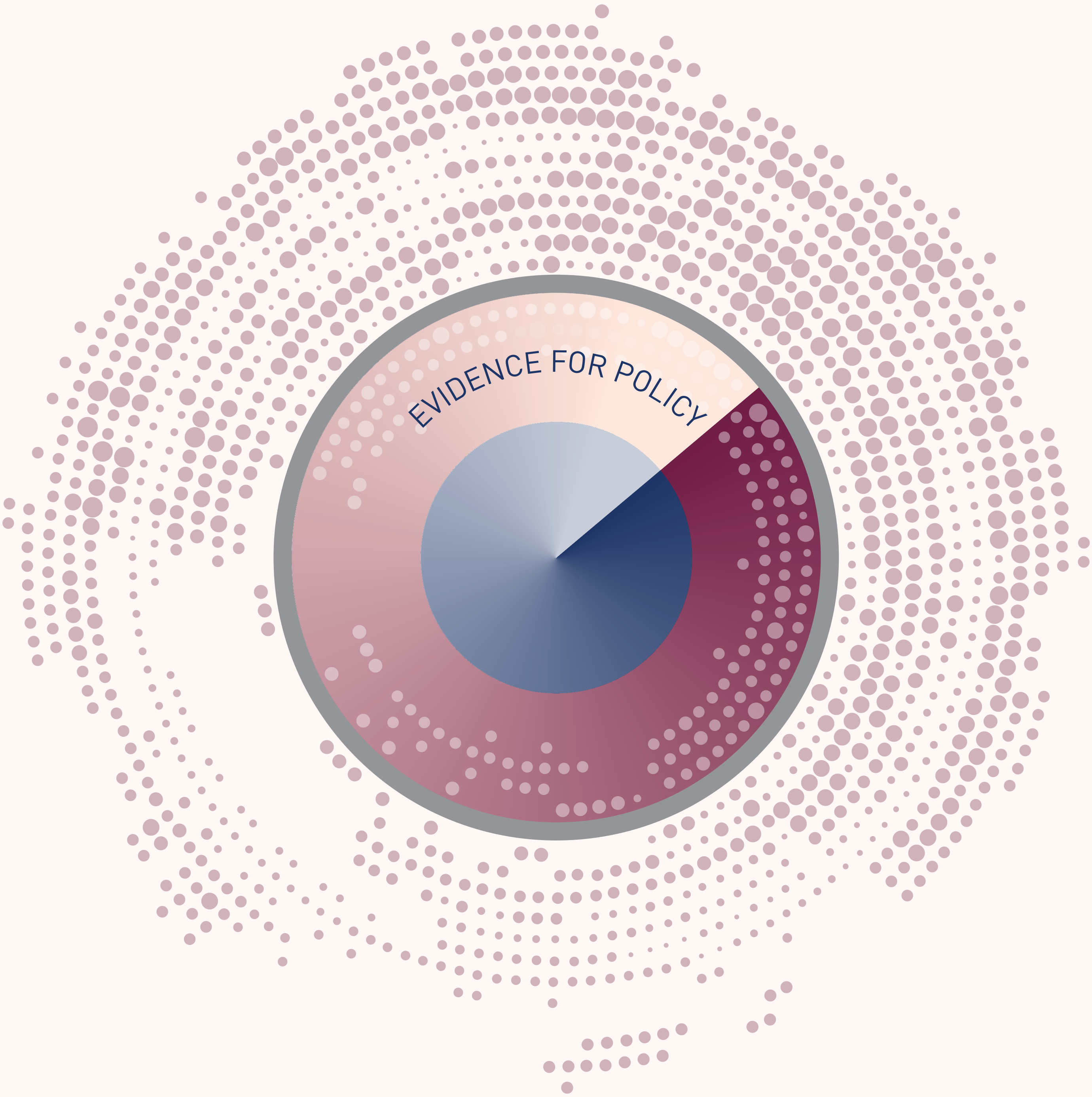
MACRO
ECONOMIC
FORECASTING
Spring 2017

QUARTERLY ECONOMIC COMMENTARY

SPRING 2017

KIERAN MCQUINN, DANIEL FOLEY, ELISH KELLY



ESRI ECONOMIC & SOCIAL RESEARCH INSTITUTE

QUARTERLY ECONOMIC COMMENTARY

Kieran McQuinn
Daniel Foley
Elish Kelly

Spring 2017

The forecasts in this *Commentary* are based on data available by 09 March 2017

Draft completed on 09 March 2017

A subscription to the *Quarterly Economic Commentary* costs €327 per year, including VAT and postage.

ISBN 978-0-7070-0424-2

THE AUTHORS

The Commentary is edited by Kieran McQuinn. Kieran McQuinn is Research Professor, Daniel Foley is a Research Assistant and Elish Kelly is a Research Officer at the Economic and Social Research Institute (ESRI).

The Quarterly Economic Commentary has been accepted for publication by the Institute, which does not itself take institutional policy positions. It has been peer reviewed by ESRI research colleagues prior to publication. The authors are solely responsible for the content and the views expressed.

TABLE OF CONTENTS

SUMMARY TABLE

	2014	2015	2016	2017	2018
Output (Real Annual Growth %)					
Private Consumer Expenditure	1.7	4.5	3.0	3.1	3.0
Public Net Current Expenditure	5.4	1.2	5.3	2.5	2.6
Investment	18.2	32.7	45.5	9.6	8.7
Exports	14.4	34.4	2.4	5.9	5.6
Imports	15.3	21.7	10.3	7.6	7.7
Gross Domestic Product (GDP)	8.5	26.3	5.2	3.8	3.6
Gross National Product (GNP)	9.2	18.7	9.0	3.5	3.4
Prices (Annual Growth %)					
Consumer Price Index (CPI)	0.2	-0.3	0.0	0.6	1.1
Growth in Average Hourly Earnings	1.6	2.9	2.3	2.5	2.5
Labour Market					
Employment Levels (ILO basis (‘000))	1,914	1,964	2,020	2,078	2,126
Unemployment Levels (ILO basis (‘000))	243	204	172	142	127
Unemployment Rate (as % of Labour Force)	11.3	9.4	7.9	6.4	5.6
Public Finance					
General Government Balance (€bn)	-7.2	-4.8	-0.6	-0.3	1.5
General Government Balance (% of GDP)	-3.7	-1.9	-0.2	-0.1	0.5
General Government Debt, % of GDP	105.2	78.6	74.9	70.8	67.2
Balance of Payments Current Account (€bn)	3.2	26.2	12.5	7.4	2.2
Current Account (% of GNP)	2.0	12.9	10.5	4.1	2.3

Note: Detailed forecast tables are contained in an Appendix to this *Commentary*.

NATIONAL ACCOUNTS 2016

A: Expenditure on Gross National Product

	2015	2016	Change in 2016		
	€ bn	€ bn	Value	Price	Volume
Private Consumer Expenditure	92.4	96.1	4.0	1.0	3.0
Public Net Current Expenditure	27.0	28.0	3.7	-1.5	5.3
Gross Fixed Capital Formation	54.1	80.8	49.3	2.6	45.5
Exports of Goods and Services	317.2	318.5	0.4	-1.9	2.4
Physical Changes in Stocks	1.3	1.0			
Final Demand	**492.0**	**524.4**	**6.6**	**-0.9**	**7.6**
less:					
Imports of Goods and Services	236.0	256.0	8.5	-1.6	10.3
Statistical Discrepancy	-0.2	0.0			
GDP at Market Prices	**255.8**	**268.3**	**4.9**	**-0.3**	**5.2**
Net Factor Payments	-53.2	-41.8			
GNP at Market Prices	**202.6**	**226.6**	**11.8**	**2.6**	**9.0**

B: Gross National Product by Origin

	2015	2016	Change in 2016	
	€ bn	€ bn	€ bn	%
Agriculture	3.3	3.4	0.1	2.5
Non-Agriculture: Wages, etc.	77.6	81.7	4.1	5.3
Other	94.1	97.0	2.8	3.0
Adjustments: Stock Appreciation	0.2	0.2		
Statistical Discrepancy	0.2	0.0	-0.1	-93.5
Net Domestic Product	**175.5**	**182.3**	**6.8**	**3.9**
Net Factor Payments	-53.2	-41.8	11.4	-21.4
National Income	**122.3**	**140.5**	**18.2**	**14.9**
Depreciation	61.6	66.3	4.8	7.7
GNP at Factor Cost	**183.9**	**206.8**	**23.0**	**12.5**
Taxes less Subsidies	18.8	19.7	0.9	5.0
GNP at Market Prices	**202.6**	**226.6**	**23.9**	**11.8**

C: Balance of Payments on Current Account

	2015	2016	Change in 2016
	€ bn	€ bn	€ bn
X – M	81.2	62.5	-18.7
F	-53.2	-41.8	11.4
Net Transfers	-3.1	-2.7	0.4
Balance on Current Account	**24.9**	**18.0**	**-6.9**
as % of GNP	12.3	8.0	-3.1

NATIONAL ACCOUNTS 2017

A: Expenditure on Gross National Product

	2016	2017	Change in 2017		
	€ bn	€ bn	Value	Price	Volume
Private Consumer Expenditure	96.1	100.1	4.1	1.0	3.1
Public Net Current Expenditure	28.0	28.8	3.0	0.5	2.5
Gross Fixed Capital Formation	80.8	91.6	13.4	3.5	9.6
Exports of Goods and Services	318.5	346.4	8.7	2.7	5.9
Physical Changes in Stocks	1.0	2.0			
Final Demand	**524.4**	**568.5**	**8.4**	**2.5**	**5.7**
less:					
Imports of Goods and Services	268.4	284.1	5.9	1.9	3.9
Statistical Discrepancy		0.0			
GDP at Market Prices	**268.3**	**284.1**	**5.9**	**2.0**	**3.8**
Net Factor Payments	-47.4	-51.6			
GNP at Market Prices	**220.9**	**232.5**	**5.2**	**1.7**	**3.5**

B: Gross National Product by Origin

	2016	2017	Change in 2017	
	€ bn	€ bn	€ bn	%
Agriculture	3.4	3.5	0.1	3.0
Non-Agriculture: Wages, etc.	81.7	86.3	4.6	5.7
Other	97.0	102.5	5.5	5.7
Adjustments: Stock Appreciation	0.2	0.2		
Statistical Discrepancy	0.0	0.0	0.0	0.0
Net Domestic Product	**182.3**	**192.5**	**10.2**	**5.6**
Net Factor Payments	-47.4	-51.6	-4.2	8.8
National Income	**134.9**	**141.0**	**6.1**	**4.5**
Depreciation	66.3	71.1	4.8	7.2
GNP at Factor Cost	**201.2**	**212.0**	**10.8**	**5.4**
Taxes less Subsidies	19.7	20.5	0.7	3.8
GNP at Market Prices	**220.9**	**232.5**	**11.6**	**5.2**

C: Balance of Payments on Current Account

	2016	2017	Change in 2017
	€ bn	€ bn	€ bn
X – M	62.5	61.7	-0.9
F	-47.4	-51.6	-4.2
Net Transfers	-2.7	-2.7	0.0
Balance on Current Account	**12.4**	**7.4**	**-5.0**
as % of GNP	5.6	3.2	-2.2

NATIONAL ACCOUNTS 2018

A: Expenditure on Gross National Product

	2017	2018	Change in 2018		
	€ bn	€ bn	Value	Price	Volume
Private Consumer Expenditure	100.1	105.1	5.1	2.0	3.0
Public Net Current Expenditure	28.8	29.9	3.7	1.1	2.6
Gross Fixed Capital Formation	91.6	104.3	13.9	4.8	8.7
Exports of Goods and Services	346.4	375.7	8.5	2.7	5.6
Physical Changes in Stocks	2.0	3.0			
Final Demand	**568.8**	**618.0**	**8.6**	**2.8**	**5.6**
less:					
Imports of Goods and Services	284.7	316.8	11.3	3.3	7.7
Statistical Discrepancy	0.0	0.0			
GDP at Market Prices	**284.1**	**301.2**			
Net Factor Payments	-51.6	-53.9			
GNP at Market Prices	**232.5**	**247.3**	**6.4**	**2.9**	**3.4**

B: Gross National Product by Origin

	2017	2018	Change in 2018	
	€ bn	€ bn	€ bn	%
Agriculture	3.5	3.6	0.1	2.5
Non-Agriculture: Wages, etc.	86.3	90.6	4.3	5.0
Other	102.5	112.0	9.6	9.3
Adjustments: Stock Appreciation	0.2	0.2		
Statistical Discrepancy	0.0	0.0	0.0	
Net Domestic Product	**192.5**	**206.5**	**13.9**	**7.2**
Net Factor Payments	-51.6	-53.9	-2.3	4.5
National Income	**141.0**	**152.6**	**11.6**	**8.2**
Depreciation	71.1	73.6	2.5	3.6
GNP at Factor Cost	**212.0**	**226.2**	**14.2**	**6.7**
Taxes less Subsidies	20.5	21.1	0.6	3.1
GNP at Market Prices	**232.5**	**247.3**	**14.8**	**6.4**

C: Balance of Payments on Current Account

	2017	2018	Change in 2018
	€ bn	€ bn	€ bn
X – M	61.7	58.9	-2.7
F	-51.6	-53.9	-2.3
Net Transfers	-2.7	-2.7	0.0
Balance on Current Account	**7.4**	**2.3**	**-5.0**
as % of GNP	3.2	0.9	-2.0

The Irish Economy – Forecast Overview

While 2016 saw a number of challenges emerge with likely significant implications for the Irish economy over the medium to longer term, the domestic growth outlook continues to be positive over the coming 12 to 18 months.

Domestic factors have been important constituents of growth in the Irish economy over the past number of years and are set to continue to play an influential role through 2018. Increased activity in the construction sector is impacting both aggregate consumption and investment; continued increases in rental levels are feeding into the former, while the higher levels of commercial and residential supply now apparent are a primary influence on the latter. Also employment growth which was quite strong in the latter part of 2016, saw sizeable increases in the construction sector.

It is more than likely that the construction sector will assume a growing importance in the domestic economy over the medium term. While this reflects the fact that housing supply is still somewhat below estimated levels of housing demand in the economy, it is important to remember the imbalances which emerged in the Irish economy prior to 2007. Not alone did the housing bubble have severe consequences for the banking sector, but overall economic activity was distorted in a number of ways by the disproportionate significance of the construction sector.

While Brexit and the policy orientation of the new US administration will almost certainly have negative implications for international trade over the coming years, significant external demand for Irish goods and services is envisaged in the immediate future. The economic outlook for Ireland's main trading partners is quite positive in the short to medium term.

Overall, therefore, we forecast that GDP will grow by 3.8 per cent in 2017 and 3.6 per cent in 2018. The latter outcome ties in with the medium-term forecast using COSMO – the new structural model of the Irish economy, which was launched at the end of 2016. Given the expected increase in construction related activity, we expect to see a consistent fall in the unemployment with the rate falling to 6.4 and 5.6 per cent by the end of 2017 and 2018 respectively.

However, the challenges to the domestic economy cannot be underestimated. Recent research by Lawless and Morgenroth (2016)[1] provides a highly useful granular assessment of potential new trade outcomes due to Brexit. In particular, their analysis reveals the heterogeneous impact of WTO style trade arrangements for the Irish economy on a sectoral basis.[2] Areas of the country where agricultural income is particularly relevant are set to be especially impacted under such a 'hard' Brexit scenario.

The Irish economy must seek to minimise the impacts of trade-related adverse shocks. This entails maintaining competitiveness in labour markets and strengthening productivity growth in general.[3] A small open economy particularly reliant on international trade is highly vulnerable to significant changes in international trading conditions.

In light of the distortionary impact on the domestic National Accounts of certain multinational-related activity, the report of the Economic Statistics Review Group (ESRG) proposes a number of new economic concepts and variables. The Central Statistics Office (CSO) has outlined a response to the report documenting a timeframe of delivery for some of these measures. The publication of these along with the requisite analysis should enable a more accurate characterisation of Irish economic activity.

1 Lawless M. and E. Morgenroth (2016). 'The Product and Sector Level Impact of a Hard Brexit across the EU'. Working Paper No. 550, Economic and Social Research Institute (ESRI).

2 Smith D., M. Fahy, B. Corcoran and B. O'Connor (2017). *UK EU exit – An exposure analysis of sectors of the Irish Economy*, Department of Finance, March, also examine likely sectors of the Irish economy most impacted by Brexit.

3 Some of the Brexit related policy implications are discussed in Davies R.B., I. Siedschlag and Z. Studnicka (2016), Corporate Taxation and Foreign Direct Investment in EU Countries: Policy Implications for Ireland, *Quarterly Economic Commentary*, Autumn for more details.

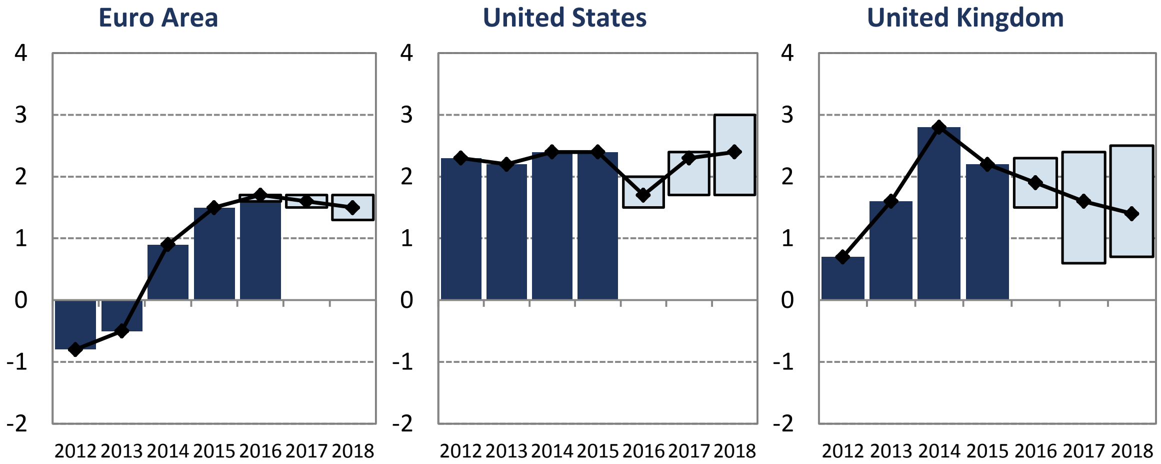
The International Economy

Forecasts for the International economies remain reasonably optimistic for 2017 and 2018 (Figure 1) despite the significant downside risks to international trade. In particular, forecasts for the UK, US and Euro Area economies have been revised upwards in recent months. The European Commission's latest forecasts suggest that the Euro Area will now grow by 1.6 per cent in 2017, revised up moderately by 0.1 per cent, before growing a further 1.8 per cent in 2018. The forecasts for 2017 have been revised up largely as the short-term negative impact of the Brexit referendum has not been as significant as originally envisaged. Euro Area economic growth accelerated towards the end of 2016 and looks to maintain momentum in 2017 driven by an improving labour market in many member countries and the accommodative nature of ECB monetary policy.

The UK economy has continued to perform above expectations, prompting a number of institutions to revise their forecasts upwards for the second time since the referendum. The HM Treasury which provides consensus forecasts for the UK economy believe that there will be GDP growth of 1.6 per cent in 2017 and 1.4 per cent in 2018. The US economy has been growing at a modest but steady rate in 2016 and with a large fiscal stimulus proposed by the incoming administration, is expected to continue to grow at a reasonable pace over the forecast horizon. In particular the Federal Reserve Board has forecast GDP growth of 2.1 per cent and 2 per cent in 2017 and 2018 respectively.

