



Banc Ceannais na hÉireann
Central Bank of Ireland

Eurosystem



Quarterly Bulletin

QB1 – January 2018

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Notes

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2. Unless otherwise stated, statistics refer to the State, i.e., Ireland exclusive of Northern Ireland.
3. In some cases, owing to the rounding of figures, components do not add to the totals shown.
4. The method of seasonal adjustment used in the Bank is that of the US Bureau of the Census X-11 variant.
5. Annual rates of change are annual extrapolations of specific period-to-period percentage changes.
6. The following symbols are used:

| | |
|---------------|------------------------------|
| e estimated | n.a. not available |
| p provisional | . . no figure to be expected |
| r revised | – nil or negligible |
| q quarter | f forecast |
7. Data on euro exchange rates are available on our website at www.centralbank.ie and by telephone at 353 1 2246380.

Designed by: Essentra plc.

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ISSN 0332-2645

Forecast Summary Table

| | 2016 | 2017 ^e | 2018 ^f | 2019 ^f |
|---|-------|-------------------|-------------------|-------------------|
| Real Economic Activity | | | | |
| (% change) | | | | |
| Personal consumer expenditure | 3.3 | 2.8 | 2.7 | 2.5 |
| Public consumption | 5.3 | 3.7 | 3.6 | 2.2 |
| Gross fixed capital formation | 61.2 | -11.6 | 7.9 | 7.4 |
| Exports of goods and services | 4.6 | 5.1 | 4.4 | 3.9 |
| Imports of goods and services | 16.4 | -3.1 | 4.7 | 4.2 |
| Gross Domestic Product (GDP) | 5.1 | 7.0 | 4.4 | 3.9 |
| Gross National Product (GNP) | 9.6 | 6.0 | 3.8 | 3.7 |
| External Trade and Payments | | | | |
| Balance-of-Payments Current Account (€ million) | 9,196 | 29,254 | 27,720 | 29,644 |
| Current Account (% of GNP) | 3.3 | 9.8 | 8.8 | 8.8 |
| Prices, Costs and Competitiveness | | | | |
| (% change) | | | | |
| Harmonised Index of Consumer Prices (HICP) | -0.2 | 0.3 | 0.7 | 0.9 |
| of which: Goods | -3.1 | -2.1 | -0.9 | -1.0 |
| Services | 2.5 | 2.5 | 2.3 | 2.8 |
| HICP excluding energy | 0.4 | -0.1 | 0.3 | 1.1 |
| Consumer Price Index (CPI) | 0.0 | 0.4 | 0.8 | 1.1 |
| Compensation per Employee | 1.4 | 3.0 | 3.2 | 3.4 |
| Labour Market | | | | |
| (% change year-on-year) | | | | |
| Total employment | 3.7 | 2.6 | 2.2 | 1.8 |
| Labour force | 1.9 | 0.7 | 1.2 | 1.2 |
| Unemployment rate (ILO) | 8.4 | 6.7 | 5.7 | 5.2 |
| Technical Assumptions² | | | | |
| EUR/USD exchange rate | 1.11 | 1.13 | 1.21 | 1.21 |
| EUR/GBP exchange rate | 0.82 | 0.88 | 0.89 | 0.89 |
| Oil price (\$ per barrel) | 44.05 | 51.83 | 52.57 | 53.09 |
| Interbank market – Euribor ³ (3-month fixed) | -0.26 | -0.33 | -0.33 | -0.33 |

1 Based upon the annual change in the average nominal HICP.

2 The technical assumption made is that exchange rates remain unchanged at their average levels in mid-January. Oil prices and interest rates are assumed to move in line with the futures market.

3 Euribor is the rate at which euro interbank term deposits are offered by one prime bank to another, within the euro area. Daily data from 30 December 1998 are available from www.euribor.org.

Comment

The Irish economy continues to grow at a strong pace, supported by the buoyancy of domestic economic activity. While headline National Accounts data remain volatile and continue to be strongly influenced by the activities of multinational enterprises, the evidence from a broad range of domestic spending and activity indicators is that the domestic side of the economy is growing at a solid pace. The strength of domestic activity has been underpinned by strong and broad-based growth in employment, which has boosted incomes and supported the growth of consumer spending, while some key domestic components of investment, such as building and construction, have also grown strongly.

Looking ahead, with strong domestic momentum and a broadly improving international growth environment, the outlook remains positive, though both upside and downside risks prevail. On the domestic side, there is some upside risk related to the cyclical strength of the economy, while, on the external side, uncertainties in relation to Brexit, the international taxation environment, and exchange rates, persist.

Abstracting from the volatility in the headline National Accounts data arising from distortions to the trade and investment data, the underlying picture is that growth has continued at a relatively strong pace over the past year. Strong and broad-based growth in employment, particularly full-time employment, has provided a stimulus to incomes, which has been augmented both by some pick-up in wage growth and the further boost to real purchasing power from subdued inflation. In addition to the positive impact of these gains, underlying economic activity has also benefitted from continuing favourable financial conditions and the ongoing improvement in sectoral balance sheets.

Looking ahead, the outlook remains positive and, the central forecast, is that the economy will continue on a favourable growth path. The main impetus to growth this year and next is projected to come from the continued strength of demand within the economy in the form of solid growth in consumer spending and underlying investment (which excludes the volatile categories of investment in intangibles

and aircraft). The main driver of growth in underlying activity will be the continuing growth in employment and incomes, although following its very strong growth in recent years, employment growth is projected to gradually moderate over the forecast horizon. Notwithstanding this gradual slowing, underlying domestic demand is projected to grow by close to 4 per cent this year and by over 3 per cent next year.

On the basis of the latest forecasts for growth in trading partner countries, and abstracting from volatility from contract manufacturing activity, underlying export growth is set to remain favourable in 2018 and 2019. As a result of the improved overall outlook for trading partner countries, stronger net export growth is now projected than at the time of the last Bulletin and is expected to make a small positive contribution to overall growth both this year and next. However, the main contribution to growth over the forecast horizon will continue to come from the domestic side of the economy.

While the central forecast is for economic activity to continue to grow at a solid pace, risks to these forecasts remain. The outlook continues to be characterised by uncertainty about the external environment, both in relation to Brexit and international corporate tax policy issues. Given the position of Ireland as a small, highly open economy and the important role of multinational firms within the economy, the state of global economic and trading conditions and significant movements

in major exchange rates have an important bearing on Irish economic performance.

As noted previously, the economic impact of Brexit on Ireland will be negative and material, with uncertainty prevailing and the extent of the impact depending on the timing and nature of the changes to trading arrangements. To date, the impact of Brexit on the economy has mainly been felt through the effect of the weaker sterling exchange rate. Output, orders and exports data continue to suggest a muted overall response from Brexit related factors to date, with the most notable impact of sterling weakness, so far, to be seen on inflation. Reflecting the high proportion of goods imports which come from the UK, pass-through from sterling weakness has continued to keep downward pressure on goods price inflation, largely offsetting higher prices for services and keeping overall inflation subdued. However, indigenous sectors and regions which depend more heavily on the UK market remain vulnerable to the changes which Brexit may bring and the potential for adverse economic effects to emerge remains.

On the domestic side, while inflation has remained subdued and wage growth

contained, the buoyancy of domestic demand and the extent of the recovery in the labour market raises the question of the extent to which the cyclical strength of the economy may come to pose a risk to the sustainability of stable and balanced growth. In particular, the question of the extent to which there is still some slack in terms of available resources or whether the economy is now moving back close to capacity. Both recent research within the Bank and the newly published labour market data indicate that broader measures of labour supply signal that the legacy effects of the crisis on the labour market have not been fully resolved and that there is still additional labour supply available. This suggests that while labour market conditions are tightening, there is still scope for unemployment to fall further before more significant wage pressures emerge. The upswing in the economy in recent years has been driven by the improvement in real economic variables rather than financial factors. The recovery has been an income and not a credit or asset-driven phenomenon. In such circumstances, adherence to flexible, counter-cyclical policies are key to ensuring the sustainability of stable and balanced growth.

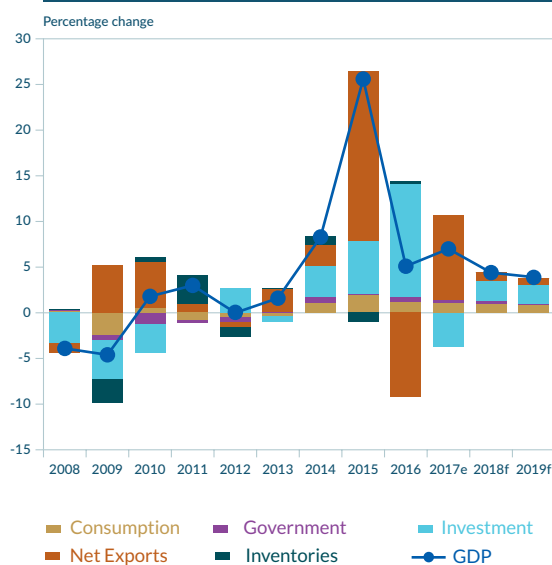
The Irish Economy

Overview

- Following a strong performance in 2017, the outlook for the economy remains positive, with significant momentum evident both in Ireland and internationally. However, recent headline GDP data (annual estimated growth of 7.0 per cent in 2017) overstate the strength of underlying developments and do not reflect the degree to which underlying economic conditions have improved. As has been the case in recent years, the headline data in 2017 were inflated by the activities of multinational enterprises (MNEs). This was most evident in trade and investment data and resulted in a significant distortion to the relative contributions to overall growth from net exports (overstated) and domestic demand (understated). Excluding the impact of these distortions, the outturn for last year was probably broadly in line with the outlook for the domestic economy. For 2018, GDP growth of 4.4 per cent is forecast, with a moderation to 3.9 per cent expected in 2019. This reflects both external demand prospects and the erosion of spare capacity domestically, as the growth in employment gradually moderates.

- Export growth was muted in the first half of last year, but picked up strongly in the third quarter, primarily reflecting a recovery in contract manufacturing exports. The performance of 'underlying' goods exports, excluding the impact of contract manufacturing, weakened somewhat over the second and third quarters of the year, falling slightly behind external demand indicators. Weakness in contract manufactured exports together with volatile investment in intellectual property (IP) contributed to a notable slowdown in import demand in the first half of last year. Despite the strong recovery in exports, the falloff in imports accelerated in the third quarter. This was due to a virtual cessation in imports of R&D related IP assets and a 75 per cent decline in imports of aircraft by leasing firms. The decline in imports, together with the pickup in exports in the third quarter resulted in a sizable positive contribution from net exports that largely accounted for the step-up in annual GDP growth to over 10 per cent in the

Chart 1: Contributions to GDP



Source: CSO and Central Bank of Ireland.

third quarter of last year. On the basis of the outlook for demand in Ireland's main trading partners and abstracting from volatility from contract manufacturing activity, net exports are likely to make a small positive contribution to overall GDP growth both this year and next.

- Underlying domestic demand¹, which grew by an estimated 2.4 per cent in 2017, is expected to expand by about 3.9 per cent in 2018, easing to 3.3 per cent in 2019. The modest increase in underlying domestic demand last year reflected relatively weak core machinery and equipment investment that seems to reflect a large base effect following strong equipment investment in the previous year. Other components of domestic demand including consumer spending, government consumption and building and construction investment were more buoyant.
- Total investment expenditure in Ireland has been exceptionally volatile in recent years and has, in turn, engendered significant volatility in domestic demand and in overall GDP growth. It reflects a very lumpy, stop-start pattern of expenditure on IP assets by multinational firms and the purchase of aircraft by aircraft leasing firms based here. Underlying investment, which excludes these items, has also been

¹ Underlying demand is the sum of consumption, government and underlying investment spending. The latter excludes intangibles and transport related spending from total investment.

volatile, due to the timing of large individual projects, which can have a significant impact. Total investment is projected to rebound strongly in 2018, with growth of about 7.9 per cent, easing to 7.4 per cent next year. In the construction sector, both housing and non-residential building should continue to recover strongly. In addition, underlying machinery and equipment expenditure is expected to pick up reflecting prospects for external and domestic demand.

- Estimated volume growth in consumer spending of 2.8 per cent in 2017 was slightly below the average pace of recovery since 2014. Growth of about 2.7 per cent this year and 2.5 per cent next year would see per capita consumption levels returning close to pre-crisis peak levels in 2019. The recovery in consumer spending has been sustained by solid growth in income and employment, which is projected to continue.
- The labour market continues to perform strongly. Employment growth of 2.2 per cent and 1.8 per cent is forecast for 2018 and 2019, respectively. This follows estimated growth of 2.6 per cent last year. The outlook here brings the prospect of full employment into view, with the unemployment rate projected to decline to just over 5 per cent next year. Economy-wide compensation is forecast to increase on average by 5.4 per cent in 2018 and 2019, albeit with a slight change in terms of the breakdown between employment and wage growth. It is envisaged that the latter will play a greater role in driving developments in the wage bill over the forecast horizon - compensation per employee is projected to increase on average by 3.2 per cent this year and 3.4 per cent in 2019.
- Despite signs of a pick-up in the final quarter of 2017, consumer price inflation remained subdued for the year as a whole. In 2017, the Harmonised Index of Consumer Prices (HICP) averaged just 0.3 per cent, while the core HICP declined by 0.1 per cent. Such a muted outturn reflects the impact of the appreciation of the euro against sterling that has led to a decline in the price of imported consumer goods from the UK. This has contributed to strong downward pressure on goods price

inflation, which has been offset by positive services price inflation. A gradual pick-up in headline inflation to 0.7 per cent in 2018 and 0.9 per cent in 2019 is forecast as the negative impact from goods prices moderates.

- Risks to the forecast reflect the uncertainty surrounding the strength and sustainability of the recovery in the Irish economy and in world demand. In the short term, these risks seem weighted on the upside given the strength of high frequency indicators both in Ireland and domestically. Ongoing downside risks, reflecting uncertainty regarding the terms of Brexit and the international taxation environment, continue to persist.

Box A: The International Economic Outlook
By Monetary Policy Division

Economic expansion continues to strengthen in the euro area, with GDP growing by 0.6 per cent on a quarterly basis in the third quarter of 2017, and by 2.6 per cent on an annual basis. This represents the eighteenth consecutive quarter of growth in the euro area. Household consumption expenditure and gross fixed capital formation had a positive contribution to growth, each contributing a 0.2 percentage points increase. The contribution of the external balance was slightly positive. A solid and broad-based growth momentum is broadly reflected in the December 2017 Eurosystem staff macroeconomic projections. These projections, substantially revised up compared with the September ones, foresee annual real GDP increasing by 2.3 per cent in 2018, 1.9 per cent in 2019 and 1.7 per cent in 2020, following estimated growth of 2.4 per cent in 2017.

Sentiment indicators for the euro area also indicate that the economic recovery is to remain robust in the near term. The Composite Purchasing Manager's Index (PMI) for the euro area posted 58.1 in December, up from 57.5 in November. The headline index has reached its highest reading since February 2011, and has signalled growth for 54 successive months. In December, the European Commission's Economic Sentiment Indicator increased further to 116.0, the highest level since October 2000, continuing the upward trend observable since autumn 2016.

According to Eurostat's flash estimate, euro area annual HICP inflation was 1.4 per cent in December, down from 1.5 per cent in November. Measures of underlying inflation have remained stable in recent months, with HICP excluding energy prices increasing by 1.2 per cent year-on-year in November. The ECB expects headline inflation to remain moderate in early 2018, mainly reflecting base effects in energy prices, before increasing again. Underlying inflation is expected to rise gradually over the medium term, supported by the substantial degree of monetary policy accommodation still in place, the continuing economic expansion, and the corresponding absorption of economic slack and rising wage growth. The December 2017 Eurosystem staff macroeconomic projections for the euro area foresee annual HICP inflation at 1.4 per cent in 2018, 1.5 per cent in 2019 and 1.7 per cent in 2020.

In December, the Governing Council of the ECB decided to leave its key interest rates unchanged. As announced in October, starting from January 2018 net asset purchases will amount to €30bn per month, and are intended to run until the end of September 2018, or beyond if necessary. The ECB re-iterated its forward guidance that the Governing Council expects the key ECB interest rates to remain at their present levels for an extended period of time, and well past the horizon of the net asset purchases.

The ECB assesses that risks surrounding the euro area growth outlook remain broadly balanced. On the one hand, the strong cyclical momentum could lead to further positive growth surprises in the near term; on the other hand, downside risks continue to relate primarily to global factors and developments in foreign exchange markets. As regards inflation, economic expansion and a reduction of labour market slack give grounds for greater confidence that HICP will converge towards target. At the same time, domestic price pressures remain muted overall and have yet to show convincing signs of a sustained upward trend. An ample degree of monetary stimulus is therefore considered to remain necessary for underlying inflation pressures to continue to build up and support headline inflation developments over the medium term.

Box A: The International Economic Outlook
By Monetary Policy Division

Turning to the UK, the Office for National Statistics estimated a 0.4 per cent increase in GDP in the third quarter of 2017 compared to the previous quarter, following 0.3 per cent growth in the second quarter. Overall output growth is projected to remain modest at 0.4 per cent in the fourth quarter, although there are risks around this projection. In contrast, growth in employment has remained robust and the unemployment rate has fallen to 4.3 per cent, exceeding expectations. Productivity growth has been weak and is expected to remain subdued. This, coupled with the modest outlook for growth in supply capacity, will limit the pace at which output can grow without generating inflationary pressure. In its November 2017 Inflation Report, the Bank of England projected GDP growth of 1.6 per cent in 2018, 1.7 per cent in 2019 and 1.7 per cent in 2020, following estimated growth of 1.6 per cent last year.

After November's rate increase, the Bank of England's Monetary Policy Committee (MPC) voted to leave the bank rate unchanged at 0.5 per cent at its December meeting. Annual inflation rose to 3.1 per cent in November 2017, its highest level since March 2012. However, the MPC judges that inflation is likely to be close to its peak, and will decline towards the 2 per cent target in the medium term.

In the United States, the labour market has continued to strengthen and economic activity has been rising at a solid rate. GDP increased by 0.8 per cent during the third quarter of 2017 compared with the previous quarter (after also a 0.8 per cent increase in the second quarter of 2017). Compared with the same quarter of the previous year, GDP grew by 2.3 per cent (after a 2.2 per cent increase in the second quarter of 2017). Near-term risks to the economic outlook appear roughly balanced.

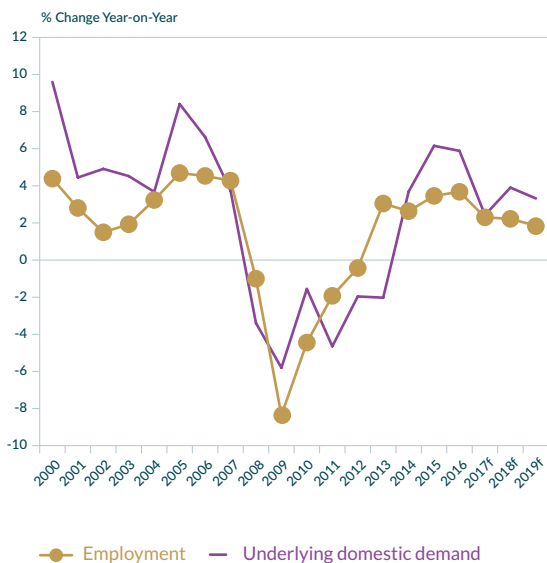
In December, the Federal Open Market Committee (FOMC) decided to raise the target range for the federal funds rate to 1.25 to 1.5 per cent, noting the continued strengthening in the labour market and the solid rise in economic activity. US consumer price inflation increased to 2.2 per cent year-on-year in November 2017 from 2 per cent in the previous month. The FOMC expects annual inflation to remain somewhat below its 2 per cent objective in the near term, but to stabilise around the objective in the medium term.

The increase in global economic activity is strengthening, with notable pickups in investment, trade, and industrial production, coupled with stronger business and consumer confidence. The IMF projects global growth to rise to 3.6 per cent in 2017 and 3.7 per cent in 2018, with broad-based upward revisions in the euro area, Japan, emerging Asia, emerging Europe, and Russia more than offsetting downward revisions for the United States and the United Kingdom. However, inflation remains below target in most advanced economies; and while short-term risks are broadly balanced, medium-term risks are still tilted to the downside.

Table 1: Expenditure on Gross National Product 2016, 2017^e, 2018^f and 2019^f

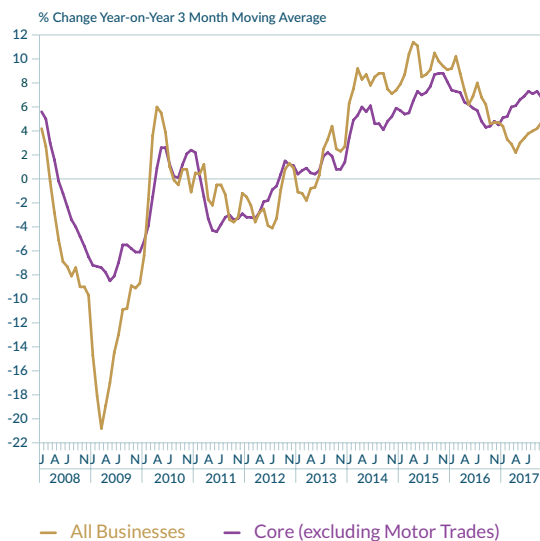
| | 2016 | | | 2017 ^e | | | 2018 ^f | | | 2019 ^f |
|---|------------|--------------------|-------|-------------------|--------------------|-------|-------------------|--------------------|-------|-------------------|
| | € millions | % change in volume | price | € millions | % change in volume | price | € millions | % change in volume | price | € millions |
| Personal Consumption Expenditure | 96,613 | 2.8 | 0.6 | 99,865 | 2.7 | 0.9 | 103,485 | 2.5 | 1.3 | 107,451 |
| Public Net Current Expenditure | 28,354 | 3.7 | 2.0 | 29,996 | 3.6 | 2.1 | 31,708 | 2.2 | 1.9 | 33,031 |
| Gross Domestic Fixed Capital Formation | 87,662 | -11.6 | 0.7 | 78,041 | 7.9 | 2.2 | 86,103 | 7.4 | 2.4 | 94,613 |
| <i>Building and Construction</i> | 17,694 | 9.3 | 4.2 | 20,149 | 10.2 | 3.5 | 22,965 | 7.9 | 3.9 | 25,741 |
| <i>Machinery and Equipment</i> | 20,533 | -9.3 | 0.6 | 18,739 | 5.4 | 1.3 | 20,006 | 5.4 | 1.3 | 21,358 |
| <i>Intangibles</i> | 49,436 | -20.0 | -1.0 | 39,153 | 8.0 | 2.0 | 43,131 | 8.0 | 2.0 | 47,513 |
| Value of Physical Changes in Stocks | 2,383 | | | 2,383 | | | 2,283 | | | 2,183 |
| TOTAL DOMESTIC DEMAND | 215,012 | -3.0 | 0.8 | 210,286 | 4.7 | 1.5 | 223,578 | 4.3 | 1.7 | 237,278 |
| <i>of which: Underlying Domestic Demand</i> | 155,524 | 2.4 | 1.5 | 161,578 | 3.9 | 1.6 | 170,491 | 3.3 | 1.8 | 179,371 |
| Exports of Goods & Services | 335,042 | 5.1 | 1.3 | 356,857 | 4.4 | 1.3 | 377,273 | 3.9 | 1.1 | 396,117 |
| FINAL DEMAND | 550,054 | 2.0 | 1.1 | 567,142 | 4.5 | 1.4 | 600,851 | 4.0 | 1.3 | 633,395 |
| Imports of Goods & Services | -274,398 | -3.1 | 1.1 | -268,830 | 4.7 | 1.8 | -286,425 | 4.2 | 0.5 | -300,031 |
| <i>Statistical Discrepancy</i> | -89 | | | -89 | | | -89 | | | -89 |
| GROSS DOMESTIC PRODUCT | 275,567 | 7.0 | 1.2 | 298,224 | 4.4 | 1.0 | 314,338 | 3.9 | 2.1 | 333,274 |
| Net Factor Income from Rest of the World | -48,818 | 11.2 | 1.3 | -54,973 | 6.8 | 1.3 | -59,432 | 4.6 | 1.1 | -62,853 |
| GROSS NATIONAL PRODUCT | 226,749 | 6.0 | 1.2 | 243,250 | 3.8 | 0.9 | 254,906 | 3.7 | 2.3 | 270,422 |
| EU subsidies less taxes | 993 | | | 1,920 | | | 2,012 | | | 2,135 |
| GROSS NATIONAL INCOME | 227,742 | 6.0 | 1.5 | 245,170 | 3.8 | 0.9 | 256,918 | 3.7 | 2.3 | 272,556 |

Chart 2: Domestic demand and employment growth



Source: CSO and Central Bank of Ireland.

