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Stability Programme Update 2018

Incorporating the Department of Finance's Spring Forecasts

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Ireland's Stability Programme
April 2018 Update

Incorporating the Department of Finance's Spring Forecasts

Foreword

This update of Ireland's *Stability Programme* takes account of Budget 2018 and other Government initiatives. It is Ireland's national medium-term fiscal plan and includes an update of the economic and fiscal outlook (the Department of Finance's Spring forecasts). This document was submitted to the European Commission on 30 April 2018 in accordance with the requirements of the European Semester.

It was presented in draft form to Dáil Éireann on 17 April prior to submission to the European Commission.

The document incorporates horizontal guidance provided by the European Council to Member States in March 2018 as part of the discussions on the European Semester cycle of economic monitoring and policy guidance. It has been prepared in line with the May 2017 guidelines on the format and content of Stability and Convergence Programmes.

This document should be read in conjunction with Ireland's *National Reform Programme (NRP) 2018*, which sets out policies being advanced in response to challenges identified by the European Commission in its *Country Report* on Ireland, and which reports on progress towards *Europe 2020* strategy targets.

The analysis and forecasts contained in this document are based on macroeconomic data available to end-March 2018. The fiscal projections are based on data to mid-April. The macroeconomic forecasts contained herein were endorsed by the *Irish Fiscal Advisory Council* on 10th April 2018.

In order to further enhance the budgetary framework, the Department of Finance is now publishing its macroeconomic and fiscal forecasts on an *ex-post* basis, i.e. incorporating the fiscal outlook as set out in Budget 2018.

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[1] In line with the Governments *Open Data Initiative* the data underpinning charts in this document are available on the Department of Finance website.

Chapter 1
Overview and General Policy Strategy

1.1 Policy Strategy

While GDP clearly overstates domestic living standards, analysis of a wider suite of indicators shows the economy in a healthy position at present. For instance, the level of employment – in full-time equivalent terms – rose at an annual rate of 3.7 per cent at the tail-end of last year and the unemployment rate has continued to fall in the opening months of this year. Indeed, the economy is approaching a situation that could reasonably be classified as full-employment.

In terms of budgetary policy, it is imperative that the pro-cyclical mistakes of the past are avoided and, in this context, the Government will continue to manage the public finances in a prudent manner. Moreover, the Government is acutely aware that the ratio of debt-to-GNI* – a better measure of sustainability in Ireland than the debt-to-GDP ratio – remains at around 100 per cent. Continuing to bring this ratio to safer, lower levels remains a key objective for budgetary policy.

Notwithstanding the current healthy economic position, there are clouds on the horizon. First and foremost is the impending exit of the UK from the European Union. This time next year, Ireland's single most important trading partner will have formally left the European Union, bringing to an end its 46-year membership of the Union. At the current juncture, the most likely scenario thereafter involves a transition period of 21 months, during which the status quo will continue to apply. Beyond 2020, the post-exit trading arrangements between the UK and the EU will have a significant bearing on Irish living standards and there is, at this point, no clarity on the form that the post-exit arrangements will take.

Secondly, with exports the backbone of the Irish economy, the possibility of any disruption to world trade is a concern. While Ireland – nor indeed the wider European Union – is not at the forefront of current difficulties, both regions could be caught in the crossfire in the event of significant tariffs being introduced in other regions. At the same time, rising geopolitical tensions have the potential to damage global economic conditions.

From a budgetary perspective, the priority must be to rebuild the fiscal buffers so that the economy can best absorb any adverse developments. In this context, the Government will continue to prioritise stability-oriented budgetary policies that ensure a further reduction in the debt ratio.

1.2 Short-term Economic and Budgetary Outlook

The baseline scenario is for GDP growth of 5.6 per cent this year, followed by an expansion of 4.0 per cent next year. This solid growth should continue to support further employment creation, with the level of employment set to surpass its pre-crisis peak over the course of this year. The economic forecasts set out in this document have been endorsed by the *Irish Fiscal Advisory Council*.

Figures published by the Central Statistics Office (CSO) show a headline deficit of 0.3 per cent of GDP for last year. This is unchanged compared with that estimated at the time of *Budget 2018* last October.

For this year, a headline deficit of 0.2 per cent of GDP is projected; again this is unchanged from that projected at the time of the *Budget 2018* (and takes into account the classification – as announced by the CSO in December 2017 – of Approved Housing Bodies within the general government sector).

Table 1: summary – main economic and fiscal variables, per cent change (unless stated)

	2017	2018	2019	2020	2021
Economic Activity					
Real GDP	7.8	5.6	4.0	3.4	2.8
Real GNP	6.6	5.6	3.7	3.1	2.6
Prices					
HICP	0.3	0.8	1.0	1.4	2.6
Core HICP	0.0	0.7	1.2	1.5	2.6
GDP deflator	-0.3	0.0	1.3	1.3	1.5
Balance of Payments					
Trade balance (per cent of GDP)	32.1	31.6	31.1	30.8	30.2
Current account (per cent of GDP)	12.5	12.2	11.4	10.9	10.2
Labour Market					
Total Employment ('000)^	2,194	2,254	2,307	2,350	2,389
Employment	2.9	2.7	2.3	1.9	1.7
Unemployment (per cent)	6.7	5.8	5.3	5.3	5.4
Public Finances (per cent of GDP)					
General government balance	-0.3	-0.2	-0.1	0.3	0.4
Structural balance	-0.4	-0.9	-0.4	0.1	0.3
Debt ratio (year-end)	68.0	66.0	63.5	60.2	58.7
Debt ratio (per cent of GNI*)^	100.1	96.9	93.7	88.9	86.8
Net debt position (year-end) ~	58.9	56.5	54.7	53.3	51.6

^ forecasts for GNI* are compiled on the purely technical assumption that this variable grows in line with nominal GNP.
~ net debt figures from 2018 estimated by mechanical extrapolation of assets.
Source: CSO and Department of Finance.

Part of the improvement in the headline deficit in recent years reflects cyclical factors; when these are excluded, the underlying (structural) deficit is projected at 0.9 per cent for this year. Ireland's medium term objective – the anchor of the preventive arm of the *Stability and Growth Pact* – is a structural deficit of 0.5 per cent of GDP.

Estimating the cyclical position of the economy has become increasingly complex at present, largely because of the distortions to GDP arising from activity in parts of the multinational sector. The impact of these statistical anomalies is that, on the basis of the agreed methodology, the output gap is strongly positive this year and, as a result, it may be next year before the MTO is formally achieved. Having said that, alternative methodologies, more suited to the Irish economy, show a small negative output gap, suggesting that a balanced budget has, indeed, been achieved (see chapter 9).

The budgetary projections in this document reflect the voted expenditure increases set out in *Budget 2018* and the *National Development Plan*, and specifically in relation to 2019, reflect pre-committed expenditure increases of c.€2.6 billion (€1.5 billion for additional capital spending, €0.4 billion to provide for demographic-related costs, €0.4 billion for public sector pay and €0.3 billion for carry-over costs associated with measures introduced this year). Accordingly, the overall voted expenditure increases for 2019 are broadly in line with the increases set out in Budget 2018, apart from some technical adjustments and additional capital included in the NDP. Therefore, consistent with *Budget 2018* projections, the fiscal accounts, in headline terms, will remain in modest deficit next year.

The debt-to-GDP ratio continues to decline and is projected at 66.0 per cent of GDP for this year. It must be acknowledged, however, that the recent evolution of the debt-to-GDP ratio paints an overly benign picture of public indebtedness in Ireland; other metrics – such as debt interest payments as a share of revenue or the ratio of debt-to-modified GNI[2] – show that, while declining, public indebtedness remains high in Ireland (the ratio of debt-to-GNI* is projected at 97 per cent for this year). This highlights the importance of the Government's strategy of implementing prudent budgetary policies designed to further reduce the elevated burden of public debt.

Net public indebtedness in Ireland – that is the general government sector's financial liabilities less its financial assets – is forecast at 56.5 per cent of GDP for this year. This takes into account accumulated financial assets amounting to around 9.4 per cent of GDP at year-end. Prudently, this does not, however, take into account the State's remaining assets in the domestic banks or receipts from the wind-up of NAMA. As these are realised over time, the outstanding amount of both gross and net debt will decline.[3]

[2] Modified Gross National Income (also known as GNI*) more accurately reflects the income standards of Irish residents than GDP. It differs from actual GNI in that it excludes *inter alia* the depreciation of foreign-owned, but Irish-resident, capital assets (most notably intellectual property and assets associated with aircraft leasing) and the undistributed profits of firms that have re-domiciled to Ireland.

[3] A more detailed analysis of public debt developments in Ireland will be outlined in the Department's *Annual Report on Public Debt in Ireland* which will be published over the summer.

Chapter 2
Economic Outlook

2.1 Summary

The baseline forecast is for strong headline growth in the short-term, with GDP projected to increase by 5.6 per cent this year, partly reflecting statistical distortions arising from parts of the multinational sector. Growth is projected to remain reasonably broad-based, with positive contributions from both net exports and domestic demand. The labour market should benefit accordingly, with employment growth of 2.7 per cent expected this year, facilitating a reduction in the unemployment rate to an average rate of 5.8 per cent. The impact of the euro-sterling exchange rate appreciation on consumer prices is likely to wane; as a result, the rate of inflation is projected to accelerate moderately to 0.8 per cent.

Short-term risks to the central scenario are tilted to the downside. On a positive note, statistical factors – including exports linked to contract manufacturing (see below) – could once again inflate the headline growth rate. On the other hand, trade protectionism is an important downside risk to short-term prospects, given the importance of exports to the Irish economy. Geopolitical risks have increased since the publication of the Department's autumn forecasts last October. Over the medium-term, the balance of risk is tilted firmly to the downside, in large part reflecting uncertainty regarding the post-exit trading relationship between the EU and UK (risks to short- and medium-term projections are outlined in more detail in chapter 6).

2.2 Macroeconomic Outturn 2017

First estimates show that GDP increased by 7.8 per cent last year. This is 3½ percentage points higher than assumed at the time of the Budget reflecting, in the main, statistical factors – a surge in contract manufacturing[4] activity and royalty exports in the second half of the year – which have a limited, if any, impact on Irish living standards.

The headline export performance – with growth of 6.9 per cent recorded in 2017 – was heavily influenced by contract manufacturing. Having said that, the underlying performance of both goods and service exports was very strong once again last year.

On the domestic front, investment fell by 22.3 per cent last year, although the headline figure was distorted by a significant decline in aircraft purchases as well as the low level of investment in intangible assets (both of these transactions are GDP-neutral in the short-term as the assets are sourced from abroad and therefore classified as imports). Other components of capital formation were also weak last year with 'core' machinery and equipment spending (i.e. excluding the volatile components referred to above) declining by 12.0 per cent. In fact, building and construction was the only category of investment in positive territory, rising by 16.5 per cent last year with strong contributions from both the residential and commercial construction sub-components.

[4] Contract manufacturing is a form of outsourcing where a company in Ireland engages a company abroad to manufacture products on its behalf (and *vice versa)* but where the Irish-resident firm retains ownership of all inputs into the production process.

Notwithstanding strong growth in disposable income, improving consumer confidence and modest inflation, the growth of personal consumer spending was relatively subdued last year, increasing by just 1.9 per cent.[5] At an aggregate level, preliminary data suggest a pick-up in the savings ratio last year to 8.6 per cent.

Imports contracted sharply last year, with the 6.2 per cent fall reflecting significant declines in both the goods and service categories. On the goods side, the fall was attributable to *inter alia* lower investment in aircraft (which are sourced from abroad); on the services side, the most notable development was the decline in intangible investment, which reduced imports of intellectual property.

With the expansion of exports and contraction of imports, the net trade balance increased significantly last year, reaching over 32 per cent of GDP. As a result, the current account of the balance of payments recorded a double-digit surplus as a percentage of GDP last year.

In terms of the labour market, 61,000 (net) jobs were created over the course of last year, so that the level of employment was 2.9 per cent higher than a year earlier. There was also a noticeable shift from part-time employment into full-time employment, a further sign of the health of the labour market at present.

On the nominal side, headline inflation was once again subdued, averaging just 0.3 per cent (on a HICP basis) for the year, as the dampening impact on prices of euro-sterling exchange rate appreciation offset the impact of rising oil prices and price increases in the services sector. The GDP deflator – a wider measure of inflationary pressures in the economy – declined slightly last year, largely due to an exchange rate–related deterioration in the terms-of-trade.

2.3 Macroeconomic Projections 2018

2.3.1 External assumptions

Short-term prospects for the global economy are generally favourable at present. In terms of Ireland's key export markets, growth in the euro area has surprised on the upside of late, and solid growth is anticipated once again this year. In the US, several factors, including fiscal stimulus, should help support continued expansion. On the other hand, prospects for the UK economy remain uncertain; the most likely outcome involves a slowdown in the pace of growth as rising inflation dampens consumer spending and uncertainty regarding post-EU exit trading arrangements weighs on investment spending. Projections for growth in key external markets are presented in table 2.

Oil prices have increased by around 20 per cent relative to the Department's autumn forecasts reflecting *inter alia* the acceleration in global growth (which has raised the demand for oil) and OPEC's decision to extend production cuts this year (which is weighing on supply). The nominal effective (trade-weighted) exchange rate is broadly unchanged relative to the autumn forecasts, as the modest appreciation of the euro-dollar bilateral rate since the autumn has been largely offset by a moderate depreciation of the euro-sterling bilateral rate in recent months.

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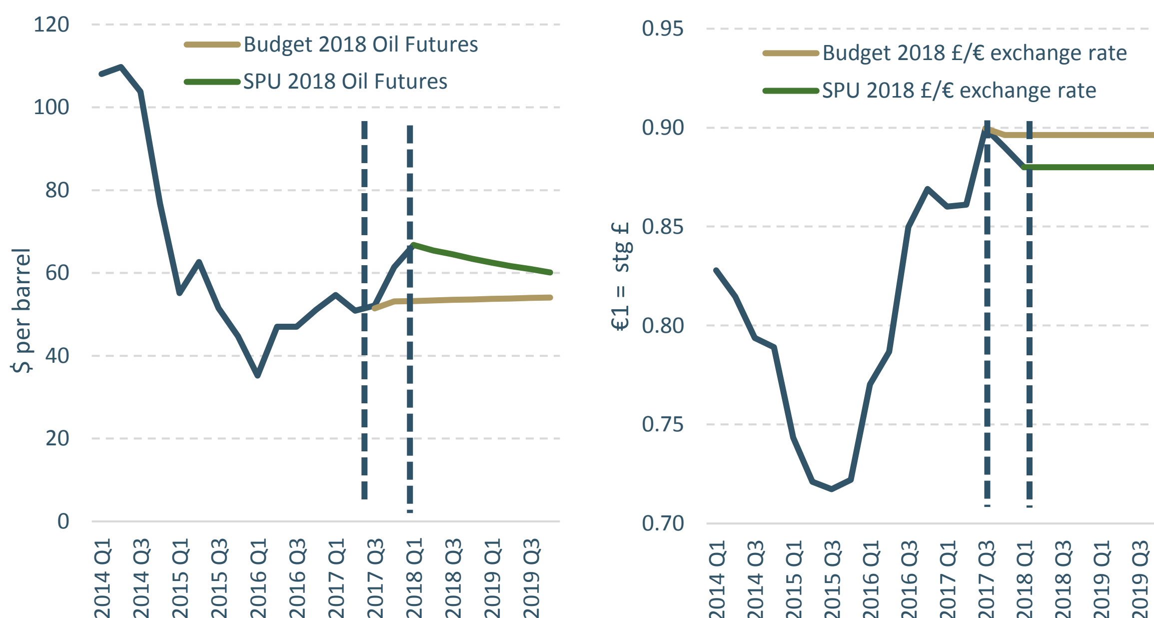
[5] It should be noted that there has been a pattern of upward revisions to the preliminary estimates of consumer spending in recent years once the national accounts are published in July. This has been driven by *inter alia* the interaction between very strong rental inflation and updating the chain linked reference year.

Table 2: external assumptions, per cent change (unless stated)

	2017	2018	2019	2020	2021
External GDP growth					
United States	2.3	2.9	2.8	1.8	1.7
Euro area	2.5	2.3	2.1	1.6	1.5
United Kingdom	1.7	1.3	1.1	1.7	1.7
Technical assumptions					
Euro-sterling exchange rate (€1=)	0.88	0.88	0.88	0.88	0.88
Euro-dollar exchange rate (€1=)	1.13	1.23	1.23	1.23	1.23
Brent crude (dollars per barrel)	54.8	65.0	61.3	58.7	58.1

Oil prices (futures) in 2018 - 2020 are calculated on the basis of futures markets as of mid-March 2018. Oil price futures are available for the first three quarters of 2020 and, thereafter, oil prices are held constant.
Exchange rate outturns as of mid-March 2018 and unchanged thereafter.
Source: OECD Interim Economic Outlook (March) for 2018-2019, with projections from 2020-2021 taken from the IMF World Economic Outlook (October 2017).

Figure 1: change in external assumptions relative to autumn 2017 forecasts



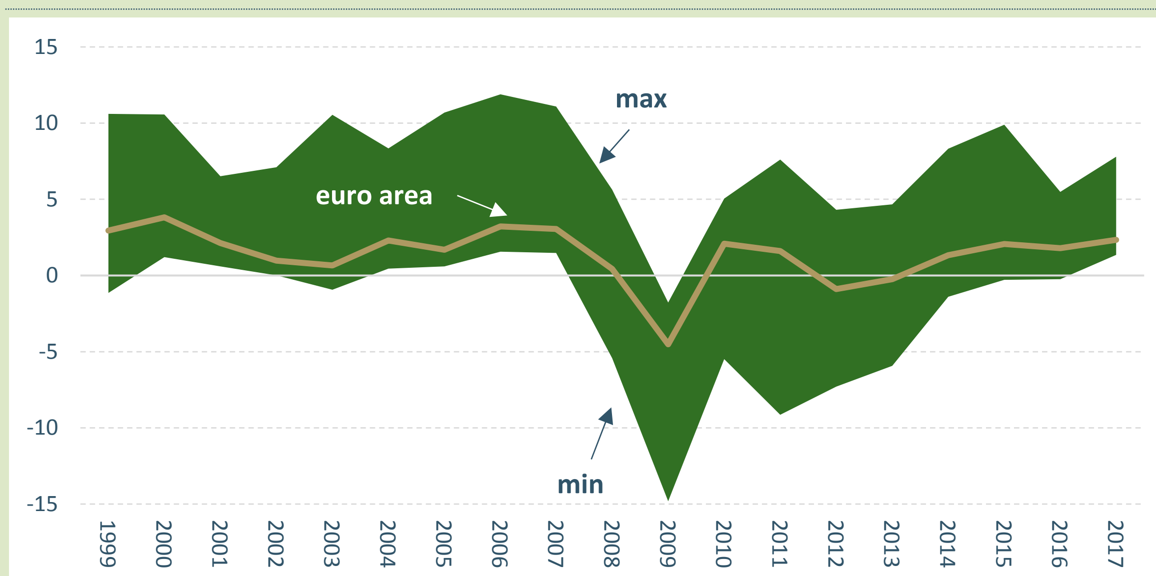
The Department's autumn forecasts were set out in the Economic and Fiscal Outlook, October 2017.
In relation to exchange rates, the standard approach is to hold these constant at rates prevailing at a certain cut-off point (mid-March for the Department's spring forecasts and mid-September for the Department's autumn forecasts). Thus, given the depreciation of the euro relative to sterling since the autumn, holding the exchange rate unchanged at mid-March levels would imply a depreciation of 1.4 per cent for 2018 relative to what had been assumed in the autumn.
Source: Macrobond (for oil prices) and Central Bank of Ireland (for exchange rate data).

