2. Endorsement and Assessment of Macroeconomic Forecasts

Key Messages

- The Council endorsed the *SPU 2018* macroeconomic forecasts for 2018–2021 produced by the Department of Finance. The Council also verified the application of the modified Commonly Agreed Methodology, as estimated by the Department.

- The Council welcomes the Department's publication of alternative estimates of the output gap for the Irish economy. Although not assessed within the scope of the Council's formal endorsement for *SPU 2018,* these measures should feature as headline indicators of economic performance in future Department publications. As a key input to setting fiscal policy, the alternative output gaps should be included for assessment under future endorsements.

- The forecast horizon in *SPU 2018* only extends out to three years ahead (2021), whereas previous Department publications have forecast out to five years ahead. Medium-term forecasting out to five years should be resumed.

- While *SPU 2018* forecasts a gentle easing of growth to around 3 per cent in the medium term, concerns remain over short-term risks from overheating and a number of medium-term downside risks. In particular, the exit of a large, foreign-owned multinational firm from Ireland poses significant risks. Corporation tax receipts would be particularly vulnerable to such an exit, given the high concentration of payments among the top ten contributing firms, amongst other direct and indirect impacts.

- Although near-term growth forecasts for some of Ireland's main trading partners have improved in recent months, much uncertainty remains on prospects for growth in the UK. The expected impacts of Brexit on the Irish economy may also be underestimated by model-based estimates. Assumptions included as inputs to such models may

not fully capture the extent of the two countries' closely integrated supply-chain networks, amongst other relevant features. If the EU and the UK do not reach agreement regarding a transition arrangement, the near-term risk of a "hard Brexit" remains significant.

2.1 Introduction

The Council's tenth endorsement exercise assessed macroeconomic projections prepared by the Department of Finance, as contained in *SPU 2018*.[17] The timeline for this endorsement process is detailed in Appendix A. The Council monitors developments in the Irish economy on an ongoing basis. The identification of potential risks and economic imbalances requires careful and continuous analysis.

Box C describes the potential impact of a large, foreign-owned multinational firm ceasing operations in Ireland, considering potential direct effects on tax revenue, employment, earnings and gross value added. The key developments leading to the Department's publication of alternative supply-side estimates of the Irish economy in *SPU 2018* are discussed in Box D. The Council has consistently advocated such alternatives as essential to provide a sound basis for setting the economy and the public finances on a sustainable path (IFAC, 2017a).

2.2 Endorsement of *SPU 2018* Projections

This section details the tenth endorsement exercise undertaken by the Council, covering the macroeconomic forecasts in *SPU 2018* and outlining the Council's considerations around the time of the endorsement.[18]

The demand-side macroeconomic forecasts contained in *SPU 2018* are assessed as being within an endorseable range for 2018–2021, taking into account the methodology and the plausibility of the judgements made. The endorsement process focuses on three key dimensions: the plausibility of the methodology used; the pattern of recent forecast errors; and comparisons with the Council's Benchmark projections and other projections.

Methodology

Regarding the Department's approach to demand-side forecasting, the Council is satisfied that it broadly conforms to standards set by other forecasting agencies.

[17] The endorsement function is outlined in detail in IFAC (2013) and in IFAC (2014a). As the SPU represents the national medium-term fiscal plan, the endorsement related to it covers a longer time range than that of the Budget. Benchmark projections prepared by the Secretariat form a key part of the endorsement process (see IFAC, 2013 and 2014a). In addition to discussions with Council members, an important input into the preparation of the Benchmark projections involves rounds of discussions with other external forecasters, coming from a wide variety of different perspectives. For this round of forecasts, the Secretariat held discussions with economists and forecasters at the Central Bank of Ireland and Investec. The Secretariat also met with the CSO to gain further insights into recent National Accounts and Balance of Payments data.

[18] Data available at that time may differ from that available for the purposes of this assessment.

Although prone to mismeasurement of the Irish economy's supply side (see Boxes B and E in IFAC, 2017e), the EU Commonly Agreed Methodology (CAM) has remained central to assessment of compliance with the fiscal rules. At a late stage in the endorsement process for *SPU 2018*, the Council was informed of changes to the CAM's usual implementation by the Department of Finance, introducing dummy variables in 2017 that mitigate the impact of strong GDP growth in that year on the output gap. A similar approach had been implemented to alleviate the effects of significant distortions contained in the 2015 outturn data. However, the case for applying these dummy variables is not as compelling as it was for the 2015 data. In particular, provisional outturns for 2017 did not indicate significant onshoring activity of intellectual property by foreign-owned multinational firms in Ireland – as occurred in 2015 – and the variability of growth was in line with normal volatility.

The primary motivation for the inclusion of the dummy variables for 2017 was to obtain a more plausible output gap estimate. However, the inclusion of dummy variables for many different years may be highlighting a greater problem – that is, the possibility that using GDP as the standard input for deriving Ireland's potential output might not be appropriate, given that it is subject to regular and large distortions. Efforts to provide a more realistic assessment of the economy should focus on alternative measures of potential growth, rather than modifications to the CAM. Details of progress made in this regard are described in Box D, and the Council welcomes the intention of the Department to feature alternative estimates in the headline table of macroeconomic indicators in future endorsement rounds.

While it was unclear at the time of the endorsement whether the European Commission would also adopt the approach for their Spring 2018 forecasts, the Council nonetheless verified the application of the CAM, consistent with the adjusted methodology. Since that time, the Commission has published its Spring 2018 forecasts and informed the Council of its decision to adopt similar (although not identical) adjustments to the CAM methodology in their estimates.

Pattern of Recent Forecast Errors

In assessing whether a pattern of errors exists in the Department's projections, the Council has found no systematic pattern in recent forecast errors. The Council notes that outturn data for certain components of external trade have been stronger than expected in recent years, in particular for services exports. However, it is difficult to

ascertain the real economic activity underlying these outturns, and the data are prone to significant volatility and revisions.

Comparisons with the Council's Benchmark Projections

As noted in Chapter 1, the forecast horizon has shortened in recent Department publications, with *SPU 2018* covering just three years ahead (to 2021). The Council would welcome a return to forecasting out to five years ahead, in order to provide a consistent view of projections over the medium term, and to ensure continued emphasis on identifying risks or potential economic imbalances in real time.

Comparison between *SPU 2018* forecasts and the Council's full set of Benchmark projections (Appendix B) reveals some differences over the forecast horizon. In particular, forecast growth in 2018 is somewhat lower than the Council's Benchmark projection. Nonetheless, the Department's growth forecasts are assessed to be within an endorseable range.

