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EU Fiscal Rules and International Expenditure Rules

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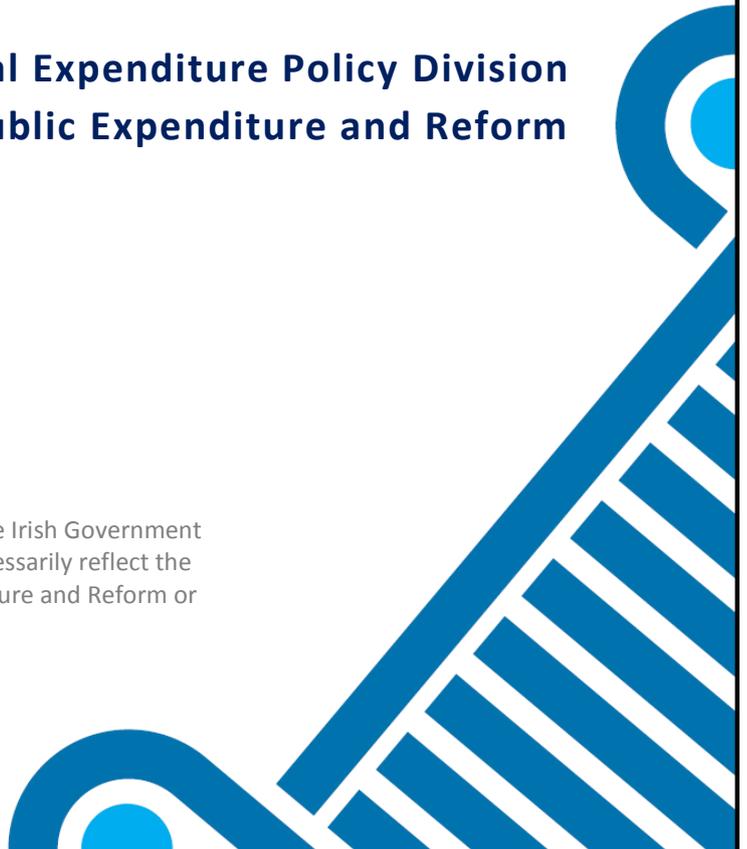


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Summary

- **Purpose:** The Mid-Year Expenditure Report (published in July 2016) discussed, in summary terms, some important considerations relating to the objectives, impact and operationalisation of the EU Fiscal Rules under the Preventive Arm of the Stability and Growth Pact (SGP). This paper expands and elaborates on the themes discussed in the Mid-Year Expenditure Report describing the Structural Budget Balance (SBB) and Expenditure Benchmark (EB) rules, highlighting the role of the Expenditure Benchmarking as complementary to the Structural Budget Balance rule in guiding it towards the achievement of the Medium-Term Budgetary Objective (MTO).
- **Structural Budget Balance:** In practice, the SBB is extremely difficult to estimate due to unreliable real-time estimates of the cyclical position of the economy. Estimated changes in the SBB are typically revised by more than 0.5% of GDP, which is more than the adjustment that the rules require for compliance.
- **Expenditure Benchmark:** The European Commission state that the calculation of the EB could be usefully amended, in particular to exclude one-offs from the revenue and expenditure aggregates used and less reliance on estimated, unobservable variables to ensure greater consistency with the SBB rule.
- **Compliance Challenge:** A key challenge in seeking to ensure compliance with the SGP is the large number of distinct parameters informing the estimation of the SBB and EB. It is difficult to measure certain parameters accurately in real-time and some of the revisions to which have been are significant in Ireland's case. This issue arose particularly in the context of Estimates 2017 on account of the huge revision to the GDP level in 2015 and the impact that this had on the parameters of the SBB and EB calculations. Bruegel, a Brussels-based economic think tank, have also made a number of proposals on how the EU fiscal framework could be strengthened to address some of the issues highlighted.
- **Rationale for and impact of Expenditure Rules (ERs):** Benefits of ERs from international research include lower risks of excessive deficits, pro-cyclicality and debt increases. In addition, although ER are not aimed primarily at steering expenditure reforms, they can help underpin reform incentives by promoting efficiency and prioritisation of public spending overall. On the other hand, research also indicates that ERs including a sole focus on expenditure growth (net of revenue measures) may not be optimal as they do not take into account an assessment of the ability of the economy to access finance to withstand a negative shock. In addition, an expenditure rule or any other fiscal rule that

is applied in the absence of any consideration of the underlying budget position and the ability of the economy to finance sustainable spending runs the risk of pro-cyclicality.

