The Domestic Economy

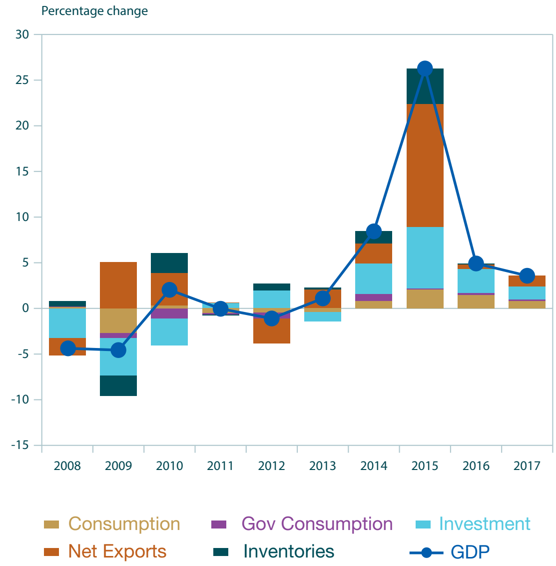
Overview

- *National Income and Expenditure Accounts (NIE) for 2015 point to a volume increase in GDP of 26.3 per cent and an increase in real GNP of 18.7 per cent. These constitute exceptionally large revisions from preliminary estimates that indicated GDP growth of 7.8 per cent and GNP growth of 5.7 per cent. The headline figures reflect a level shift in the amount of capital assets recorded in Ireland, mainly due to corporate restructuring by multinational firms located here. The activity generated by this much larger capital base is now included in Irish GDP. This is most evident in the export figures which have been boosted by contract manufacturing abroad on behalf of multinational firms, including recently redomiciled firms located here. Investment has also been revised upwards significantly to account for intellectual property assets now booked here and increased investment in aircraft, located abroad but owned by Irish based leasing firms (for more details see Box A).*

- *Following these revisions, Irish GDP now includes a very significant amount of activity carried out in other countries but recorded in the Irish national accounts. As a result, both the levels and the rates of change in Irish GDP and GNP are not currently reflecting the actual level of economic activity carried out in Ireland. To get a more accurate measure of the level of activity in the domestic economy it is necessary to look beyond the headline GDP and GNP figures. One useful indicator of activity in the domestic economy is underlying domestic demand – that is domestic demand, excluding investment in aircraft and intangible assets. This measure is estimated to have increased by closer to 5 per cent in 2015, reflecting buoyant consumer spending and a significant pick-up in construction and equipment investment. Another such indicator is employment, which also grew strongly in 2015.*

- *The economy is projected to grow by 4.9 per cent in GDP terms this year and by 3.6 per cent in 2017. The outlook has been revised downwards following the outcome of the UK referendum on membership of the European Union (Brexit). Relative to a no-Brexit baseline, projected GDP growth was reduced by approximately 0.2 and 0.6 per cent in 2016 and 2017, respectively. Notwithstanding this downward revision, the Irish economy continues to perform strongly and growth remains on track to exceed the EU average by a significant margin both this year and next.*

Chart 1: Contributions to GDP



Source: CSO and Central Bank of Ireland.

- *The Brexit decision will have a negative impact on Irish GDP, employment and incomes. The main channels through which the effects of Brexit will be felt include trade (predominantly) via weaker foreign demand, foreign direct investment and the labour market. Furthermore, the likelihood of heightened levels of uncertainty could weigh on consumer and investor confidence. Increased financial market volatility could also generate adverse spillovers to countries such as Ireland with close linkages to the UK (for more details see Box B).*

- *In the medium to long term, depending on the nature of the final arrangements, there is the potential for significant adverse impacts from any increased tariff and non-tariff barriers which permanently restrict trade, financial and labour market flows. In addition, there is also the potential for impacts from lower demand in the UK and in Ireland's main trading partners. Model estimates outlined in*

Box B point to a potential negative impact on Irish GDP of over 3 per cent after ten years.

- *Underlying domestic demand growth moderated in the first quarter of 2016 reflecting offsetting trends from consumer and investment spending. For the year as a whole growth of 4 per cent is anticipated with close to 3 per cent growth projected in 2017. This slowdown partly reflects an assumed negative impact from the Brexit vote.*

- *Personal consumption expenditure is forecast to grow by 4 per cent in 2016 and by 2.3 per cent in 2017. The forecast is driven by the strong outlook for the labour market, incomes and momentum from the release of pent-up demand. However it also reflects the unwinding of some positive factors such as the boost to disposable incomes from lower energy prices. In addition, the impact of the Brexit referendum, while likely to be relatively modest in 2016 will probably be more evident in 2017.*

- *The revisions to the National Accounts make interpreting investment data extremely difficult. The Brexit decision has motivated a small downward revision to the outlook for investment expenditure, more notably in 2017. This is likely to manifest itself mainly via delayed or postponed (equipment) investment decisions. In light of the current shortage of residential (and commercial) properties, any impacts on the construction sector in the short-term are likely to be minimal. The outlook for investment expenditure however remains robust with growth of 12.3 per cent and by 6.1 per cent envisaged in 2016 and 2017, respectively.*

- *Reflecting somewhat weaker external demand conditions, higher levels of uncertainty and adverse exchange rate movements (reflecting Brexit), exports are expected to moderate with growth of 6.4 and 4.5 per cent in 2016 and 2017, respectively. Import growth is also set to moderate with growth of 8 per cent in 2016 and 4.7 per cent in 2017.*

- *The labour market outlook remains positive despite elevated risks to employment in sectors more dependent on the UK. However, the overall impact will be limited reflecting Ireland's reduced dependence on the UK market over recent decades and the strong growth evident in other sectors of the economy. In addition there is a high degree of flexibility in UK - facing sectors of the economy that have proved to be adaptable to episodes of exchange rate volatility in the past. Employment is forecast to increase by 2.1 per cent in 2016 and by 1.3 per cent in 2017. This outlook should see further declines in the unemployment rate which is expected to average 7.9 per cent in 2016 and 7.2 per cent in 2017 (the marked decline in unemployment is highlighted in Box C).*

- *Despite the strength in the domestic economy, headline inflation remains subdued. Low global commodity prices continue to feed through to goods price inflation. This pattern may become more pronounced over the next year reflecting exchange rate movements against sterling. Services inflation, on the other hand, while well contained by historic standards, is registering continued counter-balancing increases. (The diverging trends in goods and services inflation is discussed in Box D). Following on from marginal deflation in 2015, the Consumer Price Index (CPI) and the Harmonised Index of Consumer Prices (HICP) inflation are expected to average 0.4 and 0.2 per cent respectively in 2016. Looking to 2017, CPI and HICP inflation are forecast to average 1.5 per cent and 1.4 per cent, respectively.*

- *The risks to the projections are firmly weighted to the downside following the Brexit vote. These reflect both the possibility of a larger than anticipated direct impact on the UK economy and a larger spillover to other trading partners, particularly the Euro Area. In the domestic economy, the potential exists for more negative impacts on consumer and investor sentiment and for a more adverse labour market effect.*

Box A: Recent Revision to the National Income and Expenditure Accounts
By Diarmaid Smyth[1]

The 2015 NIE published by the Central Statistics Office (CSO) revealed exceptional revisions to both the level and growth rate of measured output in Ireland. The 2015 growth rate (as proxied by GDP) was revised up to 26.3 per cent (from 7.8 per cent) with GNP growth revised up to 18.7 per cent (from 5.7 per cent). The headline figures do not accurately reflect economic activity within Ireland as evidenced by the extraordinary large annual changes (Table 1). The data reveal a very large level shift in capital assets (up €300 billion) recorded in Ireland on account of corporate restructuring, reclassifications and aircraft leasing. This "on-shoring" of activity has little real benefit in terms of employment or incomes and obscures underlying growth dynamics. The CSO compiles the data in accordance with international rules (European System of National and Regional Accounts (ESA 2010)).[2] However, the highly open nature of the Irish economy, global production chains and the heavy concentration of high-value added sectors in Ireland (e.g. pharma-chem, IT and aircraft leasing) are distorting headline data series. In simple terms, the NIE data now include a very significant amount of activity carried out in other jurisdictions but formally recorded in the Irish national accounts.