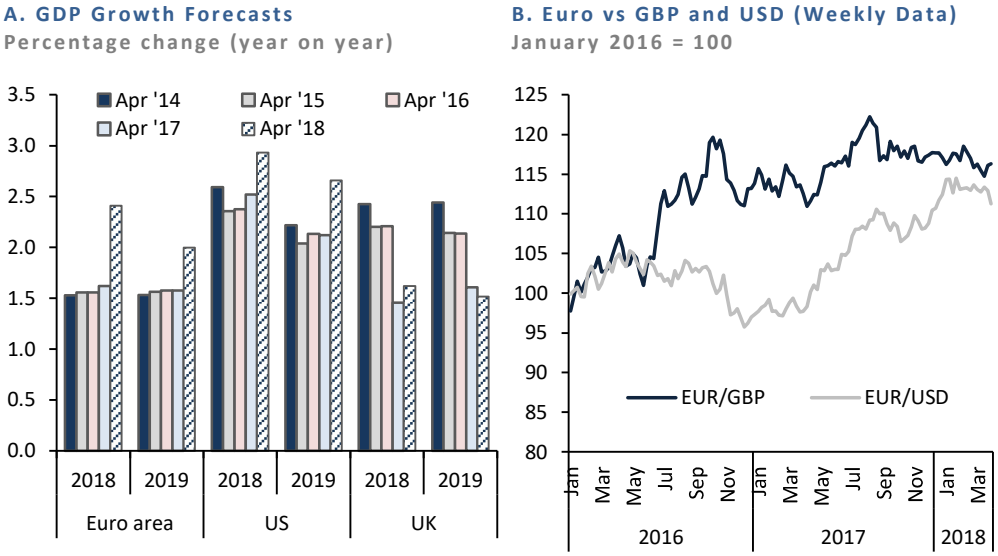
2.3 Assessment of the Macroeconomic Forecasts in *SPU 2018*

2.3.1 Macroeconomic Context

Strong growth has been a consistent feature of the Irish economy since the recovery began. Employment growth rates remain robust and near-term expectations are for a moderating rate of growth in domestic demand. Output is close to its medium-term potential path. Capacity constraints have arisen across various sectors of the economy, in particular for housing, where rents and prices have been growing at an average rate of over 8 per cent since 2012. Wages and prices more broadly have remained subdued, however, despite a continuously falling unemployment rate since 2012.

External demand conditions have remained relatively stable for Irish exporters in recent months. GDP growth forecasts for the Euro Area and US have been rising, despite some softness in recent data. As shown in Figure 2.1A, recent IMF forecasts for 2018–2019 see faster growth than previously expected. Forecasts for the UK suggest that the economy is on a weaker growth trajectory, with weaker consumption growth and weak investment, likely reflecting prospects of Brexit.

Figure 2.1: Trading Partner Growth Forecasts and Exchange Rates



Sources: IMF *World Economic Outlook* and Datastream.

In currency markets, the euro has been trading within a tight range in 2018 (Figure 2.1B). While the weakening of the US dollar against the euro during 2017 was an unhelpful development for Irish firms selling into the US, the previous three years had been amongst the strongest for the dollar since 2003. More significantly for indigenous Irish exporters, the EUR/GBP exchange rate has stabilised lately – although sterling remains about 15 per cent weaker than its early 2016 level.

The assumptions in *SPU 2018* regarding the impact of Brexit on the Irish economy are somewhat more favourable than were those contained in *Budget 2018*. While the Department's baseline Brexit assumption is that the UK will leave both the EU Customs Union and Single Market in favour of a free-trade agreement (to be agreed in 2021), the main expected near-term impact of Brexit has been deferred from 2019 to 2021, in expectation of a transition arrangement being agreed. Furthermore, it is assumed that an agreement similar to the recent Canadian-EU trading arrangements will begin from 2021 onwards. If realised, such an arrangement would limit any changes to UK–EU trading and other relationships to (at earliest) the final year of the forecast horizon, 2021.

However, there has been much uncertainty surrounding the prospects for a transition arrangement since EU-UK negotiations progressed beyond their initial phase in December 2017. Compounding such near-term risks, the expected medium-term impact on the Irish economy of Brexit included in the Department's forecasts (and

forecasts of other agencies) could be understated.[19] Doubts remain over whether the assumptions included in model-based estimates will accurately reflect the scale of logistical and regulatory challenges likely to be faced by the Irish economy under a "hard Brexit". In particular, the extent of disruption to supply-chain interlinkages could hamstring growth significantly, and the labour intensity of Irish exports to the UK could lead to an underestimation of the impact of Brexit on Ireland. A less benign outcome may result in the imposition of large WTO tariffs from April 2019 onwards, which would pose a significant threat to Irish businesses.

Further risks to external demand include the potential for reduced global trade due to the adoption of protectionist measures in key trading partners, and geopolitical tensions. These and other external risks are discussed later in Section 2.4.

2.3.2 *SPU 2018* Short-Term Forecasts, 2018–2019

The key elements of the demand-side forecasts for 2018 and 2019 contained in *SPU 2018* are described in this section. Component overviews of domestic demand and net exports are included, followed by analysis of overall aggregate demand. A moderation of strong growth rates is forecast in 2018 and 2019, while the contribution to growth from underlying domestic demand is expected to rise, as shown in Table 2.1.

Domestic Demand

Preliminary outturns for **personal consumption** in 2017 were softer than expected, expanding by 1.9 per cent. Goods consumption grew by 4.6 per cent, whereas the first estimate of services consumption shows a marginal decrease for the year (-0.1 per cent). However, some of the reported services consumption weakness is likely to reflect timing issues on data availability. New estimates of imputed rents and insurance are expected to result in upward revisions. This could potentially add around 1 percentage point to the volume of total consumption growth in 2017. Reflecting this, *SPU 2018* consumption growth forecasts have been generated on the basis of an assumed upward revision to the 2017 outturn. Expected growth rates in

[19] Such risks include, for example, the strong assumption that a shock to growth in the UK is equivalent in terms of its impact on Ireland to a shock to an average trading partner.

2018 and 2019 are similar to the expected outturn for 2017, and in line with forecast growth in personal disposable income.[20]

Table 2.1: *SPU 2018* Macroeconomic Forecasts (to 2019)
Percentage change in volumes, unless otherwise stated

	2017[a]	2018	2019
Aggregate Demand			
GDP	7.8	5.6	4.0
…of which (underlying contributions)			
Domestic Demand[b] (p.p.)	1.4	2.0	1.9
Net Exports[b] (p.p.)	6.4	3.6	2.1
GDP Deflator	-0.3	0.0	1.3
Inflation (HICP, %)	0.3	0.8	1.0
Nominal GDP	7.5	5.6	5.4
Nominal GDP (€ billion)	296.2	312.8	329.6
GNP	6.6	5.6	3.7
Nominal GNI*	6.4	5.9	5.0
Domestic Demand			
Personal Consumption	1.9	2.6	2.4
Investment	-22.3	8.5	7.4
Underlying Investment	5.7	10.3	9.1
Government	1.8	1.9	1.9
External Demand			
Exports	6.9	6.9	5.4
Imports	-6.2	6.6	5.9
Current Account (% of GDP)	12.5	12.2	11.4
Trade Balance (% of GDP)	32.1	31.6	31.1
Labour Market			
Population	1.1	1.3	1.4
Employment	2.9	2.7	2.3
Unemployment Rate (% Labour Force)	6.7	5.8	5.3

Sources: CSO and *SPU 2018*.
Notes: [a]Denotes latest outturns from the CSO, except for nominal GNI* for which an outturn is not yet available for 2017 – it is instead estimated assuming no change in the adjustments from nominal GNI included in 2016. [b]Underlying contributions to real GDP growth rates in percentage points (excludes the effect of investment in aircraft and intangible assets).

