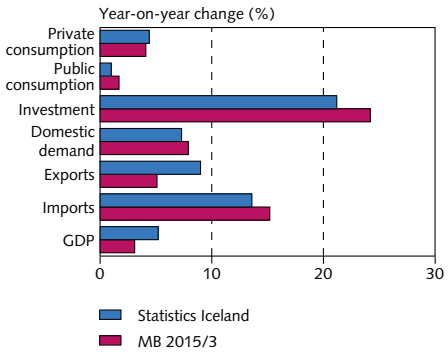
IV The domestic real economy

Seasonally adjusted GDP has gained momentum steadily since bottoming out in the wake of the 2008 financial crisis and is now above its 2007 peak. During this recovery phase, GDP growth has been driven by a strong increase in exports, business investment, and private consumption – the last of these supported by households' improving position, particularly in the past two years. This year, GDP growth is projected to be at its strongest since 2007, owing mainly to robust growth in the same factors that have led the recovery. Strong growth in domestic demand is also reflected in a narrowing trade surplus in spite of robust export growth. The recovery of the labour market continues as well, with a noticeable increase in jobs and falling unemployment. Productivity growth has been weak, however, much more so than in previous recoveries. The slack that has characterised the domestic economy in recent years has turned around into a positive output gap, reflecting the adjustment and recovery that have taken place in the past few years. The fiscal stance has eased at the same time.

Chart IV-1
National accounts for H1/2015 and Central Bank estimate



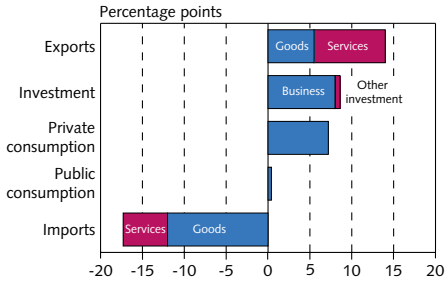
Sources: Statistics Iceland, Central Bank of Iceland.

GDP growth and domestic private sector demand

H1/2015 output growth in line with the May forecast

According to the Q2/2015 national accounts, published by Statistics Iceland in September, year-on-year GDP growth measured 5.6% during the quarter, the strongest single quarter since Q1/2008. GDP growth measured 5.2% in the first half of the year, whereas the Bank's August forecast assumed just over 3% (Chart IV-1). A large portion of the forecasting error was due to the revision of older Statistics Iceland figures, and in addition, the contribution from net trade was considerably more positive than had been assumed in August. H1 GDP growth was therefore much closer to the Bank's May forecast, which was prepared before the preliminary national accounts figures for Q1 were available. Closer examination of the composition of GDP growth reveals offsetting effects from robust domestic demand and the contribution from net trade, which – in spite of booming services exports – was negative in the first six months of the year because of the strong imports that usually accompany growing investment and private consumption.

Chart IV-2
Contribution of GDP components to economic recovery[1]



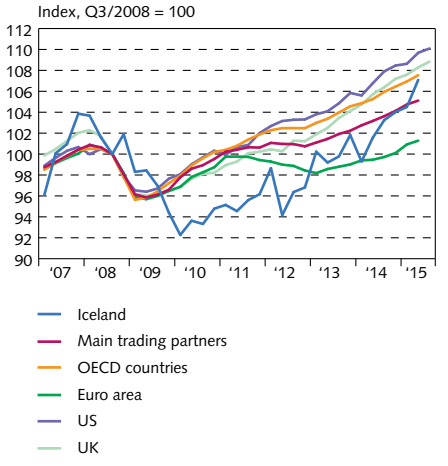
1. From H1/2010 - H1/2015.
Sources: Statistics Iceland, Central Bank of Iceland.

GDP per capita approaches its pre-crisis peak

In Q2, GDP was about 3.3% above its Q4/2007 peak in terms of seasonally adjusted Central Bank figures. Population growth was significant over this period, however, and GDP per capita was therefore about 2½% lower (in terms of Statistics Iceland's population estimate). From its pre-crisis peak, GDP contracted by some 11.2% before beginning to grow again in mid-2010. From that time onwards, it has grown by 16.1%, with the recovery driven mainly by private consumption, services exports, and business investment (Chart IV-2).

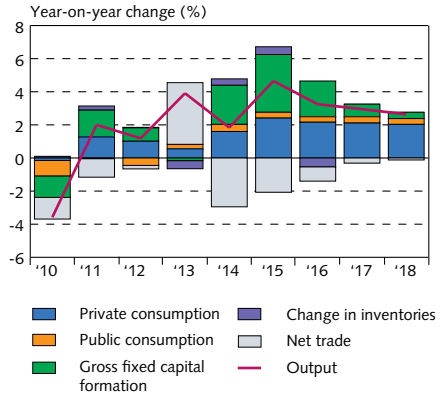
Iceland's post-crisis contraction was deeper than in most trading partner countries, and growth was weaker early in the recovery (Chart

Chart IV-3
Post-crisis developments in GDP[1]
Q1/2007 - Q3/2015



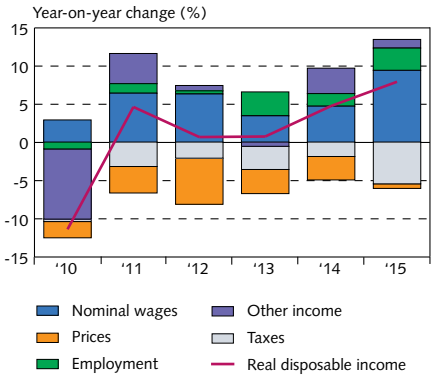
1. Seasonally adjusted data for Iceland are from the Central Bank of Iceland.
Sources: Macrobond, OECD, Central Bank of Iceland.

