between surveys but remained unchanged year-on-year. It should be noted, though, that the ratio is very high, at about 40%, and that in construction, retail and wholesale trade, and manufacturing, it is about 50-60%.

… and tension is growing in the labour market, …

There is growing tension in the labour market, owing to strong labour demand. As has been discussed previously, labour participation is similar to that in early 2007, and the employment rate is approaching its previous peak. Average hours worked and the measure of a potential addition to the labour market are still below their historical averages, however.[5] Consequently, there could still be some scope to address additional demand for labour by lengthening the work week, importing labour, or increasing participation among those willing to work but not necessarily looking for a job (Chart IV-19).

… which has been addressed in part with imported labour …

The percentage of firms considering themselves understaffed has been high enough in the past year that it is probably difficult for them to address the shortage without importing labour, with net immigration of foreign nationals amounting to 2.5% of the population in the past two years. The ratio of foreign nationals to the population of Iceland has also risen strongly since 2013. By the end of 2015, it was 8%, nearly ½ a percentage point above its previous peak from around the time of the financial crisis.

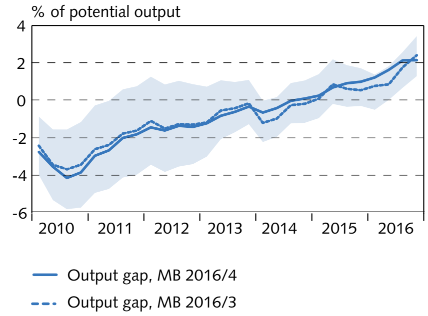
… therefore, the output gap has not grown as rapidly as previously expected

Surveys among corporate executives indicate that firms are having about the same amount of difficulty filling positions and responding to unexpected surges in demand as they had during the spring – after a sharp increase last year (Chart IV-20). This is consistent with the Bank's view that the post-crisis output slack has disappeared and given way to a positive output gap (Chart IV-21). GDP growth has been strong in recent years and is considered to have been in excess of the growth

5. Those who are employed part-time but would like to work more (often referred to as underemployed), those who are seeking work but cannot begin within two weeks, and those who could begin work within two weeks but are not looking for a job are considered a potential addition to the labour market.

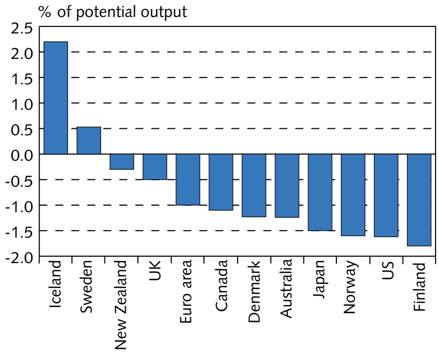
rate of potential output for some time. The strain on domestic resources has been eased somewhat with imported labour, however. It is now assumed that labour will be imported in greater numbers than before and that the output gap will therefore be smaller than was projected in August, even though output growth is expected to be stronger than was forecast at that time. The output gap is expected to widen until mid-2017 and then gradually narrow thereafter. As Chart IV-22 indicates, the situation is very different from that in other developed countries, where a slack in output has been more persistent.

Chart IV-21
Output gap[1]
Q1/2010 - Q4/2016



1. Shaded area shows ± 1 five-year standard deviation. Central Bank baseline forecast 2016.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-22
Estimated output gap in 2016, selected industrialised countries[1]



1. US Congressional Budget Office estimate for US; HM Treasury estimate for the UK; European Commission estimate for the euro area and Finland; and estimates of the relevant central banks for Denmark, Iceland, Canada, Norway, New Zealand, and Sweden. For other countries, estimates are based on IMF data (*World Economic Outlook*, October 2016).
Sources: Central banks of Denmark, Canada, Norway, New Zealand, and Sweden; European Commission; HM Treasury; IMF; US Congressional Budget Office, Central Bank of Iceland.