There have been some interpretation issues for the household savings ratio, in particular regarding the plausibility of official CSO outturns for household net borrowing, as discussed in IFAC (2017e, Box C). Forecasts in *SPU 2018* show a savings ratio of over 8 per cent of disposable income until 2020. However, this outcome appears to be inconsistent with a rising share of economic growth contributed by

[20] Projecting the volume of consumption forward based on the first estimate of the 2017 outturn data implies a lower consumption level than if expected revisions had been included in the base.

underlying domestic demand. Although the current level of the savings ratio may not be correctly measured, the direction of change over time should nonetheless be consistent with other indicators, such as the underlying current account of the balance of payments and the composition of growth arising due to domestic demand. In particular, a falling current account balance and a higher share of growth arising due to domestic demand would be more readily explained by a falling savings ratio over time.

Real **government net consumption of goods and services** recorded growth of 1.8 per cent in 2017, slightly below the growth rate expected at the time of *Budget 2018* (2 per cent). Similar volume growth is forecast for coming years. Including price effects shows a steady nominal growth rate of 3.7 per cent for 2019–2021. Compared to the figures shown in *Budget 2018,* the *SPU 2018* profile implies a slightly lower level (-0.6 per cent) of net government spending by 2021.

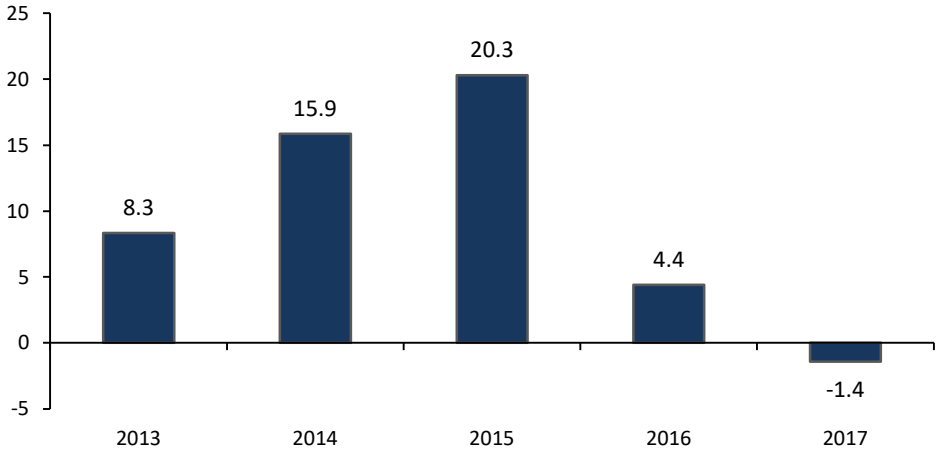
Headline figures for **investment** have been extremely volatile in recent years, with volumes doubling between 2014 and 2016, before falling back by one-fifth in 2017. However, the rate of growth in underlying investment (excluding aircraft and intangibles) has been much more stable. *SPU 2018* forecasts an expected continuation of double-digit growth in residential construction in 2018 and 2019. Annual output of housing completions is expected to reach 24,000 in 2018, rising steadily by 4,000 units per annum to 36,000 by 2021.[21] The Council has previously highlighted the uncertainty around the projected increase in housing output, with the risk that activity may accelerate more rapidly. For 2018 and 2019, non-residential construction activity is expected to grow slightly slower at 10 per cent each year on average.

Against this, there has been puzzlingly weak performance of underlying investment in machinery and equipment in 2017, which excludes the distortionary impact of aircraft. Despite average growth of 20 per cent for the previous four years, it fell by more than 10 per cent in 2017, and the CSO has advised that this weakness was broadly evident across sectors. Given the reliance of firms on importing many of the components needed to carry out investments in machinery and equipment, detailed trade statistics can be used to confirm softening in this area of investment. Removing certain categories linked to investment by foreign multinational enterprises that have

[21] If sustained over the medium term, this output level would be within the range of estimates of housing supply required to achieve equilibrium in the market. However, the range is somewhat wide at between roughly 30,000 units (Duffy *et al.*, 2016) and 50,000 units (Lyons, 2017).

a distortionary impact on Irish investment data allows the construction of a series for imports for adjusted underlying machinery and equipment.[22] As Figure 2.2 shows, activity for such investments has weakened.

Figure 2.2: Adjusted Machinery and Equipment Imports
Percentage change (year-on-year)



Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: This figure shows machinery and equipment imports data adjusted to exclude items 79, 728.21, 752.30, 752.70, 759.97 and 776.42 in the merchandise trade data where large distortions are visible in recent years.

Net Exports

Ireland's performance in net exports and international trade has become particularly difficult to analyse in recent years. As described in previous Council publications, outturn data for goods **exports** have been significantly affected by what is known as "contract manufacturing".[23] The monthly trade statistics published by the CSO exclude such activity. For the *Quarterly National Accounts* and *Balance of Payments* releases, exports and imports data are adjusted for the activities of some multinational enterprises.

While contract manufacturing also took place prior to 2015, it was on a smaller scale and was generally believed to have had a GNP-neutral impact, as payments of royalties and outward profit flows would offset the effect on this aggregate. This offsetting process did not occur in 2015, however, resulting in a large and positive impact of contract manufacturing on both GNP and GDP growth rates. In general, the

[22] The omitted categories include semiconductor machinery, data storage units, processors/controllers and aircraft.

[23] For example, see Box D of IFAC (2017e) and Box A in IFAC (2015b). For further detail see Connolly (2017).

components of net exports have lately been increasingly unpredictable to forecast. In 2017, after initially acting as a drag on growth in the first half of the year, a surge in contract manufacturing activity in the second half of the year resulted in a growth-neutral impact for the year overall.

In line with recent trends, more rapid exports growth is forecast in services than in goods, with services exports growth expected to average over 7 per cent out to 2019. This reflects the consistent outperformance of services exports relative to forecasts in recent years. Meanwhile, growth has been weaker for **imports** of goods. In the preliminary outturns for 2017, overall imports registered single-digit declines for both goods and services components. However, these growth rates are also significantly affected by aircraft (goods) and intangibles (services). Given the difficulty in predicting such components, it is more instructive to analyse underlying imports, which grew by 2 per cent in 2017 – partly reflecting the weakness of adjusted machinery equipment imports shown in Figure 2.2. For 2018 and 2019, the growth rate in underlying imports is forecast to accelerate to above 7 per cent.