Chart 3: Index of Volume of Retail Sales



Source: CSO.

Demand

Domestic Demand Overview

The outlook for both consumer and investment spending remain favourable. For 2018 and 2019, underlying domestic demand is forecast to grow by 3.9 and 3.3 per cent, respectively. Headline (unadjusted) measures of domestic demand are marginally stronger than underlying demand in both years reflecting prospects for IP and transport related investments.

Consumption

Personal consumption expenditure is forecast to grow by 2.7 per cent in 2018 and 2.5 per cent in 2019. This follows solid growth in recent years, with consumption up by an estimated 2.8 per cent last year. The forecast reflects current momentum in consumer spending and continuing employment and income growth.

The latest retail sales data show that core sales (i.e. sales less motor trades) were up 6.8 per cent in the year to November, with overall sales up 3.9 per cent. The retail sales data

were particularly strong in November (Chart 3), building on a solid outturn in the third quarter. This bodes well for consumption prospects in 2018 with significant momentum in the data in the latter part of the year. While services related consumption was weaker last year, past experience points to a notable pattern of upward revisions to historical growth rates (Figure 2).²

Within the components, there has been a very strong recovery in spending on durable related goods, again evidenced in monthly retail sales data. Purchases of durable goods tend to be cyclical and linked to the housing market. These issues are examined in Box B.

The projections for spending would see real per capita consumption levels near to pre-crisis (2007) peak levels in 2019 (Figure 3). With incomes projected to rise solidly over the forecast horizon and with ongoing Brexit-related risks, the household savings ratio is expected to increase modestly to an average rate of 6.2 per cent in 2018 and 2019.

² For more details, see Box A: Consumer Spending Data and Forecasts, Diarmaid Addison-Smyth, Quarterly Bulletin No. 1, 2015).

Box B: The Recovery in Irish Personal Consumption Expenditure
 By Suzanne Linehan and Diarmaid Smyth³

Personal consumption expenditure, a key economic aggregate accounting for more than one third of GDP and almost two-thirds of underlying domestic demand, has made a solid contribution to the Irish economic recovery, having grown continuously since the first quarter of 2014. Growth in the volume of personal consumption expenditure averaged 2.9 per cent in year-on-year terms from the first quarter of 2014 up to the third quarter of 2017. Such growth in consumer spending has also had significant implications for employment, taxation and output. This Box decomposes the recovery in personal consumption expenditure, paying particular attention to spending on durable goods.

Decomposition of Personal Consumption Expenditure

While the headline personal consumption growth rate points to a strong turnaround, it masks heterogeneous developments within the consumption basket. In Table 1, consumer spending is classified into four categories – staple goods, non-essential non-durables, durable goods and non-adjustable expenditure.⁴ The most volatile category within this breakdown is clearly durable goods, falling sharply during the recession and rising robustly during the recovery phase. Growth in consumer spending on durable goods appears to have been much more cyclical than the non-durable goods and services categories, the growth rates of which remain well below their pre-crisis rates

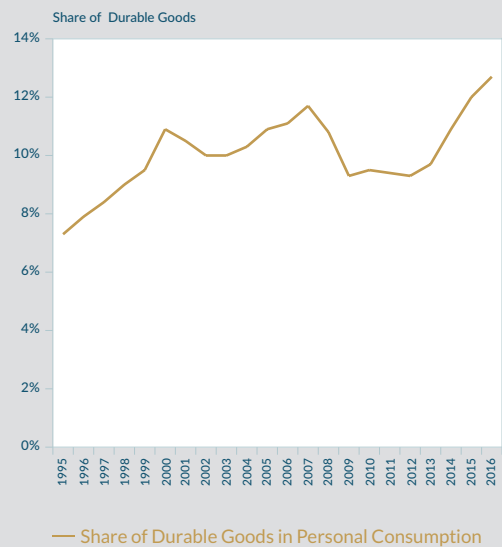
Table 1: Decomposition of Personal Consumption Expenditure

| | 1996-2007 | 2008-2013 | 2014-2016 |
|----------------------------|------------|-------------|------------|
| Staple Goods | 3.9 | -1.5 | 2.9 |
| Non-essential non-durables | 6.7 | -1.3 | 2.8 |
| Durable goods | 11.0 | -3.9 | 12.8 |
| Non-adjustable expenditure | 4.3 | 0.9 | -0.8 |
| Total | 6.5 | -1.1 | 3.2 |

Breakdown of Spending on Durable Goods

Spending on durable goods can be more easily postponed during a downturn as this category generally tends to have a longer life-span as well as a higher price. As a result, consumer purchases of durable goods have been found to exhibit a higher degree of sensitivity to changes in macroeconomic conditions, such as an income shock, than is the case for the non-durable categories of goods and services.⁵ Following double-digit increases pre-2008, the durable goods category experienced the largest contraction during the 2008-2013 period. It would appear that the effects of both the negative income shock and the sharp rise in uncertainty during the economic and financial crisis discouraged Irish consumers from purchasing durable goods over this period.

Box B Chart 1: Share of Durable Goods in Personal Consumption



Source: CSO.

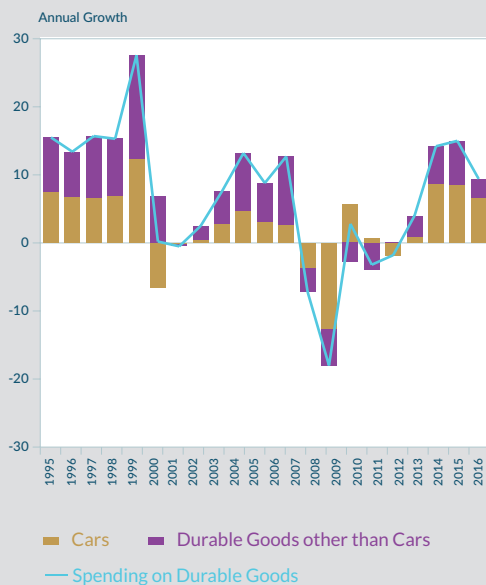
³ Irish Economic Analysis Division.

⁴ Staple goods includes items such as food and non-alcoholic beverages, education and transport services. Non-essential non-durables includes predominantly services – restaurants, hotels, recreational, communications as well as alcohol and tobacco. Durables include vehicles, furnishing, household equipment as well as clothing and footwear.

Box B: The Recovery in Irish Personal Consumption Expenditure

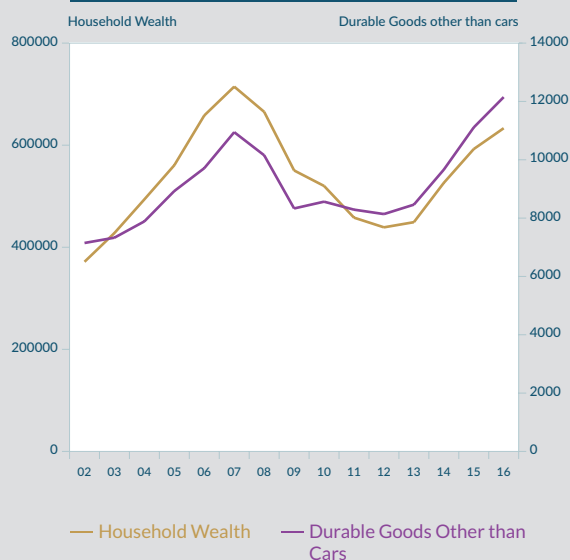
By Suzanne Linehan and Diarmaid Smyth

Box B Chart 2: Decomposition of Spending on Durable Goods, annual growth



Source: CSO.

Box B Chart 3: Spending on Durable Goods other than cars and Household Wealth



Source: CSO and Central Bank of Ireland.

The cyclicity of spending on durable goods is further evidenced by the sharpness of its recovery (Table 1), with double-digit growth in average annual terms since 2014, exceeding pre-recession averages. Reflecting the strength and duration of this upturn, the share of durable goods in total private consumption reached a series high of 12.7 per cent in 2016, having averaged around 10 per cent over the 1995 to 2016 period – see Chart 1. Macroeconomic conditions and in particular, consumer confidence and expectations have improved considerably since 2013. The turnaround in consumer sentiment and as a result, consumer spending is evident in savings and credit data. In terms of the former, the savings ratio at just over 6 per cent in 2016 has more than halved since 2009 and has declined continuously since 2013. At the same time, loans over a 1 to 5 year period (predominantly for durables related purchases) have risen significantly since early 2015, with an average annual growth rate of 10.2 per cent.⁶ In addition, pent-up demand for durable goods may have built up during the recession, thereby, boosting consumption expenditure amid the cyclical upswing.

5 Matute, M and Urtasun, A., (2017), The recovery of private consumption in Spain by product type and household, Banco de Espana, Economic Bulletin 2/2017, Analytical Articles.
 6 See Box B: *Developments in Consumer Credit – Evidence from Money and Banking Statistics*, by Byrne, S., and Meehan, C. in Quarterly Bulletin No. 4, 2016.

Box B: The Recovery in Irish Personal Consumption Expenditure*By Suzanne Linehan and Diarmaid Smyth*

A further breakdown of consumer spending on durable goods highlights the role that the rise in new car purchases has played in its recovery - see Chart 2. This is in line with available data on new private car registrations, which grew by 26 per cent in average annual terms between 2014 and 2016, as well as from retail sales data, which suggests that the volume of car sales rose by over 45 per cent between January 2014 and January 2017. However, it should be noted that the underlying trend in car sales over this period is difficult to estimate as they were heavily influenced by various temporary measures and structural changes (scrappage schemes, registration changes, PCPs, etc.).

Spending on durable goods other than cars (i.e. household appliances and furniture) also made a significant contribution to the recovery in consumption. This may be closely linked to developments in the housing market (see Chart 3), in view of the complementarity of house purchases and certain types of consumer expenditure, most notably durable goods. Also, Clancy, Cussen and Lydon (2014) found significant housing wealth effects, particularly in relation to spending on durable goods in Ireland.

While higher frequency consumer expenditure data, such as retail sales, clearly suggests that the recovery in durables continued into 2017 (see Table 2), the sustainability of double-digit growth in such spending is unclear. As highlighted above, both housing transactions and housing wealth have been found to exert a positive effect on consumption and therefore, much will depend on the prospects for the housing market in particular. As completions and the number of transactions are currently expected to continue rising over the forecast horizon, consumer spending on household durables seems likely to continue to receive a boost from this source. It is also worth noting that, as highlighted in Table 1, growth in most categories of personal consumption other than durables (staples, non-essential, non-adjustable) remain below their pre-crisis rates suggesting that scope exists for further expansion in these categories. At the same time, the forecasts within this Bulletin envisage that per capita consumption (in real terms) will converge on pre-crisis peak levels by end-2019. Given Brexit-related uncertainty and the expected stabilisation of the savings ratio at close to 6 per cent, upside risks to the consumption outlook are likely to become more limited.

Table 2: Top-5 Retail Sales by Product type, January to November 2017

| | Average, y/y |
|---------------------------------------|--------------|
| Retail Sale of Furniture and Lighting | 15.7% |
| Other Retail Sales | 13.6% |
| Retail Sale of Household Equipment | 12.7% |
| Retail sale of books, newspapers etc. | 11.7% |
| Retail sale of electrical goods | 11.5% |

Investment

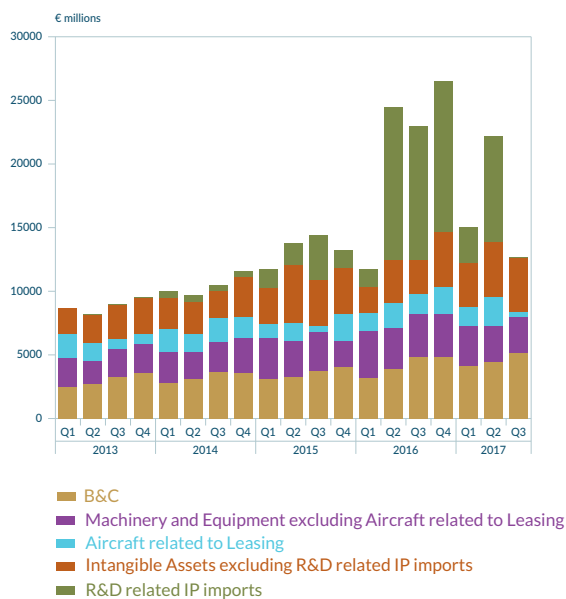
Headline investment declined by 44.7 per cent year-on-year in the third quarter of 2017 according to QNA data. As illustrated in Chart 4, much of this decline was due to a decrease in R&D-related IP investment. Underlying investment, which excludes the intangibles and aircraft components of investment, increased by 2.6 per cent in the year to the third quarter. Building and construction investment continued apace, with new dwellings investment up by 32 per cent over the same period while non-residential construction increased by 17.7 per cent. Machinery and equipment investment, on the other hand, has displayed some weakness in recent quarters and, excluding the aircraft component, was down 16.6 per cent in the year to the third quarter. However, this series is quite volatile and the latest weakness would appear to primarily reflect a base effect from strong equipment investment in 2016. Total intangible investment was down 27.3 per cent for the year to the third quarter of 2017.

For 2018 and 2019, residential construction investment is expected to increase strongly with approximately 23,000 and 27,000 units, respectively. This builds on an estimated 19,000 housing units in 2017. For the non-residential sector, activity is forecast to increase by 15 per cent and 9 per cent in 2018 and 2019, respectively. In total, building and construction related investment is forecast to increase by 10.2 and 7.9 per cent in 2018 and 2019, respectively.

As indicated above, core (excluding aircraft leasing) machinery and equipment investment softened considerably in the first three quarters of 2017. While Brexit-related uncertainties pose a risk, core machinery and equipment investment is projected to recover in 2018 and 2019 to around trend growth of 5 per cent.

Bearing in mind prospects for all components of investment, total investment is forecast to

Chart 4: Gross Fixed Capital Formation (Constant Prices)



Source: CSO.

increase by 7.9 and 7.4 per cent in 2018 and 2019, respectively.

Government Consumption

Government consumption is projected to grow by 2.9 per cent on average in 2018 and 2019 based on the measures announced in Budget 2018. This follows estimated growth of 3.7 per cent in 2017.

External Demand and the Balance of Payments

Exports and Imports

The export outturn for the third quarter of 2017 considerably outpaced that of the first half of the year, with year-on-year increases of 8.7 per cent and 3.4 per cent, respectively. While services export growth continued, albeit at a reduced pace, strong growth in goods exports was the main contributor to the third quarter upturn, reflecting increased

Table 2: Goods and Services Trade 2016, 2017^e, 2018^f, 2019^f

| | 2016 | | | 2017 ^e | | | 2018 ^f | | | 2019 ^f |
|----------|------------|--------|-------|-------------------|--------|-------|-------------------|--------|-------|-------------------|
| | € millions | volume | price | € millions | volume | price | € millions | volume | price | € millions |
| Exports | 335,042 | 5.1 | 1.3 | 356,857 | 4.4 | 1.3 | 377,273 | 3.9 | 1.1 | 396,117 |
| Goods | 194,071 | 1.1 | 0.5 | 197,187 | 2.8 | 0.5 | 203,722 | 2.6 | 0.3 | 209,541 |
| Services | 140,971 | 11.0 | 2.0 | 159,670 | 6.5 | 2.1 | 173,552 | 5.5 | 1.9 | 186,576 |
| Imports | 274,398 | -3.1 | 1.1 | 268,830 | 4.7 | 1.8 | 286,425 | 4.2 | 0.5 | 300,031 |
| Goods | 88,219 | -2.4 | 0.5 | 86,459 | 3.6 | 0.0 | 89,558 | 3.1 | 0.5 | 92,833 |
| Services | 186,179 | -3.4 | 1.4 | 182,371 | 5.2 | 2.6 | 196,866 | 4.7 | 0.5 | 207,198 |

levels of contract manufacturing carried out outside the State. As highlighted in previous Bulletins, the difference between the value of goods exports according to the QNAs and the CSO's monthly External Trade Statistics⁷ (ETS) represents a timely proxy for contract manufacturing levels. The gap between these two measures widened sharply in the year to the third quarter of 2017, rising by 23 per cent, suggesting that contract manufacturing activity sharply boosted goods export growth. This strong outturn follows a 21 per cent year-on-year contraction in the QNA - ETS gap in the first half of 2017 (see Chart 5), when weakness in contract manufacturing weighed heavily upon the goods export outturn.

Following a buoyant first quarter outturn, the performance of 'underlying' goods exports, excluding the impact of contract manufacturing, weakened during the second and third quarters of 2017, falling slightly behind external demand indicators. The most noteworthy development at a sectoral level was the buoyancy of the performance of exports from the largely indigenous food and beverages sector despite the Brexit-related weakening of sterling. While the high-tech sectors of pharmaceuticals and medical devices continued to feature prominently in terms of goods export performance during the first half of 2017, some weakening was evident in year-on-year terms in the third quarter. On the services side, both computer services and financial services maintained a strong level of growth in the third quarter, with year-on-year

Chart 5: Goods Exports - Values



Source: CSO.

growth rates of 9.8 per cent and 27.9 per cent, respectively. Both high frequency indicators and external demand assumptions for the final quarter of 2017 are consistent with further expansion at a solid pace. In view of this and given the strength of the third quarter performance, the projected outturn for 2017 as a whole has been revised upwards by 0.2 percentage points to 5.1 per cent.

⁷ The inclusion of contract manufacturing is the main adjustment made in transforming goods export data from a cross border basis in the External Trade Statistics to an ownership basis in the QNAs.

Table 3: Balance of Payments 2016, 2017^e, 2018^f and 2019^f

| € million | 2016 | 2017 ^e | 2018 ^f | 2019 ^f |
|--|--------------|-------------------|-------------------|-------------------|
| Trade Balance | 60,644 | 88,027 | 90,849 | 96,085 |
| <i>Goods</i> | 105,852 | 110,728 | 114,163 | 116,708 |
| <i>Services</i> | -45,208 | -22,701 | -23,315 | -20,623 |
| Net Factor Income from the Rest of the World | -47,647 | -54,972 | -59,430 | -62,851 |
| Current International Transfers | -3,801 | -3,801 | -3,801 | -3,801 |
| Balance on Current Account | 9,196 | 29,254 | 27,618 | 29,433 |
| (% of GDP) | 3.3 | 9.8 | 8.8 | 8.8 |

Looking ahead, overall export growth is set to remain supported by the outlook for external demand. The most up-to-date assumptions continue to signal a solid expansion in demand among Ireland's main trading partners, albeit slowing slightly over the projection horizon as the upturn matures. It is noteworthy that demand in our main trading partners is expected to be somewhat stronger in 2018 than was expected at the time of release of the previous Quarterly Bulletin. In addition, sentiment indicators point to sustained growth in new export orders in the near term. The Purchasing Managers Indices (PMIs) for both the manufacturing and services sectors in the final quarter of 2017 exceeded levels recorded in the third quarter as well as long-run averages pointing to a continued steady expansion in export activity.

Overall, the volume of exports is projected to grow by 4.4 per cent this year followed by 3.9 per cent in 2019. As in previous Bulletins, our export projections are conditioned on the assumption that levels of contract manufacturing will grow in line with underlying exports over the remainder of the forecast horizon; effectively, a neutral impact is assumed. The outlook for exports continues to be characterised by a high degree of uncertainty largely arising from Brexit, with risks currently judged to be tilted to the downside.

Following a noticeable slowing in the first half of 2017, the falloff in imports accelerated in the third quarter, with a decline of more than 13 per cent year-on-year. Such a weakened

outturn largely reflected an intensification of the downward pressure from the services side owing to reduced levels of business services sector imports and, specifically, R&D-related imports of IP assets. Downward pressure also arose on the goods side from a lower level of aircraft-related imports. As a result, the estimate for import growth and particularly services import growth for 2017 as a whole has been revised sharply downwards. With import growth making a much weaker contribution in the year to the third quarter, combined with a strong export outturn, a sizable positive net trade contribution to GDP growth was recorded in the year to the third quarter.

Looking beyond recent volatility, the projected profile of imports will depend on the outlook for final demand as well as its composition. While generally remaining strong, the factors underpinning import growth are expected to ease somewhat over this year and next. Accordingly, a 4.7 per cent rise in overall import volumes is projected in 2018, followed by 4.2 per cent in 2019. The forecasts for exports and imports imply that net exports should continue to support GDP growth in the near term, albeit at more modest rates relative to 2017 - a positive contribution to GDP growth in 2018 from net trade of 1.0 percentage points is currently anticipated, falling to 0.8 percentage points in 2019.

Net Trade, Factor Incomes and International Transfers

Following a modest current account deficit of €872 million in the second quarter of 2017, a sizable surplus of €14,488 million was recorded in the third quarter. Once again, this sizable shift in the current account balance can largely be attributed to developments in the import of intellectual property. Despite the relatively modest services export performance during the third quarter of 2017, a services trade surplus was recorded for the first time

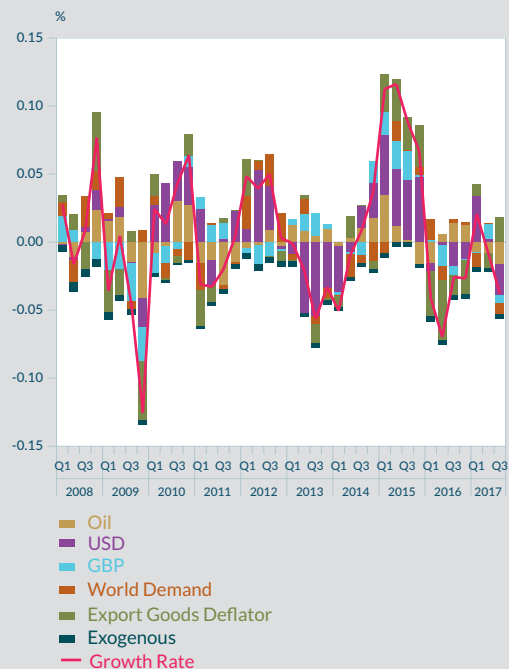
since 2013 reflecting the dramatic weakening of services imports. The widening of the merchandise surplus owing to the upturn in goods exports and the recording of a services trade surplus was partly offset by a minor pickup in net factor income outflows in the third quarter.

Box C: What is Behind Recent Trade Deflator Dynamics?
By Stephen Byrne⁹

Reflecting the exceptionally open nature of the Irish economy, changes in the trade deflators are the principal determinants of changes in the overall GDP deflator. The GDP deflator can be broadly decomposed into domestic prices and the terms of trade. The latter measures the price of Ireland’s exports relative to its imports, that is, the quantity of imports that can be purchased for a given quantity of exports. Previous work has examined the drivers of the terms of trade in aggregate⁹. This Box uses the Bank’s trade deflator forecast models to examine the drivers of movements in the price of imports and exports.

Figure 1 shows a historical decomposition of the changes in the export goods deflator (EGD) following a vector autoregression (VAR) that identifies the contributions of the variables that are included in the model as well as shocks which are not included in the model (exogenous). For the EGD, the most important driver over recent years has been the euro/dollar exchange rate. In fact, Irish export prices behave counterintuitively in the face of an appreciation of the euro (depreciation of the dollar). An appreciation in the euro exchange rate makes Irish exports prices cheaper. This is a result of the volume of Irish goods trade that is priced in dollars¹⁰.

Box C Figure 1: Export Goods Deflator - VAR Historical Decomposition



Source: CSO, ECB and Author's Calculations.

The import goods deflator (IGD) is also influenced to a significant extent by currency developments, with the euro/sterling exchange rate playing an important role as well as the US dollar again. In recent quarters, the strength of the euro relative to the pound has had a dampening influence on import prices (light blue bars), as have recent developments in the price of oil.

