

**Chapter 2**

**Endorsement and  
Assessment of the  
Macroeconomic Forecasts**

## 2. Endorsement and Assessment of the Macroeconomic Forecasts

### Key Messages

- The Irish economy has recovered from a deep crisis. Now, into the sixth year of cyclical upswing, it is operating near capacity according to the Department of Finance's preferred estimate of potential output. The Council assesses that these supply-side estimates are more plausible than those based on the EU Commonly Agreed Methodology (CAM). Despite elevated uncertainty in recent months relating to Brexit, and the prospect of weaker demand from Ireland's main trading partners, underlying economic activity in Ireland has remained resilient thus far.
- The Council endorsed the Department's *SPU 2019* forecasts for continued growth in the real economy over the medium term, with output forecast to rise steadily above its estimated potential in the coming years in the absence of significant countercyclical policies or a large negative economic shock. Downside risks mainly relate to Brexit. However, if economic growth instead outperforms *SPU 2019* forecasts over the medium term, the economy could significantly overheat.
- Although the *SPU 2019* medium-term forecasts show some typical characteristics of an economy operating above its potential, the Council assesses that the coherence of this picture is weaker in some areas. In particular, the forecasts for the household savings ratio, the modified current account, and net migration are not consistent with an economy that would be overheating.
- Since 2013, the Department's forecasts for real growth rates in government consumption have been generally lower than outturns. This is evident in an average year-ahead forecast error of 2.8 percentage points, rising to around 4 percentage points for forecasts made two and three years in advance. This shows that government spending increases, which are in excess of what was planned for in successive budgets and which rely on technical assumptions, can affect the accuracy of medium-term macroeconomic forecasts.

## 2.1 Introduction

The analysis in this chapter examines the consistency of *SPU 2019* medium-term macroeconomic forecasts, in particular regarding the interaction between the demand-side forecasts and the Department's alternative supply-side estimates. The improved availability of relevant indicators of the Irish economy provides a stronger basis for understanding economic activity and its sustainability. Box E at the end of this chapter provides a methodology for forecasting two such relevant indicators: (nominal) modified gross national income and the modified current account.

As the identification of potential risks and economic imbalances requires careful and continuous analysis, the Council monitors developments in the Irish economy on an ongoing basis. The Council's twelfth endorsement exercise assessed macroeconomic forecasts prepared by the Department of Finance reflected in *Stability Programme Update 2019 (SPU 2019)*.

## 2.2 Endorsement of *SPU 2019* Projections

The Council's twelfth endorsement exercise of macroeconomic forecasts to be used in the Budget or SPU was undertaken in March 2019 (see Appendix B for the endorsement timeline details).<sup>20</sup> The Council assessed that the macroeconomic forecasts produced by the Department of Finance and contained in *SPU 2019* were within an endorseable range for the medium term, taking into account the methodology and plausibility of the judgments made.

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 macroeconomic forecasting broadly conforms to that of other forecasting agencies.

In terms of the demand-side macroeconomic forecasts, they tend to be constructed based on an expected reversion of economic growth to equilibrium over some medium term. The forecasting approach has remained largely unchanged in recent years. As discussed in the analysis of recent forecast errors, the methodology has produced reasonably accurate short-term (in-year and year-ahead) forecasts of key aggregates, including underlying domestic demand.

However, one component with persistent forecast errors has been government net consumption of goods and services. For example, its year-ahead annual real growth forecasts for 2013–2018 have been 2.8 percentage points lower than outturns, on average. This coincides with several instances of within-year and budget-time upward revisions to spending by the Government, which have been frequently discussed by the Council in *Fiscal Assessment Reports* and other publications. Forecasts made two and three years in advance have been around 4 percentage points (on average) lower than outturns. This performance underlines the case for

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<sup>20</sup> The forecasts prepared by the Secretariat were also approved by the Council. The statutory function is detailed in IFAC (2013) and IFAC (2014a). The SPU is the national medium-term fiscal plan, requiring a longer endorsement horizon than for the Budget. Benchmark projections prepared by the Secretariat form a key part of the endorsement process. An important input into the preparation of the benchmark projections involves rounds of discussions with other external forecasters. The Secretariat met with IBEC and statisticians from the CSO to gain further insights into recent data releases.

realistic spending projections, in particular regarding outer-year forecasts. Besides contributing to inaccuracy in the Government's macroeconomic forecasts, such unplanned spending weakens the credibility of medium-term fiscal forecasts. The use of "technical assumptions" is likely to understate the spending required to achieve government objectives, and is unlikely to adequately account for anticipated economic and population growth contained in the macroeconomic forecasts (see Chapter 3).

The Department's publication of forecasts for underlying measures of economic activity, which attempt to correct for statistical distortions mostly related to multinational enterprises, is welcome and in line with Council recommendations (IFAC, 2018e). These provide a more meaningful measure of economic activity and are likely to be more closely related to sustainable tax revenues. The Department forecasts modified gross national income (GNI\*) using the nominal growth rate of gross national product (GNP), and assumes a path for the modified current account (CA\*) to complement trends in the preferred output gap estimate. This approach does not explicitly consider linkages between adjustments to gross national income and the current account necessary to calculate GNI\* and CA\*, and their related demand-side variables (including investment in aircraft and intangibles). Box E describes the Council's approach to deriving forecasts for GNI\* and CA\*.

As discussed in the November 2018 *Fiscal Assessment Report* (IFAC, 2018e), the Department's alternative supply-side estimates are broadly consistent with their assessment of economic activity. However, as discussed later in this chapter, this assessment is not necessarily reflected in some elements of the Department's demand-side forecasts, including the household savings ratio and the change in net migration. The methodology behind the supply-side estimates is one that is relevant for a small open economy, as described in Murphy, Nacheva and Daly (2018). The approaches are similar to the Council's methodology, as described in Casey (2018). In particular, these methodologies involve a suite-of-models approach to estimating the output gap and potential output. In the Council's view, these estimates are more plausible than those based on the EU Commonly Agreed Methodology (CAM). While potential output is not observable and is always estimated with uncertainty, the Department's estimates are more consistent with other indicators of the economy, and the forces known to be affecting it, than the CAM-based estimates. Variables of

particular relevance to the output gap include net migration, the modified current account, and rates of unemployment and inflation.

The prominence of the alternative supply-side estimates in Department publications represents a significant improvement compared to relying on CAM-based estimates, which have well-documented shortcomings and which often show misleading indications about the economy.<sup>21</sup> Furthermore, a national-specific methodology is preferable for Ireland and other small open economies, whereas the CAM uses a harmonised EU-wide approach.

The Department's preferred methodology applies extended Hodrick-Prescott (HP) filters with gross domestic product (GDP) as the measure of output. The Council considers the Department's other supply-side estimates based on domestic gross value added (domestic GVA) to be conceptually more robust than the GDP-based estimates, given the large distortions to GDP in recent years. There may also be statistical drawbacks to using HP filters rather than Kalman filters, although the profile indicated by the HP-filtered GDP-based estimates of a widening positive output gap out to 2023 is still plausible.<sup>22</sup> A sensitivity analysis is explored in Section 2.3 using the Department's preferred methodology but with different inputs for net inward migration and private sector credit growth. Higher net migration and private sector credit would result in larger positive output gaps over the medium term.