Chart IV-4
GDP growth and contribution of underlying components 2010-2018[1]



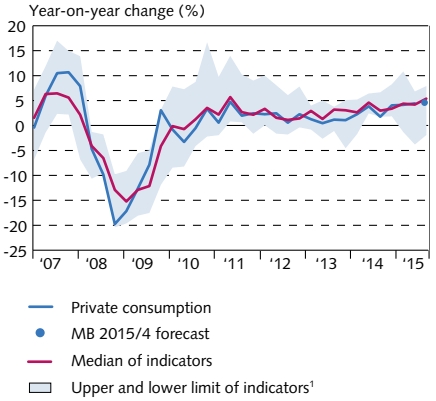
1. Central Bank baseline forecast 2015-2018.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-5
Developments in real disposable income and its main components 2010-2015[1]



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

Chart IV-6
Indicators of private consumption
Q1/2007 - Q3/2015



1. Indicators are payment card turnover, groceries turnover, share prices, housing prices, consumer goods imports, new motor vehicle registrations, wages, and unemployment. The indicators are rescaled so that their average and standard deviation are the same as those for private consumption.
Sources: Centre for Retail Studies, Statistics Iceland, Central Bank of Iceland.

IV-3). In the recent term, however, GDP growth has been much stronger in Iceland than in trading partner countries (see Chapter II).

Outlook for stronger GDP growth in 2015 than previously projected

A more favourable contribution from net trade, owing to unexpectedly strong services exports, is the main reason H1/2015 GDP growth outperformed the August forecast. In the latter half of the year, however, growth is projected to moderate, as the surge in services growth was due in part to one-off revenues related to patents (see below). Domestic demand growth is expected to be in line with recent developments, however, and GDP growth for the year is estimated at 4.6%. This is 0.4 percentage points above the Bank's August forecast and well above the projected trading partner average. As in the August forecast, it is assumed that GDP growth will ease in coming years but remain relatively robust, averaging just under 3% per year. As in previous Central Bank forecasts, growth is driven to a great extent by robust growth in domestic private sector demand (Chart IV-4).

Households' financial situation continues to improve ...

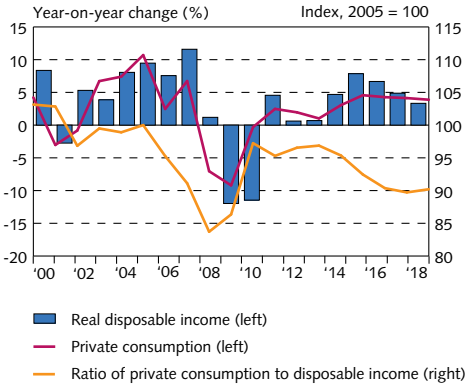
According to figures from Statistics Iceland, households' real disposable income grew by a full 4.7% in 2014 (deflated by the private consumption deflator). This is mainly a reflection of increased wage income, although there were positive contributions from investment income as well (Chart IV-5). This was somewhat weaker growth in purchasing power than was assumed in August, however, because wage income was lower than forecast and tax payments slightly higher. Households' equity position improved markedly in 2014 because of both deleveraging and higher asset values (see the discussion of financial conditions in Chapter III). Households' income and equity position suffered greatly in the wake of the financial crisis, but from 2010 through 2014, real disposable income rose by 10.9% and real household equity by 39.2%. In view of the continued rise in real wages and asset prices and the increase in employment year-to-date, it can be assumed that these items will support household demand, both this year and in the near future. The announced reduction in income tax will further stimulate purchasing power and household demand.

... supporting household demand

Private consumption grew by 4.4% in the first half of 2015, and developments during the year appear to be in line with recent forecasts in *Monetary Bulletin*, which have assumed that the impact of the Government's debt relief measures would show most clearly in private consumption growth this year. Indicators of developments in private consumption during the third quarter show rather unequivocally that the trend from the first half will continue and, if anything, gain momentum (Chart IV-6). Presumably, the effects of the debt relief measures can be seen in the real estate market as well; for instance, according to the Gallup big-ticket index, the percentage of households considering a home purchase in the next twelve months

is at its highest since late 2007. Rising property prices and reduced debt make it easier for households to undertake such investments. Furthermore, some credit institutions have eased access to credit by raising loan-to-value ratios and lowering interest rates and borrowing charges (see Chapter III). Private consumption growth for this year is forecast at 4.6%, somewhat more than was projected in August, reflecting stronger-than-expected growth in real wages, which is due largely to low inflation during the period. Private consumption is expected to be the one of the mainstays of GDP growth during the forecast horizon, supported by real wage growth and further improvements in households' equity position (Chart IV-7).

Chart IV-7
Private consumption and real disposable income 2000-2018[1]



1. Central Bank baseline forecast 2015-2018.
Sources: Statistics Iceland, Central Bank of Iceland.

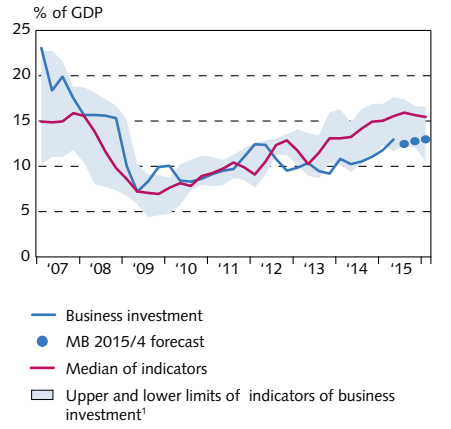
Business investment-to-GDP ratio at historical average

Following a strong post-crisis contraction, investment has been on the rise, and in the first half of 2015 business investment was the component of domestic demand that contributed most to GDP growth for the period. Over the first half, business investment grew 38% year-on-year. The main difference was in investments in ships and aircraft, although investment excluding energy-intensive industry, ships, and aircraft grew significantly as well. The ratio of business investment to GDP was at its long-term average of 13% during the first half of the year. In spite of this, total investment was somewhat below its long-term average, mainly due to weak public and residential investment.