8 Irish Economic Analysis Division

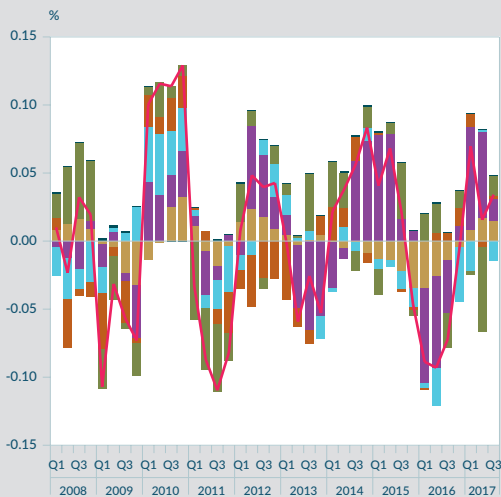
9 Box C: 'Developments in nominal GDP and the GDP deflator'. Central Bank Quarterly Bulletin, No. 1 2016

10 This is explained in large part by the exports of the pharmaceutical sector, which is dominated by US multinationals.

Box C: What is Behind Recent Trade Deflator Dynamics?

Stephen Byrne

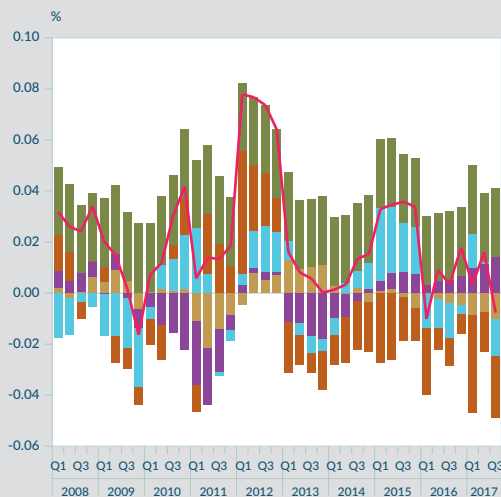
Box C Figure 2: Import Goods Deflator



- Oil
- USD
- GBP
- World Demand
- Import Goods Deflator
- Exogenous
- Growth Rate

Source: CSO, ECB and Author's Calculations.

Box C Figure 3: Import Services Deflator



- Oil
- World Demand
- Competitors Prices
- Import Services Deflator
- Exogenous
- Growth Rate

Source: CSO, ECB and Author's Calculations.

On the services side, price developments are heavily influenced by globalisation activities. When calculating deflators, the CSO match the price of products in one year with the same, or similar products in the previous year. With services, and in particular business and computer services this is not straightforward and can result in price movements that are driven by firm specific decisions which are unrelated to developments in the wider economy.

The export services deflator is heavily influenced by multinational activity. Computer services exports account for a significant degree of total services exports. These are largely foreign owned IT firms resident in Ireland. While our competitors prices, and world demand explained a significant portion of the dynamics during the 2012-2014 period; in recent years, the shocks that drive the export services deflator are largely unexplained by the variables in the model and are likely to reflect firm specific developments.

On services imports, the data are also heavily influenced by the import of royalties and licenses by multinational enterprises, along with research and development related imports. As noted above, these transactions often reflect firm specific decisions. As a result, Figure 3 shows that much of the dynamics in the import services deflator are exogenous to the forecast model (dark green bars). However, world demand and the import prices of our competitors do explain dynamics in services import prices to some extent. During the recent financial crisis in particular the collapse in world demand resulted in a fall in the import prices of services.

Taking account of the forecasts outlined above, the trade balance is projected to expected to average 29 per cent of GDP in 2018 and 2019. Net factor income outflows are expected to have increased in 2017, with a further pick-up envisaged in 2018 and 2019. Reflecting the prospective trends across these components, a current account surplus of around 9.8 per cent of GDP is estimated for

2017, followed by a narrowing to just under 9.0 per cent of GDP in both 2018 and 2019. It is nevertheless worth noting that, as is the case with National Accounts aggregates, the activities of multinational entities in Ireland represent a sizable challenge in terms of analysing developments in Balance of Payments statistics.

Table 4: Employment, Labour Force and Unemployment 2016, 2017^e, 2018^f and 2019^f

| | 2016 | 2017 ^e | 2018 ^f | 2019 ^f |
|-----------------------------------|--------------|-------------------|-------------------|-------------------|
| Agriculture | 113 | 109 | 109 | 109 |
| Industry (including construction) | 395 | 411 | 427 | 440 |
| Services | 1,625 | 1,668 | 1,700 | 1,727 |
| Total Employment | 2,133 | 2,188 | 2,236 | 2,277 |
| Unemployment | 195 | 156 | 136 | 124 |
| Labour Force | 2,328 | 2,344 | 2,372 | 2,401 |
| Unemployment Rate (%) | 8.4 | 6.7 | 5.7 | 5.2 |

Note: Figures may not sum due to rounding

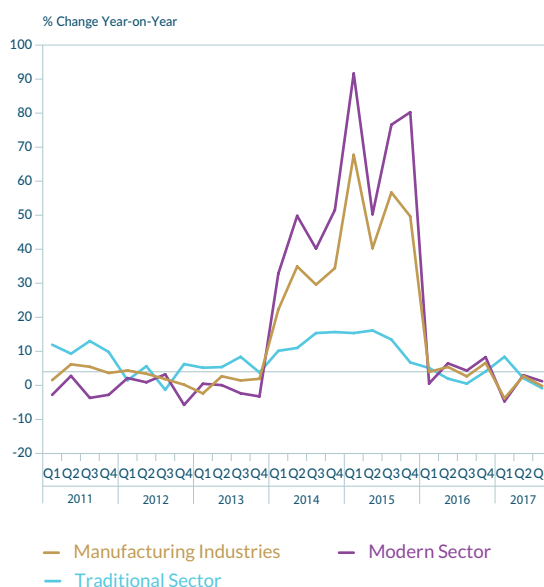
Supply

The QNA show strong output growth through the first three quarters of 2017. Industrial output (excluding construction) accelerated markedly in the third quarter, increasing by 13 per cent year-on-year following an increase of 6 per cent in the previous quarter. On the services side, the information and communication sector grew by 13.1 per cent year-on-year while the professional, administration and support services sector grew by 10.2 per cent. Agriculture, forestry and fishing grew by 5.7 per cent in the quarter with construction, up 7.6 per cent.

The strength of industrial output in the QNA is not reflected in industrial production data which show that overall output in the manufacturing sector fell by 2.8 per cent from January to November in comparison with the same period of last year. However, this series is volatile and heavily influenced by the activities of multinational corporations, with output in the modern sector falling by 2.7 per cent over this period. Output in the traditional sector also contracted, by 0.4 per cent on average through the first eleven months of the year.

The Investec Manufacturing PMI closed the year strongly, with a reading of 59.1 in December (values above 50 signifying expansion). This is the strongest reading in the series, which dates back to 1998. The CSO's monthly services index showed average growth of 2.4 per cent for the January to November period. All components of the Investec Services PMI showed expansion for December with the overall index at 60.4.

Chart 6: Volume of Industrial Production



Source: CSO.

The Labour Market

Employment is expected to grow by 2.2 and 1.8 per cent in 2018 and 2019, respectively. This would see an additional 89,000 people in work and overall employment levels at 2.3 million, in excess of the pre-crisis (2007) peak level. However, the composition of employment is likely to be significantly different by 2019 with approximately 1 in 16 persons (directly) employed in construction as opposed to 1 in 9 back in 2007.

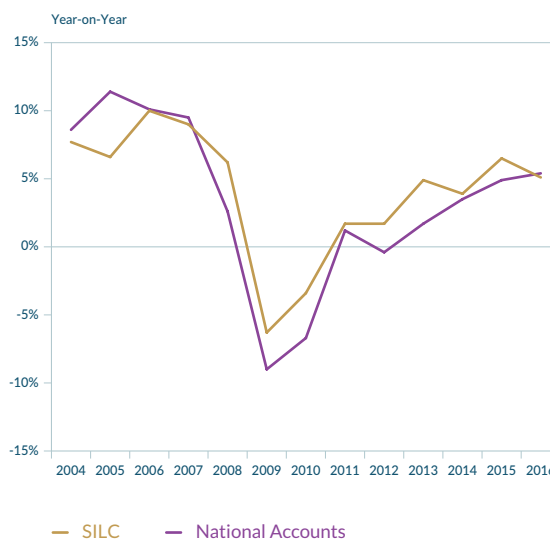
Given the robust outlook for employment and with the labour force expected to grow on

average by 1.2 per cent over the period, we see the unemployment rate falling further by close to a percentage point this year and by a further half a percentage point in 2019. This would see the unemployment rate declining to an average rate of 5.2 per cent in 2019 (from 6.7 per cent in 2017).

The labour market outlook is driven in part by current and prospective developments in domestic spending. In particular, the strength in underlying domestic demand points to further gains in employment and falls in unemployment.

The latest data from the new quarterly Labour Force Survey (LFS), which replaced the Quarterly National Household Survey (QNHS) (see Box D for further details), points to strong increases in employment (+2.8 per

Chart 7: Total Compensation to Employees



Source: CSO, Survey on Income and Living Conditions.

Box D: Revisions to Irish Labour Market Data

By Thomas Conefrey¹¹

Revised labour market data were published by the CSO on 16 January 2018. The new data incorporate the impact of two significant changes: the move to a new survey methodology along with an update to previous labour market data to reflect the results of the most recent Census in 2016. The net effect of these changes has been an upward revision to the levels and rates of employment and unemployment (and hence, the labour force and labour force participation) in the new Labour Force Survey (LFS) release compared to the previous Quarterly National Household Survey (QNHS) estimates. This Box briefly describes the reasons for the revisions to the CSO data and assesses the current position of the labour market based on the new data.

The QNHS, first introduced by the CSO in Q4 1997, has been replaced by the LFS as of Q3 2017. The LFS uses a new method of data collection and contains some other methodological changes (including sampling changes, questionnaire changes and non-response adjustment) compared to the QNHS, and this explains some of the revision to the labour market data. The second, more significant, factor behind the revisions was the incorporation of the Census 2016 results into the LFS estimates. The LFS (and previously the QNHS) is a sample survey. The CSO generates quarterly population totals by taking the population from the most recent Census as a base and then updates this figure every quarter using information on births, deaths and estimated migration. From Q3 2011 up to Q2 2017, the quarterly population estimates in the QNHS were based on Census 2011. With the availability of the Census 2016 results, the CSO has now revised the quarterly population estimates from Q3 2011 to the current quarter.¹²

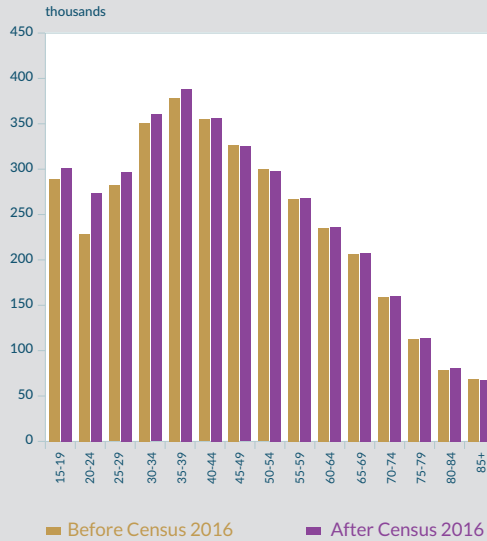
Based on the old Census 2011 benchmark, the original CSO estimate of the working-age population at Q2 2016 was 3.64 million; the new revised figure based on Census 2016 is almost 96,400 higher at 3.73 million. Figure 1 shows a comparison of the population estimates by age group based on the old QNHS estimate and the latest LFS estimate. As shown in the chart, the additional 96,400 persons from Census 2016 were not evenly distributed across the population with the difference between the two estimates heavily concentrated in the younger 15-19 and 25-29 age groups.

¹¹ Irish Economic Analysis Division

¹² The CSO has published an explanatory Information Note describing the changes to the labour market statistics. It is available here: <http://www.cso.ie/en/media/csoie/releasespublications/documents/labourmarket/2012/revlabourmarketest.pdf>

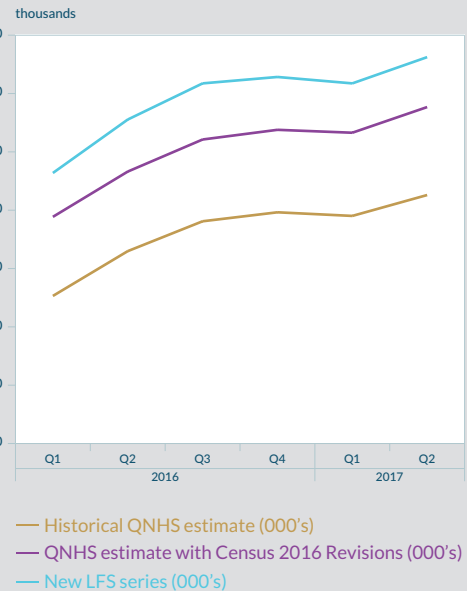
Box D: Revisions to Irish Labour Market Data
By Thomas Conefrey

Box D Figure 1: Population Estimates by Age Group, Quarter 2 2016, Original QNHS and New LFS Estimates



Source: CSO, QNHS and LFS.

Box D Figure 2: Impact of Census 2016 Revisions and LFS on Employment Estimates, Q1 2016-Q2 2017



Source: CSO, QNHS and LFS.

Table 1: Impact of Census of Population 2016 Revisions and LFS on employment estimates, Q1 2016 - Q2 2017

| | Historical QNHS estimate | QNHS estimate with Census 2016 Revisions | New LFS series | Adjustment due to Census of Population Revisions | Adjustment to LFS level | Total revision |
|-------|--------------------------|--|----------------|--|-------------------------|----------------|
| | (1) | (2) | (3) | (2)-(1) | (3)-(2) | (000's) |
| | (000's) | (000's) | (000's) | (000's) | (000's) | (000's) |
| Q1 16 | 1976.48 | 2044.31 | 2081.92 | 67.83 | 37.61 | 105.44 |
| Q2 16 | 2014.94 | 2083.05 | 2127.74 | 68.11 | 44.69 | 112.8 |
| Q3 16 | 2040.48 | 2110.62 | 2158.73 | 70.14 | 48.11 | 118.25 |
| Q4 16 | 2048.15 | 2118.89 | 2164.21 | 70.74 | 45.32 | 116.06 |
| Q1 17 | 2045.11 | 2116.44 | 2158.71 | 71.33 | 42.27 | 113.6 |
| Q2 17 | 2063.04 | 2138.43 | 2181.18 | 75.39 | 42.75 | 118.14 |

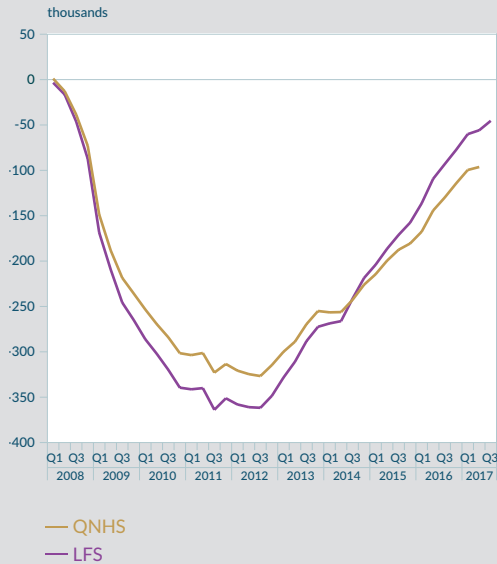
The CSO has revised its historic estimates of employment, unemployment and the labour force taking into account the new higher estimate of the overall population from Census 2016. In addition, the data for Q3 2017 are based on the new LFS methodology. Table 1 and Figure 2 shows the impact of both the Census 2016 revisions and the LFS on the estimated level of employment from Q1 2016 to Q3 2017. Taking Q2 2017, the overall level of employment was revised up by 118,200 in the new LFS compared to the previous QNHS figure. As shown in Table 2, the inclusion of the Census 2016 data accounted for around two thirds (or 75,400) of the overall revision, with the changes due to the introduction of the new LFS accounting for the remaining one third (42,800).

Box D: Revisions to Irish Labour Market Data
By Thomas Conefrey

The revised data present a slightly altered picture of the pattern of decline and recovery in the Irish labour market since 2008. Figure 3 shows the change in employment from its pre-crisis peak up to the most recent quarter. The revised data suggest that the pace and scale of the employment loss during the crisis was more acute than previously measured, while the recovery is now estimated to be stronger. In the previous QNHS data, the decline in employment from peak (Q1 2008) to trough (Q3 2012) was estimated at 328,000. In the new data the employment loss during the crisis is 36,100 higher at 364,000. While the decline in employment was more severe, the recovery since the trough is significantly stronger than previously reported. Employment in the revised data is estimated to have grown at an annual average pace of 3.2 per cent from 2013-2016, compared to the previous CSO estimate of 2.4 per cent. This means that as of Q3 2017, overall employment was 2 per cent (or 45,400) lower than its pre-crisis peak in 2007.

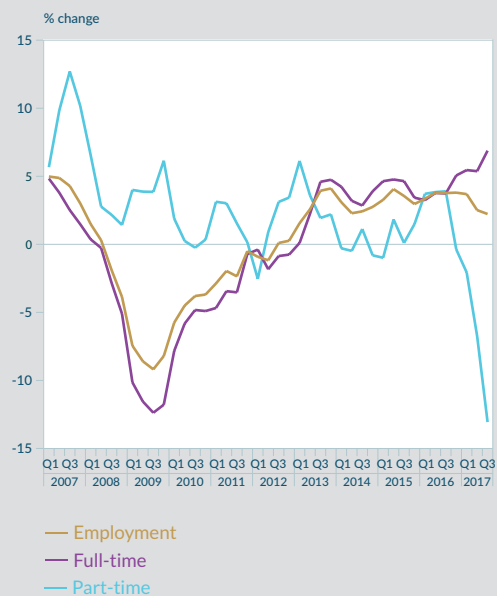
Turning to recent labour market developments, the LFS data point to continuing strong employment growth in 2017. Although the pace of headline employment growth slowed in the period up to Q3 2017, this is entirely due to a marked slowdown in part-time employment (Figure 4). In contrast, the pace of growth in full-time employment continued to accelerate during 2017. Year-on-year growth in full-time employment in Q3 2017 was 6.9 per cent, the fastest pace of growth since the series began in 1999. The steep drop in part-time employment over recent quarters appears unusual and may be related to the switch to the new LFS survey. Further monitoring of these data over the coming quarters is required before deciphering the drivers of the recent volatility in part-time employment.

Box D Figure 3: Quarterly Change in Employment relative to 2007Q4



Source: CSO, QNHS and LFS.

Box D Figure 4: Employment: Full-Time and Part-Time, Annual % Change

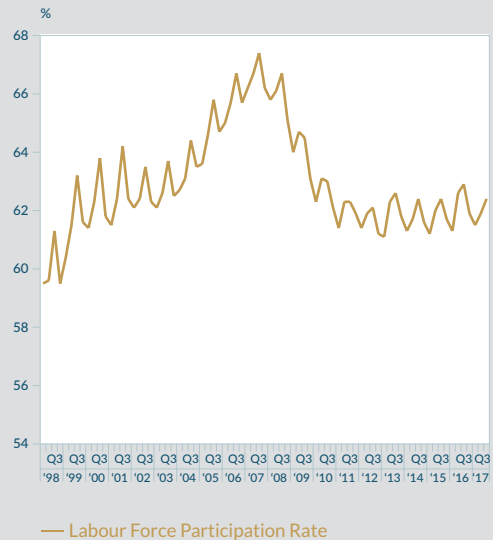


Source: CSO, QNHS and LFS.

Box D: Revisions to Irish Labour Market Data
By Thomas Conefrey

While the latest data provide further evidence of the strength of the recovery in overall employment since 2012, the legacy effects of the crisis on the labour market have not been fully resolved. In particular, labour force participation has been largely flat since reaching its low point in early 2013 and at Q3 2017 was 5 percentage points below its peak in 2007. This implies that there are still a significant number of individuals who are not classified as unemployed but are not in employment and are available for work. Increasing labour force participation from its current low level will be important in order to boost the economy's potential growth in the long term.

Box D Figure 5: Labour Force Participation Rate, % of Population Aged 15 and Over



Source: CSO, QNHS and LFS.

cent) in the first three quarters of 2017. These gains were broadly based, with most sectors bar agriculture and financial services posting increases. The largest increases were recorded in industry (including construction), information technology, education and health care related services. At the same time, labour force growth was modest with growth of 0.8 per cent over the period. As a result, the unemployment rate (on a seasonally adjusted basis) declined to 6.7 per cent in the third quarter, down from 8.3 per cent in the same period in 2016. In December, the monthly unemployment rate was estimated at 6.2 per cent to give an average annual rate of 6.7 per cent in 2017.

Pay

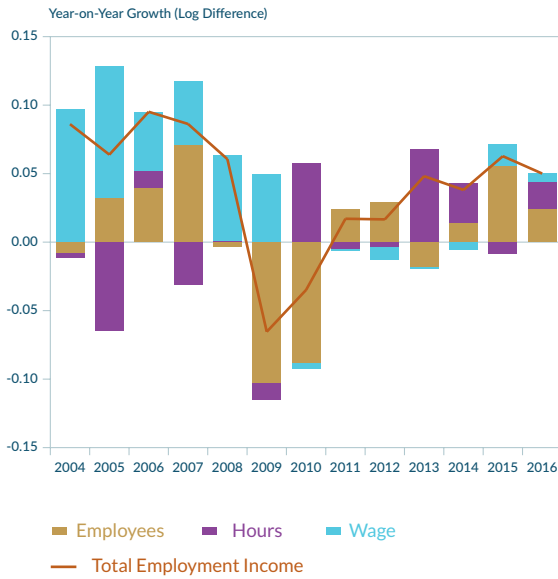
Given the outlook for the labour market, economy wide compensation is expected to increase by 5.4 per cent on average in both 2018 and 2019. This follows an estimated increase of 5.7 per cent last year. Within compensation, the balance between employment and wages is projected to change, with the latter expected to play a more prominent role in driving the wage bill

- compensation per employee projected to average 3.2 per cent this year and 3.4 per cent in 2019.

The Survey on Income and Living Conditions (SILC) allows for a more detailed analysis of the determinants of changes in overall employee compensation, in particular, the role played by changes in employment versus changes in wages. Employee income is the key component of household income and accounted for 85 per cent of household direct income in 2016. Employee income still makes up a large share (63 per cent) when extending to gross household income, which includes social transfers. Chart 7 shows the growth rates of total employee compensation from the National Accounts and SILC, with both series following a very similar path.

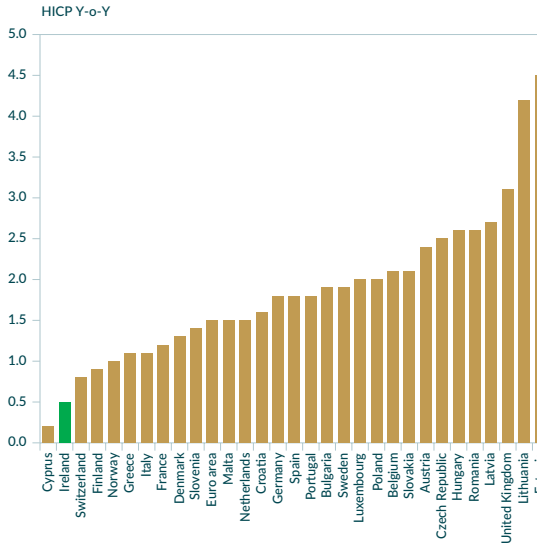
The key drivers of employee income include the number of hours worked by employees (the intensive margin), the number of individuals that are employed (the extensive margin) and the wages paid to workers. Chart 8 uses SILC microdata and shows how these different factors have influenced income growth over

Chart 8: Employment Income Drivers



Source: CSO, Survey on Income and Living Conditions.

Chart 9: HICP - November 2017



Source: Eurostat.

the past decade. While employee income has grown in recent years, this has been driven by increases in employment and hours worked, with more modest growth in wages. As the labour market continues to perform strongly, further reductions in unemployment have the potential to feed through to stronger growth in wages. This view is supported by recent Central Bank research, which highlighted that wages are less responsive to labour market conditions when the unemployment rate lies in the 5-10 per cent range.¹³ However, as the unemployment rate falls towards lower levels below 5 per cent, the historical relationship suggests that wages should rise more quickly. Recent data releases from the Earnings, Hours and Employment Costs Survey (EHECS) provide some evidence of increasing wages, as average hourly earnings increased by 2.3 per cent in the third quarter of 2017, up from 1.2 per cent year-on-year in the previous quarter.

