Chapter 2

Endorsement and Assessment of the Macroeconomic Forecasts

2. Endorsement and Assessment of the Macroeconomic Forecasts

Key Messages

- The Council endorsed the *Budget 2019* macroeconomic forecasts for 2018 and 2019 produced by the Department of Finance, which expect the Irish economy to maintain its recent strong growth. This favourable performance is part of a cyclical recovery that has been ongoing for about five years. The Council's preferred estimate of real economic activity in Ireland is underlying domestic demand, which strips out components of domestic demand that are particularly affected by multinational enterprises. The Department of Finance forecasts this to grow by 4.9 per cent on average for 2018 and 2019.

- The Council welcomes the development and publication in *Budget 2019* of tables detailing the Department of Finance's estimates of potential output and the cyclical position of the economy. These estimates suggest that the Irish economy is currently operating close to potential, and that economic growth will outstrip the sustainable rate of around 3 per cent over coming years, leading to upward pressure on prices. Although these pressures imply upside risk to the near-term forecasts, they could also lead to the realisation of downside risks over the longer term. While a growth in new dwelling completions to meet demand has been included in the baseline projections, high levels of residential building activity often characterise the end of an economic cycle. As such, careful management of these risks by policymakers is necessary.

- The Irish economy remains heavily dependent on large, foreign-owned multinational enterprises to support growth in national income and tax revenues. Although near-term forecasts for some of Ireland's main trading partners remain favourable, much uncertainty surrounds the prospects for growth in the UK. The impact of Brexit on the Irish economy is particularly difficult to forecast, as standard models may not capture the extent of the two countries' closely integrated supply-chain networks, amongst other linkages.

- The presentation of relevant economic statistics for the Irish economy has improved considerably in recent years, in response to the distortions related to multinational enterprises. Further additions are needed in order to provide policymakers with a coherent and consistent picture of underlying economic conditions in Ireland. The Council, the Department of Finance and the Central Bank of Ireland in particular have emphasised these alternative measures in their forecast publications. The Council would welcome widespread adoption of available alternative estimates and statistical aggregates by forecasters from official and private-sector agencies.

2.1 Introduction

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. The Council's 11th endorsement exercise assessed macroeconomic projections prepared by the Department of Finance reflected in *Budget 2019*. The timeline for this endorsement process is detailed in Appendix B.

A key focus of this chapter concerns the improvement in the range of relevant analysis and statistics available for the Irish economy, providing policymakers with a greater understanding of underlying activity and its effects on economic conditions. Some of these improvements are detailed in Box C. At the same time, ongoing efforts by the Council and Department of Finance have substantially improved the availability of relevant estimates of the potential output of the economy. Taken together, these developments have made inroads towards a coherent and consistent set of variables with which to describe economic activity in Ireland.

Box C: Underlying Measures of the Irish Economy

Issues with interpreting Irish economic data

Irish economic data has long been bedevilled by the effects of globalisation. Unlike many developed economies, gross national product (GNP) for Ireland is substantially lower than gross domestic product (GDP) as a result of activities by foreign companies that lead to large net factor income flowing back to the rest of the world. As a result, GDP is not a reliable proxy for the tax base as it is in many other countries.

For many years, contemporary understanding of Irish economic data held that transfer pricing and other factors related to globalisation resulted in a distorted flow of recorded exports sold by firms operating in Ireland, initially concentrated in goods and extending to services over time. To the extent that profits related to these export sales accrued to foreign-owned multinational firms, rather than to Irish firms, these profits could be expected to flow back out of Ireland – either through royalties payments (services imports) or net factor payments. GNP, which nets off income flows to foreigners, was used as a proxy for underlying Irish activity.

However, in recent years, some of the increases in exports have not been flowing back out of GNP, resulting in a distorted profile for GNP. The composition of gross product measures has been complicated by the move to measuring activity on an ownership basis. This change has also affected investment through higher recorded investment and imports, and the associated issue of contract manufacturing (FitzGerald, 2016). The impact of contract manufacturing has been discussed in previous Council publications, for example the June 2018 *FAR* (IFAC, 2018c). Further issues related to depreciation on intangibles and re-domiciled firms have provided additional challenges to the interpretation of trends in the national accounts.

Alternative indicators of activity, income and savings

Efforts to address many of these challenges have been ongoing in recent years. The CSO has been implementing various changes to the presentation of national accounts data, in response to end-user suggestions and the findings of the Economic Statistics Review Group (ESRG). Table C.1 summarises the Council's preferred alternative indicators and the adjustments required in the derivation of these indicators.

Table C.1: Underlying measures of the Irish economy

2017 nominal € billion amount

Indicators and Adjustments	Modified nominal GNI	Modified current account	Domestic GVA	Modified domestic demand	Underlying domestic demand
Original aggregate	234.2	24.9	272.2	198.5	198.5
Less:					
Re-domiciled PLCs	-4.9	-4.9			
Depreciation on R&D service imports and trade in IP	-43.1	-43.1			
Depreciation on aircraft leasing	-5.1	-5.1			
Net aircraft activities related to leasing		6.6		-6.6	
R&D-IP imports		14.0		-14.0	
R&D-IP exports		-3.1			
R&D service imports		12.8			
Foreign GVA*			-107.2		
Planes and intangibles					-39.2
Underlying total	**181.2**	**2.2**	**165.0**	**177.9**	**159.3**

Source: CSO.

Note: * Foreign GVA corresponds to GVA by NACE sectors 20, 58-63, 18.2, 21, 26, 27 and 32.5.

Modified gross national income (GNI*) has gained some traction as a more relevant nominal indicator. As such, the use of GNI* has become more prevalent as a denominator for assessing trends in debt and deficit ratios, for example, which are understated when scaled by GDP or GNP. A top-down adjusted measure, GNI* subtracts certain items from gross national income. These adjustments are the factor income of re-domiciled firms (as Irish residents will not benefit from any resulting profit flows), and depreciation on each of research and development (R&D) service imports, trade in intellectual property (IP) and aircraft leasing (as the Irish employment does not depend on the savings required to replace these capital assets). At present, it is only available annually and as a current-prices series. Further planned developments include its publication as a constant-prices series, and to publish quarterly GNI* updates.

A **modified current account (CA*)** aims to provide a picture of underlying Irish savings with (or borrowing from) the rest of the world. It makes the same adjustments as GNI*, but further excludes net aircraft acquisitions related to leasing, R&D-related IP imports and exports, and R&D service imports. These adjustments result in a far more relevant profile for CA* than shown for the headline current account, which should represent a key sustainability measure for the economy.

The CSO has long published a decomposition of gross value added (GVA) between sectors that are dominated by foreign-owned multinational firms, and the remainder. The **domestic GVA** series provides a reasonably consistent profile for both nominal and real economic growth, but like GNI* it is only available annually, and the CSO has described the compilation of a quarterly version of the data as a "project in the medium term" (CSO, 2017).

The *Institutional Sector Accounts* also provide additional details on economic conditions in Ireland, particularly those facing households and non-financial corporations. Besides detailing the household savings ratio, a more recent inclusion is the breakdown of non-financial corporations into a top 50 group and all other firms (as ranked by GVA). Recommended by the ESRG, this decomposition is intended to provide a better understanding of indigenous economic activity (ESRG, 2016).

Alternative indicators of domestic demand

Domestic demand has previously been a relevant aggregate for assessing economic growth as explained by personal consumption, government consumption and gross domestic fixed capital formation. However, increased purchases of aircraft (outright or for leasing purposes), and onshoring of intellectual property assets by large foreign-owned multinational firms (depreciation on which are included as investment in the form of intangibles) have limited the relevance of headline domestic demand in recent years.

The CSO have begun publishing a quarterly **modified domestic demand** series, in both constant and current prices, which excludes aircraft for leasing and R&D-related IP imports. The constant-prices series performs reasonably well in terms of mirroring annual employment growth, and the Department of Finance has been using modified domestic demand as its preferred measure of core activity for the domestic economy. However, at a conceptual level, the Council prefers to exclude all aircraft investment and all intangibles, since they reflect activity in sectors which are dominated by foreign-owned multinational firms, with little value-added likely to accrue to Irish residents. This indicator is termed **underlying domestic demand**, and has been used extensively in Council publications in recent years.