Business investment growth to gain pace in 2015

Most indicators of business investment in the coming term suggest that investment will continue to increase (Chart IV-8). The Central Bank survey of nearly 100 firms showed a marked year-on-year increase in planned investment, both in 2015 and in 2016 (see Table IV-1). According to the survey findings, companies in the fishing industry plan the largest increase in investment this year, or almost 50%. Firms in travel and transport also expect modest growth, whereas industrial firms project a contraction of about a fifth. Firms in travel and transport, on the one hand, and finance and insurance, on the other, project the largest increase in 2016, or over a third, and retail companies also forecast a considerable increase. The Gallup survey among Iceland's 400 largest firms also indicates that companies'

Chart IV-8
Indicators of business investment
Q1/2007 - Q1/2016



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. Investment indicators are lagged by two quarters.
Sources: Gallup, Statistics Iceland, Central Bank of Iceland.

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

Largest 98 firms *Amounts in ISK billions*	*2014*	*2015*	*2016*	*Change 2014 and 2015, % (prev. survey)*	*Change between 2015 and 2016,(%)*
Fisheries (16)	5.9	8.9	9.0	49.3 (50.5)	1.7
Industry (18)	4.8	3.8	3.8	-20.4 (-20.3)	-0.8
Wholesale and retail sale (22)	5.1	6.3	7.3	24.1 (17.2)	16.7
Transport and tourism (7)	13.8	20.1	27.8	45.3 (78.1)	38.1
Finance/Insurance (9)	5.1	4.7	6.2	-8.5 (8.7)	32.5
Media and IT (7)	7.3	7.1	7.4	-2.9 (-4.5)	3.3
Services and other (19)	14.6	15.1	14.4	3.5 (-15.5)	-4.5
Total (98)	56.6	65.9	75.8	16.4 (20.4)	15.0

1. In parentheses is a comparison with the last survey, in which respondents from 99 firms were asked about investment plans for 2014-2015 (*Monetary Bulletin* 2015/2).
Source: Central Bank of Iceland.

investment plans are on the rise, with a growing share of respondents projecting increased investment expenditure in the coming term.

The above-mentioned indications of investment activity in 2015 are well in line with developments in investment goods imports. As before, the Bank's investment survey indicates that firms are to a large extent financing investment internally but that external credit financing is gaining ground, which accords with indicators of increased corporate lending (see Chapter III). In comparison with the August forecast, the outlook is for somewhat stronger growth in business investment excluding energy-intensive industry, ships, and aircraft, but as was assumed in August, total business investment is projected to grow by nearly a third year-on-year in 2015.

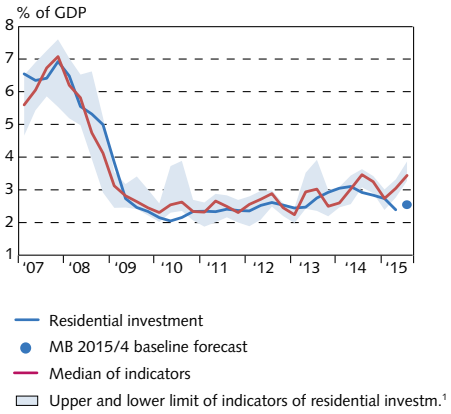
Residential investment growth in 2015 weaker than was forecast in August

In the first half of this year, residential investment contracted by over 13% year-on-year, according to preliminary figures from Statistics Iceland, whereas the forecast in the last *Monetary Bulletin* assumed an increase of 5%. This is somewhat at odds with both the Bank's forecast and projections from other forecasters, as well as with the indicators generally consulted in an assessment of residential investment activity (Chart IV-9). So far in 2015, both cement sales for construction outside the energy-intensive sector and imports of reinforcing steel have increased somewhat year-on-year. These indicators are well in line with the Federation of Icelandic Industries' (SI) assessment that there had been a large number of new residential housing starts during the year. Furthermore, figures from construction firms' value-added tax returns and new registrations of construction cranes indicate a marked increase year-on-year, lending further support to SI's estimates. Although these figures do not allow for a breakdown between residential and commercial housing, it appears likely that Statistics Iceland's residential investment figures will rise upon revision. According to the forecast, residential investment will increase by nearly 12% this year, which is still 6 percentage points less than in the August forecast. It is also assumed that rising house prices, which have been well in excess of the rise in construction costs in the recent past, and the improvement in households' financial position will support residential investment during the forecast horizon.