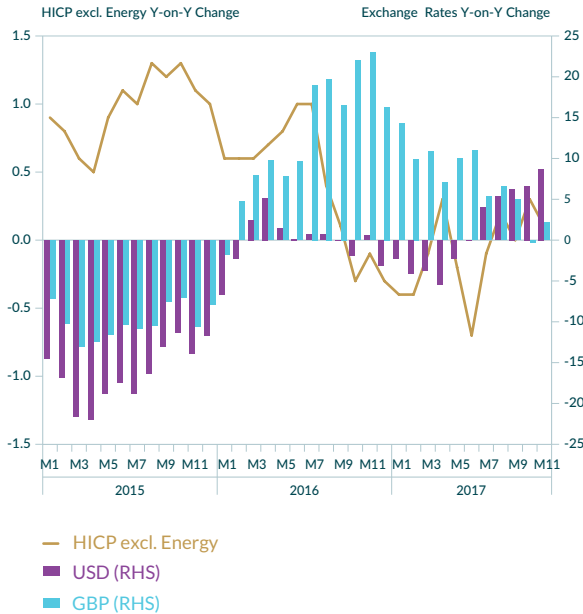
Inflation

Consumer Prices

Headline inflation remains subdued as negative, generally imported, goods price inflation weighs on higher prices in the services sector. The Harmonised Index of Consumer Prices (HICP) increased by just 0.3 per cent annually in 2017; goods prices declined by 2.2 per cent over this period, while services prices increased by 2.6 per cent. Abstracting from energy price developments, core inflation remains in negative territory, down by 0.1 per cent in average annual terms in 2017. Inflation in Ireland remains one of the lowest in the Euro area (see Chart 9). It is, however, noteworthy that a pickup in consumer price developments was evident in the final quarter of 2017, with a year-on-year increase in the headline HICP of 0.5 per cent following a 0.1 per cent increase in the previous quarter. This pickup in the fourth quarter was driven solely by a reduction in the pace of decline in goods prices.

¹³ For more details, see Linehan et al (2017), The Labour Market and wage growth after a crisis, Central Bank Quarterly Bulletin 4, 2017.

Chart 10: Irish Inflation and Exchange Rate Changes



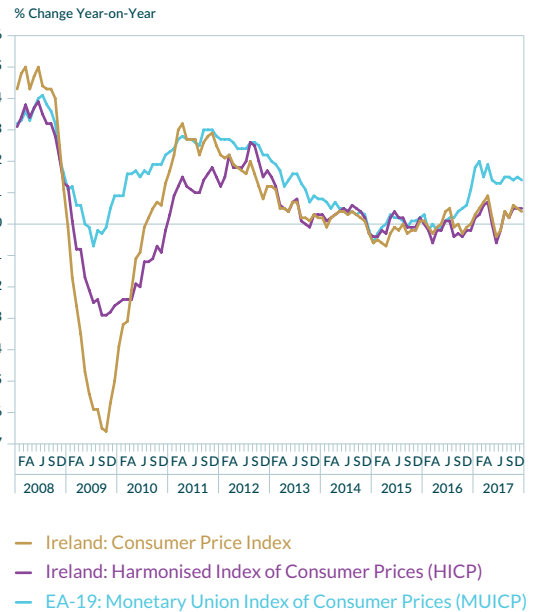
Source: Eurostat.

Previous weakening in sterling would appear to be contributing to downward pressure on consumer prices in Ireland (Chart 10) as imports from the UK become cheaper¹⁴. All else being equal, a rise in the value of the euro relative to sterling serves to decrease the euro price that foreign producers selling in Ireland need to charge to maintain profits in their own currency.

Chart 12 reveals that in 2017, prices increased for petrol and diesel, rent, energy, insurance and services, while prices declined for industrial goods, clothing, alcohol and food.

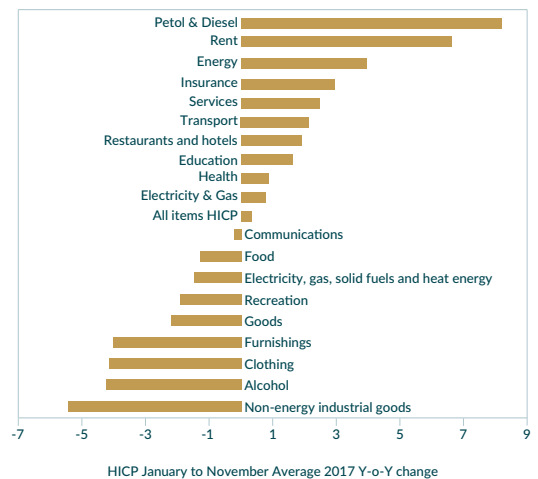
Over the coming year, the negative price impetus coming from the goods side of consumer prices is expected to continue, although the rate of decline is likely to moderate. Goods prices are forecast to decline by just 1 per cent in 2018 and 2019. With improving labour market conditions, domestic cost pressures are expected to remain elevated relative to goods; services prices are expected to increase by 2.3 per cent and 2.8 per cent in 2018 and 2019, respectively.

Chart 11: Consumer Prices



Source: CSO.

Chart 12: Consumer Prices by Commodity



Source: Eurostat.

Overall, based on current assumptions for oil prices, exchange rates and international commodity prices, and the outlook for earnings and the labour market, the headline HICP inflation rate is expected to increase by 0.7 per cent in 2018 and 0.9 per cent in 2018

¹⁴ For further details, see Reddan and Rice (2017), "Exchange rate pass-through to domestic prices", Economic Letter No. 8/EL/17. Central Bank of Ireland.

Table 5: Inflation Measures - Annual Averages, Per Cent

| Measure | HICP | HICP excluding Energy | Services ^a | Goods ^a | CPI |
|---------|------|-----------------------------|-----------------------|--------------------|-----|
| 2016 | -0.2 | 0.4 | 2.5 | -3.1 | 0.0 |
| 2017 | 0.3 | -0.1 | 2.5 | -2.1 | 0.4 |
| 2018f | 0.7 | 0.3 | 2.3 | -0.9 | 0.8 |
| 2019f | 0.9 | 1.1 | 2.8 | -1.0 | 1.1 |

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

Residential Property

The latest data show that the pace of annualised residential property price growth continued to increase throughout the first eleven months of 2017, growing by 10.8 per cent year-on-year. This builds on an increase of 7.3 per cent in 2016.

On the rental side, the latest rental report by property website Daft showed that average rental prices grew by 11.2 per cent year-on-year in the third quarter. The CSO's HICP "Actual Rentals for Housing" series, which takes account of outstanding tenancies, grew by 6.7 per cent on average in the year to November.

Commercial Property

The latest data from the MSCI/IPD database show that the pace of growth in commercial property prices has moderated in recent quarters. Overall, commercial property prices grew by 5.6 per cent year on year in the third quarter of 2017. On an annual basis, the office, retail and industrial sectors grew by 5.8, 5.4 and 7.3 per cent, respectively, in the third quarter¹⁵.

Competitiveness

The latest Harmonised Competitiveness Index (HCI) data for November 2017 show that the nominal HCI increased by 3.5 per cent on an annual basis. In real terms, the HCI rose by 2.2 per cent when deflated with consumer prices. These developments suggest a decline in competitiveness in Ireland, linked to the exchange rate movements, although weakness in consumer price inflation is offsetting some of this fall.

The Public Finances

Overview

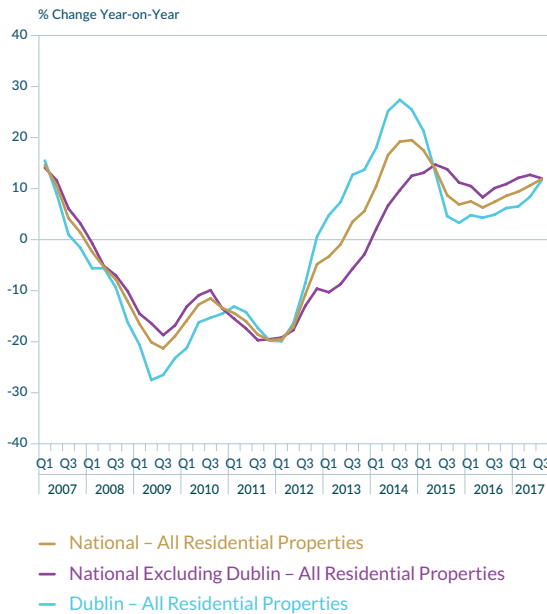
Full Exchequer data is now available for 2017 and points to an improvement in the general government balance from the deficit of 0.7 per cent of GDP recorded in 2016. The trends evident in Government Finance Statistics (GFS) data in the first three quarters appear to have continued in the final months of 2017; solid tax growth and falling interest payments more than offsetting strengthening primary expenditure. Within the former, growth was relatively broad based across the largest tax heads, with corporation tax once again increasing strongly and surpassing annual expectations. The GFS data also points to a further decline in the general government debt ratio in 2017, although as a percentage of GNI* it remains elevated; the Department of Finance estimate it remained above 100 per cent of GNI* in 2017. The early repayment of the outstanding IMF programme loans in the fourth quarter was a notable development and, as a result, around one-third of programme related borrowing has now been repaid.

Exchequer Returns

The Exchequer ran a surplus of €1.9 billion in 2017 - the first annual surplus since 2006 - with the outturn boosted considerably by receipts from the sale of part of the Government's shareholding in AIB. Excluding this transaction, and others that have no effect on the general government balance, the Exchequer ran a deficit of €2.2 billion (see Table 6), down from a deficit of €3 billion in the preceding year. Robust tax growth and falling interest costs drove the improvement,

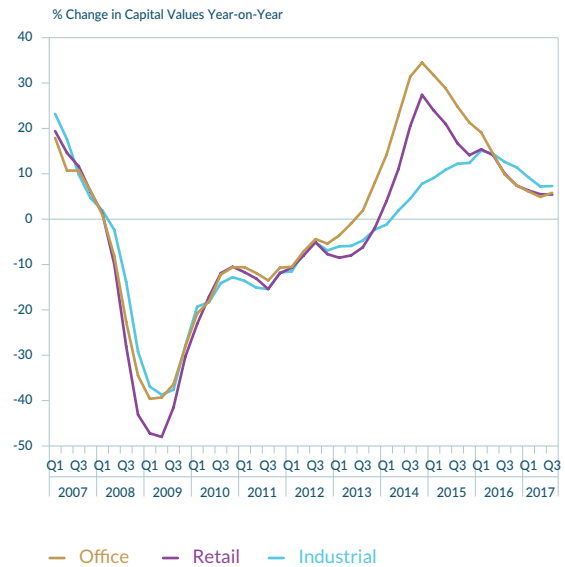
¹⁵ The Bank's Macro Financial Review provides a detailed review of developments in the commercial property sector.

Chart 13: Residential Property Price Indices



Source: CSO.

Chart 14: MSCI/IPD Irish Commercial Property Index



Source: MSCI/IPD.

while the year also saw a strengthening of primary expenditure.

Exchequer tax revenue increased by 6 per cent in 2017¹⁶, with growth not only stronger, but also broader based than in the preceding year; every tax head recorded an annual increase. Income tax, the largest tax head (it generates around 40 per cent of tax receipts and one-third of total revenue) was up 4.4 per cent year-on-year, as employment continued to strengthen. It was two of the other 'big four' tax heads which experienced the strongest growth rates, however; VAT and corporation tax receipts increased by 7.1 and 11.6 per cent, respectively. The latter was also the main driving force behind total tax revenue meeting its target for the year, as a higher than expected outturn offset below profile performances elsewhere. Corporation tax receipts were 0.2 per cent of GNI* ahead of expectations, highlighting once again its importance in supporting the fiscal improvement. Non-tax revenues recorded a small decline on the year as a weaker Central

Bank surplus and investment incomes offset stronger PRSI receipts.

As planned in Budget 2017, government spending expanded at its strongest pace for a number of years. Total expenditure grew by 2.9 per cent from 2016, with both current and capital spending increasing. The biggest nominal increase in gross voted expenditure occurred in the housing, planning and local government vote group (€717 million), followed by health and education (€693 million and €438 million, respectively). In all three of these vote groups, spending surpassed their Budget targets, although this was offset by weaker than expected non-voted spending. The latter includes spending on the EU budget, which was notably below profile. For a third successive year, spending on interest payments declined – by almost 10 per cent – and have now fallen by €1.3 billion (0.7 per cent of 2017 GNI*) since end-2014.

¹⁶ The figures in the remainder of this section exclude transactions with no general government impact, giving a closer approximation to the general government balance. These figures are provided by the Department of Finance in its Analytical Exchequer Statement.

Table 6: Analytical Exchequer Statement 2017

| | 2017 €m | 2016 €m | Annual Change (%) | Outturn vs Profile (€m) |
|-------------------------------|---------------|---------------|-------------------------|-------------------------------|
| Revenue | 64,779 | 62,098 | 4.3 | +305 |
| – Tax revenue | 50,737 | 47,864 | 6.0 | +116 |
| – Appropriations-in-aid | 12,262 | 11,995 | 2.2 | +128 |
| – Other Revenue | 1,781 | 2,238 | -20.4 | +61 |
| Expenditure | 66,997 | 65,086 | 2.9 | -162 |
| – Current Primary Expenditure | 56,323 | 54,148 | 4.0 | 0 |
| – Capital Expenditure | 4,585 | 4,194 | 9.3 | +44 |
| – Interest on National Debt | 6,090 | 6,745 | -9.7 | -206 |
| Balance | -2,218 | -2,989 | 25.8 | +467 |

Source: Department of Finance

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

Funding and Other Developments

The National Treasury Management Agency (NTMA) raised a further €5.25 billion through bond sales in the fourth quarter of 2017, bringing the total amount raised for the year to €15.75 billion. This was higher than the amount targeted at the start of 2017, highlighting the favourable nature of market conditions during the year. The fourth quarter activity included the syndicated sale of a new five-year bond, raising €4 billion at a negative yield. This supported the early repayment of the outstanding IMF and bilateral programme loans from Sweden and Denmark, following which around one-third of total Programme borrowing has been repaid. The NTMA also cancelled a further €1 billion of the floating rate treasury bonds issued in connection with IBRC's liquidation in the fourth quarter. As a result, €9.5 billion of these long dated bonds have been cancelled, with €15.5 billion still outstanding. For this year, the NTMA has announced it plans to issue €14 to €18 billion in government bonds. In January, the NTMA raised €4 billion through the sale of a new 10-year benchmark bond at a yield of 0.944 per cent.

An Timpeallacht Gheilleagrach

Leanann geilleagar na hÉireann de bheith ag fás ar luas láidir agus tá buacacht na gníomhaíochta eacnamaíche intíre ag tacú leis an bhfás sin. Cé go bhfuil luaineacht ag baint i gcónaí le sonraí príomha na gCuntas Náisiúnta agus cé go bhfuil na sonraí sin faoi thionchar mór ag gníomhaíochtaí frontier ilnáisiúnta, tugann an fhianaise ó raon leathan táscairí maidir le caiteachas agus gníomhaíocht intíre le fios go bhfuil an taobh intíre den gheilleagar ag fás ar luas maith. Tá fás láidir, leathan ar fhostaíocht mar bhonn agus mar thaca faoi neart na gníomhaíochta intíre, rud a chuireann borradh faoi ioncaim agus a thacaíonn le méadú ar chaiteachas tomhaltóirí, fad atá fás láidir tagtha freisin ar phríomhghnéithe intíre den infheistíocht, amhail tógáil agus foirgníocht.

Ag féachaint romhainn, tá cuma dhearfach ar chúrsaí i gcónaí sa mhéid go bhfuil fuinneamh láidir intíre ann agus go bhfuil an timpeallacht idirnáisiúnta fás ag dul i bhfeabhas tríd is tríd, ach tá rioscaí fós ann ar an taobh thuas agus ar an taobh thíos araon. Ar an taobh intíre, gabhann riosca áirithe ar an taobh thuas le neart timthriallach an gheilleagair, fad atá éiginnteachtaí ann i gcónaí ar an taobh seachtrach maidir le Brexit, maidir leis an timpeallacht idirnáisiúnta cánach, agus maidir le rátaí malairte.

Cé is moite den luaineacht a bhaineann le sonraí príomha na gCuntas Náisiúnta, ar luaineacht í a eascraíonn as saobhadh na sonraí trádála agus infheistíochta, is léir gur lean an fás ar luas measartha láidir le bliain anuas. Tugann fás láidir, leathan ar fhostaíocht, go háirithe ar fhostaíocht lánaimseartha, spreagadh d'ioncaim, spreagadh atá á neartú le méadú ar fhás pá agus le borradh faoin gcumhacht ceannaigh réadach de thoradh boilscithe mhaolaithe. I dteannta le tionchar dearfach na ngnóthachan seo, tá an bhunghníomhaíocht eacnamaíoch ag tairbhiú de dhálaí fabhracha leanúnacha airgeadais agus den fheabhsúchán leanúnach ar chlár chomhardaithe earnála.

Ag féachaint romhainn, tá cuma dhearfach ar chúrsaí agus táthar ag tuar sa réamhaisnéis phríomha go leanfaidh an geilleagar ar chonair fhabhrach fás. Meastar go dtiocfaidh príomhspreagadh an fháis i mbliana agus an bhliain seo chugainn ó neart leanúnach an éilimh laistigh den gheilleagar i bhfoirm dlúthfháis ar chaiteachas tomhaltóirí agus ar bhuninfheistíocht (lena n-eisiatar na gnéithe luaineacha den infheistíocht i sócmhainní doláimhsithe agus in aerárthaí). Beidh an fás leanúnach ar fhostaíocht agus

ar ioncaim mar phríomhspreagadh an fháis ar bhunghníomhaíocht, cé go meastar go maoloidh an fás ar fhostaíocht de réir a chéile thar thréimhse na réamhaisnéise. D'ainneoin an mhoillithe chéimsigh seo, meastar go dtiocfaidh méadú um 4 faoin gcéad i mbliana ar an mbunéileamh intíre agus go dtiocfaidh méadú de bhreis agus 3 faoin gcéad air an bhliain seo chugainn.

Ar bhonn na réamhaisnéisí is déanaí maidir le fás sna comhpháirtithe trádála, cé is moite d'aon luaineacht a d'eascródh as monaraíocht ar conradh, meastar go mbeidh an bunfhás ar onnmhairí fabhrach i gcónaí in 2018 agus 2019. De thoradh an ionchais fhoriomláin fheabhsaithe do na comhpháirtithe trádála, tá fás níos láidre ar ghlan-onnmhairí á thuar anois ná mar a bhí tráth na Faisnéise Ráithiúla deireanaí agus táthar ag súil go gcuirfidh sé ar bhealach dearfach le fás foriomlán i mbliana agus an bhliain seo chugainn. Ar a shon sin, is é an taobh intíre den gheilleagar is mó a chuirfidh leis an bhfás thar thréimhse na réamhaisnéise.

Cé go dtuairtar sa réamhaisnéis phríomha go leanfaidh gníomhaíocht eacnamaíoch de bheith ag fás ar luas maith, tá rioscaí ag baint leis na réamhaisnéisí seo i gcónaí. Sainghné an ionchais is ea an éiginnteacht a bhaineann leis an timpeallacht sheachtrach, lena n-áirítear Brexit agus saincheisteanna beartais cánach corparáide idirnáisiúnta. I bhfianaise go bhfuil geilleagar beag, oscailte ag Éirinn agus i bhfianaise an ról thábhachtaigh atá ag gnólachtaí ilnáisiúnta sa gheilleagar, bíonn tionchar tábhachtach ar fheidhmíocht eacnamaíoch na hÉireann ag dálaí trádála agus eacnamaíocha domhanda agus ag gluaiseachtaí suntasacha sna mór-rátaí malairte.

Mar a cuireadh in iúl roimhe seo, beidh iarmhairt dhiúltach, ábhartha ag Brexit ar Éirinn, sa mhéid go mbeidh éiginnteacht i réim agus go mbeidh méid na hiarmharta sin ag brath ar thráthú agus ar chineál na socruithe trádála. Go dtí seo, bhí iarmhairt Brexit ar an ngeilleagar le brath go mórmhór trí éifeacht ráta malairte níos laige don phunt steirling. Tugtar le fios ó shonraí maidir le haschur, le horduithe agus le honnmhairí go raibh iarmhairt mhaothaithe fhoriomlán ag tosca a bhain le Brexit go dtí seo, agus gur ar bhoilsciú don chuid is mó atá iarmhairt laige steirling le brath. I bhfianaise go dtagann cion ard d'allmhairí earraí ón Ríocht Aontaithe, leanann traschur ó laige steirling de bhrú anuas a chur ar bhoilsciú praghsanna earraí, rud a fhritháiríonn praghsanna níos airde ar sheirbhísí agus a choinníonn boilsciú TCPT gar do nialas. Ar a shon sin, tá earnálacha dúchasacha agus réigiúin a bhíonn ag brath níos mó ar mhargadh na RA leochaileach i gcónaí do na hathruithe a d'eascródh as Brexit agus tá an fhéidearthacht ann i gcónaí go dtiocfaidh éifeachtaí eacnamaíocha díobhálacha chun cinn.

Ar an taobh intíre, cé go bhfuil boilsciú maolaithe i gcónaí agus fás pá faoi shríon, tarraingíonn buacacht an éilimh intíre agus

méid an téarnaimh sa mhargadh saothair ceist i dtaobh a mhéid a chuirfidh neart timthriallach an gheilleagair inbhuanaitheacht fáis chobhsaí, chothroim i mbaol. Tá ceist ann go háirithe i dtaobh an bhfuil scóip fágtha fós sa mhargadh saothair nó an bhfuil an geilleagar ag druidim i dtreo na lánacmhainneachta arís. Tugtar le tuiscint ó thaighde a rinneadh le déanaí sa Bhanc féin agus ó na sonraí nuafhoilsithe maidir leis an margadh saothair gur léir ó bhearta níos leithne maidir le soláthar lucht saothair nár réitíodh fós na héifeachtaí leagáide a bhí ag an ngéarchéim ar an margadh saothair agus go bhfuil soláthar breise lucht saothair fós ar fáil. Tugtar le tuiscint uaidh seo go bhfuil scóip ann go fóill do laghdú breise ar dhífhostaíocht, ainneoin go bhfuil dálaí sa mhargadh saothair ag éirí níos géire, sula dtiocfaidh brúnna níos suntasaí maidir le pá chun cinn. Tá an cor chun feabhais ar an ngeilleagar le blianta beaga anuas á spreagadh ag an bhfeabhas ar athróa fíor-eacnamaíocha seachas ag tosca airgeadais. Is feiniméan ioncaim seachas feiniméan faoi thionchar sócmhainní é an téarnamh. Sna himthosca sin, tá sé riachtanach go gcloífear le beartais solúbtha, fritimthriallacha chun inbhuanaitheacht fáis chobhsaí, chothroim a áirithiú.

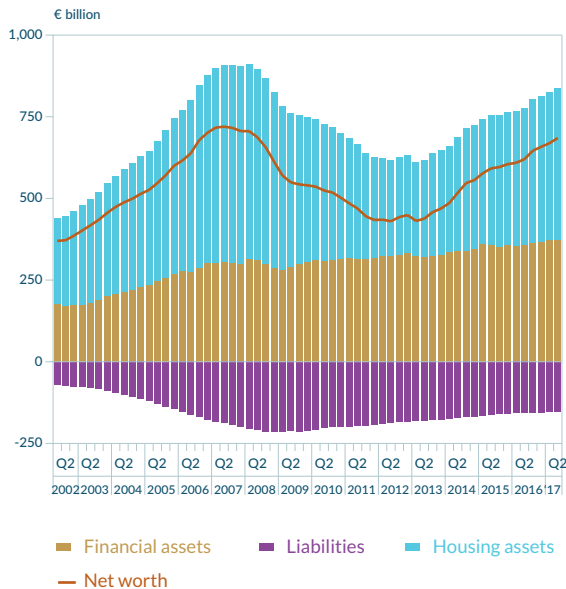
Financing Developments in the Irish Economy

Overview

Continuing improvements in the economic environment and an accommodative monetary policy contributed towards improved financing conditions during late 2017. Households continued to reduce debt to more sustainable levels over the year. Household debt is now at its lowest level since late 2005. Furthermore, mortgage arrears continued to fall and there was further movement towards more sustainable long-term solutions. Government net financial wealth also continued to increase over Q2 2017. In December, the Government repaid the outstanding IMF loan facility in full (€4.5 billion), as well as the bilateral loans from Sweden (€0.6 billion) and Denmark (€0.4 billion). These early repayments further reduce the Exchequer debt service bill by an estimated €150 million over the remaining life of the loans. Non-financial private-sector enterprises continued on a net basis to repay loans with Irish credit institutions, as repayments outstripped borrowing during Q3 2017, albeit to a lesser extent than in previous quarters.