- **Potential Impact of ERs on Public Investment:** There is also some evidence from international research that the application of ERs coincide with lower levels of public investment. An empirical analysis is undertaken in this paper, on the relationship between public investment and ERs. The empirical evidence from a panel of advanced countries (11 European countries plus US, Japan and Canada) for the period 1985-2014 suggests the existence for those countries of a negative correlation between public investment and the use of ERs. This analysis relates to an estimated impact, across a number of different countries (not including Ireland) in relation to a wide diversity of ERs. It cannot, therefore, be assumed that the analysis applies to the effect of the EU EB Rule.
- **Evolution of the Fiscal Space 2003 – 2017:** From 2003 onwards, there was rapid growth in expenditure in Ireland, which peaked in 2007 with 14.1% growth over the corrected expenditure levels in 2006. The trend shifted dramatically in 2009 when there was a year-on-year fiscal reduction of 9%, which was followed by a further four years of consolidation. Finally, from 2014 onwards, there has been more modest growth in expenditure. The trends as experienced in this period highlight the pro-cyclical nature of fiscal policy with rapid growth in spending and tax reductions taking place during a positive period in the economic cycle, while the consolidation period to restore the public finances occurred during a large downturn in the economic cycle.
- **Expenditure and Revenue split of Fiscal Space:** It is estimated that in the two periods of fiscal growth (i.e. 2003-08 “rapid growth” and “2014-17 “recovery”) taken together primary expenditure accounted for about 90% of all the fiscal space, which would represent growth in both new measures and dealing with additional costs of demographics. During the “consolidation” period (i.e. 2009-13) primary expenditure contributed 48% of the reduction in the period with announced Budget tax measures accounting for 52% of fiscal space.
- **Looking Backwards: Lessons from Expenditure Rules from Ireland’s Fiscal Crisis?:** Drawing on similar work, two ERs (i.e. the EB and the Bruegel expenditure rule) are retrospectively mapped onto Ireland’s fiscal performance for the period 2003–17. This facilitates a comparison of the actual evolution of public expenditure to that which would theoretically have occurred if expenditure policy had been subject to either of the two ERs. This does not present a potential alternative approach to the conduct of fiscal and expenditure policy over the period following the economic and fiscal collapse but, is

intended to explore some features of the operation of ERs that could be helpful for the future conduct of public expenditure policy.

- **Conclusion:** Consideration is ongoing at EU level of how the fiscal rules might be simplified and improved by addressing the complexity of the current framework. In Ireland's case, aligning the scope for expenditure growth to the economy's medium-term growth potential has played a crucial role in supporting the restoration and maintenance of stable public finances. Under the Preventive Arm of the SGP, the Fiscal Rules can facilitate the conduct of counter-cyclical fiscal policy in the case of economic shock as well as maintaining and securing long-term sustainability of Ireland's public finances. The continued recognition of the critical role of capital expenditure in supporting the development of the economy's long-term growth potential (e.g. through the capital smoothing under the EB rule) is also central to long-term economic prospects.

1. Introduction and purpose of study

The introduction of the revised Stability and Growth Pact (SGP) in 2011 brought greater responsibility for Member States in ensuring that deficit and debt figures remain at sustainable and stable levels over the medium-term. As a result, a detailed Medium-Term Expenditure Framework was put in place for Ireland during 2013, with the EU Fiscal Rules forming a key element of the overall framework. The interaction between and integration of the EU Fiscal Rules with the Medium-Term Expenditure Framework is of key importance to fiscal sustainability. The Mid-Year Expenditure Report (published in July 2016)¹ discussed in summary terms some important considerations relating to the objectives, impact and operationalisation of the Fiscal Rules. This paper expands and elaborates on the themes discussed in the Mid-Year Expenditure Report.

The purpose of the paper is to review the new EU framework for fiscal governance and in particular expenditure management. The Preventive Arm of the Stability and Growth Pact includes the Expenditure Benchmark (EB) rule which directly focusses on limiting expenditure growth to support the achievement of Ireland's Medium-Term Budgetary Objective, a structural budget deficit of -0.5% of potential GDP. The operation of Ireland's fiscal framework has played a critical role in restoring and then maintaining the sustainability and stability of Ireland's public finances and, therefore, contributing to the realisation of economic and social objectives through public expenditure and taxation policies.

This paper considers issues of interest relating to the current EU fiscal framework within the Preventive Arm, in particular the operation of the Structural Budget Balance (SBB) and EB rules. The paper also contains an analysis of the impacts that long-established Expenditure Rules (ERs) internationally may have on public investment. Finally, in order to draw out some important factors relating to the application of the rules in practice, the paper will compare the theoretical application of Expenditure Rules (including the EB operating under the Preventive Arm of the Stability and Growth Pact (SGP), as well as a variant proposed by Bruegel, a Brussels based economic think tank, to the actual expenditure position in Ireland from 2003 onwards.

¹ [Mid-Year Expenditure Report 2016](#)

2. The SGP Fiscal Rules

The current SGP rules are based on macroeconomic theory centred on the Phillips Curve and the Cobb-Douglas Production Function. The Phillips Curve identifies the relationship between inflation and unemployment which has been used to measure the output gap of the economy. One of the key indicators that forms part of the SGP, the 'Fiscal Compact' treaty and the domestic Fiscal Responsibility Act 2012 is the SBB. This is the Government's Budget Balance corrected for the effects of the economic cycle (using the output gap methodology grounded in the Phillips Curve² and Cobb-Douglas Production Function³) and once-off expenditure such as arose in re-capitalising the banking system.

The European Commission have stressed that the concepts of potential growth and the output gap form a crucial part of the toolkit for assessing the cyclical position of the economy and its productive capacity (Havik et al, (2014))⁴. The Commission emphasise that these concepts are essential ingredients of the fiscal surveillance process emanating from the SGP. Given that the SBB is central to the design of national and EU fiscal frameworks, it must therefore be central to their implementation and operationalisation.