Using the underlying measures in economic forecasts

The Council would welcome a more widespread adoption by official and private-sector forecasters of alternative measures of economic activity in Ireland, including those described above. This would help to focus forecasts on the most relevant developments for the Irish economy and make forecasts easier to communicate on a consistent basis by setting aside the most volatile components with weak connections to domestic developments.

Some publications have begun to include alternative measures – for example, the *Quarterly Bulletin* by the Central Bank of Ireland has included underlying domestic demand excluding stocks in its summary forecast table since the July 2018 update (Central Bank of Ireland, 2018), while the Department has lately emphasised modified domestic demand. However, many other forecasters continue to report the traditional components of GDP and an unmodified current account profile as a share of GDP or GNP. These provide very little relevant information to users.

Further planned enhancements to official economic statistics produced by the CSO should broaden the capacity of forecasters and policymakers to understand changes in economic conditions. Further progress should be a priority. The value of the data enhancements to users is reduced unless they are included prominently in the main tables of forecast publications by public- and private-sector forecasters.

2.2 Endorsement of *Budget 2019* Projections

This section describes the 11th endorsement exercise undertaken by the Council.[1] The macroeconomic forecasts contained in *Budget 2019* are assessed as being within an endorseable range for 2018 and 2019, taking into account the methodology and the plausibility of the judgements made.[2] There were modest changes of around 0.1 per cent of nominal GDP to the forecasts endorsed by the Council as a result of policies introduced in *Budget 2019*; these changes were concentrated in personal consumption (due to price effects) and government consumption (higher volume growth), and resulted in an upward revision of 2,000 to total employment in 2019.

The endorsement process entails three key aspects: the plausibility of the methodology used; the pattern of recent forecast errors; and comparisons with the Council's Benchmark projections and other forecasts.

Methodology

The Council is satisfied that the Department's approach to demand-side forecasting broadly conforms to that of other forecasting agencies. The Department has developed a set of supply-side estimates based on a relevant methodology for a small open economy, and consistent with their assessment of economic activity, and the Council welcomes this. The Department uses a suite-of-models approach, which draws on information from a range of models, and the output is included for the first time in the main tables of *Budget 2019*. The methodology is broadly similar to that of the Council, as described in Casey (2018).

Crucially, the new supply-side estimates of potential output and the output gap are more plausible, in the Council's view, than those based on the EU Commonly Agreed Methodology (CAM). This applies for historical series as well as for the near-term

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[1] The statutory endorsement function is detailed in IFAC (2013) and IFAC (2014a). The Budget-related endorsement covers a shorter time range than the Stability Programme Update, which is the national medium-term fiscal plan. Benchmark projections prepared by the Secretariat form a key part of the endorsement process (see IFAC, 2013 and 2014a). An important input into the preparation of the Benchmark projections involves rounds of discussions with other external forecasters. For this round of forecasts, the Secretariat held discussions with economists and forecasters at the ESRI and Ulster Bank Capital Markets, and met with the CSO to gain further insights into recent data releases.

[2] In accordance with the *Fiscal Responsibility Act*, medium-term forecasts for 2020–2023 in *Budget 2019* are not subject to endorsement. These nonetheless provide useful information for policymakers and help with the assessment of the plausibility of the in-year and year-ahead forecasts.

forecast period. While potential output is not observable and is always estimated with considerable uncertainty, the Department's new estimates are more consistent with other indicators of the state of the economy, and the forces known to be affecting it, than the CAM. This is largely due to the use of a national-specific methodology whereas the CAM uses a relatively more harmonised EU-wide approach. Furthermore, the picture of an economy currently close to potential but growing faster than the sustainable medium-term rate of around 3 per cent is internally consistent with the Department's forecasts for activity, employment and prices. The Department's supply-side estimates show a similar picture to the Council's Benchmarks (see Appendix C), but diverge somewhat over the forecast horizon with a wider output gap opening up in the Budget estimates, albeit well within the margin of error of either approach.

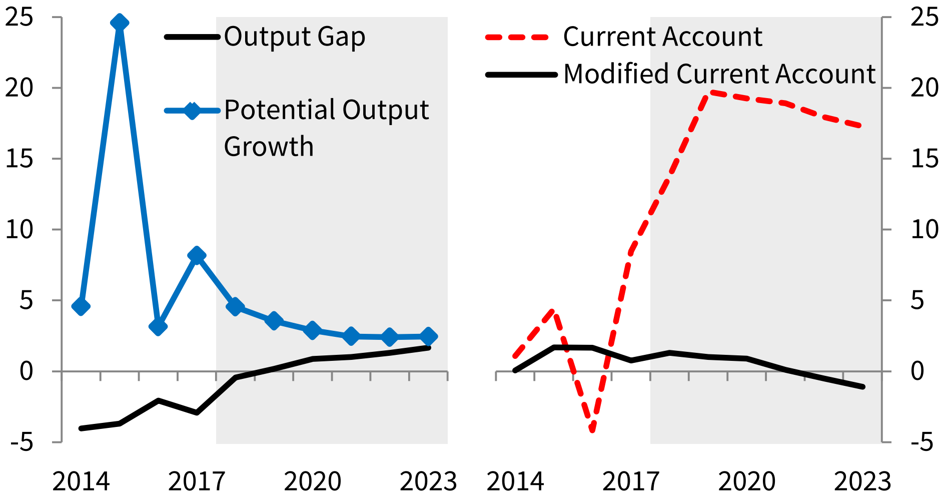
The Department's models include the application of a Kalman filter to gross value added (GVA) of the domestic economy, and others derived from extended Hodrick Prescott filter models using GDP (which the Department considers as their preferred estimates). The midpoint series of these GDP-based results have been included in the 'Economic and Fiscal Outlook' of *Budget 2019* (reproduced in Figure 2.1A). The Council considers the GDP-based estimates to be conceptually weaker than those based on domestic GVA, given the large distortions to GDP in recent years. The profile of a widening output gap over the medium term is nonetheless plausible. While full details of the methodology underpinning these alternative estimates had not yet been published at the time of the endorsement, a preliminary draft of a forthcoming Department of Finance technical paper (including its underlying data and code) was made available to the Council Secretariat.

An additional series included in *Budget 2019* is the modified current account (CA*, see Box D for a description of the adjustments), presented as a share of modified gross national income (GNI*). As shown in Figure 2.1B, the modified current account provides a more plausible indication of the sustainability of economic activity in Ireland than the forecast path for the headline current account. The headline measure has been extremely volatile in recent years, showing a very high nominal surplus in recent quarters that does not reflect the economy's true saving behaviour and its external relationship with the rest of the world, due to the influence of multinationals on recorded trade flows.[3, 4]

Figure 2.1: *Budget 2019* supply-side estimates and the current account (CA) compared to the modified current account (CA*)

A. Output gap and potential output
Percentage points of potential output and percentage change (year on year)

B. CA compared to CA*
Percentage of GNI*



Source: Department of Finance.
Note: The potential output growth estimate for 2015 of 24.6 per cent is clearly implausible and related to distortions in the MNC sector.

Both the publication of the alternative supply-side estimates and forecasts of CA* are welcome as important complements to other indicators of underlying economic activity (described in Box C). The inclusion of these new series in the Department's publications provides a coherent basis for understanding the sustainability and quality of forecast economic growth.[5] These developments complement ongoing improvements by the Central Statistics Office (CSO) in publishing more relevant and meaningful statistics of economic activity in Ireland. In summary, these innovations have enhanced Ireland's capacity to monitor economic performance and potential imbalances.

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[3] From a sizeable deficit position in 2016, the current account as share of GDP returned to a large surplus in 2017. Data for the first half of 2018 point to another large increase in the position for the full year (forecast by the Department as 3.5 per cent of GDP), whereas CA* is only expected to increase modestly (by 0.1 per cent of GNI*).

[4] Although the CA* series was not available to the Council at the time of the endorsement, its expected path over time was nonetheless discussed with the Department.

[5] For example, the trajectory of the output gap is rising into positive territory, while potential output growth is forecast to moderate, with the modified current account declining into deficit. This suggests an internally consistent view of the economy over the medium term, reflecting an expectation for some degree of overheating.