In 2017 and 2018 we expect the international economic climate to have some diverging impacts on Irish trade. In particular, we expect demand from the US to be strong over the period. On the other hand, export demand from the UK is likely to be weaker than in 2016 particularly in the food and agriculture sectors. Overall, we expect international developments to be net positive and drive growth in exports over the forecast horizon.

FIGURE 1 Real GDP Growth (% Change, Year-on-Year)



Sources: EuroFrame, IMF, OECD, HM Treasury and Federal Reserve.

THE UK ECONOMY

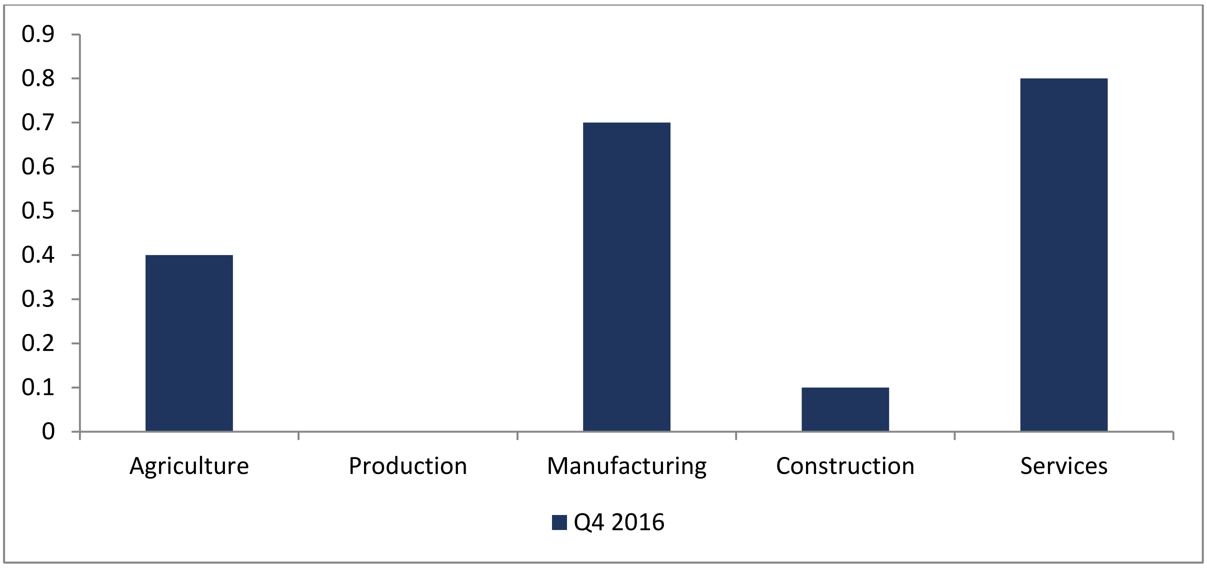
GDP growth has remained particularly resilient towards the end of 2016. In Q4 2016, growth of 0.6 per cent was observed, the same rate of growth as the preceding two quarters. Although the growth rate has been quite consistent in 2016, it has, however, been particularly unbalanced. In Q4, the majority of growth was driven by the services sector. Figure 2 shows the quarterly growth rates of GDP by industry for the UK. The results suggest that the most significant contribution came from consumer-focused industries such as retail sales and travel agencies.

Coupled with this, other indicators such as retail sales and business confidence suggest that consumers and businesses seem to be feeling reasonably confident in the face of an uncertain future for the UK. Recent labour market data released from the Office of National Statistics indicate that employment growth rose moderately by 0.1 percentage points in the last quarter of 2016, after being relatively flat over the latter half of the year. The BOE forecasts the unemployment rate to increase a little in the short term as demand for labour is set to wane. This could compound the pressure on households' real incomes as weak productivity growth and slack in the labour market suggest it may take some time before wages begin to grow again.

Growth is expected to moderate somewhat in 2017 with consensus forecasts from the UK Treasury estimating annual growth of 1.6 per cent as of February 2017. The slowdown is largely expected to be driven by an easing in consumption growth as inflation begins to impact households' real disposable income. Inflation rose towards the end of 2016 and in December was 1.6 per cent, only 0.4

percentage points below target. This is forecast to accelerate with the Bank of England predicting inflation exceeding the target level during 2017, mainly due to the depreciation of Sterling since June.

FIGURE 2 Quarter 4 GDP Growth in the UK by Industry (%)



Source: Office of National Statistics (ONS).

Despite forecasts for inflation exceeding the BOE’s target level, the Bank in their latest report chose to keep both interest rates and Quantitative Easing levels the same as the previous quarter. Trade should, however, offset some of the negative impacts of inflation and the reduced activity in the labour market as exports are forecast to increase while imports are expected to moderate, leading to a positive contribution from net exports in 2017 and 2018.

THE US ECONOMY

GDP in Q4 2016 grew at an annual rate of 1.9 per cent, primarily due to positive developments in domestic components of expenditure. Personal consumption along with investment and government spending all contributed to the growth in Q4. There was, however, a moderate slowdown compared to the 3.5 per cent annual growth observed in Q3. This was due to a negative contribution from net exports likely due to appreciation in the US Dollar following announcements from the new administration of plans for a large fiscal stimulus in 2017. Consumption, which accounts for around two-thirds of US economic activity, appears to be particularly strong at present driven by a low unemployment rate and rising wages. In addition to this, trends in consumer sentiment over the last few months indicate that consumer confidence remains quite favourable and should contribute to continuing consumption growth in 2017.

The unemployment rate in January was 4.8 per cent, moderately above levels in December but likely very close to its natural rate. There was an increase of 227,000 in the number of people in employment in January across a broad range of sectors including construction, retail and financial activities. The strong performance of the domestic economy in 2016 and slowly rising inflation increases the possibility of the Federal Reserve raising interest rates this year and next.

Any fiscal stimulus, if passed by the Congress, will likely boost economic activity in the short run. The IMF has revised upwards forecasts for the US economy largely as a result of the proposed infrastructure plan. In particular, they expect GDP growth of 2.3 per cent in 2017 and a further 2.5 per cent in 2018. There is, however, large risk and uncertainty associated with this forecast, mainly due to the lack of details of the fiscal stimulus. While the plans are likely to increase economic activity by means of increased investment, associated proposals to cut taxes while simultaneously increasing spending will place a significant strain on the public finances. This is likely to increase the deficit and debt levels which are arguably already at heightened levels. Ultimately, these proposals will require the backing of the US Congress. Compounding this uncertainty are increasing signs of rising protectionism which could be a significant risk to economic growth over the forecast period. Increasing protectionism could be expected to have serious negative consequences for trade and employment and ultimately overall growth.

EURO AREA

There was a steady increase in GDP in the second half of 2016, increasing by 0.4 and 0.5 per cent in Q3 and Q4. This is consistent with an overall annual growth of around 1.7 per cent. Private consumption was the main driver of growth with an expansion in real disposable incomes and positive developments in the labour market driving the increase. Positive factors such as low inflation as well as low energy prices provided a boost to household purchasing power over the period. Indicators, such as consumer confidence and retail sales are pointing to positive growth in consumption in 2017 and 2018. The European Commission expects growth to continue, though more moderately, growing 1.8 and 1.6 per cent in 2017 and 2018 respectively. In contrast, investment growth in the Euro Area remains relatively weak despite the low interest rates available to businesses. Growth has slowed towards the end of 2016 from 0.3 per cent in Q2 to 0.0 per cent in Q3 2016.[4] Factors such as loose monetary policy and a reasonably positive outlook for the world economy should provide some incentive for increased investment activity. On the other hand, an elevated level of uncertainty and high levels of debt should weigh on activity. Overall, investment growth in the Euro

[4] Irish data are excluded as these are particularly volatile.

Area is expected to grow at a moderate pace. This is however, far below pre-crisis levels. Trends in employment in the Euro Area have been positive over the last few years. In December, the unemployment rate in the Euro Area was 9.6 per cent, down from 10.4 per cent in January 2016 but still above its pre-crisis low of 7.2 per cent. There have also been some beneficial compositional effects with a continuing decline in both youth and long term unemployment levels. Trends in the labour market are forecasted to continue with the growth rate in employment expected to be around 1 per cent in both 2017 and 2018. This should underpin the GDP growth forecasted in 2017 and 2018.

As always, there are some risks associated with these forecasts mainly relating to Brexit and US trade and fiscal policy. Heightened uncertainty surrounding the outlook could lead to increasing financial and exchange rate instability. Any further falls in the value of the Pound could weigh negatively on the trade outlook for the Euro Area this year and next.

China

As the Chinese economy has transitioned towards a more consumption and services focused economy, growth has slowed significantly. Despite this, China still remains one of the best performing economies worldwide and accounts for a significant proportion of world GDP. In 2016, China's GDP is expected to have grown by 6.7 per cent, marginally slower than last year but still in the target range of 6.5-7 per cent set by the government. The government has recently revised its GDP growth target down to 6.5 per cent for 2017 as it becomes increasingly difficult to achieve the high growth rates of the past. Both monetary and fiscal policy remain quite expansionary and provide a very accommodative environment for business and consumers to borrow and spend. If policies continue to remain accommodative then this is expected to support growth over the next two years. IMF forecasts suggest that despite an expansionary policy environment, growth will slow marginally, with GDP of 6.6 per cent and 6.0 per cent in 2017 and 2018 respectively.

There are a number of risks associated with the outlook for the Chinese economy. Export growth has slowed in recent years driven by low global demand which has acted as a drag on growth over the last few years. Increasing US protectionism could exacerbate this trend leading to a larger than expected slowdown in the economy. On the domestic side, there are also a number of factors which could worsen the outlook. There have been increasing capital outflows leaving the country in recent years which has impacted the level of FDI in China. Although the central bank has tightened capital controls to stem this flow, the trend is still worrying. This is putting increasing downward pressure on the currency which could have serious implications for businesses with Dollar denominated debt.

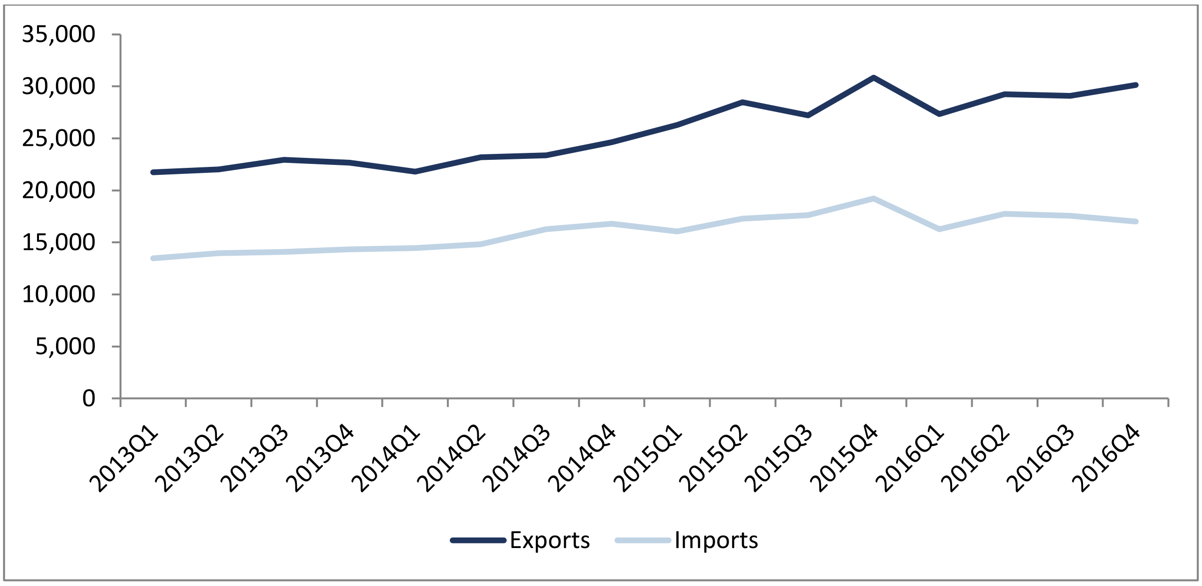
Finally, as noted in previous *Commentaries*, the level of corporate and household debt in the economy is substantial and a significant increase in non-performing loans across the household and corporate sector would have serious implications for the Chinese economy in general and the banking sector in particular.

IMPLICATIONS FOR IRISH EXPORTS, IMPORTS AND THE BALANCE OF PAYMENTS

After the extraordinary performance of Irish exports in 2015, data from the final month of 2016 suggest that the value of goods exports increased by 4.0 per cent for the year. In particular, exports totalled €116,916 million, the highest annual total on record. Some of the largest gains over the year include Electrical Machinery, Apparatus and Appliances which increased by around €4.4 billion or 150 per cent. There was also a significant increase in Organic Chemicals by over €2 billion or 10 per cent.

Figure 3 shows the trends over time in the value of both goods imports and exports. Goods imports appear to have fallen compared to last year, albeit marginally by 0.7 per cent. This drop in imports can be attributed to the volatile aircraft component of Machinery and Transport equipment. These numbers translate to a further widening in the trade surplus in 2016 by over €5 billion or just under 12 per cent.

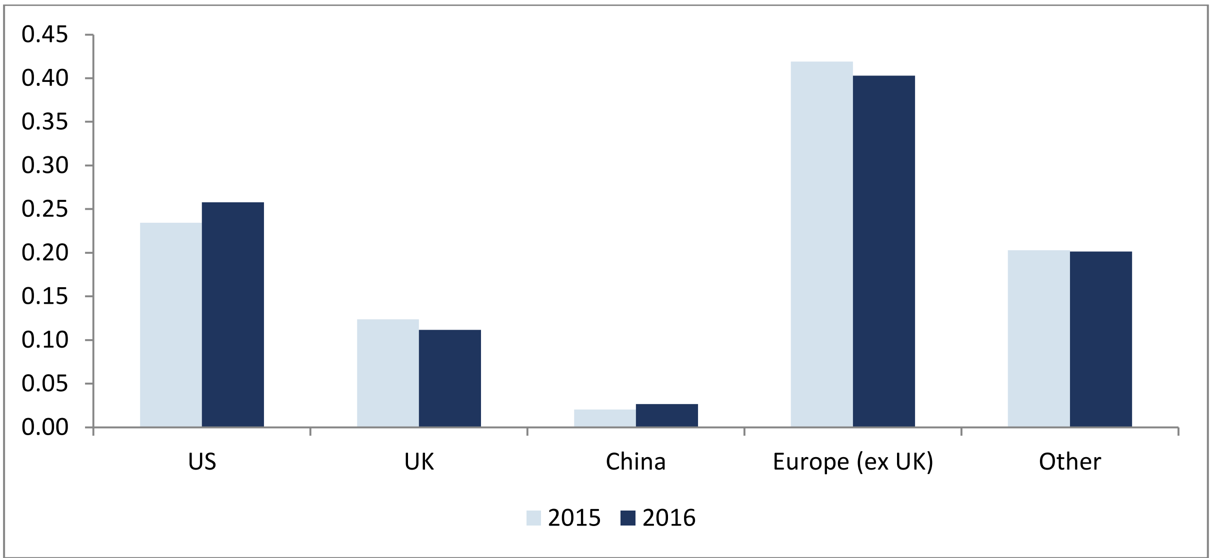
FIGURE 3 Goods Exports and Imports Value (Quarterly)



Source: Central Statistics Office.

Compared with 2015, the value of goods exports to the UK fell by nearly €500 million or 4 per cent, suggesting that currency fluctuations in the latter half of 2016 have had a relatively large effect on Irish exports. Interestingly, it appears that an increase in trade with the US has more than offset this fall with exports increasing by €3.3 billion or 12 per cent over the same period. We expect these developments to remain over the forecast horizon although it is possible that interest rates in the US could rise faster than expected, adding further upward pressure on the US Dollar and leading to relatively cheaper Irish goods and services exports. Figure 4 shows the relative shares of goods exports by region in 2015 and 2016. Over the last year it appears that the relative share of goods exports going to the UK has fallen by around 1 per cent driven, at least in part, by Sterling depreciation following the June referendum. At the same, time the shares going to the US and China have increased by 3 per cent and 1 per cent respectively.

FIGURE 4 Goods Export Share by Region (% of Total) Jan-Dec 2015 to Jan-Dec 2016



Source: Central Statistics Office.

The latest release of the Balance of Payments suggests that service exports grew by 12 per cent annually. The increase across the sectors was broad with exports increasing in all but three. The most notable increases occurred in the business and services sector growing by 16 per cent and the computer services sector, increasing by 13 per cent annually. The concentration of service imports in relatively few sectors is evident from the Balance of Payments data. In Q4, two sectors, the business services sector and the royalties and licences sectors accounted for approximately 85 per cent of the total. It appears that multinationals are still having a relatively large effect on the Balance of Payments in Ireland with annual growth in service imports of 54 per cent in 2016. The significant volatility in service imports is closely mirrored by activity in

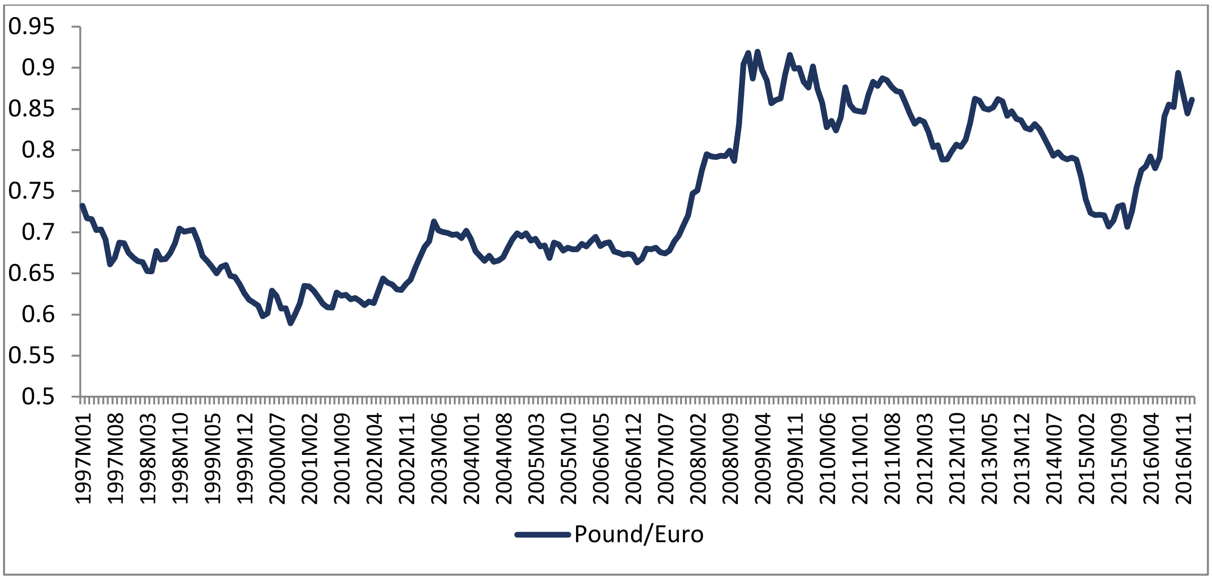
Investment, particularly in the Intangible component. The increase in the last quarter of 2016 is being driven by imports of intellectual property rights particularly in the business services sector. This has had a significant effect on the balance on the current account, falling by around €14 billion down to €12.5 billion for the year or 4.7 per cent of GDP.

As part of the official response to the report of the Economic and Statistics Review Group (ESRG), the CSO has proposed in 2017 to initially publish a ‘walkthrough’ analysis for annual trade data which highlights the relevant adjustments applied to external trade statistics (which are compiled on the basis of a ‘crossing the border’ concept) in order to calculate exports and imports on a Balance of Payments/National Accounts basis (which are compiled on an ‘economic ownership’ basis).