### **Pattern of Recent Forecast Errors**

In forecasts of activity over the past six years, the Council has found a pattern of generally positive errors in forecasts of underlying domestic demand. This is in contrast to the crisis period prior to 2013, when there were persistent underperformances in economic growth relative to forecasts—see Chapter 2 in the November 2018 *Fiscal Assessment Report* (IFAC, 2018e).

Figure 2.1 shows errors for four vintages of underlying domestic demand forecasts, and the contributions of its components: personal consumption of goods and services, government consumption, and underlying investment. Since 2013,

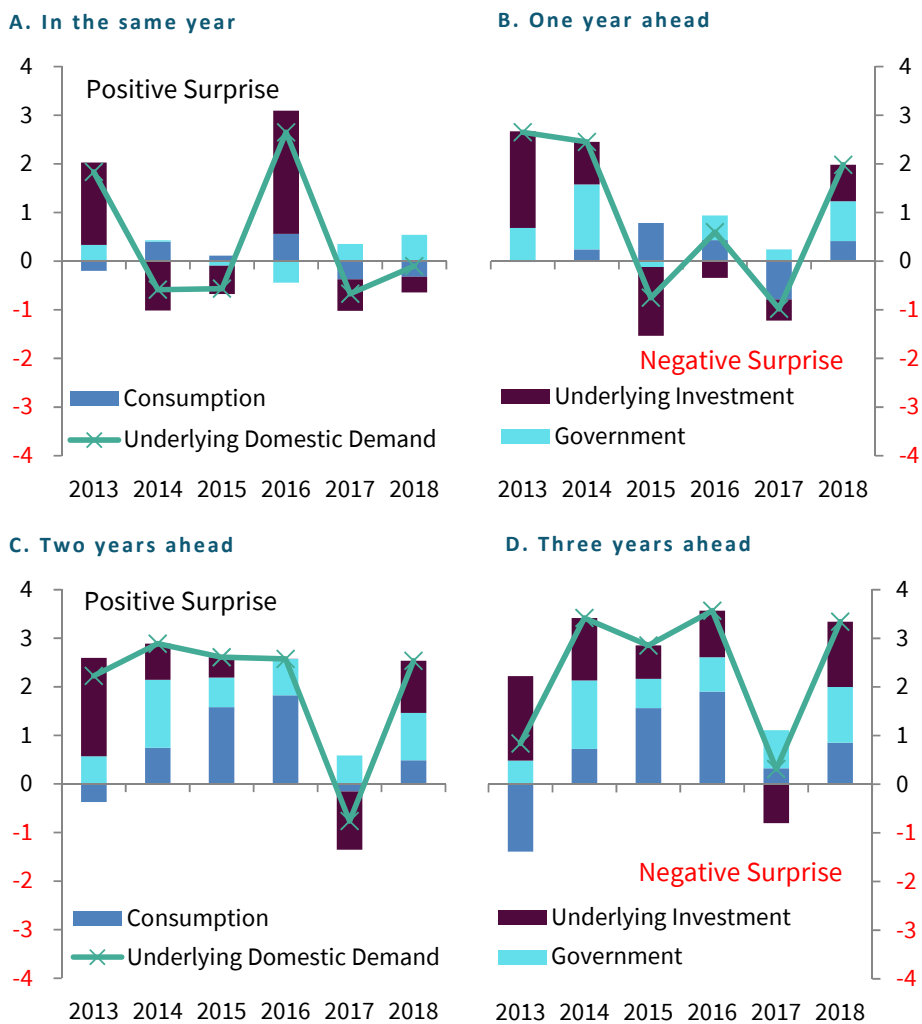
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<sup>21</sup> For details on issues with the CAM-based estimates for Ireland, see Boxes B and E in IFAC (2017e).

<sup>22</sup> These drawbacks mainly relate to end-point bias, an issue the Department mitigates to an extent with mechanical (crude) extensions of forecasts three years beyond each publication's horizon.

government net consumption of goods and services has contributed the largest average share in forecast errors of underlying domestic demand across the four vintages. Its average year-ahead forecast error is 2.8 percentage points, rising to about 4 percentage points for forecasts made two and three years ahead. Despite a small weight in the aggregate over the period (19 per cent), the mean error contribution for government consumption since 2013 is 0.6 percentage points, more than the contributions from underlying investment and personal consumption (0.5 and 0.4 percentage points).

**Figure 2.1: Forecast errors of underlying domestic demand**  
Percentage points (forecast error and contributions)



Sources: Department of Finance, various Budget forecasts since 2010; CSO, various Quarterly National Accounts and National Income and Expenditure data releases since 2009; 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 back to 2016. Prior to 2016, domestic demand excluding stocks is used as a proxy.

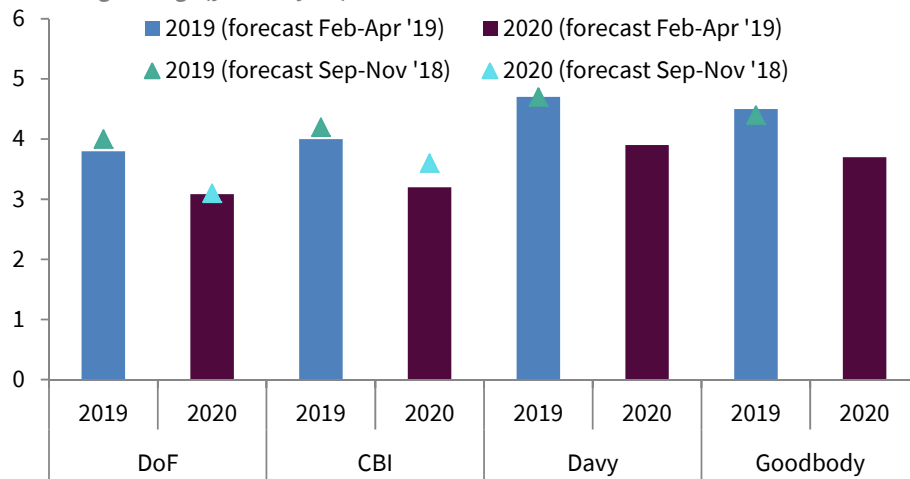
### Comparison with Other Projections

The Council’s benchmark projections are presented in Appendix C, and there are generally minor differences between these and the Department’s macroeconomic forecasts in *SPU 2019*. The benchmark projections anticipate a slower growth rate than *SPU 2019* forecasts show in underlying domestic demand over the medium term, including broadly offsetting contributions of faster growth in personal consumption and slower growth in underlying investment.

Figure 2.2 compares recent and (where available) prior short-term forecasts for real underlying domestic demand in 2019 and 2020. As discussed in Box C of the November 2018 *Fiscal Assessment Report* (IFAC, 2018e), the Council would welcome more widespread adoption by official and private-sector forecasters of alternative measures of economic activity in Ireland. Forecasts that report only the traditional components of GDP and an unmodified current account profile as a share of GDP or GNP provide very little relevant information to users. Instead, prominent inclusion of available alternative measures in forecast publications will improve the quality and relevance of economic forecasts.

**Figure 2.2: Forecasts of underlying domestic demand**

Percentage change (year-on-year)



Sources: Department of Finance, *Budget 2019* and *SPU 2019*; Central Bank of Ireland, *Quarterly Bulletin* (Nos 4 for 2018 and 2 for 2019); Davy Stockbrokers, October 2018 and April 2019; Goodbody Stockbrokers, *Irish Economy Health Checks* November 2018 and February 2019.