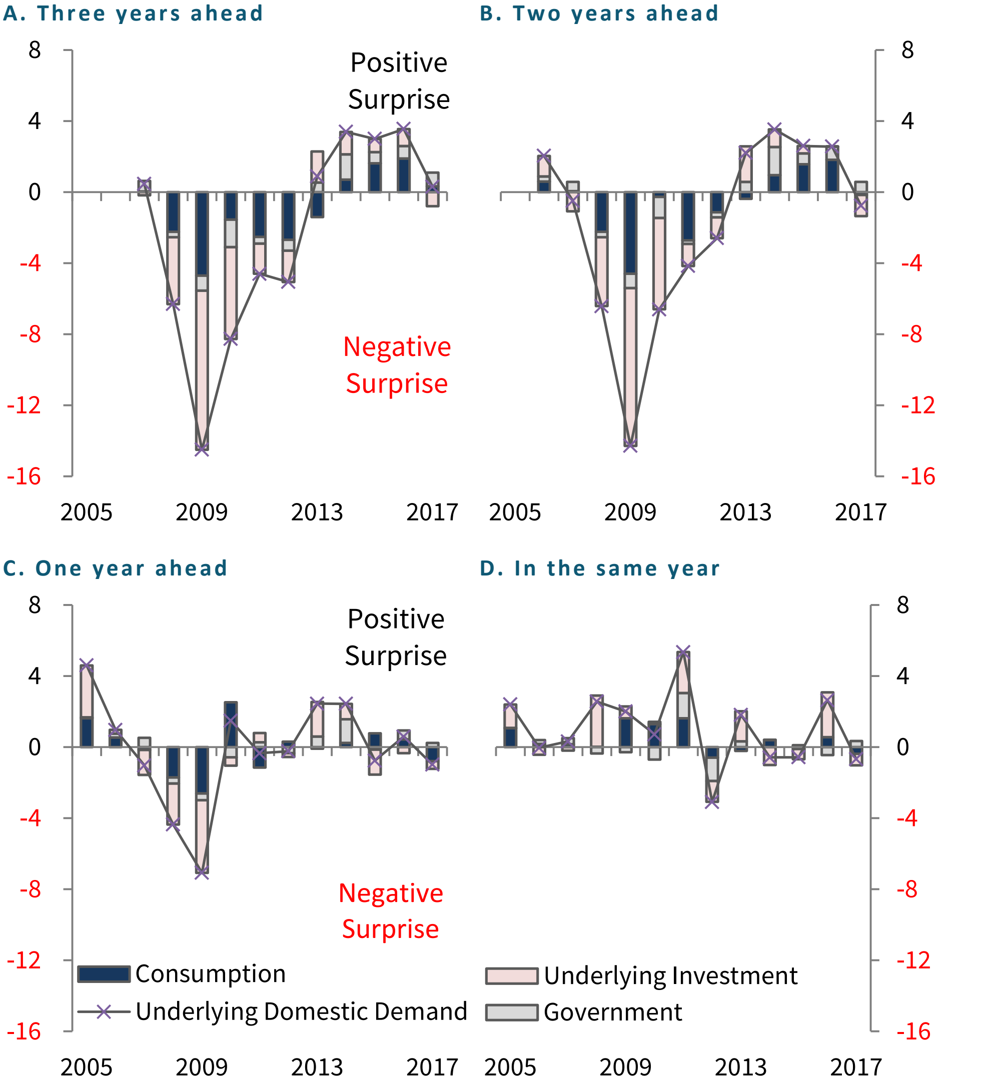
As in previous endorsements, the Council verified the application of the EU Commonly Agreed Methodology (CAM), which is required for the assessment of compliance with the fiscal rules. The CAM is prone to mismeasurement of the Irish economy's supply side (as discussed in Boxes B and E in IFAC, 2017e), and as such can provide misleading indications about the state of the economy.

Pattern of Recent Forecast Errors

A persistent pattern of forecast errors could indicate a deficiency with a chosen forecasting approach. The Council has found some recurrence in forecast errors by the Department. As described in Box C, the Council's preferred measure of activity in the domestic economy is underlying domestic demand. Figure 2.2 shows errors for four vintages of underlying domestic demand forecasts, and the contributions of its components: personal consumption, government consumption and underlying investment. The panels show that accuracy generally improves as the forecast horizon reduces, which is consistent with the principle that there is greater uncertainty around forecasts for periods that are further ahead. Underlying investment contributes the largest share of forecast errors in underlying domestic demand. In recent years, however, the Department's in-year forecasts and those made one year ahead (panels C and D) have been relatively accurate.

Figure 2.2: Forecast errors for underlying domestic demand

Percentage points (forecast error and contributions)



Sources: Department of Finance, various Stability Programme and Budget forecasts since 2004; CSO, various Quarterly National Accounts and National Income and Expenditure data releases since 2003; and internal IFAC calculations.
Note: Underlying domestic demand is calculated as domestic demand excluding stocks, aircraft and intangibles. Aircraft and intangibles are published as separate quarterly series and forecasts by the Department of Finance for these series are available since 2016. Before this, domestic demand excluding stocks is used a proxy.

The Council also notes that forecasts of real government net consumption made two and three years in advance have been persistently lower than outturns since 2013. A factor is the Department's use of technical assumptions to underpin its fiscal forecasts, which can result in a significant slowdown in government expenditure growth (as discussed in Chapter 3). More realistic outer-year forecasts would show higher planned expenditure increases, consistent with anticipated economic growth and the Department's projection for a positive output gap over the medium term. Such reliance on inconsistent technical assumptions partly explains how real government net consumption outturns for each of 2015 and 2016 were higher than the comparable-basis Department forecasts three years earlier by over €4 billion.[6]

Comparison with Other Projections

Council's Benchmark Projections

For *Budget 2019*, the Department's forecasts are similar to the Council's latest Benchmark projections (detailed in Appendix C). Underlying domestic demand is forecast to grow by over 5.9 per cent in 2018, and close to 4 per cent in 2019. Although *Budget 2019* forecasts from 2020 onwards are not subject to formal endorsement, the Council's Benchmarks show a more moderate pace of expansion in underlying investment, mainly due to residential building and construction. Both *Budget 2019* and the Council's Benchmarks forecast a significant rise in new dwelling completions by 2023. The Benchmarks involve a more front-loaded increase in new dwellings completions, resulting in a smaller contribution to underlying investment growth over 2021–2023.

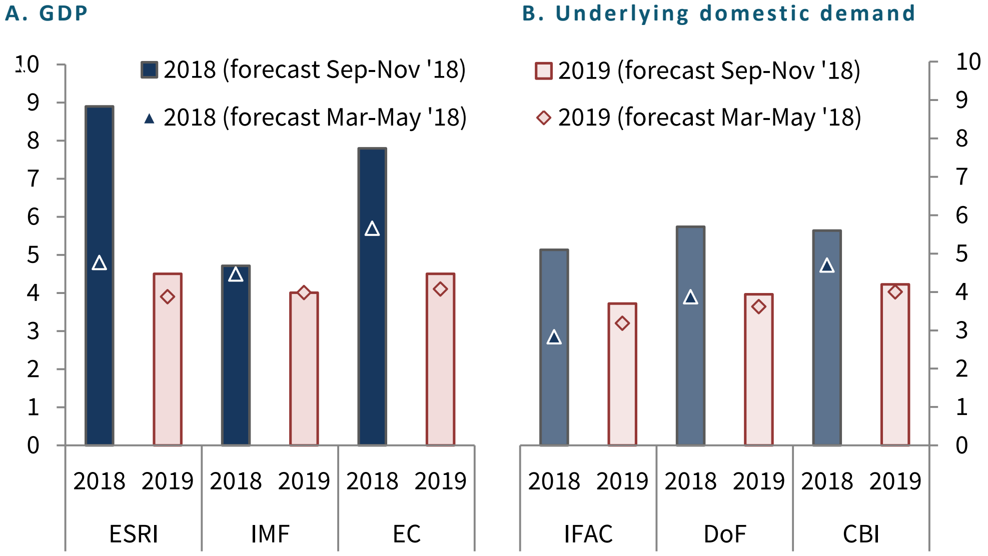
Short-Term Forecasts of Other Agencies

Preliminary CSO outturns show that the strong momentum in recorded GDP growth from the second half of 2017 has continued into the first half of 2018, resulting in upward revisions for both 2018 and 2019 by other forecasting agencies. However, where relevant forecast are available, the Council prefers to compare an aggregate that is not distorted severely by factors unrelated to domestic economic conditions, such as underlying domestic demand. Revisions to forecasts for 2018 and 2019 are depicted for six forecasting agencies in Figure 2.3; panel A shows forecasts for real GDP, while panel B shows real underlying domestic demand forecasts, where available. This compares expected economic growth rates from earlier in 2018 with updated forecasts from more recent months for the same agency.