Our trade forecast for 2017 is broadly in line with the previous *Commentary*. We believe exports will grow in both 2017 and 2018. Our assumption for these forecasts is that the Pound/Euro exchange rate remains broadly flat at current levels and will not reduce further during the forecast horizon. This should lead to a gradual waning in export demand from the UK and recent data suggest this is already underway. We believe that the positive outlook for both the US and EU economies and relatively stable US/Euro exchange rate should contribute to further growth in exports of 5.9 in 2017 and a further 5.6 in 2018.

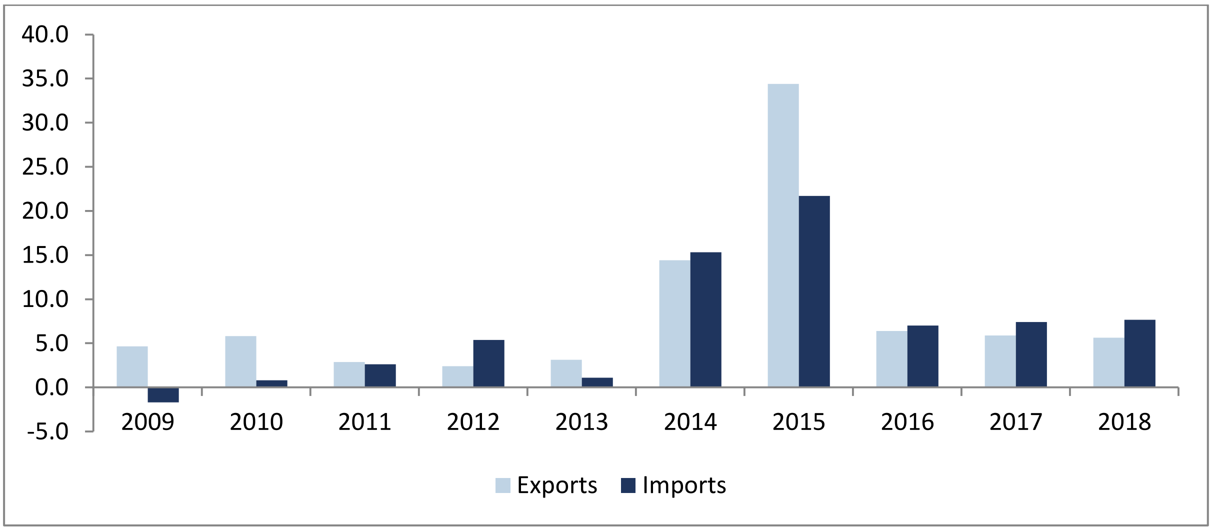
From 2016 data, it is clear that there is still a significant amount of multinational activity on the services side of imports. For our forecasts, we assume that we do not see activity in service imports on the same scale that was observed in 2015 and 2016. We do think, however, that import growth will still be strong in both 2017 and 2018 as a number of positive tailwinds benefit consumers. In particular, the fall in the value of the Pound relative to the Euro make imports from the UK relatively cheaper than a year ago (Figure 5). In addition to this, the labour market seems to be improving at a faster pace than expected and this should support incomes and spending. We therefore think imports will grow by 7.6 per cent in 2017 and by 7.7 per cent in 2018 (Figure 6). Overall, taking into account recent developments in trade data and expectations of the economic climate over the next two years, we believe that the contribution to GDP from net exports will be marginally negative in 2017 and 2018.

FIGURE 5 Euro/Pound Exchange Rate



Source: European Central Bank.

FIGURE 6 Import and Export Growth (2017-2018 Forecasts)



Source: *QEC* calculations.

There are a number of upside and downside risks to consider over the horizon of our forecasts. One source of upside risk is that a large fiscal stimulus in the US will boost the economy and increase the value of the US Dollar. A rise in the currency relative to the Euro could provide a boost for Irish goods and services and potentially offset some of the negative impacts associated with Brexit. Other policies, on the other hand, that the incoming US administration has signalled such as higher trade protectionism and cutting corporation tax to attract companies back to the US have the potential to weaken overall growth in the Irish economy.

Brexit remains the main concern over the short term as impacts from Sterling depreciation are expected to continue to weigh on Irish export demand over the next two years. We have, however, assumed that exchange rates broadly remain at current levels over the forecast period but as increasing inflation erodes UK household purchasing power we would expect export growth to the UK to decline further. The substantive impact of Brexit is largely expected to occur upon the UK's departure from the EU. A recent report by Bergin et al. (2016)[5] highlights the potential impact on Ireland of a UK Brexit under a variety of trade agreement scenarios. The study over a horizon of ten years suggests that Irish output could be between 2.7 and 3.8 per cent lower relative to a 'No-Brexit' baseline.[6]

5 Bergin et al. (2016). 'Modelling the Medium to Long Term Potential Macroeconomic Impact of Brexit on Ireland'. Working Paper No. 548, Economic and Social Research Institute (ESRI).

6 Ebell M. (2016), 'Assessing the impact of trade agreements on trade', *National Economic Institute Review* vol. 238, finds that the reduction in the UK's trade with the EU would be lower by 30 per cent in the case of a WTO scenario (the estimated trade reduction for trade with goods is 32 per cent and for trade in services 26 per cent).

The Domestic Economy

OUTPUT

The domestic section of the *Commentary* is organised as follows; we initially review the outlook for output growth before discussing developments in the Irish monetary and financial sectors. Prices and earnings in the economy are then discussed, followed by a review of demand-side factors such as consumption and housing market issues. On the supply side, we then examine developments in investment and the labour market before concluding with an analysis of the public finances.

The publication of the Economic Outlook in 2016 saw the first published output from COSMO – the new structural model of the Irish economy. One of the key relationships which is estimated in the model is the rate of potential output growth in the Irish economy. Bergin and Fitzgerald (2014)[7] have discussed the benefits of estimating potential output with a structural model, particularly for a small open economy such as Ireland's. In general, one advantage is that the estimate of potential output is obtained when a number of different markets, such as the goods market, the current account and the Government sector, within the economy are in equilibrium. The potential growth rate of the economy in COSMO is comprised by aggregating over the traded, non-traded and Government components of the economy.

Over the longer-term COSMO estimates that the potential growth rate of the aggregate economy is approximately 3 per cent. Table 1 below (which is reproduced from Table 1.4 in Bergin et al., 2016) illustrates the rate of convergence of output towards its potential growth rate so that the economy grows closely in line with potential after 2018.

Table 1 Output Growth (Δ %)

Sector	2011-2015	2016-2020	2021-2025
Total	7.6	3.7	3.3
Traded	10.1	4.3	3.9
Non-Traded	5.9	3.1	2.4
Government	3.1	2.5	2.4

Source: Bergin et al. (2016).

7 Bergin, A. and J. FitzGerald, 2014. 'The Structural Balance for Ireland, *Quarterly Economic Commentary*: Special Articles, Economic and Social Research Institute (ESRI).

For the present year, we believe the economy will increase by 3.8 per cent for GDP. Increased activity in the residential property and commercial market is impacting positively on growth in a number of different ways; continued increases in the costs of accommodation (house prices and rents) is one of the main contributing factors to the positive growth rates of consumption, while the pick-up in construction activity also results in persistent upward movements in investment. This is particularly the case for the non-intangible asset component of investment.

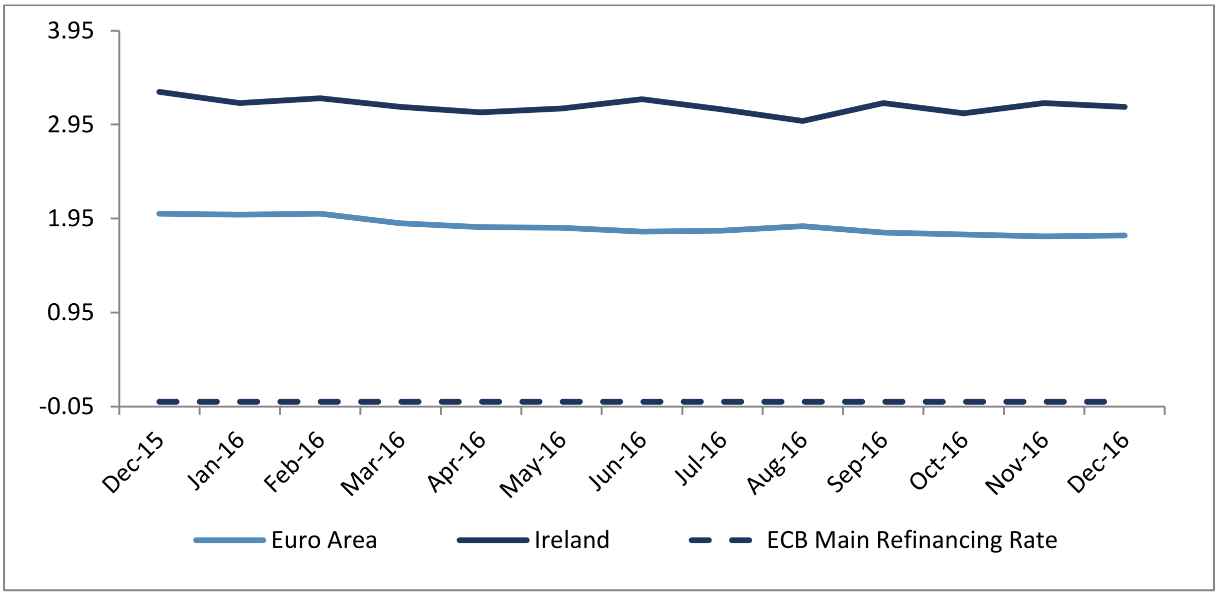
Based on the supply-side analysis in the Economic Outlook and the continued likely pressures in the property market, our expectation is that growth in the Irish economy in 2018 will be approximately 3.6 per cent. This does reflect a more negative outlook for trade considerations in 2018 than is the case for the present year.

Given the difficulties interpreting movements in the Irish National Accounts due to a variety of issues, the response of the Central Statistics Office (CSO) to the main recommendations of the Economic Statistics Review Group (ESRG) is encouraging. For example, the CSO has committed to publishing an adjusted indicator Gross National Income (GNI*), which will provide an indication of the size of the domestic economy adjusted for the retained earnings of redomiciled firms and depreciation on foreign-owned domestic capital assets. The corresponding adjusted estimates of the Balance of Payments (BOP) and the international investment position (IIP) will also be released. These data will be available on an annual basis initially and backdated to 1997.

Monetary and Financial Conditions

The average interest rate on new mortgage agreements by Q4 2016 is 3.38 per cent in December (Figure 7). This represents a decline of 21 basis points over the past 12 months. The equivalent Euro Area rate was 1.71 per cent. Evidence of the growing level of activity in the housing market can be gleaned from the amount of mortgages taken out in 2016; the value of new mortgages taken out increased to €5 billion, which was up over half a billion on the amount taken out in 2015 (€4.4 billion). Of these mortgages over two-thirds were variable rate, whereas the Euro Area equivalent is less than a quarter for the same period.

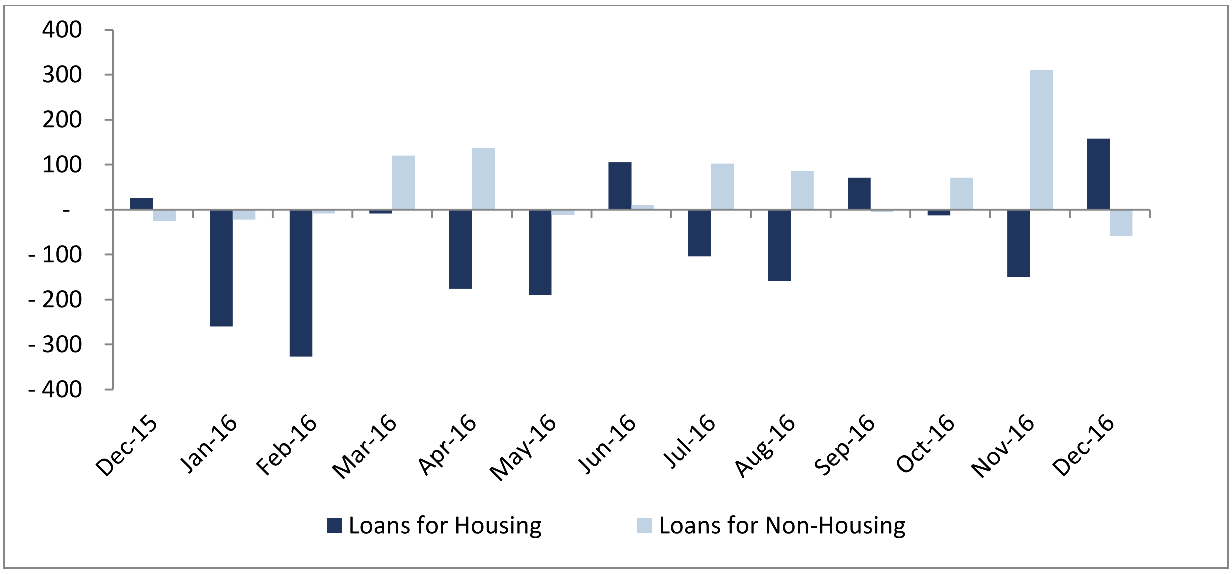
FIGURE 7 Variable Interest Rates on New Mortgages (%)



Sources: Central Bank of Ireland and European Central Bank (ECB).

Figure 8 plots developments in net flows in household credit through 2016. While the stock of new mortgages issued increased overall for the year, mortgage loans in terms of net flows declined by 1.4 per cent. Conversely, in the case of non-property related consumer loans, credit drawdowns were higher than repayments over the year. New spending on credit cards, with €764 million in December, was the highest recorded in 2016. Retail spending dominated new credit card spending, with expenditure on groceries/perishables and clothing once again being the most significant.

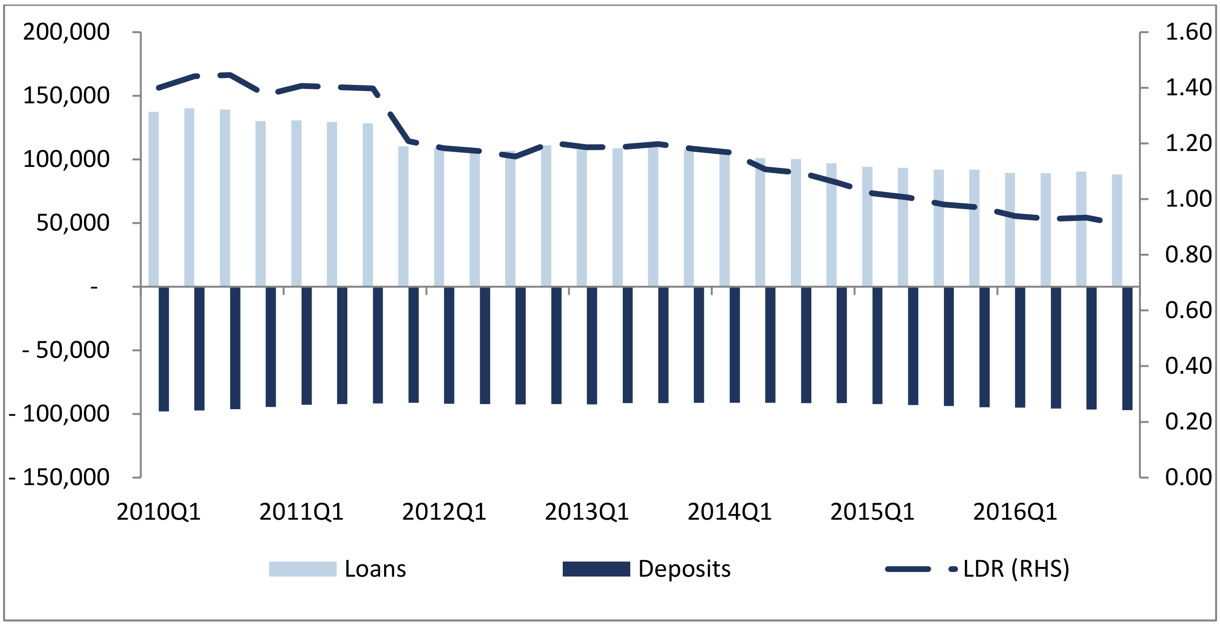
FIGURE 8 Loans to Households; Developments in Net Flows (€ million)



Source: Central Bank of Ireland.

Household deposits, on the other hand, were €2.2 billion higher than withdrawals, resulting in a 2.3 per cent increase over the year. The movements in loans and deposits meant that Irish households continue to be net funders of the Irish banking system (i.e. the loan-to-deposit (LTD) ratio is less than 1). Banks held €9 billion more household deposits than loans at end-December (Figure 9). By comparison in early 2009 household loans exceeded deposits by €53.5 billion.

FIGURE 9 Household Loans and Deposits; Outstanding Stock and Loan-to-Deposit Ratio (LDR)

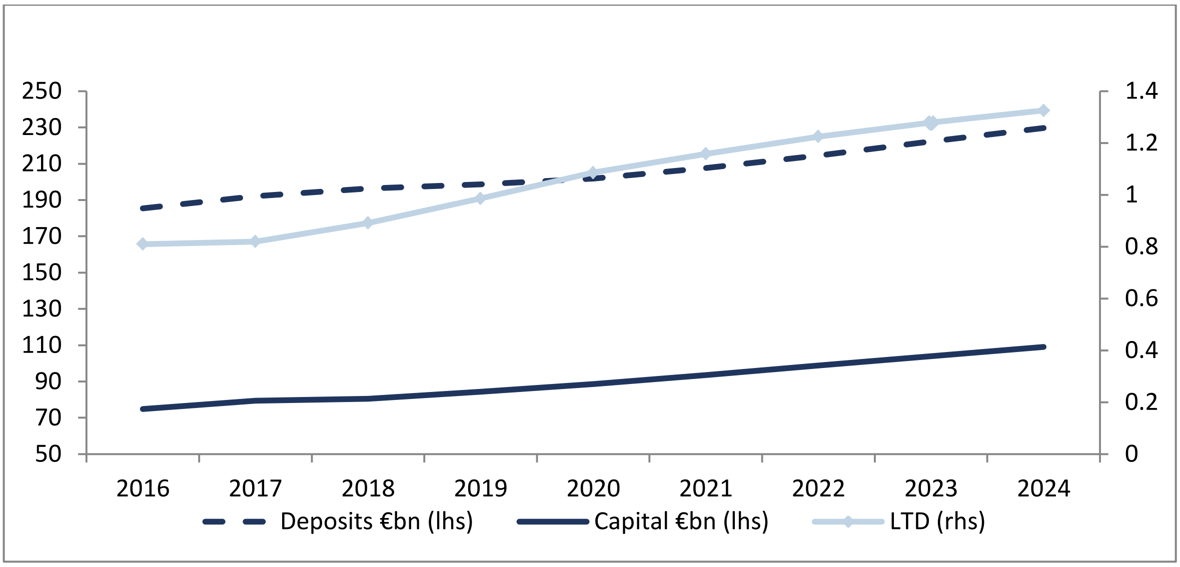


Sources: Central Bank of Ireland and European Central Bank (ECB).

The present funding situation can be compared with future forecasts of the LTD ratio in Duffy Foley, McInerney and McQuinn (2016).[8] Duffy et al. (2016) examine the implications for the LTD ratio in the context of likely future developments in the Irish residential construction sector (see Figure 11 of Duffy et al., 2016, reproduced below as Figure 10). They estimate that if long-run structural demand for housing settles at around 35,000 units per annum, then the increase in credit provision required to enable this would see the LTD ratio climb back up to nearly 1.3 by 2024. This, Duffy et al. (2016) argue, would present certain challenges, particularly from a macroprudential regulatory perspective.

8 Duffy D., Foley D., McInerney N. and K. McQuinn (2016). 'Demographic change, long-run housing demand and the related challenges for the Irish Banking Sector', chapter in *Ireland's Economic Outlook*, The Economic and Social Research Institute.