Box 1: economic recovery in the euro area

Evidence is mounting that recovery in the euro area is finally gaining momentum. The latest figures show that growth surprised on the upside last year, with GDP expanding by 2.3 per cent for the year as a whole. Since the 'double-dip' in 2012, the euro area has now recorded 19 consecutive quarters of positive annual growth.

Perhaps more importantly, the data show that growth in all euro area countries was in positive territory during 2017, the first time this has happened since the crisis (see graph). Moreover, the dispersion of growth rates across the euro area has narrowed – last year, the strongest growth rate was recorded in Ireland (7.8 per cent) with the weakest growth rate recorded in Greece (1.4 per cent), a divergence of 6.5 percentage points. In contrast, in 2011 the divergence in growth rates amounted to 16.7 percentage points. As a result of the economic recovery, real GDP in the euro area is now 5.5 per cent above its pre-crisis peak although, on a per capita basis, it is 3.1 per cent above the earlier peak.

Real GDP growth in the euro area, per cent



Euro area GDP growth is based on all 19 Member States over the whole horizon, with the exception of Malta in 1999 and 2000. The Irish GDP growth rate in 2015 is excluded.
Source: Eurostat.

The strengthening in the pace of recovery in the euro area inevitably raises questions regarding the cyclical position of the euro area economy (the size of the output gap) and whether the pace of inflation is set to pick-up.

In relation to the former, answering this question has become increasingly difficult in recent years, given that links between measures of capacity utilisation (such as the output gap, the unemployment gap, etc.) and inflation have become somewhat more tenuous since the crisis began.

In relation to the latter, the improvement in the inflationary environment has led the eurosystem (the European Central Bank and the National Central Banks of the euro area) to taper its asset purchase programme, currently scheduled to end in September 2018, to €30 billion per month from €60 billion per month up until December of last year. On current assumptions, therefore, the era of ultra-cheap money is coming to an end and *ceteris paribus* this will have implications for sovereign borrowing costs.

2.3.2 The Irish economy in 2018

Against this generally favourable external backdrop, Irish exports are forecast to grow by 6.9 per cent this year. This projection assumes that exports associated with contract manufacturing continue to boost the headline export figure. On an underlying basis, Ireland's export performance is projected to decelerate this year, reflecting *inter alia* a moderation in service exports from the double-digit growth rate recorded last year.

Underlying domestic demand – that is domestic demand excluding the volatile components of investment spending – is projected to increase by 3.9 per cent this year (this is a better approximation of activity in the real economy this year given the expectation that GDP growth will continue to be boosted by statistical factors). Robust growth in real household incomes, solid consumer confidence and progress in household balance sheet repair[6] will continue to support private consumption, which is forecast to increase by 2.6 per cent this year. Excluding new car purchases, retail sales have remained solid in the first quarter of this year, supporting this assumption. The household savings rate is assumed to remain broadly unchanged this year.

Table 3: macroeconomic prospects

	2017	2018	2019	2020	2021
	year-on-year per cent change				
real GDP	7.8	5.6	4.0	3.4	2.8
nominal GDP	7.5	5.6	5.4	4.7	4.3
real GNP	6.6	5.6	3.7	3.1	2.6
Components of GDP	*year-on-year per cent change (real)*				
personal consumption	1.9	2.6	2.4	2.3	1.9
government consumption	1.8	1.9	1.9	1.8	1.7
investment	-22.3	8.5	7.4	5.2	4.7
stock changes^	0.1	0.0	0.0	0.0	0.0
exports	6.9	6.9	5.4	4.5	3.9
imports	-6.2	6.6	5.9	4.8	4.4
Contributions to GDP growth	*annual percentage point contribution*				
domestic demand	-6.2	3.0	2.8	2.3	2.0
net exports	14.5	2.5	1.2	1.1	0.8
stock changes	0.1	0.0	0.0	0.0	0.0
statistical discrepancy	-0.6	0.0	0.0	0.0	0.0
Current prices	*€ millions*				
GDP (nearest €25m)	296,150	312,750	329,575	345,100	360,000
GNP (nearest €25m)	241,175	255,400	268,250	280,250	292,100
GNI* (nearest €25m)^^	201,150	212,975	223,625	233,600	243,450

Rounding can affect totals.
^ contribution to GDP growth.
^^ technical assumption that its growth rate moves in line with nominal GNP growth.
Source: 2017 - CSO; 2018 to 2021 - Department of Finance.

[6] Central Bank data show that, at an aggregate level, household balance sheets continue to improve; the aggregate position, however, hides pockets of high leverage.

Investment is set to increase by 8.5 per cent this year, with positive contributions expected from all sub-components of capital formation. The forecasts assume that investment in intangible assets and aircraft return to more “normal” rates of growth this year. These components are extremely volatile and are primarily responsible for the unpredictability of headline investment in recent years. However, large swings in these components are GDP-neutral in the short-term, due to the high import-content of such spending. On an underlying basis, investment is forecast to accelerate this year. Building and construction spending is forecast to increase by 12.8 per cent – with strong contributions from both residential and commercial investment – while machinery and equipment spending should benefit from the acceleration in domestic demand and continued strength in external demand. In addition, financing conditions appear to be less binding than in the recent past.

Imports of goods and services are expected to grow by 6.6 per cent this year broadly in line with the projected growth in final demand. This assumes an increase in the level of imports of aircraft and intellectual property this year.

Overall, therefore, GDP is forecast to increase by 5.6 per cent this year, with GNP also expected to increase by 5.6 per cent.

2.4 Balance of Payments

The trade balance is set to decline modestly this year, reflecting the assumption of a deterioration in the terms-of-trade (the price of exports relative to imports) as well as the assumption of a recovery in imports of aircraft and intellectual property.

Table 4: savings, investment and the balance of payments, per cent of GDP

	2017	2018	2019	2020	2021
Gross Savings	36.7	37.5	37.8	37.8	37.6
of which:					
- households	2.9	2.8	2.8	2.7	2.4
- corporate	32.1	32.7	32.7	32.5	32.3
- government	1.8	2.0	2.2	2.7	3.0
Investment^	24.2	25.4	26.4	27.0	27.5
of which:					
- building and construction	7.4	8.3	9.1	9.5	9.9
- other investment	16.0	16.3	16.6	16.8	17.0
: investment in tangible assets	6.2	6.2	6.2	6.2	6.2
: investment in intangible assets	9.8	10.1	10.4	10.6	10.8
- change in stocks	0.8	0.8	0.7	0.7	0.7
- statistical discrepancy	0.0	0.0	0.0	0.0	0.0
Current account	12.5	12.2	11.4	10.9	10.2
of which:					
- trade balance	32.1	31.6	31.1	30.8	30.2
- income balance	-19.6	-19.4	-19.7	-19.9	-20.0

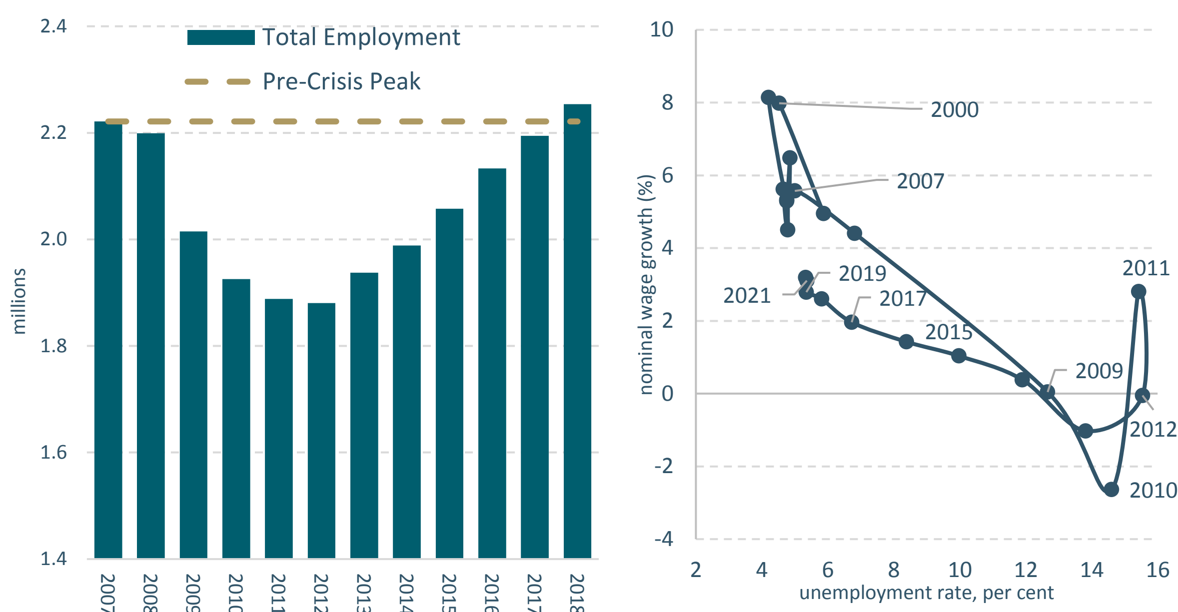
Rounding can affect totals.
^ More specifically, Gross Capital Formation which is the sum of gross domestic fixed capital formation, changes in stocks and the statistical discrepancy.
Source: 2017 - CSO; 2018 to 2021 - Department of Finance.

With a modest improvement in the income balance in prospect, a current account surplus of 12.2 per cent of GDP is projected for this year. It must be stressed, however, that the current account position is inflated by a variety of statistical factors which emanate from the multinational sector, including so-called 'contract manufacturing', re-domiciled PLC's and the depreciation of Irish-based, foreign-owned capital assets. The CSO will publish the modified measure – CA* – over the summer which will provide a better insight into the underlying trends.[7]

2.5 The Labour Market

Continued output growth is expected to translate into further employment creation, with the level of employment expected to increase by 60,000 (2.7 per cent) this year. The increase in employment has been broadly-based with gains evident across most sectors of the economy in recent years; this sectoral trend is expected to continue this year.

Figure 2: employment and the phillips curve



Source: CSO, Department of Finance.

Unemployment has fallen significantly since its peak of 16 per cent in 2012, with both short- and long-term unemployment on a steady downward trajectory in recent years. For this year, employment growth is expected to exceed the growth in the labour force once again, so that unemployment is set to fall further. The latest figures show an unemployment rate of 6.1 per cent in March 2018 and, for the year as a whole, the unemployment rate is projected to average 5.8 per cent of the labour force.

After a number of years of modest earnings growth (at least at an aggregate level), available evidence points to a modest pick-up in wage inflation in recent quarters. In the private sector, for example, hourly earnings growth was 2.1 per cent in the final quarter of last year. This trend is likely to continue this year, with the decline in the unemployment rate likely to be associated with an increase in hourly pay of around 2.1 per cent for the year as a whole.

[7] The Department will publish a detailed analysis of Balance of Payments developments shortly.

Table 5: labour market developments, per cent change (unless stated)

	2017	2018	2019	2020	2021
Employment	2.9	2.7	2.3	1.9	1.7
Unemployment rate (per cent)	6.7	5.8	5.3	5.3	5.4
Labour productivity^	4.2	2.3	1.5	1.3	1.0
Compensation of employees*	5.8	5.7	5.4	5.1	4.8
Compensation per employee*	2.0	2.6	2.8	3.2	3.1

^ GDP per hour worked.
*Non-agricultural sector.
Source: 2017 - CSO; 2018 to 2021 - Department of Finance. The wage bill figure for 2017 is a Department of Finance estimate pending publication of the 2017 National Income and Expenditure data.

2.6 Price Developments

After a prolonged period of low inflation, there was a significant acceleration of inflation in the euro area last year, with prices (on a harmonised – HICP – basis) increasing by 1.5 per cent in 2017 compared with just 0.2 per cent a year earlier. In Ireland, however, headline inflation remained subdued – averaging just 0.3 per cent last year – as the appreciation of the euro-sterling exchange rate continued to dampen import prices.

A modest acceleration in inflation is expected this year as the lagged impact of euro-sterling appreciation begins to wane. Futures prices for oil suggest a positive contribution from the energy sub-component of the index, while continued solid domestic demand growth should exert some upward pressure on services prices. Taking all these factors into account, HICP inflation is expected to average 0.8 per cent this year, with core inflation (see footnote in table 6) averaging 0.7 per cent.

Table 6: price developments, per cent change

	2017	2018	2019	2020	2021
GDP deflator	-0.3	0.0	1.3	1.3	1.5
Personal consumption deflator	1.3	1.6	1.7	1.9	2.7
Harmonised index of consumer prices (HICP)	0.3	0.8	1.0	1.4	2.6
Core HICP inflation^	0.0	0.7	1.2	1.5	2.6
Export price deflator (goods and services)	-0.8	-1.1	1.3	1.1	0.8
Import price deflator (goods and services)	1.1	0.0	1.8	1.4	1.2
Terms-of-trade (good and services)	-1.8	-1.0	-0.5	-0.4	-0.3

^ core inflation is HICP inflation excluding the most volatile components, namely energy and unprocessed food.
Source: 2017 - CSO; 2018 to 2021 - Department of Finance.

The GDP deflator – a measure of the price changes in the economy as a whole – is forecast to remain unchanged this year. On the basis of the technical assumption of unchanged exchange rates from those prevailing at mid-March, a deterioration in the terms-of-trade is projected for this year.

2.7 Medium-Term Growth Prospects 2019 to 2021

At the outset, it must be acknowledged that the concept of potential growth is more complex to assess for a small, open economy such as Ireland, which *inter alia* is characterised by significant cross-border mobility of labour and capital. Indeed, the positive output gap – calculated according to the EU-wide methodology – currently estimated for this year, which is inconsistent with limited inflationary pressures evident in the economy, highlights the health warnings attached to estimates of the cycle using this framework.

Over the medium-term, the central scenario assumes that a transition period will be agreed that extends or replicates existing frameworks until end-2020, i.e. the UK is assumed to remain in the single market and customs union during this period. From 2021 onwards, the baseline forecasts assume that the EU and UK conclude a free trade agreement; there is, of course, considerable uncertainty surrounding what form of trading arrangements will apply post-exit.

Domestic demand is projected to be the main driver of growth over the 2019-2021 period. Personal consumer expenditure is expected to grow by just over 2 per cent on average over this period, with consumption per capita just below the pre-crisis peak by the end of the forecast horizon. Underlying investment as a share of modified GNI (see footnote 1 on page 3) is projected to continue to increase over the forecast horizon as residential investment reverts to more 'normal' levels. Exports are projected to continue to grow in excess of external demand reflecting compositional effects, i.e. the concentration of Irish exports in 'high-growth' service sectors. Imports are projected to grow broadly in line with final demand.

The level of employment growth is expected to expand further over the medium-term, with average growth of 2.0 per cent per annum between 2019 and 2021. Both demographics (the 'natural' increase in the population of working age and net inward migration) and participation should contribute positively towards increased labour supply. Employment growth will be largely in line with labour force growth for much of the period, with the unemployment rate broadly stable at just over 5 per cent.

2.8 Comparison of Forecasts

This section compares the Department's forecasts with those of other forecasting institutions as well as comparing how the Department's forecasts for this year and next have evolved since the last set of forecasts.[8]

Table 7 shows the Department's short-term forecasts relative to those of other public sector institutions. For this year, the differences in GDP growth forecasts primarily relate to timing. In particular, the Department's forecast takes into account the very strong growth rate recorded for the final quarter of last year (these figures were not available at the time of the latest Commission and OECD forecasts). As a result, the range of forecasts is relatively wide, which is not unusual for the Irish economy. There is more consensus around labour market projections, with the range for employment growth extending from 1.7 per cent to 2.7 per cent. For next year, the range of forecasts extends from 4.2 per cent to 2.4 per cent with, once again, less variance surrounding labour market forecasts.

[8] The Department publishes two sets of forecasts per annum – in the autumn (as part of the Budget) and in the spring (as part of the SPU). In order to enhance the analysis, and in line with best international practice, the Department now highlights how the forecasts for both t and t+1 evolve between the two sets of forecasts.

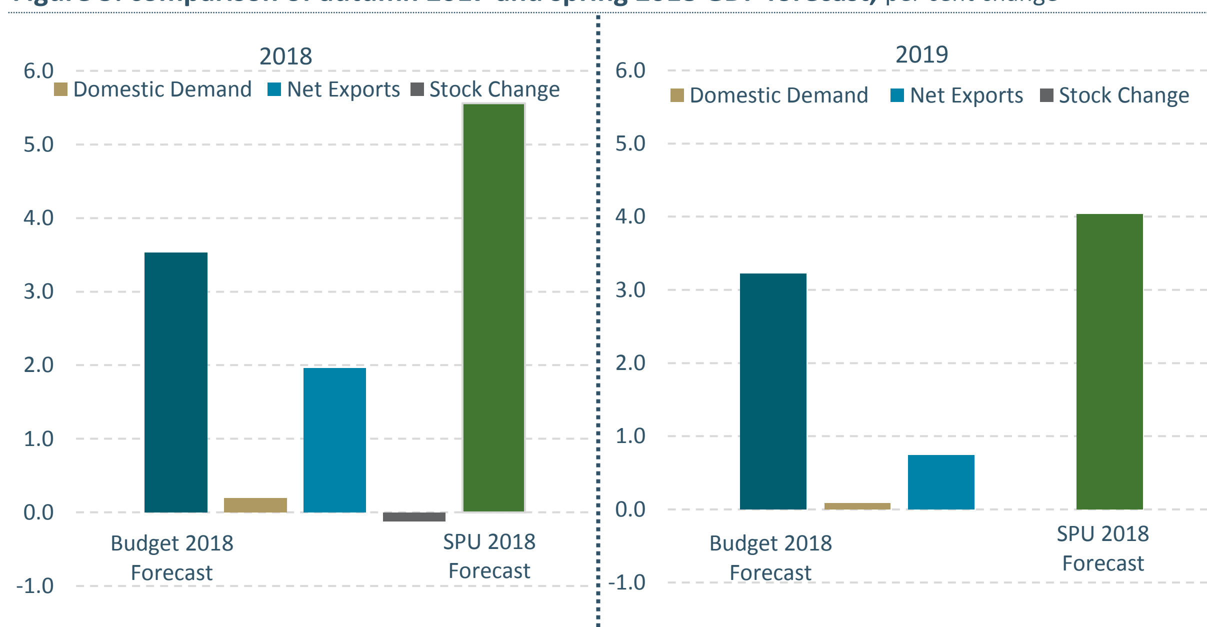
Table 7: range of forecasts, per cent change

2018	GDP	GNP	HICP	Employment
Department of Finance	5.6	5.6	0.8	2.7
Central Bank of Ireland	4.8	4.4	0.8	2.4
IMF	4.5	NA	0.9	1.7
ESRI	4.8	4.7	NA	2.7
European Commission	4.4	NA	0.9	NA
OECD	2.9	NA	1.4	NA
2019	**GDP**	**GNP**	**HICP**	**Employment**
Department of Finance	4.0	3.7	1.0	2.3
Central Bank of Ireland	4.2	3.9	0.9	2.0
IMF	4.0	NA	1.3	1.4
ESRI	3.9	3.9	NA	2.0
European Commission	3.1	NA	1.1	NA
OECD	2.4	NA	2.1	NA

Source: Source: latest forecasts from the institutions cited.