A summary of the main components in the NIE is shown in Table 1. The revisions and reclassifications manifest most clearly in headline GDP, GNP, trade and investment data with marked "level shifts" occurring in 2015. Much of this reflects contract manufacturing type activity on a very large scale. For example, the NIE reported that goods exports amounted to €195 billion last year, whereas the merchandise trade statistics (these only include goods that physically cross the Irish border) reported much lower exports of €112 billion.

Table 1: National Accounts Aggregates: 2015 - Expenditure Side

	2015 Nominal (initial estimate)	2015 Nominal (current estimate)	2015 Real Growth Rate (initial)	2015 Real Growth Rate (revised)
	€bn	€bn	% y/y	% y/y
Consumption	92.4	92.4	3.5	4.5
Government	27.9	27.0	-0.8	1.1
Investment	47.2	54.1	28.2	32.7
Exports	260.6	317.2	13.8	34.4
Imports	215.8	236.0	16.4	21.7
GDP	214.6	255.8	7.8	26.3
Net Factor Income	-33.6	-53.2		
GNP	181.0	202.6	5.7	18.7

On the output side, the level shift is very apparent in Gross Value Added (GVA) data (Table 2), with output up €62 billion in 2015. Approximately four-fifths of this was accounted for by the industrial sector although a breakdown into specific sub-sectors was not provided. The other notable rise occurred in the category "other services" which includes aircraft leasing.[3] The rise in industrial output is likely to be largely accounted for by foreign-owned multinationals and potentially a small number of firms, reflecting the restructuring that took place in 2015. The near doubling in the level of industrial output was also accompanied by a very large rise in depreciation and measured profitability (not shown in Table 2).

1 Irish Economic Analysis Division

2 For more details see "Box A: The Implications of Recent Changes to Macroeconomic Statistics", in the Domestic Economy Chapter of the Central Bank of Ireland *Quarterly Bulletin* No. 3, 2014.

3 For a more detailed discussion see: "26% GDP Growth: Where did it come from and who got it?" by Seamus Coffey. Available from: http://economic-incentives.blogspot.ie/

Box A: Recent Revision to the National Income and Expenditure Accounts
By Diarmaid Smyth

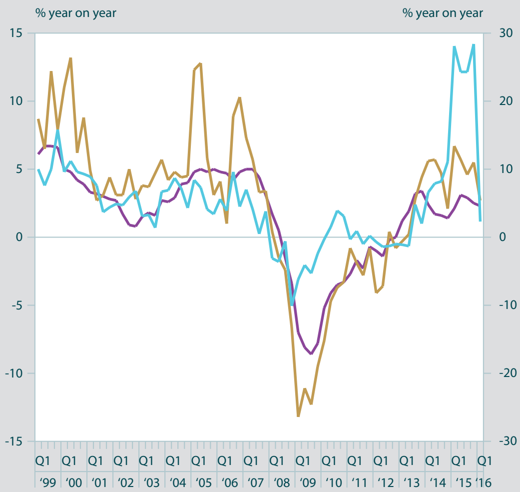
Table 2: National Accounts Aggregates: 2015 - Output Side, € billions

	2014 Nominal	2015 Nominal	Annual Change
Agriculture	4.2	4.1	-0.1
Industry (excl construction)	41.1	91.8	50.7
Construction	5.4	6.0	0.6
Distribution	47.1	48.8	1.7
Public Admin.	7.2	7.4	0.3
Other services	71.8	78.0	6.2
GVA	174.9	236.6	61.5
Depreciation	30.9	61.6	30.9

Despite the noise in the headline figures, the underlying growth story remains broadly positive. Domestic demand data (including labour market releases) point towards an underlying rate of growth of closer to 4 per cent this year.[4] One useful metric is underlying domestic demand. This strips out transport and intangibles related investment from domestic demand (Figure 1). Other indicators such as retail sales data, labour market series and exchequer figures also provide a good barometer of economic activity.

The scale of data revisions is unprecedented and has potentially serious implications in terms of the interpretation of ESA 2010, headline fiscal ratios, the Macroeconomic Imbalance Procedure (MIP) and Irish budget contributions. The main deficit and debt ratios (as a percentage of GDP) are now significantly below previous estimates given that the level of GDP has been revised up from €215 billion to €256 billion. This automatically lowered the end-2015 debt ratio to less than 80 per cent (from 94 per cent) and the deficit to below 2 per cent (from 2.3 per cent).

Box A Fig 1: Measures of Growth



— Underlying Domestic Demand — Employment
— GDP (RHS)

Source: CSO and internal calculations.

Also on the fiscal side, the revisions to the NIE go some distance in explaining the surge in corporate tax receipts last year. Firms that are re-domiciled here are now paying their corporate taxes to the Irish Exchequer.[5] However, there is a risk that these firms could relocate their headquarters out of Ireland in the future with obvious fiscal/tax implications.

On the external side, the current account surplus soared to 10.2 per cent of GDP last year reflecting a huge rise in the trade balance (contract manufacturing). The measured current account surplus should be interpreted in the context of the massive level negative shift in the Net International Investment Position (NIIP) (also part of the MIP set of indicators). This large NIIP will run down over time as the depreciation of foreign-owned domestic capital means a decline in foreign liabilities/large current account surplus. This balance again obscures the underlying picture which is positive – a healthy but much smaller underlying surplus.

4 For more details see "Box B: Linking Employment to Underlying Economic Activity", in the Domestic Economy Chapter of the Central Bank of Ireland *Quarterly Bulletin* No. 1, 2016.

5 For more details see "Box D: Corporation Tax Receipts in 2015", in the Domestic Economy Chapter of the Central Bank of Ireland *Quarterly Bulletin* No. 1, 2016.

Box B: The Impact of Brexit on the Short-term Outlook
By Irish Economic Analysis Division

The UK decision to leave the European Union (Brexit) will have a negative impact on Irish GDP, employment and incomes. The key channels through which Brexit impacts the Irish economy include trade, foreign direct investment and the labour market. Under the most adverse scenario, where increased tariff and non-tariff barriers significantly reduce trade flows between Ireland and the UK, the level of Irish GDP could be over 3 percent below a no-Brexit baseline after ten years. A significant short-term impact is also likely. Adverse exchange rate movements together with a negative shock to foreign demand will reduce Irish export growth. Heightened uncertainty and financial market volatility in advance of formal UK exit negotiations could weaken investor and consumer confidence. These effects could then spill over into the labour market with negative consequences for employment and wages. Taking account of all of these factors, the forecast for Irish GDP growth has been revised down by 0.2 per cent in 2016 and by 0.6 per cent in 2017, compared with a no-Brexit baseline. These estimates are tentative and reflect the unprecedented nature of recent developments and the uncertainty surrounding the nature of the post-Brexit regime. It is likely that a significant amount of downside risk remains reflecting potentially large spillovers to trading partners, particularly in Europe, and the possibility of more acute confidence effects on investment and consumption decisions.