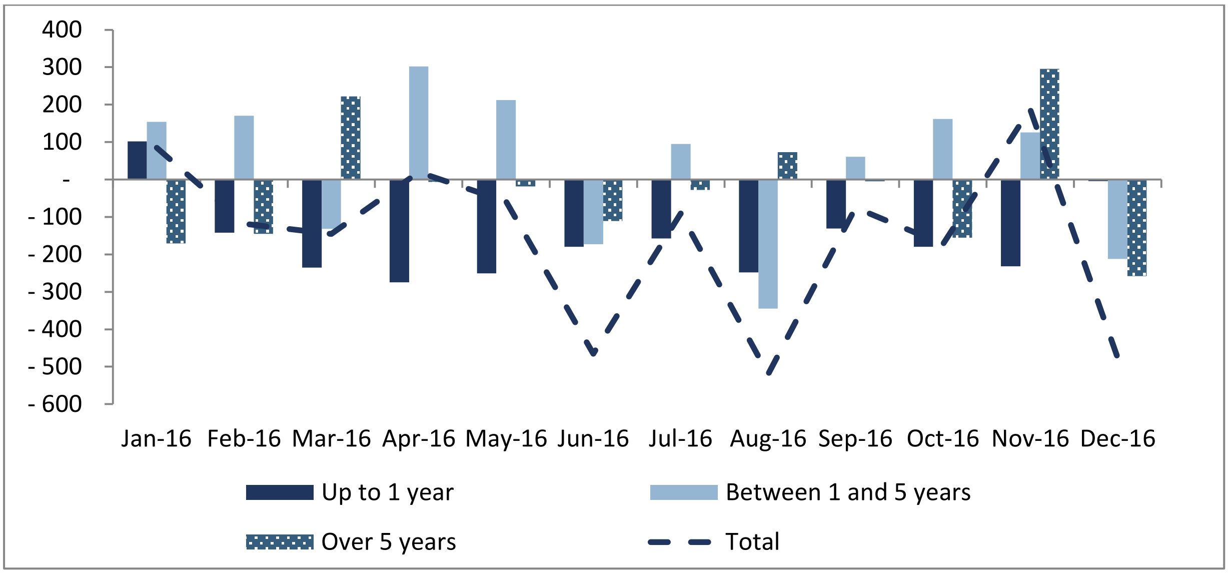
FIGURE 10 Projected Levels of Deposits and Capital (€bn), and the Loan-to-Deposit Ratio



Source: Foley, Duffy, McQuinn and McInerney (2016).

In other sectors of the economy, the overall stock of loans to non-financial corporates fell by over 9 per cent in 2016. In terms of net flows, the decline, however, masks divergent trends between short- and medium-term maturities. As seen in Figure 11, medium-term maturities have remained positive since the beginning of 2015. In annual terms, medium-term net lending to NFCs grew by 3.2 per cent in December, with drawdowns exceeding repayments by €420 million. Short-term net lending declined by €1.9 billion over the past 12 months.

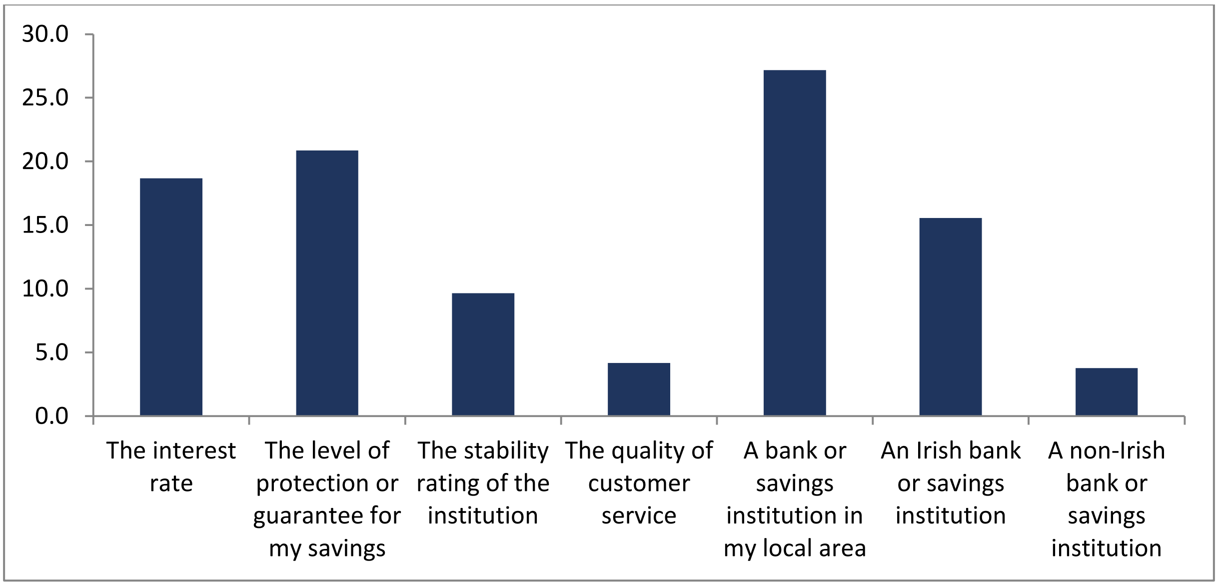
FIGURE 11 Loans to NFCs; Net Flows by Original Maturity Category (€ million)



Source: Central Bank of Ireland.

Response to questions in the ESRI/Nationwide savings index provides some information on the savings decisions of Irish households. Looking at the most recent responses to the question 'What is the most important factor for deciding where to save?' reveals that having a bank or savings institution in one's locale is the most important factor, accounting for approximately 27 per cent of the total (Figure 12). The level of protection of savings is still very important, highlighting that savers are generally very cautious and this is supported by some of the other results of the survey. The interest rate is also an important factor suggesting savers are looking for a good return on their savings. The continued low rates of interest on offer highlight the importance of this issue to those saving in the domestic economy.

FIGURE 12 Most Important Factor for Deciding Where to Save



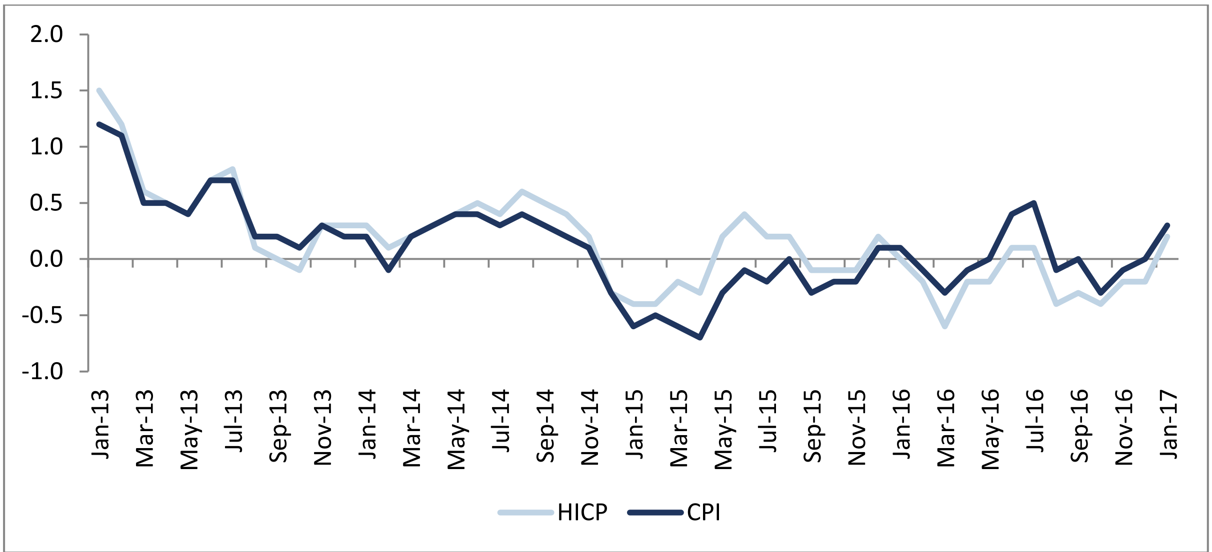
Source: Nationwide Savings Index.

€8.4 billion of debt funding was issued on behalf of the State in 2016. Funding requirements were reduced somewhat on previous years mainly due to the improving fiscal position. Over the course of 2017, the NTMA plans to issue between €9-13 billion of long-term bonds. The State issued €4 billion for 20 years in January at an interest rate of 1.72 per cent per year. The new 20-year syndicated deal attracted investor interest totalling €10.75 billion. The final amount borrowed was double the original target. A syndicated bond deal is when the debt is underwritten by a group of banks, who then in effect sell on the risk to investors. In traditional government bond auctions the debt is issued to investors through primary dealers.

Prices and Earnings

Annual inflation (Figure 13) continues to remain subdued with annual Consumer Price Inflation (CPI) in January of 0.3 per cent. During 2016, the rate of inflation was only positive for three of the 12 months as factors such as low commodity prices and energy prices weighed negatively on growth. The Harmonised Index of Consumer Prices (HICP) which captures a greater number of goods and services than the CPI, exhibited annual growth of 0.2 per cent in January, despite many positive tailwinds domestically such as robust employment growth and rising earnings.

Figure 13 Annual Growth in CPI (%)

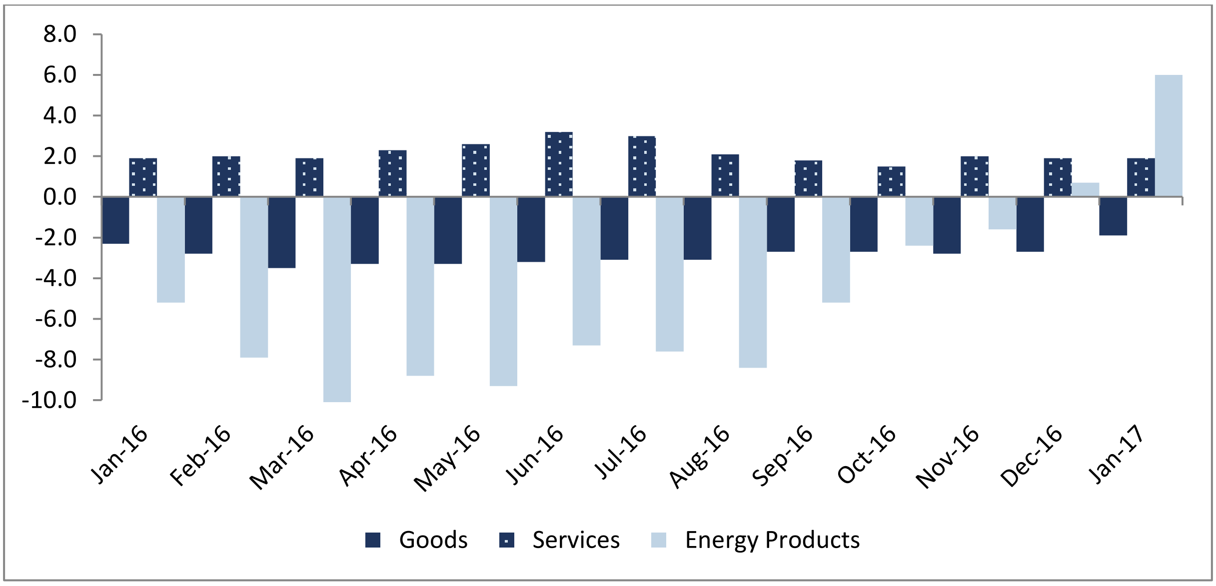


Source: Central Statistics Office.

Recent trends in some of the components of inflation (Figure 14) show that prices in energy products have started to contribute positively to inflation growth. Annual growth in the energy component turned positive in December and picked up again in January growing by 6.0 per cent following a sustained period of deflation for much of 2015 and 2016. This likely reflects OPEC's decision to cut oil production, impacting the level of supply in the market. If this trend continues, we can expect the overall CPI to be stronger over the next two years as there is sustained upward pressure on oil prices. The underlying goods and services trend has remained broadly consistent over the last year. The goods component has been a persistent drag on the overall rate in 2016 and most recently fell by 1.9 per cent while the services component continues to grow at a positive rate.

Factors contributing to deflation in the goods component over the year included falls of 2.6 per cent in clothing and footwear and a drop of 2.4 per cent in Food and non-alcoholic beverages. These were broadly offset by increases in other service areas such as Education and Restaurants and Hotels in 2016.

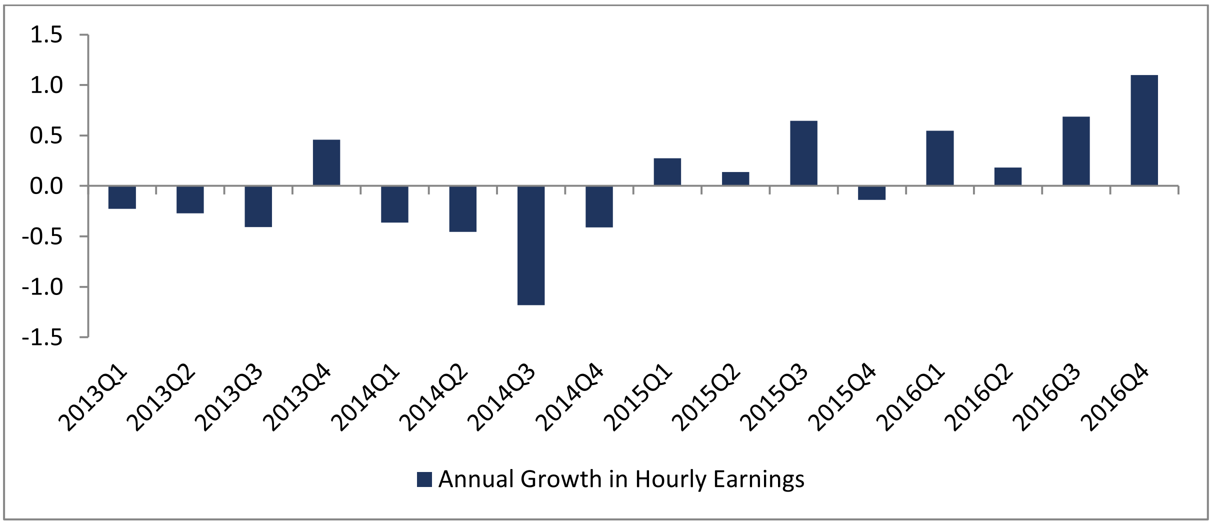
FIGURE 14 Decomposition of the CPI into Selected Components 2016 (%)



Source: Central Statistics Office.

Earnings data for Q4 2016 indicate a pickup in annual Average Hourly Earnings. More specifically, Figure 15 shows that compared to Q4 2015, earnings grew by 1.1 per cent up to €22.16.

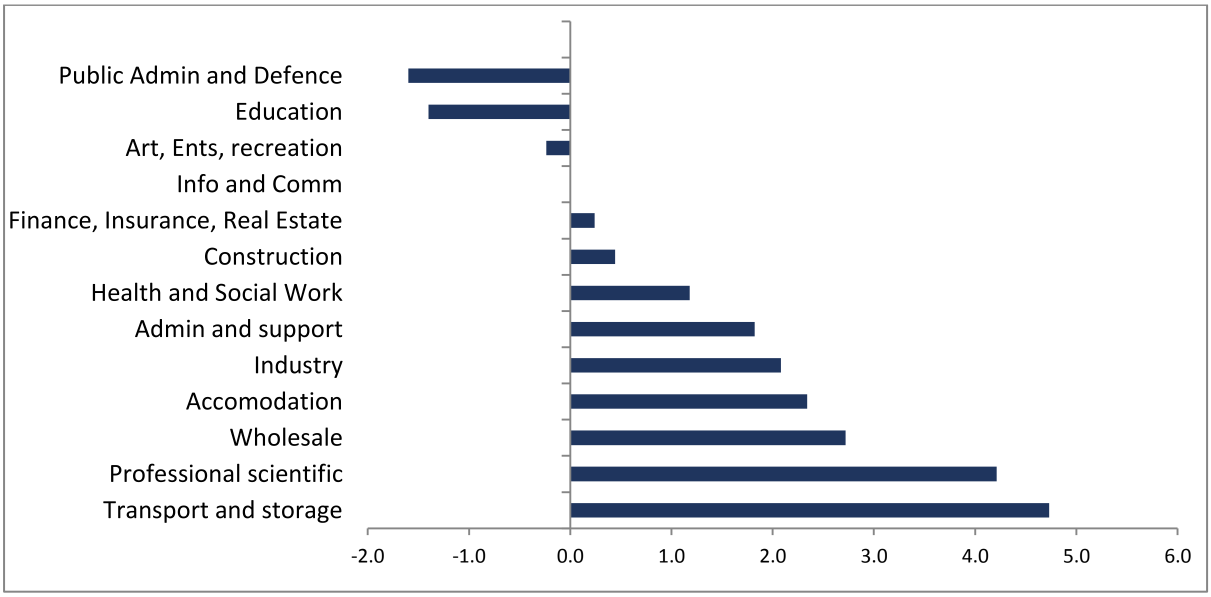
FIGURE 15 Annual Growth in Average Hourly Earnings



Source: Central Statistics Office.

Figure 16 shows the trends for growth in Average Hourly Earnings compared to Q4 2015. We can see that the growth in Average Hourly Earnings over the year was very broad with positive earnings growth in all but four sectors. The largest increase over the year was observed in the transport and storage sector, increasing by 4.7 per cent or from €20.50 to €21.47 per hour. There were also gains observed in the accommodation sector and professional and scientific sectors of 2.3 and 4.2 per cent respectively. Interestingly, the education sector with the second largest decrease over the year also had the highest Average Hourly Earnings at €33.78. Although the graph shows earnings in public admin and defence and in education fell, this may be driven by compositional changes rather than a fall in earnings.[9] We expect this broad trend in wage increases to continue in 2017 and 2018 as the unemployment rate is expected to reach around 5.6 per cent by the end of 2018.

FIGURE 16 Annual Growth in Average Hourly Earnings by Sector (Q4 2015 - Q4 2016)



Source: Central Statistics Office.

Table 2 presents our forecast for inflation over the period. We believe inflation will return to positive growth in 2017 as the negative contribution from energy products wanes. We also expect that the continued demand for housing will contribute to increases in rents over the horizon, leading to increases in the annual rate of inflation. Trends, for the most part in the goods and services components, are expected to remain broadly similar to what we observed over 2016. The continued growth in employment should lead to a gradual tightening

9 According to the EHECS, changes in the composition of employees in a given sector or group has an effect on the average levels of earnings and paid hours over time. For example, if the proportion of part-time employees increases within a sector then it would be expected that the average weekly earnings and paid hours would fall in that sector even if the hourly pay rates were unchanged.

of the labour market over the next two years and will result in upward pressure on wage inflation. Overall, these factors should see annual CPI growth of around 0.6 per cent in 2017 with a further 0.9 per cent growth in 2018.

TABLE 2 Inflation Measures

	2015	2016	2017	2018
	Annual Change			
	%	%	%	%
CPI	-0.3	0.0	0.6	0.9
HICP	0.0	-0.2	0.7	1.0

Sources: Central Statistics Office and ESRI forecasts.

DEMAND

Household Sector Consumption

Household consumption continued to grow strongly in 2016 following significant growth in 2015. There are a number of reasons for this; the continued improvement in household balance sheets allied to the persistent fall in unemployment and the consistent, albeit modest, increase in disposable incomes. The annual real growth for select retail sales items can be observed from Table 3.