2.1 Overview

The legislation governing the SGP was initially adopted in 1997. The first amendment of the SGP occurred in 2005 and involved changes to both the preventive and the corrective arms. The main aim of those changes was to better encapsulate country-specific economic circumstances into account when assessing fiscal policy. In the preventive arm, a country-specific objective was now set in structural terms (net of cyclically-driven expenditure and revenue and of one-offs). These objectives took, and continue to take, into account Member States' gross government debt level and the magnitude of the fiscal challenge presented by population ageing. In the corrective arm, the possibility of extending the Excessive Deficit

² The New-Keynesian Phillips Curve formula is $\pi_t = \beta E_t \pi_{t+1} + \gamma y_t$; where π_t is the inflation rate, $E_t \pi_{t+1}$ is the next period's expected inflation rate and y_t is the output gap.

³ The Cobb-Douglas Production Function is $Y = L^\alpha K^\beta A$; where: Y is total production, L = labour input (the total number of person-hours worked in a year), K is capital input (the real value of all machinery, equipment, and buildings), A is total factor productivity, and α and β are the output elasticities of capital and labour, respectively. These values are constants determined by available technology.

⁴ [Havik et al; *The Production Function Methodology for Calculating Potential Growth Rates & Output Gaps*; EC, 2014.](#)

Procedure (EDP) deadline was introduced for Member States that had taken effective action but were faced with unexpected adverse economic circumstances with a significant impact on their public finances.

Following the onset of the crisis in 2008, the SGP was amended for a second time in 2011, as part of a package of legislation known as the Six Pack. The package amended both Regulations and added a system of financial sanctions, to address the weaknesses in the surveillance framework that the crisis exposed. A key change in the Preventive Arm was the addition of a new expenditure benchmark, which analyses government expenditure net of discretionary revenue measures, as a complement to the change in the structural balance. In addition, there was specification introduced of when deviations from the adjustment path to the MTO are deemed to be significant within the preventive arm, which could ultimately lead to sanctions. The sanctions for the euro area Member States were particularly strengthened.

Added to the five SGP regulations, the Six Pack contained one directive on requirements for domestic budgetary frameworks which imposed requirements for procedures, rules and institutions, which better ensure that national budgetary positions are in line with the EU fiscal framework.

At the outset, it is important to highlight the core objectives of the Fiscal Rules as well as their linked and inter-dependent nature. The concept of the Medium-Term Objective (MTO) is at the centre of the EU Fiscal Rules under the Preventive Arm of the Stability and Growth Pact. The Medium-Term Objective is set as a target level for the Structural or underlying Government Budget position (stripping out the impact of cyclical or temporary tax receipts and expenditure). This target is set at a level which seeks to take into account the longer-term sustainability of the public finances in terms of factors such as population ageing and a Member State's debt level as a percentage of GDP, as well as a 'safety margin' to minimise the risk that an economic or fiscal shock gives rise to an excessive 'headline' deficit (i.e. greater than -3%). As set out above Ireland's MTO is currently -0.5% of potential GDP. Up to the point that the MTO is realised, there is a requirement to achieve a minimum improvement in the SBB. It is currently +0.6% of potential GDP per annum but can vary depending on the debt level and economic conditions at a given point in time.

The EB is a complementary rule to the SBB rule. It limits growth in public expenditure to support the achievement of the MTO. In overall terms, for as long as the SBB is above the MTO, there is requirement for public expenditure to grow at a rate lower than the economy's potential growth rate (i.e. by a convergence margin) to guide the SBB to the achievement of the MTO.

Once the MTO is reached, public expenditure net of discretionary revenue measures can grow at the medium-term growth rate of the economy. The concept of Fiscal Space relates in this specific context to the gap between existing fiscal policy and the projected permitted growth in expenditure and discretionary tax reducing measures consistent with estimates of the impact of the EB rule in the years ahead.