The economic impact of Brexit will depend on the nature of the UK relationship with the European Union (EU) following a UK departure. Three possible scenarios can be considered. The best case (considered very unlikely given UK revealed preferences) envisages a Norwegian-type solution whereby the UK becomes a member of the European Economic Area (EEA). Under this scenario, the long term economic impact would be minimal since it would largely mimic the current regime. A second scenario envisages a bilateral trade agreement between the UK and the EU along the lines of the EU/Swiss trade agreements. The worst case is where the UK and EU do not conclude a bilateral trade agreement and instead, the UK exercises its rights under the Most Favoured Nation (MFN) clause of the World Trade Organisation (WTO). Under this scenario there is likely to be a marked negative impact on UK trade and investment which in turn leads to a significant negative impact on the European economy and on Ireland in particular.

Analysis published by the UK treasury[6] pointed to potentially severe effects on UK GDP over a 15 year period ranging from -3.8 per cent (EEA scenario) to -6.2 per cent (negotiated bilateral agreement) to -7.5 per cent (WTO outcome).

In the Irish case, model based scenario analysis carried out within the Bank in advance of the referendum vote using a Bayesian Vector Autoregression (BVAR) approach considered a worst case (WTO) scenario with no bilateral trade agreement between the UK and the EU. Using this approach, the estimated impact on the level of Irish GDP after 10 years (relative to the no-Brexit baseline) would result in a 3.2 per cent decline under the adverse scenario (Table 1). In terms of assessing the short-term impact, we make the assumption that the most likely outturn will closely resemble developments in the first two years under the adverse scenario. This is done to take account of the higher level of uncertainty and disruption generated, particularly in terms of financial market impacts and sentiment.

Table 1: Macroeconomic Estimates of Brexit Impact (levels)

	Deviation after 10 years
World Demand	*-2.8*
Exports	*-5.5*
GDP	*-3.2*
Wages	*-4.4*
Employment	*-1.8*

6 See: https://www.gov.uk/government/publications/hm-treasury-analysis-the-long-term-economic-impact-of-eu-membership-and-the-alternatives.

Box B: The Impact of Brexit on the Short-term Outlook
By Irish Economic Analysis Division

The short-term outlook for the Irish economy was then revised bearing in mind these estimates. The results are summarised in Table 2. Reflecting the mid-year timing of the referendum, the estimated negative impact on the growth rate this year is comparatively small at 0.2 per cent. However, a more significant impact is expected in 2017 with the growth rate lowered by 0.6 per cent. This arises from a less favourable outlook for exports.

Table 2: Short-term Impacts of Brexit on Growth in Ireland

	2016	2017
GDP	*-0.2*	*-0.6*
Consumption	*-*	*-0.1*
Investment	*-0.1*	*-0.5*
Government	*-*	*-*
Exports	*-0.4*	*-1.0*
Imports	*-0.3*	*-0.9*
Balance of Payments, % GDP	*-0.1*	*-0.1*
Labour Market		
Employment	*-0.1*	*-0.2*

Demand

Domestic Demand Overview

Despite the uncertainty created following the UK referendum, domestic demand is expected to drive growth over the projection period. The outlook for consumption and investment spending remains robust although growth rates will moderate. Economy wide domestic demand is expected to grow by 6.4 per cent in 2016 and by 3.4 per cent in 2017.

Consumption

Personal consumption expenditure is forecast to grow by 4.0 per cent in 2016 and by 2.3 per cent in 2017. This builds on a very strong outturn in 2015 - volume growth of 4.5 per cent (a significant upward revision from the preliminary estimate) - based on the recently released NIE. The forecasts are driven by a positive outlook for the labour market, incomes and a projected decline in the household savings ratio.[7] Spending continues to be supported by an element of pent up demand within the economy, as evidenced by strong retail sales and car licensing/registration data in the first half of the year.[8]

Given the large share of consumption in domestic demand, the response of consumers to the uncertainty surrounding Brexit will have a bearing on growth. The consumption scenario outlined in Box B is largely driven by second round effects (from the shock to trade) on employment and incomes with no direct impacts arising from weaker sentiment. However, a decline in sentiment arising from Brexit related uncertainty and/or contagion to other economies is a clear downside risk to the consumption outlook. There have been periods when UK and Irish consumer sentiment move together – for example in response to global shocks such as those during the financial crisis in 2008/09 – as well as periods when they do not move together – such as in the early 1990s. If a large drop in consumer sentiment is assumed, then the effects on consumption would be more severe. For 2016, the impact of the Brexit referendum on consumer spending is likely to be modest with risks to

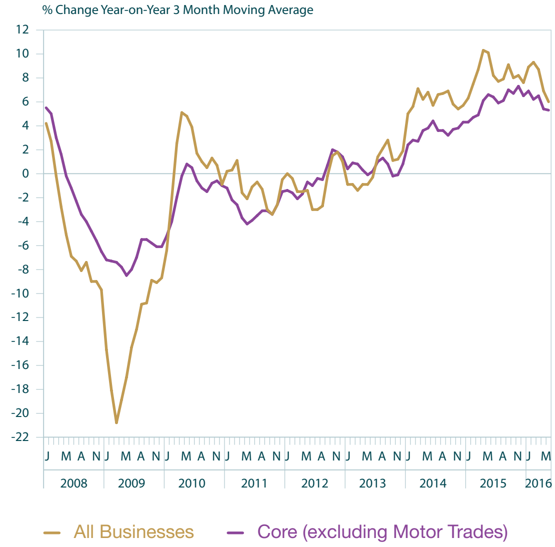
7 For more details on the links between consumption and employment see “Box B: Driver of Personal Consumption – A BVAR Approach”, in the Domestic Economy Chapter of the Central Bank of Ireland *Quarterly Bulletin* No. 2, 2016.

8 There were 97,490 new private cars licenced in the first half of the year, an increase of 23.9 per cent on what was recorded over the same period in 2015.

the downside in 2017 given the potential for weaker sentiment.

The latest consumption data have been very positive. The *Quarterly National Accounts (QNA)* figures for the first quarter reported seasonally adjusted growth in consumer spending of 2.1 per cent coupled with an upward revision to the 2015 growth rate (from 3.5 to 4.5 per cent). The latest retail sales data point to a 7.9 per cent increase in the volume of sales to end-May, with core sales (i.e. sales excluding motor trades) up 5.8 per cent. Indirect tax receipts in the first half of the year are also consistent with robust consumer spending with strong increases recorded (notably for excise duties). The KBC Bank Ireland/ESRI consumer sentiment index improved in June following a weak reading in May. However the survey was carried out prior to the Brexit referendum with the upturn reflecting positive employment developments.

Chart 2: Index of Volume of Retail Sales



Source: CSO.