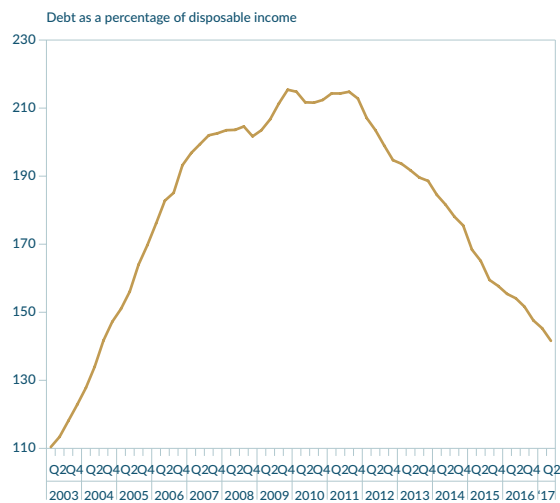
In addition to the decline in debt, financing costs for most sectors also improved over the quarter. In relation to households, mortgage interest rates for both standard variable interest rates and fixed interest rates declined during the year. Irish sovereign bond yield spreads also continued on a downward trajectory. The spread of Ireland's 10-year government bond yields over the German equivalent had fallen to 21 basis points by late December. Conversely, interest rates on new lending to small- and medium-sized enterprises (SMEs) excluding financial intermediation increased by 9 basis points, over the year to Q3 2017.

Chart 1: Household Net Worth



Source: Quarterly Financial Accounts, Central Bank of Ireland.

Chart 2: Household Debt to Disposable Income



Sources: Quarterly Financial Accounts, Central Bank of Ireland; Quarterly National Accounts, Central Statistics Office.

Household Sector

At an aggregate level, household balance sheets continued to improve. By end-Q2 2017, net worth had risen to €686.3 billion (Chart 1). This was just 4.6 per cent lower than its peak of €719.6 billion at Q2 2007. The increase in net worth over the quarter reflected a substantial increase in housing assets (€16.1 billion) and a decrease of liabilities (€1.5 billion). The increase in property values was partially offset by a decline in financial assets of €0.7 billion due to a fall in the value of households' insurance technical reserves.

Households also reduced debt further during the quarter. Household debt fell to €141.7 billion during Q2 2017. This was its lowest level since late 2005. Household debt is over 30 per cent lower than its peak of €204.2 billion in Q3 2008. The decline in debt over the quarter also contributed towards a further improvement in household debt sustainability.

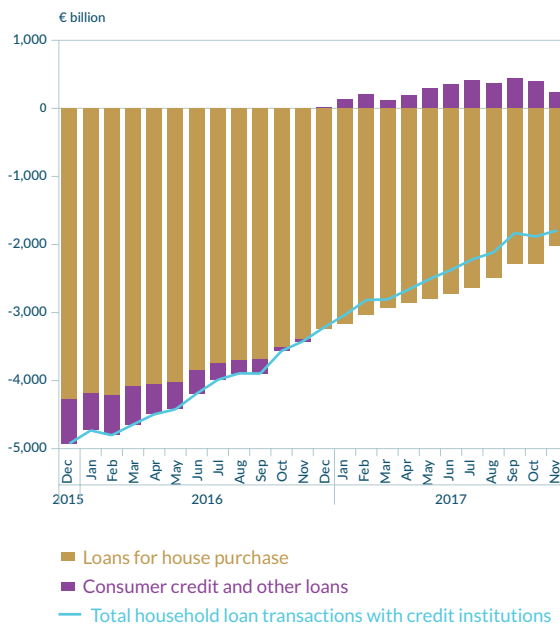
Debt as a proportion of disposable income declined by 3.7 percentage points to 141.6 per cent, its lowest level since Q2 2004

(Chart 2). The fall in Q2 2017 reflected both the reduction in debt as well as growth in annualised disposable income, which was 1.9 per cent. Box A examines the contributions of changes in household debt and disposable income to debt sustainability for Ireland, compared to other highly indebted EU countries.

Loans to households¹ declined by 1.5 per cent in annual terms to end-November. Mortgage loans, which accounted for 87 per cent of total loans to households, fell by 1.7 per cent. The decline occurred as households continued, on a net basis, to repay loans with Irish credit institutions during late 2017, albeit at a reduced rate compared with previous periods (Chart 3). Transactions on loans relating to house purchase, when measured as a 12-month moving sum, were minus €2 billion in November 2017. The corresponding decline for November 2016 was minus €3.4 billion. This reduced level of net repayments over the year reflected increased investment in principal dwelling households (PDH),

¹ This includes loans which were securitised by Irish credit institutions.

Chart 3: Household Loan Transactions with Credit Institutions, Measured as a 12-Month Moving Sum



Source: Credit and Banking Statistics, Central Bank of Ireland.

particularly in Q3 2017, when net new lending of €372 million² was recorded. This marked the sixth consecutive quarter of growth. Investment in buy-to-let properties and holiday homes remained low. Household borrowing in relation to non-housing loans increased by 1.8 per cent in annual terms to end-November, marking 12 consecutive months of annual growth. Drawdowns on loans for non-housing purposes exceeded repayments by €271 million in the year to end-November 2017.

Improving economic conditions and new restructuring agreements contributed towards a further decline in the number of mortgage accounts in arrears during Q3 2017. PDH mortgage accounts in arrears stood at 72,489 (10 per cent) at end-Q3. This represented a decline of 1.7 per cent over the quarter and marked the lowest level of mortgage arrears since Q4 2009. The number of accounts in arrears over 720 days also declined by 1.7

per cent (or 545 accounts) during Q3 2017. Year-on-year, accounts in arrears over 720 days declined by 8.5 per cent. The number of PDH mortgage accounts that were classified as restructured at end-September was 119,070. Of these restructured accounts, 87 per cent met the terms of their current restructuring arrangement. This marked a slight increase compared with the previous quarter. In addition, there was a continued reduction in short-term restructure arrangements, such as Interest Only and Reduced Payments. This was partly offset by an increase in longer-term arrangements such as Arrears Capitalisation, which are likely to be more sustainable. McCann (2017)³ finds that only 10 per cent of mortgages more than 90 days in arrears were 'cured'⁴ without any mortgage modification. The remaining 90 per cent received some form of modification.

Though household debt and mortgage arrears are continuing to decline, some households may become vulnerable should interest rates increase in the future. Recent research by Byrne et al. (2017)⁵ finds that there is a strong and statistically significant correlation between increases in interest rates and mortgage default. They find that a 1 per cent reduction in instalment payments is associated with a 5.8 per cent decrease in the likelihood of default in the following year. In contrast to other euro area countries, Irish households have tended predominately to hold tracker interest rate or standard variable interest rate mortgages. At end-2014, PDH mortgages with a fixed interest rate of greater than 1 year accounted for 7.9 per cent of total PDH mortgages. However, in recent years, the share of mortgages with a fixed interest rate has consistently increased. By end-September 2017, fixed interest rates accounted for 18.4 per cent of PDH mortgages. Most of the increase in the share of fixed interest rates was in 1-3 year fixed interest rates, which increased from 3.5 per cent of all PDH mortgages in December 2014 to 10.9 per cent by end-

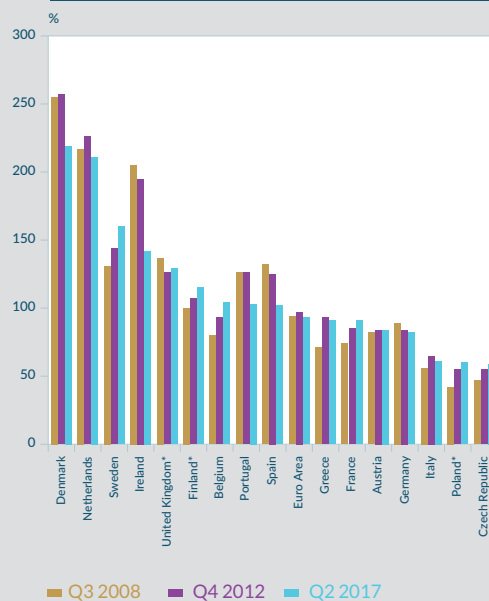
2 This excludes loans securitised by Irish credit institutions, as it is not possible to decompose securitised loans transactions for housing purposes into PDH and other housing.
 3 McCann (2017), 'Resolving a Non-Performing Loan crisis: The ongoing case of the Irish mortgage market' Research Technical Paper, Central Bank of Ireland, 10/RT/17, December.
 4 Cured loans were defined as loans 90 or more days past due (DPD) in the 2009-2016 period, but at end-2016 were no longer in the over 90 DPD state.
 5 Byrne, Kelly and O' Toole (2017), 'How does monetary policy pass-through affect mortgage default? Evidence from the Irish mortgage market', Research Technical Paper, Central Bank of Ireland, 04/RT/17, March.

Box A: Household Debt to Gross Disposable Income Ratio Across Highly Indebted EU Countries by Mary Cussen and Tatiana Murphy⁶

While access to credit can help to smooth intertemporal consumption and facilitate home ownership, very high household debt can also be a source of financial vulnerability. High levels of household debt can also constrain consumption, as households use income to deleverage. Recent studies show that the benefits to growth from increasing levels of debt start declining when aggregate leverage is high (IMF 2017⁷). Preceding the financial crisis, Irish household debt increased considerably faster than disposable income. Between Q1 2004 and Q2 2008, Irish household debt grew by 122.4 per cent compared to a 39.5 per cent increase in income. As a result, Irish household debt to gross disposable income (GDI)⁸ ratio increased from 127.8 per cent to 203.6 per cent during this period. This Box compares developments in the Irish household debt-to-GDI ratio to the EU countries with the most indebted household sectors. In recent years, countries with highly indebted households, or countries severely impacted by the financial crisis, have experienced falls in their level of debt. This Box analyses the respective contributions of changes in debt and changes in GDI to the ratio. In order to observe household behaviour two main time periods are examined, the time period after the start of the financial crisis/economic downturn (Q3 2008 to Q4 2012), and the time period during which Irish unemployment began to decline and Irish consumption underwent a sustained recovery (Q1 2013 to Q2 2017).

Irish households have reduced their debt-to-GDI ratio more than any other EU country since Q3 2008. This ratio fell from 204.6 per cent in Q3 2008 to 141.6 per cent in Q2 2017, a reduction of 63 percentage points (Box A Chart 1). Danish, Spanish and Portuguese households' debt-to-GDI ratios also decreased significantly, falling by 36.3, 30.4 and 23.7 percentage points, respectively. In contrast, while its level of debt declined, the Greek household debt-to-GDI ratio increased by 20.2 percentage points, from 70.9 per cent to 91.1 per cent. Since Q2 2016, Irish households have ranked as the fourth most indebted country in the EU. It is important to note, however, when examining debt-to-GDI across countries that these ratios don't take into account differences in household wealth or preferences for home ownership.

Box A Chart 1: Comparison of Household Debt-to-GDI Ratios



Source: Quarterly Financial Accounts, Central Bank of Ireland ECB Statistical Data Warehouse.

Note: * denotes that Q1 2017 is the latest period available.

⁶ Statistics Division, Central Bank of Ireland.

⁷ IMF (2017), 'Household Debt and Financial Stability', Chapter 2, Global Financial Stability Report, 'Is Growth at Risk?', International Monetary Fund, October.

⁸ The GDI figures throughout this Box refers to annualised GDI.

Box A: Household Debt to Gross Disposable Income Ratio across Highly Indebted EU Countries

by Mary Cussen and Tatiana Murphy

Examining the factors contributing to the changes in the debt-to-GDI ratio across EU countries highlights some diverging trends. Box A Chart 2 shows that between Q3 2008 and Q2 2017, GDI increased in all countries, with the exception of Greece. In addition, four countries (Ireland, Spain, Portugal and Greece) also reduced debt over the period – both factors contributed towards reducing their debt-to-GDI ratio. Irish households reduced debt more than any other country examined over the period. Box A Chart 3 depicts the relative contributions of changes in household debt and GDI to the debt-to-GDI ratio of each country. This chart shows that the reduction in Irish debt contributed towards a decrease in the debt-to-GDI ratio of 62.6 percentage points. Increases in GDI have slightly contributed to the reduced ratio by 0.4 percentage points, as the recent recovery has largely returned GDI to 2008 levels. Consequently, the overall reduction in Ireland’s debt-to-GDI ratio over the period was 63 percentage points. Danish households recorded the second largest debt-to-GDI ratio reduction. This was due to increasing GDI rather than decreasing debt. In the case of Greek households, declining debt contributed towards a decrease in the debt-to-GDI ratio of 8.8 percentage points – however, this was more than offset by declining GDI which contributed to an increase in the ratio of 29 percentage points. Combining debt and GDI developments saw the Greek household debt-to-GDI ratio increase by 20.2 percentage points. As unemployment is considered the most significant shock to household income (Debelle, 2004⁹), the large decrease in GDI for Greece is unsurprising as unemployment reached a peak of 27.9 per cent in Q3 2013. The largest contribution increase in household debt occurred in Sweden (Box A Chart 3). During 2016, house prices increased by more than any country examined in this Box (Eurostat, 2017¹⁰).

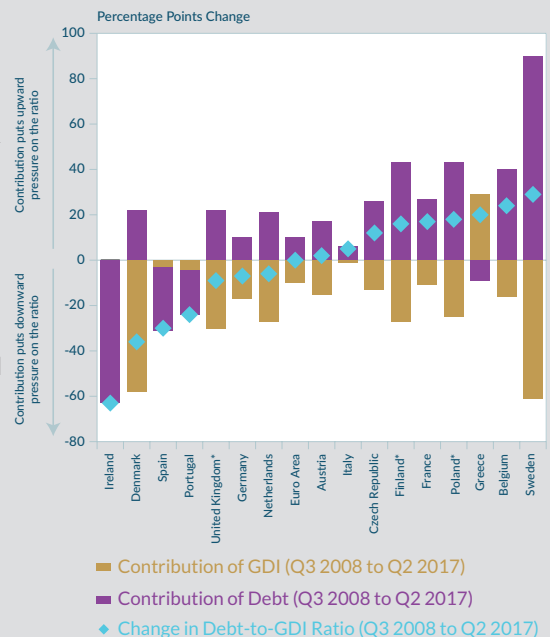
Box A Chart 2: Changes to Household Debt and GDI



Sources: Quarterly Financial Accounts, Central Bank of Ireland; ECB Statistical Data Warehouse.

Note: * denotes that Q1 2017 is the latest period available.

Box A Chart 3: The Contributions of Changes in Household Debt and GDI to the Changes in Debt-to-GDI Ratios (Q3 2008 to Q2 2017)



Sources: Quarterly Financial Accounts, Central Bank of Ireland; ECB Statistical Data Warehouse.

Note: * denotes that Q1 2017 is the latest period available.

9 Debelle, G. (2004), 'Macroeconomic implications of rising household debt', BIS Working Paper No. 153, Bank for International Settlements, June.

10 Eurostat (2017), 'Macroeconomic Imbalance Procedure Scoreboard', News Release, November.

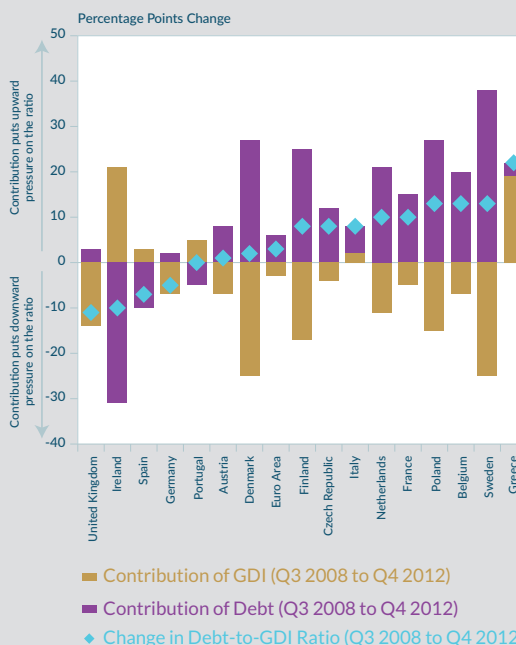
Box A: Household Debt to Gross Disposable Income Ratio across Highly Indebted EU Countries

by Mary Cussen and Tatiana Murphy

It is instructive to compare developments in the household debt-to-GDI ratio in the period after the start of the financial crisis (Q3 2008 to Q4 2012) and subsequently when Irish unemployment rates began to fall (Q1 2013 to Q2 2017). This comparison reveals differing dynamics during the two periods. Box A Chart 4 shows that between Q3 2008 and Q4 2012 GDI fell in Ireland, Greece, Portugal, Spain and Italy. This contributed towards increasing the debt-to-GDI ratios for those countries. Three of these countries (Ireland, Spain and Portugal) also reduced household debt levels over this period, thereby offsetting to some extent the fall in GDI. Irish households reduced their debt-to-GDI ratio overall by 9.9 percentage points over the period. This was due to declining debt, which contributed towards a 30.9 percentage point decline in the ratio. This was offset, in part, by decreasing GDI which contributed towards a 20.9 percentage point increase in the ratio. The fall in GDI was due, in part, to the Irish unemployment rate increasing from 7 per cent to 14.3 per cent over this period. This negative debt contribution and positive GDI contribution were the largest contributions of the countries examined. The UK reduced their debt-to-GDI ratio by the most over the period. This was due to increasing GDI and was partly mitigated by increasing debt.

Examining the most recent period (Q1 2013 to Q2 2017) reveals that Greece is the only country where GDI continued to decline. Greece's unemployment rate remained the highest in this period, albeit decreasing significantly from 26.8 per cent in Q1 2013 to 21.6 per cent in Q2 2017. In addition, compared to the previous period examined, a further three countries (Greece, Italy and Denmark) reduced debt levels. Irish households continued to reduce their debt-to-GDI ratio over this period, largely due to debt reduction. Increasing GDI over the period also contributed towards a decline in the ratio. Overall, the ratio fell by 52 percentage points of which 33.9 percentage points were due to debt reduction, and 18.1 percentage points were due to increasing GDI. It should be noted, however, that the recovery in Ireland occurred earlier than in other crisis countries.

Box A Chart 4: The Contributions of Changes in Household Debt and GDI to the Changes in Debt-to-GDI Ratios (Q3 2008 to Q4 2012)



Sources: Quarterly Financial Accounts, Central Bank of Ireland; ECB Statistical Data Warehouse.

Box A Chart 5: The Contributions of Changes in Household Debt and GDI to the Changes in Debt-to-GDI Ratios (Q1 2013 to Q2 2017)



Sources: Quarterly Financial Accounts, Central Bank of Ireland; ECB Statistical Data Warehouse.

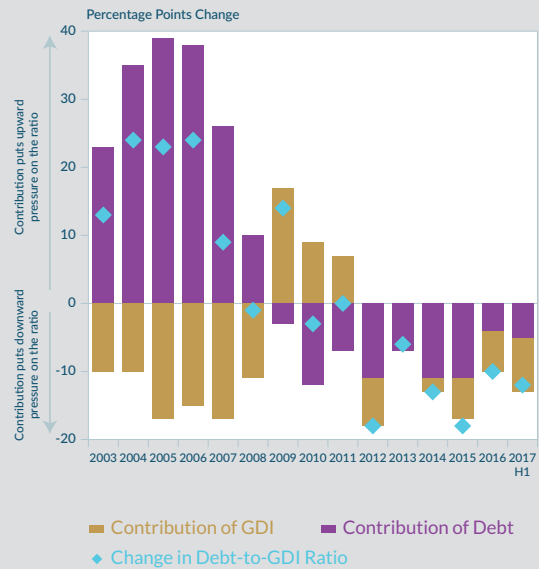
Note: * denotes that Q1 2017 is the latest period available.

Box A: Household Debt to Gross Disposable Income Ratio across Highly Indebted EU Countries

by Mary Cussen and Tatiana Murphy

Box A Chart 6 provides further insight into the yearly compositional changes to the debt-to-GDI ratio for Ireland since 2003. From 2003 to 2008 Irish households accumulated large amounts of debt, outstripping growth in GDI and thus increasing the debt-to-GDI ratio. The financial crisis brought on a reduction in GDI between 2009 and 2011, with GDI beginning to recover moderately from 2012. With the combination of debt reduction and growth in GDI, Ireland's debt-to-GDI ratio began to decrease from 2012. The periods 2016 and 2017 H1 show us that, the GDI contribution has been greater than the debt contribution in terms of reducing the debt-to-GDI ratio.

Box A Chart 6: The Contributions of Changes in Household Debt and GDI to Annual Changes in the Debt-to-GDI Ratio for Ireland



Sources: Quarterly Financial Accounts, Central Bank of Ireland; ECB Statistical Data Warehouse.

This Box shows that in the period after the financial crisis began (Q3 2008 to Q4 2012), GDI fell in the euro area peripheral countries, contributing towards increasing debt-to-GDI ratios. In the most recent period (Q1 2013 to Q2 2017), Greece was the only country where GDI continued to fall. In the first period, households in only three countries reduced debt, whereas in the most recent period households in six countries reduced debt. Over the entire period (Q3 2008 to Q2 2017), Irish households have reduced debt more than any other country.

September 2017. The share of over 3 year fixed interest rates rose from 4.4 per cent of PDH mortgages in December 2014 to 7.5 per cent by end-September 2017. Conversely, the share of euro area fixed rate mortgages for new loans at end-October 2017 was 80 per cent. Interest rates for both standard variable rates and fixed rates continued to fall during the year. Standard variable rates for new PDH mortgages decreased by 6 basis points over the past 12 months. Rates stood at 3.41 per cent in Q3 2017. Fixed rate PDH mortgage rates also recorded a decline, with rates fixed for 1-3 years falling by 29 basis points over the same period, to 3.13 per cent at the end of Q3 2017.

Non-Financial Corporation Sector

Non-financial corporation (NFC) debt to GDP stood at 215.4 per cent at end-Q2 2017, a decrease of 15.9 percentage points compared with the previous quarter. The decline was due to an increase in annualised GDP of 1.9 per cent and a decrease in NFC debt of 5.1 per cent. Irish NFC debt was 111.3 percentage points above the euro area average of 104.2 per cent and ranks as the second most indebted amongst EU countries. It is important to note, however, that NFC debt in Ireland is significantly influenced by large multinational corporations (MNCs). Restructuring by these entities has resulted in extremely large movements in Irish private-

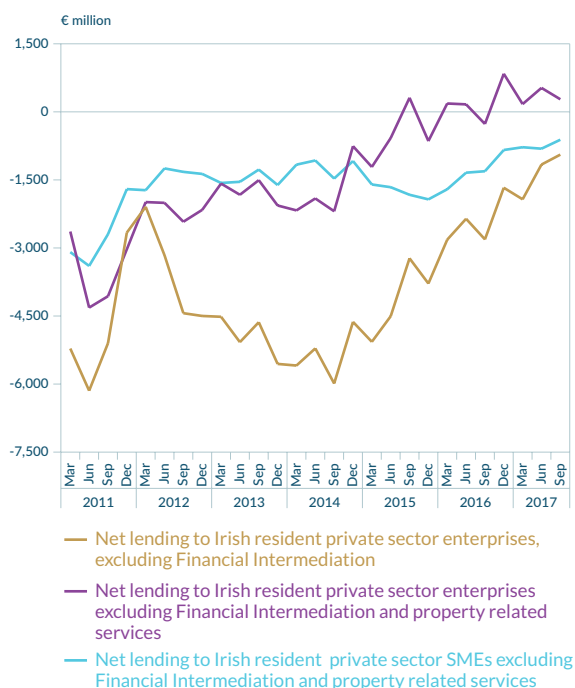
sector debt, particularly from 2014 onwards. The Central Statistics Office (2017)¹¹ show that Irish NFC debt, excluding foreign-owned NFCs and redomiciled NFCs, stood at 54.8 per cent of GDP at end-2016. This represented an increase in debt of €0.3 billion compared with the previous year, due to increased borrowing from non-residents.

Loan repayments by non-financial private-sector enterprises continued to outstrip borrowing during 2017, albeit to a lesser extent than in previous quarters. In the third quarter of 2017, net lending to Irish private-sector enterprises (excluding financial intermediation) declined by €943 million, when measured as a four-quarter moving sum. This was the lowest level of decline since June 2009. Examining the sub components of overall net lending by Irish enterprises reveals diverging trends. Property-related sectors, which borrowed heavily during the crisis, continued to make net repayments on loans from credit institutions. When property-related entities are excluded, private-sector borrowing exceeded repayments by €277 million, at end-September 2017 when measured as a four-quarter moving sum. Chart 4 also shows that, on a net basis, small- and medium-sized enterprises (SMEs) continued to repay loans with credit. At September 2017, however, net lending to SMEs was at its highest level since the series began.