### 2.3 Assessment of the Macroeconomic Forecasts in SPU 2019

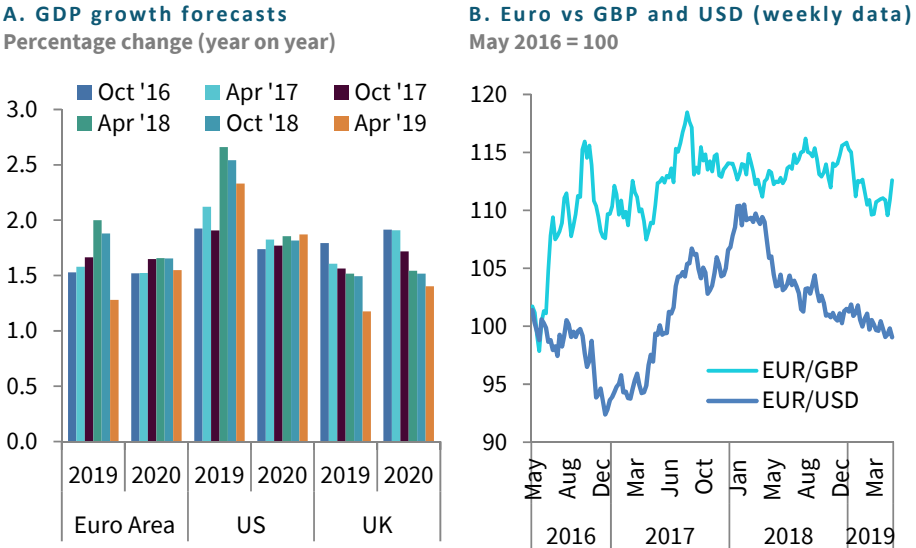
#### Macroeconomic Context

The Irish economy grew rapidly once again in 2018, and the Department estimates output is now operating near capacity. Annual average employment growth has been 3.1 per cent since 2013, and the unemployment rate has fallen from almost 16 per cent in early 2012 to below 5 per cent in the first quarter of 2019. The Department forecasts continued growth in underlying domestic demand in 2019 and 2020, although Brexit uncertainties remain high.

Output appears to be close to its medium-term potential path, and capacity constraints across various sectors of the economy have been evident, in particular for residential construction. Hourly nominal wage growth has accelerated in recent months, and the Department forecasts further increases over the medium term. Inflation is again forecast in *SPU 2019* to remain below 1 per cent in 2019, only rising above 2 per cent in 2023.

Prospects for external demand have worsened considerably over the past year. As shown in Figure 2.3A, recent IMF forecasts for economic growth in Ireland’s main trading partners have been revised downwards—in particular for 2019 in the euro area and the UK.

**Figure 2.3: Trading-partner growth forecasts and exchange rates**



Sources: IMF World Economic Outlook and Datastream.

Various indicators for the US economy suggest that it is reaching the peak of the economic cycle. Bureau of Labor Statistics data show that the unemployment rate has been at or below 5 per cent since December 2015, and the current unbroken run of economic expansion in the US is expected to surpass its previous record (from 1991–2001) by mid-2019. The Federal Reserve has raised the Federal Funds Rate starting in December 2015, and the effects of a recent fiscal stimulus may wear off during 2020.

Furthermore, an indicator of a potential economic recession is an inverted yield curve, and the ten-year US Treasury bond yield fell below the three-month Treasury yield in March 2019. Although this indicator has been strongly correlated for some 50 years with ensuing recessions in the US—with a lag of up to two years between the yield curve’s first inversion and the downturn—there may also be causal factors at play. A channel for this indicator to possibly bring about a recession is through its implications for business sentiment. On this view, as returns to medium- and long-term projects fall below the short-term returns to low-risk activities, businesses are less likely to engage in such investment, which can cause job creation to slow.<sup>23</sup>

The assumptions in *SPU 2019* regarding the impact of Brexit on the Irish economy are essentially unchanged compared to *Budget 2019*, with the exception of the timing of the start of the transition period, which has proven difficult to anticipate given the current degree of political uncertainty. As such, 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 during 2019 and lasting until end-2020.

Clearly, a disorderly Brexit remains possible, and it could still involve the imposition of large World Trade Organisation (WTO) tariffs, which would pose a significant threat to Irish firms. Recent estimates jointly produced by the ESRI and Department of Finance (Bergin *et al.*, 2019) indicate a ten-year impact of a disorderly Brexit on the level of GDP, which would be 5 percentage points lower than under a no-Brexit baseline. Estimates produced by the Central Bank of Ireland suggest a more severe shock from a disorderly Brexit (Box C).

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<sup>23</sup> Several explanations have been suggested as to why the current yield-curve inversion may not indicate a likely recession by end-2020, including the influence of quantitative easing and non-standard monetary policies, and the increased issuance of short-term debt by the US Treasury (undertaken in part to fund the recent fiscal stimulus).

## SPU 2019 Short-Term Forecasts, 2019–2020

Table 2.1 sets out in detail some of the key short-term macroeconomic forecasts contained in *SPU 2019*.

**Table 2.1: SPU 2019 macroeconomic forecasts (to 2020)**

Percentage change in volume, unless stated

	2018 <sup>a</sup>	2019	2020
<b>Demand</b>			
Underlying domestic demand <sup>b</sup>	5.7	3.8	3.1
GDP	6.7	3.9	3.3
<i>...of which (contributions)</i>			
Underlying domestic demand <sup>c</sup> (p.p.)	2.6	2.0	1.6
Underlying net exports <sup>c</sup> (p.p.)	4.0	2.0	1.8
Personal consumption	3.0	2.7	2.5
Government consumption	6.4	3.9	2.7
Investment	9.8	6.9	5.5
Underlying investment <sup>b</sup>	14.6	7.2	5.2
Exports	8.9	5.2	4.5
Imports	7.0	5.9	5.0
Underlying imports <sup>b</sup>	7.2	5.8	4.9
<b>Supply</b>			
Potential output	4.1	3.1	2.6
Output gap (% of potential output) <sup>d</sup>	-0.5	0.2	0.8
<b>Labour Market</b>			
Population	1.4	1.4	1.4
Labour force	1.7	1.9	1.9
Employment	2.9	2.2	2.1
Unemployment rate (% labour force)	5.7	5.4	5.2
<b>Prices</b>			
HICP	0.7	0.9	1.1
Personal consumption deflator	1.4	1.5	1.6
GDP deflator	1.5	1.5	1.7
<b>Other</b>			
Nominal GNI*	6.1	4.9	4.9
Nominal GDP	8.3	5.5	5.1
Nominal GDP (€ billion)	318.5	335.8	352.8
Modified current account (% of GNI*)	1.8	0.7	0.5

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

Notes: <sup>a</sup> Denotes latest outturns from the CSO.

<sup>b</sup> Underlying (final) domestic demand, investment and imports exclude other transport equipment (mainly aircraft) and intangibles.

<sup>c</sup> Underlying contributions to real GDP growth rates in percentage points. Underlying net exports include the effect of the change in inventories and exclude the effect of investment in aircraft and intangible assets.

<sup>d</sup> The output gap and potential output estimates used here are the Department's GDP-based alternative estimates.

## Domestic demand

Growth in underlying (final) domestic demand is forecast to moderate somewhat in 2019 and 2020 in the baseline scenario. The average real growth rate over the past five years is close to 4½ per cent. The forecast modest decrease is in line with a moderation in growth of each of its components: personal consumption, government consumption and underlying investment. This would reflect downward pressures due to Brexit and a maturing of the Irish recovery.