Figure 3 compares the Department's current forecasts with its autumn 2017 forecasts published alongside Budget 2018. GDP growth for this year is 2.0 percentage points higher relative to last year's autumn forecasts reflecting *inter alia* a stronger contribution from net exports. For next year, GDP growth is 0.8 percentage points higher primarily due to revised assumptions in relation to the Brexit transition period.

Figure 3: comparison of autumn 2017 and spring 2018 GDP forecast, per cent change



Source: Department of Finance.

Chapter 3
Exchequer Developments and Outlook

3.1 Summary

An Exchequer deficit of €1.5 billion is currently projected for 2018, in line with the underlying outturn for last year, i.e. when adjusted for the sale of a portion of the State's shareholding in AIB.[9] For next year, an Exchequer deficit of €2.4 billion is projected. The widening of the Exchequer deficit next year reflects a range of developments including an assumed €0.5 billion contribution from the Exchequer account to the rainy day fund (RDF)[10] and planned public capital expenditure increases underpinning the *National Development Plan 2018-2027* (NDP).

3.2 Fiscal Outturn 2017

In Exchequer terms, total tax receipts of €50.7 billion last year were in line with expectations and 6 per cent (€2.9 billion) higher than a year earlier. All taxation headings recorded positive annual growth which, in turn, reflects the broadly-based economic expansion last year.

On the spending side, total gross voted expenditure of €58.6 billion for 2017 was just 0.8 per cent (€0.5 billion) above the *2017 Revised Estimates for Public Services* profile. The bulk of this in-year increase can be directly related to the policy decision to refund domestic water charges and to meet the funding gap arising from their abolition. Accordingly, gross voted current expenditure was 0.8 per cent (€0.4 billion) above profile, with gross voted capital expenditure 1 per cent (€0.1 billion) ahead of expectations.

Combined, non-tax revenue and capital receipts of €7.6 billion were boosted last year through the sale of approximately one-third of the State's shareholding in AIB. Non-voted expenditure was €1.9 billion lower than the previous year, mainly because of technical reasons (related to the absence of short-term, cash-flow loans to the Social Insurance Fund last year).

In aggregate terms, therefore, a headline Exchequer surplus of €1.9 billion was recorded last year, the first surplus on the Exchequer account since 2006. However, when adjusted for the one-off receipts arising from the AIB sale, the Exchequer had an underlying borrowing requirement of €1.5 billion.

3.3 Fiscal Outlook 2018

3.3.1 Tax forecast

Exchequer revenues for this year, including the revenue measures introduced as part of Budget 2018, are forecast to increase by 5.7 per cent this year. In the first quarter of the year, taxation receipts were 3.5 per cent (€401 million) higher than in the same period last year, albeit these were 1.2 per cent (€141 million) behind expectations.

In terms of individual tax headings, income tax receipts to end-March recorded a strong performance, up 5.7 per cent (€251 million) in annual terms, reflecting positive labour market

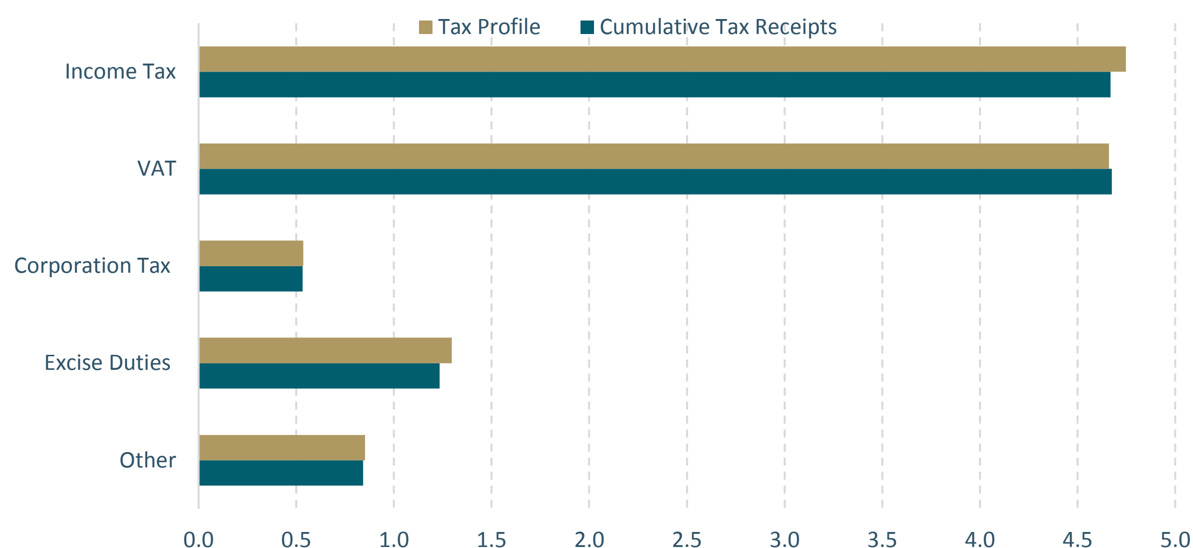
[9] A headline Exchequer surplus of €1.9 billion was recorded last year, boosted by €3.4 billion receipts from the partial sale of the State's shareholding in AIB in June 2017.

[10] As announced in *Budget 2018,* it is proposed to capitalise the rainy day fund in the coming year with €1.5 billion from the *Ireland Strategic Investment Fund* which is both Exchequer and general government neutral. Legislation to establish the rainy day fund is currently being prepared.

dynamics. Receipts slightly undershot the quarterly target by just 1.7 per cent (€80 million), although it should be noted that the main PAYE components in line with profile.

The other direct tax heading – corporation tax – rose by 2.3 per cent (€12 million) in annual terms. Receipts were broadly in line with profile, although it should be noted a key feature of this heading is that receipts are non-linear across the tax calendar with May, June and November the key payment months (over 60 per cent of the overall receipts are in these months).

Figure 4: end-march cumulative tax receipts relative to profile, € billions



Source: Department of Finance.

Turning to indirect taxes, VAT performed in line with expectations in the year to end-March, with a receipts amounting to €4.7 billion. In annual terms, VAT recorded growth of 2.4 per cent (€108 million) in the first quarter. Solid growth in consumer spending was the main factor underpinning the annual increase in VAT receipts with positive growth across the main business sectors, as suggested by recent retail sales data.

Excise duties, in contrast, were 4.8 per cent (€62 million) lower than expectations. Several factors appear to be behind this, including the continuing drag from tobacco receipts, adverse weather conditions and fewer banking days. Relative to the first quarter of last year, excise duties were down by 3.4 per cent (€44 million), as the temporary effect arising from the introduction of the domestic plain packaging initiative on tobacco products continues to weigh on receipts. An annual decline in excise duty receipts is factored into the current fiscal arithmetic.

In terms of the outlook for the year as a whole, total tax receipts are projected at €54.2 billion. This is unchanged from that at the time of the Budget for this year, once the classification impact of motor and local property taxation are taken into account.

3.3.2 Non-tax revenue[11]

The projection for non-tax receipts for 2018 is €0.6 billion higher than assumed at the time of the Budget, mainly due to higher-than-projected dividend payments to the Exchequer. Also on the capital resources side, changes to scheduled receipts from IBRC will benefit the Exchequer by €0.2 billion. As the majority of these are classified as financial transactions, there will be no impact in general government terms.

3.3.3 Expenditure[12]

In relation to voted expenditure, the *Revised Estimates for Public Services 2018 (REV 2018)* details the allocations for all Government departments. Total gross voted expenditure of €61.8 billion is projected for this year, with net voted expenditure projected at €49.6 billion.

In terms of the performance in the year-to-date, gross voted expenditure at the end of the first quarter was 2.3 per cent (€328 million) below profile. In annual terms, gross voted expenditure was up 3.7 per cent (€508 million) at end-March. Gross voted current spending was 1.6 per cent (€212 million) below expectations, but 3.5 per cent (€453 million) higher year-on-year. Gross voted capital expenditure was 13.2 per cent (€117 million) behind target, but 7.7 per cent (€55 million) higher in annual terms.

The outlook for non-voted current expenditure for this year has been reduced by €0.2 billion, mainly due to debt service savings offsetting expected increases under the 'other' central fund elements. The debt service savings arise due to the continuation of benign market conditions.

3.3.4 Summary

Taking all of these factors into consideration, the Exchequer borrowing requirement for this year has improved by €0.9 billion on the (adjusted) Budget 2018 projection. However, while Exchequer-positive, the statistical treatment of certain extra non-tax and capital revenues means they do not fully benefit the general government balance.

3.4 Fiscal Outlook 2019-2021

3.4.1 Tax forecast

Taxes are forecast to grow on average by 5 per cent over the 2019-2021 forecast horizon. With nominal GDP forecast to grow over the same period by an average of 4.8 per cent, this implies an aggregate tax-to-GDP elasticity of just over 1.0, in-line with established norms.

Further employment and earnings growth is expected to support increases in the income tax yield over the forecast horizon, while increases in consumer spending will boost the VAT yield (income tax and VAT are the two largest tax headings, when combined account for two thirds

[11] Following enactment of the *Water Services Act 2017*, transfers to the Exchequer (booked under Non-Tax Revenue) from the Local Government Fund no longer arise. Accordingly comparisons are now made on a like-for-like basis. See p.3 Exchequer Borrowing Requirement Profiles, March 2018 available at: http://www.finance.gov.ie/wp-content/uploads/2018/03/180315-Exchequer-Borrowing-Profiles-March-2018.pdf

[12] Estimates of non-voted current and capital expenditure have decreased following the enactment of the *Water Services Act 2017*. Non-voted capital expenditure is expected to reduce as all State funding for domestic water services will now be included in voted expenditure, rather than a combination of voted expenditure, non-voted expenditure and transfers from the Local Government Fund. Non-voted current expenditure will reduce as Local Property Tax receipts will be transferred directly to the Local Government Fund rather than via the Exchequer.

of all receipts). Corporation tax revenues – which currently account for a large portion of the total tax take – are expected to increase in line with corporate profitability (any shock to profitability could potentially open a significant gap in the public finances).[13] Excise duties, the final of the so-called 'big 4' tax headings, are projected to rise at an average annual rate of 3 per cent over the forecast horizon.

3.4.2 Non-tax revenue

The baseline assumption is that non-tax revenue will be boosted by increased dividend payments to the Exchequer in the coming years. In particular, payments by the Central Bank – arising from the disposal, by the Bank, of the floating rate notes[14] – should boost non-tax revenue. Capital resources are assumed to be largely unchanged over the forecast horizon with no assumptions made around potential receipts from the resolution of the financial crisis.

3.4.3 Capital Investment Plan

The Government has committed to increasing public capital investment to c.4 per cent of GNI* and then maintaining investment at this proportion out to 2027, as set out in the recently published NDP. The Exchequer contribution to the NDP is estimated at €24 billion over the 2019-2021 period. The voted capital expenditure amounts for the period to 2021 are as set out in Annex I of the NDP, where the Departmental capital allocations are outlined.

3.4.4 Expenditure

Non-voted expenditure is forecast to decrease by an average €0.1 billion per annum over the 2019–2021 period due to projected debt service savings which partially offset increased spending demands in other areas.

Voted expenditure is unchanged from Budget 2018, albeit some technical changes arising from the REV 2018 and NDP.[15] The gross voted current expenditure amounts for the period 2019-2021, show an average annual increase of €1.4 billion. In 2019, the overall increase in gross voted current expenditure is just over €1.35 billion. This includes pre-committed costs of approximately €1.1 billion in respect of the estimated impact of demographics and the carryover of Budget 2018 measures, including the Public Service Stability Agreement, that would need to be accommodated within this overall increase for 2019.

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[13] See analysis set out in Annual Taxation Report 2018 available at:
http://www.finance.gov.ie/updates/annual-taxation-report-january-2018/

[14] The floating rate notes were issued to replace the promissory notes originally issued to recapitalise *Anglo Irish Bank* and *Irish Nationwide Building Society*.

[15] The capital expenditure amounts for 2019-2021 were revised somewhat, to facilitate the early commencement of a number of new funds which are being established under the NDP. In addition, all State funding in respect of domestic water services is now being reflected in the voted expenditure amounts for 2018 to 2021. *Irish Water's* business plan sets out a multiannual capital plan over the period to 2021 with the Estimate settlements for each year then taking into account progress against this plan.

Table 8: budgetary projections 2017-2021, € millions

	2017	2018	2019	2020	2021
CURRENT BUDGET					
Expenditure					
Gross voted current expenditure	53,970	55,940	57,295	58,745	60,185
Non-voted current expenditure*	8,930	9,015	8,900	8,690	8,220
Gross current expenditure	**62,895**	**64,955**	**66,190**	**67,435**	**68,405**
less expenditure receipts and balances	12,000	12,105	12,230	12,350	12,475
Net current expenditure	**50,900**	**52,850**	**53,965**	**55,080**	**55,925**
Receipts					
Tax revenue	50,735	54,180	56,950	59,710	62,725
Non-tax revenue	2,865	2,700	2,120	1,600	1,365
Net current revenue	**53,600**	**56,880**	**59,070**	**61,310**	**64,090**
CURRENT BUDGET BALANCE	**2,705**	**4,030**	**5,105**	**6,225**	**8,165**
CAPITAL BUDGET					
Expenditure					
Gross voted capital expenditure	4,585	5,830	7,270	7,850	8,605
Non-voted capital expenditure*	1,245	845	845	845	840
Gross capital expenditure	**5,830**	**6,670**	**8,115**	**8,690**	**9,450**
less capital receipts	260	20	20	20	20
Net capital expenditure	**5,570**	**6,650**	**8,095**	**8,670**	**9,430**
Capital resources	**4,775**	**1,105**	**1,080**	**950**	**960**
CAPITAL BUDGET BALANCE	**-795**	**-5,545**	**-7,010**	**-7,720**	**-8,465**
RAINY DAY FUND	0	0	500	500	500
EXCHEQUER BALANCE	**1,910**	**-1,515**	**-2,405**	**-1,995**	**-805**
Government Expenditure Ceiling**	58,555	61,770	64,565	66,595	68,790

* Central Fund.
** Projected GEC.
Figures are rounded to the nearest €5 million and may affect totals.
Note: Fiscal forecasts are presented on an *ex-post* basis. These assume distribution of estimated baseline fiscal space as set out in the Summer Economic Statement 2016 adjusted for base effects from outturns and technical and policy adjustments including NDP.
Source: Department of Finance forecasts.

Table 9: alternative presentation of exchequer position, € millions

	2017	2018	2019	2020	2021
Revenue	**64,780**	**67,680**	**70,375**	**72,730**	**75,635**
: tax revenue	50,735	54,180	56,950	59,710	62,725
- Income tax	20,010	21,445	22,420	23,650	24,940
- VAT	13,305	14,090	15,015	15,800	16,735
- Corporation tax	8,200	8,505	8,985	9,445	9,890
- Excise duties	5,925	5,820	6,030	6,175	6,305
- Stamp duties	1,205	1,675	1,805	1,920	2,025
- LPT	475	0	0	0	0
- Motor tax	0	990	950	905	935
- Customs	330	345	360	375	390
- Capital gains tax	825	845	885	925	965
- Capital acquisitions tax	460	470	495	520	540
: A-in-As (inc. PRSI, NTF and balances)	12,260	12,125	12,250	12,370	12,495
: non-tax revenue	1,750	1,300	1,120	600	365
: capital resources	30	75	60	50	50
Expenditure	**66,995**	**70,780**	**73,455**	**75,280**	**77,005**
: gross voted current expenditure	53,970	55,940	57,295	58,745	60,185
: gross voted capital expenditure	4,585	5,830	7,270	7,850	8,605
: non-voted current expenditure	8,445	9,010	8,895	8,685	8,215
- debt servicing	6,225	6,020	5,695	5,500	4,895
Balance excluding transactions with no GG impact	**-2,220**	**-3,100**	**-3,080**	**-2,550**	**-1,365**
Revenue transactions with no GG impact	**5,860**	**2,430**	**2,020**	**1,900**	**1,910**
: non-tax revenue	1,115	1,400	1,000	1,000	1,000
: capital resources	4,745	1,030	1,020	900	910
Expenditure transactions with no GG impact	**1,730**	**850**	**1,350**	**1,350**	**1,345**
: non-voted current expenditure	485	5	5	5	5
: non-voted capital expenditure	1,245	845	845	845	840
: transfer to Rainy Day Fund	0	0	500	500	500
Balance of transactions with no GG impact	**4,125**	**1,585**	**670**	**555**	**565**
Exchequer balance	**1,910**	**-1,515**	**-2,405**	**-1,995**	**-805**

Figures are rounded to the nearest €5 million and may affect totals.
Source: Department of Finance.

Chapter 4
General Government Developments and Outlook

4.1 Summary

A general government deficit of 0.2 per cent of GDP is projected for this year, improving further next year with a headline deficit of 0.1 per cent of GDP in prospect. After adjusting for the impact of the economic cycle, a structural deficit of 0.9 per cent of GDP is projected for this year, with the medium term budgetary objective (MTO) achieved next year. It must be acknowledged, however, that distortions to GDP are having a severe impact on estimates of the cyclical position of the economy, which make assessments of the structural balance extremely uncertain at the current juncture.

4.2 General Government Balance in 2018

General government revenue is projected at €79,295 million this year. This is 4.1 per cent higher than in 2017. General government expenditure is projected at €80,080 million this year, 3.7 per cent higher than last year. As a result, a general government deficit of €780 million is projected for 2018.

Box 2: Approved Housing Bodies

Approved Housing Bodies (AHBs) are not-for-profit entities which have, as their primary objective, the relief of housing needs and the provision and management of affordable rented housing. Such bodies may be granted 'approved status' for the provision of housing under the Housing (Miscellaneous Provisions) Act, 1992.

Following a meeting on social housing initiatives in October 2016, and reiterated at the Excessive Deficit Procedure (EDP) Dialogue Visit in January 2017, *Eurostat* requested that the Central Statistics Office (CSO) review the sectoral classification of AHBs. *Eurostat* expressed the view that, under the European System of Accounting 2010, the role of government financing should be given greater weight in the sectoral classification assessment.

Over the course of 2017, the CSO conducted this review, focussing on the largest of these bodies – so-called 'Tier 3' – and published its decision in December 2017.[16] The CSO concluded that there was sufficient evidence within the funding schemes to indicate control by government and, accordingly, that 15 AHBs should be classified as part of the local government sector, i.e. within the general government sector.