Aggregate Demand

Notwithstanding the many limitations of **GDP** (Economic Statistics Review Group, 2017), it remains a central element of Irish economic forecasting. Forecasts of real GDP in *SPU 2018* show some moderation over the forecast horizon, although the near-term expansion is expected to remain strong at close to 5 per cent on average until 2019. Looking ahead, the medium-term outlook for GDP growth slows to just under 3 per cent.

Table 2.2: Real GDP Growth and Underlying Contributions
Percentage change, unless otherwise stated

	2017[b]	2018	2019	2020	2021
Real GDP Growth	7.8	5.6	4.0	3.4	2.8
Of which…					
Domestic Demand (p.p.) [a]	1.4	2.0	1.9	1.5	1.3
Net Exports (p.p.) [a]	6.4	3.6	2.1	1.9	1.5

Sources: CSO and *SPU 2018*.
Notes: [a]Underlying contributions to real GDP growth rates in percentage points (excludes the effect of investment in aircraft and intangible assets). Domestic demand includes changes in inventories. Rounding can affect totals. [b]Denotes latest outturns from the CSO.

As shown in Table 2.2, underlying net exports (stripping out aircraft and intangibles from imports) are expected to account for a greater share of GDP growth throughout the forecast horizon, although growth is projected to become more balanced.

With unchanged seasonally adjusted real GDP throughout 2018 compared to the fourth quarter of 2017, carry-over GDP growth would be 5.4 per cent. This is close to the *SPU 2018* forecast, implying an average quarter-on-quarter growth rate of just 0.1 per cent.

While traditionally understood to provide a more robust measure of real output than GDP, the level of **gross national product** (GNP) has also been distorted in recent years. Such persistent distortions have led to the development of a new measure of aggregate demand, namely modified gross national income (GNI*).[24] Gross value added has also been disaggregated by the CSO for both the predominantly domestic-economy sectors and for the sectors whose turnover is dominated by large, foreign-owned multinational enterprises. The direct impacts of foreign-owned multinational firms on the Irish economy – through taxation, employment, employee earnings and gross value added – are examined further in Box C.

Box C: Impact of a Large, Foreign-Owned Multinational Firm Exiting Ireland

Attracting large multinational enterprises to set up operations in Ireland has been a focus of economic policy for several decades. The scale and value-added of these firms' activities has generated substantial corporation tax receipts for the Exchequer, and also creates significant employment and generates investment in tangible goods in Ireland. This in turn contributes significantly towards income tax/PRSI receipts, and activity more widely.

The presence of these companies in Ireland could change as the result of company-specific decisions or changes in policy regimes and circumstances globally.[25] An assessment of the impact needs to go beyond only corporation tax receipts to reflect the full range of negative impacts that would simultaneously occur. This box provides a scenario analysis for direct macroeconomic, labour-market and budgetary effects of an exit from Ireland by a stylised large, foreign-owned multinational enterprise.

The Role of Foreign-Owned Multinational Firms in Ireland

In measuring economic activity, the Central Statistics Office (CSO) defines a sector as dominated by foreign-owned multinational enterprises when such firms' turnover exceeds 85 per cent of the sector's total. Such sectors comprised 40 per cent of gross value added (GVA) for the economy overall in 2016. This is a doubling of the share over the past decade, with these sectors representing 20 per cent of GVA in 2006. However, the net benefit of some foreign-owned multinational activity to the domestic Irish economy is overstated by GVA data, given the large outflow of profits from Ireland seen in net factor income from abroad. Since 2008, the foreign-dominated sectors' share of total GVA has been increasing, and had risen towards 30 per cent by 2014 even before the 2015 level-shift took place (Figure C.1A). The CSO has advised that the level-shift was concentrated among a small number of companies (Eurostat, 2016).

Detailed analysis on corporation taxes by McCarthy and McGuinness (2018) shows that €5.7 billion (79 per cent) of receipts for the 2016 tax year came from 6,219 foreign-owned

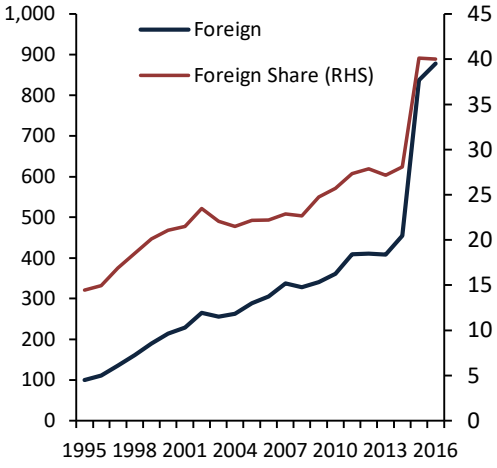
[24] Discussed in Box D of IFAC (2017c).

[25] An example from the last decade of a large firm moving operations out of Ireland is Dell, moving 1,900 jobs from Limerick in 2009 – formerly its largest manufacturing plant in the world.

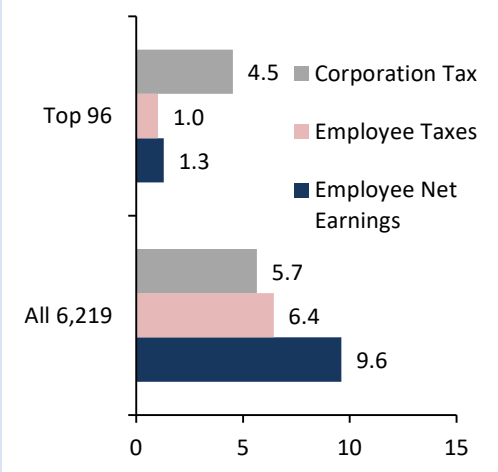
multinational enterprises. Some 435,000 employees worked for these firms, earning a combined after-tax annual salary of €9.6 billion and contributing a further €6.4 billion to the Exchequer in direct taxation for income tax, USC and Employer's PRSI. More granular data shows that the top 96 foreign-owned multinational firms each employed an average of 429 staff, with total gross salaries at €2.3 billion, of which €1 billion was paid in income taxes and employer's PRSI. Figure C.1 summarises the direct contributions of foreign-owned multinational enterprises on taxes (including employer's PRSI), employee earnings and real GVA in Ireland.

Figure C.1: Concentration Risk in Foreign-Owned Multinational Enterprises

A. Foreign Firm Real Gross Value Added 1995 = 100 (LHS), Per cent of total (RHS)



B. 2016 Taxes and Employee Earnings € billion



Sources: CSO; Revenue Commissioners; and internal IFAC calculations.

For the top 96 foreign-owned firms ranked by corporation tax payments for the 2016 tax year (paying at least €8 million each), the average payment was €47 million. Clearly, some of the top-paying firms among these 96 are included in the top-ten payers, whose total net corporation tax payments were €2.8 billion (37 per cent of total) for the 2016 tax year – an average contribution of €276 million.