Investment

Investment expenditure is forecast to grow by 12.3 per cent in 2016 and by 6.1 per cent in 2017. The impact of the Brexit decision will be felt in the investment figures in the latter part of this year but more so in 2017. This is likely to materialise through either delayed or lower levels of equipment investment. In light of the current shortage of residential (and commercial) properties, any impacts on the construction sector in the short-term are deemed to be minimal.

As indicated in previous *Bulletins*, the inclusion of intellectual property (IP) assets and the change in aircraft leasing arrangements in gross fixed capital formation adds considerably to the unpredictability of investment data. Investment in 'intangible' assets (generally in the form of a purchase of a licence or patent) amounted to over €23 billion in 2015 – an increase of over 100 per cent in the year. While this was most likely related to the reorganisation of activities by a limited number of multinationals, it represents a non-negligible proportion of overall investment (43 per cent) and adds considerable noise to the overall investment figures. The strength in IP investment helped to drive the overall level of investment back to levels not seen since prior to the crisis. Abstracting from aircraft and IP related assets, underlying investment registered strong growth in 2015 (by 11.5 per cent) reflecting higher levels of construction and equipment investment.

On the construction side, housing output is expected to increase to 15,000 and 18,000 units in 2016 and 2017, respectively. This follows completions of 12,666 units in 2015. Further large increases in supply will be needed to satisfy current and future housing demand. On the non-housing side, building and construction registered an increase of 13.5 per cent in 2015. With current available supply of commercial space dwindling, and a strong pipeline of incoming investments, commercial real estate construction is projected to increase strongly over the projection period. Taking all of these factors into account, overall building and construction investment is projected to increase by 8.5 per cent on average per annum in 2016 and 2017.

On the machinery and equipment side, the trend – net of aircraft – continues to be one of re-stocking and new investment, with projected annual increases of 3 per cent

Table 1: Expenditure on Gross National Product 2015, 2016f and 2017f

	2015	% change in		2016f	% change in		2017f
	EUR millions	volume	price	EUR millions	volume	price	EUR millions
Personal Consumption Expenditure	92,377	4.0	1.0	96,986	2.3	1.1	100,308
Public Net Current Expenditure	26,985	2.3	1.1	27,932	1.6	1.6	28,817
Gross Domestic Fixed Capital Formation	54,103	12.3	2.0	62,004	6.1	2.2	67,221
Building and Construction	14,243	8.6	2.8	15,893	8.4	3.4	17,810
Machinery and Equipment	16,365	18.9	1.5	19,750	1.6	1.5	20,371
Intangibles	23,495	10.0	2.0	26,361	8.0	2.0	29,040
Value of Physical Changes in Stocks	1,293			1,293			1,293
TOTAL DOMESTIC DEMAND	174,758	6.4	1.2	188,215	3.4	1.5	197,639
of which: Underlying Domestic Demand	143,774	4.0	1.3	151,484	2.9	1.5	158,093
Exports of Goods & Services	317,197	6.4	1.2	341,340	4.5	1.3	361,106
FINAL DEMAND	491,955	6.4	1.2	529,555	4.1	1.4	558,745
Imports of Goods & Services	-235,987	8.0	0.8	-257,082	4.7	0.9	-271,386
Statistical Discrepancy	-155			-155			-155
GROSS DOMESTIC PRODUCT	255,813	4.9	1.5	272,318	3.6	1.8	287,204
Net Factor Income from Rest of the World	-53,173	6.1	1.2	-57,078	5.5	1.3	-60,996
GROSS NATIONAL PRODUCT	202,640	4.6	1.5	215,240	3.1	2.0	226,207

envisaged in 2016 and 2017, respectively. This component of investment is likely to be most affected by the Brexit decision with the potential for postponed or delayed investment decisions on account of uncertainty. In conjunction with the forecasts for building and construction, underlying investment (i.e., excluding intangibles and aircraft) is forecast to increase by 6.2 per cent per annum on average in 2016 and 2017.

Government Consumption

According to the NIE accounts, government consumption in 2015 increased in volume terms by 1.1 per cent. In the first quarter of 2016, spending grew by 3.5 per cent with growth of 2.3 per cent expected for the year as a whole. In 2017, government consumption is expected to grow by 1.6 per cent.

External Demand and the Balance of Payments

Exports and Imports

Following the revisions to the NIE, the narrative about the Irish economy in 2015 has been completely transformed. Preliminary QNA pointed to domestic demand as the main growth driver last year with net exports accounting for a minimal 0.1 percentage point of overall GDP growth. Exports had performed strongly but were outpaced by a more rapid growth in imports. However following a dramatic upward revision to export growth from 13.8 per cent to 34.4 per cent and a significant but less sizable upward revision in imports, net trade now accounts for over half (13.5 percentage points) of total GDP growth in 2015.

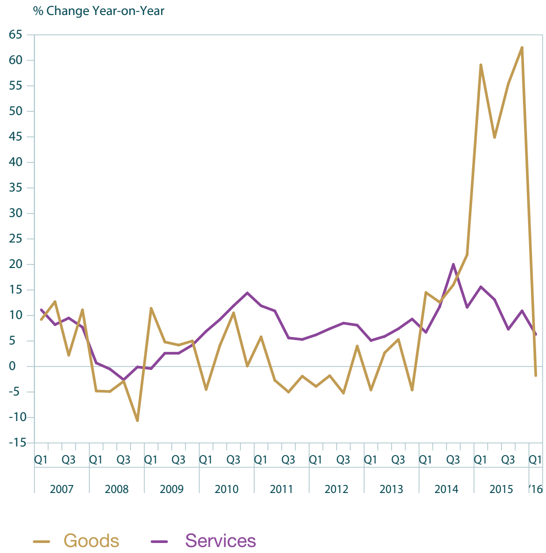
On the export side, the largest revision was for goods exports where the rate of increase in 2015 was revised to 55.4 per cent from 17.2 per cent. This was boosted by contract manufacturing abroad on behalf of multinational firms, including recently redomiciled firms located here. There was a more modest revision to the recorded increase in services exports from 10 per cent to 11.5 per cent last year. This was accounted for in the main by strong growth in financial services, insurance, operational leasing and computer services exports.

The forecasts for exports and imports imply a small, albeit positive contribution to growth this year from net trade of 0.5 per cent, rising to 1.2 per cent in 2017.

The revision to the trade figures in 2015, were almost all accounted for by a very large once-off level shift in the first quarter of 2015 reflecting a reclassification of transactions previously accounted for abroad. Accordingly, the revisions point to a change in the level of exports rather than in the rate of growth with little or no implications for the growth outlook thereafter. However, Brexit is a significant event which will have implications for the outlook and we have revised our projections for GDP growth to take this into account (see Box B).

The trade outlook is likely to be most affected by the Brexit referendum given the prospect of weaker demand and higher levels of uncertainty. On the export side, a projected moderation in line with expected developments in external demand has been further downgraded, particularly in 2017. Exports are projected to grow by 6.4 and 4.5 per cent in 2016 and 2017, respectively. Growth in imports is also projected to ease to 8.0 per cent in 2016 and 4.7 per cent in 2017 reflecting both the trend in exports and

Chart 3: Volume of Exports



Source: CSO Quarterly National Accounts.

a projected slowing in the pace of domestic demand growth.

Net Trade, Factor Incomes and International Transfers

In 2015, the revisions to export and import volumes had a dramatic impact on the trade balance which increased to €81.2 billion or 31.7 per cent of GDP (from a preliminary estimate of €44.7 billion). Taking account of the forecasts above, the trade balance is forecast to ease to 31.3 per cent of GDP by 2017.