Gross new lending to SMEs over the 12 months to September 2017 totalled €4.8 billion. This represents an increase of €547 million compared with the previous year. The core sectors with the largest gross new lending over the past 12 months were wholesale/retail (€885 million), the primary industries (€851 million) and manufacturing (€439 million). Between Q3 2016 and Q3 2017, interest rates on new lending to SMEs, excluding financial intermediation, increased by 4 basis points.

Investment by foreign-owned MNCs in their Irish operations [Foreign Direct Investment

Chart 4: Net Lending to Irish Resident Enterprises from Irish Credit Institutions



Source: Business Credit and Deposits Statistics, Central Bank of Ireland.

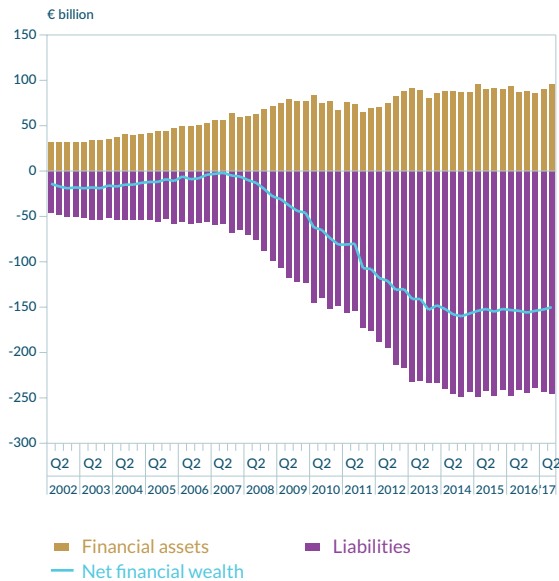
(FDI) inflows] decreased from €26 billion in Q2 2017 to €9.8 billion in Q3 2017. This reflected mainly a decrease in 'Other Capital'. Investment by Irish-owned MNCs abroad (FDI outflows) decreased by €11.7 billion during the quarter, to stand at €10.9 billion in Q3 2017. Despite this fall, direct investment income earned abroad by this sector remained quite stable at €5.1 billion in the quarter.

Government Sector

Government debt rose during Q2 2017 by €2.4 billion to reach €232.3 billion. This was primarily due to a €3 billion increase in government issued debt securities, which was offset by a €0.7 billion reduction in government loan liabilities. Quarterly Government Debt, which is based on the Excessive Deficit Procedure (EDP)¹² measure of debt, increased by €3 billion in Q2 2017.

¹² Government debt in the Quarterly Financial Accounts differs from the EDP measure of debt as it is calculated on a non-consolidated basis, and uses market rather than nominal values.

Chart 5: Government Net Financial Wealth



Source: Quarterly Financial Accounts, Central Bank of Ireland.

The net financial wealth of government increased by €2.5 billion over the quarter, as government financial assets increased faster than liabilities (Chart 5). Government assets increased by €4.3 billion, due to a €6.9 billion increase in deposits held by government. Government holdings of equity shares fell by €2.8 billion during the quarter, a reduction of 7.1 per cent compared with the previous quarter. This was primarily due to the sale of part of the Government's equity stake in Allied Irish Banks.

During December 2017, the State repaid the outstanding IMF loan facility in full (€4.5 billion), as well as the bilateral loans from Sweden (€0.6 billion) and Denmark (€0.4 billion). This discharges loan obligations that were originally to fall due from January 2021 to December 2023. These early repayments further reduce the Exchequer debt service bill by an estimated €150 million over the remaining life of the loans. It also increases the ECB's capacity to purchase Irish government bonds through its quantitative easing programme.

Sovereign bond yield spreads for Ireland have continued on their downward trajectory into the second half of the year. The spread of Ireland's 10-year government bond yields over the German equivalent had fallen to close to 40 basis points in late-Q2 2017 and continued to ease back thereafter. By late-Q4, this spread stood at 21 basis points, having touched just 18 basis points on consecutive days in early-December.

Financial Sector

Irish credit institutions' funding from non-resident deposits fell by €24.7 billion in the 12 months to November 2017. This was in part offset by an increase in funding from Irish resident deposits of €5.2 billion. Irish NFCs and households increased deposits by €5.5 billion and €3.7 billion, respectively. Irish Other Financial Intermediaries (OFIs) increased deposits by €1.2 billion. Funding from debt securities and the Eurosystem remained largely unchanged.

Quoted shares issued by Irish resident financial corporations had a market capitalisation of approximately €45 billion. Of this, €10 billion was issued by entities now classified as Financial Auxiliaries. Much of the latter figure is attributable to the new bank holding company structures that have been introduced over the course of 2017. This was due to a methodological change, which is discussed in Box B.

Box B: The Statistical Treatment of the New Bank Holding Company Structures*by Dermot Coates and Giovanna Bua¹³*

Until recently, the issuance of debt securities or quoted shares by Irish-headquartered credit institutions was typically allocated to the deposit-taking corporation (DTC) sector¹⁴ and this, in turn, was how issuance (or holdings) of these securities were typically classified in the various macroeconomic statistical series. This, however, changed during 2017 as two of the principal domestic credit institutions¹⁵ moved to establish group holding companies. This was done, in part, to meet the requirements of the EU's Bank Recovery and Resolution Directive (BRRD) which has been transposed in all participating member states.¹⁶

Under the BRRD, national authorities are required to introduce a resolution strategy, and are granted powers to ensure an orderly resolution of failing banks, whilst banks are required to prepare recovery plans to overcome financial distress. The Single Resolution Board (SRB) is the resolution authority for participating member states within the Banking Union. The SRB and the Bank of England agreed a preferred joint treatment option for Bank of Ireland and AIB as these Irish domestic banks have operations in the UK. This preferred resolution model consists of a single point of entry¹⁷ bail-in strategy through a bank holding company structure. These changes necessitated a corporate reorganisation and required shareholder approval. Bank of Ireland¹⁸ adopted this re-structured form from mid-2017, with AIB¹⁹ commencing a similar reorganisation process before the end of 2017.

These holding companies have now become the parents of the respective groups. Deposits continue to be held in the existing operating banks (subsidiaries of the holding company), and these covered (or eligible) deposits are excluded from the scope of the bail-in tool. The BRRD will also require the banks to meet a minimum requirement for own funds and eligible liabilities (MREL), so as to be able to absorb losses and restore their capital position. Its resolution authority will determine the MREL for each institution. In Ireland's case, such liabilities will include senior debt (i.e. structured notes) – to be issued by the holding company – which may potentially be down-streamed into the group's subsidiaries.

These developments gave rise to certain changes in the statistical classification of the securities issuance of Ireland's domestic banking system. The applicable statistical treatment under the ESA 2010²⁰ guidelines requires that these emerging bank holding company entities be classified as financial auxiliaries (FAs) rather than credit institutions. This treatment takes cognisance of the fact that the holding company largely undertakes management activities on behalf of the group, whilst the traditional banking operations are conducted by the subsidiary entities.²¹ On foot of this definition, those quoted shares issued by the holding company are thus re-classified into the FA sector, albeit that those debt securities issued by any subsidiary credit institution(s) will continue to be classified in the DTC sector.

¹³ Statistics Division, Central Bank of Ireland.

¹⁴ This is a sub-sector of the overarching Monetary Financial Institutions (MFI) sector.

¹⁵ In the case of Permanent tsb Group Holdings plc., the holding company was the issuer of the quoted equity pre-2017.

¹⁶ European Union (Bank Recovery and Resolution) Regulations 2015 (S.I. 289 of 2015).

¹⁷ Application of the resolution strategy at the level of a single parent company.

¹⁸ <https://investorrelations.bankofireland.com/wp-content/assets/HoldCo-RNS-03.02.2017.pdf>

¹⁹ <https://aib.ie/investorrelations/holding-company>

²⁰ The European System of Accounts (2010) is the updated and internationally compatible accounting framework for providing a systematic description of an economy.

²¹ In addition, all (or most) of the subsidiaries of the new holding companies are financial corporations.

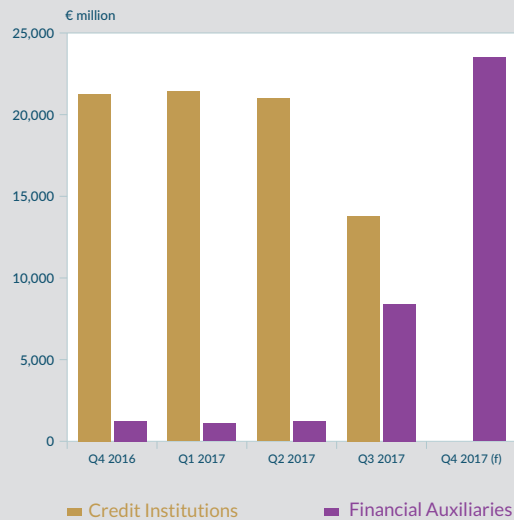
Box B: The Statistical Treatment of the New Bank Holding Company Structures

by Dermot Coates and Giovanna Bua

The effects of the updated treatment can be seen in a number of the Central Bank of Ireland's published statistical series. For instance, these changes are most clearly evident in recent developments in both the Securities Issues Statistics (SIS) and the Securities Holdings Statistics (SHS) datasets (Box B Chart 1 and Box B Chart 2). In the SIS data series, the total equity liabilities (or market capitalisation) of the Irish domestic market credit institutions stood at close to €23 billion by end-2016 with almost all of the overall figure allocated to the DTC sector. By end-2017, however, the equivalent figure had moved into the FA sector in its entirety. Similarly, the SHS data series indicates that the value of shareholdings in Ireland's domestic market credit institutions held by Irish-resident households stood at some €323 million by mid-2016. The value of this shareholding has increased over time, reflecting positive net transactions alongside valuation changes. Furthermore, these shareholdings have moved into the FA sectoral classification during 2017 and by the year-end, this data series will record no holdings in the DTC sector for quoted shares issued by domestic credit institutions.

Over time, the impact of these changes will be seen across a range of other statistical datasets including, but not limited to, the Investment Fund (IF) statistics, the Quarterly Financial Accounts (QFA) and the Locational Banking Statistics (LBS). The latter are reported quarterly to the Bank for International Settlements (BIS). The LBS series consists of two modules (i.e. residency and nationality) and set out the exposures of resident banking offices by counterparty country. This data on total claims and liabilities are disaggregated by instrument type – debt securities, loans and deposits, and other instruments – and provide detailed information on the outstanding claims and liabilities of banks located in BIS reporting countries. This includes insights into the composition of banks' balance sheets, and the geographical breakdown of their counterparties and cross-border funding flows. In the case of the new bank holding companies, however, these structures do not meet the definition of a DTC for the purposes of BIS reporting. Consequently, the issuance of quoted shares – and any future debt securities – by these holding companies will no longer form part of the banking sector's liabilities as reported under the LBS series.

Box B Chart 1: Comparative Trend in the Market Capitalisation (quoted shares) of DTCs and FAs, 2016-2017



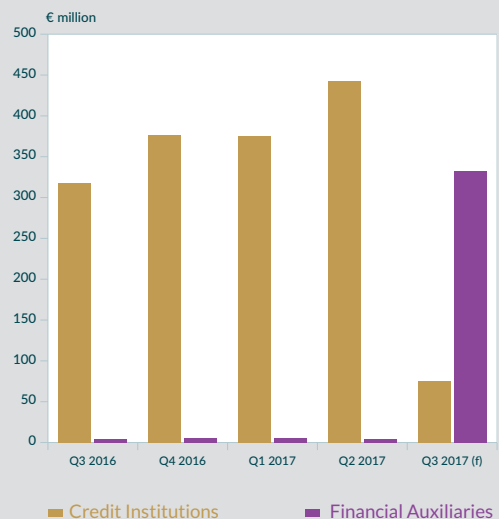
Source: Securities Issues Statistics, Central Bank of Ireland.

Notes: (i) Data are subject to revision over time.

(ii) f = forecast.

(iii) Data presented here relate solely to Irish domestic market credit institutions and bank holding companies.

Box B Chart 2: Market Value of Irish Resident Households' Shareholding in Ireland's Domestic Market Banks, 2016-2017



Source: Securities Holdings Statistics, Central Bank of Ireland.

Notes: (i) Data are subject to revision over time.

(ii) Data presented here relate solely to Irish domestic market credit institutions and bank holding companies.

(iii) Estimates presented here relate solely to quoted shares held via an Irish-resident custodian.

The non-bank financial industry continued to grow during the year with the number of Irish-resident securitisation vehicles or Financial Vehicle Corporations (FVCs) hitting a historical high of 928 vehicles by end-Q3 2017. This represented an additional 21 vehicles over the quarter. The number of non-securitisation vehicles or other Special Purpose Entities (SPEs) grew at a faster pace, reaching 1,067 vehicles in Q3 2017, an addition of 27 vehicles in the quarter. The total asset value of FVCs declined by 2 per cent to €382.9 billion in Q3 2017, due to euro appreciation in the first two months of the quarter. In contrast, the total assets of other SPEs, increased by 1 per cent to €347.7 billion in Q3 2017. Mortgage-backed securitisation (MBS) continued to decline in line with longer-term trends in Q3 2017. Commercial MBS registered the most significant decrease, declining by 8 per cent from Q2 2017. Cash Collateralised Debt Obligations (CDO) was the only securitisation type to record an increase in total assets,

with a 1.5 per cent increase compared with Q2 2017. Within other SPEs, total assets of all activity types decreased except for loan origination and fund-linked investment.

Irish investment funds' net asset values (NAVs) increased by 3.3 per cent in Q3 2017, reaching €1,824.5 billion. The increase was driven by strong net inflows for funds, continuing the trend of high net issuances over 2017. All fund types were net issuers of equity, with bond funds registering the largest net investor inflows of €31.6 billion. Equity funds saw the largest positive revaluation, at €12.4 billion, and mixed funds saw the largest negative revaluation, at €7.1 billion. With the exception of equity and hedge funds, all fund types saw negative revaluations of their NAVs in Q3 2017. Box C examines the links between Irish investment fund shares and other sectors of the economy.

Box C: Holders of Irish Resident Investment Funds Shares Across the Euro Area: A Securities Holdings Statistics Perspective

by Siobhán O'Connell and Dermot Coates²²

Securities holdings statistics (SHS) provide a valuable insight into the various holdings of resident investors in Ireland. These statistics, however, can also provide mirror data showing holdings by both resident and non-residents of securities issued by residents in Ireland. Whereas data are currently collected from Irish resident investment funds (IFs) on the sectoral and geographic profile of their liabilities, these are provided on a first counterparty basis and so may be somewhat incomplete. Securities holdings can be used to provide a more complete view of their counterparties (or investors).

In recent years, Irish resident IFs have grown significantly with equity liabilities outstanding of €1,766 billion at the end of Q2 2017. SHS data are reported by euro area member states through a combination of both direct reporting by financial investors in addition to indirect (custodian) data. The former relates to credit institutions, money market funds, IFs, financial vehicle corporations and, more recently, insurance corporations. The latter covers both the remaining other financial sectors, non-financial investors and non-euro investors. In Q2 2017, the SHS captured data on 43.5 per cent of total Irish resident IFs liabilities (or €768 billion).²³ This represents an improvement over time as the equivalent figure in Q1 2014 was 30 per cent.²⁴ Data gaps remain within the field of securities holdings statistics, namely in the area of pension funds which are not yet direct reporters. Moreover, any euro area investors using the services of a non-euro area custodian will not be captured nor will rest of the world holdings in these IFs be covered within the ESCB's Securities Holdings Statistics Database (SHSDB). This is an important caveat for the information presented below.

²² Statistics Division, Central Bank of Ireland.

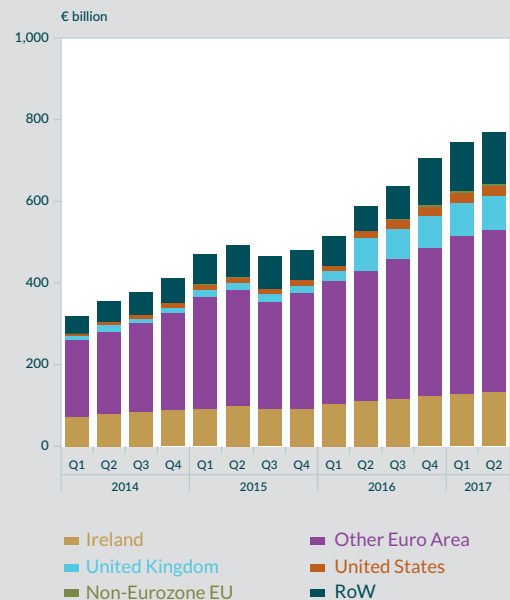
²³ Data is predominantly collected for those securities where an International Securities Identification (ISIN) code is reported. The ISIN code is a 12-character alpha-numerical code which serves to uniquely identify a security. These enable the authors to cross-match with the ESCB's Centralised Securities Database (CSDB). Reporting of non-ISIN securities is currently voluntary for the purposes of SHS whereas IF sector liabilities are reported under both ISIN and non-ISIN (i.e. CUSIP, SEDOL, etc.) securities to the Central Bank of Ireland.

²⁴ Securities holdings are collected on an ISIN and non-ISIN (voluntary for non-ISINs) within the euro area, direct reporting is received from credit institutions, money market funds, investment funds, financial vehicle corporations and insurance companies (from Q1 2016 only). Other financial sector holders may hold assets with custodians. The non-financial sector is reported through custodians.

Box C: Holders of Irish Resident Investment Funds Shares Across the Euro Area: A Securities Holdings Statistics Perspective
by Siobhán O’Connell and Dermot Coates

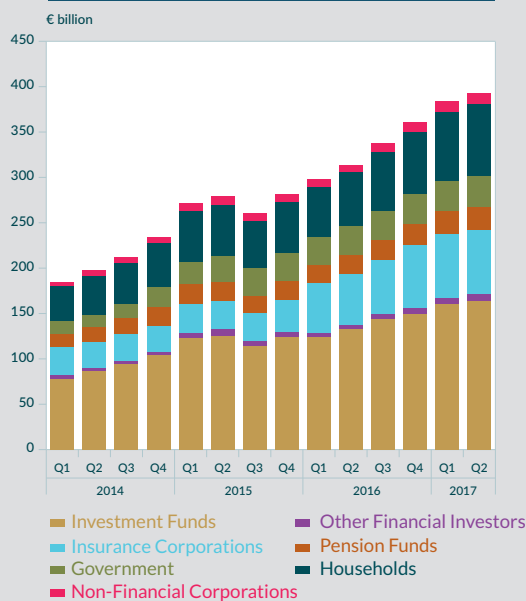
Euro area investors currently account for 29.9 per cent (or €530 billion) of Irish resident IF shares/units outstanding (Box C Chart 1). Irish resident investors accounted for €132 billion (7.5 per cent) of these holdings with the balance held by other euro area investors (€398 billion). Custodians within the euro area report holdings by non-euro area countries as third party holdings (TPH). This indicates a potential limitation of using SHS data as a direct comparator to the directly reported IF liabilities issued. To this end, we are solely focussing on those holders of these IF shares/units residing in the euro area. A closer look at the data indicates that 9.3 per cent (€164 billion) of the total Irish resident IF liabilities was held by IF sector across the euro area (excluding Ireland). This represents an increase of more than 100 per cent in the market value of these holdings since 2014. The next largest holder sector for these securities in Q2 2017 was households at 4.5 per cent (Box C Chart 2).

Box C Chart 1: Holders of Irish Investment Funds, by Region



Source: Securities Holdings Statistics Database (SHSDB), ECB.

Box C Chart 2: Holders of Irish Investment Funds within Euro Area (excluding Ireland) broken down by Holder Sector



Source: Securities Holdings Statistics Database (SHSDB), ECB.

Box C Chart 3: Breakdown of Holders of Irish Investment Funds by Fund Type, Q2-2017



Source: Securities Holdings Statistics Database (SHSDB); and Register of Institutions and Affiliates Database (RIAD), ECB.

In terms of those investments in the Irish resident IF sector held by other IFs, we can also comment on the type of IFs making these investments (Box C Chart 3). This can be achieved by disaggregating these securities holdings by the fund type for those securities where an ISIN code is used.²⁵ In the case of those shares held by IFs in the euro area – excluding Ireland – the principal investors were bond funds and equity funds. A similar finding applies in the case of the IFs resident in Ireland, albeit that real estate funds are slightly more prevalent.

²⁵ The presence of non-ISIN codes should become less acute over the next few years as the prospectus directive mandates issuers to have an ISIN with all new issuances.

Box C: Holders of Irish Resident Investment Funds Shares Across the Euro Area: A Securities Holdings Statistics Perspective*by Siobhán O'Connell and Dermot Coates*

Turning to an analysis of the top five euro area counterparty countries (Box C Table 1), we can see that the principal holder sector varies between countries. In the case of Italy and France, insurance corporations accounted for 44.2 and 38.6 per cent of the total holdings within these countries, respectively. By contrast, there is a more concentrated connection in holdings in Ireland and Luxembourg, with IFs being the largest holder sectors at 76.1 and 88.3 per cent, respectively, of total holdings in Q2 2017. This suggests a large number of cross-holdings across the IF sector. Unfortunately, the available data limits data users on the holdings side to see only the holder sector (i.e. IF), without any further breakdown.

Box C Table 1: Holders of Irish Investment Fund Shares, by euro area holder country, Q2-2017

| € billion | Total | Largest Holder Sector |
|---------------------|-------|------------------------|
| Euro Area | 530 | Investment Funds |
| Ireland | 132 | Investment Funds |
| Italy | 78 | Insurance Corporations |
| Germany | 77 | Investment Funds |
| Luxembourg | 77 | Investment Funds |
| France | 43 | Insurance Corporations |
| Remaining Euro Area | 123 | Investment Funds |

Source: Securities Holdings Statistics Database (SHSDB), ECB.

Finally, we can compare shares/units issued by Irish resident IFs and held by other Irish residents versus similar holdings by other euro area investors. For illustrative purposes, we have done so for two specific holder sectors: the IFs and households (Box C Chart 4 and Box C Chart 5). At end Q2 2017, IFs resident in Ireland held €100 billion in other Irish IFs versus the €164 billion held by other euro area resident IFs. Comparisons between fund types within each portfolio are difficult to make but we have estimated²⁶ that there is a higher preference for investments in equity funds at 46.2 per cent for other euro area residents. The equivalent figure for Irish residents was 20.2 per cent. Hedge funds accounted for a higher proportion of the investments held by other euro area residents at 7.1 per cent compared to 1.6 per cent for Irish resident IFs.

²⁶ This arises due to the level of non-ISIN bias within the Irish resident holdings. For the purposes of these estimates, we have excluded those securities reported with a non-ISIN identifier.

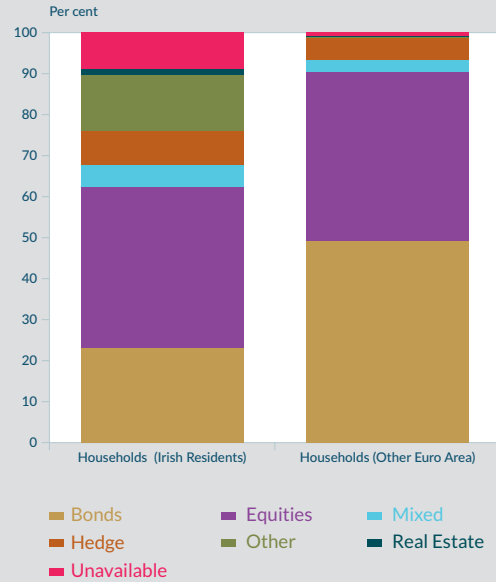
Box C: Holders of Irish Resident Investment Funds Shares Across the Euro Area: A Securities Holdings Statistics Perspective
by Siobhán O’Connell and Dermot Coates

Box C Chart 4: Investment Fund Holders of Irish Resident Investment Fund Shares, Q2 2017



Sources: Securities Holdings Statistics Database (SHSDB); and Register of Institutions and Affiliates Database (RIAD), ECB.

Box C Chart 5: Household Holders of Irish Resident Investment Fund Shares, Q2 2017



Sources: Securities Holdings Statistics Database (SHSDB); and Register of Institutions and Affiliates Database (RIAD), ECB.