[6] To ensure comparability between forecasts and outturns, actual real government net consumption is re-based to the base year applicable to the forecasts; e.g. forecasts for 2016 made in October 2013 (*Budget 2014*) were based on the latest CSO *National Income and Expenditure* release (*NIE 2012*, whose volume series are based in 2011 prices). The difference between the 2016 actual (€27.97 billion) and three-year-ahead forecast (€23.74 billion) real government net consumption was €4.23 billion, based in 2011 prices.

Figure 2.3: Forecasts of economic growth

Percentage change in volumes (year on year)



Sources: Economic and Social Research Institute, *Quarterly Economic Commentary* (Spring 2018 and Autumn 2018); International Monetary Fund, *World Economic Outlook* (April 2018 and October 2018); and European Commission, *European Economic Forecast* (Spring 2018 and Autumn 2018); Department of Finance, *SPU 2018* and *Budget 2019*; Central Bank of Ireland, *Quarterly Bulletin* (No.s 2 and 4 for 2018); and Irish Fiscal Advisory Council, *Fiscal Assessment Reports* from June 2018 and November 2018.

2.3 Assessment of the Macroeconomic Forecasts in *Budget 2019*

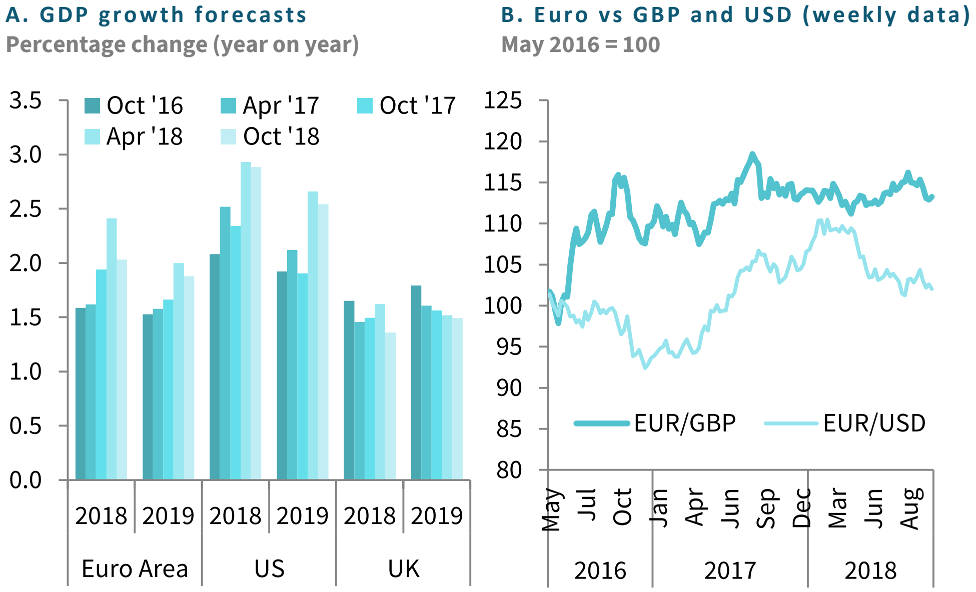
Macroeconomic Context

The Irish economy has continued to grow rapidly in 2018, with its robust cyclical recovery now ongoing for around five years. Employment growth remains strong at close to 3 per cent on average in the four quarters to June 2018; the unemployment rate has fallen from a peak of 16 per cent in early 2012 to 5.3 per cent by October 2018; and tax revenues including PRSI but excluding corporation tax are up by 6.2 per cent in the first ten months of the year. Despite an unexpected slowdown in recorded personal consumption growth in 2017, domestic demand is forecast to contribute meaningfully to economic growth in 2018 and 2019.

Output is close to its medium-term potential path, and capacity constraints have arisen across various sectors of the economy, in particular for housing. Hourly wage growth is expected to rise over coming years, and though still well below the pace seen in the early 2000s, it is forecast to reach 3.7 per cent by 2023. The growth in prices is similarly expected to increase, driven in part by a recovery in crude oil prices over the past year, rising from around $50 per barrel during 2017 to about $70 per barrel in 2018.

Prospects for external demand appear somewhat less favourable than at the time of *Stability Programme Update 2018* in April. Although GDP growth forecasts for the Euro Area and US this year and next have generally improved, as shown in Figure 2.4A, recent IMF forecasts have been revised downwards. Forecasts for the UK suggest that the economy is on a weaker growth trajectory, with slower consumption growth and subdued investment spending. This is likely to reflect a rise in uncertainty as the end-March 2019 date for Brexit draws nearer. In currency markets, the euro has continued on a relatively stable path during 2018 (Figure 2.4B). The euro-sterling exchange rate has been fairly steady for the past year, with sterling remaining close to 15 per cent weaker compared to May 2016 (before the Brexit vote took place). This continues to present a challenge to indigenous Irish exporting firms, whose exports rely heavily on UK-imported components (Lawless, 2018), although the relatively weaker inflation in Ireland compared to the UK has offset this effect to some extent.

Figure 2.4: Trading-partner growth forecasts and exchange rates



Sources: IMF World Economic Outlook and Datastream.

The assumptions in *Budget 2019* regarding the impact of Brexit on the Irish economy are essentially the same as in *SPU 2018*. The Department's baseline Brexit assumption is that the UK will leave both the EU customs union and single market for a free-trade agreement to be agreed in 2021, following a transition period beginning after the first quarter of 2019 and lasting until end-2020. As the forecast horizon in *Budget 2019* has been extended by two years to 2023, further information is now available regarding the Department's expectations for the impact of Brexit on the Irish economy. Relative to a scenario of no Brexit, the Department's baseline entails a level of GDP that is 2 per cent lower over 2021–2023 as a result of the less favourable trading conditions for Ireland under the assumed new free-trade agreement. With the end of the transition period expected from 2021 onwards, an increase in inflation is also forecast to coincide with the higher costs for businesses under the free-trade agreement.

Continued uncertainty has characterised the prospects for a transition arrangement since EU-UK negotiations progressed beyond their initial phase in December 2017. Indeed, *Budget 2019* acknowledges that estimates of the impact of Brexit on the Irish economy could be understated, even if the outcome is an orderly exit.[7] A

[7] Risks to the estimated effects that may not be adequately modelled include financial market effects and non-tariff barriers (i.e. regulatory divergence). Further issues relate to the strong assumption often applicable 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.

disorderly outcome, however, could involve the imposition of large WTO tariffs from April 2019 onwards, which would pose a significant threat to Irish businesses. This is expected to result in a loss in the level of GDP between the first quarter of 2019 until 2023 of 3¼ per cent relative to a no-Brexit scenario – larger than the projected impact of a new free-trade agreement. Such estimates are helpful, but highly uncertain and the Department notes that the estimate for the "disorderly" Brexit scenario should be considered as a minimum likely impact of such a scenario.

Budget 2019 Short-Term Forecasts, 2018–2019

The key elements of the demand-side forecasts for 2018 and 2019 contained in *Budget 2019* are set out and assessed in this section. Rapid growth of 5.9 per cent is forecast for underlying domestic demand in 2018.[8] This measure of real growth is then expected to moderate to 4 per cent in 2019, supported by growth in underlying investment and personal consumption (as shown in Table 2.1). Employment is expected to continue its recent trend of strong growth, while the Department's GDP-based estimate of the output gap is projected to turn positive in 2019.

[8] *Budget 2019* forecasts growth in modified domestic demand of 5.2 per cent in 2018.