Strongest investment growth since 2006

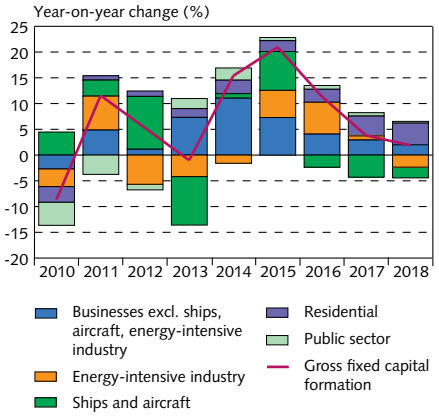
The need to expand firms' production capacity has increased in response to growing household demand and the recent surge in exports. Increased business investment has been the key driver of the pick-up in investment activity, which is unsurprising, given that the output slack is considered fully absorbed and a positive output gap is developing. This year, it is estimated that business investment will account for the lion's share of growth in total investment, which is estimated at more than one-fifth (Chart IV-10). If the forecast materialises, this will be the strongest growth rate in a single year since the peak of the Kárahnjúkar Power Station construction project in 2006. According to the current forecast, energy-intensive investment

Chart IV-9
Indicators of residential investment
Q1/2007 - Q3/2015



1. The indicators are imports of reinforcing steel, imports of other construction materials, and cement sales to buyers other than energy-intensive firms. In assessing the range, the variables are rescaled so that their average and standard deviation are the same as those for measured residential investment. The chart shows a two-quarter moving average.
Sources: Aalborg Portland Iceland, Sementsverksmiðjan ehf., Statistics Iceland, Central Bank of Iceland.

Chart IV-10
Gross fixed capital formation and contribution of its main components 2010-2018[1]



1. Central Bank baseline forecast 2015-2018.
Sources: Statistics Iceland, Central Bank of Iceland.

will be slightly less this year than was forecast in August and slightly more next year. Over the forecast horizon as a whole, the outlook is for slightly more energy-intensive investment than was provided for in the August forecast. If this projection is borne out, the investment-to-GDP ratio will be just under 20% in 2018, or about 1 percentage point below the thirty-year average.

Public sector

The baseline forecast assumes modest growth in government expenditure

Fiscal consolidation is discernible on the expenditures side, with real public consumption growth measuring about 1% in the first half of 2015, according to preliminary figures from Statistics Iceland. Over the same period, public investment contracted slightly in real terms. Public consumption and investment are both forecast to grow slowly and steadily in real terms over the forecast horizon. An important factor here is the steep rise in expenses due to pay increases, which, in the absence of changes in planned nominal expenditure, holds back real growth in public consumption at both the state and the municipal levels. For example, several municipalities have already announced that they will have to resort to layoffs if negotiated wage increases are comparable to those provided for in the recent arbitration panel ruling.

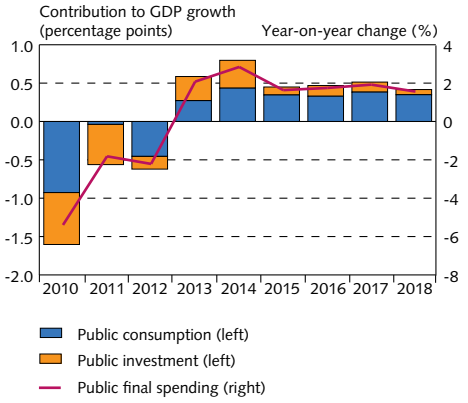
Public consumption is projected to grow by about 1½% per year during the forecast horizon, and as in Ministry of Finance and Economic Affairs estimates, the ratio of public investment to GDP is expected to hold unchanged throughout the forecast horizon at about 3%. If the forecast materialises, this will mark a turning point in these economic variables during the business cycle, just as several years' contraction in public consumption and investment did in the wake of the financial crisis. The contribution of public expenditure to GDP growth will therefore be modest in coming years, at about ½ a percentage point per year (Chart IV-11). On the other hand, there is the risk that expenditure targets will not be met, owing to large cost increases like those provided for in public employees' wage settlements.

Outlook for a relatively stable surplus on the primary Treasury balance

According to the spring fiscal plan, prepared in April, the primary Treasury balance was assumed to improve by 0.4 percentage points of GDP between 2016 and 2019.[1] In the recently presented fiscal budget proposal, however, this improvement is cut in half; therefore, the fiscal policy response to the recent wage settlements, as measured in changes to the primary balance, is limited. Over the same period, it is assumed that the deficit in the financial balance will narrow significantly because of deleveraging, which means that the overall surplus will grow slightly over the period (Chart IV-12).

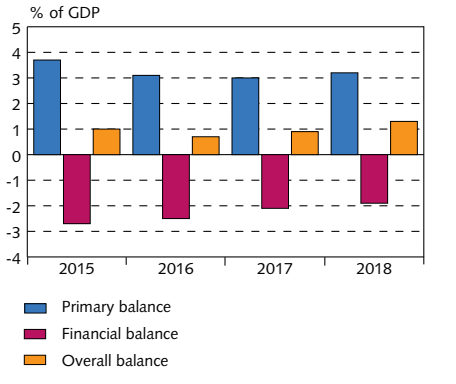
1. The primary balance for 2017 is adjusted for the accelerated write-down of indexed mortgage loans.