As a result, general government statistics have been re-stated to reflect the activities of the reclassified AHBs. In summary, any private borrowing by AHBs increases general government debt; funding provided to AHBs by either the Department of Housing, Planning and Local Government or local authorities is consolidated; and revenue and expenditure of AHBs is treated as general government revenue and expenditure.

The practical implication of this is to raise the level of general government debt by c. €100 million (0.03 per cent of GDP) and to increase the general government deficit by €470 million (0.15 per cent of GDP) in 2018.

[16] More detailed information available at:
http://www.cso.ie/en/methods/nationalaccounts/classificationdecisions/classificationofapprovedhousingbodies/

Table 10: exchequer balance to GGB 2017-2021, € millions (unless stated)

	2017	2018	2019	2020	2021
Exchequer balance	1,910	-1,515	-2,405	-1,995	-805
Walk[1]	-2,925	735	2,055	2,890	2,250
General Government balance	**-1,015**	**-780**	**-350**	**895**	**1,445**
of which:					
General Government revenue	**76,195**	**79,295**	**82,615**	**85,415**	**88,910[3]**
Taxes on production and imports	24,425	25,120	26,375	27,455	28,680
Current taxes on income, wealth	30,800	33,290	34,700	36,385	38,180
Capital taxes	450	450	475	500	520
Social contributions	12,645	13,165	13,725	14,275	14,860
Property Income	1,770	1,360	1,325	980	740
Other	6,110	5,910	6,015	5,825	5,935
General Government expenditure	**77,210**	**80,080**	**82,965**	**84,520**	**87,460[3]**
Compensation of employees	20,710	21,405	21,925	22,270	22,625
Intermediate consumption	9,835	10,720	10,920	10,910	10,835
Social payments	28,920	29,010	29,335	29,825	30,285
Interest expenditure	5,810	5,350	5,225	5,075	4,895
Subsidies	1,835	1,795	1,860	1,870	1,885
Gross fixed capital formation	5,500	6,790	7,690	8,015	8,340
Capital transfers	1,525	1,295	1,580	1,435	2,715
Other	3,080	3,710	3,915	3,910	3,925
Resources not allocated	0	0	530	1,210	1,960
memo items					
General government balance per cent GDP	-0.3	-0.2	-0.1	0.3	0.4
General government balance per cent GNI*[2]	-0.5	-0.4	-0.2	0.4	0.6
Total revenue per cent GDP	25.7	25.4	25.1	24.8	24.7
Total revenue per cent GNI*[2]	37.9	37.2	36.9	36.6	36.5
Total expenditure per cent GDP	26.1	25.6	25.2	24.5	24.3
Total expenditure per cent GNI*[2]	38.4	37.6	37.1	36.2	35.9

1. The 'walk' from the exchequer balance to the general government balance is set out in table A1 in the appendix.
2. Forecast of modified GNI (GNI*) is a purely technical assumption, for illustrative purposes only, moving in line with GNI. See Annex 2 for nominal GDP and GNI*.
3. Gross general government revenue and expenditure for 2021 have been updated since the draft publication to take account of consolidation of intra-government flows. This had no impact on the headline government balance.
Source: Department of Finance, Department of Public Expenditure and Reform, CSO and NTMA.

4.3 General Government Balance in 2019

For next year, general government revenue is forecast to increase by 4.2 per cent to €82,615 million, mainly on foot of stronger general government tax receipts. General government primary expenditure is forecast at €77,740 million. With interest expenditure amounting to a projected €5,225 million, a general government deficit of 0.1 per cent of GDP (€350 million) is projected for next year.

4.4 Structural Budget Balance

The Medium Term (Budgetary) Objective (MTO) is the cornerstone of the preventive arm of the *Stability and Growth Pact*. Member States are required to be at, or on the adjustment path towards, their (country-specific) MTOs. Ireland's MTO is a structural deficit of 0.5 per cent of GDP. At the time of the Budget for this year, the MTO was expected to be achieved in 2018. However, the stronger-than-assumed headline growth figure for last year – with the growth surprise mainly attributable to contract manufacturing – was not accompanied by any revenue surprise. As a result, the forecasted structural position is worse than assumed. Having said that, it must be stressed that estimates of the structural position, which are always subject to a health warning in an Irish context, are even more uncertain than normal.

Table 11: structural budget balance, per cent of GDP (unless stated)

	2017	2018	2019	2020	2021
Headline fiscal developments					
General government balance	-0.3	-0.2	-0.1	0.3	0.4
One-off / temporary measures	-0.1	0.0	0.0	0.0	0.0
Interest expenditure	2.0	1.7	1.6	1.5	1.4
General government primary balance	1.6	1.5	1.5	1.7	1.8
Economic cycle					
GDP growth rate	7.8	5.6	4.0	3.5	3.0
Potential GDP growth, per cent	8.0	4.7	4.7	3.7	3.2
- contribution from labour, pp.	2.2	2.0	1.9	0.9	0.4
- contribution from capital accumulation, pp.	0.1	0.3	0.5	0.5	0.5
- contribution from total factor productivity, pp.	5.6	2.3	2.2	2.2	2.2
Output gap	0.3	1.2	0.6	0.4	0.2
Structural fiscal developments					
Cyclical budgetary component	0.2	0.6	0.3	0.2	0.1
Structural budget balance	-0.4	-0.9	-0.4	0.1	0.3
Structural primary balance	1.5	0.8	1.2	1.5	1.7

Estimates of output gap based on harmonised methodology and mechanical closure of output gap from 2020 onwards. The harmonised methodology has been adjusted in order to mitigate distortions to estimates of potential output on account of the strong GDP growth rate in 2017. In particular, dummies have been included in both Kalman filters used to de-trend TFP and the NAWRU.
Figures may not sum due to rounding. pp is percentage points.
Source: Department of Finance.

4.5 Comparison of Forecasts

Table 12 shows how the Department's fiscal forecasts compare with those of other institutions. For the headline balance, there is very little variance amongst the set of forecasts for this year, with the range extending from deficit of 0.2 per cent of GDP to a surplus of 0.2 per cent of GDP. For next year, the range extends from deficit of 0.2 per cent of GDP to a surplus of 0.6 per cent of GDP. Differences in relation to estimates of the structural fiscal position for this year are mainly timing-related.

In terms of forecasts for general government debt, the range extends from 66.0 per cent of GDP to 69.2 per cent of GDP this year and from 63.5 per cent of GDP to 67.2 per cent of GDP for next year (debt dynamics are set out in more detail in chapter 5).

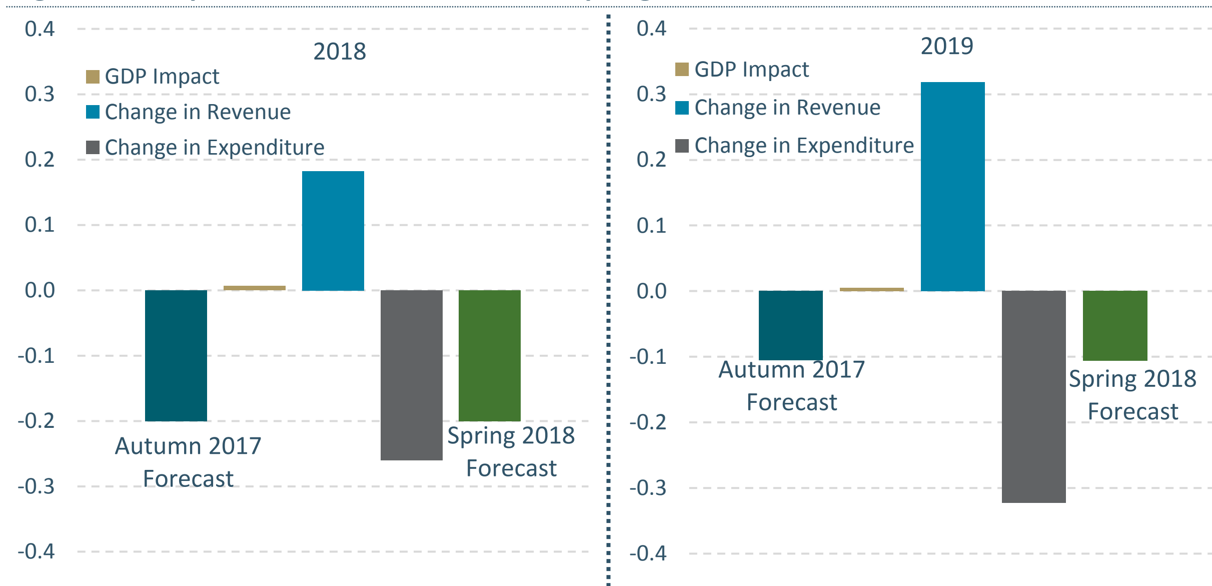
Table 12: comparison of budgetary forecasts, per cent of GDP

2018		GG debt	GG Balance	Structural Balance
Department of Finance	Apr-18	66.0	-0.2	-0.9
IMF	Apr-18	67.1	-0.2	-0.8
ESRI	Mar-18	68.0	0.2	n/a
European Commission	Nov-17	69.1	-0.2	-0.5
OECD	Mar-18	69.2	-0.2	n/a
2019		**GG debt**	**GG Balance**	**Structural Balance**
Department of Finance	Apr-18	63.5	-0.1	-0.4
IMF	Apr-18	64.9	-0.1	-0.6
ESRI	Mar-18	64.2	0.6	n/a
European Commission	Nov-17	67.2	-0.2	0.3
OECD	Mar-18	67.0	-0.1	n/a

GG = general government.
Source: latest forecasts from the institutions cited.

Figure 5 compares the Department's spring forecasts for the general government balance with its autumn forecasts published in the Economic and Fiscal Outlook in October 2017. The forecast for the general government balance has deteriorated due to the inclusion of the reclassified AHBs.

Figure 5: comparison of autumn 2017 and spring 2018 GG balance forecast, per cent of GDP



Figures rounded to first decimal point resulting in no contribution from some components.
Source: Department of Finance.

Chapter 5
General Government Debt

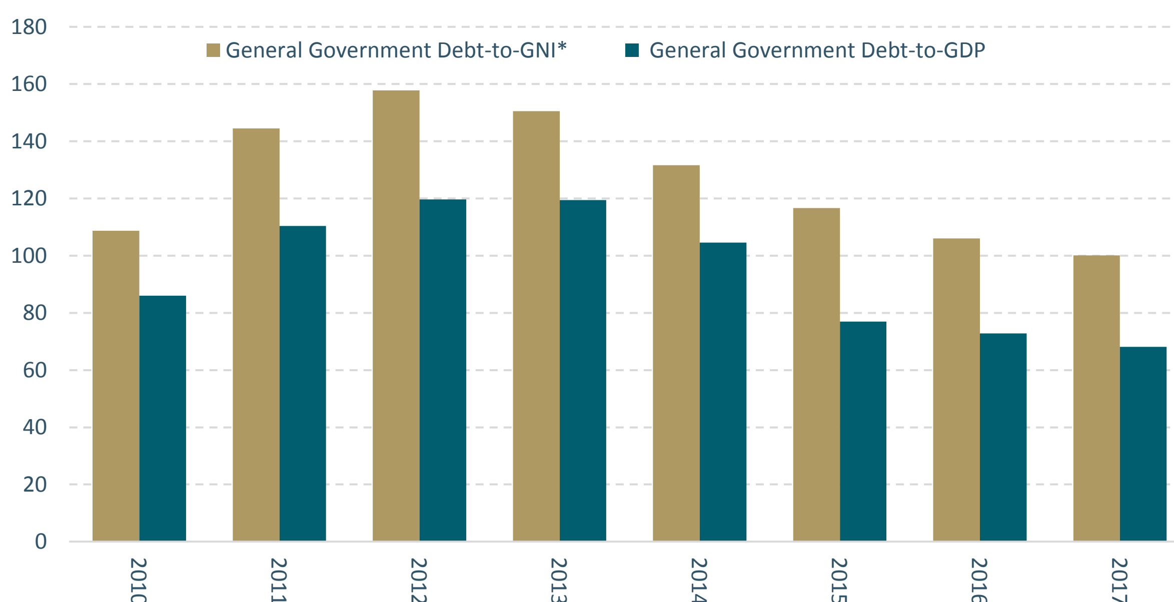
5.1 Summary

While the debt-to GDP-ratio continues to decline, this fall is due in its entirety to the increase in the level of GDP (the 'denominator effect'). Other sustainability metrics show that, although declining, public indebtedness remains high in Ireland; these metrics include the absolute level of debt, debt interest payments as a share of revenue and debt to GNI*.

5.2 Debt Developments

Data from the CSO show that, at end-2017, Ireland's general government gross debt stood at just under €201.3 billion, or 68.0 per cent of GDP. In terms of this year, while the absolute level of debt is expected to increase slightly, the ratio is set to decline further to 66.0 per cent. The ratio has fallen considerably since the peak of just below 120 per cent in 2012, particularly so in 2015, when 'measured' nominal GDP growth was in excess of 30 per cent. Ireland is on track to bring the debt-to-GDP ratio below 60 per cent – as required by the *Stability and Growth Pact* – in the early part of the next decade.

Figure 6: General Government Debt to GDP and debt to GNI*, per cent



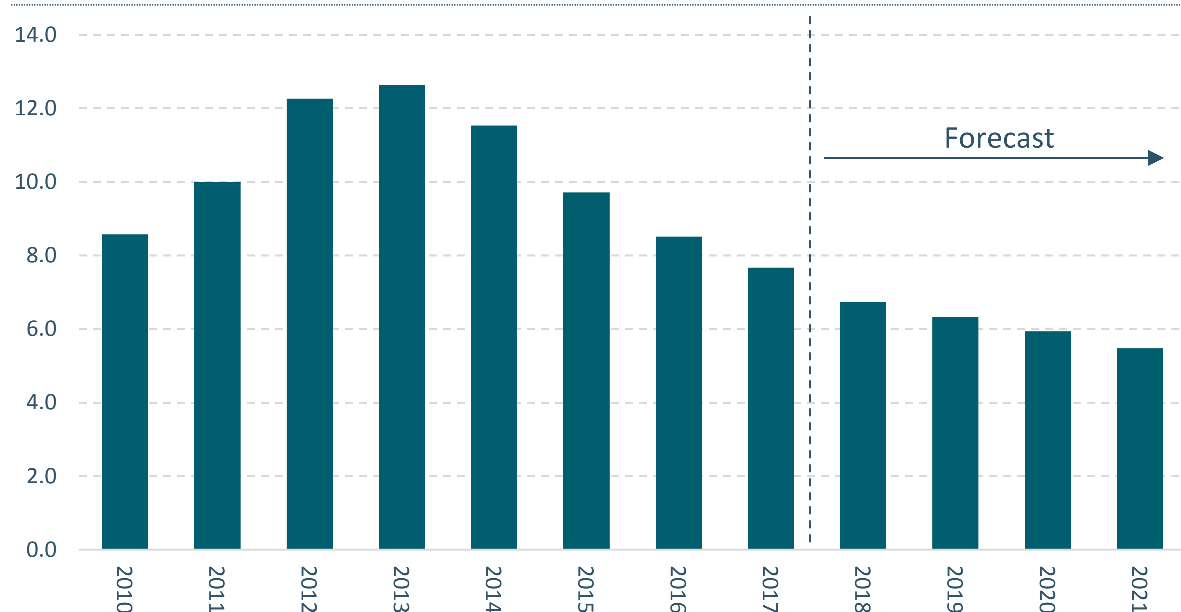
GNI* estimate for 2017 is based on the technical assumption that its growth rate moved in line with nominal GNP growth.
Source: CSO, Department of Finance.

Modified GNI (GNI*) is an alternative measure of economic activity in Ireland that strips out part of the distortions arising in the multinational sector. As such, it is a better measure of actual economic activity taking place in Ireland. Measured on this basis, the debt ratio remains at around 100 per cent; thus, while debt remains manageable in Ireland, it is crucial that the burden of debt is reduced further.

Debt interest payments as a percentage of total general government revenue are a useful means of assessing debt sustainability. Figure 7 shows the portion of general government revenue absorbed by debt interest payments over the period 2010-2021. As this measure is

dependent on domestic revenue streams, it is less prone to distortion by the effects of globalisation on the Irish economy and, accordingly, provides a better insight into repayment capacity. After peaking in 2013, this metric has subsequently been on a downward trajectory, reflecting a combination of higher general government revenue and lower interest payments.

Figure 7: debt interest to revenue ratio, per cent



Source: CSO, Department of Finance.

While it is important to analyse debt dynamics using a wider set of variables, legal obligations – as set out in the *Stability and Growth Pact* – are set with reference to movements in the debt-to-GDP ratio. The debt-to-GDP ratio for this year is 2.0 percentage points lower than the 2017 year-end figure, 68.0 per cent of GDP. The forecast movements in debt levels and debt dynamics are set out in Table 13.

Table 13: general government debt developments, per cent of GDP (unless stated)

	2017	2018	2019	2020	2021
Gross debt (€ billions)	201.3	206.3	209.4	207.7	211.4
Gross debt ratio	68.0	66.0	63.5	60.2	58.7
Change in gross debt ratio(=1+2+3)	-4.9	-2.0	-2.4	-3.4	-1.4
Contributions to change in gross debt ratio:[1]					
1.General Government deficit (1=1a+1b)	0.3	0.2	0.1	-0.3	-0.4
: interest expenditure (1a)	2.0	1.7	1.6	1.5	1.4
: primary balance (1b)	-1.6	-1.5	-1.5	-1.7	-1.8
2.Stock-flow adjustment (2=2a+2b+2c+2d+2e+2f+2g)	-0.1	1.4	0.8	-0.3	1.4
: change in liquid financial assets (2a)	0.5	0.8	-0.1	-1.5	0.6
: interest adjustments (2b)	0.1	0.1	0.1	0.1	0.0
: equity transactions (2c)	-1.6	-0.5	-0.4	-0.3	-0.3
: accrual adjustments (2d)	0.1	0.3	0.2	0.2	-0.1
: impact of ISIF (2e)	0.1	0.1	0.1	0.1	0.1
: collateral held (2f)	-0.2	-0.1	0.0	0.0	0.0
: other (2g)	1.0	0.4	0.8	1.0	1.0
3.Nominal GDP contribution (3)	-5.1	-3.6	-3.4	-2.9	-2.5
Memorandum items					
: average interest rate	2.9	2.7	2.5	2.4	2.4
: gross debt per cent of GNI*	100.1	96.9	93.7	88.9	86.8

Source: CSO, Department of Finance and NTMA (National Debt data provider).