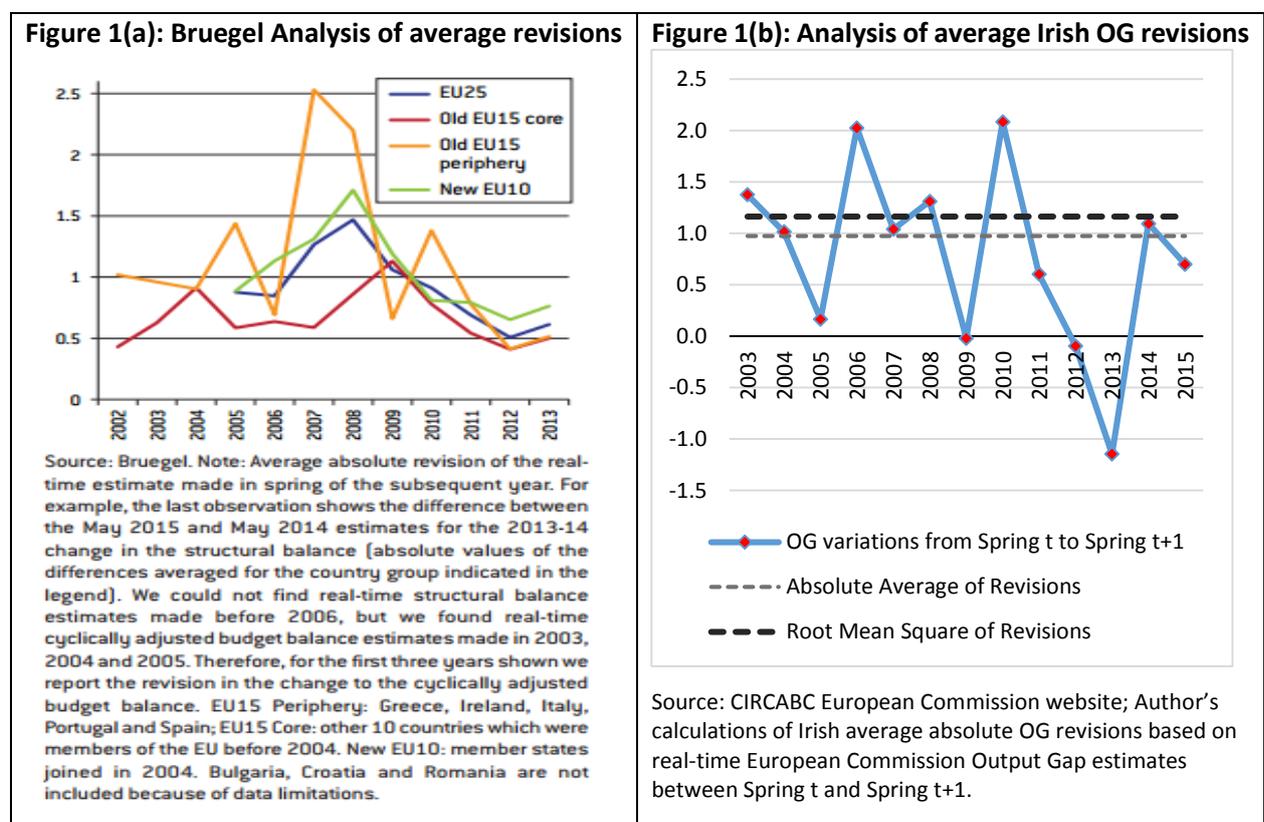
The fiscal rules are underpinned in national legislation by the Fiscal Responsibility Acts 2012 and 2013. This requires that either the SBB meets the MTO or is on an adjustment path to the MTO. In certain circumstances, where the Commission issue a formal warning under the Stability and Growth Pact or the Government consider there is a significant deviation from the MTO or the adjustment path of the SBB towards the MTO, an adjustment plan must be presented to the Oireachtas to secure compliance.

2.2 The Structural Balance

The SBB is intended to account for certain fluctuations across the economic cycle to give policymakers certainty when setting fiscal policy for the future. In addition, the rules set out sustainability targets for Member States if the structural deficit is too high. Countries then must adjust their budgets to achieve their MTO which is expressed in structural terms⁵. In theory, in the case of a recession, the actual budget deficit deteriorates because of cyclically-sensitive falling tax revenues and increased unemployment benefit payments, but the structural balance would be largely unaffected by this and therefore would not imply a need for fiscal consolidation. The opposite should also be true in periods of above-trend growth.

⁵ The Medium-term Budgetary Objective is decided every three years subject to a European Commission minimum limit. The MTO for 2017 is set at -0.5% of GDP

In practice, it is well established that the structural balance is extremely difficult to estimate on a real-time basis. The estimate relies on uncertain and unobservable assessments of the economic cycle and its impact on government finances. Estimated changes in the structural balance are typically revised by more than 0.5% of GDP, which is more than the adjustment that the rules require for compliance. These revisions are considerably higher for small open EU countries such as Ireland (Figure 1(a), Bruegel, 2016). Separately, using the real-time estimates of Irish Output Gap forecasts, figure 1(b) shows that absolute average annual revisions of Irish output gaps are in the region of 1 p.p to 1.2 p.p.



There are also, as discussed by the Irish Fiscal Advisory Council⁶, a number of significant methodological concerns relating to the implementation of the EU fiscal framework. These apply particularly to a small open economy with a high degree of responsiveness in labour supply owing to migration flows. A particular issue relates to pro-cyclicality in real time estimates of both Ireland's estimated trend (or potential) growth rate and output gap (i.e. the extent to which actual GDP exceeds or fall short of projected potential GDP). Pro-cyclicality is

⁶ IFAC; Fiscal Assessment Report, April 2013; Dublin, 2013 (pp.57-63)

illustrated by the tendency for estimates of Ireland's potential or trend output to track actual output growth on account of the tendency of estimates of the 'natural' or underlying unemployment rate to follow actual unemployment.

On account of these factors, the exclusive use of the SBB measure as a fiscal anchor has the potential to lead to poorly designed fiscal policies. The Department of Finance (2003) have highlighted, in particular, the volatility of potential output⁷ and trend growth underlying its estimation on account of the financial cycle and point to the fact that estimates of the SBB for the 2003-07 period did not highlight the serious risks to the sustainability of the public finances.