Direct Impacts of an Exit by a Large, Foreign-Owned Multinational Firm

The impact on macroeconomic, employment and budgetary figures in Ireland due to a large, foreign-owned multinational firm exiting the economy can be illustrated using a stylised example. The scenario uses a scaled-up firm based on the relative tax liabilities of a top-ten case compared to a firm in the top 96 foreign-owned corporation taxpayers, given the absence of specific data for the very large firms. This approach relies critically on the strong assumption of common cost structures and productivity for a large firm compared to a foreign-owned firm among the top 96 ranked by corporation tax payments, which clearly may not be the case. Table C.1 derives the share of the economy-wide total for the stylised firm's data.

The stylised direct impact of a large firm leaving Ireland would be to reduce government revenues by over €330 million, close to half a per cent of total revenue in 2016. This would mostly arise due to lost corporation tax. The exit would at the same time directly reduce GVA by 1.9 per cent, whereas the reductions to employment, employee earnings and taxes would all be considerably lower with all under 0.5 per cent. However, these impacts consider only direct and stylised consequences. The overall effects would be larger when considering other consequences such as higher unemployment payments, lower value-added taxes from consumption, potential re-skilling of specialised labour supply, and other indirect impacts.

Table C.1 Direct Effects on Taxes, Earnings and Economic Activity in Ireland
€ million unless otherwise stated

	Typical Large Firm[a]	Total	Large Firm Share (per cent of Total)
Taxes and Earnings			
Corporation Tax	276	7,353	3.7
Employee Taxes/PRSI	62	15,997	0.4
Employee Net Earnings	79	30,419	0.3
Economic Activity			
Gross Value Added	4,975	255,294	1.9
Employment (thousands)	2	2,133	0.1

Sources: CSO; Revenue Commissioners; and internal IFAC calculations.
Notes: [a]The direct impacts of a typical large foreign-owned multinational firm on GVA, employment and employee taxes/PRSI and net earnings are estimated using the relative size of corporation tax payments for a top-ten firm compared to a top 96 foreign-owned firm ranked by corporate tax payments made in 2016.

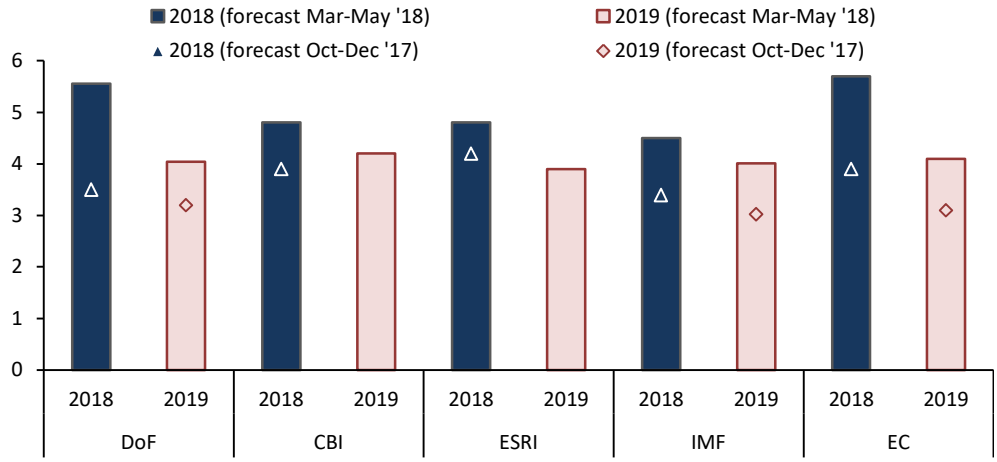
In summary, the impact of a typical large, foreign-owned multinational firm exiting the Irish economy would be largest in percentage terms for corporation tax, followed by GVA, employee taxes, net earnings and employment. While relatively few jobs would be lost as a direct result of an exit, likely spillover effects would mean further lost jobs in supporting employment. There is also potential for additional exits by other large firms if the reasons for one firm to exit Ireland are more broadly applicable, rather than specific to the firm in question.

2.3.3 Short-Term Forecasts of Other Agencies

The surge in growth rates during the latter half of 2017 resulted in GDP outperforming forecasts for the year. This has led to large upward revisions to growth rates in 2018 and 2019 by other forecasting agencies. The largest forecast revision for 2018 across agencies is shown for the Department (*SPU 2018* compared to *Budget 2018*). Revisions to forecasts for 2018 and 2019 (where available) are depicted for five forecasting agencies in Figure 2.3. This compares expected GDP growth rates in October-December 2017 with updated forecasts from March-May 2018 for the same agency.

Figure 2.3: Real GDP Growth Forecasts

Percentage change (year-on-year)



Sources: Department of Finance, *Budget 2018* and *SPU 2018*; Central Bank of Ireland, *Quarterly Bulletin* (4 for 2017 and 2 for 2018); Economic and Social Research Institute, *Quarterly Economic Commentary* (Autumn 2017 and Spring 2018); International Monetary Fund, *World Economic Outlook* (October 2017 and April 2018); and European Commission, *European Economic Forecast* (Autumn 2017 and Spring 2018).

2.3.4 *SPU 2018* Medium-Term Forecasts, 2020–2021

Forecast Horizon

As discussed earlier in relation to the endorsement of macroeconomic forecasts, the Council notes that forecasts published in *SPU 2018* cover only the period 2018–2021. While not a legal requirement, recent forecasts by the Department have extended to five years ahead (t+5), which in this case would imply forecasts to 2023. Forecasts for *Budget 2018* similarly did not cover the period of five years ahead. As well-founded forecasts are a key input for setting the economy and the public finances on a sustainable path, and identifying potential imbalances, forecasting out to t+5 should be resumed, even if it requires stylised assumptions.

Box D: New Alternative Supply-Side Estimates

This box outlines the Department of Finance's development of its new alternative estimates of the supply side as part of *SPU 2018*. These comprise alternative estimates of potential output and of the output gap to those typically produced for Ireland using the EU Commonly Agreed Methodology (CAM). The CAM has a number of shortcomings that can lead to implausible results for Ireland.

Background to the New Alternatives

Since at least 2003, the Department has been critical of the supply-side estimates produced for Ireland under the CAM. Despite this, little progress had been made to develop an alternative set of estimates considered more appropriate. An unhelpful situation emerged in subsequent years whereby the Department considered its own published CAM-based estimates of the cycle to be uninformative or misleading, yet no alternative estimates were given. The published

commentary about the supply side was limited to dismissals of the CAM's results rather than a more fully formed discussion of the Department's actual views of the supply side of the economy. The Department had published some related work for *SPU 2016*, yet the subsequent publication of the *National Income and Expenditure* for 2015 disrupted its work on alternatives.

This continued until April 2017, when the Council – as part of its endorsement of the macroeconomic forecasts underpinning *SPU 2017* – welcomed a commitment from the Department to develop "an alternative to the CAM for medium-term forecasts in the coming twelve months, alongside continuing to produce the CAM estimates to meet legal requirements" (IFAC, 2017a). The Department shared preliminary plans on what might be achieved during this time and updated the Council in terms of its progress in later months.