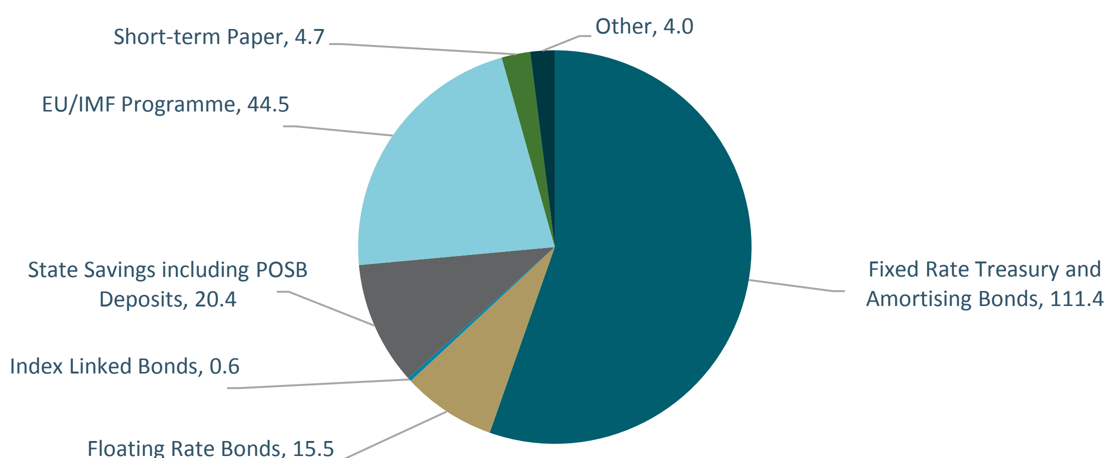
5.3 Debt Composition

Figure 8 shows the compositional breakdown of the stock of general government debt at end-2017. The most notable changes to the composition from end-2016 are the increase in the Fixed Rate Treasury and Amortising Bonds category and the decline in both EU/IMF Programme loans and the Floating Rate Bonds issued in 2013 to replace the IBRC promissory notes held by the Central Bank of Ireland (CBI).

The reduction in EU/IMF Programme debt in 2017 reflects the early repayment of the residual IMF loan facility as well as the bilateral loans from Sweden and Denmark and their replacement with marketable debt.

Also in 2017, the NTMA purchased from the CBI, and subsequently cancelled, €4 billion of the Floating Rate Bonds, reducing the outstanding balance of that category to €15.5 billion at year end.

Figure 8: composition of general government debt at end-2017, € billions



Source: NTMA (national debt data provider) and CSO.
Note: The "other" category includes consolidation adjustments in respect to debt, including government bonds, held by general government entities.

General government debt, as defined under the Excessive Deficit Procedure (EDP) regulation, is a gross measure of government liabilities. Net general government debt (obtained by deducting the value of the financial assets corresponding to the categories of financial liabilities which comprise Gross Debt) is reported in table 14. The assets deducted include:

- Exchequer cash and other assets;
- Ireland Strategic Investment Fund (ISIF) cash and non-equity investments; and,
- other cash and assets held by general government.

Table 14: gross and net general government debt, per cent of GDP at end-year

	2017	2018	2019	2020	2021
General government debt (gross)	68.0	66.0	63.5	60.2	58.7
EDP debt instrument assets	9.1	9.4	8.8	6.9	7.2
Net debt position	58.9	56.5	54.7	53.3	51.6

Source: CSO, NTMA (national debt data provider) and Department of Finance.

Credit ratings

Ireland's long-term credit rating is now firmly in the 'A' category with all of the main rating agencies, as set out in the table below. An 'A' level rating is an important consideration for investors. In December 2017, *Fitch Ratings* upgraded Ireland's sovereign rating to A+ with a stable outlook. Underpinning this decision, *Fitch* cited the improving health of the banking sector, the declining general government debt-to-GDP ratio and reducing debt servicing costs.

Table 15: Irish sovereign credit ratings

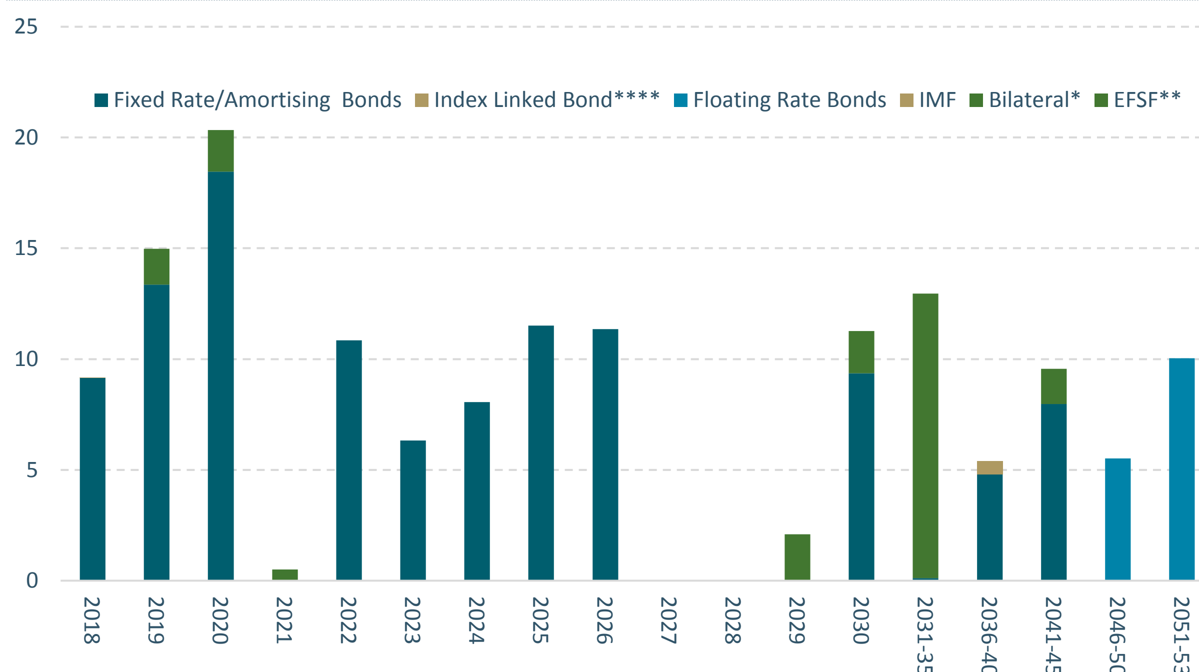
Rating Agency	Long-term rating	Short-term rating	Outlook
Standard & Poor's	A+	A-1	Stable
Moody's	A2	P-1	Stable
Fitch Ratings	A+	F1+	Stable

As at mid-April 2018.
Source: institutions cited and NTMA.

5.4 Funding Developments

The NTMA plans to issue €14 – €18 billion of Government bonds during 2018. By mid-April, €10.3 billion had been issued at a weighted average yield of 1.1 per cent and with a weighted average maturity 12.3 years.

Figure 9: maturity profile of long-term marketable and official debt, € billion at end-March 2018



Note that the figures in the chart are unaudited figures. Rounding can affect totals.
* EFSF loans reflect the maturity extensions agreed in June 2013.
**EFSM loans are also subject to a seven year extension. It is not expected that Ireland will have to refinance any of its EFSM loans before 2027. However the revised maturity dates of individual EFSM loans will only be determined as they approach their maturity dates. The graph above reflect both original and revised maturity dates of individual EFSM loans.
Source: NTMA.

A new 10-year benchmark bond issued in January raised €4 billion at a yield of 0.94 per cent while a new 15-year benchmark bond issued in April raised a further €4 billion at a yield of 1.32 per cent. In between the two syndicated transactions, there were two separate dual bond auctions in February and March, with the sale of bonds maturing in 2022, 2028 and 2037 raising €2.3 billion.

The NTMA has taken advantage of favourable market conditions to reduce the 2019/2020 refinancing requirements, to lower the interest bill and to issue longer-term debt.

Exchequer cash balances at the end of the first quarter of this year were over €18 billion, up from €10.5 billion at end-2017. There is a bond maturing in October; the current outstanding balance on that bond is just under €9 billion. Year-end cash balances are expected to be over €12 billion, the increase over end-2017 reflecting the higher refinancing needs in 2019 and 2020. There are four bonds maturing over the period June 2019 – October 2020 with an aggregate outstanding balance of €31 billion at present. As a result of bilateral bond switching, this is a reduction of €1.5 billion since the end of the third quarter of 2017 and close to €4.5 billion since late-2014.

In terms of official sector debt, the first of the UK bilateral loan matures in 2019 (see figure 9 above). The early repayment of EU-IMF Programme loans from the IMF, Sweden and Denmark further reduces refinancing needs in the near-term.

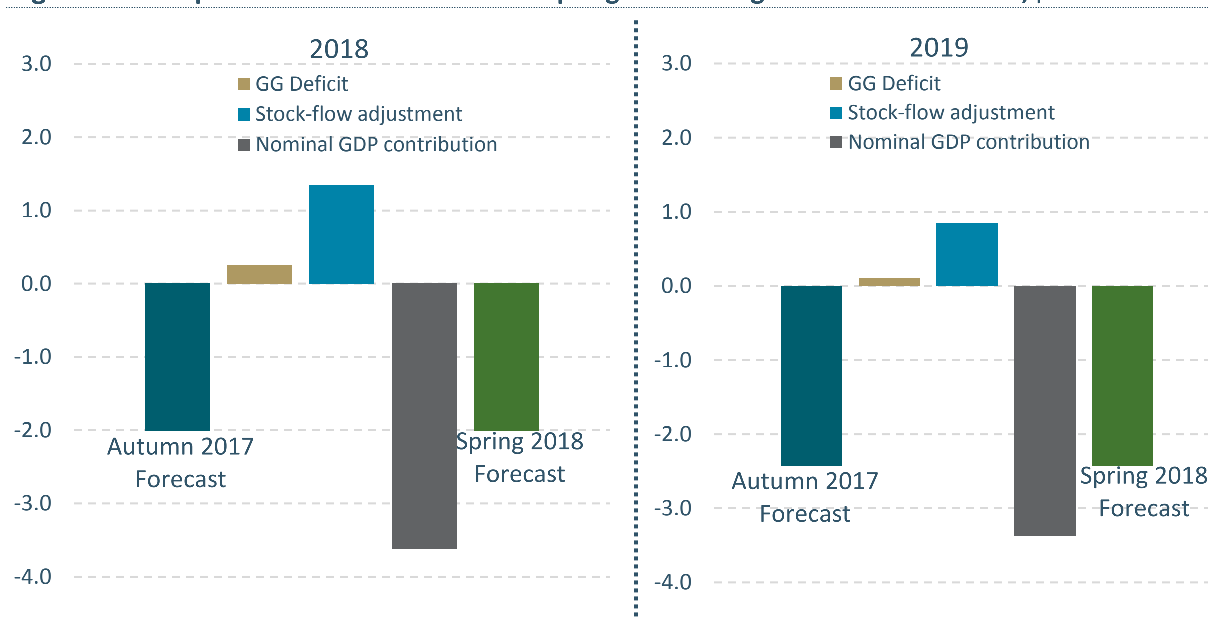
5.5 Comparison of Forecasts

Figure 10 below compares the Department's autumn forecasts for general government debt published alongside the Budget with its spring forecasts published in this document.

For this year, the debt ratio is projected at 66.0 per cent, a 3.0 percentage point improvement relative to the autumn forecasts, while for next year the debt ratio of 63.5 per cent represents a 3.6 percentage point improvement.

The main reason underlying these improvements is the denominator effect along with a reduction in the nominal debt forecast - from €208.2 billion to €206.3 billion for this year; and from €211.5 billion to €209.4 billion for next year.

Figure 10: comparison of autumn 2017 and spring 2018 change in GG debt forecast, per cent of GDP



Graph shows the annual change in the debt ratio; actual projections for debt ratio for 2018 and 2019 are shown in table 13.
Source: Department of Finance

Chapter 6
Risk and Sensitivity Analysis

6.1 Summary

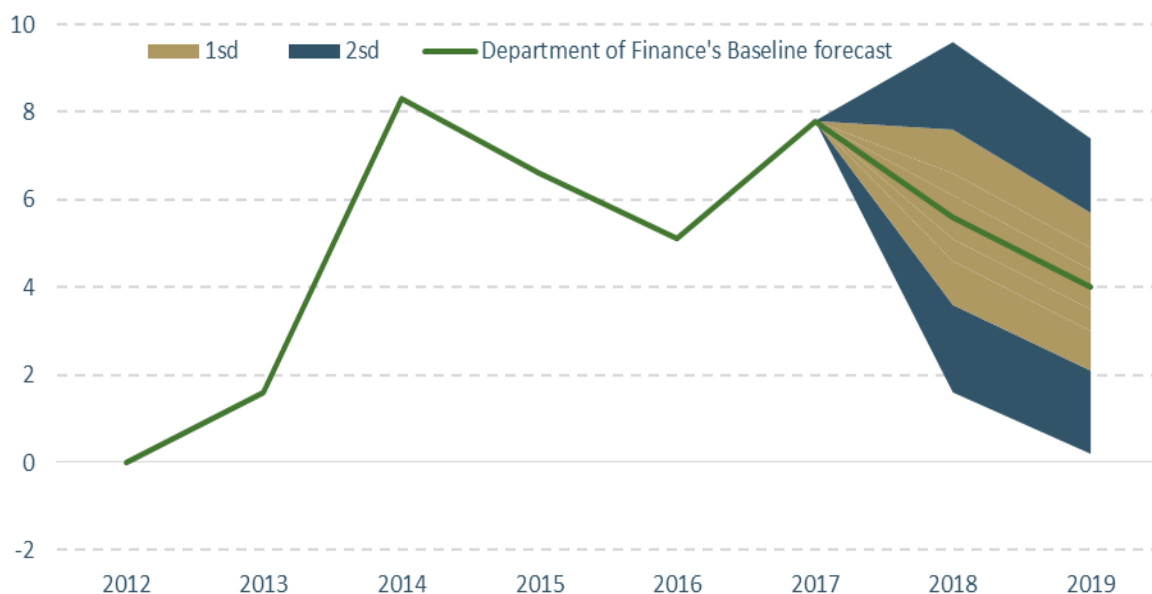
The forecast GDP growth of 5.6 per cent for this year and 4.0 per cent for next year represents a central scenario. It is a contingent forecast and is based on assumptions for key inputs such as demand in major export markets, the evolution of commodity prices, exchange rate developments, etc. The purpose of this chapter is to set out the main identifiable risks which, if they were to materialise, could alter the economic and fiscal trajectory in Ireland over the short- and medium-term.[17] Quantitative estimates of the impact of particular shocks on the Irish economy and on the public finances are also provided, prepared using the ESRI's COSMO[18] model.

6.2 Risks to the Economic and Fiscal Forecasts

The international economic outlook has strengthened since the autumn forecasts reflecting *inter alia* fiscal stimulus in the US and increased momentum in the euro area economy. However, recent protectionist measures increase the risk of a tit-for-tat trade war which could derail the global recovery.

Despite the acceleration in growth last year, short-term risks to the central scenario are tilted to the downside. This mainly reflects of the possibility of a 'cliff-edge' Brexit – in the event of a transitional arrangement not being agreed between the EU and the UK.

Figure 11: confidence bands for real GDP growth, 2018-2019, per cent change



Note: The growth rate for 2015 is based on growth in modified domestic demand.
Source: Department of Finance calculations.

[17] The National Risk Assessment 2017, which was published in August 2017, represents a comprehensive cross-government assessment of the strategic risks that Ireland faces over the short, medium and long-term.
[18] **Co**re **S**tructural **Mo**del.

A risk assessment matrix – listing the principal identifiable economic risks along with an assessment of their relative likelihood and economic impact – is set out in table 18. The main short-term risks relate to the possibility of a 'cliff-edge' Brexit, increasing trade protectionism and a tightening of financial market conditions. Over the medium term, the principal risks relate to potential overheating as the economy approaches full-employment, a more adverse-than-expected outcome of the Brexit discussions currently underway, a faster-than-expected normalisation of monetary policy (especially in the euro area) and changes in other jurisdictions that affect the competitiveness of Ireland's corporate tax regime.

6.3 Sensitivity Analysis

To assess the sensitivity of the forecasts to changes in baseline inputs, the ESRI COSMO macroeconomic model is used to simulate the impact of stylised shocks to the following three exogenous inputs with the results reported in table 16 below:

- 1 per cent deterioration in world demand;
- 1 per cent increase in average wages; and,
- 1 percentage point increase in the ECB interest rate.

Table 16: sensitivity analysis, relative to baseline

	T	T+1	T+2	T+3	T+4	T+5
	1 per cent decrease in world demand					
per cent deviation from baseline						
GDP	-0.3	-0.5	-0.7	-0.9	-1.0	-1.0
Employment	-0.1	-0.2	-0.3	-0.4	-0.5	-0.6
percentage point deviation from baseline						
General Government Balance, per cent GDP	0.0	-0.1	-0.1	-0.1	-0.2	-0.2
General Government Debt, per cent GDP	0.1	0.3	0.5	0.8	1.0	1.2
Unemployment Rate, per cent	0.0	0.1	0.2	0.3	0.3	0.3
	1 per cent increase in average wages					
per cent deviation from baseline						
GDP	0.0	0.0	-0.1	-0.1	-0.2	-0.2
Employment	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
percentage point deviation from baseline						
General Government Balance, per cent GDP	0.01	0.02	0.01	0.0	-0.01	-0.02
General Government Debt, per cent GDP	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3
Unemployment Rate, per cent	0.1	0.1	0.1	0.2	0.2	0.2
	1 percentage point increase in interest rates					
per cent deviation from baseline						
GDP	-0.6	-1.1	-1.3	-1.3	-1.1	-0.9
Employment	-0.1	-0.4	-0.6	-0.7	-0.7	-0.5
percentage point deviation from baseline						
General Government Balance, per cent GDP	0.0	-0.2	-0.3	-0.3	-0.3	-0.2
General Government Debt, per cent GDP	0.3	0.9	1.4	1.8	2.0	2.1
Unemployment Rate, per cent	0.1	0.3	0.4	0.5	0.5	0.4

Source: Results based on analysis by Department of Finance using COSMO, the ESRI macro-economic model.

Figures presented in table 16, show the response, relative to baseline projections, for a range of key macro-fiscal variables to the simulated shocks to world demand, average wages and interest rates. In each of the simulations presented, government solvency/budget rules are not imposed, i.e. there is no fiscal policy response to the change in the economic environment. The advantage of this approach is that the results give the 'pure' impact of the shock, free from the addition of presumptive policy changes. Each of the shocks are introduced in year 't'.

Response to a 1 percent deterioration in world demand

A permanent reduction in the level of global output of 1 per cent, relative to baseline projections, dampens Irish growth with impacts transmitted primarily through the trade channel. In the traded sector, a decrease in external demand contributes to reductions in both the demand for Irish exports and production which, in turn, lead to falls in investment, employment and wages in that sector. These impacts in the traded sector lead to lower domestic demand, with less employment and wages in the rest of the economy which, in turn, contributes to a rise in the unemployment rate. The reduction in employment and lower wages lead to lower personal income and a decrease in consumption (relative to baseline) which, in turn, adversely affect the tax-base.

Overall, the level of output would be 1.0 per cent lower after 5 years relative to the baseline projection. The level of employment would be 0.6 percent lower after 5 years, with the unemployment rate increasing by 0.3 percentage points. The deficit-to-GDP ratio worsens by 0.2 percentage points with the debt-to-GDP ratio rising by 1.2 percentage points.