The European Commission (Aramendía and Raciborski, 2015)⁸ showed that taking into account financial variables would have better predicted the output gap for the Irish economy in the lead up to the financial crisis which "*...could have helped inform better economic policies in Ireland*". However, this may not be the panacea for the use of the output gap in terms of measuring the Irish economy as the authors found "*our estimates of the financial output gap in the late 1980s and early 1990s are less plausible when compared with conventional estimates of the business cycle as financial cycles tend to have a different, lower frequency*". So while further work on the impact of financial variables on economic growth is obviously desirable, it is not very evident - given the configuration of key financial indicators such as, for example, house prices, inflation, credit growth and developments in household debt levels⁹ - that the financial cycle is currently a significant driver of growth in the economy at this time. The Department of Finance have also developed and published estimates of the output gap which account of movements in financial variables including house prices, credit and movements in the current account (SPU, 2016)¹⁰.

⁷ [Department of Finance; December 2003 Stability Programme Update; Dublin, 2003.](#)

⁸ [Aramendía and Raciborski, Using financial variables to estimate the Irish output gap: do they make a difference? EC Economic Brief 004, Brussels, 2015.](#)

⁹ While house prices have grown by c.50% since the trough in 2013 to Nov 2016 ([CSO residential price index Nov 2016](#)), this isn't being funded by growth in lending to Irish households, or through the build-up of household debt, which have reduced year-on-year ([Charts 1 and 8 in Central Bank Finance Statistics Dec 2016](#)).

¹⁰ [Department of Finance; December 2016 Stability Programme Update; Dublin, 2016.](#)

Clearly, there are significant challenges in properly measuring in real-time the underlying structural budget position, but the concept remains very important for prudent and responsible fiscal management. Ireland's experience in the run-up to the fiscal crisis, highlights that the headline budgetary position can present a very misleading picture of the public finances. This can lead to a situation where permanent expenditure commitments are introduced on the basis of temporary revenues, which sows the seeds for future crises. An expenditure rule or any other fiscal rule that is applied in the absence of any consideration of the underlying economic performance and the ability to finance deficits runs the risk of procyclicality (i.e. expenditure growth contributing to a deterioration in the underlying budgetary position). The international research literature confirms that there is scope for improving real time measurement of the structural budget position through better measurement and estimation of the output gap and potential growth and it is an area that the Irish Fiscal Advisory Council (IFAC) have recommended that further work is carried out for the Irish economy¹¹.

2.3 Expenditure Benchmark

As discussed in the preceding section, the SBB rule under the Preventive Arm of the Stability and Growth Pact is supplemented by the EB rule which is intended to assist Member States in achieving and maintaining their MTO. The EB primarily focusses on fiscal policy through managing the real growth of expenditure year-to-year, by which it limits expenditure growth to the medium-term potential growth rate of the economy in order to support the achievement of the MTO. The EB does exclude some elements of expenditure that are considered to be not fully under the control of Government, such as debt interest spending and cyclical unemployment expenditure. The EB is not affected by most of the shortcomings of the structural balance.

However, as the European Commission acknowledge, the EB is not without its own methodological issues including:

1. Reliance on unobservable variables when setting the targets;
2. Detailed data requirements;

¹¹ [Irish Fiscal Advisory Council; *Fiscal Assessment Report*; Dublin, 2016; Box B.](#)

3. The non-exclusion of one-off measures; and
4. Investment matched by EU funds could be improved to avoid possible double counting, by ensuring these funds are not also counted in other areas of expenditure particularly Gross Fixed Capital Formation.

The European Commission state that the calculation of the EB could be usefully amended, in particular to exclude one-offs from the revenue and expenditure aggregates used and thus to ensure greater consistency with the SBB rule.

The recent Dutch presidency of the EC highlighted issues with the current operation of the EU Fiscal Rules at a meeting of the informal ECOFIN in April 2016¹² in particular the level of complexity involved with operationalising the rules which has, for example, given rise to difficulties in the monitoring of compliance and could potentially impact on the credibility of the rules. As set out in the Budget documentation, the huge revisions to the level of GDP in Ireland's National Accounts for 2016 gave rise to a need to adjust the methodology for Ireland (see Box 1 for details).

On the basis of its research into the EU fiscal framework, the European economic think tank, Bruegel, has made number of proposals on options to strengthen the EB. These proposals shed light on some key aspects of the design and operation of the EB. Bruegel note that the fact that the EB depends on an estimate of the GDP deflator to convert nominal expenditure into real expenditure means that it can also suffer from elements of forecasting and data revision error. In addition, the inclusion of the unobservable 'cyclical unemployment expenditure' means that the EB is subject to similar forecasting issues as the SBB measures on account of the reliance on estimates of the natural rate of unemployment (or NAWRU) which is difficult to measure. Bruegel have also made a number of proposals on how the EU fiscal framework could be strengthened (Bruegel, 2016)¹³. Their proposals are discussed in section 5 of this paper.