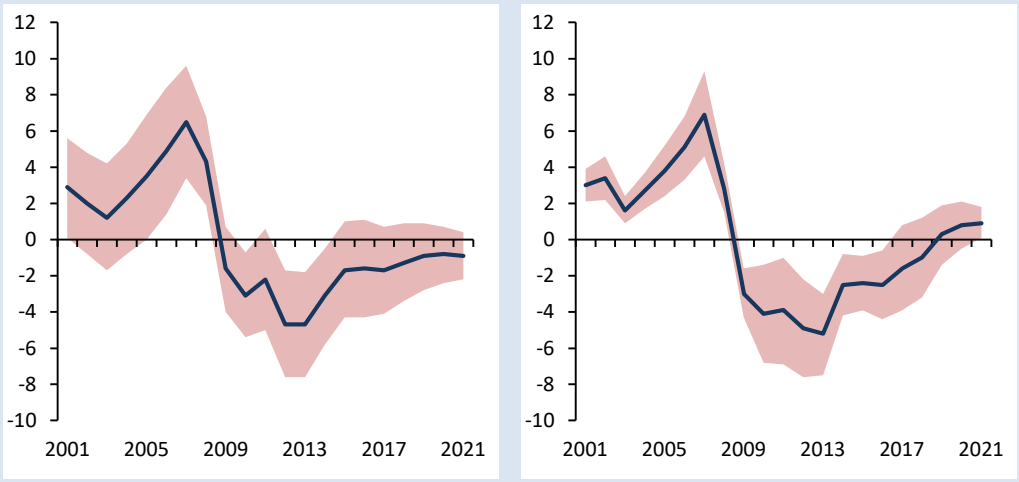
IFAC (2017c) noted that the Council's endorsement of the Department's forecasts in future endorsement rounds would be "at risk if progress is not achieved in developing a better basis for the Department's view of medium-term growth and the cyclical position of the economy".

In March 2018, the Department participated in a conference on the subject of Ireland's economic cycle that was arranged by IFAC. The Department outlined some of the preliminary outputs from its recent work on advancing alternative estimates of the output gap for Ireland, while the Council presented its own suite of models of the output gap and the working paper produced on the subject (Casey, 2018).

The New Alternatives

The alternatives produced by the Department rely on filtered estimates of both real GDP and real domestic gross value added (GVA), which is also used by the Council in its own estimates. A Kalman filter or HP filter is applied to estimates along with additional variables as indicators of the cycle. The additional (demeaned) indicators used by the Department include house price growth; private sector credit growth; real domestic private sector credit growth; core Consumer Price Index inflation; the share of employment in the construction sector; unemployment; and migration as a share of the labour force.

Figure D.1: Alternative Estimates of the Output Gap in *SPU 2018*



Sources: Department of Finance, *SPU 2018*.

In terms of the results, the alternatives produced by the Department (Figure D.1) show a broadly similar pattern to that shown in the suite of models used by the Council. The initial 2000s show a slight positive output gap that turns increasingly more positive as the credit/property bubble forms, before collapsing through 2008–2009. A subsequent stagnation then gives way to a rapid recovery from 2014 onwards. *SPU 2018* notes that "the mid-point estimate outlines a GDP

output gap path that is broadly in line with the Department's assessment", shown in Figure D.1B.

What's Next?

The progress made by the Department in terms of developing the new alternative set of estimates of Ireland's output gap, as published in *SPU 2018*, is a significant step. It should help in terms of developing and communicating the Department's analysis of the cycle. It should provide for more well-founded medium-term forecasts. It should also ensure that potential signs of overheating are communicated publicly and acted upon if necessary.

While the standard CAM approach is still likely to be the main tool used by the European Commission for assessing cyclical developments and the cyclical component of the budget deficit, there is scope for this approach to be amended or for alternative estimates to be used by the Commission in terms of its overall assessments of compliance. The fiscal rules do not explicitly preclude the use of alternative measures. Even if the CAM continues to apply, the Department should emphasise its own alternative views in its publications. Country-specific amendments are possible within the framework, provided that there is a reasonable evidence base supporting the use of alternatives proposed. However, such country-specific changes are subject to a number of governance requirements that might imply insufficient scope to cover the inclusion of the new alternative approaches for the purposes of the Commission's assessments of compliance with the fiscal rules.

In terms of their application, these new alternative estimates should form a core part of future publications by the Department. As is common among other EU finance ministries, and to avoid confusion, the Department's preferred estimate of the output gap should be included in the headline table of macroeconomic aggregates as a way of describing cyclical developments, while CAM-based estimates should be given relatively more limited coverage (e.g., in an Appendix).[26] The Department has committed to publishing a working paper detailing the alternative estimates during the summer. This should help to clearly set out the methods by which it assesses the relative merits of the models it has adopted, and should give a clear indication of the Department's preferred set of supply-side estimates and how they are estimated.

Application of the Commonly Agreed Methodology in *SPU 2018*

Despite the long-standing concerns with the CAM, it remains the European Commission's primary means of assessing Member States' economic performance from the perspective of aggregate supply. Given the CAM's role in assessing compliance with the EU fiscal rules, the Department is obliged to show CAM-based supply estimates in its budget and SPU publications. However, the updated estimate continues to suggest an implausible path for the output gap, showing an overheating economy in 2015, which cooled in 2016 and 2017.

Supply-Side Estimates: Comparing *SPU 2018* to *Budget 2018*

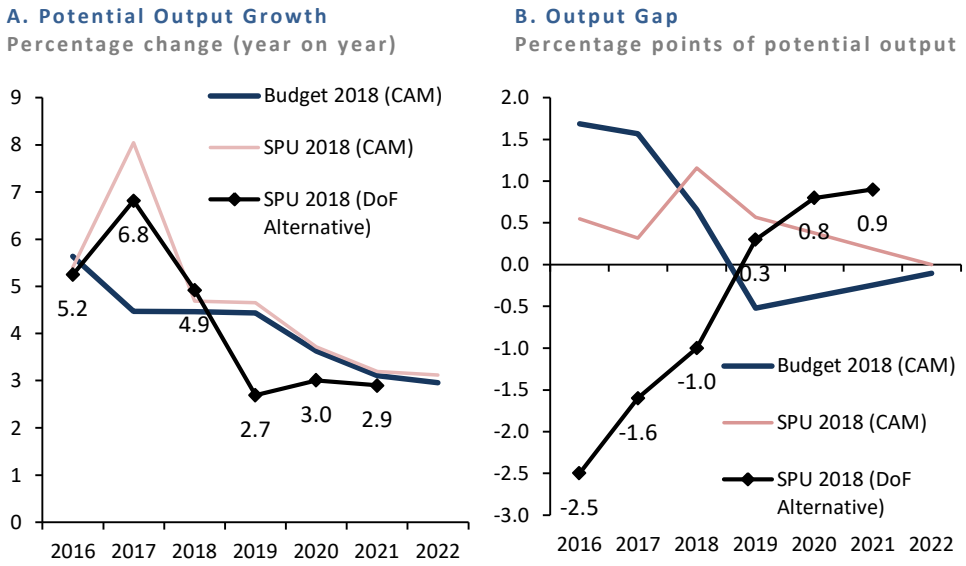
As there are clear limits to the informational content of any individual approach to supply-side estimation, the Department's publication of a range of alternative estimates is an encouraging development. The alternative estimates are developed in

[26] Box B of the November 2015 *FAR* explores the presentational approaches adopted by other EU finance ministries when it comes to showing alternative estimates of the output gap (IFAC, 2015b).

line with some of the techniques applied by Casey (2018), which are based on a "suite of models" approach. This is a sensible way of reinforcing the robustness of the estimates produced, as the relevance of any single model paradigm may vary over time. In particular, the use of "error bands" is a helpful acknowledgement of the uncertainty surrounding the estimates.