By contrast, holdings by households display some notable differences²⁷. Irish resident households had an exposure to Irish resident IFs of some €655 million at end Q2 2017. Other euro area resident households – excluding Ireland – held investments in Irish resident IFs valued at almost €78 billion during the same period. Within the other euro area category, households had a stronger preference for bond funds. These accounted for 49.1 per cent of the total investment compared to 23.1 per cent in the case of Irish resident households. Both Irish resident households and other euro area residents display a comparable level of preference for equity funds (39.1 per cent and 41.4 per cent, respectively).

²⁷ It can be seen that securities reported without an ISIN code account for a relatively higher proportion of the holdings of Irish-resident households when compared to their other euro area peers.

Irish money market funds’ (MMFs) NAVs rose by €2.3 billion over the quarter to reach €474.7 billion at end-September 2017. The increase was driven by net transactions of €9.4 billion, which were largely offset by exchange rate movements. Total debt securities held by MMFs at end-September 2017 amounted to €351.4 billion. The stock of debt securities rose by €0.9 billion from the previous quarter. The increase consisted of €5.8 billion in net purchases of debt securities and a €4.9 billion negative revaluation. The increase was largely driven by €5.2 billion in net purchases of Japanese banks’ debt securities.

Signed Articles

The articles in this section are in the series of signed articles on monetary and general economic topics introduced in the autumn 1969 issue of the Bank's Bulletin. Any views expressed in these articles are not necessarily those held by the Bank and are the personal responsibility of the author.

Insurance Corporations Statistics in Ireland: Introducing the New Quarterly Statistics

By Anne-Marie Kelly and Jenny Osborne-Kinch¹

Abstract

This article presents new statistics on Insurance Corporations resident in Ireland. The collection of new insurance statistics was introduced to increase the quality, coverage and granularity of ECB statistics in the euro area financial sector. This new dataset, which the Central Bank of Ireland will publish end-March 2018, will facilitate the analysis of changes in financing by institutional sector, the monitoring of changes in financial intermediation in the Euro Area, and help with assessing and analysing the impact of monetary policy on the transmission mechanism. As a subsector of the Irish financial sector, Insurance Corporations represented 6 per cent of total assets in 2016, compared to a euro area average of 11 per cent. This sector has grown steadily over the past five years, with total assets amounting to €303 billion at end-June 2017, equivalent to 110 per cent of GDP. Life insurance corporations account for the majority of the sector, contributing 79 per cent to total assets, followed by reinsurance (13 per cent) and non-life insurance corporations (8 per cent). The foreign share of the insurance sector in Ireland accounts for 85 per cent of total premiums written, with the remaining 15 per cent of premiums earned domestically. This article provides first results and initial analysis of the new statistical dataset collected and compiled by the Central Bank of Ireland.

¹ The authors are Economist and Senior Economist in the Statistics Division. The views expressed in this article are those of the authors only, and do not necessarily reflect the views of the Central Bank of Ireland. The authors would like to acknowledge the useful comments received from Mark Cassidy, Joe McNeill, John Flynn, Rory McElligott, Allan Kearns, Raymond O'Sullivan and Róisín Flaherty.

1. Introduction

In February 2017, a new harmonised statistical series on insurance corporations (ICs) was released by the ECB (reference Q3 2016). This new dataset replaced the non-harmonised euro area IC Statistics that were previously published by the ECB in the context of euro area Insurance Corporation and Pension Fund (ICPF) statistics. The latter, which was published from June 2011 until 2016, had a number of shortcomings, including the lack of harmonisation across countries, while in some cases data were available only on an estimated basis. High quality data on ICs are necessary in order to analyse changes in financing by the institutional sector, for monitoring changes in financial intermediation in the euro area, conducting scenario analysis in the context of Eurosystem exercises, and assessing the impact of standard and non-standard monetary policies on the transmission mechanism. Accordingly, the ECB published a Regulation in the fourth quarter of 2014 on harmonised reporting of insurance data by Eurosystem member states.

The new ECB dataset features harmonised concepts that comply with international statistical standards and covers assets and liabilities of ICs broken down between life, non-life, composite², and reinsurance corporations. The ECB derived an approach to data collection that would reduce the reporting burden on insurers. Data collected under Solvency II for supervisory purposes can be used to meet the majority of the ECB's statistical reporting requirements. Box B, in Section 2, provides a descriptive analysis of Solvency II. The Central Bank of Ireland chose to compile the ECB data requirements using the Solvency II reporting framework, along with most other Eurosystem central banks. This avoided two separate sets of reporting frameworks, as the one data collection satisfies the majority of both the supervisory and statistical data requirements.

The statistical balance sheet for Ireland is derived from the quarterly and the annual returns submitted under Solvency II. The dataset consists of quarterly stocks, flows and adjustments (revaluations + reclassifications)³, and an annual 'premiums, claims and commissions' return. This new dataset provides comprehensive statistical information on the Insurance Sector. In the case of Ireland, the Central Bank will publish its first data release (reference Q3 2016 to Q4 2017) before end-March 2018. This publication and subsequent quarterly releases will also include explanatory notes in relation to quarter-on-quarter data movements within the sector. It will also present linkages between the various sectors for specific financial instruments, as defined under ESA 2010⁴.

Insurance is an important sector within the Irish economy. Total assets of ICs were €303 billion⁵ in the second quarter of 2017, or 110 per cent of GDP, which represented approximately 6 per cent of total assets of the financial sector. This relates to all resident individual insurance corporations with head offices (HOs) or subsidiaries located in Ireland, which are prudentially regulated by the Central Bank, and domestic branches located in Ireland with their HO located in another EEA country in another EEA country.

There were 202 HOs or subsidiary ICs operating in the Irish insurance market at end-June 2017, of which 38 had a balance sheet in excess of €1 billion. The largest five ICs accounted for €123 billion or 41 per cent of total IC's assets. The activities of these five ICs covers both Irish and foreign risk business, written by domestic entities and non-resident branches. There were also 41 domestic branches resident in Ireland in the same period. Their aggregate balance sheet size was €25 billion, or 8 per cent of the total assets for the entire sector. The largest five domestic branches had a balance sheet size in excess of €1 billion each, or 81 per cent of

² Ireland currently does not have any insurance corporations established as 'Composite' for supervisory purposes.

³ Outstanding amounts, or stock data, refer to the value of assets and liabilities at the end of the reference period. Transactions, or flow data, refer to the net acquisition of a given type of asset, or the net incurrence of a given type of liability, during the reference period. Reclassifications refer to the act of changing the category or classification of something, while a revaluation refers to a change in price or currency.

⁴ <http://ec.europa.eu/eurostat/web/esa-2010>.

⁵ Note that figures presented throughout the article are compiled using the ESA 2010 statistical framework, unless otherwise stated.

the total domestic branches balance sheet. The amount of subsidiaries and branches in operation in Ireland is indicative of the strong international focus of the sector. 85 per cent of total premiums are written outside of Ireland by either the establishment of a branch in that country or writing business in that country from the head office or subsidiary located in Ireland.

The remainder of this article is structured as follows: section two introduces the new ICs Statistics, explaining the compilation process and scope of data collected, section three provides a first analysis of the new dataset; before discussing the interlinkages within the euro area insurance market in section four. Section five concludes.

2. Background on Insurance Statistics

In order to address existing data gaps a new ECB regulation (ECB/2014/50⁶) on statistical reporting requirements for ICs was published in the fourth quarter of 2014, followed by an accompanying guideline (ECB/2015/4⁷) as part of an amendment to the ECB's guideline on monetary and financial statistics in the fourth quarter of 2015. This new regulation was aligned to the EIOPA requirements under the Solvency II directive. This allows National Central Banks to derive the necessary statistical information, where possible, from data reported for supervisory purposes under the EU's Solvency II framework. The Central Bank chose to compile the ECB statistical data requirement using the supervisory data collected under Solvency II, in order to reduce the reporting burden on regulated entities. This data collection also facilitates compliance with the updated ECB regulation concerning the Securities Holdings Statistics⁸.

2.1 Compilation

The quarterly and annual IC Statistics datasets are derived using individual quarterly and annual reporting templates submitted under Solvency II. In total, information from six individual quarterly templates, and eight individual annual templates are required to successfully compile the ECB insurance statistics datasets. While the majority of the information required can be derived from the supervisory data collected in the standard Solvency II returns, some additional statistical information was added to the templates to ensure that both the statistical and supervisory requirements can be met from a single reporting framework.

Information that needs to be provided for statistical purposes, over and above the supervisory requirements, is collected through additional fields within the existing Solvency II returns, or from separate statistical templates created to satisfy the ECB requirements. The latter are known as the 'Unofficial Reporting templates including ECB add-ons'⁹ and are used by countries that are deriving the ECB insurance statistics returns from the Solvency II dataset.

Furthermore, for the Central Bank, there were additional challenges from the joint data collection process, which related to the residency concept for statistical purposes, as defined in ESA 2010. In order to enhance the Solvency II data further, the Central Bank collected some additional information under National Specific Templates (NSTs). This addressed the difference in the 'home' approach (Solvency II) and the 'host' approach (ESA 2010). Under the home approach, domestic branches in Ireland are not included, but non-resident branches are included. Conversely, under the host approach, domestic branches in Ireland are included, but non-resident branches are not. (Refer to Box A for more detail on the home to host approach).

6 http://www.ecb.europa.eu/ecb/legal/pdf/oj-jol_2014_366_r_0008-en-txt.pdf

7 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:3201500044&from=EN>

8 <https://www.ecb.europa.eu/ecb/legal/1005/shs/html/index.en.html>

9 https://www.ecb.europa.eu/stats/money/icpf/shared/pdf/ICPF_log_files.pdf?a457ae2295fdee0f385812bdd334880d

Box A: Home to host approach

Data collected under the Solvency II directive includes insurance corporations incorporated and resident in Ireland, and the non-resident branch activity of these entities. This is referred to as 'home' approach data collection.

The reporting population used for statistical purposes, as defined under ESA 2010, requires the assets and liabilities of institutional units¹⁰ to be reported in the country of residence. In this instance, the reporting population will consist of all insurance corporations resident in the territory of the relevant euro area member state. This data collection is known as the 'host' approach; it should include both HO, or subsidiary business, and any domestic branch activity by entities, with their HO within the EEA. In summary, data compiled for the ECB insurance statistics balance sheet is on a 'host' approach while, conversely, Solvency II is on a 'home' basis. Table 1 provides a summary of insurance business included in the home and host data collection.

Table 1: Example Home / Host approach

| | Included in 'Home' approach data collection | Included in 'Host' approach data collection |
|--|---|---|
| HO/Subsidiary resident in Ireland | Yes | Yes |
| Domestic Branch (resident in Ireland) | No | Yes |
| Non-resident Branch (located outside of Ireland with HO resident in Ireland) | Yes | No |

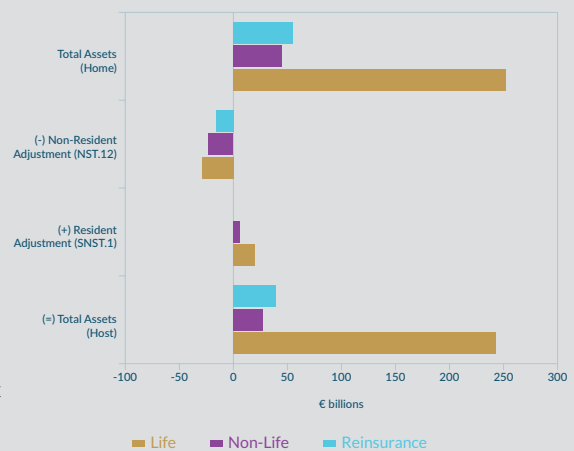
In order for the Central Bank to estimate the host approach from the data collected under Solvency II, two National Specific Templates are required to facilitate the calculation of this adjustment.

The first National Specific Template (NST.12)¹¹ collects financial instrument balance sheet data separately for resident entities and non-resident branches. Thus, non-resident branch activity can be removed from the Irish dataset.

The second National Specific Template (SNST.1)¹² collects financial instrument balance sheet data from the domestic branches resident in Ireland. This can then be added to the Irish dataset to provide full coverage of resident business.

Chart one presents the 'home to host' adjustment applied to the Irish dataset as of end-June 2017. Life ICs have a slightly higher non-resident adjustment compared to their resident adjustment, indicating that life business conducted by Irish branches abroad is larger than foreign branch business in Ireland. Similarly, non-life non-resident activity is much larger (79 per cent of total non-life adjustment) compared to non-life domestic branch activity, while reinsurance corporations data only requires a non-resident adjustment as there are no domestic branches in operation in Ireland.

Chart 1: Home to Host Adjustment, Q2 2017



Source: Central Bank of Ireland.

¹⁰ Institutional units are economic entities that are capable of owning goods and assets, of incurring liabilities, and of engaging in economic activities and transactions with other units in their own right.

¹¹ <https://www.centralbank.ie/docs/default-source/statistics/statistical-reporting-requirements/insurance-corporations/nst-12-notes-on-compilation.pdf?sfvrsn=2>

¹² <https://www.centralbank.ie/docs/default-source/statistics/statistical-reporting-requirements/insurance-corporations/snst-1-notes-on-compilation.pdf?sfvrsn=2>

The first ECB publication in 2017 included data on euro area aggregates and high-level detail on stocks and flows. More recently, additional information has been included in the publication, such as transactions in debt securities, further micro level detail for asset breakdowns, as well as details on national aggregates. In an upcoming publication the ECB insurance statistics will expand further to include annual growth rates. As the dataset evolves, further details on balance sheet information will be published.

2.2 Solvency II

The Solvency II directive is a new harmonised EU-wide insurance regulatory regime that came into operation in 2016, replacing several EU insurance directives that were in place until then. The aim of Solvency II is to strengthen EU market integration, increase international competitiveness, and to move towards a risk-based approach to insurance supervision. It also provides greater confidence to policyholders in the products offered by ICs, as each reporting institution must comply with the rules set out under the framework. Box B provides an overview of the Solvency II directive.

Box B: Background to Solvency II

The Solvency II Directive (2009/138/EC) is a harmonised prudential framework for (re) insurance firms, introduced in 2009 to replace a patchwork of rules in the areas of life insurance, non-life insurance and reinsurance. Solvency II is a Directive in European Union law that codifies and harmonises the EU insurance regulation. The objectives of Solvency II are to increase the protection of policyholders, minimise market disruption, and promote stability in the financial sector and broader economy. It intends to reduce the risk that an insurer would be unable to meet claims, or become insolvent. The Solvency II Directive was transposed into Irish Law as the European Union (Insurance and Reinsurance) Regulations 2015 (S.I. 485 of 2015) and the legislation came into force on 1 January 2016¹³.

The Solvency II framework sets out strengthened requirements around capital, governance, and risk management in all EU authorised (re)insurance undertakings. Solvency II also introduces increased regulatory reporting requirements and public disclosure requirements. The new requirements are intended to reduce the likelihood of an insurer failing and should provide policyholders with increased protection¹⁴. The new framework applies to almost all EU insurers and reinsurers. However, there are some instances (e.g. smaller institutions and (re)insurance corporations that are in run-off¹⁵) where Solvency II reporting is not required.

The three pillars of Solvency II each represent a different aspect of risk mitigation. Pillar one sets out quantitative and qualitative requirements for the calculation of technical provisions and Solvency Capital Requirements (SCR). Technical provisions comprise two components, the best estimate¹⁶ of the liabilities plus a risk margin¹⁷. The SCR is the capital required to ensure that the (re)insurance corporation will be able to meet its obligations over the next 12 months, with a probability of at least 99.5 per cent confidence. In addition to the SCR, a Minimum Capital Requirement must be calculated, which is intended to correspond to an 85 per cent probability of adequacy over a one year period. Pillar two addresses the qualitative assessment of internal controls and risk management, while pillar three defines the standards for reporting and disclosure.

The quarterly and annual Insurance Statistics balance sheet for the European Central Bank (ECB) is derived from the quarterly and annual returns submitted under Solvency II. Almost all Eurosystem countries derive the ECB Insurance statistics from the data collected under the Solvency II directive. However, the relevant National Central Banks in two countries do not use Solvency II as a source for this data collection, as a separate statistical data collection is implemented there.

¹³ This article does not attempt to present all details on Solvency II. For further detail, please refer to the EIOPA website on Solvency II <https://eiopa.europa.eu/regulation-supervision/insurance/solvency-ii>

¹⁴ <https://www.centralbank.ie/regulation/industry-market-sectors/insurance-reinsurance/solvency-ii>

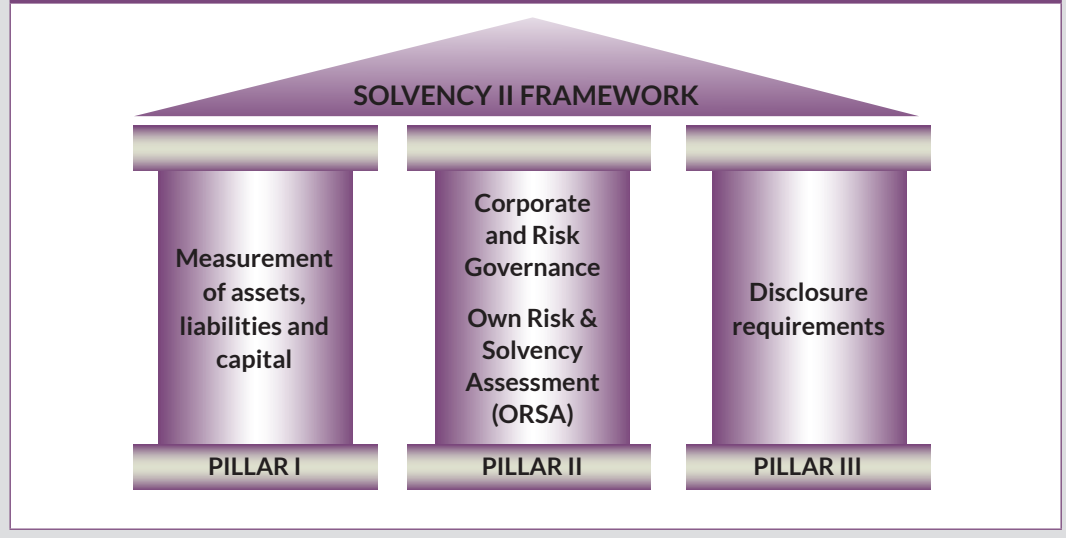
¹⁵ An insurance corporation that has stopped writing new policies and has ceased operations.

¹⁶ "The best estimate shall correspond to the probability weighted average of future cashflows, taking into account the time value of money (expected present value of future cashflows), using the relevant risk-free interest rate term structure" – article 77(2).

¹⁷ <https://eiopa.europa.eu/CEIOPS-Archive/Documents/Advices/CEIOPS-L2-Final-Advice-on-TP-Risk-Margin.pdf>

Box B: Background to Solvency II

Figure 1: Summary Solvency II Framework



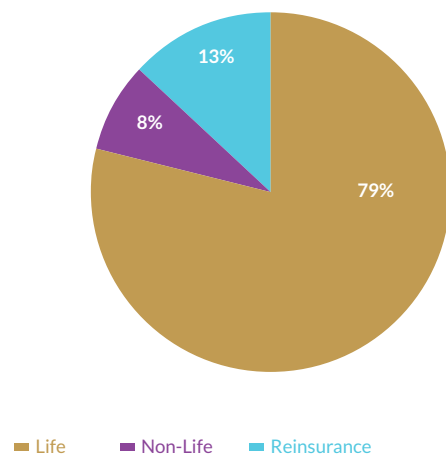
3. First Analysis of Insurance Statistics

The IC sector in Ireland, which comprises of life, non-life, and reinsurance, is both diverse and international in character. The IC sector earned 85 per cent of their total premiums outside of Ireland in 2016, highlighting the significant international presence in the market. The reinsurance sector earned almost all of their total premiums abroad on either a Freedom of Services (FOS) or Freedom of Establishment (FOE) basis, followed by the life (94 per cent) and non-life (69 per cent) sectors. This is not surprising given that the majority of the 202 regulated ICs resident in Ireland are subsidiaries of larger groups.

The new data set provides a split of the total insurance statistics balance sheet by Life, Non-Life, and reinsurance corporations resident in Ireland. Chart two presents an overview of the total asset value for the sector and indicates that it is predominantly made up of life ICs (79 per cent), with the second largest sector

reinsurance (13 per cent), followed by non-life insurance corporations (8 per cent)¹⁸.

Chart 2: Total Assets Split by IC Type, Q2 2017



Source: Central Bank of Ireland.

¹⁸ The data presented in this paper refers in most part to the second quarter of 2017. It should be noted that this is a new dataset, and so may be subject to change over time, as revisions occur.

The data for Ireland consists of assets and liabilities broken down by their financial instrument composition, according to ESA 2010 definitions. In relation to the assets side of the balance sheet, the majority of the instruments are compiled from the Solvency II list of assets template, which provides security-by-security level detail. On the liabilities side, the majority of the instruments are compiled using the Solvency II balance sheet template; however, for some of the financial instrument breakdowns, such as country breakdown, the quarterly data needs to be estimated using annual data.

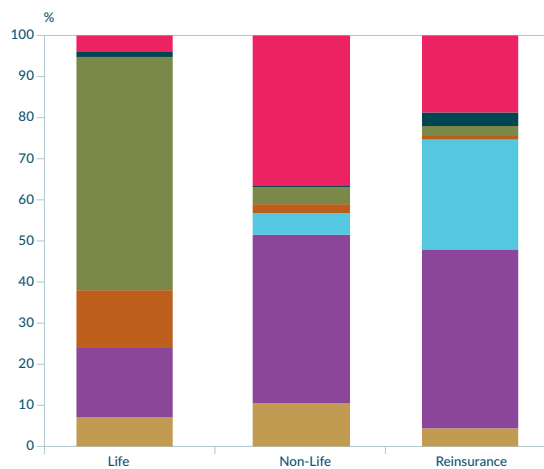
3.1 Breakdown of Assets

Chart three¹⁹ depicts the financial asset breakdown of the Irish insurance statistics dataset. The unit-linked products²⁰ are incorporated into each of the underlying assets (e.g. the Investment Funds and Equity instruments), and so these are not separately identified. These products are discussed in further detail in Section 3.2. This chart highlights that the asset composition is significantly different across the different types of ICs.

3.1.1 Life ICs - Asset holdings

Life ICs predominantly hold investment funds shares (IFs) (57 per cent), followed by debt securities (17 per cent) and equity (14 per cent). As life ICs primarily offer long-term insurance products (life insurance and annuities) and unit-linked investment products, these corporations can adopt a longer-term investment horizon. As such, the premiums received from customers can be invested in more volatile assets such as equities and unit-linked investment funds. Investing in such assets brings benefits of diversification, an expectation of higher returns, and access to a much larger range of markets and asset classes. Additionally, investing in a portfolio of such assets also helps to combat the challenges faced in relation to ensuring ICs meet their long-term obligations to policyholders.

Chart 3: Financial Asset Composition Split by IC Type, Q2 2017



■ Currency & Deposits
■ Debt Securities
■ Loans
■ Equity
■ Investment Funds
■ Derivatives
■ ITRs & Related Claims*

Note: *Insurance Technical Reserves (ITRs) and Related Claims/Reinsurance Recoverables.

Source: Central Bank of Ireland.

3.1.2 Non-life ICs - Asset holdings

The composition of non-life insurers' financial asset holdings is in contrast to life ICs, as they have a greater need for liquid assets with fixed cash flows. The largest asset class held by non-life ICs is debt securities (41 per cent), followed by Insurance Technical Reserves (ITRs) and related claims (37 per cent), and Currency and Deposits (11 per cent). Non-life ICs have a greater need to hold debt securities with short-term durations in order to match their assets and liabilities, given the predominantly short-term nature of their business. 'ITRs and Related Claims', the second largest category represents reinsurance recoverables. It should be noted that this instrument is an asset of the IC and is different from the insurance technical reserves (ITRs) held by ICs, which is a liability instrument and is discussed in further detail in Section 3.3. Reinsurance recoverables represent the proportion of non-

¹⁹ The non-financial assets and residual remaining assets are not included in Chart 3.