TABLE 3 Annual Growth in Select Retail Sales (Volume) Items (January 2017)

Item	%
Motor Trade	4.0
Non-Specialised Stores	2.3
Department Stores	3.3
Clothing, Footwear and Textiles	2.8
Furniture and Lighting	18.1
All businesses excl. Motor Trades	6.1
All businesses	4.9

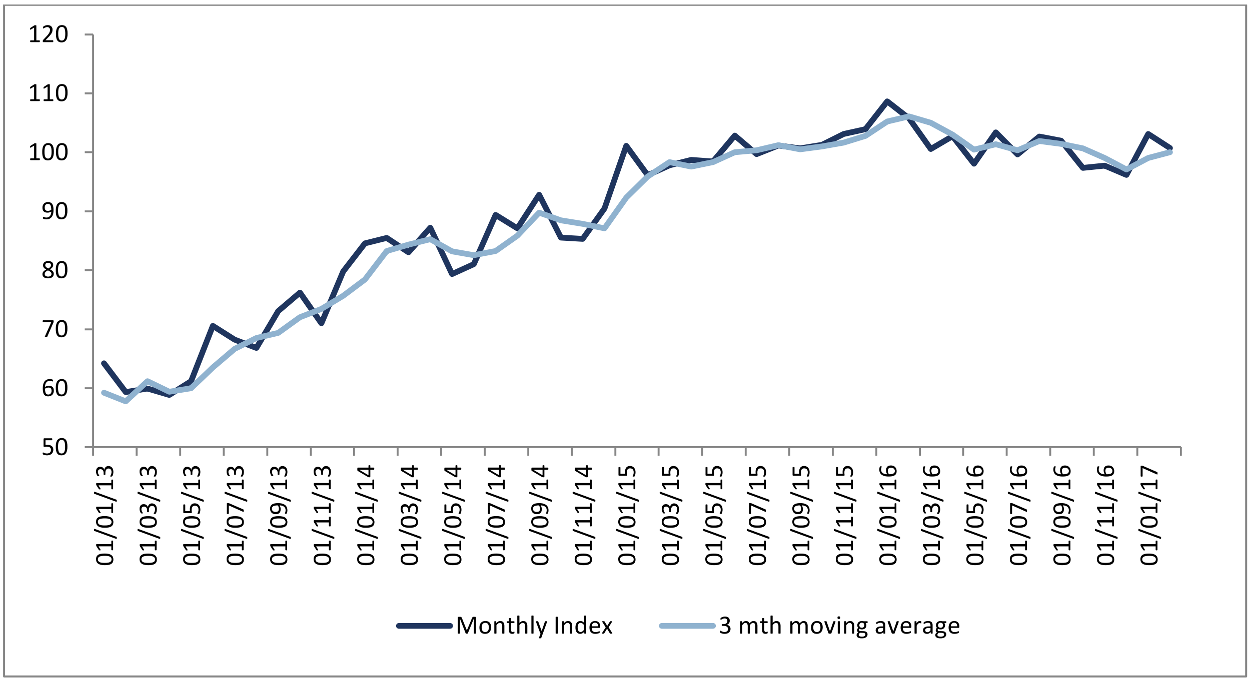
Source: Central Statistics Office.

The heightened activity in the motor trade sector has been a key reason for the growth in sales. In addition to this, all businesses excluding the motor trade experienced considerable growth of 6.1 per cent year on year.

Another significant reason for the increase in personal consumption is the importance of movements in both actual and imputed rents. For example in value terms in 2015, imputed rent alone accounted for nearly 11 per cent of total personal expenditure. In value terms, both actual and imputed rents have grown substantially over the past number of years as actual housing supply has been well below the level of long-run housing demand in the economy, thereby causing a marked increase in the cost of accommodation. As housing supply is unlikely to meet housing demand in the short term, this suggests that this component of consumption will continue to increase over the next few years.

Consumer sentiment, arguably on the back of the Brexit vote and the outcome of the US presidential election, had declined somewhat through last year. However, consumers' personal financial situations appear to have improved in the first quarter of the present year (see Figure 17). The component asking how people feel about their personal financial situation compared with 12 months ago registered a significant increase as less people recorded a negative response for this question. Consumers' perceptions of their future finances, which had been broadly declining towards the latter half of the year, increased back up to levels last seen before the Brexit referendum.

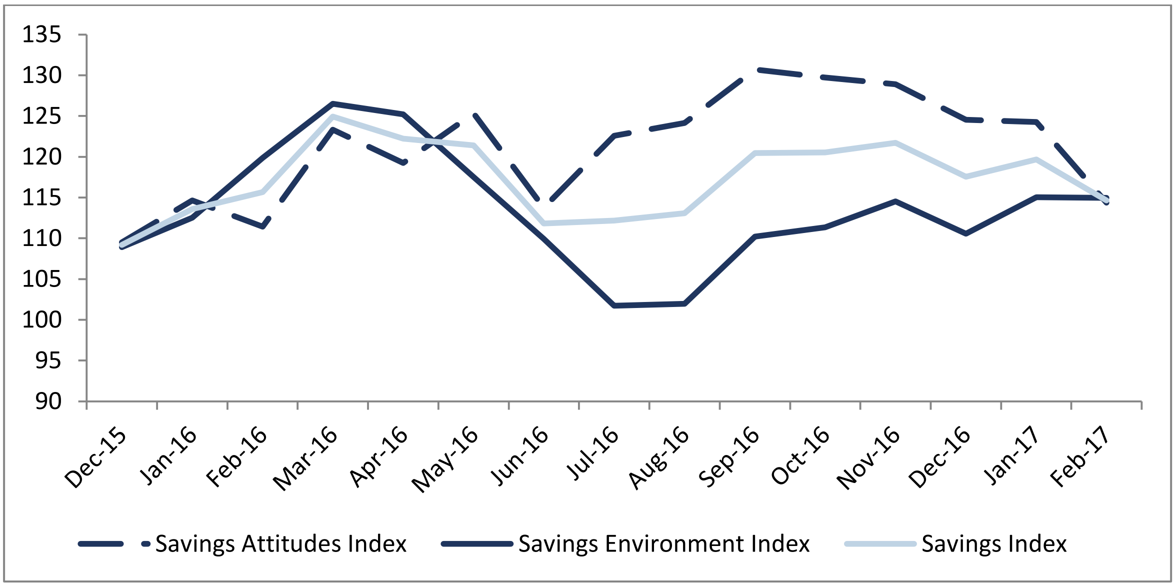
FIGURE 17 ESRI/KBC Consumer Sentiment Indicator



Source: ESRI / KBC.

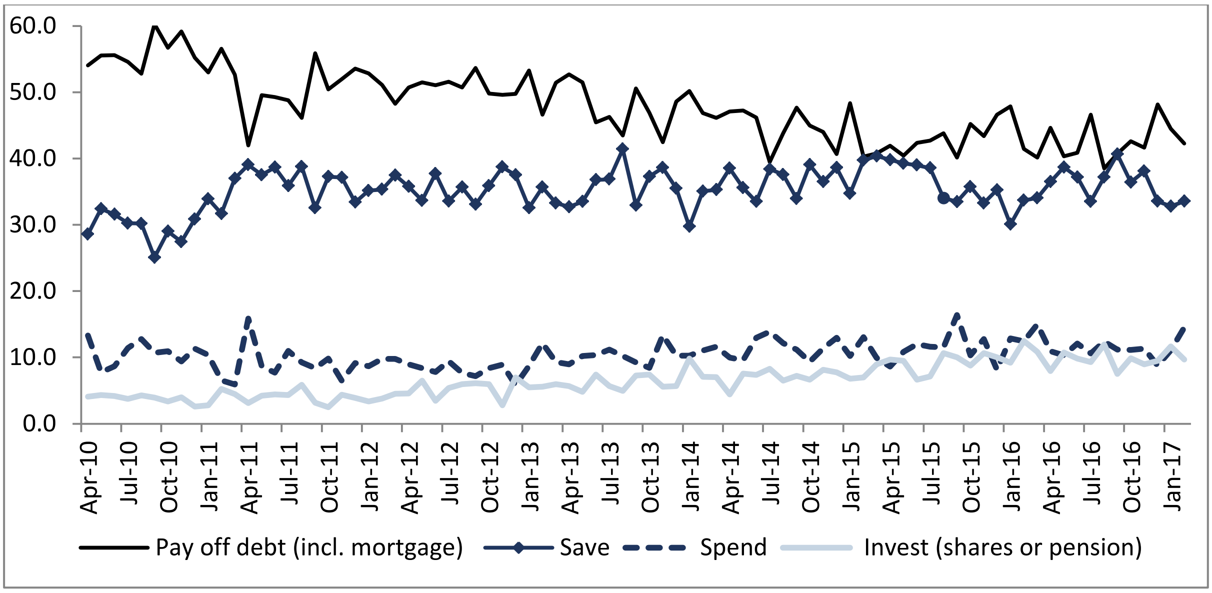
Further evidence of changing sentiment amongst Irish households may be observed from the latest Nationwide Savings Index. Of the three main indices compiled (Figure 18), it is evident that the overall index and the savings environment index have increased to different degrees over the past six months. For some of these indicators the gain would appear to be driven by an increase in the amount of people able to save, as well as an increase in the amount that people are able to save. It is the case, however, that greater uncertainty such as the outcome of the Brexit referendum, will also cause an increase in precautionary savings.

FIGURE 18 Nationwide Savings Indices



Source: Nationwide Savings Index.

FIGURE 19 Consumers' Intentions for any Surplus Money

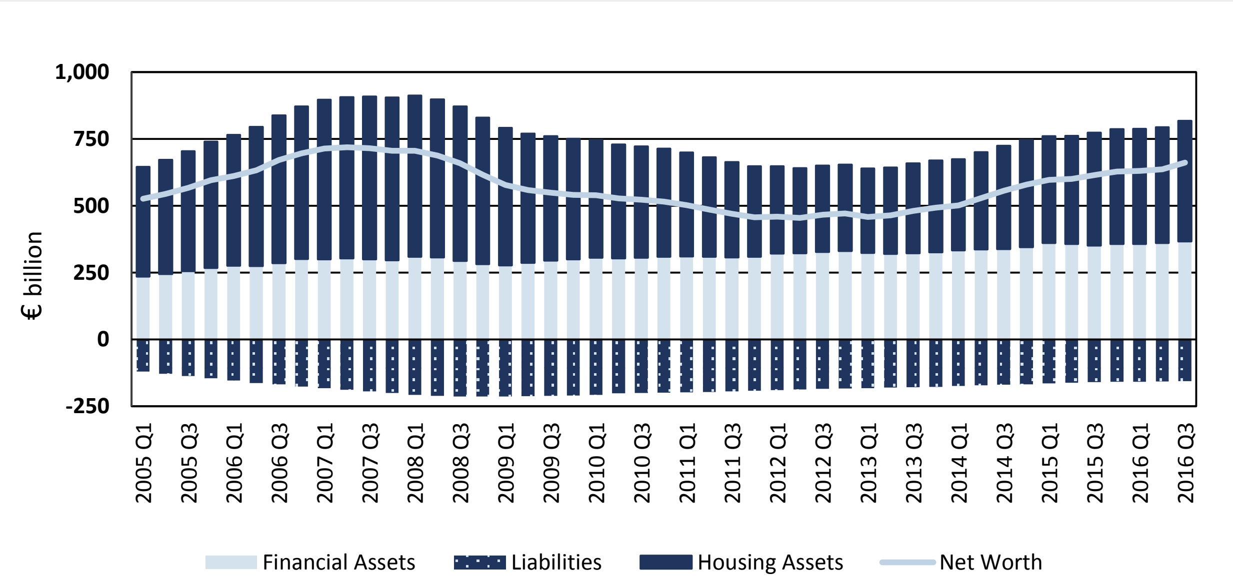


Source: Nationwide Savings Index.

Figure 19 illustrates the trends in households' intentions for any surplus money. The importance of paying down debt is clear from the graph. However this has been falling since the new year, while there appears to be a marginal increase in the proportion of people willing to spend any excess money. Unsurprisingly, there appears to have been some increase in the number of people who wished to save through 2016. This may well be linked to the precautionary motive to save, given the increased commentary surrounding the role of uncertainty in the Irish economy.

The overall position of Irish households' net worth, which is the stock of financial and housing assets minus the stock of liabilities, can be observed in Figure 20. Over the period, the expansion of net worth in the series was largely driven by the rapid growth in the value of housing assets. The subsequent decline in net worth was also significantly driven by this factor. Since Q2 2012, the improvement in Irish households' net worth is again associated with the increase in housing wealth.

FIGURE 20 Irish Household Net Worth



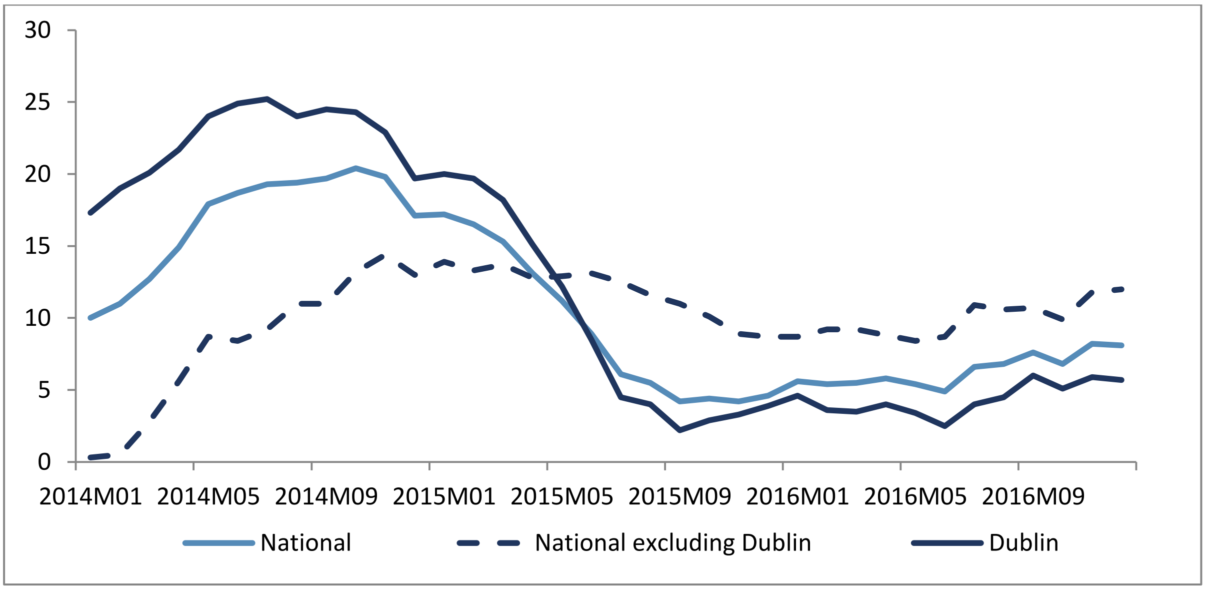
Source: Central Bank of Ireland.

Given the expected strong performance of both the housing and labour market over the short to medium term, we expect to see a further strong contribution to growth from consumption over the medium term. We, therefore, expect consumption to increase by 3.5 and 3.2 per cent in 2017 and 2018 respectively.

Property Market Developments

House price growth, which appeared to slow from mid-2015 onwards increased again towards the end of 2016. Nationally, prices were up 8 per cent year on year by the end of 2016. Figure 21 plots the annual rate of growth for the national, national excluding Dublin and Dublin categories.

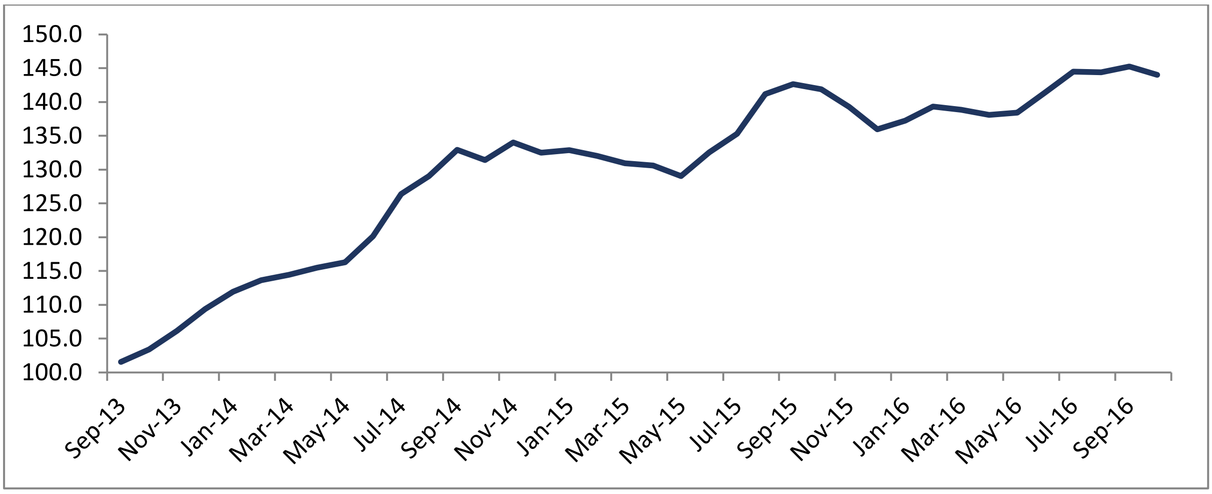
FIGURE 21 Annual House Price Growth (%)



Source: Central Statistics Office.

It is likely that some of the de-escalation in price increases from 2015 onwards was possibly due to the introduction of the macroprudential measures by the Central Bank of Ireland; however consumer attitudes to the housing market appear to be increasingly confident. Figure 22 plots the latest ESRI/AIB housing market indicator. The index, which comprises of questions on market participants attitudes to buying and selling property as well as expectations of house prices 12 months from now, has started to trend upwards from the mid-point of 2016.

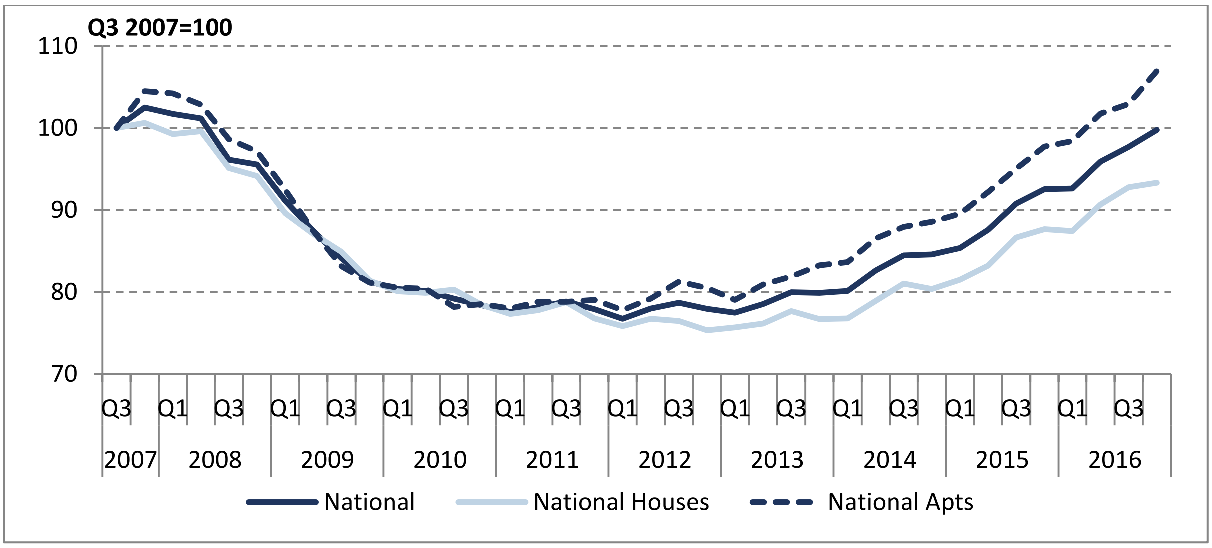
FIGURE 22 ESRI/AIB Housing Market Index



Source: AIB/ESRI Housing Market Index.