Chart IV-11
Public consumption and investment 2010-2018[1]



1. Central Bank baseline forecast 2015-2018.
Sources: Statistics Iceland, Central Bank of Iceland.

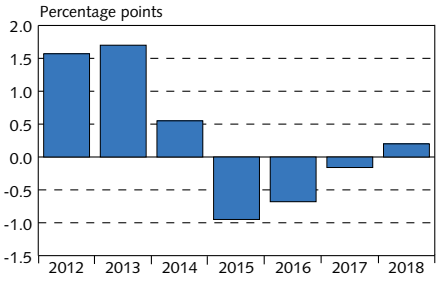
Chart IV-12
Central government balances 2015-2018[1]



1. National account basis.
Sources: Ministry of Finance and Economic Affairs, Central Bank of Iceland.

The accumulated reduction in revenues due to systemic changes on the revenues side since autumn 2013, excluding the bank levy, totals 1.6% of GDP in 2016. Substantial tax revenues have been relinquished at a time of consolidation on the expenditures side. Therefore, the easing of the fiscal stance stems primarily from changes on the revenues side. The declared objective in the fiscal budget proposal – that the ratio of primary revenue to GDP must not rise during the period 2016-2019 – therefore appears to be at odds with the objective of allowing automatic fiscal stabilisers to work, which would entail permitting the ratio to rise during an upward cycle. Primary expenditure relative to GDP declines at the same time, however, according to the budget proposal, as is generally the case during an economic recovery (see the discussion of the 2016 fiscal budget proposal in Box 3). According to the Central Bank forecast, real growth in primary expenditure will be outpaced by GDP growth; therefore, the primary expenditure-to-GDP ratio excluding irregular items will decline by just over 1% of GDP during the period. These assumptions are somewhat uncertain, however, particularly in view of possible expenditure pressures related to an increase in the Treasury's special revenues concurrent with capital account liberalisation (see also the discussion of uncertainties in Chapter I).

Chart IV-13
Change in central government cyclically adjusted primary balance 2012-2018[1]



1. Central Bank baseline forecast 2015-2018.
Sources: Financial Management Authority, IMF, Central Bank of Iceland.

Fiscal stance to ease until 2017

The fiscal stance is reflected in the cyclically adjusted primary balance (see the discussion of the output gap later in this chapter). Measured in terms of changes in the cyclically adjusted primary balance, the Treasury outcome will deteriorate by a total of 1.6 percentage points during the period 2015-2018. The easing is greatest in 2015 and 2016, at 0.9 and 0.7 percentage points, respectively (Chart IV-13). The fiscal stance therefore eases in spite of the improvement in the overall balance, as the primary surplus does not increase, whereas spare capacity disappears and a positive output gap develops at the same time. This is also slightly more slack than was assumed in the May forecast, which is the Bank's most recent assessment of the fiscal stance.

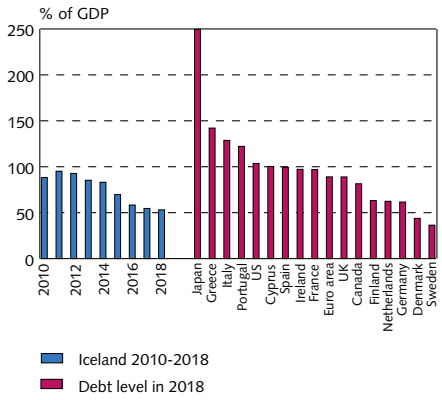
Treasury debt falls rapidly

The fiscal budget proposal for 2016 provides for rapid reduction of Treasury debt, although account has not been taken of the impact of the capital account liberalisation strategy on central government finances, except that the Central Bank bond will be paid off by the Treasury in the first half of the year.[2] This debt payment amounts to about 6% of GDP. Another extraordinary debt reduction measure is expected in connection with the sale of the Treasury's 30% stake in Landsbankinn. The ratio of Treasury debt to GDP was 75% at year-end 2014 and will decline to 62% by the end of 2015, according to the plan accompanying the budget proposal. With the above-mentioned extraordinary deleveraging measures, the ratio will fall still further, to just under 50% of GDP by the end of 2016, whereas the forecast in *Monetary Bulletin* 2015/2 assumed 61%. The change from that

2. The Government strengthened the Central Bank's capital position with a special bond issue.

forecast is due equally to the retirement of the Central Bank bond and the Treasury's buyback of the outstanding US dollar bonds it issued in 2011 to expand the foreign exchange reserves. The buybacks reduced gross Treasury debt by about 2.7% of GDP. In addition to those bonds, the Avens bond and the loans taken in connection with the Stand-By Arrangement between the authorities and the International Monetary Fund (IMF) have been paid off.[3] Treasury financing of the foreign exchange reserves has therefore been reduced. According to the forecast, the gross debt of the Treasury and the general government will amount to 45% and 53% of GDP, respectively, by year-end 2018. This would be in compliance with the fiscal rule concerning indebtedness that is set to take effect with the new legislation on public sector finances, and it means that Iceland's general government debt ratio would be similar to Germany's (Chart IV-14).

Chart IV-14
General government gross debt



Sources: IMF, Central Bank of Iceland.

External trade and the current account balance

Growth in total exports driven by services in 2015

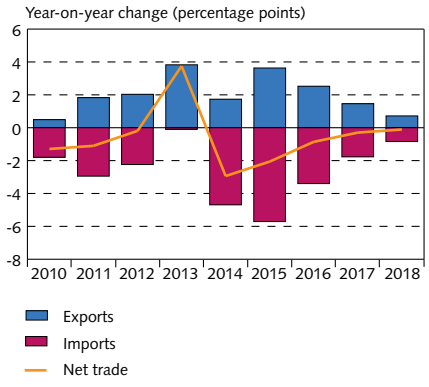
Exports of goods and services were up 9% year-on-year in the first half of 2015, with growth driven primarily by a 15% increase in services exports. Services exports grew considerably more than was projected in August, whereas goods exports were broadly in line with that forecast. Growth in services exports is due principally to booming tourism and sizeable one-off revenues from intellectual property patents in Q2. Although this handsome growth will probably not reflect developments over the year as a whole, it is likely that all components of services exports will exceed the projections in the August forecast. The travel component weighs heaviest here, with the number of passengers travelling to Iceland up more than a fourth year-on-year so far in 2015. This is a larger increase than was recorded at the same time in 2014, and the country's two largest airlines have already increased their seat offerings by a considerable margin. As a result, stronger growth in services exports is expected this year, although the outlook is for somewhat weaker goods exports. The outlook for goods exports is due somewhat to weaker growth in marine product exports, which in turn stems from reduced mackerel catches, the Russian import ban, and poor sales to Nigeria. In spite of relatively unfavourable developments in external conditions, total exports are forecast to grow by nearly 7% this year, which is broadly in line with the forecast in the August *Monetary Bulletin*. The outlook for the next two years has deteriorated, however, in line with a weakening competitive position and poorer prospects for trading partner demand (see Chapter II and Box 2).