¹² Link: <https://www.rijksoverheid.nl/binaries/rijksoverheid/documenten/kamerstukken/2016/04/14/bijlage-7-presidency-paper-simplification-sgp/bijlage-7-presidency-paper-%E2%80%93-simplification-sgp.pdf>

¹³ [Claeys, Darvas and Leandro; A proposal to revive the European Fiscal Framework; Brussels, 2016](#)

2.4 Conclusion

This section highlights:

- the central role of the EU Fiscal Rules in the conduct of fiscal policy in Ireland;
- the importance of the SBB rule in determining a minimum target for reductions in the Government's structural or underlying budget deficit (i.e. adjusted for the economic cycle); and
- the critical role of the EB rule is steering the public finances towards the achievement of the MTO.

It also draws attention to the well-established difficulty in using estimates of the SBB rule as a robust anchor for the conduct of fiscal policy.

The analysis also points to a key issue in ensuring compliance with the SGP – the large number of distinct parameters that need to be estimated or projected informing the estimation of the SBB and EB. As discussed, there are difficulties in measuring these parameters accurately in real-time and the revisions to which have been particularly significant in Ireland's case.

The Box following sets out the changes to the Fiscal Rules in Ireland adopted in Budget 2017 on account of the substantial revisions to Ireland's GDP reported in 2016.

In view of the benefits of maintaining a broadly balanced budget over the economic cycle in terms of the long-term sustainability of the public finance, it is clearly worth examining – as is taking place at EU level – how the operationalisation of the EU Fiscal Rules can continue to be improved.

Box 1: Changes to the Stability and Growth Pact methodology in Budget 2017

1. Changes to the EU harmonised methodology

The CSO's summer revision to national accounts created important challenges for the methodology underpinning the EU fiscal framework in Ireland. This is true for both the estimation of the cyclical position of the economy (potential output and output gap) and the calculation of the EB (as based on a 10-year average of potential output). The key variables which determine potential output and have been subjected to important changes are the following:

Capital: The CSO's revision suggests an increase in real net capital stock of about 50% in 2015, although this data was not made publicly available by the CSO until after Budget 2017. The capital stock series used in the methodology has been adjusted to take these changes into account.

Productivity: The increase in capital does not fully explain the increase in real GDP. Part of that is given by an increase in Total Factor Productivity (TFP). A technical adjustment to the methodology (use of a dummy variable approach) has been implemented to capture this structural change in trend TFP.

Labour: The NAWRU (Non-accelerating wage rate of unemployment) is one of the building blocks of the production function methodology used by the European Commission (EC) to estimate potential output. The CSO's revisions have produced a significant increase in the real unit labour cost. As a result, a similar approach to that one used for trend productivity has been applied. Nonetheless, even with this change, the use of a Philips curve which tries to explain the unemployment gap on the basis of wage inflation, is not a good representation for Ireland. As the Department of Finance [have observed](#) with the calculated adjusted Phillips curve, the "fit ... is above (the) minimum threshold but (is) still relatively poor in (the) Irish case". (Slide 41 of the presentation to the Oireachtas Select Committee on Budgetary Oversight)

2. Application of EB from 2018 onwards (no policy change)

The methodological changes that have been implemented represent an attempt to tackle the significant revisions experienced by the increase in capital and GDP. The exceptional increase in GDP in 2015 meant that if potential output was held constant, an extremely high output gap would have been generated. This would have worsened the structural position of the Irish public finances and produced an insufficient fiscal adjustment towards the MTO.

As detailed by the Department of Finance in Annex 4 of the *Budget 2017* book, the changes that have been implemented have neutralized these effects on the output gap. In 2015, potential output was estimated to grow by 24.6% in line with GDP (26.3%). This has resulted in an output gap of 1.6% and allowed for a sufficient structural fiscal improvement. Nonetheless, a side-effect of this approach is that under the expenditure rule the 10-year average is affected by an outlier (24.6%) and this would have raised the permitted expenditure from 2018 onwards, requiring a further adjustment.

Only for the calculation of the 10-year average potential growth under the expenditure rule, potential growth for 2015 has been calculated using an average of potential output growth in 2014 (3.4%) and that in 2016 (4%), resulting in a value of 3.7%. Even if this adjustment is reasonable, it seems inconsistent that under one pillar (structural balance), potential output growth in 2015 is 24.6% and under another (expenditure rule) the same variable during the same year is given a value of 3.7%.

Following these adjustments, it is projected that the government will reach the MTO (-0.5%) in 2018 (as a result no converging margin will be applied from 2019 onwards). As shown in Table 2 below, the available fiscal space in 2018 will be consistent with the SES estimate (€1.2 billion). From 2019 to 2021, the fiscal space will be lower than previously forecasted (cumulatively €1 billion less) due to lower reference rates for potential output growth (e.g. 3.6% vs 3.3% in 2019). It is important to highlight that the estimates of fiscal space from 2018 onwards will be subjected to changes as the main variable of interests will be determined by the spring forecast of the preceding year produced by the EC.