Table 2.1: *Budget 2019* macroeconomic forecasts (to 2019)

Percentage change in volume, unless stated

	2017[a]	2018	2019
Demand			
Underlying domestic demand[b]	2.9	5.9	4.0
GDP	7.2	7.5	4.2
...of which (contributions)			
Underlying domestic demand[c] (p.p.)	*0.5*	*3.6*	*2.1*
Underlying net exports[c] (p.p.)	*6.8*	*3.9*	*2.1*
Personal consumption	1.6	3.5	3.0
Government	3.9	3.5	2.9
Investment	-31.0	-8.9	7.1
Underlying investment[b]	6.2	16.5	7.7
Exports	7.8	7.0	5.6
Imports	-9.4	0.9	6.2
Underlying imports[b]	2.4	6.0	6.2
Supply			
Potential output	8.2	4.5	3.5
Output gap (% of potential output)	-2.9	-0.4	0.2
Labour Market			
Population	1.1	1.4	1.4
Employment	2.9	3.0	2.8
Unemployment rate (% labour force)	6.7	5.8	5.2
Prices			
HICP	0.3	0.7	1.5
Personal consumption deflator	1.4	1.5	2.0
GDP deflator	0.4	1.8	1.9
Other			
Nominal GNI*	3.0	8.1	6.1
Nominal GDP	7.6	9.3	6.2
Nominal GDP (€ billion)	294.1	321.6	341.5
Modified current account (% of GNI*)	1.2	1.3	1.0

Sources: CSO; Department of Finance; and internal IFAC calculations.
Notes: [a]Denotes latest outturns from the CSO. [b]Underlying domestic demand, investment and imports exclude other transport equipment (mainly aircraft) and intangibles; underlying domestic demand further excludes changes in inventories. [c]Underlying contributions to real GDP growth rates in percentage points – underlying domestic demand here includes the effect of changes in inventories, but like underlying net exports, it excludes the effect of investment in aircraft and intangible assets.

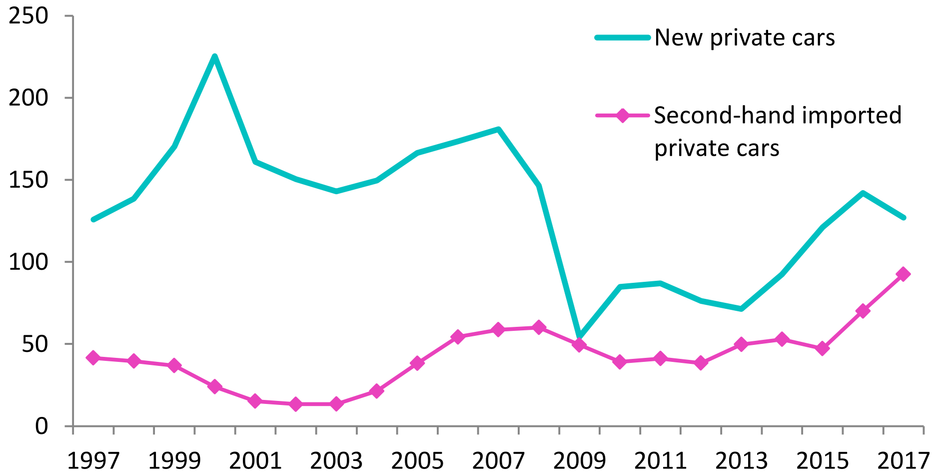
Domestic Demand

Personal consumption is set to grow 3 per cent in 2018 and 3.5 per cent in 2019 according to the *Budget 2019* projections. This is consistent with forecasts of sustained increases in employment income and a modest reduction in the savings rate as household balance sheets improve. However, recorded outturns for consumption in 2017 surprised to the downside, expanding by just 1.6 per cent. This outturn would – if taken at face value – suggest a considerable slowdown in the growth of goods consumed compared to the previous three years, when growth averaged 5.6 per cent. However, a marked slowdown is not evident in the drivers of personal consumption. For example, the retail sales volume index and employment grew by 3.9 per cent and 2.9 per cent in 2017, respectively.[9] As such, a broader reading of available indicators suggests consumption volumes did grow fairly rapidly in 2017, lending plausibility to the continued strength in spending growth in 2018 and 2019.

The CSO has advised of the possibility that the volume of consumption of motor vehicles for 2017 may be revised, based on a new data source related to second-hand car purchases. As shown in Figure 2.5, second-hand imported private car sales almost doubled in 2017 compared to 2015. This is likely to be related to the negative exchange-rate shock to sterling since the Brexit vote, which has made used imported cars more attractive to Irish car buyers. The potential savings compared to equivalent domestic second-hand purchases is larger for more expensive vehicle brands and models. New information regarding such activity could have implications for estimates of the goods consumption deflator, which may not fully capture the composition of imported second-hand motor vehicles following the significant change in consumption patterns in 2017.

Figure 2.5: Private cars licensed for the first time in Ireland

Thousands of licences



Source: CSO.

[9] The volume growth for retail sales excluding motor trades accelerated from 4.9 per cent in 2016 to 5.8 per cent in 2017.

Real **government net consumption of goods and services** recorded growth of 3.9 per cent in 2017, more than double the rate expected at the time of *SPU 2018* (1.8 per cent), and a full 3.9 percentage points above the growth rate expected three years in advance, in *Budget 2015* (published in October 2014). Over the medium term, growth is forecast to fall back towards 1.8 per cent out to 2023. However, as discussed in Chapter 3, it is not clear how well this profile reflects anticipated growth in employment and population, which in turn facilitate growth in net government consumption.

Headline figures for **investment** have been extremely volatile in recent years, with levels doubling between 2014 and 2016, before falling by close to one third in 2017. However, the rate of growth in underlying investment (excluding aircraft and intangibles) has been more stable, increasing 6.2 per cent in 2017. *Budget 2019* forecasts a continuation of double-digit growth in residential construction in 2018 and 2019, reflected in annual output of new dwelling completions which is expected to reach 19,000 in 2018, rising to 49,000 by 2023.[10]

For 2018 and 2019, growth in non-residential construction activity is expected to slow to 7 per cent each year on average, although it would still contribute substantially to short-term growth in underlying investment. Further ahead, a gentle decline averaging −0.3 per cent annually is forecast for non-residential construction, as the Department anticipates substitution of activity from commercial into residential construction activities. However, there is a clear risk that the shift does not go as smoothly; there are potential upside risks to activity in the near term as a result, although there could also be a fall in non-residential construction before the predicted response in the supply of residential dwellings takes place, which represents a downside risk to the outlook for investment.

Finally, machinery and equipment excluding other transport equipment (mainly aircraft) has been growing particularly rapidly in the first half of 2018. It is not yet clear whether this represents a broad-based increase in activity, or one-off idiosyncratic developments. Forecast growth of 16 per cent on average for 2018 and 2019 could reflect some rebound in underlying capital formation, following a

[10] If sustained over the medium term, this output level would be at the upper range of estimates of housing supply required to achieve equilibrium in the market, as discussed in the June 2018 FAR (IFAC, 2018c).

decrease of close to 13 per cent in 2017. As discussed in the June 2018 *FAR* (IFAC, 2018c), certain foreign-multinational manufacturers whose investments entail a high content of imported machinery and equipment may explain some of this observed volatility.

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, CSO data in the national accounts for goods **exports** in the national accounts have been significantly affected by what is known as "contract manufacturing".[11] The monthly trade statistics published by the CSO do not include such activity. For the *Quarterly National Accounts* and *Balance of Payments* releases, broader definitions of exports and imports include the contract manufacturing of some firms, many of which are multinational enterprises. Growth in services exports is expected to slow in 2018 to just 2.6 per cent, reflecting weaker data for the first half of the year. In 2019 and 2020 however, it is projected to increase to above 5 per cent, and a long-running trend continues to favour services, comprising 45 per cent of total exports in 2017 (compared to close to 14 per cent twenty years previously).

Imports growth weakened in 2017, where the final outturns registered a 9.4 per cent decline. However, this profile is also significantly affected by aircraft (goods) and intangibles (services). Given the difficulty in predicting such components, it is more instructive to analyse underlying imports (excluding aircraft and intangibles), which grew by 1.7 per cent in 2017. For 2018, the growth rate in underlying imports is expected to fall back to zero, before returning to 1.3 per cent in 2019 and 1.4 per cent in 2020. Another cause of volatility for underlying imports is due to royalty payments (service imports), which have slowed considerably in recent quarters.