Import growth at its strongest since H1/2006

In the first half of 2015, goods and services imports grew by nearly 14% year-on-year, the strongest growth rate since H1/2006, owing mainly to substantial aircraft imports in the first quarter. Even exclud-

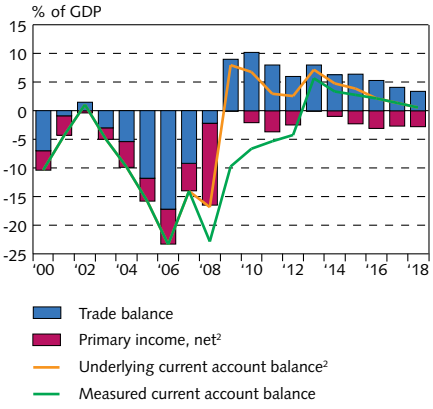
3. The Avens bond was due to the Treasury's purchase of asset-backed bonds issued by Avens B.V., a company owned by the old Landsbanki Íslands. In summer 2008, the bank had received a facility from the European Central Bank (ECB) in Luxembourg against collateral in Avens B.V. bonds. Avens' assets consisted primarily of Icelandic bonds, and the company became the largest single owner of ISK assets outside Iceland.

Chart IV-15
Contribution of net trade to GDP growth 2010-2018[1]



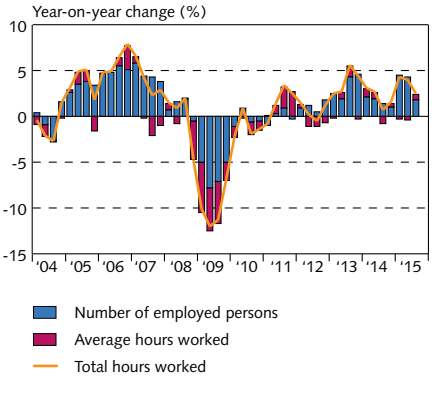
1. Central Bank baseline forecast 2015-2018.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-16
Current account balance 2000-2018[1]



1. Including secondary income. Central Bank baseline forecast 2015-2018.
2. Excluding the calculated income and expenses of DMBs in winding-up proceedings but including the estimated effects of the settlement of their estates, and excluding 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).
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-17
Changes in employment and hours worked
Q1/2004 - Q3/2015



Source: Statistics Iceland.

ing ships and aircraft, import growth is at its highest since H1/2006: without them, imports were up 9% year-on-year, outpacing domestic demand growth over the same period. The rise in the real exchange rate could partly explain the rise in imports, but strong domestic demand for consumer goods and for commodities and operational imports is a factor as well. Indications from Statistics Iceland's external trade figures suggest that growth in goods imports has eased as the year has progressed but continues to be consumer-driven to a large degree. Icelandic Tourist Board figures on Icelanders' departures via Keflavík International Airport and the Gallup survey of overseas travel plans indicate that tourism imports are also growing markedly between years, in line with Icelanders' increased purchasing power. On the whole, import growth excluding ships and aircraft is assumed to remain about the same for 2015 as a whole as it was in H1. Imports of all goods and services will grow somewhat more, however, or about 12%, slightly less than was forecast in August.

Negative contribution of net trade to GDP growth despite robust export growth

Imports are forecast to grow in excess of exports this year; therefore, the contribution of net trade to GDP growth will be strongly negative for the second year in a row (Chart IV-15). According to figures from Statistics Iceland, this was the case in the first half, in spite of strong export growth. The forecast assumes that the contribution from net trade will be somewhat more negative in H2 than in H1, in part because the surge in patent revenues in Q2 is not expected to continue unabated. The contribution of net trade to GDP growth is forecast to be negative by 2 percentage points over 2015 as a whole, on the heels of a 3-point negative contribution in 2014.

Surplus on combined goods and services trade set to shrink

Last year the surplus on goods and services trade amounted to nearly 6½% of GDP. H1/2015 showed a surplus comparable to that in 2014, and the outlook for the year as a whole is similar as well. The surplus is projected at just over 6%, slightly less than was forecast in August. As in the previous forecast, the surplus is expected to narrow in coming years, to about 5% in 2016 and 3% by 2018 (Chart IV-16).

Current account surplus to shrink accordingly

The underlying deficit on primary income including secondary income totalled 23 b.kr. in H1/2015, a slightly larger deficit than was assumed in the August forecast, as the preliminary estimate of primary income for Q1 was revised downwards. The underlying current account surplus totalled 40 b.kr. in H1, or just under 4% of GDP. As is the case for the goods and services accounts, the outlook is for a somewhat smaller underlying current account surplus in 2015 than was forecast in August. Prospects for coming years are broadly unchanged, however. The underlying current account surplus is projected to continue shrinking, to about ½% of GDP by 2018 (Chart IV-16). If this forecast materialises, national saving will remain above 20% of GDP during the forecast horizon.