The latest data from the RTB rental index confirm that rents nationally continue to increase at a significant rate. Rents in Q4 2016, nationally, increased by nearly 9 per cent on an annual basis continuing the rise that has been observed since early 2013 as can be seen from Figure 23.

FIGURE 23 Residential Tenancies Board National Rental Index: Q3 2007 = 100



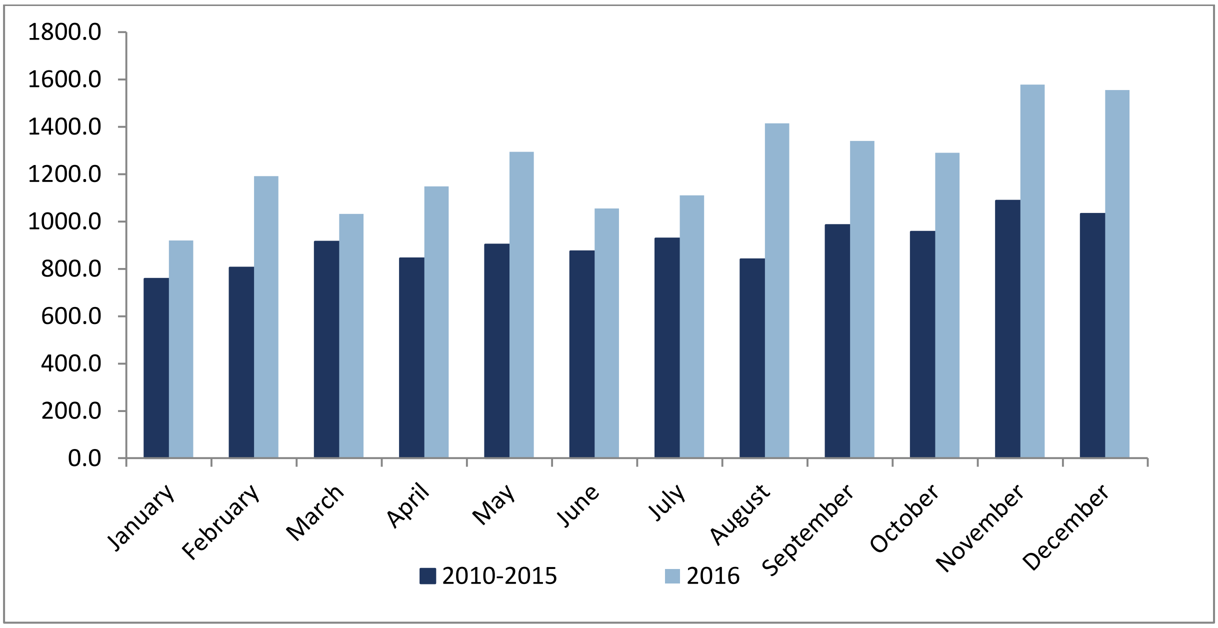
Source: RTB.

In late 2016 the RTB asked researchers at the Institute to explore the possibility of compiling rental indices at a more granular regional level. These indicators are now used to underpin the implementation by the Department of Housing of the rent pressure zones policy. Indicators are estimated from Q3 2007 to the present for the 137 local electoral areas (LEAs). In particular, an area qualifies to be included as a rent pressure zone if two considerations arise (i) if the area experiences an annual rate of rental growth of 7 per cent or more in four of the last six quarters and (ii) the average rent for tenancies registered with the RTB must be above the average national rent. The first RTB rent index using the new approach will be published this quarter (RTB, 2017).

These data will provide a unique insight into supply and demand pressures in the rental market at a highly disaggregated regional basis. While this information is clearly of benefit in the framing of the rent pressure zone policy, it will also provide highly useful information in understanding both housing and more general economic trends at a regional level.

Housing supply does now appear to be finally responding to increased demand. Completions data for 2016, when compared with the average over the 2010-2015 period, (Figure 25), indicate an increase in the rate of completions. The total number of houses built was just under 15,000 in 2016 and our expectation is that will increase to 18,500 units in 2017, with the number increasing to 25,000 units in 2018.

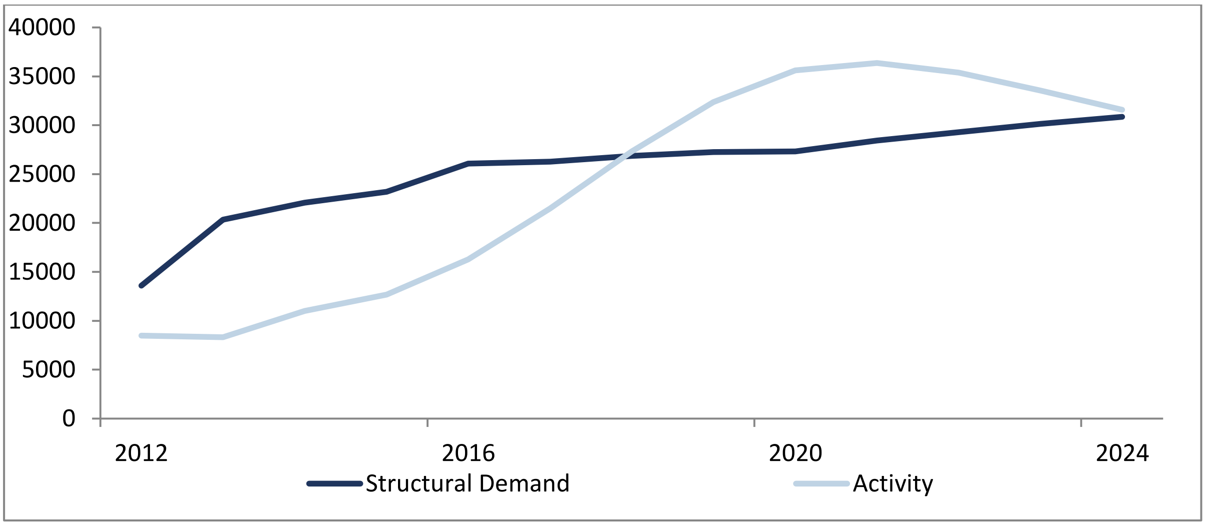
FIGURE 25 Monthly Levels of Housing Supply



Source: Department of Housing Planning and Local Government and *QEC* calculations.

This forecast for housing supply is in line with that of Duffy, Foley, McInerney and McQuinn (2016), who in the recent Economic Outlook, suggested that activity levels and structural demand in the Irish mortgage market would come into balance in 2018 (see Figure 3.6 from their chapter reproduced below as Figure 26).

FIGURE 26 Activity vs Structural Demand (units)



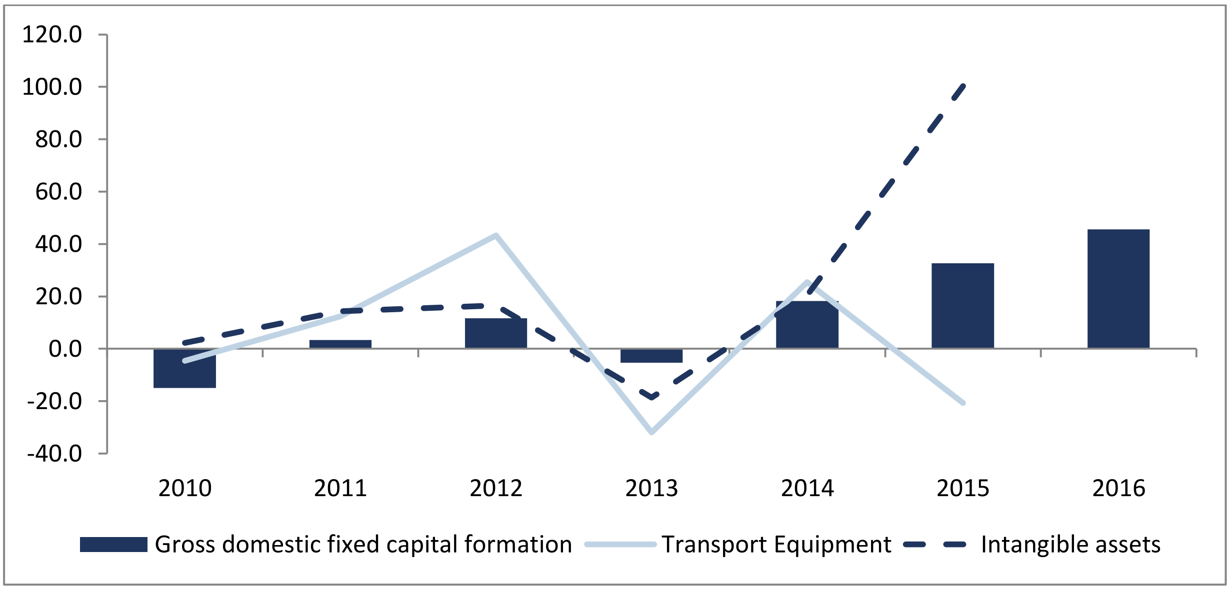
Source: Duffy, Foley,McInerney, McQuinn (2016) *Demographic Change, Long-Run Housing Demand and the Related Challenges for the Irish Banking Sector.*

SUPPLY

Investment

The substantial impact that movements in some of the components of investment have on Irish data is clear from the annual National Accounts going back as far as 2010. Figure 27 shows the growth rates in some of the most volatile components such as transport equipment (including purchases of aircraft) and intangible assets (including intellectual property rights).[10] Intangible asset growth of 100 per cent in 2015 highlights the unstable nature of these components. Most recently available data suggest that we have had a further expansion in intangible assets in 2016. The exact level is difficult to ascertain due to data for the volatile categories being withheld by the CSO for Q4 2016. What is clear, however, is that the proportion of total investment that was accounted for by the machinery and equipment component and the intangible asset component was approximately 80 per cent in 2016. Figure 28 shows the total level of investment along with its components since Q1 2015. The graph highlights the volatile nature of investment quarter to quarter and in particular in the final quarter of 2016, when total investment increased by 185 per cent.

FIGURE 27 Growth in Selected Components of GFCF



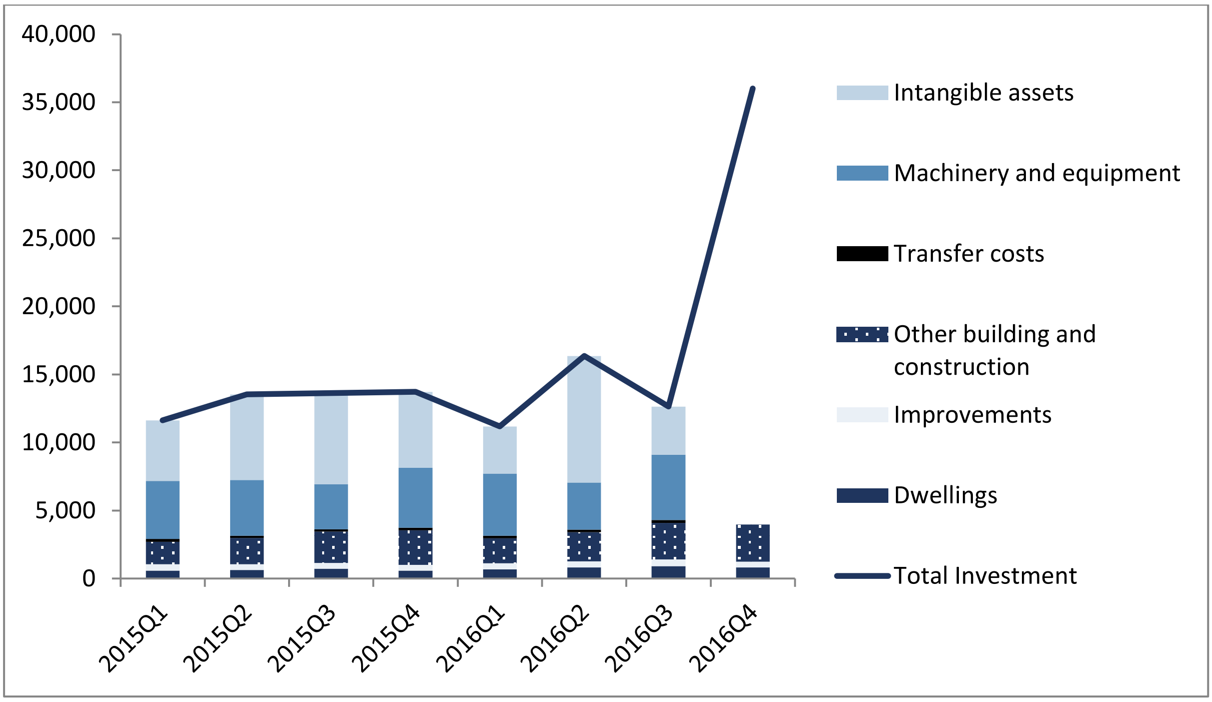
Sources: Central Statistics Office and *QEC* calculations. Some data have been withheld by the CSO for data privacy reasons.

In response to the recommendations of the Economic Statistics Review Group (ESRG), the CSO has committed to quantifying the flows of intellectual property

10 2016 data for transport equipment and intangible assets have been withheld by the CSO for data privacy reasons.

(IP) relocations and aircraft leasing activity in current and constant prices at the time of the annual National Income and Expenditure results in mid-2017.

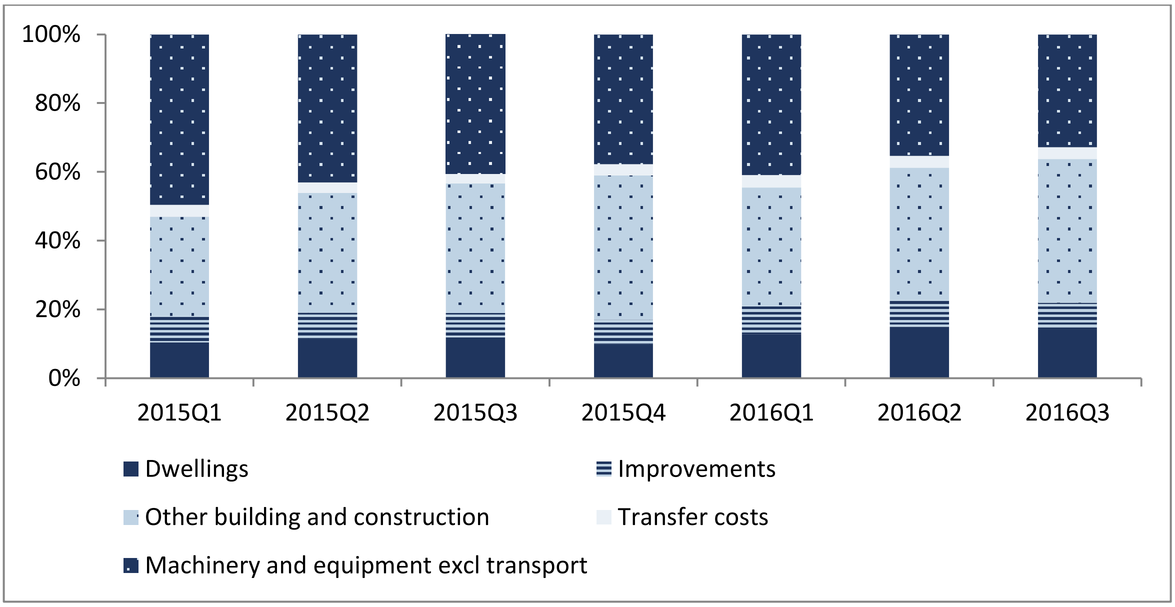
FIGURE 28 Components of Investment as a Proportion of Total



Sources: Central Statistics Office and *QEC* calculations. Some data have been withheld by the CSO for data privacy reasons.

In light of these developments, to get a better understanding of the underlying trends in investment, we focus on the components of investment that are less volatile and are a much better indication of real domestic investment activity. Figure 29 shows the trends in some of the less volatile components of investment on a non-seasonally adjusted quarterly basis since Q1 2015. The graph shows the relative proportions of the components of investment (less intangibles and aircraft). Of particular note are the developments in both other building and construction and dwellings. Since Q1 2015, as a proportion of total investment, other building and construction has increased from 29 to 42 per cent. There has also been an increase in the dwellings component, rising from approximately 10 per cent in Q1 2015 to 14 per cent in Q3 2016. The other components have remained relatively flat but these trends are consistent with a strong recovery in both commercial and residential property markets observed over the last few years.

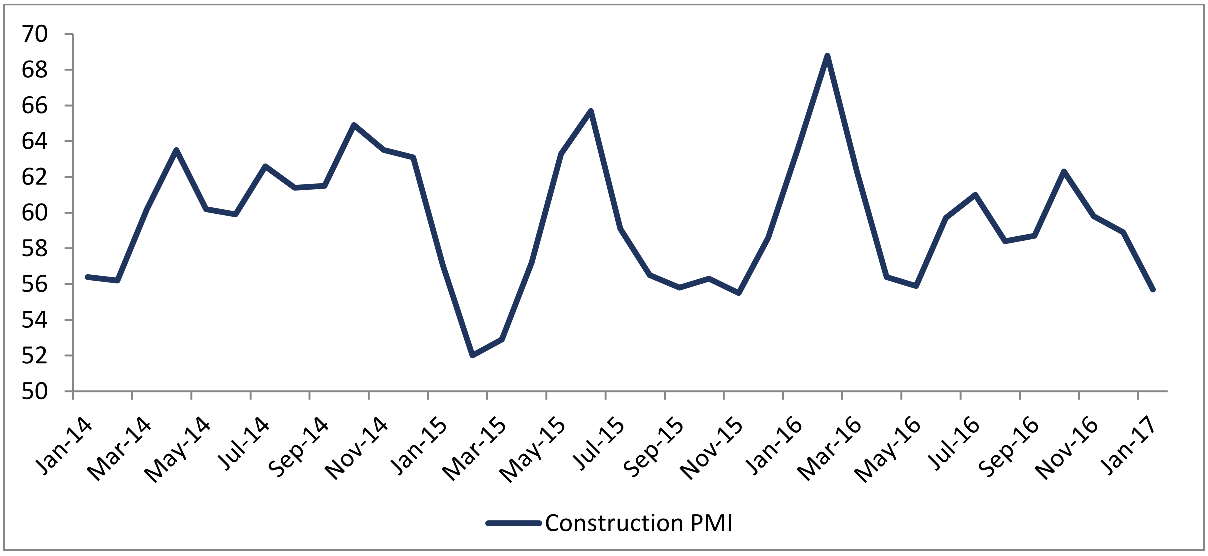
FIGURE 29 Investment in Building and Construction, and Machinery and Equipment, as Percentage of Investment Excluding Intangibles and other Transport Equipment



Sources: Central Statistics Office and *QEC* calculations.

The Markit Construction PMI which provides a higher frequency estimate for activity in the construction sector is shown in Figure 30. Growth in the index has been consistently positive throughout 2016. In recent months the index has pulled back somewhat, but is still above 50, the cut-off between expansion and contraction suggesting construction activity has continued to grow at the start of 2017.