Aggregate Activity and Demand

Growth in real **underlying domestic demand** slowed in 2017, according to the most recent national accounts data – in large part due to a weak reading for goods consumption, as previously discussed. For 2018 and 2019, real underlying domestic demand is now forecast to grow quite rapidly, at 4.9 per cent on average (up from 3.7 per cent on average, according to *SPU 2018*).

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

Modified gross national income (GNI*) forecasts have been included in *Budget 2019*, although only as a technical forecast, moving in line with gross national product (GNP). For the latest Benchmarks, the Council derived a sum-of-parts forecast for GNI* starting with GNP and using forecasts of relevant investment components, combined with a relevant rate of depreciation and assumptions for other adjustments (including re-domiciled PLCs and EU taxes and subsidies).[12]

Table 2.2: Estimates of economic growth

Percentage change in volumes (year on year, unless stated) and percentage-point contributions

	2017[c]	2018	2019	2020	2021	2022	2023
Underlying domestic demand[a]	2.9	5.9	4.0	3.1	2.6	2.7	2.8
GNP	4.4	5.9	3.9	3.3	2.3	2.4	2.5
GDP	7.2	7.5	4.2	3.6	2.5	2.6	2.7
Of which…							
Underlying domestic demand[b]	*0.5*	*3.6*	*2.1*	*1.6*	*1.3*	*1.4*	*1.5*
Underlying net exports[b]	*6.8*	*3.9*	*2.1*	*1.9*	*1.2*	*1.2*	*1.2*
Nominal GNI*	3.0	8.1	6.1	5.2	4.2	4.3	4.4

Sources: CSO; and Department of Finance, *Budget 2019*.
Notes: [a]Underlying domestic demand excludes changes in inventories, investment in aircraft and intangible assets. [b] Underlying contributions to real GDP growth rates in percentage points (excludes the effect of investment in aircraft and intangible assets). Domestic demand contributions here include changes in inventories. Rounding can affect totals. [c] Denotes latest outturns from the CSO.

Forecasts of real **GDP** have been revised upwards for 2018, from 5.6 per cent at the time of *SPU 2018* to 7.5 per cent in *Budget 2019*, reflecting strong annual growth during the first half of the year. For 2019 onwards, there is some moderation expected over the forecast horizon, although the near-term expansion is expected to remain robust.

Budget 2019 Medium-Term Forecasts, 2020–2023

Forecast Horizon

The Council welcomes the return by the Department to forecasting out to five years ahead. However, as discussed in the June 2018 *Fiscal Assessment Report* (IFAC,

[12] The level of nominal GNI* for 2016 was revised down by the CSO in the most recent *National Income and Expenditure* release by close to €13.5 billion. In addition to a downward revision to GNP of €4.6 billion, depreciation on R&D service imports was broadened to include depreciation on trade in intellectual property. This resulted in the subtraction of a further €8.9 billion from GNI in the calculation of GNI*.

2018c), previous outlooks published by the Department have often reverted towards the three-year minimum required by the European Union, under the *Stability and Growth Pact* for each member's Stability Programme Update. The Council assesses that a horizon of at least five years ahead is appropriate to support a medium-term orientation for fiscal policy, and to ensure ongoing emphasis on identifying risks or potential economic imbalances in real time. The Department should not shorten the forecast horizon and should use realistic technical assumptions where needed, for example to forecast the public finances when the forecast horizon exceeds the length of the current parliamentary term.

Supply-Side Estimates

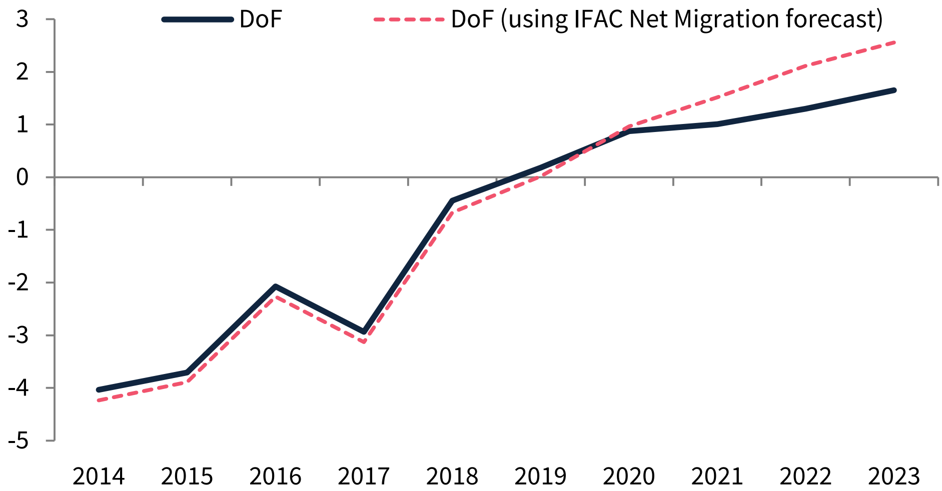
The Department's alternative estimates of the output gap and potential output, in conjunction with the modified current account, indicate an economy that is forecast to grow moderately faster than potential over the medium term. The GDP-based estimate of the output gap turns positive in 2019 and rises gradually to 1.7 per cent by 2023, as potential output growth reduces over time to 2.4 per cent from an estimated 4.5 per cent for 2018. The modified current account as a share of GNI* deteriorates slowly towards a deficit in 2022, reaching -1.1 per cent in 2023.

The alternative supply-side estimates represent a significant improvement on the EU CAM, especially for plausibility and representing the Department's view of the cyclical position of the economy at present and over the medium term. Forecasts tend to show output gaps closing over a period of time, even if this assumption is not imposed explicitly. While the Budget forecasts show the gap widening, financial variables could have a stronger effect on increasing the output gap than is assumed in the forecasts, especially if overheating were to take hold in a more serious way.

It is important to acknowledge that the alternative estimates are subject to considerable uncertainty. The severity of overheating signalled by the estimates changes substantially depending on the inputs assumed for key variables including, for example, net migration. Figure 2.6 shows a sensitivity analysis of the *Budget 2019* alternative GDP-based output gap estimates using the Council's Benchmark assumptions for net migration. The Council assumes that net migration rises continuously over the forecast horizon, whereas the Department's net migration forecast moderates over time. If the higher net migration estimates are incorporated, the output gap turns significantly more positive for 2021–2023. As discussed in the Risks and Imbalances section, a more positive net migration forecast appears more consistent with other *Budget 2019* forecasts, in particular expectations for construction employment (see Figure 2.9).

Figure 2.6: Sensitivity analysis of alternative output gap estimates

Percentage points of potential output



Sources: Department of Finance, *Budget 2019*; and internal IFAC calculations.

2.4 Risks and Imbalances

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 since the recovery began. Table 2.3 reviews the short- and medium-term macroeconomic risks described by the Department in *Budget 2019*. 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 *Budget 2019*, three additional risks are included by the Council: inappropriate monetary policy, inappropriate domestic policy and a potential volatility in food commodity prices.

Overall, the main risks relate to Brexit, strong reliance on highly concentrated foreign-owned activities, and domestic overheating. In the near term, there are upside risks from greater momentum in domestic activity (including construction) with negative risks related to other factors. Looking ahead, risks are mainly to the downside, including if overheating were to lead to a correction.