Labour market

Swifter rise in total hours worked than was forecast in August

The forecast in the August *Monetary Bulletin* assumed that the impact of the cost increases provided for in the recent wage settlements would be reflected to some extent in reduced labour demand. There are few signs of this as yet, although it is difficult to assess how strong demand would have been without these large cost increases. According to the Statistics Iceland labour force survey (LFS), labour demand did grow somewhat more slowly in Q3 than in the first half, albeit somewhat more strongly than had been forecast. Total hours worked rose by 2.4%, whereas the forecast assumed an increase of just under 2%. So far this year, total hours have increased by 3.5%, but unlike the first half of the year, the increase in Q3 is due both to a rise in the number of employed persons and average hours worked (Chart IV-17). However, as is discussed in the May issue of *Monetary Bulletin*, average hours worked have grown slowly since 2011, and in Q3 they were still somewhat below the third-quarter average in 2003-2015 and well below the pre-crisis average.

According to the LFS, the labour participation rate and the employment rate also rose somewhat between years, and the number of persons outside the labour market continued to fall. Seasonally adjusted unemployment measured 4% in Q3, having declined by 0.2 percentage points quarter-on-quarter.[4] The fall in the unemployment rate was smaller than the rise in the employment rate, however, as the participation rate increased considerably (Chart IV-18).

Increased optimism about the employment outlook

According to the Gallup survey carried out in August and September among Iceland's 400 largest firms, respondents are considerably more upbeat about staff recruitment than they were in the spring survey, which was conducted around the time wage settlements were being finalised (Chart IV-19). According to the autumn survey, firms interested in recruiting staff in the next six months outnumbered those planning redundancies by just over 17 percentage points. More companies are planning to recruit now than according to the summer survey, and fewer are planning to reduce staffing. Executives in all sectors except tourism were more optimistic about recruitment than in the summer survey. The public also seems quite optimistic about the employment outlook and, according to the Gallup Consumer Sentiment Index in October, expectations towards the employment situation have not measured higher since October 2007.

Increased labour use rather than productivity growth during the economic recovery

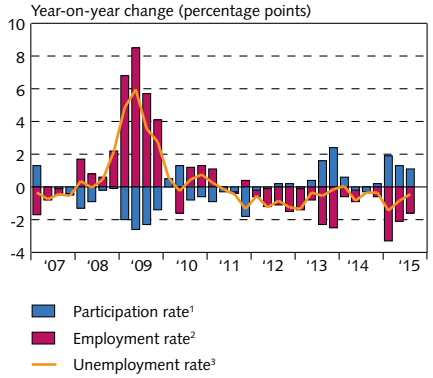
As is stated above, the total hours have risen markedly this year. In the first half, GDP growth exceeded the increase in total hours, resulting in an increase in labour productivity, which has remained virtually

4. Unemployment as registered by the Directorate of Labour (DoL) was less, or 3%, in Q3, after adjusting for seasonality. It had declined very slightly between quarters and by just over ½ a percentage point between years.

Chart IV-18

Contribution to changes in unemployment rate

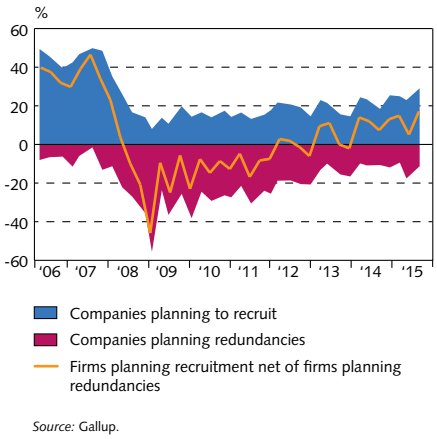
Q1/2007 - Q3/2015



1. Persons in the labour market as percentage of population aged 16-74. 2. Employed persons as percentage of population aged 16-74. An increase in the employment rate shows as a negative contribution to changes in unemployment. 3. Unemployed persons as percentage of labour force. May not equal the sum of its components due to rounding.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-19

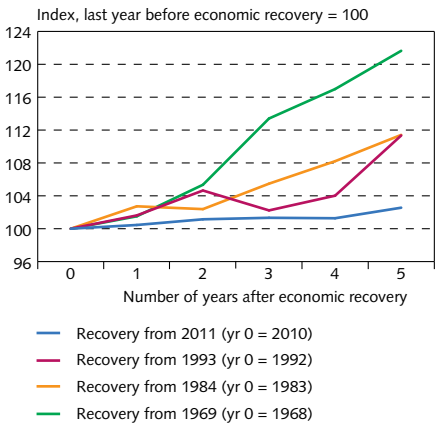
Companies planning to change staffing levels within 6 months



Source: Gallup.

Chart IV-20

Post-crisis labour productivity¹

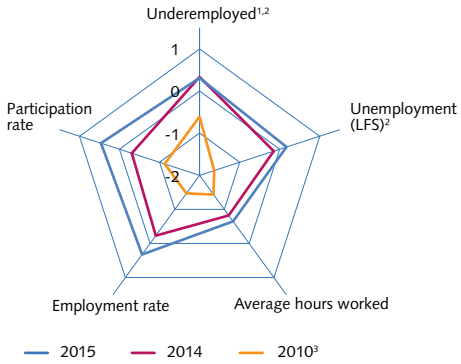


1. From 1991, the ratio of GDP to total hours worked; before 1991, the ratio of GDP to man-years. Data for 2015 are based on the forecast in *Monetary Bulletin* 2015/4. The four contractions are periods featuring a significant contraction in measured GDP.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-21

Indicators of labour market tension in the third quarter of the year

Deviation from third-quarter average in 2003-2015 (number of standard deviations)



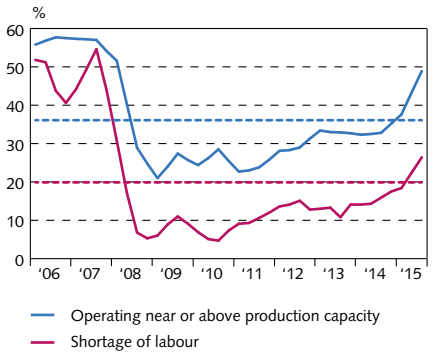
1. Number of underemployed part-time workers as a percentage of population. 2. Multiplied by -1 so that a negative deviation from the average indicates tension. 3. The year when labour market recovery began.

Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-22

Indicators of factor utilisation[1]

Q1/2006 - Q3/2015

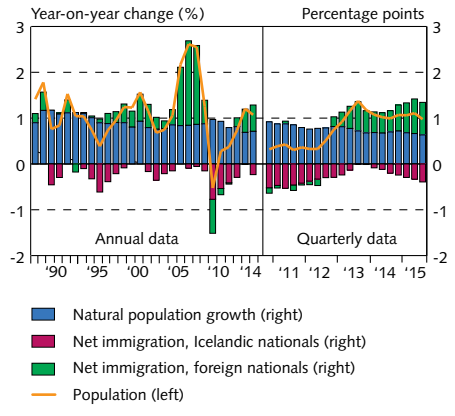


1. According to Gallup Sentiment Survey among Iceland's 400 largest firms. Seasonally adjusted data. Twice a year respondents are asked if their production is near or above capacity; therefore, a linear interpolation is used to generate quarterly data. Broken lines show period averages.

Sources: Gallup, Central Bank of Iceland.

Chart IV-23

Contribution to population changes[1]



1. Population figures are annual for 1987-2014 and quarterly from Q4/2010 onwards.

Sources: Statistics Iceland, Central Bank of Iceland.

flat for the past five years. The current recovery is therefore quite dissimilar to previous recoveries as regards the slow improvement in productivity (Chart IV-20). This development is in line with those in many developed economies in recent years however (see Chapter IV in *Monetary Bulletin* 2015/2). Productivity growth is projected at just over 1% year-on-year in 2015, and if the forecast materialises, the next few years will be broadly similar. The pick-up in productivity is slightly greater than in the last forecast, as GDP growth is projected to be stronger, but it is well below the average of the past three decades, which is close to 2% per year.

Indicators of factor utilisation

Far more firms consider themselves understaffed

The slack in the labour market appears to have been considerably smaller in Q3 as compared with the third quarter of previous years, owing to strong labour demand in the first half (Chart IV-21). In terms of the deviation of unemployment, the labour participation rate, the employment rate, and the underemployed from the 2003-2015 average, the slack had already disappeared, but average hours worked were still below their historical average.[5] In view of how slowly average hours worked have increased, however, there still may be some scope to satisfy increased labour demand without creating additional wage pressures. The share of firms considering themselves short-staffed rose by about 7 percentage points between Gallup's summer and autumn surveys. In the autumn survey, about a fourth of respondents considered themselves understaffed (Chart IV-22). Because this information extends only back to 2006, however, the average for the period (43%) is probably not a good indicator of normal factor utilisation.

The results of the autumn survey also give rise to the question whether it is now more difficult for firms to address staffing problems with imported labour, but net immigration of foreign nationals has been considerable in recent years (Chart IV-23). This applies in particular to the assessment by firms in the construction sector, which has relied most heavily on imported labour to address staffing shortages. According to Gallup's autumn survey, about ⅔ of construction firms considered themselves understaffed, and over 70% were interested in recruiting. In the tourism sector, which also uses foreign workers to address staffing shortages, some 40% of firms considered themselves understaffed.

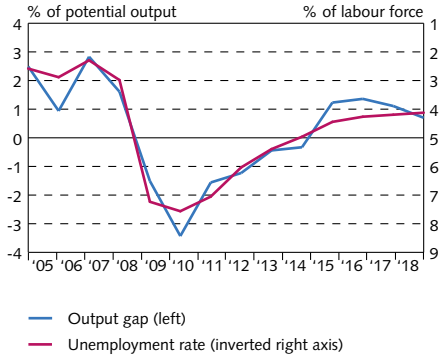
Positive output gap has developed

Since the post-crisis economic recovery began, the margin of spare capacity in the economy has narrowed steadily. Increased use of the capital stock and declining unemployment in recent years are signs of this. Indications from surveys suggest strongly that the positive

5. Statistics Iceland published recently a detailed breakdown of the labour force, which includes a potential addition to the labour market. There are three groups: those that are employed part-time and want to work more (underemployed) and those who are outside the labour market and are (a) seeking work but cannot begin work within two weeks or (b) could begin work within two weeks but are not looking for work (see Box 3 in *Monetary Bulletin* 2015/2).

output gap has widened over the course of the year. According to the Gallup survey conducted this autumn, the number of firms considering themselves understaffed had risen sharply, as did the number that would have difficulty responding to a sudden increase in demand (Chart IV-22). The slack in the economy is considered to have virtually disappeared in 2014, and this year GDP is expected to grow in excess of potential output, giving rise to an output gap of nearly 1½% of potential output (Chart IV-24), somewhat more than was assumed in the Bank's August forecast.

Chart IV-24
Output gap and unemployment 2005-2018[1]



1. Central Bank baseline forecast 2015-2018.
Sources: Statistics Iceland, Central Bank of Iceland.