Figure 2.4 compares CAM-based estimates of potential output and the output gap from *Budget 2018* and *SPU 2018*, along with the Department's preferred alternative output gap and potential growth rates from *SPU 2018*. The preferred alternative measure is based on the Department's GDP-based estimates, which conceptually may be considered less robust than if based on domestic GVA (as a better indicator of underlying activity in the domestic economy). The profile for estimated potential growth according to the Department's preferred alternative measure is generally lower than for the modified-CAM estimates. However, the differences are more striking for the output gap, even accounting for the modifications made to the CAM for *SPU 2018*.

Figure 2.4: Supply-side Projections for the Medium Term



Source: Department of Finance, *Budget 2018* and *SPU 2018*.

2.4 Risks and Imbalances

2.4.1 Risks

This section considers various risks and imbalances that may affect the Department's central forecasts. They include the possibility of an unwinding of various favourable conditions evident during the recovery period. Table 2.3 reviews the short- and

medium-term macroeconomic risks described by the Department in *SPU 2018*. Likelihood and impact factors are assessed, and a brief commentary describes the Council's own assessment of each risk. Besides the ten macroeconomic risks identified in *SPU 2018*, three additional risks are included by the Council: inappropriate monetary policy, inappropriate domestic policy and a potential volatility in food commodity prices.

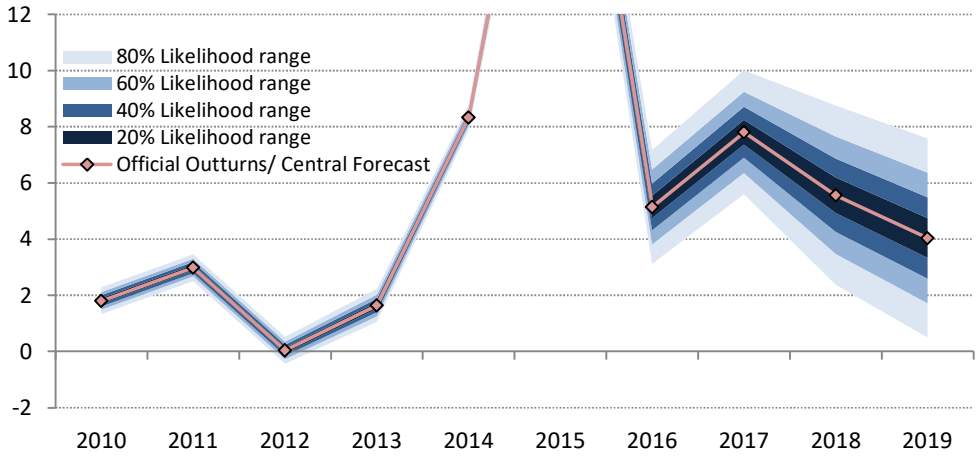
Table 2.3: Assessing the *SPU 2018* Macroeconomic Risk Matrix

Risk	Likelihood	Impact	IFAC Comment
"Hard Brexit"	M	H	Risks of a WTO-style arrangement, impact on Irish-UK trade. Impact on medium-term growth prospects in Ireland. Severity and persistence of shock relative to estimates.
External Demand Shock	M	H	Strong current global economic growth context. Concern due to slowdown in global trade and prospective trade wars.
Geopolitical Risks	M	H	Limited direct impact, second-round impacts could be more significant.
Disruptions to World Trade	M	H	Protectionism risk: possible negative impact on global trade flows. However, OECD forecasts suggest trade growth will increase in 2018.
Loss of Competitiveness	M	H	Domestic sources: wage pressures, rising commercial/residential rents. External source: exchange rates.
Inappropriate Monetary Policy (IFAC Risk)	M	H	Growth in Ireland is forecast to continue to outperform the Euro Area; risk of looser monetary policy than would be ideal for Ireland. This could amplify the business cycle, as occurred in the last crisis.
Housing Supply Pressures	H	M	Supply response necessary to moderate price growth. Excess demand: harmful for competitiveness and labour mobility. Overheating risk: construction boom with growth nearing potential.
Food Commodity Prices (IFAC Risk)	H	L	Weather-related increases of recent years expected to unwind. Potential to disrupt dairy profits, crucial for regional economic growth.
Global financial market conditions	M	M	Low interest rates/"search for yield": financial stability concerns. Normalisation of monetary policy: impact on borrowers.
Policy Uncertainty in the US (& EU)	M	M	US Corporate Tax changes: possible negative impact on FDI for Ireland. EU common, consolidated corporate tax base (CCCTB): unlikely to affect Ireland's corporation tax rate, but the impact could be high if it does.
Overheating Economy	M	M	Could occur in the Irish economy without significant credit growth. Strong growth when currently near potential output risks overheating.
Concentrated Production Base	L	H	Production base concentrated in a small number of sectors. Sector- or firm-specific shocks could pose wider risks for the economy.
Inappropriate Domestic Policy (IFAC Risk)	M	M	Monetary policy is set by the European Central Bank (ECB). Ireland has fewer levers for managing the domestic economy. Two main domestic policy tools: fiscal and macroprudential policy. These may need to play an active role in preventing overheating.

Note: Likelihood and impacts from *SPU 2018*: H= High; M = Medium; L = Low.

As one of the most volatile economies in the OECD, Ireland is also prone to large statistical revisions to its macroeconomic data. Figure 2.5 reflects such uncertainties by using the typical magnitude of historical revisions and forecast errors to depict uncertainty ranges around *SPU 2018* projections of real GDP growth.

Figure 2.5: Real GDP Fan Chart
Percentage change (year-on-year)



Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: Distributions or 'fans' around historical growth estimates are based on previous revisions to real GDP data. Forecast errors are based on 1999-07, while the sample outturn data covers 2010-15. The vertical axis is truncated to make the 2018 and 2019 forecast legible.

2.4.2 Imbalances

The Council's modular approach to analysing the supply side of the Irish economy examines various indicators with the intention of identifying sources of economic imbalances in real time.[27] A motivation of the approach is to monitor specific economic data that may indicate the presence of potentially unsustainable positions relevant for the public finances, or developments that may be cyclical or temporary. Appendix C presents indicators over the *SPU 2018* forecast horizon for four modules: the labour market and prices, investment/housing, external balances and credit conditions. The figures show outturns and *SPU 2018* forecasts (where available).