Response to a 1 per cent increase in average wages

The simulated shock of higher labour costs results in lower employment over the medium- to long-run, with a consequential knock-on impact on the unemployment rate. The level of GDP is negatively affected by a decrease in the competitiveness of the Irish economy, which reduces exports and exerts a drag on the traded sector. Production in the non-traded sector also declines due to the impact of higher labour costs. There is a limited positive impact on the fiscal position in the short-run, which turns to a negative impact in the medium term due to output being below where it otherwise would have been.

Overall, the level of output would be 0.2 per cent below baseline after 5 years. Employment falls by 0.1 per cent lower below baseline after 5 years. After an initial modest improvement in the fiscal position, results show that the deficit to GDP ratio slightly worsens by 0.02 percentage points after 5 years, and 0.03 after 10 years. The debt to GDP ratio falls by 0.3 percentage points after 5 years, due to the initial improvement in the deficit, and returns to its baseline projection after 10 years.

Response to a 1 percentage point interest rate increase

The impact of a higher ECB policy interest rate negatively affects the level of Irish growth over the medium term, transmitted primarily through the trade channel due to lower output in the euro area as a result of higher interest rates leading to a reduction in external demand for Irish exports. The shock is simulated as a 1 percentage point increase in the main ECB rate over 5 years. This is principally driven by output in the euro area being reduced below the baseline level, and a strengthening of the euro exchange rate relative to the baseline, which has a negative competitiveness effect on Ireland.

Overall, this scenario results in the level of GDP being 0.9 percent below baseline, with employment falling by 0.5 per cent after 5 years. The deficit-to-GDP ratio worsens by 0.2 percentage points, with the debt-to-GDP ratio rising by 2.1 percentage points after 5 years.

6.4 Contingent and other liabilities

A contingent liability arises in a situation where past or current actions or events create the risk of a call on the Exchequer funds in the future. The 2016 Appropriation Accounts for the year ended 31 December 2016[19] were published last September. While the amounts are not all quantifiable, notes on the contingent liabilities are listed in the Appropriation Accounts of the various votes.

The Other[20] category in Table 17 relates to entities such as CIE, Insurance Acts, Housing Finance Agency and the Credit Guarantee Act. Additional details on most of these can be accessed in the 2016 Finance Accounts (Statement 1.11).

Table 17: contingent liabilities, per cent of GDP at end-year

	2015	2016	2017
Public guarantees	4.8	1.9	0.5
of which linked to the financial sector			
Eligible Liabilities Guarantee	1.2	0.5	0.1
National Asset Management Agency	3.1	0.9	0.0
Other	0.5	0.5	0.4

Note: Rounding may affect totals.
Source: Department of Finance, CSO.

On 25 October 2017, the National Asset Management Agency (NAMA) redeemed the final €500 million of senior debt originally issued in 2010 and 2011 to acquire bank loans. This means that the guarantee is no longer active.

Other liabilities

The State has certain other long-term future payment liabilities which are contractually conditional on the continued availability to the State of public infrastructure provided under public private partnerships (PPPs). PPPs involve contractual arrangements between the public and private sectors for the purpose of delivering infrastructure or services which were traditionally provided by public sector procurement. Under PPPs, infrastructure is delivered by a private sector firm and the asset is made available for public use, paid for by the State by way of an annual unitary payment over the period of the contract (typically 20-25 years).

The *Department of Public Expenditure and Reform* (DPER) publishes information on the PPP[21] programme including the level of estimated outstanding future financial commitments in nominal terms arising under existing PPP contracts. The calculation of the contractual capital value of all Irish PPPs as at December 2017 is €0.5 billion on the government balance sheet,

[19] http://www.audgen.gov.ie/documents/annualreports/2016/AppAcc/En/AR%202016%20AA%20Full%20Volume.pdf
[20] http://opac.oireachtas.ie/AWData/Library3/FINdoclaid260717_112531.pdf
[21] www.ppp.gov.ie

and €5 billion off-balance sheet amounting to a total of €5.5 billion.

The DPER measures the accrued liability of the occupational pension promises that the State has made to its serving and former employees. An actuarial review of the State's pension liabilities was completed last year using 2015 data and concluded that the value of accrued public service pension obligations is estimated to be €114.5 billion as at 31st December 2015. The underlying assumption built into this scenario was that future pension increases will continue to be in line with pay parity. The value of the accrued liability was also calculated under the assumption that pensions in payment increase in line with the Consumer Price Index (CPI). In this scenario, the accrued liability figure falls to €97.2 billion as at 31st December 2015.

The separate obligation for the contributory and non-contributory old age State pension is assessed as part of the actuarial reviews of the Social Insurance Fund (SIF) which are carried out at 5 yearly intervals. An actuarial review of the SIF was published by the Department of Employment Affairs and Social Protection in 2017 based on data at 31st December 2015. A key result from this review is the net present value of future projected shortfalls, which is estimated at €335 billion over the period 2015-2071.

Ireland also has a commitment to provide capital to the various international organisations of which it claims membership. This can take the form either of paid-in capital or callable capital. Paid-in capital is funding which has already been contributed to organisations, whereas callable capital is funding which may be called on only as and when required by the organisations.[22] The most significant of these contingent or potential liabilities is Ireland's callable commitment of approximately €9.87 billion to the European Stability Mechanism.

[22] http://opac.oireachtas.ie/AWData/Library3/FINdoclaid260717_112531.pdf

Table 18: macro-economic risk assessment matrix

Risk	Likelihood	Impact and main transmission channel
External		
External demand shock	**Medium**	**High** – while global growth is proving more durable than expected, it remains subject to downside risk over the medium term.
Geopolitical factors	**Medium**	**High** – increased geopolitical uncertainty has the potential to disrupt growth in key regions and generate headwinds for output and employment in Ireland.
Disruption to world trade	**Medium**	**High** – the Irish economy is deeply embedded in the international economy and has benefited enormously from globalisation, so that any increase in protectionism could potentially have a detrimental impact on living standards. In particular, recent protectionist measures increase the risk of a tit-for-tat trade war which could derail the global recovery.
Policy uncertainty in the US	**Medium**	**Medium** – There remains uncertainty in relation to the potential impact of recent US tax reforms.
"Hard-Brexit"	**Medium**	**High** – An outcome to the continuing EU-UK negotiations which resulted in a WTO-type arrangement between the EU and UK would have a particularly detrimental impact on Irish-UK trade. This could potentially arise over the short-term if the EU and UK do not agree to a transitional arrangement.
Global financial market conditions	**Medium**	**Medium –** the stance of monetary policy may become less accommodative in advanced economies and the 'normalisation' process for the global financial system may not be smooth, with implications for the cost of capital. The Irish economy is particularly exposed to a faster-than-expected normalisation of ECB monetary policy.
Domestic		
Concentrated production base	**Low**	**High** – Ireland's production base is highly concentrated in a small number of high-tech sectors, with the result that output and employment are exposed to firm- and sector-specific shocks.
Loss of competitiveness	**Medium**	**High** – as a small and open economy, Ireland's business model is very much geared towards export-led growth, which, in turn, is sensitive to the evolution of cost competitiveness.
Housing supply pressures	**High**	**Medium** – supply constraints in the housing sector can adversely impact on competitiveness by *inter alia* restricting the mobility of labour.
Overheating economy	**Medium**	**Medium** – With the labour market approaching full employment, stronger than assumed growth could lead to overheating pressures. While boosting growth over the short-term, overheating pressures could generate significant imbalances over the medium-term.

Source: Department of Finance

Table 19: fiscal risk assessment matrix

Risk	Likelihood	Impact and main transmission channel
Domestic		
Budgetary pressures	**Medium**	**High** – potential downside risk arising from excessive public expectations regarding budgetary policy. Indeed, significant outlays (current & capex) are needed simply to address changes in the structure of the population.
Tax forecast and payment timeline asymmetry	**Medium**	**Medium** – the asymmetry between the 'two pack' requirement for an October budget and the distribution of certain receipts (self-employed and corporation tax) towards end-year increases risks to the forecast.
Corporation tax concentration risks	**High**	**Medium** – corporation tax revenue has increased significantly in recent years and the 'Top 10' payers contribute just under 40 per cent of this tax, leaving this component of the public finances exposed to idiosyncratic shocks creating a concentration risk.
Dividend payments	**Low**	**Medium** – lower-than-expected dividend payment arising from the State's shareholdings in banks or commercial semi-state companies.
Receipts from resolution of financial sector crisis	**Low**	**Medium** – budgetary projections prudently exclude any assumptions around the State's disposal of shareholding in a number of financial institutions. Also receipts from the termination of NAMA or wind-up of the Credit Union Restructuring Board are excluded *inter alia* due to uncertainty regarding timing. All of these represent a likely upside risk to the baseline scenario.
EU Budget Contributions	**Medium**	**Medium** – stronger-than-expected growth in national income (or statistical changes) can increase the Irish contribution to the EU budget, while there is no clarity on how the UK's exit will impact upon the EU Budget.
Contingent liabilities	**Low**	**Medium** – contingent liabilities continue to decline although the public finances would be adversely affected in the event these liabilities were 'called' (table 19 provides more detail).
External		
Bond market conditions	**Low**	**Medium** – government financing has benefitted from supportive bond market conditions. Any change to this environment could lead to an unanticipated rise in debt interest costs. However, as the bulk of outstanding public debt is at fixed rates, this helps to mitigate this risk.
Changes to tax 'drivers'	**Medium**	**Medium** – macroeconomic 'drivers' are used to forecast taxation receipts and changes in the composition of economic activity can impact upon the public finances.
Statistical classifications	**Medium**	**Low** – Ireland's compliance with the EU fiscal rules is measured under the ESA 2010 statistical framework. Therefore statistical revisions, updated guidance and classification decisions, including by Eurostat, represent a fiscal risk with both down and upside potential.
EU climate change and renewable energy targets	**High**	**High** – Ireland is obliged to reduce greenhouse gas emissions by 20 per cent on 2005 levels by 2020. Separately, Ireland has a binding 2020 target that 16 per cent of all energy be from renewable sources. Failure to meet these targets will imply financial costs or sanctions.
Litigation Risk	**Medium**	**Medium** - An adverse or unexpected outcome of litigation against the State which resulted in additional expenditure over and above that provided could pose a risk to the achievement of budgetary targets.

Source: Department of Finance

Chapter 7
Quality of the Public Finances

7.1 Summary

A number of reforms to the overall budgetary process, with specific emphasis on expenditure, have been introduced in recent years to enhance the quality of public finances. In particular, the publication of the Public Spending Code which details procedures to ensure public money is spent or invested wisely and the continued expansion of Irish Government Economic and Evaluation Service (IGEES) tasked with carrying out evaluations and value for money reviews.

There have been reforms to improve the transparency and oversight of public expenditure through the publication of a Performance Report this year which provides quantitative information about public services delivered in 2017, the Equality Budgeting initiative which is discussed below and the publication of a Mid-Year Expenditure Report (MYER) in July as part of the whole of year budgetary cycle. In 2017, the first round of a three-year cycle Spending Review was published in July, and the second round of this review is currently taking place this year. There have also been reforms to increase parliamentary scrutiny of Budgets, through the establishment of the Oireachtas Select Committee on Budgetary Oversight in 2016 and the Parliamentary Budget Office in 2017.

7.2 Spending Review

The 2017 Stability Programme Update outlined the approach taken to carrying out the Spending Review 2017-2019. In particular, it was pointed out that there is a need to shift the emphasis away from the incremental nature of the annual Estimates process, with focus instead on assessing the effectiveness of the totality of existing programmes. This review differs from the 'comprehensive' reviews of expenditures of the past, with the introduction of a 'rolling' system of selective reviews. The objective is that the significant portion of current expenditure will be examined over the three year period 2017-2019.

The key differences of this approach are to embed an ongoing evaluation culture, which will consist of strategic and efficiency reviews to bolster the existing stock of analysis and to analyse pre-selected programme areas, which would ideally be agreed between all stakeholders. This is different in nature to the one-off, comprehensive reviews of expenditure that took place following the recession.

The 2017 Spending Review, culminating in the publication of over 20 analytical papers on spending review topics, was successfully completed in October following the publication of Budget 2018. Some significant outcomes resulted from this review, including forming a key part of the estimates negotiations that took place prior to the Budget and in highlighting an additional body of analysis to be carried forward in the Spending Review 2018.

For the Spending Review in 2018, one of the key aims is to further encourage greater input of policy departments into the Spending Review and to enhance the role for Irish Government Economic and Evaluation Service (IGEES) staff throughout the Civil Service. To date, there has been positive dialogue and collaborative working between the Department of Public Expenditure and Reform and policy departments. The intention is that this work will then

promote the use of an analytical approach to evaluating expenditure and should provide the Government a stronger evidence based approach to allocating resources in the Budget.

This is of key importance for the state finances at this moment as key internal and external risks remain. This means there is a requirement to ensuring sound public finances, which will support continued, sustainable economic growth and deliver on social priorities. This is best supported by allocating Government resources in the most efficient and effective way. The Spending Review is a tool that can allow us to achieve these aims.

7.3 Equality Budgeting Pilot

Equality Budgeting is a tool to provide greater information on the equality impacts of proposed and/or ongoing budget measures. On Budget day, a policy paper "Equality Budgeting: Proposed Next Steps in Ireland" was published which outlined the pilot approach for equality budgeting for this year's budget cycle. Reflecting the availability of relevant studies, the initial focus will be specifically on gender as an equality dimension. Pilot departments have reviewed and assessed policies for impact on gender equality and high level gender and equality objectives and indicators were set at programme level. Objectives and targets were reported in the Revised Estimate Volume 2018 (REV).

Progress towards achieving these targets will be reported in the Public Service Performance Report which is due to be published shortly. Learning from the pilot approach will be used to expand the initiative to other expenditure programmes and equality dimensions for the 2019 budgetary cycle. To further guide the roll-out of equality budgeting it is intended to establish an Equality Budgeting Steering Group in 2018. This group will be comprised of relevant stakeholders and policy experts to provide advice on the most effective way to advance the initiative going forward.

7.4 Other reforms

There have been recent reforms to the annual budget process, with the aim of increasing transparency and oversight of the Budget in advance of the agreement of estimates. The budget process now starts with publication of the Summer Economic Statement, which sets out the broad parameters for macroeconomic growth and the fiscal outlook and constraints over the medium term. This is followed by a National Economic Dialogue in June/July to facilitate an open and inclusive exchange on the competing economic and social priorities facing Government.

In relation to expenditure, the Minister for Public Expenditure & Reform publishes a Mid-Year Expenditure Report (MYER) in July. This presents the baseline for Departmental expenditure and provides the starting point for examination of budgetary priorities by the Oireachtas. Alongside the MYER from 2017 to 2019, it is intended to publish the outputs of the Spending Reviews taking place in these years. This is intended to give greater oversight of the policy options available to Government in setting the estimates for the following year.

To facilitate the Oireachtas in engaging with the Budget process, the Parliamentary Budget Office was established in 2017 as an independent specialist unit within the Houses of the Oireachtas Service. The role of the Office is to provide independent, impartial information, analysis and advice to the Houses of the Oireachtas.

The Water Services Act 2017 facilitated the introduction of budgetary reform in relation to the funding of domestic water services and the destination of the Local Property Tax (LPT) and Motor Taxation. As a result of the enactment of the legislation in November last year, LPT is now paid directly to the Local Government Fund instead of initially passing through the Exchequer. The Act also ensured that the Department of Transport, Tourism and Sport was assigned responsibility for the collection of Motor taxation, which is now paid directly into the Exchequer instead of the Local Government Fund. By ensuring that our domestic water services are funded directly through voted expenditure, these legislative changes have allowed for greater transparency to our public finances as well greater oversight by Dáil Éireann of the funding of this national service.

Chapter 8
Long-Term Sustainability of the Public Finances

8.1 Summary

Ireland currently has a favourable demographic profile compared with many other EU Member States. According to the latest *Eurostat* annual population estimates, Ireland has the highest share of population aged less than 15 years old and has the lowest share of over 65 year olds in the EU.[23] Additionally, Ireland has the lowest median age of population and the second highest (after France) fertility rate in the EU.

Despite this, unfavourable demographic trends in the coming decades will have significant implications for the economy and the evolution of the public finances. Foremost amongst these is a rise in age-related public expenditure as a larger share of the population moves into age brackets requiring such spending. Given the budgetary implications of likely demographic shifts, a range of reform measures have been implemented in recent years in order to mitigate the impact on the public finances.

8.2 Background

Ireland's demographic profile is set to change significantly over the coming decades. The share of the population aged 65 and over is set to nearly double from 13.4 per cent in 2016 to a peak of 25.9 per cent in 2054 before falling slightly to 24.2 per cent in 2070.

In contrast, the share of the working age population is projected to gradually decline during the period, from approximately 64 per cent in 2016 to 56 per cent in 2050.[24] Reflecting these changes, the old age dependency ratio is set to increase from approximately 21 per cent in 2016 to a peak of 46 per cent in the mid-2050s before falling to 41 per cent by 2070.[25]

Given the importance of population ageing in Ireland and elsewhere in the EU, the Economic Policy Committee (EPC) undertakes an assessment of the impact of long-term demographic trends on the public finances of the Member States every three years.[26] The results set out in table 20 relate to the forthcoming Ageing Report 2018 (AR 2018)[27] and are based on long-term demographic projections produced by *Eurostat* (Eurostat 2015-based projections).[28] As part of the process, Member States produce long-term pension expenditure projections, while the Commission produces health care, long-term care, education and unemployment benefit expenditure projections unilaterally.

[23] Eurostat population data as of January 1st 2017.

[24] Working age population (WAP) defined for these purposes as those aged 15-64.

[25] Old age dependency ratio = (population aged 65 and over/population aged 15-64)

[26] The EPC provides economic analyses, opinions on methodologies and draft formulations for policy recommendations, in particular on structural policies for improving growth potential and employment in the EU.

[27] The EC-EPC 2018 Ageing Report is due to be published in May 2018.