The short-term outlook for **personal consumption of goods and services** is for growth of close to 2½ per cent per year for 2019 and 2020, a modest deceleration compared to an annual average of nearly 3 per cent over 2016–2018. Seasonally adjusted retail sales values have been largely unchanged for several months—affected by weaker vehicle first-time licensing data, which show a 3.9 per cent annual decrease in the first four months of 2019. However, core retail sales (excluding motor trades) suggest strong year-on-year growth in early 2019.

Preliminary indications for 2018 suggest an increase in savings driven by higher net lending by households and non-profit institutions serving households (NPISH).<sup>24</sup> This may be consistent with a rise in precautionary savings related to Brexit uncertainty. However, other drivers may include an increasing deposit requirement for those seeking to purchase residential property, or simply that income is now growing more rapidly than consumers wish to spend it. Overall, the household savings ratio has increased from 10.8 per cent in 2017 to 11.6 per cent in 2018, while net lending by households and NPISH to other institutional economic sectors remained above €5 billion, close to double its 2016 level. The Department forecasts a further increase in the household savings ratio in 2019 and 2020 to almost 13 per cent, well above its historical average since 1995 of 8.5 per cent.

As a result of unplanned spending increases in the latter months of 2018, the full-year growth rate for **government net consumption of goods and services** increased to 6.4 per cent, compared to the 3½ per cent expected by the Department

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<sup>24</sup> Quarterly data on households' gross disposable income is currently estimated by the CSO based on trends in the *Earnings, Hours and Employment Costs Survey* (EHECS) data. These estimates are later revised taking account of detailed P35 income-tax returns. There may be differences between the EHECS trends and those contained in more-detailed administrative data. Preliminary figures show growth in household gross disposable income of 5.9 per cent was somewhat below the 7.1 per cent combined growth rate of PRSI and income tax in 2018.

at the time of the Budget in October and 1.9 per cent in *SPU 2018* published in April. As discussed in Chapter 3 and in previous *Fiscal Assessment Reports*, these in-year spending increases reflect the problem of a soft-budget constraint. Furthermore, official projections may not adequately reflect known expenditure pressures in later years that are unrelated to policy changes. Near-term government consumption growth is forecast to fall back to 3.9 per cent and 2.7 per cent in 2019 and 2020; the profile has also been revised upwards since *Budget 2019* forecasts of 2.9 per cent and 1.9 per cent, respectively.

The final component of underlying domestic demand is **underlying investment**, which grew rapidly by close to 15 per cent in 2018. This performance was mainly driven by building and construction. In particular, residential building increased by nearly a quarter, with some 18,000 new dwellings built in 2018 compared to about 14,400 in 2017. However, this output remains well below the range of medium-term estimated demand for new dwellings (30,000–50,000).<sup>25</sup> The increase in supply of apartments remains minimal, rising by just over 100 completed units to closer to 2,300 in 2018. More apartment completions will be necessary in order to realise *SPU 2019* forecasts of a cumulative additional 51,000 units in both 2019 and 2020, corresponding to annual growth in residential building and construction of about 15 per cent.

The Department forecasts a near-term slowdown in non-residential construction growth to 2 per cent by 2020. This follows an annual average expansion of close to 15 per cent for 2016–2018, and with a large share of this activity relating to the building of offices for multinational firms. Starting from a high base, the forecast share of non-residential construction activity in GNI\* would reach an all-time high of 10.8 per cent in 2019 and 2020, well above its long-term average of just under 7 per cent. This represents a clear imbalance and source of upward pressure on demand that could result in overheating, in particular given the Department’s forecast of rapid near-term growth in residential building and construction, and their preferred estimate of the output gap closing in 2019.

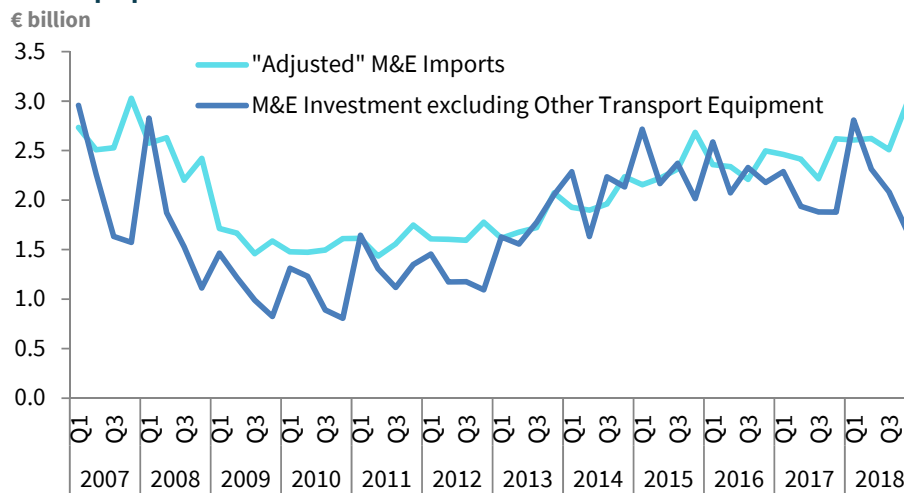
Figure 2.4 shows investment in machinery and equipment excluding aircraft compared to imports of machinery and equipment excluding aircraft, private cars,

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<sup>25</sup> See Duffy *et al.* (2016) and Lyons (2017) for details of these estimates.

and certain other sectors (see figure note for details). The fall in underlying machinery and equipment shown in the preliminary outturn for the final quarter of 2018, to its lowest nominal value in five-and-a-half years, was not matched by capital goods imports in the high-frequency trade data—which instead reached an eleven-year peak. The CSO has advised that additional data sources for investment will be available for the *National Income and Expenditure* results. As such, caution is warranted in the interpretation of trends in underlying machinery and equipment, which can be prone to especially large revisions.

**Figure 2.4: Underlying investment and imports of machinery and equipment**



Sources: Eurostat; and internal IFAC calculations.

Note: “Adjusted” M&E Imports excludes items 79, 72.821, 75.230, 75.270, 75.997, and 77.642 in the merchandise imports data where large distortions are visible in recent years. Also, item 78.120 has been excluded as imports of private cars are primarily included in the national accounts as personal consumption expenditure on goods.

### External trade

Despite the expected slowdown in growth of external demand, continued real growth in **exports of goods and services** is forecast by the Department, albeit somewhat slower than in recent years at close to 5 per cent. Trade statistics from the first quarter of 2019 show a record €38 billion in exports of goods, of which €24 billion was organic chemicals and medical/pharmaceutical products. The two largest destinations of such sales were recorded as the US and Belgium. The CSO has indicated an expected continuation of recent levels of exports of goods for several quarters to come, based on the patents and product life cycles of the large pharmaceutical firms involved. For services exports, there has been strong momentum in recent years in sales from the information and communication technology (ICT) sector, reflected in a nominal increase of €16 billion during 2018. At

present, it is not clear to what extent such drivers of exports growth may be affected by a slowdown in external demand, or the impact of a disorderly no-deal Brexit, in particular considering the countercyclical characteristics of certain pharmaceutical sales. However, these shocks would likely have a significant impact on exports of some domestic firms, with associated implications for employment, incomes, and underlying domestic demand.