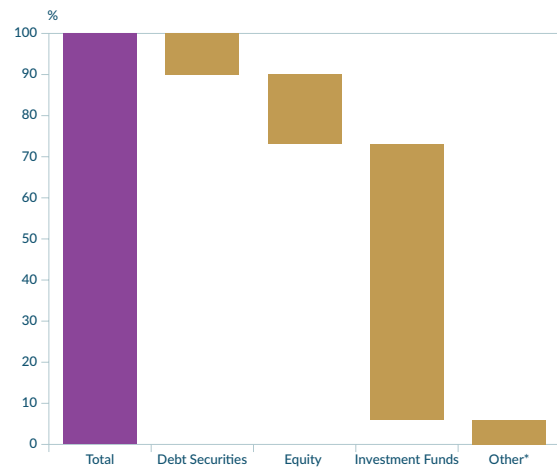
²⁰ A unit-linked product is an investment plan that combines your money along with other plan-holders money to buy assets that are held in a fund. The amount invested and the price of the units at that time will determine the number of units received in the fund.

life ICs losses from past and future claims and claims-related expenses that can be attributed to their reinsurer. This instrument also includes unearned premiums²¹ paid to the reinsurer. Non-life ICs also hold the largest proportion of currency and deposits when compared to the other types of ICs, as part of their liquidity management programmes.

3.1.3 Reinsurance Corporations - Asset holdings

The Irish reinsurance industry plays a significant role internationally, representing the second-highest²² number of reinsurance corporations in a single EU member state. The asset composition of reinsurance corporations is similar to non-life ICs, with debt securities (44 per cent) representing the largest proportion of asset holdings, followed by loans (27 per cent), and insurance technical reserves and related claims (19 per cent), reflecting the generally short-term nature of the risks facing reinsurance corporations. Deposits to cedants, where the cedant refers to the insured party in an insurance contract, account for 93 per cent of the loans instrument on the reinsurance corporations' balance sheet. These represent amounts the reinsurance corporation has deposited with the cedant; as a reserve to cover future claims and help mitigate counterparty risk. The reserves pledged by the reinsurer ensure funds are available when the ceding IC makes a claim. This is usually a proportion of the reinsurance premium. The 'ITRs and related claims' or reinsurance recoverables instrument is the third largest asset class held by reinsurance corporations as a result of retrocession²³. Similar to non-life ICs, reinsurance recoverables in this instance represents the proportion of reinsurance corporations' losses from claims that can be attributed to their reinsurer.

Chart 4: Instrument Breakdown for Life ICs Unit-linked Assets, Q2 2017



Note: *Other contains 'Currency & Deposits' and 'Non-financial Assets'.

Source: Central Bank of Ireland.

3.2 Unit-linked Assets

Unit-linked insurance plans are the main products offered by life ICs in Ireland, representing 90 per cent of the assets on the life ICs balance sheet. This is in contrast with many other EU member states, with life ICs unit-linked assets comprising of less than 20 per cent of gross technical provisions (GTP) in countries such as France, Germany, and Spain²⁴. A unit-linked insurance plan is a product offered by insurance corporations, which gives investors both insurance and investment aspects under a single integrated plan. They operate by investing an agreed amount, for example, a proportion of the premium paid by policyholders, in unit-linked bonds or funds. These products differ from traditional life insurance contracts, such as guaranteed premiums plans, as all investment risk from unit-linked securities is borne fully by the policyholder. The returns from unit-linked securities can be higher than other guaranteed payment plans; however, the policyholders'

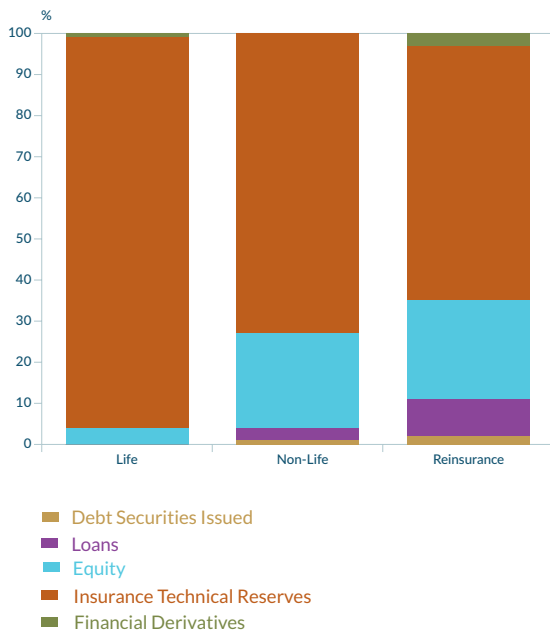
²¹ An insurance premium paid by the customer in advance, corresponding to the time period remaining on an insurance policy, which the insurance corporation has not yet earned.

²² Kelly and O'Leary, 2015.

²³ Retrocession is the process of a reinsurance corporation assuming the risk of another reinsurance corporation, i.e. reinsurance for reinsurers.

²⁴ Macro Financial Review 2017 II.

Chart 5: Financial Liability Composition Split by IC Type, Q2 2017



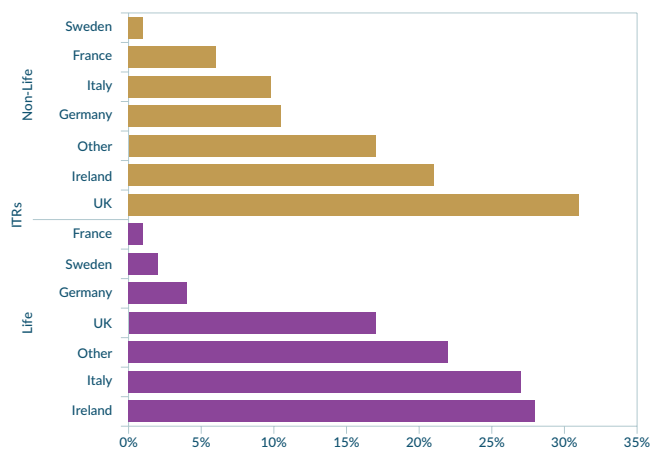
Source: Central Bank of Ireland.

capital is not secure. Chart four²⁵ indicates that the majority of the unit-linked assets are held in investment fund shares. As shown earlier in chart three, investment fund shares are the predominant asset of life ICs.

3.3 Breakdown of Liabilities

Across all the various types of ICs, the ITRs instrument is the largest financial instrument on the liability side of the balance sheet. As mentioned previously, these are different to the ITRs and related claims on the asset side of the IC balance sheet. The ITRs are liabilities of ICs to policyholders and beneficiaries. The majority of the ITRs represents the amount an insurance corporation sets aside from profits to cover future estimated claims. This instrument is the largest item on the liabilities side of an undertaking’s balance sheet. The ITRs account for 95 per cent of the life IC’s liabilities, 73 per cent for non-life ICs, and 62 per cent for reinsurance corporations (Chart five²⁶). Life ICs will match the unit-linked assets

Chart 6: Cross Country Comparison of Life and Non-Life ITRs, Q2 2017



Source: Central Bank of Ireland.

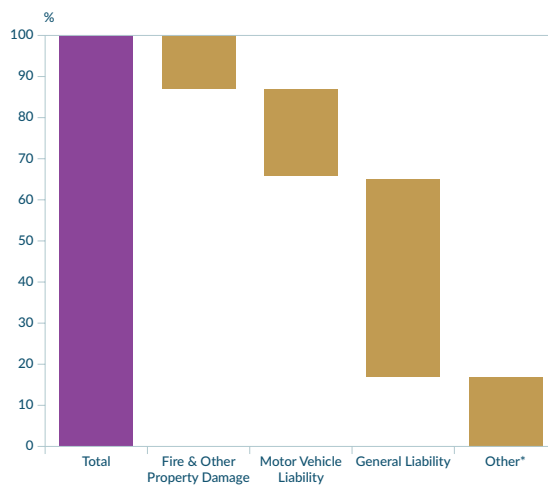
(discussed further in Section 3.2) with an equivalent amount of unit-linked reserves. Life ICs ITRs comprise almost entirely of unit-linked technical provisions (88 per cent), with the remaining non unit-linked ITRs (12 per cent) held to cover other life insurance products offered by the relevant life ICs.

Chart six provides a cross-country comparison for life and non-life ICs ITRs held by resident ICs. Life ICs hold 28 per cent of total ITRs in Ireland, 27 per cent in Italy (given the large presence of Italian subsidiaries in Ireland), and 17 per cent in the United Kingdom, to cover future estimated claims in the relevant countries. The life ICs that hold these reserves have greater exposure to these countries, in line with the level of premiums written in each of these countries. For non-life ICs, more reserves are held to cover premiums written in the United Kingdom (31 per cent), followed by Ireland (21 per cent), and Germany (10 per cent). The ITRs are usually structured to mirror the geographical profile of the premiums

²⁵ The raw data from the relevant Solvency II return was used to create this chart, and therefore will reflect the home approach data collection.

²⁶ Residual remaining liabilities is not included in Chart 5.

Chart 7: Non-Life ITRs Line of Business Breakdown, Q2 2017



Note: *Other contains 'Medical expense insurance', 'Income protection insurance', 'Workers' compensation insurance', 'Other motor insurance', 'Marine, aviation and transport insurance', 'Credit and suretyship insurance', 'Legal expenses insurance', 'Assistance', 'Reinsurance' and 'Miscellaneous financial loss'.
Source: Central Bank of Ireland.

written, and this cross-country breakdown follows a similar pattern across the insurance sector.

3.4 Life ICs Pension Entitlements

Life ITRs can be broken down further to show the amount of reserves attributable to pension entitlements. These represent the amount of technical provisions relating to the life ICs pension scheme products, which includes both occupational and individual pension plans, and account for 15 per cent of total life ITRs in the second quarter of 2017. In a defined contribution (DC) pension scheme, the benefits are paid dependent on the performance of the assets acquired by the pension scheme. In this instance, the liability to the life IC is the current market value of the scheme's assets, and investment risk is borne by the policyholder. On the other hand, in a defined benefit (DB) pension scheme the level of pension benefits is determined by an agreed formula in advance. The liability of a defined

benefit pension scheme for the life IC will be the present value of the promised benefits. As expected, the majority of schemes are defined contribution (94 per cent) compared to defined benefit schemes (6 per cent), given the general movement away from DB schemes towards more sustainable DC schemes (Broadbent et al, 2006).

3.5 Non-Life breakdown by line of business

The non-life ITRs can be broken down further to show the lines of business (LOB)²⁷. Chart seven depicts that non-life ICs are primarily holding reserves to cover business in relation to general liability (GL) insurance (48 per cent), motor vehicle liability insurance (21 per cent), and fire & other damage to property insurance (13 per cent). GL insurance provides coverage to corporations for items such as liability claims for bodily injury and property damage. The non-life ITRs breakdowns are reflective of an IC's premiums written by LOB, and will vary depending on the primary business focus of the relevant IC.

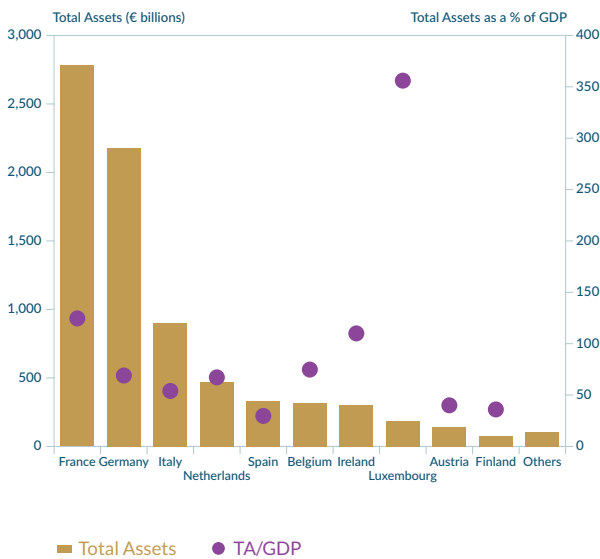
4. Interlinkages Within the Euro Area Insurance Market

The insurance market in Ireland is not only an important sector within the Irish economy but also has significant interlinkages within the euro area. This section explores the size of the Irish insurance industry compared to other countries, both in terms of total assets as a percentage of GDP, and the number of ICs resident in the territory of the relevant euro area member state. It also examines the geographical location of premiums written outside of Ireland by Irish resident ICs.

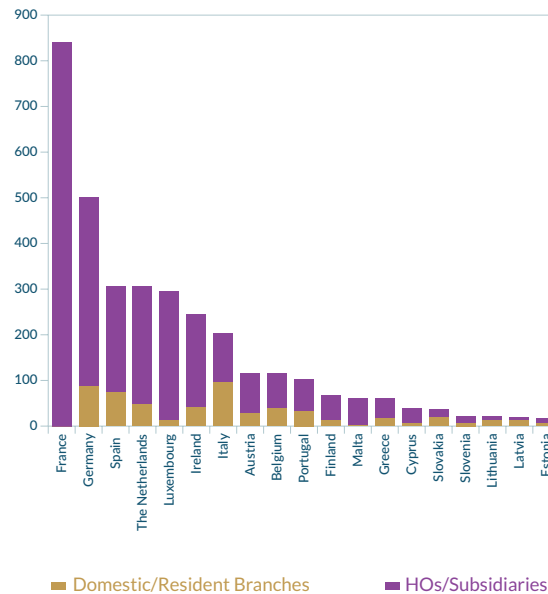
4.1. Cross-country comparison

At present, the majority of the Eurosystem countries compile the ECB insurance statistics returns on a home approach in line with Solvency II, while the remaining countries, which includes Ireland, compile the statistics

²⁷ <https://eiopa.europa.eu/CEIOPS-Archive/Documents/Advices/CEIOPS-L2-Final-Advice-Technical-Provisions-Segmentation.pdf>

Chart 8: Cross Country Comparison of IC Total Assets (TA) and TA as a % of GDP, Q2 2017

Sources: ECB Statistical DataWarehouse and Eurostat.

Chart 9: Number of ICs by Country Split by HO and Domestic Branches, Q2 2017

Sources: ECB List of Financial Institutions.

on a host basis in line with ESA 2010. As a result, there are some limitations in comparing total assets across the Eurosystem. However, it is still instructive to perform this analysis as it provides an overview of the size of the sector relative to GDP. For Ireland, total assets as a percentage of GDP are the third highest at 110 per cent, highlighting the importance of this industry domestically, albeit this is less than one-third of the ratio for Luxembourg (Chart eight).

4.2 Number of resident insurance corporations

Chart nine²⁸ depicts the number of ICs broken down by Eurosystem member states. It can be seen that Ireland is the sixth largest in terms of number of resident ICs. The number of ICs across the Eurosystem (including Ireland) could increase in the coming years, due to the potential relocation of some insurance firms' EU headquarters from the UK as a result of Brexit. Chart nine also displays the domestic branches' proportion of each countries total resident ICs. Ireland has 41 branches in

operation, reinforcing the attractiveness of Ireland as a branch location for foreign ICs.

Looking in more detail at the location of head offices for domestic branches in Ireland, Chart ten shows that the majority of domestic branches resident in Ireland have their HO located in the United Kingdom. This is followed by France. This is not surprising, as 'passporting' is prevalent between Ireland and the UK on an FOE basis. 'Passporting' allows for an insurance undertaking authorised in one EEA state to conduct business in another EEA state.

Should the UK no longer be located within the EEA post Brexit it would be considered a "third country" from a Solvency II perspective, and UK insurers may not be in a position to maintain their access to the single market or to retain their EU passporting rights. This could have implications for the size of the industry in Ireland. The impact that Brexit may have on the structure of the insurance sector in Ireland

²⁸ ECB list of financial institutions can be found here: http://www.ecb.europa.eu/stats/financial_corporations/list_of_financial_institutions/html/index.en.html

Chart 10: Location of HO for Domestic Branches in Ireland, Q2 2017

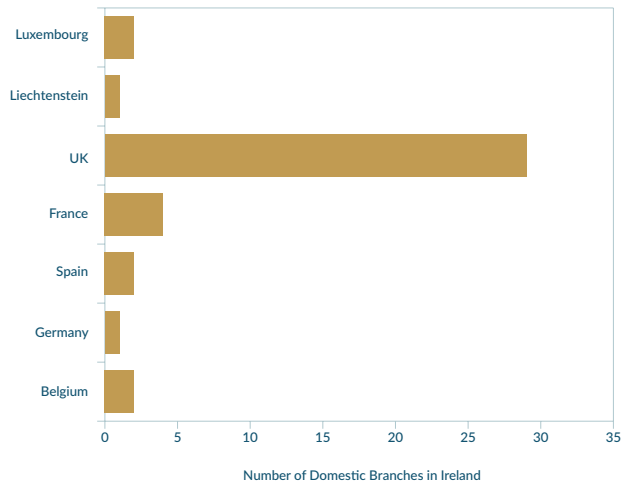
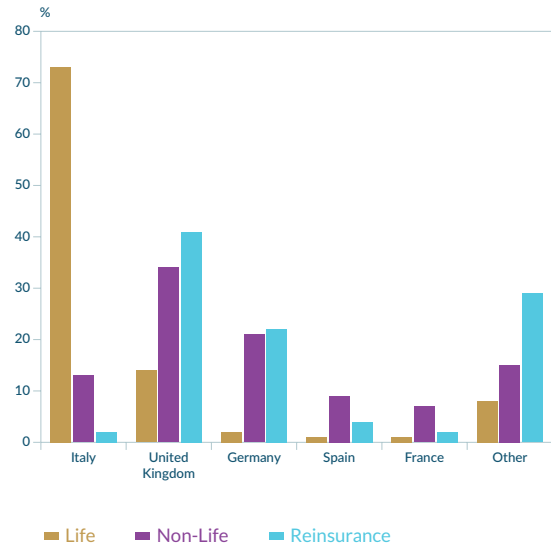


Chart 11: Cross Country Comparison of Total Foreign Premiums Written by Irish Resident ICs, 2016



Source: Central Bank of Ireland.

is uncertain at present, but will continue to be monitored.

4.3 Domestic Vs Foreign related business activities

As part of the Solvency II returns, data are collected from reporting institutions on the level of activities both within Ireland and abroad; either by the establishment of a branch in that country (Freedom of Establishment (FOE) basis), or writing business in that country from the head office or subsidiary located in Ireland (Freedom of Services (FOS) basis). ICs with a head office located in Ireland earned 85 per cent of their total premiums outside of Ireland on a FOE and FOS basis in 2016, with the remaining 15 per cent accounting for premiums earned domestically. This highlights the importance of foreign business to premium income in the Irish insurance industry.

In relation to the total domestic premiums written by ICs resident in Ireland, 79 per cent were earned by non-life ICs. The remainder was predominantly earned by life ICs. This is not surprising given the majority of the regulated ICs resident in Ireland are subsidiaries of larger groups. There are a number of benefits to head offices in setting up business in Ireland and operating internationally, such as the well-educated English-speaking workforce, competitive corporate tax regime, and a strong infrastructure in terms of professional services firms and legal system.

Chart 11 presents the country breakdown of total premiums written outside of Ireland for life, non-life and reinsurance corporations, by resident ICs (on an FOS basis) and non-resident branches (on a FOE basis). Life ICs account for 58 per cent of total premiums

earned outside of Ireland, followed by non-life ICs (31 per cent), and reinsurance corporations (12 per cent). The majority of the foreign premiums written by Life ICs are in Italy and the United Kingdom, while the largest countries by foreign premiums for non-life ICs are the United Kingdom and Germany. Similarly, the United Kingdom is also a prominent location for foreign premiums earned by reinsurance corporations resident in Ireland.

5. Conclusion

This article introduces the new Insurance Corporations statistical dataset, and provides some initial findings and analysis. A quarterly release will be published on the website at end-March 2018. Enhanced reporting under the new IC Statistics dataset will facilitate improved monetary analysis, and assist in the monitoring of non-bank financial institutions for other purposes, such as financial stability analysis, and monitoring of financial integration across Europe. Furthermore, the accessibility of high quality insurance data for consumers, industry, markets, academics, students, and the public is very important in the context of informing decision-making.

Initial estimates indicate that at end-June 2017, there were 243 insurance corporations operating in the Irish insurance industry, with an estimated total asset value of €303 billion. Of this, life ICs accounted for 79 per cent of the total followed by reinsurance (13 per cent) and non-life ICs (8 per cent). Life insurance corporations predominantly hold unit-linked investment fund shares, and non-life and reinsurance predominantly hold debt securities, given the types of risk and liability profile related to each business activity. Furthermore, non-life ICs and to a lesser extent reinsurance corporations tend to have large amounts of ITRs and related claims that are attributable to their reinsurer. As expected, ITRs are the largest instrument on the liabilities side of the life, non-life and reinsurance balance sheet.

It is also evident that the insurance market in Ireland has considerable levels of foreign related business activities, in particular for life and the non-life subsector, who predominantly write business outside of Ireland. In 2016, ICs resident in Ireland earned 85 per cent of their total premiums written outside of Ireland, by either the establishment of a branch in that country or writing business in that country from the head office or subsidiary located in Ireland. Given Ireland's significant cross-border activity, the introduction of the new IC statistical dataset is very important as Ireland performs a sizeable role in the European insurance sector.

Overall, the introduction of the new IC statistical dataset ensures effective analysis can be performed on the Irish insurance market and improves sectoral insights. Not only does the insurance sector play a direct role in the lives of resident and non-resident citizens who are policyholders of both life and non-life insurance contracts, but it also plays a vital role in the functioning of the Irish economy and financial services system.

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Statistical Appendix

Statistical Appendix

The publication of the Statistical Appendix of the Quarterly Bulletin was discontinued from Quarterly Bulletin 1 2014. Statistical data compiled by the Central Bank are accessible on the Statistics page of the Central Bank's website, <https://www.centralbank.ie/statistics>. Some tables, previously published in the Statistical Appendix, have been expanded to provide more comprehensive data. A number of statistical tables, which were not published in earlier Bulletins, have also been added.

The list of statistical tables and links to access them on the website are given on the following page.

STATISTICAL TABLES: CENTRAL BANK WEBSITE LINKS

Money and Banking:

<https://www.centralbank.ie/statistics/data-and-analysis/credit-and-banking-statistics/bank-balance-sheets>

- Summary Irish Private Sector Credit and Deposits
- Financial Statement of the Central Bank of Ireland
- Credit Institutions – Aggregate Balance Sheet
- Credit Institutions (Domestic Market Group) – Aggregate Balance Sheet

Business Credit and Deposits:

<https://www.centralbank.ie/statistics/data-and-analysis/credit-and-banking-statistics/business-credit-and-deposits>

- Credit Advanced to Irish Resident Private-Sector Enterprises
- Deposits from Irish Resident Private-Sector Enterprises

Private Household Credit and Deposits:

<https://www.centralbank.ie/statistics/data-and-analysis/credit-and-banking-statistics/private-household-credit-and-deposits>

- Credit Advanced to and Deposits from Irish Private Households

Money Market Funds:

<https://www.centralbank.ie/statistics/data-and-analysis/other-financial-sector-statistics/money-market-funds>

- Money Market Funds Aggregate Balance Sheet
- Money Market Funds Currency Breakdown of Assets

Retail Interest Rates:

<https://www.centralbank.ie/statistics/data-and-analysis/credit-and-banking-statistics/retail-interest-rates>

- Retail Interest Rates - Deposits, Outstanding Amounts
- Retail Interest Rates - Loans, Outstanding Amounts
- Retail Interest Rates and Volumes - Loans and Deposits, New Business
- Official and Selected Interest Rates

Investment Funds:

<https://www.centralbank.ie/statistics/data-and-analysis/other-financial-sector-statistics/investment-funds>

- Ireland: Investment Funds Data

Securities Holdings and Issue Statistics:

<https://www.centralbank.ie/statistics/data-and-analysis/securities-statistics/securities-issues-and-holding-data>

- Securities Issue Statistics
- Holding Data

Financial Vehicle Corporations:

<https://www.centralbank.ie/statistics/data-and-analysis/other-financial-sector-statistics/financial-vehicle-corporations>

- Irish Financial Vehicle Corporations

Locational Banking Statistics:

<https://www.centralbank.ie/statistics/data-and-analysis/credit-and-banking-statistics/locational-banking-statistics>

- Total Positions of Banking Offices Resident in Ireland vis-a-vis Residents and Non-Residents

Quarterly Financial Accounts:

<https://www.centralbank.ie/statistics/data-and-analysis/financial-accounts>

- Financial Accounts for Ireland: Q1 2012 to present – ESA 2010

Public Finances and Competitiveness Indicators:

<https://www.centralbank.ie/statistics/data-and-analysis/securities-statistics/holdings-of-long-term-irish-government-bonds>

- Holdings of Irish Government Long-term Bonds

<https://www.centralbank.ie/statistics/data-and-analysis/competitiveness-reserves-and-national-debt>

- Gross National Debt
- Nominal and Real HICs