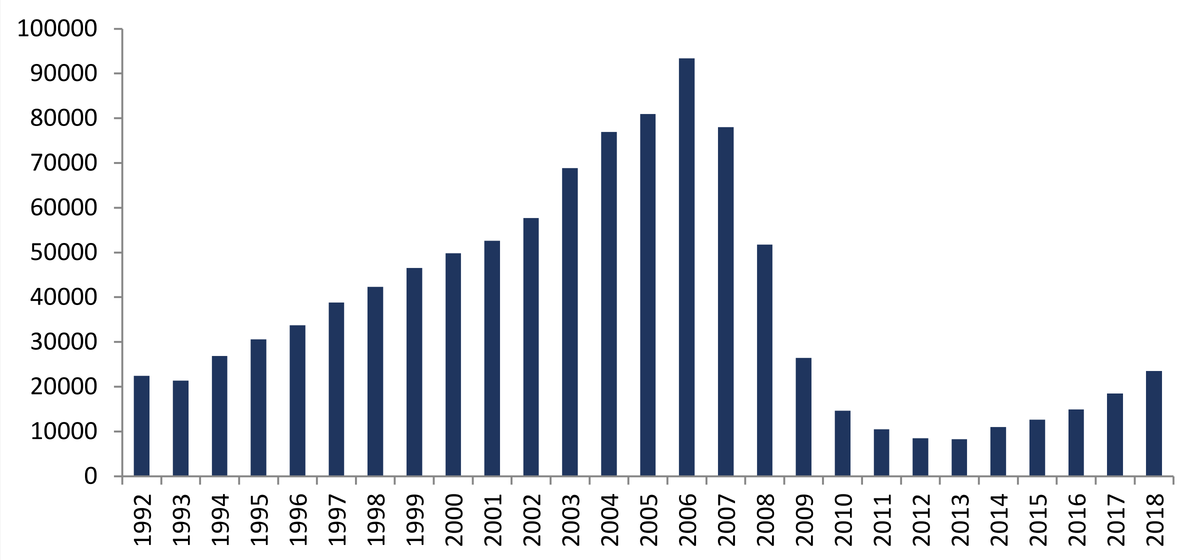
FIGURE 30 Construction PMI for Ireland



Source: Markit.

Our outlook for the domestic components of the Irish economy remains optimistic. Notwithstanding the extremely volatile components of investment such as aircraft and intangibles, we believe that the underlying trends in some of the other components such as building and construction indicate strong expansion this year for both residential and non-residential construction. As noted in the property section, we believe that the pace of growth in housing completions will increase in 2017 and 2018 (Figure 31). In addition to this, very low interest rates should continue to support robust growth in the machinery and equipment component leading to an overall growth of investment of 9.6 per cent in 2017 and 8.7 per cent in 2018.

FIGURE 31 Annual Housing Completions (2017-2018 Forecasts)



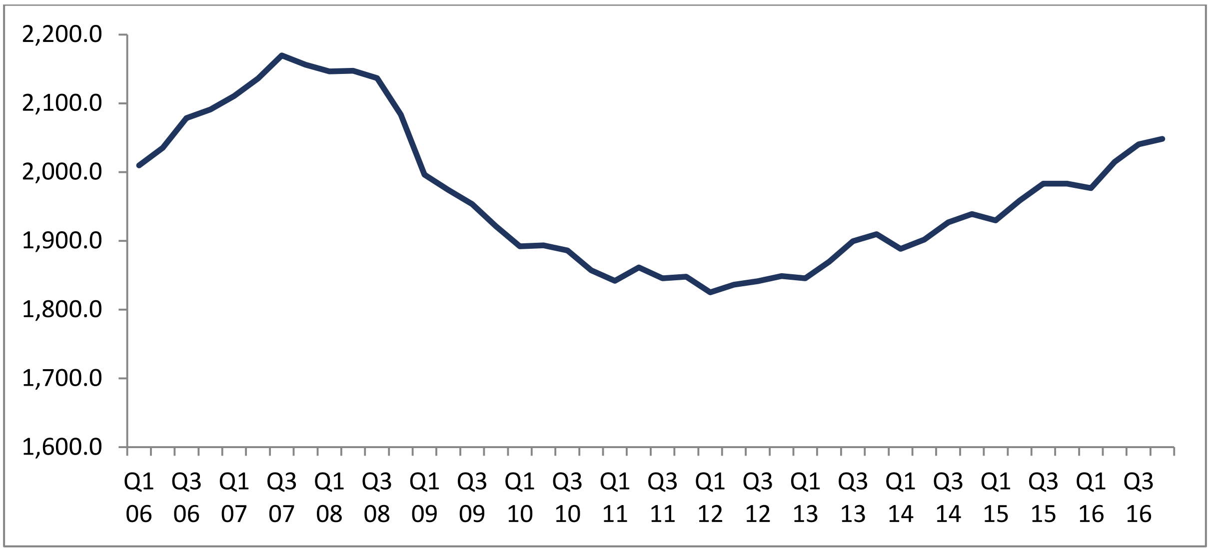
Sources: Department of Environment and *QEC* Forecasts.

LABOUR MARKET

Employment

Based on the most recent labour market data from the Quarterly National Household Survey (QNHS), employment continued to grow in the final quarter of 2016 (see Figure 32), increasing by 65,100 (3.3 per cent) between Q4 2015 and Q4 2016. Total employment stood at 2,048,100 at the end of 2016, which is the highest that it has been since Q4 2008. The peak in employment was reached in Q3 2007 when the numbers in work was 2,169,600; the current employment figure is 121,500 below this peak level.

FIGURE 32 Numbers in Employment: Q1 2006 - Q4 2016



Source: Central Statistics Office.

The growth in total employment over the year to Q4 2016 was composed of an increase in full-time employment of 71,900 (4.7 per cent) and a decline in part-time employment of 6,800 (-1.5 per cent). The number of employees increased by 67,400 (4.1 per cent) to 1,714,100 between Q4 2015 and Q4 2016, while the number of self-employed increased by only 100 over the period to 321,400.[11]

In relation to the sectoral distribution of employment (Table 4), employment grew in all of the 14 NACE[12] economic sectors over the year, albeit the magnitude of the increases varied across the sectors. Administrative and support services recorded the smallest growth in employment, increasing by less than a percentage point (0.3 per cent), while the largest increase in employment took place in the construction sector, rising from 126,600 in Q4 2015 to 138,200 in Q4 2016. While the numbers employed in construction have been growing steadily, the current figure of 138,200 is approximately half of what the employment numbers were in this sector at its peak in Q2 2007 (273,900).

[11] The remaining 12,700 in employment (to give the full employment figure of 2,048,100) were classified as 'assisting relatives'.

[12] NACE Rev. 2

TABLE 4 Change in Sectoral Employment between Q4 2015 and Q4 2016

	Q4 2015	Q4 2016	Change (%)
Agriculture, forestry and fishing	106.4	109.7	3.1
Industry	248.4	259.1	4.3
Construction	126.6	138.2	9.2
Wholesale and retail trade	279.4	283.2	1.4
Transportation and storage	93.8	96.4	2.8
Accommodation and food service activities	143.1	148.0	3.4
Information and communication	85.4	89.9	5.3
Financial, insurance and real estate activities	97.8	101.5	3.8
Professional, scientific and technical activities	119.3	126.1	5.7
Administrative and support service activities	67.1	67.3	0.3
Public administration and defence	99.1	101.2	2.1
Education	153.5	156.1	1.7
Human health and social work activities	253.7	257.5	1.5
Other NACE activities	102.7	106.3	3.5

Source: Central Statistics Office.

Regarding the occupational distribution of employment (Table 5), most of the employment growth between Q4 2015 and Q4 2016 took place in Caring, Leisure and Other Services (7 per cent), Managers, Directors and Senior Officials (5.1 per cent), Elementary (4.3 per cent) and Process, Plant and Machine Operatives (4.2 per cent) occupations. At the end of 2016, the largest occupations were Professionals, Skilled Trades, Associate Processionals and Technical and Elementary.

TABLE 5 Change in the Occupational Distribution of Employment between Q4 2015 and Q4 2016

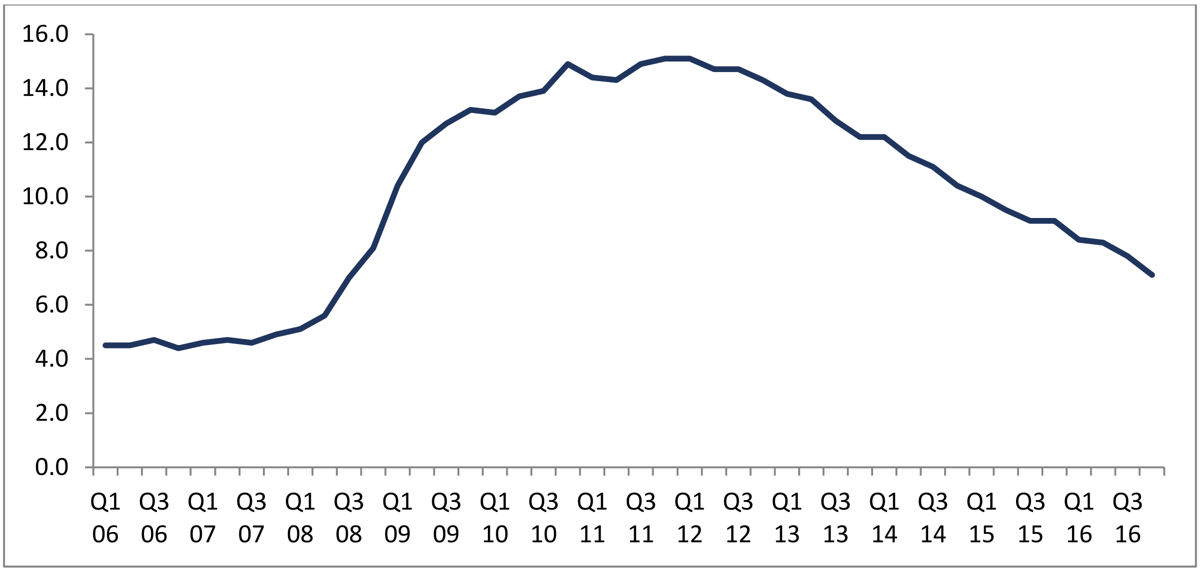
	Q4 2015	Q4 2016	Change
Managers, Directors and Senior Officials	165.1	173.6	5.1
Professionals	359.6	367.7	2.3
Associate Professional and Technical	237.3	242.2	2.1
Administrative and Secretarial	206.6	211.0	2.1
Skilled trades	312.6	319.3	2.1
Caring, Leisure and Other Services	161.8	173.2	7.0
Sales and Customer Service	160.6	165.1	2.8
Process, Plant and Machine Operatives	149.0	155.2	4.2
Elementary	213.9	223.0	4.3

Source: Central Statistics Office.

Unemployment

Unemployment continued to fall in the final quarter of 2016 (see Figure 33), with the seasonally adjusted rate falling by 2 percentage points between Q4 2015 and Q4 2016 to 7.1 per cent. The numbers unemployed decreased by 40,000 (-21.4 per cent) in the year to Q4 2016, with the number now standing at 147,400. This is the lowest unemployment has been since Q4 2008, when the figure was 173,800. Based on the CSO's Monthly Unemployment publication,[13] the unemployment rate was 6.6 per cent in February 2017, down from 8.4 per cent a year earlier. Between Q4 2015 and Q4 2016, male unemployment fell by 32,900 (-26.8 per cent) to 90,100, while female unemployment declined by 7,100 (-11.0 per cent) to 57,300.

FIGURE 33 The Unemployment Rate: Q1 2006 - Q4 2016



Source: Central Statistics Office.

Long-term unemployment has also continued to decline, with the rate falling from 4.7 per cent in Q4 2015 to 3.6 per cent in Q4 2016. However, long-term unemployment still accounts for over 50 per cent of total unemployment: this figure stood at 54 per cent in Q4 2016, down only slightly from 54.5 per cent a year earlier. While this decline is a positive development, if the characteristics of those that are long-term unemployed are not favourable towards re-entry to the labour market (e.g., low levels of educational attainment, older age, etc.), then this may result in a slowdown in the fall in the unemployment rate over the next year or so. The characteristics of the long-term unemployed was examined in more detail in the Winter 2016 *QEC*.

[13] This measure is primarily based on QNHS data, with Live Register data used to adjust trends for periods for when no QNHS data are available.

Labour Market Forecasts

Our forecasts for the labour market for 2017 and 2018 are set out in Table 6. Based on the most recent QNHS labour market data (Q4 2016) and our expectations for the performance of the Irish economy, we forecast that the labour market will continue to grow in both 2017 and 2018. We also forecast that the total number of people in employment will increase in both years, with the growth rate in 2017 being similar to 2016 and then a slight slowdown in 2018. We expect that unemployment will continue to fall in both 2017 and 2018 as well, with the pace of this decline moderating in 2018. Given this, we are forecasting the unemployment rate to be 6.4 per cent for 2017 and 5.6 per cent in 2018.

TABLE 6 Labour Market Forecasts

	2012	2013	2014	2015	2016	2017	2018
Agriculture	86	107	109	110	113	112	112
Industry:	336	343	348	374	394	415	428
Construction	102	102	109	125	136	147	156
Other Industry	234	241	239	248	258	269	272
Services:	1,414	1,430	1,453	1,474	1,506	1,551	1,586
Total Employment ('000)	1,835	1,880	1,914	1,964	2,020	2,078	2,126
Employment Growth Rate (Per cent)	-0.5	2.4	1.8	2.6	2.9	2.9	2.3
Unemployed	316	282	243	204	172	142	127
Reduction in Unemployment (Per cent)	-0.3	-10.7	-14.0	-16.1	-15.4	-17.5	-10.8
Unemployment rate	14.7	13.1	11.3	9.4	7.9	6.4	5.6
Labour Force	2,154	2,163	2,157	2,167	2,193	2,221	2,253

Sources: Central Statistics Office and ESRI Forecasts.

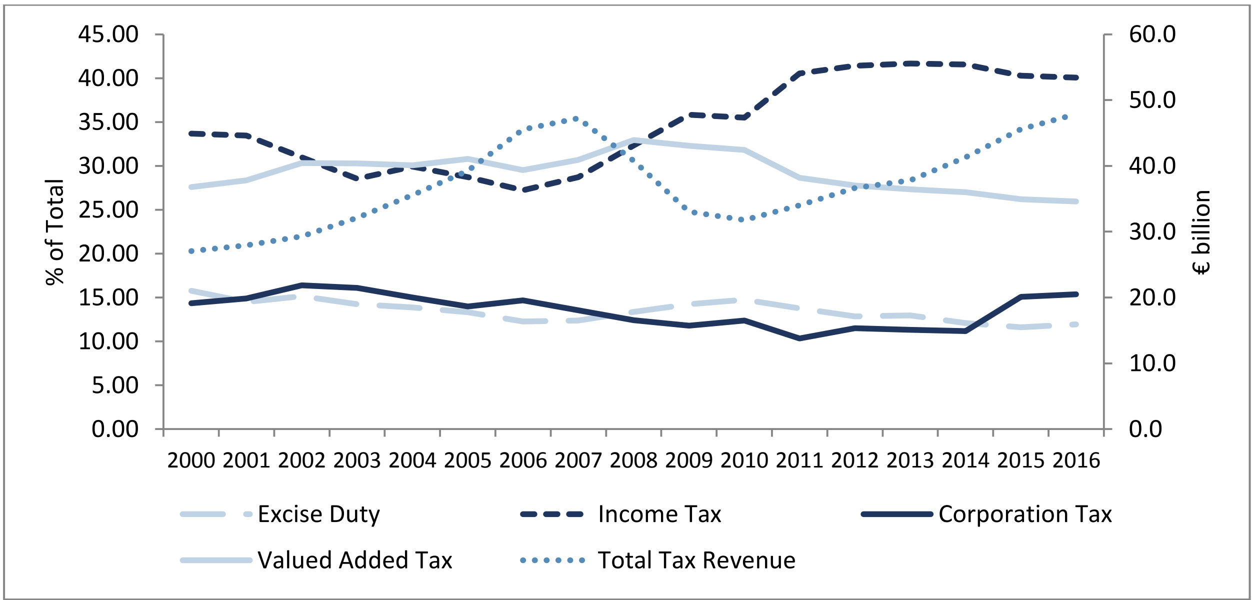
PUBLIC FINANCES

End of year Exchequer receipts for 2016 and initial estimates for 2017 indicate the continued improvement in the public finances. Overall in 2016 there was a 5 per cent increase in revenue compared to 2015 (Table 7). This follows on from very strong increases in the previous two years of 10 and 9 per cent respectively. Figure 34 plots the total tax take in billions as well as the percentage contribution of the four major headings since 2000. This clearly highlights the significant contribution from income tax, accounting for over 40 per cent of the total since 2011. Based on our forecasts for the labour market, income tax receipts are likely to contribute strongly again over the next two years.

While value added tax (VAT) has recently accounted for a decreasing proportion of the overall total taxation take, VAT receipts continue to grow at a moderate pace, increasing by 4 per cent compared to last year (Table 7). The importance of corporation tax for the overall tax take has increased since 2014 as the profit levels, in particular those of multinationals in Ireland, have risen significantly. This component, however, is extremely volatile and difficult to predict growing 7 per cent, 49 per cent and 8 per cent over the last three years. Corporation tax performed better than expected in 2016 and was one of the main reasons for the increase in overall tax revenues compared to 2015. More specifically, this taxation item saw increases of €737 million more than was expected in initial Department of Finance forecasts.

Given potential developments over the short to medium term vis-à-vis US corporation tax policy changes, the relatively volatile nature of corporation tax revenues in an Irish context is worth noting.[14] Furthermore, it raises questions about the prudence of any current expenditure projects being funded on the basis of better than expected corporation taxation receipts. Previous research (Addison-Smyth and McQuinn, 2016)[15] has highlighted the role that windfall taxes played in the difficulties experienced by the Irish public finances post-2008. While the EU fiscal rules are designed to ensure increases in public expenditure are in line with the trend growth rate of the economy, as noted in Addison-Smyth and McQuinn (2016), a useful complement to the present framework would be more granular assessments of the sustainability of key taxation aggregates.

FIGURE 34 Total Tax Take (€ billion RHS) and Contributions from Four Major Sub-Components (%)



Source: *QEC* calculations.

[14] The inherent challenges in forecasting corporation taxes is extensively reviewed in: Casey, E. Hannon, Andrew (2016) 'Challenges Forecasting Irish Coporation Tax'. IFAC Analytical Note no: 10.

[15] Addison-Smyth D. and K. McQuinn (2016). 'Assessing the sustainable nature of housing-related taxation receipts: The case of Ireland'. *Journal of European Real Estate Research*, Article first published online: June.

Table 7 Year-on-Year Changes in Major Tax Heads (%)

	Excise Duty	Income Tax	Corporation Tax	VAT	Total
2015	5,292	18,359	6,872	11,944	45,601
2016	5,711	19,169	7,351	12,420	47,864
% change	7.9%	4.4%	7.0%	4.0%	5.0%

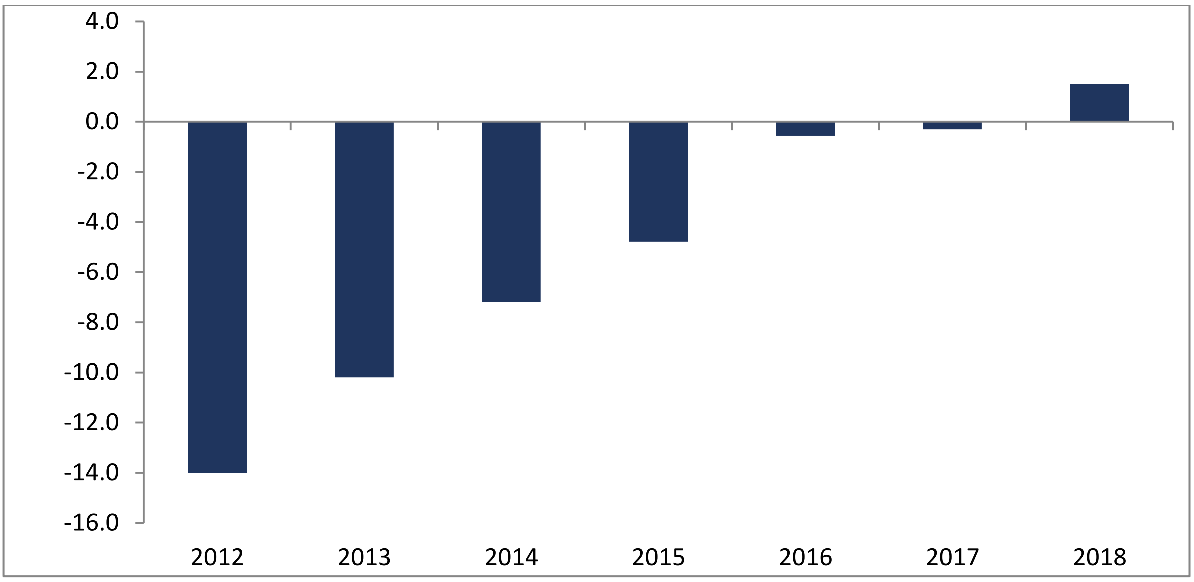
Source: Department of Finance.