For **imports of goods and services**, the Department forecasts a moderation in growth to 5 per cent by 2020. There was a large increase in imports of goods in the final quarter of 2018, leading to a growth rate for the year of over 14 per cent. This was driven by record-high investment in aircraft. Excluding this activity, underlying imports of goods grew by 8.5 per cent. Applying a similar adjustment for intangibles investments, underlying services imports increased by 6.6 per cent in 2018. The forecast reduction in growth of underlying imports of goods is supported by a fall in the purchase of private cars evident in the first four months of 2019. Payments made for royalties/licences, the largest individual component of services imports, have been relatively stable since a large increase took place in 2015.

#### Aggregate activity and demand

Growth in **underlying domestic demand** in 2017 was negatively impacted by a measured slowdown in growth of personal consumption of goods. This base effect was the main cause of the measured rebound in underlying domestic demand to 5.7 per cent in 2018. *SPU 2019* forecasts point to a moderation in growth to 3.1 per cent by 2020—unchanged compared with the *Budget 2019* forecast.

**Nominal GNI\*** has not yet been published for 2018. However, given the CSO's preliminary estimate of a large modified current account (CA\*) surplus for 2018, and applying the forecast methodology described in Box E, the size of the economy in 2018 measured by GNI\* appears to be around €200 billion, if not closer to €210 billion.<sup>26</sup> The Department forecasts GNI\* using the nominal growth rate in GNP, presented in Table 3 of *SPU 2019* as €192 billion in 2018 and reaching €211 billion in 2020.

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<sup>26</sup> Absent a downward revision to GNP, 2018 nominal GNI\* would be higher than €208 billion if the preliminary CA\* estimate matches the outturn published in this summer's *International Accounts* release, and if the share of each adjustment to the current account stay the same as for 2017.

In general, the increased exports of pharmaceuticals and ICT described above have not been matched by corresponding increases in services imports and net factor income flows, suggesting a significant build-up of profits in Ireland. This has possibly been reflected in the large increases in corporation tax paid to the Irish Exchequer in recent years, and has resulted in the large contributions of net exports to growth in headline **GNP** and **GDP**. However, it remains to be seen whether these trends, which have little if any significance for underlying economic conditions in Ireland, will continue.

### ***SPU 2019 Medium-Term Forecasts, 2021–2023***

Over the medium term, the Department forecasts economic growth to fall back toward its estimated potential rate. Underlying domestic demand forecasts in *SPU 2019* show growth of 2½–3 per cent per year for 2021–2023, while employment growth is forecast to moderate to below 2 per cent per year. Despite the assumed negative impact of the Brexit transition period ending in 2021, the Department forecasts the unemployment rate to remain close to (but above) 5 per cent.

As discussed regarding the endorsement of the macroeconomic forecasts, some of the trends in key economic sustainability indicators over the medium term lack coherence. The Council’s concerns particularly relate to the interaction of the household savings ratio, the output gap, net migration, and the modified current account balance. With output forecast to exceed the Department’s preferred estimate of its potential over the medium term, typical characteristics for a small open economy may include:

- a lower and falling household savings ratio, despite strong wage growth
- a declining current account balance that is generally in deficit
- a strong (and often upward-trending) inflow of net migration
- an elevated growth rate of private-sector credit.

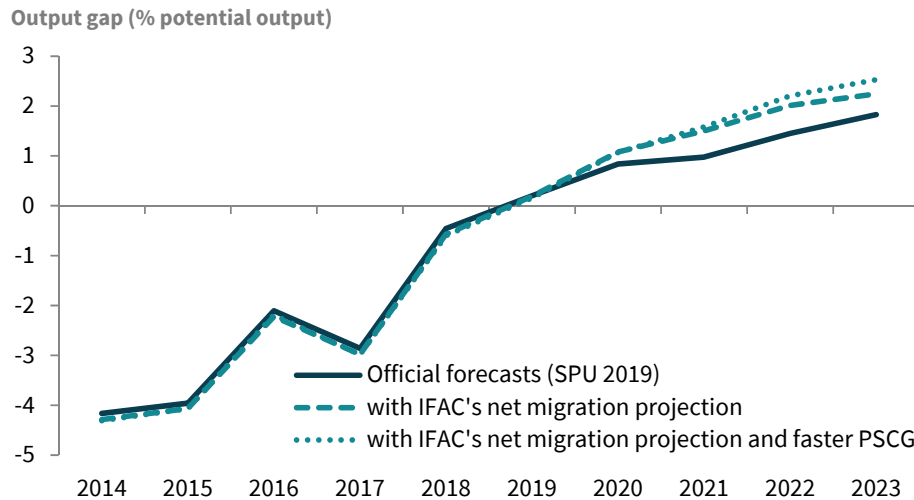
Although *SPU 2019* forecasts are consistent with some of these typical trends, the coherence of the medium-term forecasts is weaker in some areas. In particular, the persistently high level of the savings ratio over the medium term is at odds with



typical cyclical behaviour and the decline in net inward migration as a share of the labour force from 2019 onwards does not fit with Ireland’s long-standing and increased sensitivity of migration flows to the cycle.

These features of the official forecasts, together with what are assumed to be moderate increases in the growth of private sector credit, could dampen the extent of the positive output gap projected by the Department. Figure 2.5 examines the impact of scenarios involving assumptions of higher net migration and higher growth in private-sector credit.

**Figure 2.5: Alternative output gap estimates: sensitivity analysis for input variables**



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

Note: PSCG refers to private sector credit growth. The IFAC net migration forecasts are taken from the Council’s benchmark projections.

The net migration scenario is based on the higher assumed flows in the Council’s benchmark projections, which would be more in keeping with the forecast rise in dwellings output over the medium term. Private-sector credit is further assumed to reach a growth rate that is ten percentage points higher by 2023. This suggests that overheating, as measured with the Department’s preferred methodology for the output gap, could be 0.7 of a percentage point higher (2½ per cent) in outer years if migration and credit follow more typical patterns for a mature phase of an expansion in the Irish economy.

## 2.4 Risks and Imbalances

### Macroeconomic Risks

As discussed in Chapter 1, the medium-term outlook for the Irish economy is even more uncertain than usual (see Figure 1.1). Although upside risks to the *SPU 2019* forecast mainly relate to the potential for overheating—which would not represent “upside” in any normative sense—the potential for realisation of downside risks has intensified. Among the current downside macroeconomic risks are potential escalation of protectionist measures involving the world’s largest economies, the onset of a cyclical downturn in Ireland’s main trading partners, and adverse financial developments (including related to Italy).

Furthermore, Brexit presents an elevated risk to medium-term economic growth in Ireland. Despite the expiry of the initial two-year Article 50 notification period at end-March 2019, a broad range of different forms of Brexit are still possible. A negative impact on the Irish economy is anticipated with each of these outcomes. The risk of a no-deal Brexit has increased since *Budget 2019*. Recent joint analysis by the Economic and Social Research Institute and the Department of Finance (Bergin *et al.*, 2019) estimates a disorderly no-deal Brexit reduction of 3.3 per cent in real output over five years, and 5 per cent over ten years, with employment lower by 2 per cent over five years and 3.4 per cent over ten years. For an orderly deal scenario, the long-run effects are about half as large as the worst-case scenario considered. Estimates produced by the Central Bank of Ireland suggest a more severe shock from a disorderly Brexit (Box C).