Table 2.3: Assessing the *Budget 2019* Macroeconomic Risk Matrix

Likelihood and Impacts from *Budget 2019*, unless stated: high in red; medium in pink; low in grey

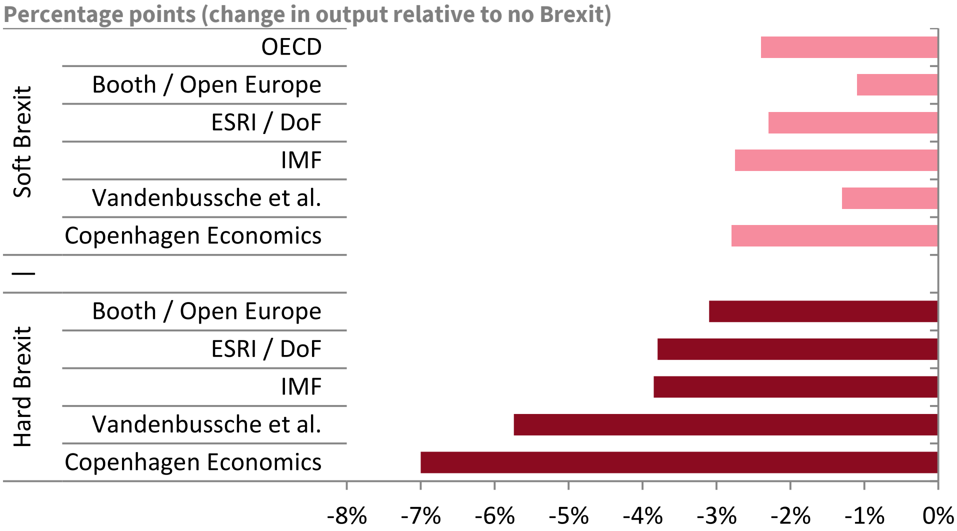
	Likelihood	Impact
"Disorderly Brexit" Risks of a WTO-style arrangement, impact on Irish-UK trade. Impact on medium-term growth prospects in Ireland. Severity and persistence of shock relative to estimates.	Medium	High
External demand shock Strong current global economic growth context. Concern due to slowdown in global trade and prospective trade wars.	Medium	High
Geopolitical risks Limited direct impact, second-round impacts could be more significant.	Medium	High
Disruptions to world trade Protectionism risk: possible negative impact on global trade flows.	Medium	High
Loss of competitiveness Domestic sources: wage pressures, rising commercial/residential rents. External source: exchange rates.	Medium	High
Inappropriate monetary policy (IFAC risk) 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.	Medium	High
Overheating economy Could occur in the Irish economy without significant credit growth. Strong growth when currently near potential output risks overheating.	Medium	High
Housing supply pressure Supply response expected to moderate price growth. Excess demand: harmful for competitiveness and labour mobility. Overheating risk: construction boom with output nearing potential.	High	Medium
Food commodity prices (IFAC risk) Weather-related increases of recent years expected to unwind. Potential to disrupt dairy profits, crucial for regional economic growth.	High	Low
Global financial market conditions Low interest rates/"search for yield": financial stability concerns. Normalisation of monetary policy: impact on borrowers.	Medium	Medium
Concentrated production base Production base concentrated in a small number of sectors. Sector- or firm-specific shocks could pose wider risks for the economy.	Low	High
Inappropriate domestic policy (IFAC risk) 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.	Medium	Medium

Medium-Term Impacts of Brexit on Ireland

Brexit remains a key source of risks to the medium-term outlook. More than two years after the referendum, the UK's ultimate trading relationship with the EU and the implications for Ireland still remain unclear. Moreover, the size and nature of potential impacts from various Brexit scenarios are highly uncertain (see estimated ranges under "soft" and "hard" scenarios in Figure 2.7). Standard models may not fully capture the extent of the two countries' closely integrated supply-chain networks, and other key channels may be more important than is assumed. Other risks stem from Ireland's reliance on a small range of specialised exporting activities, rising protectionism and potential changes in international tax policies.

Figure 2.7: Range of medium-term impacts of Brexit on Ireland

Percentage points (change in output relative to no Brexit)



Sources: As shown in chart legend.

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 (see Box A in IFAC, 2015b). Motivations for the approach include the difficulty in producing a statistical estimate of the cyclical position of the economy, and monitoring specific economic data that may indicate the presence of potentially unsustainable positions relevant for the public finances, or developments that display procyclical tendencies. Appendix D presents indicators over the *Budget 2019* forecast horizon for four modules: the labour market and prices, investment and housing, external balances and credit conditions. The figures show outturns and *Budget 2019* forecasts (where available).

The Council has also developed a summary ‘heat map’ visualisation for monitoring potential imbalances in the Irish Economy, shown in Figure 2.8. Drawing on previous work by Byrne and Smyth (2016), the methodology and data sources used in this heat map are described further in Timoney and Casey (2018).

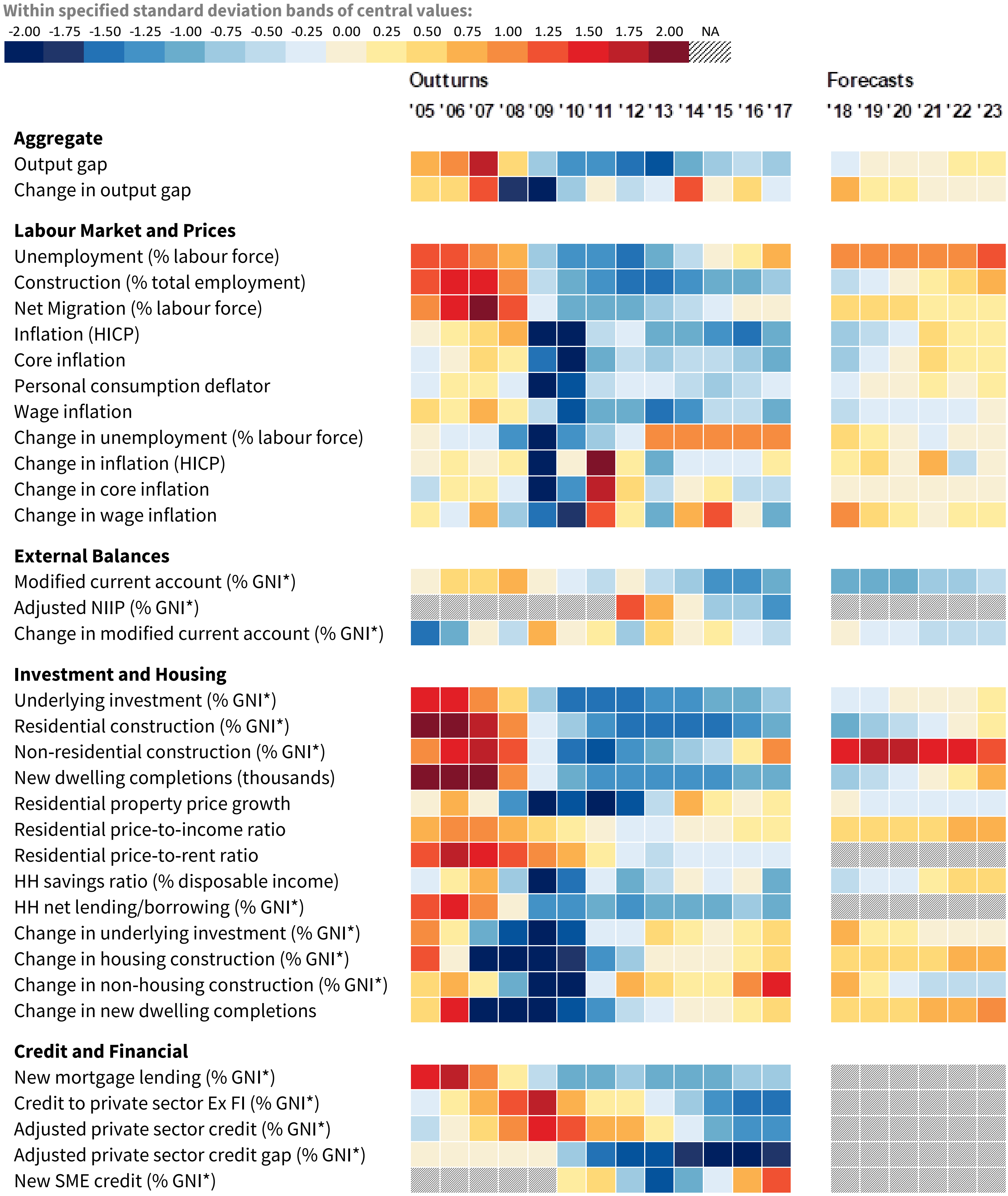
An important caveat to the signals of Figure 2.8 is that it includes forecasts of the Department, which may underestimate possible impacts of overheating.

Labour Market and Prices

Indicators for the labour market based on *Budget 2019* forecasts continue to 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. *Budget 2019* shows limited change to this outlook over the forecast horizon. Hourly wages – having returned to positive growth in 2015 – are expected to grow more rapidly to above 3 per cent from 2020, despite a surprisingly weak growth rate in 2017 of 0.1 per cent. The unemployment rate continues to decline and is forecast to stabilise between 5 and 5¼ per cent.