[28] The macro-economic assumptions and the methodologies used in the European Commission (EC)-EPC 2018 Ageing Report are published in the 2018 Ageing Report: Underlying Assumptions and Projection Methodologies. https://ec.europa.eu/info/sites/info/files/economy-finance/ip065_en.pdf

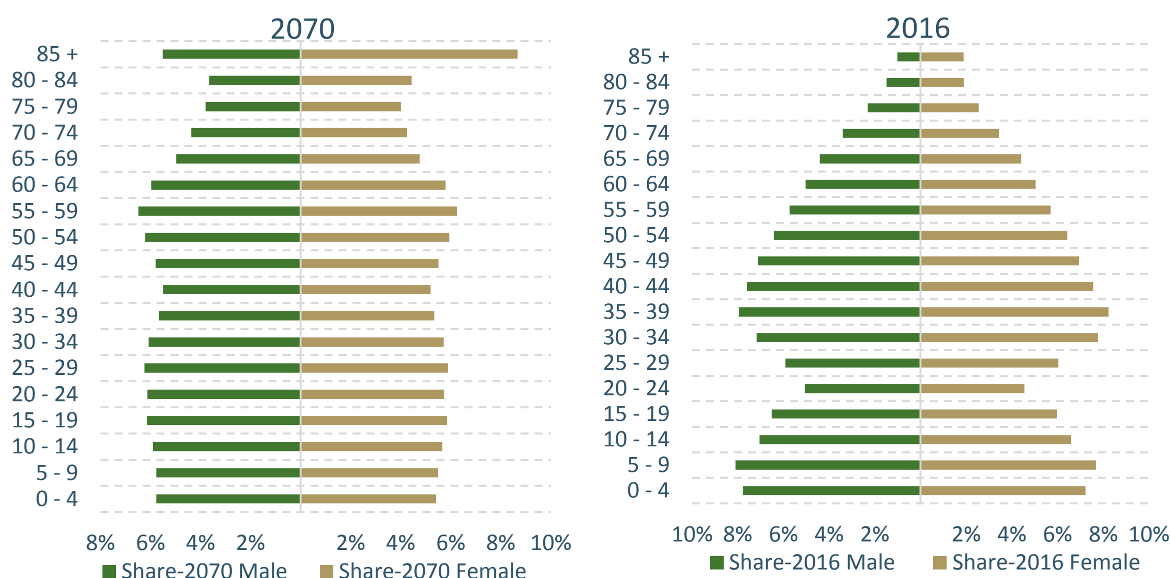
These projections are used in the context of:

- the European Semester to identify policy challenges in the area of age-related spending;[29]
- for annual assessments of the sustainability of the public finances (to update the long run sustainability S1 and S2 indicators); and
- for updating Member State's medium-term (budgetary) objectives (MTOs).

AR 2018 uses the latest *Eurostat* 2015-based demographic projections, published in February 2017. These projections assume a more positive migration profile than the EUROPOP 2013 projections used in the 2015 Ageing Report (AR 2015) and are more reflective of Ireland's current migration pattern.

However, the total population projections in the latest exercise do not take into account the 2016 Census results which show net outward migration was overestimated for the years April 2012-April 2016. As a result, the 2016 population used in AR 2018 is over 70,000 short of the total population figure from the 2016 Census of 4.762 million.

Figure 12. population by age group and sex as a share of total, per cent



Source: Ageing Report 2018.

8.3 Long-Term Budgetary Prospects

The 2018 Ageing Report projections suggest that total age-related expenditure will increase by 4.1 percentage points of GDP, reaching 20 per cent of GDP in 2060 before falling slightly to 19.3 per cent of GDP in 2070.

While this looks like a modest improvement on the AR 2015 total aged-related expenditure projection of 23.9 per cent in 2060, in reality comparisons between the age-related expenditure projections in AR 2018 and the previous exercise in 2015 are complicated by the obligation to report expenditure ratios as a proportion of GDP.

[29] As the quantitative underpinning for Country Specific Recommendations.

The substantial upward revision to the level of nominal GDP in AR 2018 relative to the macro-assumptions used in AR 2015 raises questions about the appropriateness of using expenditure ratios scaled by GDP when assessing developments from previous exercises.

The upward revision of GDP reflects the much stronger than anticipated underlying recovery in the Irish economy and more importantly the impact of statistical factors, which artificially inflate the size of the Irish economy. The Central Statistics Office (CSO) has published an alternative measure of the size of the Irish economy that excludes the effects of globalisation, so–called modified Gross National Income (sometimes called GNI*).

Comparing total pension expenditure forecasts on a GDP and GNI* basis clearly illustrates that the GDP ratio paints an overly benign picture. Total pension expenditure as a share of GNI* is 7.3 per cent in 2016 rising to 9.6 per cent in 2070 – this compares to 6.6 per cent in 2070 on a GDP basis.

Table 20: long-term spending projections, per cent of GDP unless otherwise stated

	2016	2020	2030	2040	2050	2060	2070
Total age-related expenditure	**15.2**	**15.0**	**16.6**	**17.8**	**19.4**	**20.0**	**19.3**
- Total pension expenditure	5.0	5.1	5.8	6.7	7.4	7.2	6.6
: Social security pensions	3.8	3.8	4.3	5.2	6.1	6.3	6.0
: Gross occupational pensions^	1.2	1.3	1.5	1.5	1.4	0.9	0.6
- Health care	4.1	4.3	4.6	4.9	5.1	5.2	5.1
- Long-term care	1.3	1.4	1.7	2.1	2.7	3.1	3.3
- Education	3.6	3.5	3.6	3.2	3.4	3.5	3.3
- Unemployment benefits	1.1	0.8	0.9	0.9	0.9	0.9	0.9
Economic and Demographic Developments	**2016**	**2020**	**2030**	**2040**	**2050**	**2060**	**2070**
Labour input (growth rate)	3.1	0.8	0.5	0.1	0.0	0.5	0.4
: Employment (growth rate)	2.8	0.9	0.6	0.1	-0.1	0.5	0.4
: Hours worked per employee (growth rate)	0.4	-0.1	-0.1	0.0	0.0	0.0	0.0
Labour productivity (growth rate)	1.8	2.4	1.3	1.5	1.5	1.5	1.5
: Total Factor Productivity (growth rate)	1.9	1.8	0.9	1.0	1.0	1.0	1.0
: Capital deepening (growth rate)	-0.1	0.6	0.4	0.5	0.5	0.5	0.5
Potential GDP (growth rate)	5.0	3.3	1.8	1.6	1.5	2.0	1.9
population aged >= 65 ('000s)	629	712	947	1,212	1,461	1,488	1,464
Population aged 15-64 ('000s)	3,018	3,085	3,255	3,268	3,196	3,366	3,550
Old-age dependency ratio (per cent)	20.9	23.1	29.1	37.1	45.7	44.2	41.2

^ for public service.
Rounding may affect totals.
Source: Ageing Report 2018.

Further detail on the above projections will be set out in upcoming publications on the Impact of Ageing on Public Finances by the Department of Finance, the 2018 Ageing Report and the accompanying Country Fiche for Ireland.[30]

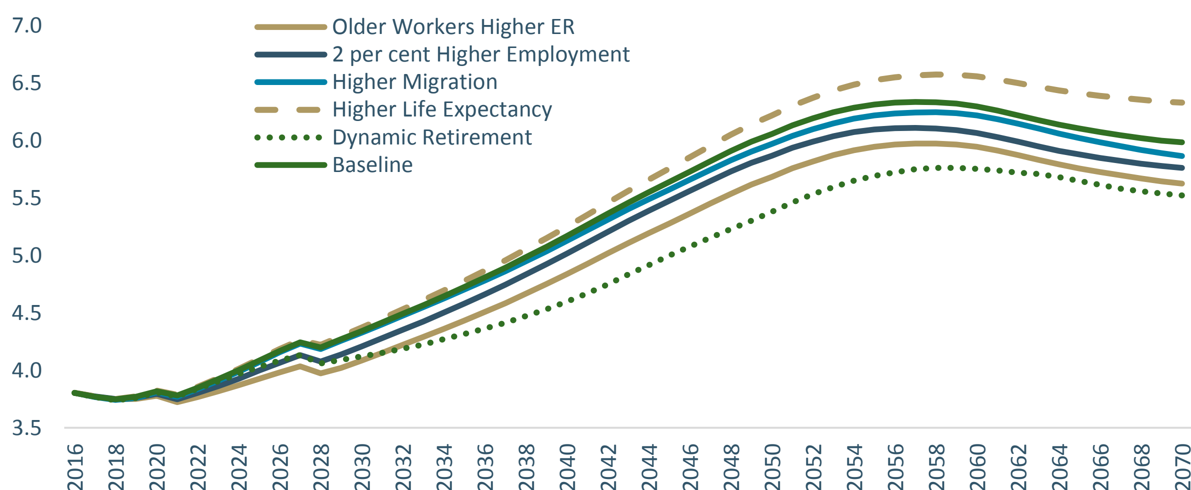
[30] The 2018 EC-EPC Ageing Report is due to be published in May 2018.

In order to test the robustness of the pension projection results to a range of assumptions, a sensitivity analysis was carried out in line with the harmonised range of shocks agreed by the Ageing Working Group (AWG).[31]

A positive life expectancy shock leads to an increase in public social security (PSS) pension expenditure as a proportion of GDP, as pension recipients spend longer in retirement. By 2070, PSS spending under the higher life expectancy scenario is 0.3 pp. of GDP higher relative to baseline.

The recently published *Roadmap for Pension Reform 2018-2023*, sets out a commitment to link future changes in the State pension age to life expectancy, following the already planned increases in 2021 and 2028.[32] The sensitivity scenario results show that the introduction of a policy linking the State pension age to life expectancy could be expected to reduce pension related spending by approximately 0.5 pp. of GDP by 2070 (dynamic retirement age scenario in Figure 13 below).

Figure 13. sensitivity analysis: public pension expenditure as a share of GDP, per cent



Sensitivity scenarios applied to PSS pension expenditure only. Older Workers Higher ER refers to the higher employment rate of older workers scenario.
Source: Ageing Report 2018.

The higher employment rate of older workers scenario also leads to a pronounced reduction in pension expenditure (-0.4 pp of GDP in 2070) suggesting targeted policies to boost employment for older workers can have a more pronounced benefit in lower pension spending.

[31] The sensitivity shocks were applied exclusively to social security pension schemes (PSS). The higher life expectancy scenario assumes an increase in life expectancy at birth of two years by 2070 compared to the baseline scenario. The higher employment rate of older workers scenario assumes an increase of 10 percentage points in the employment rate of older workers (55 to 74) between 2018 and 2030 and maintains its value thereafter. The dynamic retirement age scenario links the retirement age to increases in life expectancy. In particular, the statutory retirement age follows the evolution of life expectancy in every year, i.e. if life expectancy increases by 10 per cent of a year in a given year, the statutory retirement age will increase by 10 per cent of a year.

[32] The *Roadmap for Pension Reform 2018-2023*, published in February 2018, sets out a commitment that there will be no further increase in the State pension age prior to 2035 other than those already provided for in 2021 and 2028 and that any future changes after 2035 will be directly linked to increases in life expectancy. Roadmap available at: http://www.welfare.ie/en/pressoffice/pdf/PensionsRoadmap.pdf

These projections suggest that putting in place targeted policy measures that serve to increase the share of the older population at work would be of help in meeting the pensions funding challenge.

8.4 Policy Strategy

A range of policy reforms have been introduced in recent years to address the budgetary challenges posed by population ageing. For example:

Public service pensions

The Single Public Service Pension Scheme (Single Scheme) for all new entrants to public service employment took effect from 1 January 2013. Under this scheme, pension benefits are based on career average earnings rather than final salary. The Single Scheme minimum pension age has been raised to 66 bringing it in line with the statutory state pension age, rising progressively to 67 in 2021 and 68 in 2028. In addition, post-retirement pension increases for Single Scheme members are linked to consumer prices (CPI) rather than wage movements of existing public servants.

Department of Public Expenditure and Reform estimates suggest that the long-term annual savings from the introduction of this scheme will amount to €1.8 billion, with over a half of those savings due to changes to indexation (CPI linkage), almost a third due to the impact of career averaging, and the remainder arising from the increase in pension age. A significant and growing reduction in longer-term pension costs is therefore envisaged once this cohort begins to retire.

The *Public Service Pay and Pensions Act 2017* provides that a permanent Additional Superannuation Contribution (ASC) will be introduced for public servants from 1 January 2019. This contribution will be in addition to existing pension contributions made by public servants and will provide a further €550 million towards the cost of public service pensions when fully implemented from 2020, placing public service pensions on a more sustainable long-term footing.

State pensions

A number of reform measures have been implemented in recent years to improve the sustainability of the state pension system. The State Pension Transition payment was abolished in 2014, which had the effect of increasing the State Pension eligibility age to 66, and the age of eligibility will further rise to 67 in 2021 and then to 68 in 2028. Separately, the criteria to qualify for a contributory pension were amended to increase the minimum number of years of paid contributions required for a contributory pension from five to ten years in April 2012.

The recently published *Roadmap for Pensions Reform 2018-2023* will further address the long term sustainability of the State Pension system. It proposes the introduction of a 'total contributions approach' to replace the current 'yearly average' contributions test for the State Pension (Contributory) from 2020 onwards. This will ensure that the level of pension payments would be directly proportionate to the number of social insurance contributions the person has over their working life, thereby removing some of the anomalies associated with the current averaging approach. The Department of Employment Affairs and Social

Protection will shortly publish a total contributions approach design proposal paper for public consultation. The Roadmap also proposes that in future the rate of the State Pension will be linked to changes in the Consumer Price Index. This proposal will be examined in detail in the third quarter of 2018.

Long-term care

The aim of the Nursing Homes Support Scheme (also known as the 'Fair Deal') introduced in October 2009 is to put the financing of individuals' long-term residential care needs on a fair and equitable basis, whereby people contribute towards the cost of their long-term nursing home care according to their means with the State paying the balance. An applicant to the Scheme can enter any nursing home (public, private or voluntary) subject to it having an available bed and being able to cater for their particular needs.

When the Scheme commenced in 2009, a commitment was made that it would be reviewed after three years. The report of the review was published in July 2015. The review included a general examination of the Scheme, as well as the balance between residential care and care in the community, and the cost of long-term care in public and private residential facilities.

An Interdepartmental/Agency Working Group has been established to progress the recommendations contained in the Review. This Group is chaired by the Department of Health and includes representatives from the Department of the Taoiseach, the Department of Public Expenditure and Reform, the HSE, the Revenue Commissioners and, when required, the National Treatment Purchase Fund (NTPF). These recommendations include:

- Improvements to the administration of the Scheme, including an examination of the treatment of farm and business assets for the purposes of the financial assessment element of the Scheme; the remaining legislative reforms are planned for conclusion by the end of 2018.
- A review of how prices for private and voluntary nursing homes are set by the National Treatment Purchase Fund (NTPF); this report is expected in the first half of 2018.
- A Value for Money and Policy Review of the cost differentials in public and private/voluntary residential facilities, which commenced in early 2018.
- Improving home-care services so that people can continue to live with confidence, dignity and security in their own homes for as long as possible is a key commitment of the Government.

To support the latter, the Department of Health is currently engaged in the development of a new stand-alone, statutory scheme for the financing and regulation of home-care services. This will introduce clear rules in relation to the services for which individuals are eligible and in relation to service-allocation. It will therefore be an important step in ensuring that the system operates in a consistent and fair manner as well as improving access to home-care services on an affordable and sustainable basis. The introduction of a system of regulation for home-care will help to ensure public confidence in the services provided.

As an initial step in the development of the new scheme, the Department of Health commissioned the Health Research Board to undertake a review of the home-care systems in four European countries. The review, which was published last April, will help to ensure that

Ireland's new home-care scheme and system of regulation is informed by international experience. In addition a public consultation on the financing and regulation of home-care was undertaken last year. The purpose of this consultation, to which approximately 2,600 submissions were received, was to enable the Department to find out about the views of service-users, their families and healthcare workers on current and future home-care provision. A report on the findings of the consultation will be published in the spring and will inform the development of the new scheme. Further consultation with stakeholders including service users will take place later this year.

The development of a new statutory scheme for home-care is a complex process and a significant amount of preparatory work remains to be undertaken. This is required if reforms are to be successful, affordable and sustainable.

8.5 Conclusion

A wide range of policy measures have been undertaken over recent years to address the budgetary implications of population ageing including legislated step-increases in the state pension age over time, the planned introduction of a total contributions approach for the State Pension (Contributory), reform of public service pension entitlements and moves to place long-term care expenditure on a more sustainable footing. These reform measures will help mitigate the impact of demographic pressures over the coming decades.

Chapter 9
Alternative Estimates of the Economy's Cyclical Position

9.1 Summary

Measuring the economic cycle is important in formulating budgetary policy. Assessment of compliance with the *Stability and Growth Pact* (SGP) is undertaken on the basis of a methodology agreed between the Member States and the Commission. This harmonised methodology can produce counter-intuitive results for small open economies such as Ireland.

The Department has developed a number of alternative approaches to the harmonised methodology in order to estimate potential output and the cyclical position of the economy. In summary, the output gap as measured by the mid-point of the range of alternative estimates indicates that GDP is below its potential level in 2018. This is consistent with limited inflationary pressures in the economy and the evidence of some remaining slack in the labour market. There is, however, the possibility of overheating in the near future with the output gap measure projected to turn positive in 2019.

9.2 Measuring potential output and the economy's cyclical position

Potential output and the associated output gap are key concepts in the formulation and assessment of fiscal and monetary policy. In theory, potential output measures the level of output that an economy can sustainably produce without causing inflation to increase or decrease. From a fiscal policy perspective, it is important that public finance developments are compatible with this level of output over the medium to long term. In the short-term, the output gap (the percentage difference between actual and potential output) can be used to determine the appropriate fiscal stance. The measure indicates the level of excess demand or supply in the economy which enables the Department to evaluate the extent to which fiscal policy should be used to move the economy towards its sustainable growth path.

9.2.1 Limitations of the harmonised method

Since 2015, the public finances in Ireland have been subject to the preventive arm of the SGP which gives greater prominence to potential output and the output gap in Irish fiscal policy. A key requirement of SGP is that Member States meet or progress towards their Medium-Term Budgetary Objective, which is set in structural terms. This necessitates the estimation of the cyclically-adjusted budget balance.

Until now, the Department of Finance has used the harmonised methodology to estimate the output gap while highlighting the often counter-intuitive results of the "one-size fits all" approach. For instance, potential output estimates for Ireland are quite volatile over time compared with Germany and the euro area for example. Moreover, the uncertainty/revisions of real time potential output and output gap estimates is even more problematic as they are most relevant for fiscal policy.

9.2.2 Alternative methodologies

Identifying Ireland's potential level of output is quite a significant challenge. First, it is difficult to conceptualise what potential output should be for a "regional" economy such as Ireland with its elastic labour supply and cross-border mobility of capital. Second, in practice, potential output cannot be observed and must be estimated. There is, however, no standard

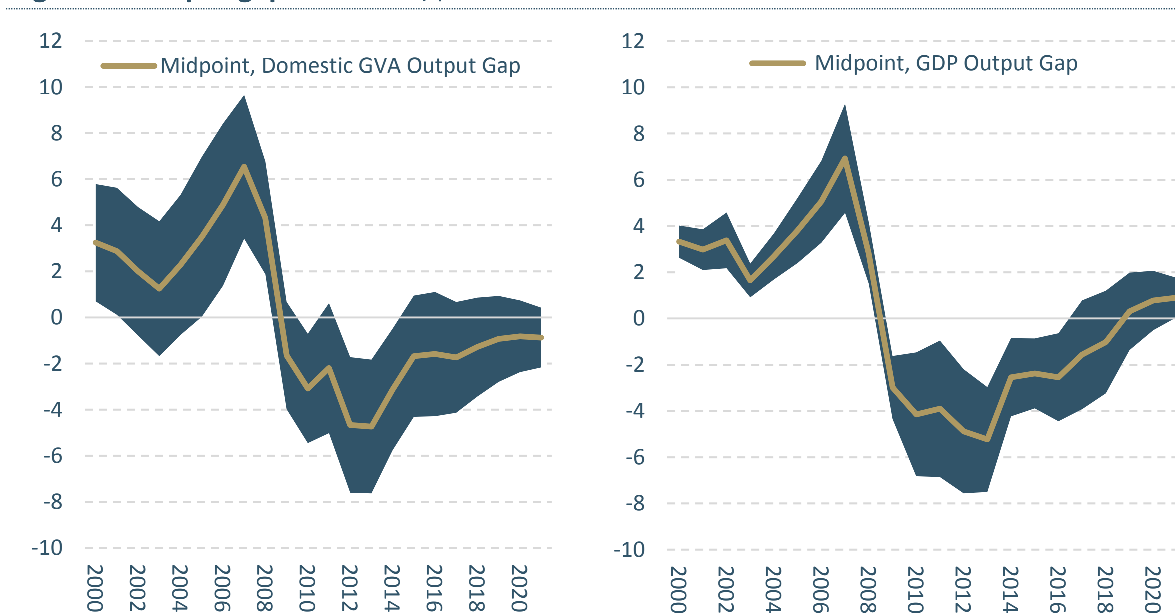
approach to estimating the economy's potential growth path and cyclical position. On that basis, it is considered prudent to develop a number of alternative estimates. Such an approach can help avoid misleading signals about the cyclical position of the economy and the adoption of policy prescriptions that are inappropriate.