Table 2.2 reviews the short- and medium-term macroeconomic risks described by the Department in *SPU 2019*. Likelihood and impact factors are assessed, and a brief commentary describes the Council’s own assessment of each risk. Various macroeconomic risks have been noted that could affect the Department’s central forecasts. These include the realistic possibility of an unwinding over the medium term of various favourable conditions that have been in place since the recovery began, including low interest rates and strong external demand conditions. Three additional risks are included by the Council: inappropriate monetary policy, inappropriate domestic policy, and a potential volatility in food commodity prices.

**Table 2.2: Assessing the SPU 2019 Macroeconomic Risk Matrix**

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

<i>Assessment in SPU 2019 (or IFAC risk, when stated) and IFAC comments</i>	<i>Likelihood</i>	<i>Impact</i>
<p><b>“Disorderly Brexit”</b> 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.</p>		
<p><b>External demand shock</b> Strong current global economic growth context. Concern due to slowdown in global trade and prospective trade wars.</p>		
<p><b>Geopolitical risks</b> Limited direct impact, second-round impacts could be more significant.</p>		
<p><b>Disruptions to world trade</b> Protectionism risk: possible negative impact on global trade flows.</p>		
<p><b>Loss of competitiveness</b> Domestic sources: wage pressures, rising commercial/residential rents. External source: exchange rates.</p>		
<p><b>Inappropriate monetary policy (IFAC risk)</b> Monetary policy is set by the European Central Bank. 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 prior to the last crisis.</p>		
<p><b>Housing supply pressure</b> A supply response would be expected to moderate price growth. Excess demand: harmful for competitiveness and labour mobility. Overheating risk: construction boom with output nearing potential.</p>		
<p><b>Food commodity prices (IFAC risk)</b> Weather-related increases of recent years expected to unwind. Potential to disrupt dairy profits, crucial for regional economic growth.</p>		
<p><b>Concentrated production base</b> Production base concentrated in a small number of sectors. Sector- or firm-specific shocks could pose wider risks for the economy.</p>		
<p><b>Overheating economy</b> Could occur in the Irish economy even without significant credit growth. Strong growth when currently near potential output risks overheating. <b>The Council assesses that a high impact would be more appropriate.</b></p>		
<p><b>Inappropriate domestic policy (IFAC risk)</b> Ireland has fewer levers for managing the domestic economy. Two main domestic policy tools are fiscal and macroprudential policy. These may need to play an active role in preventing overheating.</p>		

## Imbalances

The Council’s modular approach—see Appendix D for detailed charts of each module—examines various indicators with a view to identifying sources of economic imbalances in real time (as discussed in Box A of IFAC, 2015b). The approach seeks to address the difficulty of producing a summary statistical estimate of the cyclical position of the economy, and to monitor specific economic data that may indicate the presence of potentially unsustainable positions of relevance to the public finances, or developments that display procyclical tendencies. The four modules examined are the labour market and prices, external balances, dwellings and investment, and credit conditions.

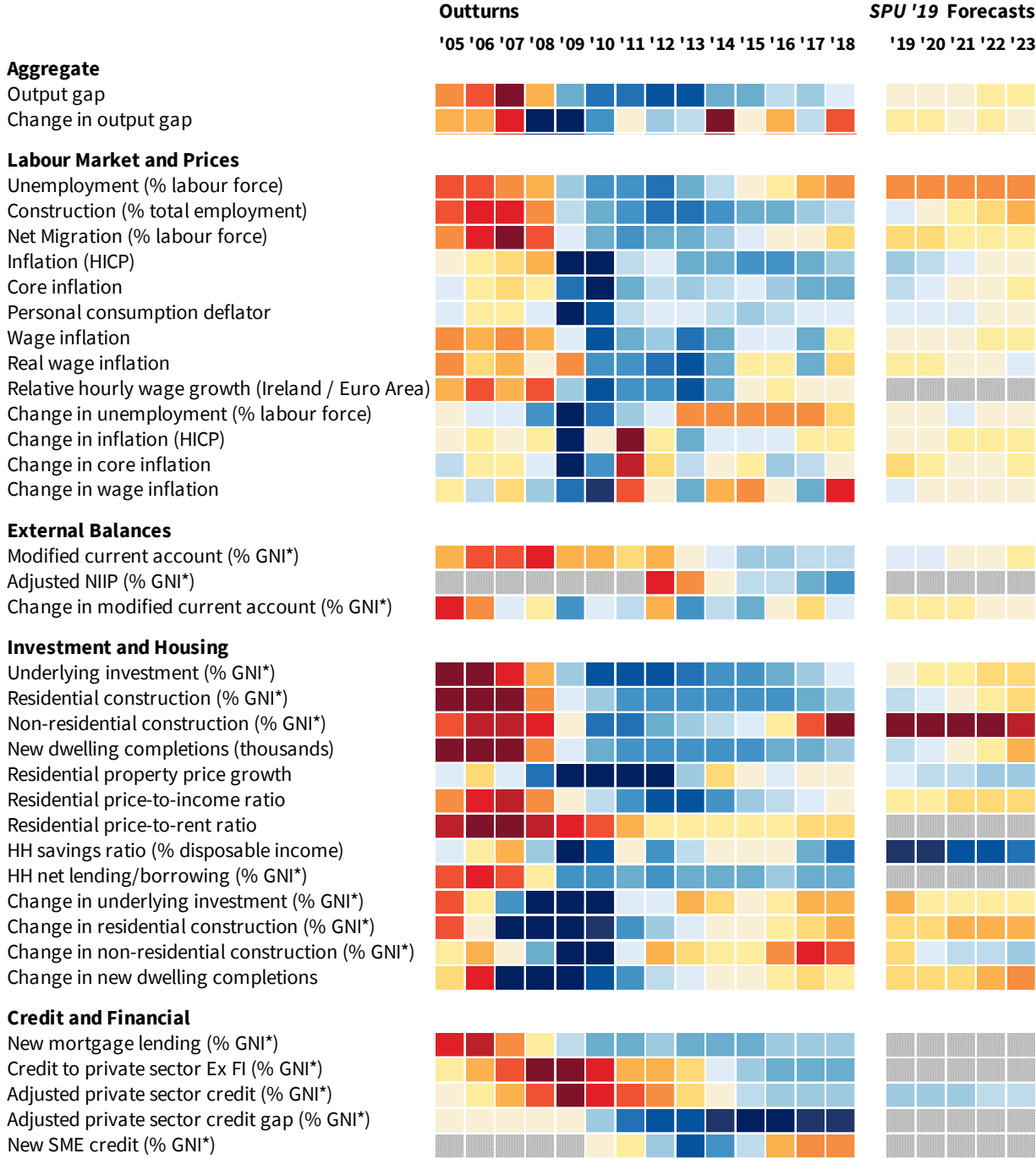
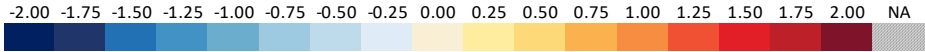
Figure 2.6 shows the Council’s “heat map” visualisation (Timoney and Casey, 2018). The visualisation depicts a set of broadly red-coloured indicators as the crisis years approached, which abruptly transitioned to blue ones for much of the time since 2009, becoming more neutral (yellow) as the recovery progressed. For the forecast period, many of the indicators remain broadly neutral. However, it should be noted that demand-side forecasts are typically constructed on an equilibrium-reversion basis (that is, forecasts tend to be developed in a way that assumes the economy reverts to its equilibrium or steady state rather than showing more acute overheating or excess spare capacity). This assumption may not prove accurate.