The improvement in the fiscal deficit is highlighted in Figure 35. At its highest point in 2010 the underlying deficit reached over 11 per cent of GDP.[16] The broad improvement since then reflects the corrective measures taken on the expenditure side as well as healthy growth in tax receipts, especially over the last few years. In line with our forecasts for employment and continued strong consumption demand, we expect growth in tax items such as VAT and Income tax to remain relatively robust over the forecast period. With government revenue expected to increase over the next two years and only moderate growth in government expenditure envisaged, we expect a mild deficit of around 0.3 per cent of GDP in 2017, before reaching a surplus of approximately 1.5 per cent of GDP in 2018.

In light of the uncertainties confronting the domestic economy over the medium term, a prudent policy would suggest that the Government adopts a more cautious fiscal stance than it otherwise would. This would also be prudent in light of developments in the labour market. In particular, given that we expect unemployment to be at or close to potential by the end of 2018, a budgetary surplus would be advisable in such a context as it would help to prevent overheating in the domestic economy.

[16] When adjusted for Bank bailout costs.

FIGURE 35 Irish General Government Balance: 2009-2018 (€ billion)



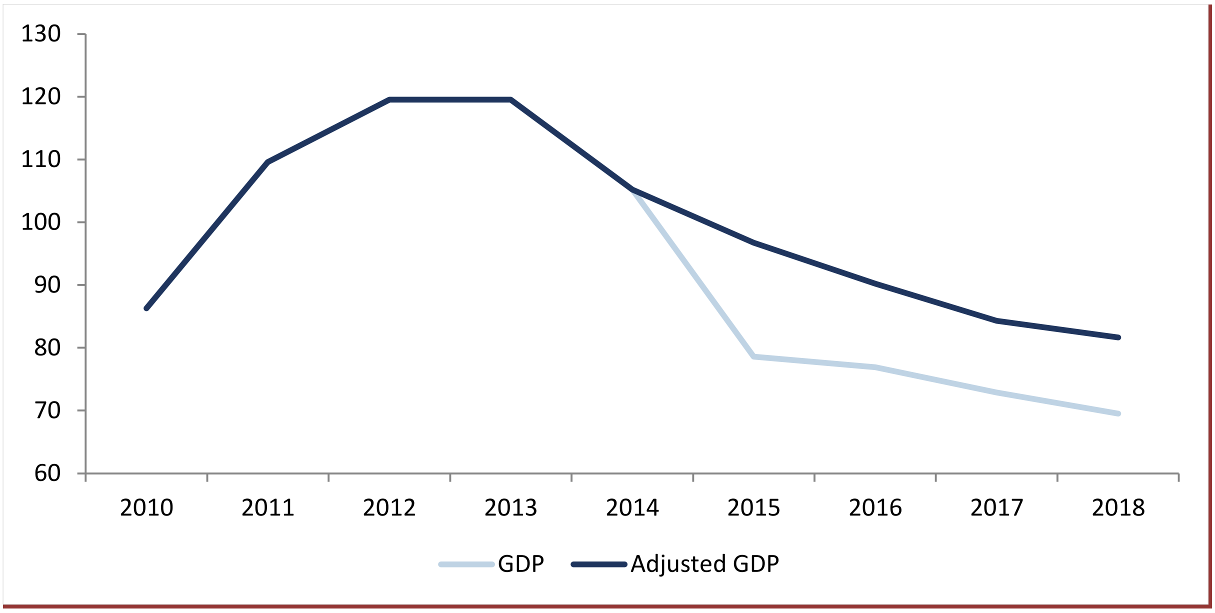
Source: *QEC* calculations.

Figure 36 plots the evolution of the debt-to-GDP ratio since 2010. We present two sets of ratios; one with the official GDP series and one with the estimated series[17] for 2015. It is important to use the estimated series given the inflated nature of the 2015 official GDP figure. Based on the official figure we envisage the debt-to-GDP ratio improving further in both 2017 and 2018, falling down to 71 per cent and 67 per cent respectively. However, on the basis of the adjusted GDP series, which we calculated first in the Autumn 2016 *Commentary*, we find that the debt ratios are much higher than those suggested by the official figures. Overall, we see this ratio falling to 84 per cent in 2017 and 82 per cent in 2018.

The Economic Statistics Review Group (ESRG) set up to deal with some of the national accounting issues which have arisen in recent years, have outlined a number of alternative economic indicators which they feel should now be published. In response the CSO has committed to publishing an alternative indicator to GDP/GNP, Gross National Income (GNI*), which would adjust for retained earnings of redomiciled firms and depreciation on foreign-owned domestic capital assets. By 2018 the CSO also plans to highlight the effect of intellectual property (IP) on the international investment position (IIP). Both of these developments should provide a clearer insight into the sustainability of the public finances. For example, as well as the debt-to-GDP ratio, attention should also focus on the debt-to-GNI*, which, like the debt-to-adjusted GDP ratio above, would provide a better estimate of the sovereign's ability to sustain its fiscal stance.

[17] This is an output based estimate of GDP which strips out contract manufacturing by providing a new estimate in 2015 for industrial output. We also make adjustments to 2015 depreciation and net factor flows.

FIGURE 36 Alternative Debt-to-GDP ratios (%)



Source: *QEC* calculations.

General Assessment

Against the backdrop of a number of longer-term challenges, the outlook for the Irish economy over the short to medium term continues to be encouraging. While certain sentiment indicators through 2016 suggested a weakening of economic performance, harder economic data such as Exchequer taxation receipts and the labour market data through Q4 2016 suggested that the economy grew quite robustly in 2016 on the back of strong performances in 2015 and 2014. Most of these variables suggest that the economy continues to perform well in 2017. While the Irish economy has been experiencing stronger growth from domestic sources such as investment and consumption over the past 18 months, one reason for continued optimism in 2017 is the better than expected performance for some of our main international trading partners; the United Kingdom and the United States are performing better than previously expected. This is somewhat ironic given the increased uncertainty concerning our longer-term trading relationships with both economies.

The significant contribution to growth from domestic factors such as consumption and investment are increasingly influenced by activities in the residential and commercial property markets. For example, the persistent increases in both actual and implicit rents is a growing component of consumption growth, while housing and office supply has shown significant increases in 2016 with further increases expected in 2017. While it is not accurate to characterise all growth in the economy as being fuelled by the construction sector, an increasing proportion of economic activity is set to be influenced by construction related activity. In that context, it is important to recall the imbalances which arose in the Irish economy prior to 2007 due to the disproportionate influence of this activity.

The expected increase in construction related activity will contribute to a consistent fall in unemployment over the next two years. We expect the unemployment rate to fall to 6.4 and 5.6 per cent by the end of 2017 and 2018. Any fall below 5.5 per cent would almost certainly indicate that the domestic economy is beginning to overheat.

The publication in December of the Economic Outlook saw the first estimates of potential output of the Irish economy using the new COSMO model. Deriving an estimate of potential output of the economy using a large scale structural model of the economy has been advocated by Bergin and Fitzgerald (2014). In particular an estimate of potential output based on a structural model has the advantage of being generated when the economy returns to long-run equilibrium, not only in the labour market, but also in a number of other important markets such as the goods market together with the government sector being in balance. Simulations of COSMO under a Brexit scenario indicate that the Irish economy will reach its potential level by 2018. Model estimates indicate that the potential growth rate of the aggregate economy is approximately 3 per cent. The likely rate of convergence of output towards its potential growth rate in 2018 suggests that the economy will grow by 3.6 per cent in 2018.

Inevitably, given Brexit and the new administration in the United States, there has been much commentary on the implications of these developments for the Irish economy. In that context it is important to understand the different channels through which Brexit, for example, will impact the domestic economy. Any new trade arrangements are unlikely to be in place until 2019 at the earliest, consequently in the meantime Brexit will impact the domestic economy through increased uncertainty which in turn may impact investment decisions by households and firms. One tangible development for the Irish economy at present is the lower exchange rate at which Sterling is now trading. Inevitably, this has implications for Irish exports with approximately 15 per cent of total domestic exports still going to the UK.

While there are a number of the incoming US administration economic policies which could have an adverse impact on the domestic economy, the Irish economy would be particularly vulnerable to any reduction in global trade which might ensue. The vagaries of the US political system mean that the Presidential element of the Government has more autonomy over trade considerations than almost all other economic and taxation measures, as evidenced by the incoming President's executive order withdrawing the US from the Trans-Pacific Partnership (TPP).

However, changes in the US corporate tax regime would also have a major impact on the Irish domestic economy. As a candidate, President Trump indicated a preference for substantial cut in the US corporation tax rate from 35 per cent to 15 per cent. Any real increase in financial incentives for US corporations to increase or keep business within the US would inevitably result in less investment overseas, with economies such as Ireland's being particularly affected. However, the implementation of such proposals come with the possibility of a sizeable increase in the US deficit and debt levels. Therefore, it will be of keen interest from an Irish perspective to see the degree of congressional agreement the incoming administration can get over the next quarter for its proposed taxation and other budgetary proposals.

While the trade outlook for the Irish economy in the short to medium term continues to remain positive over the next year, some likely longer-term trade-related developments are concerning. With the triggering of Article 50, it is increasingly likely that the UK will not alone leave the European Single Market but also the Customs Union as well. This latter development would see a frictionless border between the Republic of Ireland and Northern Ireland almost impossible to maintain. In that regard, recent research by Lawless and Morgenroth (2016) sheds new light on potential trade-related outcomes under a 'hard' Brexit. Their analysis focuses on the heterogeneity in the wide variation of tariff rates at both a country and sectoral level which actually pertains under a WTO scenario for post-Brexit UK-EU trade. Taking the significantly different price-induced increases across the 5,200 products listed in the EU external tariff schedule, and applying them symmetrically to EU-UK trade, Lawless and Morgenroth (2016) estimate that the UK's exports to the EU would fall by 22 per cent. Trade in some specific sectors, such as food and textiles would be close to wiped out while others would be almost unaffected. Clearly, from an Irish perspective a hard Brexit would have the most negative impact on the agri-food sector. This outcome will almost certainly have regional implications with rural areas such as Border counties more adversely impacted than urban ones. In fact, for Dublin, the impact of Brexit may even be positive if there is a significant increase in net foreign direct investment, such as increased activity in the financial services sector; although, given the acknowledged shortage of housing, a greater inflow of inward migration could further fuel the cost of accommodation in the capital.

While much focus has centred on external risks to the Irish economy, it is important to acknowledge potential domestic challenges as well. The growing relevance of the construction sector may give rise to productivity related issues in the economy. It will be recalled that one of the main reasons for the substantial deterioration in the competitiveness performance of the Irish economy in the 2000s was the disproportionate role played by the construction sector. The increased level of construction activity could also cause the unemployment rate to reduce faster than envisaged. If unemployment were to fall below 5.5 per cent this would almost certainly confirm that the domestic economy is overheating. This would then argue for a contractionary budgetary policy aimed at taking some of these pressures out of the economy. Budgetary policy also needs to be aware of the volatile nature of certain key taxation aggregates. Corporation tax, for example, has grown an average of 16 per cent per annum over the last four years. While multinationals based in Ireland have experienced increases in profitability over this period, there are still some concerns as to the sustainability of this rise in taxation receipts. Consequently, any policy seeking to increase current expenditure funded purely on the basis of such taxation revenues would not be prudent.

The publication in January of the report of the Economic Statistics Review Group (ESRG) saw certain proposals made concerning new CSO indicators for the Irish economy. The group, which was set up in light of the 26 per cent annual growth rate reported for the Irish economy in 2015, outlined three different sets of indicators (level, structural and cyclical). In particular the group advocates an adjusted indicator – Gross National Income (GNI*) – of the size of the economy be published. This indicator would be adjusted for the retained earnings of redomiciled firms and depreciation on foreign-owned domestic capital assets. The group also advised that the CSO include in the annual Institutional Sector Accounts (ISA) publication a breakdown of the non-financial corporations (NFC) sector into two broadly defined foreign and domestic sub-sectors. Furthermore the group advised the quarterly publication of underlying investment and underlying domestic demand measures that take account of the impact of IP relocations, contract manufacturing, aircraft leasing and redomiciled firms.

Many of these recommendations are welcome and the CSO has also published a timeframe for their implementation. A clear communication strategy is also required if these indicators are to be accepted by analysts and economists. For example, would the EU Commission be prepared to accept the ratio of Government debt-to-GNI* as an indicator of fiscal sustainability? One observation on the findings of the group is the absence of any suggestion of a micro-based indicator of economic activity. A previous *Commentary* has suggested that one avenue of approach would be to derive a set of productivity indicators amongst firms in the Irish economy decomposing the overall growth in labour productivity between existing and new entrants to the market. If this were combined with employment growth, then an overall indicator of economic activity could be estimated.

The adoption of rent pressure zones since the start of the year has led to the residential tenancies board (RTB) requesting researchers in the Institute to develop rental indices for local electoral areas (LEA). Using a new model, hedonic rental indicators will be available for 137 LEAs nationwide from Q4 2007 to the present. While the availability of such indicators is clearly beneficial in identifying rental pressures at quite a granular, regional basis, these indicators will also be able to provide a broader indication of the demand and supply of accommodation across the country. For example, the availability of these data can help to inform the practical implementation of the recent housing strategy in areas such as targeting vacant properties as well as the rental component. Variations in the supply and demand for accommodation may also provide an indication as to differences in regional levels of economic activity. This should feed into initiatives such as the recently launched Government strategic plan and development framework for Ireland between now and 2040 (*Ireland 2040 – Our Plan*). The plan seeks to achieve sustained, long-term and regionally balanced progress on social, economic and environmental fronts. Central to this process will be evidence-based analysis drawing on what regional and spatial data and information are available.

DETAILED FORECAST TABLES

FORECAST TABLE A1 Exports of Goods and Services

	2015	% change in 2016		2016	% change in 2017		2017	% change in 2018		2018
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Merchandise	195.4	-4.8	4.0	186.0	7.1	4.5	199.3	6.6	4.0	212.4
Tourism	4.3	8.4	7.4	4.7	5.0	4.0	4.9	4.0	4.0	5.1
Other Services	117.3	13.8	10.5	127.9	11.2	8.0	142.3	11.2	8.0	158.2
Exports Of Goods and Services	317.2	0.5	2.4	318.8	8.7	5.9	346.7	8.5	5.6	376.0
FISM Adjustment	0.0			-0.3			-0.3			-0.3
Adjusted Exports	317.2	0.4	2.4	318.5	8.7	5.9	346.4	8.5	5.6	375.7

FORECAST TABLE A2 Investment

	2015	% change in 2016		2016	% change in 2017		2017	% change in 2018		2018
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Housing	4.6	41.3	38.0	6.5	17.1	3.8	7.6	17.1	3.8	9.0
Other Building	8.9	12.4	7.5	10.0	14.5	9.6	11.4	14.5	9.6	13.5
Transfer Costs	0.8	8.2	3.0	0.9	8.2	3.0	0.9	8.2	3.0	1.0
Building and Construction	14.2	21.4	17.0	17.3	15.2	7.1	19.9	15.2	7.1	23.5
Machinery and Equipment	39.9	59.2	55.4	63.5	12.9	10.3	71.7	12.9	10.3	80.8
Total Investment	54.1	49.3	45.5	80.8	13.4	9.6	91.6	13.4	9.6	104.3

FORECAST TABLE A3 Personal Income

	2015	% change in 2016		2016	% change in 2017		2017	% change in 2018		2018
	€ bn	%	€ bn	€ bn	%	€ bn	€ bn	%	€ bn	€ bn
Agriculture, etc.	3.3	2.5	0.1	3.4	3.0	0.1	3.5	2.5	0.1	3.6
Non-Agricultural Wages	77.6	5.3	4.1	81.7	5.7	4.6	86.3	5.0	4.3	90.6
Other Non-Agricultural Income	19.0	31.2	5.9	22.5	7.2	1.6	24.2	30.6	7.4	31.6
Total Income Received	99.9	10.1	10.1	107.6	5.9	6.4	114.0	10.3	11.8	125.8
Current Transfers	22.8	0.6	0.1	22.9	0.5	0.1	23.1	0.1	0.0	23.1
Gross Personal Income	122.7	8.3	10.2	130.6	5.0	6.5	137.1	8.6	11.8	148.9
Direct Personal Taxes	28.2	3.8	1.1	29.3	3.2	0.9	30.2	2.7	0.8	31.0
Personal Disposable Income	94.5	9.7	9.2	101.3	5.5	5.5	106.8	10.3	11.0	117.9
Consumption	92.4	4.0	3.7	96.1	4.1	4.0	100.1	5.1	5.1	105.1
Personal Savings	2.1	256.6	5.5	5.2	30.2	1.6	6.8	87.7	5.9	12.7
Savings Ratio	2.2			5.1			6.3			10.8
Average Personal Tax Rate	22.9			22.3			22.0			21.7

FORECAST TABLE A4 Imports of Goods and Services

	2015	% change in 2016		2016	% change in 2017		2017	% change in 2018		2018
	€ bn	Value	Volume	€ bn	Value	Volume	€ bn	Value	Volume	€ bn
Merchandise	84.8	-1.7	1.2	83.3	10.5	8.2	92.1	10.0	7.7	101.2
Tourism	5.1	7.8	2.5	5.5	4.3	2.8	5.8	4.5	3.0	6.0
Other Services	145.8	31.5	19.6	168.4	11.8	7.5	188.2	12.1	7.8	211.0
Imports of Goods and Services	236.0	9.0	10.3	257.2	11.2	7.6	286.0	11.3	7.7	318.2
FISM Adjustment	0.0			-1.1			-1.3			-1.4
Adjusted Imports	236.0	8.5	10.3	256.0	11.2	7.6	284.7	11.3	2.7	316.8

FORECAST TABLE A5 Balance of Payments

	2015	2016	2017	2018
	€ bn	€ bn	€ bn	€ bn
Exports of Goods and Services	317.2	318.8	346.7	376.0
Imports of Goods and Services	236.0	257.2	286.0	318.2
Net Factor Payments	-53.2	-47.4	-51.6	-53.9
Net Transfers	-3.1	-2.7	-2.7	-2.7
Balance on Current Account	25.0	12.4	7.4	2.3
As a % of GNP	12.3	5.6	3.2	0.9

FORECAST TABLE A6 Employment and Unemployment, Annual Average

	2015	2016	2017	2018
	'000	'000	'000	'000
Agriculture	109.9	112.9	112.1	112.1
Industry	373.7	393.8	415.0	427.5
Of which: Construction	125.5	135.9	146.5	156.0
Services	1,474.1	1,506.4	1,551.2	1,586.0
Total at Work	1,963.5	2,020.3	2,078.3	2,125.6
Unemployed	203.6	173.1	142.3	126.9
Labour Force	2,167.2	2,193.1	2,220.5	2,252.5
Unemployment Rate, %	9.4	7.9	6.4	5.6

Whitaker Square,
Sir John Rogerson's Quay,
Dublin 2
Telephone **+353 1 863 2000**
Email **admin@esri.ie**
Web **www.esri.ie**
Twitter **@ESRIDublin**
ISBN **978-0-7070-0424-2**

ECONOMIC & SOCIAL
RESEARCH INSTITUTE