Net factor income outflows in 2015 were revised significantly upwards last year contributing to a significant divergence between GDP and GNP. However, the changes in net factor flows were dwarfed by the changes on the trade side and as a consequence there was a very dramatic upward revision to the estimated Balance of Payments surplus last year to 10.2 per cent of GDP.

Table 2: Goods and Services Trade 2015, 2016f, 2017f

	2015	% change in		2016f	% change in		2017f
	EUR millions	volume	price	EUR millions	volume	price	EUR millions
Exports	317,197	6.4	1.2	341,340	4.5	1.3	361,106
Goods	195,592	7.0	0.6	210,539	4.6	0.8	221,992
Services	121,605	5.5	2.0	130,801	4.3	2.0	139,115
Imports	235,987	8.0	0.8	257,082	4.7	0.9	271,386
Goods	85,024	8.7	0.4	92,782	4.4	1.0	97,875
Services	150,963	7.6	1.1	164,300	4.8	0.8	173,512

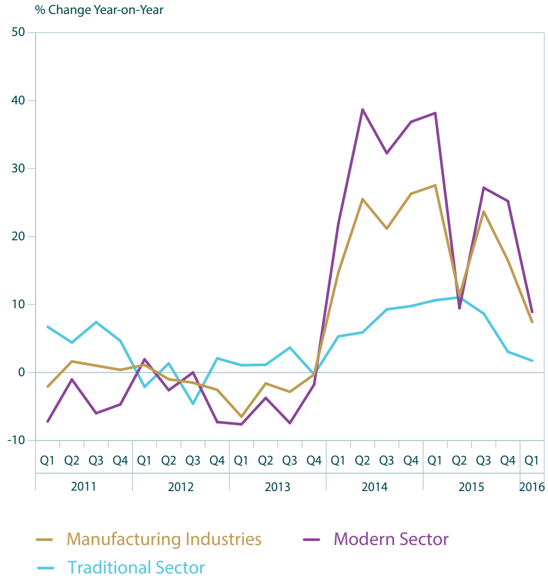
Taking account of the projected composition of growth in 2016 and 2017 with a less significant contribution from net exports, the Balance of Payments is forecast to decrease to 9 per cent of GDP in 2017.

Supply

On the output side, the latest QNA data confirm a strong performance in the first three months of the year. On the services side, the broad other services sector grew by 6.7 per cent year-on-year, with the distribution, transport, software and communications sector and public administration up 2.6 and 5.6 per cent, respectively over the same period. The performance of the services sector remains robust and consistent with the underlying growth picture. The industrial output data in the QNA are heavily affected by the statistical issues listed in Box A as evidenced by the 87.3 per cent estimated growth in 2015. In the first quarter, industrial output growth of 1.8 per cent was recorded. The agricultural sector continued to perform very strongly with growth of 10.4 per cent in the first three months of the year.

The most recent data from the monthly industrial production and turnover series showed strong industrial output growth in the first five months of the year (up 6.2 per cent), although the pace of growth has slowed. Manufacturing output was up 6.8 per cent largely on account of activity levels within the modern manufacturing sector. Output levels in the more traditional (and predominantly indigenous) sectors have been much weaker thus far in 2016, with output effectively flat in the year to end-May. This could be due to more challenging trading conditions in the weeks preceding the Brexit referendum.

Chart 4: Volume of Industrial Production



Source: CSO.

On the services side, the latest monthly services index reported growth of 5.8 per cent in the year to end-May (relative to growth of 6.8 per cent over the same period in 2015). The Investec PMI data for manufacturing rose in June to 53 from 51.5 in May. The PMI for services, while still positive, showed a slight fall

Table 3: Balance of Payments 2015, 2016f, 2017f

€ million	2015	2016f	2017f
Trade Balance	81,209	84,257	89,720
Goods	110,568	117,757	124,117
Services	-29,359	-33,500	-34,397
Net Factor Income from the Rest of the World	-51,914	-57,078	-60,996
Current International Transfers	-3,139	-3,139	-3,139
Balance on Current Account	26,156	24,041	25,585
(% of GDP)	10.2	8.8	8.9

to 61.2 from 61.7 in May. However, it should be noted that these surveys were conducted prior to the Brexit referendum.

The Labour Market

Employment growth of 2.1 per cent is anticipated in 2016 with growth of 1.3 per cent foreseen in 2017. With modest labour force growth expected, this should see further strong declines in the unemployment rate. The employment forecasts were revised downwards following the outcome of the Brexit referendum due to the risk of job losses in sectors more dependent on the UK (typically indigenous industries such as agri-food and tourism). The overall labour market outlook remains positive however with numbers at work expected to exceed 2 million persons in 2016.

The latest data from the *Quarterly National Household Survey* (QNHS) for the first quarter of the year showed continued strong gains in employment (+2.4 per cent year-on-year) with an additional 46,900 persons at work. Within this, 12 of the 14 sectors recorded gains with marked increases recorded in accommodation and food services, construction and administrative and support services. More recent labour market data from the CSO has also been positive with the seasonally adjusted unemployment rate at 7.8 per cent in June (down from 9.4 per cent in June 2015).[9]

Labour force growth has been weaker than expected with annual growth of 0.6 per cent in the first quarter based on the QNHS. In seasonally adjusted terms, the labour force contracted by 0.2 per cent quarter-on-quarter in the first three months of the year, partly due to weak momentum in labour force participation. For the year as a whole, labour force growth of 0.4 per cent is anticipated with a pick up to 0.6 per cent in 2017 (Table 4). This outlook combined with the employment forecasts above should see further marked declines in the unemployment rate. The latter is expected to average 7.9 per cent in 2016 and 7.2 per cent in 2017. More generally, the current pace of employment growth and the marked rate of decline in unemployment highlights the need for stronger labour force growth (see Box C).

Pay

Wages are projected to increase on average by 2.5 per cent per annum in both 2016 and 2017. This outlook coupled with the forecasts for employment above give rise to projected increases in economy-wide compensation levels of close to 4 per cent per annum on average in 2016 and 2017. While there are signs of increasing wage levels across the economy, there could be downward pressures arising from the Brexit decision (and likely competitiveness concerns) in the context of a weak price environment.

Inflation

Consumer Prices

Despite the strength in the domestic economy, headline inflation remains subdued and the recent result of the Brexit referendum means that inflationary pressures are likely to remain

9 The live register declined for a 48th consecutive month in June to 305,600 persons, down 39,600 year-on-year.

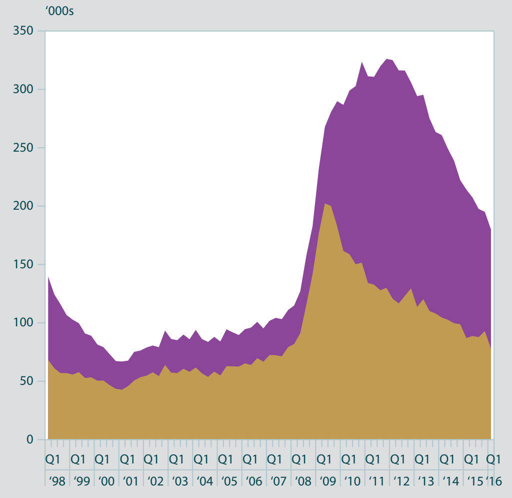
Box C: Recent Labour Market Developments

Diarmaid Smyth[10]

Employment has rebounded robustly over the past few years, with an additional 160,000 persons at work since mid-2012 (up 9 per cent). With modest labour force growth (up 22,000 or 1 per cent) over the same period, the unemployment rate has declined markedly – from over 15 per cent to below 8 per cent in mid-2016. There has also been a notable decline in both short- and long-term unemployment (Figure 1). Since mid-2012 numbers unemployed have declined by 40 per cent (with a two-third/one-third split between long- and short-term categories). In the first quarter of the year, the short-term unemployment rate declined to 3.6 per cent with the long-term rate at 4.7 per cent.