### The labour market and prices

Forecasts contained in *SPU 2019* regarding the labour market continue to suggest a benign environment over the forecast horizon. Despite strong employment growth in recent years, inflation measures remain muted in Ireland. Hourly wage growth accelerated in 2018, and is projected to remain higher over the forecast horizon—reaching 3.7 per cent by 2023. The unemployment rate fell below 5 per cent in recent months, and is forecast by the Department to remain between 5.1 and 5.3 per cent over the medium term. Forecasts for inward migration show moderation from a projected 1½ per cent of the labour force in 2019, to a rate averaging 1.2 per cent for 2020–2023—largely unchanged since *Budget 2019*. Analysis of recent flows suggests that a more highly educated and skilled profile of immigrants have been arriving to Ireland, when compared with previous episodes of net inward migration. As discussed previously, the inconsistency between an increasing and positive output gap and a moderation in net migration may imply upside risks to the Department’s net migration forecast.

**Figure 2.6: Heat map for monitoring potential imbalances in the Irish economy**

Within specified standard deviation bands of central values:



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

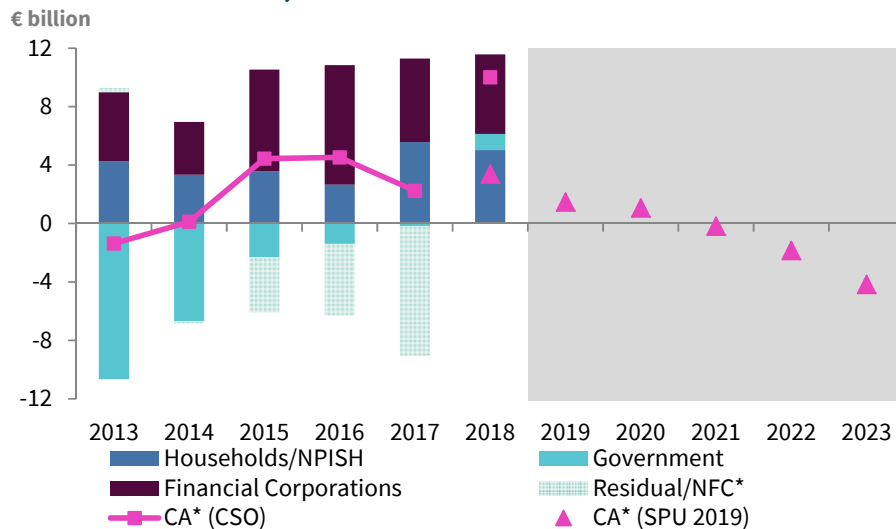
Notes: To provide a more meaningful analysis of sustainable wage growth rates, the sample periods for wage inflation, real wage inflation, relative hourly wage growth (Ireland / Euro Area), and change in wage inflation have been restricted to begin in 2003. This removes the latter years of Ireland’s convergence-growth period, where hourly wages grew by up to 10 per cent annually. For other calculation details, see Timoney and Casey (2018).

## External balances

For the modified current account (CA\*), a breakdown can be analysed based on the net financial balances of institutional economic sectors (described further by Allen, 2018). This is approximated using the balance of gross savings less gross capital formation by households/NPISH, government, financial corporations, and a residual category which includes “modified” non-financial corporations (NFC\*). This breakdown ensures that corresponding adjustments to CA\* are reflected in the net financial balance of the residual/NFC\* category.

The sectoral rebalancing of the Irish economy since 2013 is shown in Figure 2.7. Gross capital formation far exceeded gross savings for the residual/NFC\* category in 2017, which explains the reduction in CA\* for that year. However, the CSO’s preliminary estimate of CA\* in 2018 is a surplus of €10 billion, and the combination of the household/NPISH, government, and financial corporates sectors show a positive net financial balance of €11.6 billion for the year. This tentatively suggests the residual/NFC\* balance may have returned close to balance in 2018.

**Figure 2.7: Gross savings less gross capital formation by institutional sector, and the modified current account**



Sources: CSO; and internal IFAC calculations.

Note: Net-financial-balance components of the modified current account are calculated as gross savings less gross capital formation of households/NPISH, government, financial corporations, and a residual category which includes (modified) non-financial corporations. The CSO has indicated a preliminary estimated CA\* surplus for 2018 of €10 billion. The Department’s forecast of 1.8 per cent of GNI\* corresponds to a lower surplus of €3.4 billion.

The rising CA\* trend has also been apparent in the adjusted net international investment position—excluding all IFSC entities and all non-financial corporations—which increased to +€114 billion in 2018 from –€90 billion in 2012 (see Appendix D).

The CA\* surplus is forecast in *SPU 2019* to unwind by 2020, before reaching a deficit of €3.2 billion in 2023. However, the pace of CA\* deterioration could prove more rapid if the household savings ratio falls more in line with historical patterns than *SPU 2019* forecasts assume. As discussed later in this chapter with respect to household-sector credit, the balance-sheet improvement undergone by households in the past decade has been substantial—therefore, an increase in the marginal propensity to consume by households could be expected to occur following an extended period of high net savings.

### Dwellings and investment

From a low base of activity, residential construction is forecast by the Department to continue to rise over coming years. Annual housing completions, officially estimated at 18,023 for 2018, are forecast by the Department to increase to 48,000 by 2023. This would approach the upper end of estimates of the appropriate medium-term level of new-dwelling completions consistent with demand.

While it is necessary to address the undersupply of new housing, there is a risk that the associated construction activity in an economy already close to full employment will create imbalances in demand and a skew towards new-dwelling construction. Residential construction is an employment-intensive activity and generates significant tax revenues, as well as typically attracting inward migration—which in turn can further increase the required supply of new dwellings.

As discussed earlier regarding the Department's investment forecasts, the level of activity in non-residential construction is projected to remain above its long-run average share of GNI\* over the medium term. Allowing for usual volatility, this level of activity is more than two standard deviations above its long-run average, suggesting possible resource over-concentration in non-residential construction.

### Credit conditions

The stock of credit owed by households and enterprises (excluding financial intermediation) has been in continuous decline for ten years, beginning in the fourth quarter of 2008. During this period, credit outstanding has more than halved—an enormous deleveraging of €199 billion, or close to €5 billion per quarter on average. In this context, it is perhaps encouraging that the current pace of reduction in the stock of private-sector credit has slowed, and new lending to small-

and medium-sized enterprises reached €5.3 billion in 2018, close to double the amount newly borrowed in 2014. Net credit flows to private-sector enterprises (excluding financial intermediation) returned to growth in 2018. However, as discussed by White and Sheenan (2019), the extent of deleveraging has caused disintermediation in the Irish banking system. As a result, non-bank financing in commercial property transactions appears to have reduced the reliance on bank lending compared to previous financial cycles in Ireland, suggesting a lower degree of balance-sheet risk.

For household lending, net flows of credit advanced for principal dwelling purchases have been growing since the second quarter of 2016, and have since accelerated to 4.7 per cent as of the fourth quarter of 2018. This growth has occurred despite the impact of macroprudential limitations on lending, which could be contributing to the slowdown in national residential property price growth over the past year—recent CSO data show a reduction in annual price growth to 3.9 per cent in March 2019, compared to 12.6 per cent in March 2018. With new-dwelling completions forecast to increase steadily to 48,000 units over the medium term, there is clearly potential for rapid growth in net flows of credit for house purchases. Given the central role of a functioning market for private-sector credit in a modern developed economy, credit expansions carry significant potential for imbalances in the economy to arise. It is therefore essential that developments in credit are closely monitored and anticipated, in order to enable policymakers and regulators to take corrective actions where necessary.