Labour Market and Prices

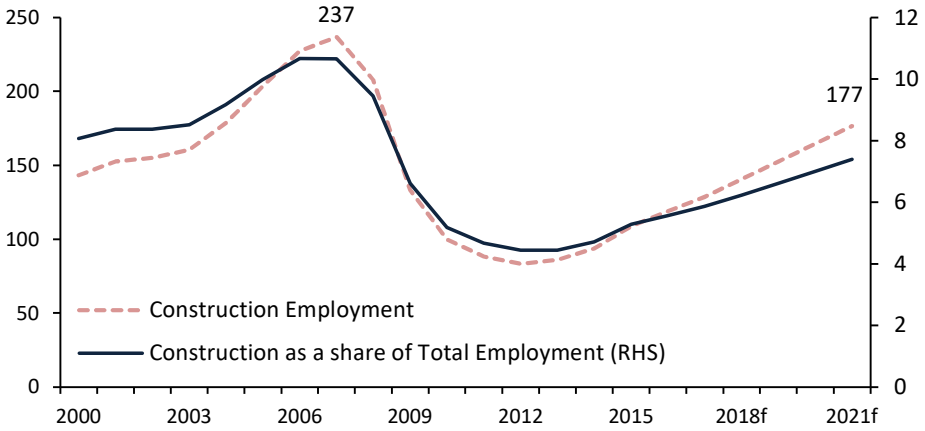
Indicators for the labour market based on *SPU 2018* forecasts suggest a relatively benign environment over the forecast horizon. Despite a rapid economic recovery since 2014 (fuelled by strong employment growth), inflation measures have remained muted in Ireland for several years. *SPU 2018* shows limited change to this outlook over the forecast horizon. Hourly wages – having returned to positive growth in 2015 – are expected to grow at a moderate pace over the forecast horizon. The unemployment rate continues to decline and is forecast to stabilise between 5 ¼ and 5 ½ per cent. This forecast is in line with the Department's view of the natural rate of unemployment, communicated to the Council during the endorsement process.

[27] See Box A in IFAC (2015b).

Forecasts for inward migration show an increase from 0.8 per cent of the labour force in 2017 to a stable rate of just over 1 per cent over the forecast horizon. Large migration flows have been previously evident as a feature of Ireland's very elastic labour supply. There is a risk that strong demand from a booming construction sector may cause sustainability concerns in the labour market. Figure 2.6 highlights the Department's forecast for construction employment, which is expected to increase close to 180,000 by 2021, approaching levels last seen during the 2005–2008 bubble period. As a share of total employment, this would mean an increase of 3 percentage points compared to 2013, to 7.4 per cent.

Figure 2.6: Construction Employment

Thousands (LHS) and percentage of total employment (RHS)



Sources: CSO; Department of Finance; and internal IFAC calculations.

External Balances

The headline current account of the balance of payments suggests an extreme case of economic imbalance for Ireland with the rest of the world, with a surplus position equivalent to an average of 11 per cent of GDP over the forecast horizon. However, this position is greatly exaggerated by activities of foreign multinationals enterprises. A clearer and more plausible picture for the current account is portrayed by adjusting for distortions including re-domiciled PLCs, depreciation of intellectual property (IP) assets relating to research and development (R&D) and aircraft, imports of R&D services by foreign-owned multinationals, and acquisitions of IP assets and aircraft for leasing.[28] This measure showed the current account reaching a small surplus of 1 per cent of GNI* in 2016, with forecasts pointing to a deficit (near 3 per cent of GNI*) opening up by 2021, assuming that these adjustments remain unchanged.

[28] These adjustments were first proposed by Coffey (2017) http://economic-incentives.blogspot.ie/2017/12/getting-somewhere-with-current-account.html

An alternative measure for analysis of external balances is the net international investment position (NIIP). In order to avoid the distorting influence of sectors such as the International Financial Services Centre (IFSC) and the volatile non-financial corporations, excluding these from the measure shows an improving position from –€90 billion in 2012, rising to a positive position of close to €75 billion in 2017. This improvement reflects higher financial asset values and also the significant international deleveraging that has taken place in the economy since 2012; the liabilities of non-IFSC monetary authorities and financial institutions have fallen by some €170 billion in that time. The rapid change that has taken place highlights the necessity to carefully monitor the adjusted NIIP measures, along with its determinants.

Investment/Housing Indicators

From a low base of activity, residential construction is expected to pick up steadily over the coming years. Annual housing completions, officially estimated at just over 19,000 for 2017, are expected to increase to 36,000 by 2021. Estimates of the appropriate medium-term level of housing completions consistent with demand range from 30,000 to 50,000 in a year. If the Department's forecasts are realised, there will clearly be a large increase in activity taking place in building and construction. Given that the economy would appear to be operating close to its potential, continued strong growth in a key sector such as housing will require careful monitoring if potential overheating is to be avoided.

The scale of the housing-supply response has been underwhelming to date, and there may be structural issues holding back the level of completions, such as regulatory burden and construction costs. A consequence of the significant undersupply for the housing market has been the rapid inflation in private rents, rising by more than half since 2010 (more than 6 per cent each year on average). Such increases have negative implications for competitiveness and the cost of living, which may influence firms in considering a location for new operations. Further effects may include an increased share of renting in locations outside of the main urban centres, which could in turn require increased spending on transport and other infrastructure for such locations.[29]

[29] McCartney (2017) relates the rise in Dublin rents to an increase in renting by those commuting from the commuter belt.

Credit Conditions

While credit growth has remained subdued in the aftermath of the previous decade's excesses, households returned to net borrowing in late 2017, and firms are likely to follow suit in 2018. For core lending to small- and medium-sized enterprises (excluding loans to financial and property sectors), new lending growth increased by 14 per cent in 2017 (to €3.7 billion), whereas a four-quarter sum of transactions to end-2017 reduced loans outstanding by close to €250 million.

Household lending growth has been limited by the introduction of macroprudential rules, intended to avoid over-extension of credit. These rules include requirements for loan-to-value and loan-to-income ratios. Deleveraging has been ongoing, whereas new lending has only recently returned to positive-growth territory in the twelve months to December 2017. However, recent research by Keenan and O'Brien (2018) points to the dangers of excessive credit growth in future, if new mortgage lending growth rates continue unchecked in line with those of the past five years (averaging 25 per cent per year). Although beginning from a low base, persistent and excessive net growth in credit could once again prove a destabilising influence on wider economic growth, in particular if credit growth causes a further acceleration in house-price growth, which could lead to a sudden correction.

Concluding Remarks on Imbalances

Current indications such as those described above suggest that the Irish economy is likely to be operating close to its potential. While short-term risks remain broadly in balance, upside possibilities include if a rapid supply response to the housing market takes place, which could result in overheating if other sectors of the economy continue to grow rapidly at the same time. However, as a small open economy, Ireland is particularly exposed to changes in external conditions. A number of significant downside risks also remain over the medium term, especially the impact of Brexit.