In Figure 2, the short- and long-term unemployment rates are shown alongside some reference rates from previously strong growth phases for context. The labour market forecasts in this *Bulletin* point to a short-term unemployment rate close to historically low levels by the end of the projection period. This serves to highlight the need for stronger labour force growth particularly in the event of skills mismatches between labour demand and supply.

Box C Fig 1: Unemployment Decomposition



Source: CSO.

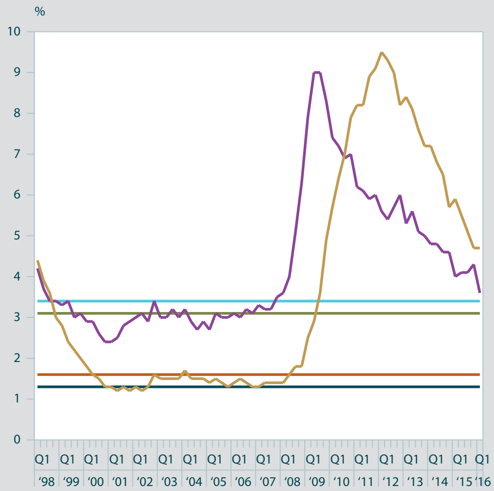
From Figure 3, we can see that current labour force levels are well below the 2008 peak. While labour force growth has turned positive, the response to date has been relatively muted. This reflects in part a fairly static participation rate – this has remained close to 60 per cent in recent quarters. Recent research by the Bank highlighted the role played by structural and cyclical factors in determining the participation rate. While some upturn in participation can be expected given the stage of the cycle, structural factors are likely to act as a constraint going forward in the absence of a return to net inward migration.[11] The latter has been negative since 2009 but can be expected to turn positive over the forecast period given economic conditions.

10 Irish Economic Analysis Division.

11 See "Understanding Irish Labour Force Participation", Central Bank of Ireland Research Technical Paper 01RT16.

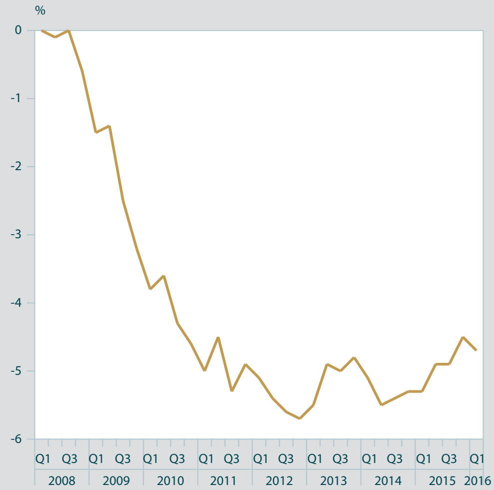
Box C: Recent Labour Market Developments
Diarmaid Smyth

Box C Fig 2: Unemployment Rates



Source: CSO.

Box C Fig 3: Labour Force: Gap from 2008 Peak



Source: CSO.

low for longer than anticipated. For the year as a whole, CPI and HICP inflation are expected to average 0.4 and 0.2 per cent, respectively (Table 5). These constitute downward revisions compared with the previous Bulletin and are attributable mainly to the weaker price pressures in the early part of the year, weak global commodity prices developments and a stronger exchange rate. Reflecting the strength in domestic demand, services inflation is projected to average 2.8 per cent this year, while goods prices are set to decline by 2.6 per cent due to lower energy, industrial goods and processed food prices. Looking to 2017, some pick-up in inflation is envisaged, driven mainly by a recovery in the goods component, as the moderating influence of external factors seems set to wane. CPI and HICP inflation are forecast to average 1.5 and 1.4 per cent in 2017, respectively.

On the currency front, following the UK referendum there were offsetting movements in the value of the euro against the pound sterling and the US dollar. Following a slight decline, the euro has since recovered against the dollar; the euro is now stronger against both the pound sterling and the dollar (our main trading partners) compared to the previous *Bulletin*. All else being equal, a rise in the value of the euro serves to decrease the euro price that foreign producers selling in Ireland need to charge to maintain profits in their own currency. Since the last *Bulletin*, the technical assumptions underlying the forecasts with regard to the US dollar and the pound sterling are approximately 1.8 and 7.7 per cent higher, respectively. This could add to the deflationary impact of low global commodity prices over the projection horizon.

Residential Property

Residential property prices increased by 10.6 per cent in 2015, although the rate of growth moderated significantly as the year progressed. Data for January to May 2016 points to a slight pick-up in the pace of growth compared to

Table 4: Employment, Labour Force and Unemployment 2014, 2015, 2016[f] and 2017[f]

	2014	2015	2016[f]	2017[f]
Agriculture	109	110	110	110
Industry (including construction)	348	374	386	394
Services	1,459	1,481	1,509	1,527
Total Employment	**1,917**	**1,964**	**2,005**	**2,031**
Unemployment	240	203	171	158
Labour Force	2,157	2,167	2,176	2,189
Unemployment Rate (%)	11.1	9.4	7.9	7.2

Note: Figures may not sum due to rounding.

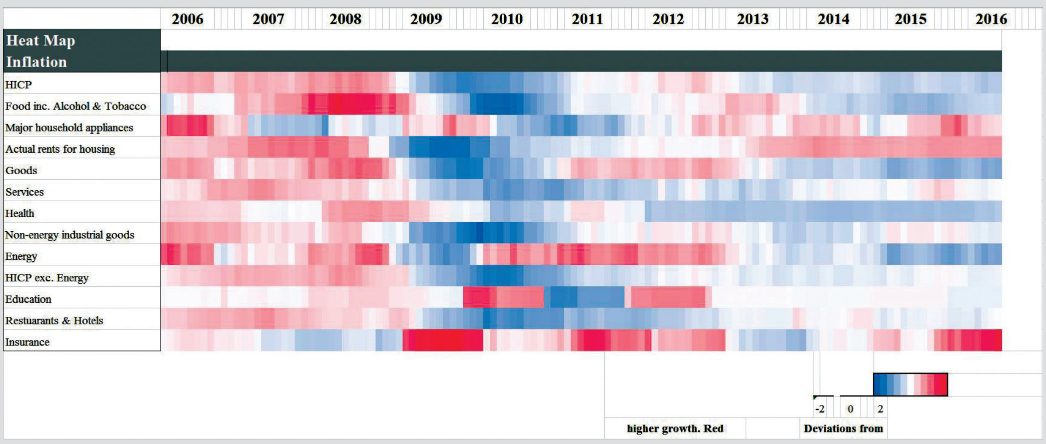
Box D: An Inflation Heat Map for Ireland

John Scally and Diarmaid Smyth[12]

Inflationary pressures in Ireland have been muted for a sustained period of time with the Harmonised Index of Consumer Prices (HICP) below 2 per cent since late 2012 and even slightly negative in 2015. To date in 2016 (as outlined above) prices have declined in four of the first six months of this year. The absence of aggregate inflation in the presence of very robust and sustained growth, while counter intuitive, largely reflects the fact that Ireland is a price taker on international markets. In particular, the current weakness in consumer prices is heavily influenced by global price developments, particularly oil and energy price declines. In total, energy prices account for a significant weighting in the HICP – at 8.8 per cent.