### **Box E: Deriving Forecasts for Modified Gross National Income and the Modified Current Account**

The CSO's *National Income and Expenditure* release for 2016 introduced modified gross national income (GNI\*) and the modified current account (CA\*). Given the significant impacts of globalisation on Irish data, these indicators have improved users' understanding of the level and sustainability of economic activity in the economy, as portrayed in the national accounts and the balance of payments data. Although further development of these statistics is ongoing—for example, the provision of a constant-prices GNI\* series would be very helpful to users—the currently available data, in conjunction with alternative supply-side estimates, provide a more consistent framework for analysis of the economy.

#### **Details of the Adjustments for GNI\* and CA\***

Box C of the November 2018 *Fiscal Assessment Report* (IFAC, 2018e) described the improved availability of relevant measures of underlying economic activity in Ireland in recent years. Two of the most relevant of these underlying indicators are GNI\* and CA\*, which both exclude:



- net factor income of re-domiciled PLCs, and
- depreciation of research and development (R&D) related service imports and trade in intellectual property (IP), and aircraft for leasing.

These adjustments relate to outflows of reinvested earnings within primary income in the balance of payments. Net factor income of re-domiciled PLCs is excluded as this income reflects future dividend payments to foreign-equity owners that will not accrue to Irish residents. Similarly, depreciation of foreign-owned domestic capital is an operating cost of foreign-owned firms, and therefore does not affect the resources generated by domestic residents (CSO, 2016). By adding these amounts to outflows of reinvested earnings in the balance of payments, GNI\* and CA\* no longer include them as domestic primary income.

The following further adjustments to CA\* relate to the impact on net exports of firms that buy aircraft for leasing and engage in R&D activities:

- net aircraft activities related to leasing,
- net trade in R&D-related IP, and
- R&D service imports.

Net aircraft activities related to leasing are excluded from imports of goods, reflecting the exclusion of the related depreciation charge from primary income flows. Purchases of R&D-related IP by firms domiciled in Ireland have artificially increased the level of imports of services recorded in the Irish imports data, and this has led to an increase in R&D-related IP exports, albeit to a much lesser extent than the increase in imports. Other non-IP R&D-related imports of services are also excluded. As this activity has been undertaken by large multinational firms whose profits do not accrue to domestic residents, these amounts are excluded from net exports.<sup>27</sup>

#### **Deriving Forecasts of GNI\* and CA\***

Given the importance of GNI\* and CA\* for quantifying activity and sustainability in the Irish economy, the Council has developed a mechanical approach to estimating the adjustments needed to forecast the underlying measures. To forecast GNI\* and CA\*, the derived adjustments are combined with the Council's benchmark forecasts for gross national income and the current account. Adjustments common to both GNI\* and CA\* are forecast as follows:

- Net factor income of re-domiciled PLCs is assumed to remain unchanged.
- Depreciation adjustments are forecast using prior-year amounts, updated for straight-line depreciation in additional investments in intangibles and aircraft.<sup>28</sup>

Forecasts of the remaining adjustments made in calculating CA\* use the following approaches:

- Net aircraft activities related to leasing are extended with the nominal growth rate in aircraft investment.
- R&D service imports and R&D-related IP imports are extended with the nominal growth rate in intangibles investment.
- R&D-related IP exports are assumed to remain unchanged.

<sup>27</sup> For 2017, the cumulative adjustment amount to primary income outflows was €53 billion, and the total adjustments to net exports included in CA\* (€30.4 billion) imply “modified net exports” of €119.6 billion.

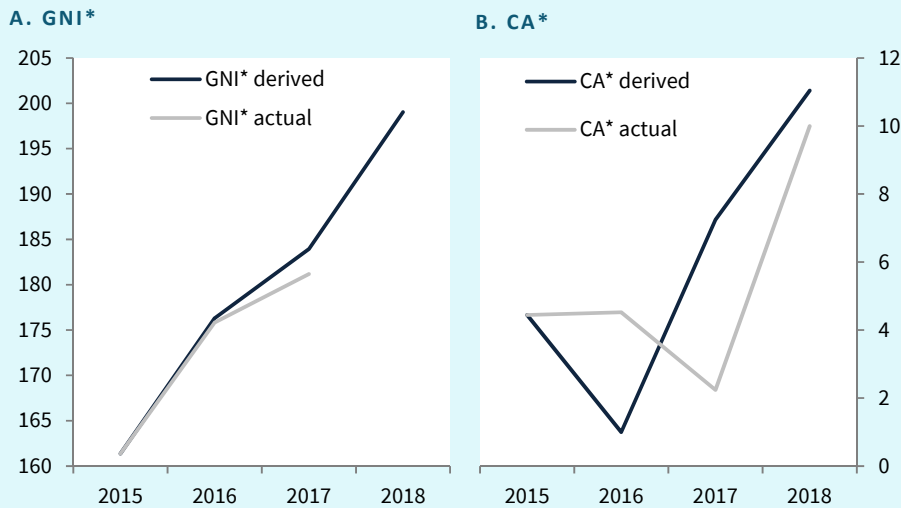
<sup>28</sup> Depreciation of R&D-related service imports and trade in IP is approximated by adding its prior-year level to 10 per cent of current-year intangibles investment. Similarly, depreciation of aircraft for leasing adds its prior-year level to 5 per cent of current-year aircraft investment, the majority of which (86 per cent in 2018) relates to leasing activity.

The usefulness of this approach can be tested by deriving series for GNI\* and CA\* using historical data for gross national income and the current account, adjusted using the forecasts described above, and comparing these derived series to the actual outturns.

Figure E1 compares derived and actual GNI\* and CA\* data, with a preliminary 2018 outturn of CA\* also included. The adjustments take 2015 outturns as the base period and then forecast on the basis of outturn data for investments in intangibles and aircraft, and services exports.

**Figure E1: Derived forecasts of GNI\* and CA\* for 2016–2018**

€ billion



Sources: CSO; and internal IFAC calculations.

Note: The “CA\* actual” series includes a preliminary estimated surplus for 2018 of €10 billion, provided by the CSO at the National and International Accounts Q4 2018 press conference in March 2019.

The results appear reasonably good for GNI\*, but somewhat more mixed for CA\*. However, the CSO has advised that its preliminary CA\* estimate for 2018 is consistent with an upward-sloping trend over several years, which appears to be captured in the derived figures (except for 2016). As such, the methodology applied offers a consistent estimation of the adjustments made to gross national income and to the current account for arriving at GNI\* and CA\*.

Some issues with the approach include that the magnitudes of absolute forecast errors for the adjustments may be large, and these errors will not necessarily be offset. Furthermore, the effects of globalisation mean that there is an inherent difficulty in forecasting Irish GDP and gross national product (GNP), in particular due to the volatile performance of net exports. Nonetheless, the Council believes it is important that GNI\* and CA\* are forecast in a manner that is consistent with the related expectations for intangibles and aircraft investment. Otherwise, forecasts for these important indicators of the economy become overly reliant on a judgement-based methodology.