Forecasts for inward migration show moderation from a projected 1.6 per cent of the labour force in 2019, to a rate averaging 1.2 per cent for 2020–2023. Large migration flows have been evident previously as a feature of Ireland’s very responsive labour supply when demand is strong. Analysis of recent flows suggests that a more highly educated and skilled profile of immigrants have been arriving in recent years, when compared with previous episodes of net inward migration for Ireland. Net migration has been closely associated with construction employment in the past (shown in Figure 2.9). Given that this relationship is not reflected in the *Budget 2019* forecasts, there may be upside risks to the Department’s net migration forecast, as the additional construction employment does not appear to be facilitated by higher net inward migration. In practice, this demand tends to be met by rapid immigration flows.

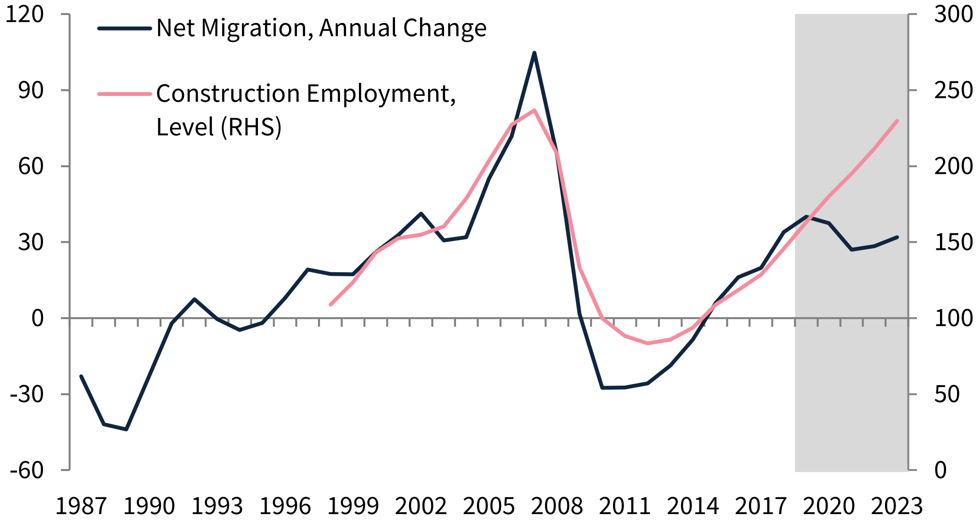
Figure 2.8: Heat map for monitoring potential imbalances in the Irish economy



Sources: CSO; Central Bank of Ireland; Department of Finance (*Budget 2019* forecasts); Department of Environment, Heritage and Local Government; ESRI/PTSB; European Commission (AMECO and CIRCABC); Residential Tenancies Board; and internal IFAC calculations.
Note: See Timoney and Casey (2018).

Figure 2.9: Net migration and construction employment

Thousands



Sources: Department of Finance, *Budget 2019* and *SPU 2018*.

External balances

The modified current account (CA*) measure reached a surplus of 2.8 per cent of GNI* in 2015, moderating to 1.2 per cent by 2017. The Department forecasts a reduction in this balance leading to a modest deficit of 1.1 per cent by 2023. Considering the sectoral balances at play, this declining path for the modified current account is supported by the Department's forecast for a gradual decline in the household savings ratio. However, the expected surplus of the general government would act against this, suggesting an increase in leverage of firms in the private sector is expected over the period.

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 volatile non-financial corporations, these are excluded from the measure. This adjusted NIIP improved from –€90 billion in 2012 to close to +€75 billion in 2017. This improvement reflects higher financial asset values and also the significant deleveraging that has taken place in the economy since 2012.

Investment and housing

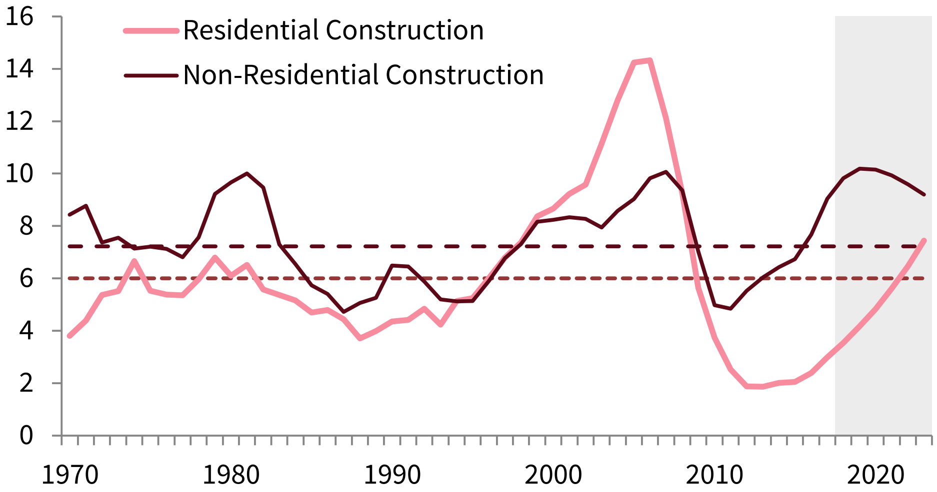
From a low base of activity, residential construction is expected to pick up steadily over coming years. Annual housing completions, officially estimated at close to 14,500 for 2017, are forecast by the Department to increase to close to 50,000 by

2023. This would be at the upper end of estimates of the appropriate medium-term level of housing completions consistent with demand. If the Department's forecasts are realised, this may help to address the undersupply of dwellings seen in recent years.

Figure 2.10 shows that *Budget 2019* forecasts imply residential construction will rise to over 7 per cent of GNI*, above its long-run average, over the forecast horizon, although well below its pre-crisis peak. This may create an imbalance in activity with a skew towards new dwellings construction. This activity is employment intensive and generates significant tax revenues, as well as attracting inward migration. It can therefore pose a wider risk if activity in construction of new dwellings adjusts downwards in future. For non-residential construction, there is also a positive deviation from a long-run average despite usual volatility, which is reflected by the red cells in the heat map. Construction activity should be monitored closely over coming years.

Figure 2.10: Residential and non-residential construction

Percentage of GNI*



Sources: CSO; Department of Finance; and internal IFAC calculations.
Note: The pre-1995 nominal GNI* series is extended back to 1970 using nominal GDP growth rates. Long-run averages are shown as dashed lines; historically, non-residential building and construction has accounted for a higher average share of national output than residential.

Credit conditions

While credit growth has remained subdued in the aftermath of the previous decade's excesses, flows of capital to the private sector have shown signs of increasing. For small- and medium-sized enterprises (SMEs) overall, new lending has grown by 8.5 per cent in the year to June 2018, increasing by over €400 million to

€5.3 billion. However, core new lending to SMEs (which excludes loans to financial and property sectors), has been quite subdued in the ear to June 2018; at €3.4 billion, it was close to €170 million lower than for the same period in 2017. The increases in new lending to SMEs overall arise mainly due to property-related lending flows. The slowdown in new lending to core SME activity is consistent with recent trends in the Department's survey of SME credit demand, which did not show any increase in the share of firms requesting credit in most recent update (for April to September 2017).[13]

Household lending growth continues to be limited by the introduction of macroprudential rules, particularly aimed at avoiding the over-extension of credit for house purchases by limiting loan-to-value and loan-to-income ratios. Deleveraging has been ongoing, and while overall credit for house purchases has only recently returned to positive-growth territory in 2017, this has been held back by buy-to-let lending which has been in continuous decline since at least December 2011 (when data published by the Central Bank of Ireland begins). For credit advanced to households for principal dwelling purchases, this has been growing since the second quarter of 2016, and has since accelerated to 3.4 per cent as of the second quarter of 2018. Although beginning from a low base, persistent and excessive net growth in credit could destabilise wider economic growth. In particular, if credit growth causes a further acceleration in house-price growth, this could lead to a sudden correction.

[13] Available at https://www.finance.gov.ie/wp-content/uploads/2018/03/180306-SME-Credit-Demand-Survey-April-September-2017.pdf