To get a better feel for underlying inflationary pressures, a heat map (building on the work presented in the previous Bulletin) has been developed for the HICP and twelve large sub-components (Figure 1).[13] The map is a quick and efficient tool for monitoring price developments and is particularly useful in highlighting areas where price pressures are most (or least) prominent. The map's shadings are determined by the number of standard deviations from the mean for each component. A growth rate two standard deviations below the mean is assigned the darkest blue, while the growth rate two standard deviations above the mean is shaded the darkest red. Observations within a standard deviation of the mean are shaded neutral. It should be noted, however, that a blue reading does not necessarily mean that absolute prices are falling – prices may in fact be rising but are still below the historical mean rate of inflation.

Fig 1: Inflation Heat Map



12 Irish Economic Analysis Division.

13 See Box A: "A Macroeconomic Heat Map for Ireland", in the Domestic Economy Chapter of the Central Bank of Ireland Quarterly Bulletin No 2, 2016.

Box D: An Inflation Heat Map for Ireland
John Scally and Diarmaid Smyth

From Figure 1, the weakness in the headline HICP since late 2012 is apparent. Even abstracting from energy price declines (e.g. HICP exc. Energy), price pressures remain muted. Global commodity price movements feed into inflation directly via energy prices and indirectly (to non-energy goods) as cost bases decline. The lack of price pressures across the main sub-components in the first half of this year appears to be fairly pervasive, particularly for goods and energy components. However, a number of sub-categories within the HICP are reporting price pressures, specifically rents, major household appliances and insurance. Typically, it is the service sectors and areas where Ireland is not a price taker on international markets that are registering the strongest pressures. This is also consistent with other data sources including strong rent increases in the residential property market and above average increases in insurance products such as car insurance. There is also anecdotal evidence that residential building costs remain above house price inflation due to high fit-out costs; this is highlighted in the heat map by higher than average increases in major household appliances.

Table 5: Inflation Measures - Annual Averages, Per Cent

Measure	HICP	HICP excluding Energy	Services[a]	Goods[a]	CPI
2012	1.9	1.0	2.0	1.9	1.7
2013	0.4	0.5	1.6	-0.6	0.5
2014	0.2	0.6	2.5	-1.9	0.2
2015	0.0	1.0	3.0	-3.0	-0.3
2016[f]	0.2	0.8	2.8	-2.6	0.4
2017[f]	1.4	1.2	2.8	-0.2	1.5

a Goods and services inflation refers to the HICP goods and services components

the end of 2016, with annual increases of 6.9 per cent. Diverse regional patterns persist in the dynamics of residential property prices, with prices in Dublin currently increasing at 4.8 per cent, while prices outside Dublin are rising by 8.5 per cent. Apartment prices in Dublin fell by 1.1 per cent in the year to May - the first annual decline since May 2013. However, it should be noted that apartment prices generally suffer from greater volatility than house prices due to low volumes of observed transactions.

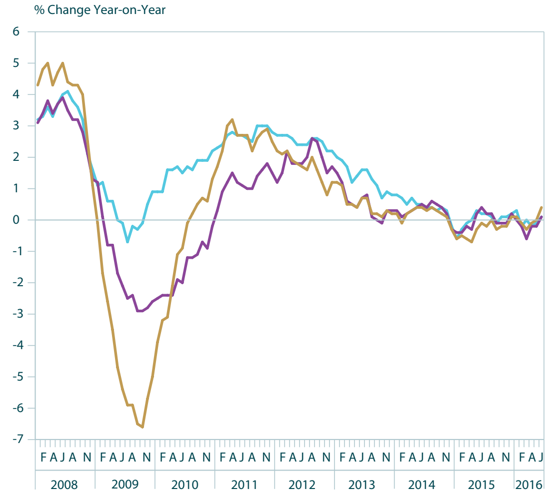
Commercial Property

The latest data from the MSCI/IPD show that commercial property prices continued to grow at a robust pace in the first quarter of 2016. On an annual basis growth was strong across all sectors with the office, retail and industrial sectors recording increases of 18.9, 15.4 and 15.1 per cent, respectively. Overall commercial property prices increased by 17.7 per cent. These data are corroborated by the Jones Lang Lasalle property index which pointed to capital increases of 18.5 per cent. The lack of capacity in the construction sector is likely to add to capital and rent increases in 2016. The Bank's latest Macro Financial Review (June 2016) conducts a detailed analysis of recent developments in the commercial property sector.

Competitiveness

The uncertainty in the run up to the Brexit referendum contributed to a weakening in the sterling/euro exchange rate. By early July, the euro had appreciated by 14 per cent relative to the pound sterling since the beginning of the year. The euro to pound exchange rate reached 0.853 in July, the highest level since October 2013. Much of this appreciation can be attributed to Brexit with an 8.9 per cent increase seen in the days following the referendum. The euro has appreciated by 2.3 per cent relative to the US dollar since the beginning of the year.

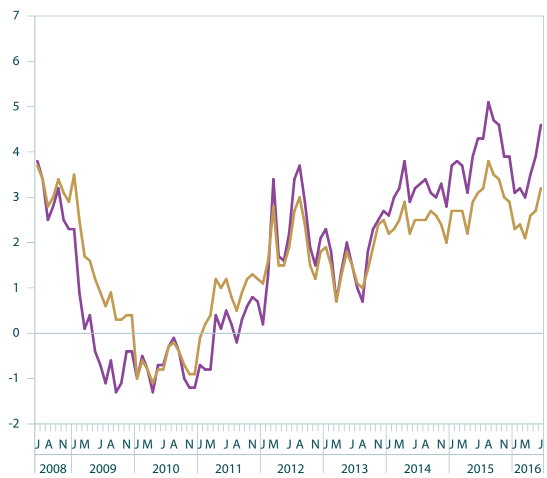
Chart 5: Consumer Prices



— Ireland: Consumer Price Index
— Ireland: Harmonised Index of Consumer Prices (HICP)
— EA-19: Monetary Union Index of Consumer Prices (MUICP)

Source: CSO.

Chart 6: Services Sector Inflation

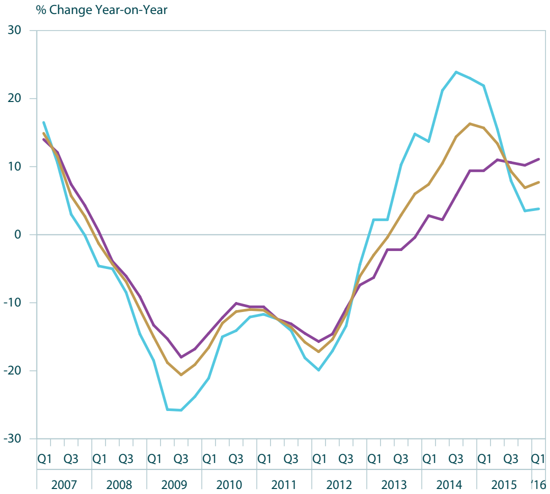


— HICP Services (Overall) — HICP Core Services

Note: Core Market Services equals HICP services excluding telecommunications, alcohol and administered services.