With this in mind, the Department has been developing alternative methodologies to estimate the output gap. A number of filtering models are used including one which follows the framework developed by Borio *et al*. (2013)[33]. Within this approach, fluctuations in credit, property prices and other relevant economic indicators can be accounted for when measuring the output gap. Another approach accounts for the distortionary effect of foreign-owned multinational enterprises (MNEs) and estimates trend measures of domestic economic activity (i.e. domestic Gross Value Added (GVA)) using a Kalman filter within both a univariate, and multivariate framework where private sector credit growth and house price growth are accounted for.

The charts present the range and midpoint output gap estimates for both domestic GVA and GDP derived from the alternative models. The mid-point estimate outlines a GDP output gap path that is broadly in line with the Department's assessment; it depicts a positive gap in the years leading up to the crisis consistent with overheating of the economy before sharply turning negative during the financial crisis. More recently, as the recovery became established the gap is found to be closing from below. The current negative value in 2018 is consistent with limited inflationary pressures in the economy and remaining slack in the labour market. There is, however, the possibility for overheating in the near future with the gap estimate forecast to turn positive in 2019.

In terms of next steps, the Department will publish a working paper (and invite comments) during the summer.

Figure 14 output gap estimates, per cent



Source: Department of Finance estimates.

[33] Borio, C., P. Disyatat, and M. Juselius. 2013. "*Rethinking Potential Output: Embedding Information about the Financial Cycle*," BIS Working paper no. 404.

Annex 1
Additional Fiscal Statistics and Tables

Table A1: difference between exchequer balance and general government balance, € millions

	2017	2018	2019	2020	2021
Exchequer balance	1,910	-1,515	-2,405	-1,995	-805
Exclude equity and loan transactions	-4,665	-1,630	-1,160	-1,060	-1,120
Adjust for interest accrual	220	460	290	340	15
Adjust for tax accruals	30	545	435	470	455
Adjust for other accruals	260	290	105	240	-675
Net lending/borrowing of non-commercial State bodies	-130	20	185	225	85
Impact of ISIF	330	310	310	315	315
Net surplus of the Social Insurance Fund	695	1,150	1,610	2,075	2,545
Net surplus of other EBF's	160	60	125	125	140
Net lending/borrowing of Local Government	175	-465	-340	-330	-5
Rainy Day Fund	0	0	500	500	500
General government balance	-1,015	-780	-350	895	1,445
General government balance as per cent of GDP	-0.3	-0.2	-0.1	0.3	0.4
Nominal GDP	296,150	312,750	329,575	345,100	360,000

Rounding may affect totals. GDP is rounded to nearest €25m
Source: Department of Finance, Department of Public Expenditure and Reform, Central Statistics Office (CSO) and National Treasury Management Agency (NTMA) estimates.

Table A2: general government balance 2017-2021, per cent of GDP (unless stated)

	2017	2017	2018	2019	2020	2021
Net lending by sub-sector						
	€m					
General government balance	**-1,015**	**-0.3**	**-0.2**	**-0.1**	**0.3**	**0.4**
Central government	-1,190	-0.4	-0.1	0.0	0.4	0.4
State government	N/A	N/A	N/A	N/A	N/A	N/A
Local government	175	0.1	-0.1	-0.1	-0.1	0.0
Social security funds	N/A	N/A	N/A	N/A	N/A	N/A
General government						
Total Revenue	76,195	25.7	25.4	25.1	24.8	24.7
Total Expenditure	77,210	26.1	25.6	25.2	24.5	24.3
Net lending/borrowing	**-1,015**	**-0.3**	**-0.2**	**-0.1**	**0.3**	**0.4**
Interest expenditure	5,810	2.0	1.7	1.6	1.5	1.4
Primary balance	4,795	1.6	1.5	1.5	1.7	1.8
One-off and other temporary measures	-180	-0.1	0.0	0.0	0.0	0.0
Selected components of revenue						
Total taxes	55,675	18.8	18.8	18.7	18.6	18.7
Taxes on production and imports	24,425	8.2	8.0	8.0	8.0	8.0
Current taxes on income, wealth etc.	30,800	10.4	10.6	10.5	10.5	10.6
Capital taxes	450	0.2	0.1	0.1	0.1	0.1
Social contributions	12,645	4.3	4.2	4.2	4.1	4.1
Property Income	1,770	0.6	0.4	0.4	0.3	0.2
Other	6,110	2.1	1.9	1.8	1.7	1.6
Total revenue	**76,195**	**25.7**	**25.4**	**25.1**	**24.8**	**24.7**
p.m.: Tax burden	68,870	23.3	23.3	23.1	23.0	23.1
Selected Components of Expenditure						
Compensation of employees	20,710	7.0	6.8	6.7	6.5	6.3
Intermediate consumption	9,835	3.3	3.4	3.3	3.2	3.0
Social payments	28,920	9.8	9.3	8.9	8.6	8.4
Social transfers in kind supplied via market producers	5,975	2.0	1.8	1.7	1.6	1.6
Social transfers other than in kind	22,945	7.7	7.5	7.2	7.0	6.9
Interest expenditure	5,810	2.0	1.7	1.6	1.5	1.4
Subsidies	1,835	0.6	0.6	0.6	0.5	0.5
Gross fixed capital formation	5,500	1.9	2.2	2.3	2.3	2.3
Capital Transfers	1,525	0.5	0.4	0.5	0.4	0.8
Other	3,080	1.0	1.2	1.2	1.1	1.1
Resources to be allocated	0	0.0	0.0	0.2	0.4	0.5
Total expenditure	**77,210**	**26.1**	**25.6**	**25.2**	**24.5**	**24.3**
p.m. : Government consumption	35,390	11.9	11.4	11.4	11.1	10.8
Gross domestic product at current market prices	296,150	296,150	312,750	329,575	345,100	360,000

Rounding may affect totals.
Source: Department of Finance, Department of Public Expenditure and Reform, CSO and NTMA estimates.

Table A3: comparison of vintages of receipts and expenditures for 2018, € millions

	Budget 2018	SPU 2018	Total Δ	New Data Δ	Other Δ	notes
General Government Revenue						
Taxes on production and imports	25,730	25,120	-610	-610	0	1
Current taxes on income, wealth	32,800	33,290	490	490	0	1
Capital taxes	345	450	105	105	0	1
Social contributions	13,155	13,165	10	10	0	1
Property Income	1,190	1,360	170	170	0	1
Other	5,510	5,910	400	400	0	1
Total revenue	78,730	79,295	570	565	0	
General Government Expenditure						
Compensation of employees	21,255	21,405	150	150	0	1
Intermediate consumption	10,620	10,720	100	100	0	1
Social payments	29,095	29,010	-85	-85	0	1
Interest expenditure	5,645	5,350	-295	-295	0	1
Subsidies	1,645	1,795	150	150	0	1
Gross fixed capital formation	6,190	6,790	600	0	600	2
Capital transfers	1,275	1,295	20	20	0	1
Other	3,540	3,710	170	170	0	1
Total expenditure	79,265	80,080	815	815	0	
General government balance	-540	-780	-240			

Rounding may affect totals
1. Reflects more up to date data since the Budget 2018 estimates.
2. Increase in gross fixed capital formation largely reflects the reclassification of Approved Housing Bodies – see Box 2 for further detail.
Source: Department of Finance.

Table A4: general government interest expenditure 2017-2021, € millions (unless stated)

	2017	2018	2019	2020	2021
National Debt Cash Interest	6,089.5	5,828.0	5,504.0	5,326.0	4,737.0
per cent tax revenue	12.0	10.8	9.7	8.9	7.6
per cent of GDP	2.1	1.9	1.7	1.5	1.3
National Debt Cash Interest Accruals	31.4	-261.4	-163.6	-277.1	-1.0
Consolidation and Grossing Adjustments	-73.9	-33.6	-14.2	52.4	128.2
Accrued promissory note interest	0.0	0.0	0.0	0.0	0.0
Other	-201.8	-186.8	-101.1	-26.3	31.7
Total Interest on ESA2010 basis	5,811.2	5,346.1	5,225.2	5,075.0	4,896.0
per cent of total general government revenue	7.6	6.7	6.3	5.9	5.5
per cent of GDP	2.0	1.7	1.6	1.5	1.4

Notes: Rounding may affect totals
Source: Department of Finance, CSO and NTMA (National Debt data provider)

Table A5: projected movement in general government debt 2017-2021, € billions

	2017	2018	2019	2020	2021
Opening general government debt	200.7	201.3	206.3	209.4	207.7
Exchequer borrowing requirement	-1.9	1.5	2.4	2.0	0.8
Change in Exchequer Deposits	1.4	2.5	-0.3	-5.0	2.2
Net lending of NCSSBs*	0.2	0.0	0.0	0.0	0.2
Net lending of local government	-0.2	0.5	0.3	0.3	0.3
Change in collateral held	-0.5	-0.2	0.0	0.0	0.0
Other	1.6	0.7	0.6	0.9	0.3
Closing general government debt	201.3	206.3	209.4	207.7	211.4
General government debt to GDP ratio	68.0	66.0	63.5	60.2	58.7

*NCSSBs = Non-commercial semi-state bodies
Source: Department of Finance, CSO and NTMA.

Table A6: breakdown of revenue, per cent of GDP (unless stated)

	2017	2017	2018	2019	2020	2021
	€ millions					
Total Revenue at Unchanged Policies	76,273	25.7	25.0	25.1	24.7	24.7
Discretionary revenue	-78	0.0	0.3	0.0	0.0	0.0

Source: Department of Finance

Table A7: expenditure developments, per cent of GDP (unless stated)

	2017	2017	2018	2019	2020	2021
	€ billion					
Exp. on EU Programmes matched by revenue from EU funds	0.5	0.1	0.2	0.2	0.2	0.2
Expenditure fully matched by mandated revenue increases	0	0.0	0.0	0.0	0.0	0.0
Non-discretionary changes in unemployment benefit expenditure	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1

Source: Department of Finance calculations and Department of Public Expenditure and Reform

Table A8: budgetary plans, per cent of GDP

	2017	2018	2019	2020	2021
1. General government balance	-0.3	-0.2	-0.1	0.3	0.4
2. Structural balance	-0.4	-0.9	-0.4	0.1	0.3
3. Cyclical budgetary component	0.2	0.6	0.3	0.2	0.1
4. One-offs and other temporary measures	-0.1	0.0	0.0	0.0	0.0
5. General government balance	-0.3	-0.2	-0.1	0.3	0.4
6. Total revenue	25.7	25.4	25.1	24.8	24.7
7. Total expenditure	26.1	25.6	25.2	24.5	24.3
Amounts to be excluded from the expenditure benchmark					
7a. Interest expenditure	2.0	1.7	1.6	1.5	1.4
7b. Expenditure on EU programmes fully matched by EU funds revenue	0.2	0.1	0.2	0.2	0.2
7c. Cyclical unemployment benefit expenditure	-0.1	-0.1	0.0	0.1	0.1
7d. Effect of discretionary revenue measures	0.0	0.3	0.0	0.0	0.0
7e. Revenue increases mandated by law	0	0	0	0	0
8. Tax burden	23.3	23.3	23.1	23.0	23.1
9. Gross debt	68.0	66.0	63.5	60.2	58.7

Rounding may affect totals.
Source: Department of Finance, Department of Public Expenditure and Reform, CSO and NTMA.

Annex 2
Macro-Economic aggregates 2017 to 2021

	2017	2018	2019	2020	2021
Economic activity			year-on-year change (unless stated)		
Real GNP	6.6	5.6	3.7	3.1	2.6
Real GDP	7.8	5.6	4.0	3.4	2.8
Nominal GDP (nearest €25m)	296,150	312,750	329,575	345,100	360,000
Nominal GNP (nearest €25m)	241,175	255,400	268,250	280,250	292,100
Nominal GNI* (nearest €25m)	201,150	212,975	223,625	233,600	243,450
Components of GDP					
Personal consumption	1.9	2.6	2.4	2.3	1.9
Government consumption	1.8	1.9	1.9	1.8	1.7
Investment	-22.3	8.5	7.4	5.2	4.7
Underlying domestic demand	2.6	3.9	3.7	3.0	2.7
Exports	6.9	6.9	5.4	4.5	3.9
Imports	-6.2	6.6	5.9	4.8	4.4
Contributions to real GDP growth			percentage point		
Domestic demand	-6.2	3.0	2.8	2.3	2.0
Stock changes	0.1	0.0	0.0	0.0	0.0
Net exports	14.5	2.5	1.2	1.1	0.8
Price developments			year-on-year change		
HICP	0.3	0.8	1.0	1.4	2.6
GDP deflator	-0.3	0.0	1.3	1.3	1.5
Personal Consumption Deflator	1.3	1.6	1.7	1.9	2.7
Labour market			year-on-year change		
Employment	2.9	2.7	2.3	1.9	1.7
Unemployment	6.7	5.8	5.3	5.3	5.4
Labour Productivity	4.8	2.8	1.7	1.5	1.1
Compensation of Employees	5.8	5.7	5.4	5.1	4.8
Compensation per Employee	2.0	2.6	2.8	3.2	3.1
External			per cent of GDP		
Trade balance	32.1	31.6	31.1	30.8	30.2
Current Account	12.5	12.2	11.4	10.9	10.2
Cyclical Developments			year-on-year change (unless stated)		
Potential GDP Growth	8.0	4.7	4.7	3.7	3.2
Contribution (percentage point)					
- Labour	2.2	2.0	1.9	0.9	0.4
- Capital	0.1	0.3	0.5	0.5	0.5
- Total factor productivity	5.6	2.3	2.2	2.2	2.2

Source: CSO (for 2017) and Department of Finance for 2018-2021

Annex 3
Ireland's National Reform Programme
Summary of Progress

Preparation of our National Reform Programme (NRP) is an important part of the European Semester process.

Ireland's NRP reports on the progress made and measures taken to address key economic and social policy challenges, including those identified in the European Commission's Country Report on Ireland published in March. Challenges and priorities identified include:

- Brexit;
- Housing supply challenges;
- Labour market and skills challenges;
- Reform of Health System; and
- Productivity gap between MNEs and domestic enterprises.

The NRP also reports on progress addressing the policy recommendations given to Ireland under the 2017 European Semester process. Country Specific Recommendations (CSRs) are tailored, concrete recommendations for actions in areas where it is considered that individual Member States should focus their reform efforts. Ireland received three CSRs in 2017 covering:

- Public Finances;
- Targeted public investment, the enhancement of social infrastructure, labour market activation; and
- Sustainable resolution of non-performing loans.

The NRP also outlines progress towards the five headline targets under the Europe 2020 Strategy covering:

- Employment;
- Research and Development;
- Climate Change and Energy;
- Education; and
- Social Inclusion.

Additionally the NRP outlines the use of European Structural and Investment Funds to meet Europe 2020 objectives, and reports on stakeholder engagement which is regarded as an important component in the European Semester process.

Annex 4
Irish Fiscal Advisory Council's Endorsement of the Macroeconomic Forecasts

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Cearnóg Whitaker, Cé Sir John Rogerson, Baile Átha Cliath 2

Whitaker Square, Sir John Rogerson's Quay, Dublin 2

10 April 2018

Dear Secretary General Moran,

The Council has an obligation under the Fiscal Responsibility Act to endorse, as appropriate, the macroeconomic forecasts prepared by the Department of Finance on which the *Stability Programme Update (SPU) 2018* will be based.[1] The final forecasts were provided to the Council on 4 April 2018 and discussed by the Council with Department staff on 6 April 2018.

The Council's approach to endorsement of the macroeconomic forecasts has three elements: a comparison of the Department of Finance's macroeconomic forecasts to the Council's Benchmark forecasts; consideration of the methodology used to produce the forecasts; and a review of past forecast errors for evidence of systematic bias.

The Irish Fiscal Advisory Council endorses as within the range of appropriate forecasts the set of macroeconomic projections prepared by the Department of Finance for *SPU 2018*.

The Council is satisfied that the demand-side forecasts are within an endorsable range, taking into account the methodology and the plausibility of the judgements made.

The Council welcomes the progress made by the Department towards developing alternatives to the EU Commonly Agreed Methodology (CAM) for the purposes of its medium-term forecasts, and its intention to publish numerical estimates of the output gap in *SPU 2018*.[2] Well-founded forecasts for the medium term are necessary to provide a sound basis for setting the economy and the public finances on a sustainable path. The Council also welcomes the intention of the Department to include these estimates in the headline table of macroeconomic indicators in future endorsement rounds.

The Department continues to produce supply-side estimates in line with the EU Commonly Agreed Methodology (CAM) for the purposes of fiscal surveillance. The Department has introduced an adjustment to the application of the method relating to 2017. The Department's mechanical application of the adjusted methodology to estimate trend supply-side variables in *SPU 2018* has been verified. At the time of the endorsement, it is unclear whether or not the European Commission will decide to adopt these adjustments.

A detailed discussion of the endorsement process and an assessment of the macroeconomic projections will be provided in the Council's forthcoming *Fiscal Assessment Report*, which is scheduled for publication in June.

Yours sincerely,

Seamus Coffey

Seamus Coffey, Chairperson.

[1] The Fiscal Responsibility Act 2012, as amended by the Ministers and Secretaries (Amendment) Act 2013, states that: "The Fiscal Council shall— (a) endorse, as it considers appropriate, the macroeconomic forecasts prepared by the Department of Finance on which the Budget and stability programme will be based".

[2] The CAM is primarily a tool used for fiscal surveillance by the European Commission. As highlighted by the Council in previous Fiscal Assessment Reports and on numerous occasions by the Department of Finance, the CAM is not well equipped to estimate the supply side of the Irish economy. Furthermore, the results do not reflect the Department's own views regarding the cyclical position of the economy.

Comhairle/Council: Seamus Coffey (Chairperson) · Sebastian Barnes · Íde Kearney · Michael G. Tutty · Martina Lawless.

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