Table 1: Forecasts of Fiscal Space using the revised EB methodology (€ billion)

	2018	2019	2020	2021	Cumulative
Summer Economic Statement (net) Fiscal Space	1.2	3.0	3.1	3.0	10.3
Budget 2017 (net) Fiscal Space	1.2	2.7	2.7	2.7	9.3
Change		-0.3	-0.4	-0.3	-1.0

3. Rationale for and impact of Expenditure Rules

There has been considerable focus on Expenditure Rules (ERs) internationally in recent research literature (IMF, 2014¹⁴; Ayuso i Casals, 2012¹⁵) discussing the strengths and weaknesses of ERs as fiscal policy tools. The analysis in this section is based on research on different types of ERs in place internationally (of which the EU's EB is one example). As illustrated in Section 5.2 below, these ERs differ between themselves and have different characteristics to the EU EB. Consequently, the research findings cannot be specifically generalised to the operation of the EB.

3.1 Benefits

Wierds (2007)¹⁶ found that ERs restrain expenditure, thereby mitigating the effect of shocks on expenditure developments. ERs primarily aim to constrain spending decisions which may address short-term pressures for increased expenditure leading to spending increases beyond current available resources and/or longer-term sustainable levels of expenditure. Spending pressures typically arise from competing stakeholders claiming government resources, known as the "common pool" problem. This was evidenced in Ireland during the pre-crisis period during which significant incremental increases in public spending at each sectoral level cumulatively added up to significant expenditure increases in overall terms. A 'top-down' expenditure constraint by applying an expenditure rule provides a ceiling within which expenditure increases can be contained and ensuring that there is not a risk to long-term sustainability of expenditure growth.

In the absence of explicit ceilings on spending decisions, the research indicates that there is a significant risk of excessive deficits, pro-cyclicality (which may involve spending temporary revenues on permanent expenditure measures) and debt increases. Indeed research shows that fiscal policy in Ireland exhibits above-average pro-cyclicality (Lane, 2002)¹⁷ (i.e. public spending tracks the performance of the economy rising in booms and declining in recessions).

¹⁴ [IMF; Public Expenditure Reform: Making Difficult Choices; IMF Fiscal Monitor, Chapter 2, 2014.](#)

¹⁵ [Ayuso i Casals J.; National ER: Why, How and When; EC Economic Papers 473, 2012.](#)

¹⁶ [Wierds, P; Can ER counter Expenditure Pressures from Revenue Windfalls?; ECB, 2007.](#)

¹⁷ [Lane, P; The Cyclical Behaviour of Fiscal Policy: Evidence from the OECD; Dublin, 2002.](#)

In addition, although ERs are not aimed primarily at steering expenditure reforms, they can help underpin reform incentives by promoting efficiency and prioritisation of public spending overall.

According to IMF (2014)¹⁸, experience has shown that ERs exhibit a number of attractive features:

1. They help contain expenditure growth to a sustainable level reducing the likelihood of excessive deficits. This means that unrealistic spending commitments can be prevented in times of growth and makes retrenchment less severe in times of recession. In combination with other rules, they can ensure that annual budgets remain consistent with sustainable medium-term public debt and deficit targets.
2. Government revenues are susceptible to fluctuations based on the economic cycle (as was experienced in Ireland during and in the wake of the economic collapse) but ERs can maintain sustainable expenditure growth that counteracts the economic cycle and revenue fluctuations. This countercyclical property also makes ERs particularly attractive for countries where SBBs are challenging to estimate, as is the case in Ireland.
3. An expenditure rule maps directly into the formulation of the annual budget, thus contributing to its predictability and enforceability. ERs promote greater economic stability as well designed and accessible rules and expenditure limits are transparent and understandable.
4. Well-designed ERs, like other fiscal rules, can usefully anchor medium-term budget frameworks.

3.2 Potential Disadvantages

The research also highlights that while there are a number of advantages of ER as summarised above, there are potentially some unintended consequences that need to be factored into consideration of their role and operation. Firstly the reciprocal nature of ERs and expenditure reforms, as mentioned, does require the commitment of policymakers to sound and high-quality public finances. Without these commitments, ERs can potentially have adverse

¹⁸ [IMF; Public Expenditure Reform: Making Difficult Choices; IMF Fiscal Monitor, Chapter 2, 2014.](#)

effects. For example, when faced with a binding spending limit, there may be an incentive to preserve some low-quality projects at the expense of higher-quality programmes with long-term productive benefits.

There is considerable evidence of unintended effects, in particular, that the application of ERs coincides with lower levels of public investment from international research. The IMF (2016) found that there appears to be pro-cyclical behaviour in relation to investment spending when ERs are in place. This suggests that when investment outlays are not specifically safeguarded, they are more likely than other spending to be subject to retrenchment during downturns. This may arise from the deferral of capital investment projects in order to comply with ERs.

In addition, a sole focus on expenditure growth (i.e. net of revenue measures) may not be optimal as it does not take into account an assessment of how the wider economy is functioning and the ability of the revenue system to withstand a negative shock. The particular advantage of a structural budget balance measure is that it analyses the amount of cyclical revenue in government spending and therefore provides a good basis for making structural expenditure decisions. International research suggests that ERs should be complemented by other rules which have a more direct impact on and application to revenues (IMF (2014)). For example, a revenue rule, where greater than expected revenues could be set aside for either a contingency fund or for investment in capital projects, would adequately complement the expenditure rule and ensure there are savings to deal with future shocks.