Source: CSO.

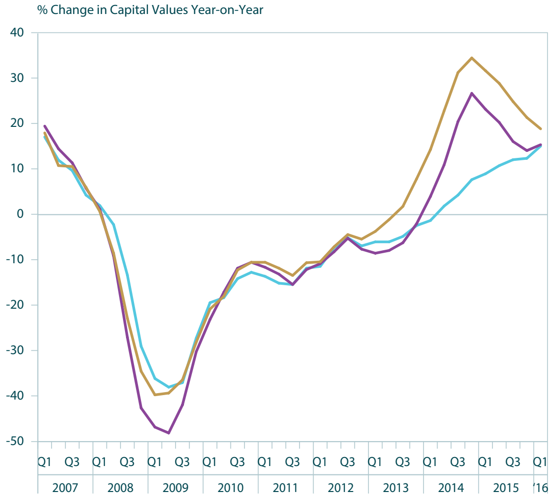
Chart 7: Residential Property Price Indices



— National – All Residential Properties
— National Excluding Dublin – All Residential Properties
— Dublin – All Residential Properties

Source: CSO.

Chart 8: MSCI/IPD Irish Commercial Property Index



— Office — Retail — Industrial

Source: MSCI/IPD.

Table 6: Annual Government Finance Statistics, 2010 to 2015 (% of GDP)

	2010	2011	2012	2013	2014	2015
Headline GG Deficit	-32.1	-12.6	-8.0	-5.7	-3.7	-1.8
Underlying GG Deficit	-13.2	-9.3	-8.0	-5.6	-3.7	-0.8
GG Gross Debt	86.3	109.6	119.5	119.5	105.2	78.7

Source: Department of Finance, Central Bank of Ireland Calculations

The latest Harmonised Competitiveness Index (HCI) data for June 2016 show that the nominal HCI appreciated by 2.5 per cent on a year-on-year basis. The real HCI increased by 1.4 per cent when deflated with either consumer or producer prices. These increases point to some loss of competitiveness. While these developments point to a less favourable situation for exporters, both the nominal and real HCI are trading at relatively low levels given recent history.

Based on the outlook for GDP and employment discussed above, annual average productivity growth of 2.8 and 2.3 per cent is forecast for 2016 and 2017, respectively. Factoring in likely developments in earnings, unit labour costs are projected to decline by 0.4 per cent in 2016 before rising by 0.2 per cent in 2017.

The Public Finances

Overview

A General Government deficit of 1.8 per cent of GDP is estimated for 2015 (down from 3.7 per cent in 2014) helped in no small part by the substantial upward revision to nominal GDP. This outturn was lower than had been anticipated even in spite of the fact that some AIB related share transactions were reclassified as deficit increasing capital transfers. Excluding these one-offs, the underlying deficit improved further to 0.8 per cent of GDP. Accordingly, the economy comfortably achieved its Excessive Deficit Procedure (EDP) target, and as a result exited the corrective arm of the Stability and Growth Pact. This is a notable achievement given the fiscal position that prevailed when Ireland entered the Financial Assistance Programme in late 2010 (see Table 6). The General Government debt ratio declined to 78.7 per cent of GDP in 2015 from 105.2 per cent the previous year. This decline was helped by the denominator effect, following the significant upward revision to GDP in 2015.

Exchequer Returns[14]

Exchequer data is currently available for the first half of the year. It reveals continued strong tax growth and marginally higher expenditure, with the overall outturn notably better than had been expected (see Table 7). This follows a significant Exchequer over-performance in 2015, which was largely driven by the rapid growth in corporation taxes.

Exchequer tax revenue grew by 9.2 per cent on an annual basis in the year to June, with strong gains across most tax categories. Income taxes were 5.6 per cent higher relative to the same period in 2015, consistent with the recovering labour market, solid employment growth and increases in average weekly earnings. Meanwhile, the other 'big four' tax heads - excise duties, corporation tax and VAT - were up by 29.2 per cent, 15.0 per cent and 3.7 per cent, respectively. Corporation tax is again performing well ahead of expectations, with the outturn more than €500 million above of profile in the first half of the year. The Government have signalled, however, that a significant portion of the over-performance in total taxes is being driven by large unexpected payments as well as timing issues, some of which are expected to unwind as the year progresses. Non-tax revenues declined in year-on-year terms, although this was mostly anticipated and primarily reflects lower dividends and Central Bank surplus receipts.

On the expenditure side, developments in current primary spending – which rose 0.9 per cent year-on-year – drove the overall modest increase in total spending. There were broad based savings across most departments

14 The figures in this section exclude transactions with no general government impact, giving a closer approximation to the General Government balance. These figures are provided by the Department of Finance in its Analytical Exchequer Statement.

Table 7: Analytical Exchequer Statement for June 2016 (€ millions)

	Jan-June 2016 €m	Jan-June 2015 €m	Annual Change (%)	Outturn vs Profile (%)
Revenue	**29,516**	**27,958**	**5.6**	**3.7**
– Tax revenue	22,523	20,622	9.2	3.4
– Appropriations-in-aid	5,505	5,318	3.5	1.4
– Other Revenue	1,487	2,018	-26.3	17.9
Expenditure	**31,469**	**31,147**	**1.0**	**-0.8**
– Current Primary Expenditure	26,068	25,841	0.9	-0.5
– Capital Expenditure	1,219	1,123	8.6	-3.2
– Interest on National Debt	4,182	4,183	0.0	-1.5
Exchequer Balance	**-1,953**	**-3,189**	**38.7**	**39.8**

Source: Department of Finance

Note: The figures in the Table exclude transactions with no general government impact, giving a closer approximation to the General Government Balance.

which came in below profile in June, although these were partly offset by developments in Health, where current spending was 2.1 per cent higher than anticipated and 5.5 per cent higher than the same period last year. Smaller EU Budget contributions had a favourable effect helping to contain spending in the first six months of the year. Capital spending increased in annual terms, primarily reflecting developments in Transport and Education, while interest spending was flat year-on-year. Overall, total spending was 0.8 per cent below profile in June.

Funding and Other Developments

The National Treasury Management Agency (NTMA) raised a further €1.5 billion through bond sales in the second quarter of the year, with auctions continuing to be oversubscribed. This brought the total raised to date in 2016 to €5.5 billion, and as a result the NTMA is comfortably on target to achieve its range of €6-10 billion for the year as a whole. The NTMA also cancelled a further €500 million in outstanding bonds linked to the liquidation of IBRC during this period. There has also been positive news on the ratings front, with Moody's upgrading Ireland's long-term sovereign credit rating to A3 (from Baa1) with a positive outlook. This recent upgrade now places Ireland in the A ratings category with all major credit rating agencies.

In June the Government announced an increase of €540 million in the proposed government expenditure ceiling for this year. The majority of this – €500 million – will go to the Department of Health to deal with spending pressures, with the remainder allocated to the Department of Justice. This increase is consistent with the ¼ per cent of GDP in spending pressures that the Government noted could materialise in the *2016 Stability Programme Update* published in April.