In order to examine this important issue further, the implications of ERs on public investment using publicly available data sources on countries where ERs have been in place over the past 30 years is analysed in the following section of this paper. It is important to stress that this analysis relates to the estimated impact over an extended period of time and across a large number of different jurisdictions of a wide spectrum of ERs (the details of the ER included are contained in Appendix A). It cannot, therefore, be assumed that the analysis applies to the EB Rule.

4. Empirical analysis of the impact of Expenditure Rules on public investment

On average, public investment has fallen across the developed world in the past 20 years. For example, gross fixed capital formation as a percentage of GDP has decreased in the Euro area from 3.3% in 1995 to 2.7% in 2014 (AMECO). This reduction may be attributed to a range of macroeconomic, political and institutional factors. However, the issue has been raised, including in the IMF research referenced above, regarding the potential impact exerted by ERs.

To seek to shed some further light on this issue, an empirical analysis was undertaken on the relationship between public investment, as measured by gross fixed capital formation, and fiscal rules. In particular, we focus on the impact of ERs, that is, rules that limit government expenditure. In order to do so a balanced¹⁹ panel of advanced countries (11 European countries²⁰ plus US, Japan and Canada) from 1985-2014 is used. The choice regarding the countries included reflects the fact these countries introduced ERs during this time period and they also constitute a relatively homogenous set of developed countries. This facilitates cross-country comparisons and strengthens the robustness of the results. Data is taken from OECD.stat, the Quality of Government Standard dataset 2016 – Time-Series provided by the University of Gothenburg and from the IMF Fiscal Rules dataset. Several models of the following equation are estimated:

$$(2) \text{GFCF}_{it} = \beta_0 + \gamma \text{ER}_{it} + \delta X' + \alpha_i + u_{it}$$

Results are displayed in Table 2. In column 1 a parsimonious model is estimated regressing GFCF on the dummy variable for the presence or absence of ERs. The model is estimated using the fixed effects model²¹. This is done to produce estimates which take into account country specific heterogeneity (i.e. differences) related to time-invariant factors such as economic institutions and social norms that might affect the relationship between public

¹⁹ A panel data is considered (strongly) balanced if each unit (country) is observed over the same number of years (from 1985 to 2014).

²⁰ Belgium, Denmark, Finland, France, Germany, Greece, Luxembourg, Netherlands, Poland, Sweden and Spain.

²¹ The fixed effects model is a panel data estimator which allows to control for time-invariant country-specific characteristics, which represent a relevant sources of omitted variables bias, particularly in cross-country regressions. If the explanatory variables (e.g. the dummy for having or not an expenditure rule), are correlated with country-specific characteristics, the use of the fixed effects estimator avoids inconsistent estimates. Its explanatory power relies on overtime variation within each country.

investment and ER. The estimates suggest that ERs in the countries selected is negatively associated with public investment. The coefficient on ERs is negative and statistically significant (-0.56). This would indicate that the existence of ERs decreases the ratio of gross fixed capital formation to GDP by almost 0.6 pp. This result would be consistent with the explanation that when subject to ERs and faced with budget constraints, areas of current expenditures that are political-sensitive are prioritised ahead of capital expenditure, the benefits of which are realised over the longer-term.

Table 2 – Regressions for Public Investment

Explanatory variable	(1)	(2)	(3)
Expenditure rule	-0.56** (0.19)	-0.53** (0.18)	-0.54*** (0.16)
Output gap		0.04** (0.02)	0.02 (0.01)
Election year			0.009 (0.03)
Government Fractionalization			0.14 (0.42)
Constant	4.09*** (0.09)	4.05*** (0.09)	4.01*** (0.13)
Observations	389	349	296
R-squared	0.15	0.19	0.20
Number of Countries	14	13	12

Cluster robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

In columns 2-3, a set of control variables are included. These are the lagged value of the output gap; a dummy variable that equals 1 if a parliamentary election took place, 0 otherwise; and an index of political fragmentation²². These variables are used for the following key reasons: the output gap is used to control for cyclical fluctuations; the election variable investigates the existence of a political budget cycle; the index of political fragmentations deals with the “common pool problem”. Estimating the model using the fixed effects estimator, it is observed that the negative effect of ERs on public investment persists even when additional explanatory variables are included in the model (-0.54). The point

²² The index of political fragmentation is based on the probability that two deputies picked at random from among the government parties will be of different parties.

estimate is almost the same as the one obtained without controls. In relation to the other explanatory factors: the election variable and the index of political fragmentation do not appear to exert a statistically significant effect on public investment; on the other hand, when political variables are not included (column 2) and more observations are available, the output gap shows a positive and significant impact on public investment (0.04). This predicts that public investment increases when the economy experiences a positive business cycle.

In summary, this exercise suggests the existence of a negative correlation between public investment and the application of ERs in the countries included in the empirical analysis. The estimates imply that countries that have ERs in place, would see their ratio of gross fixed capital formation to GDP to decrease by almost 0.6 pp on average²³. It is important to stress that Ireland is not included in this analysis and the results do not relate or cannot be robustly generalised to the impact of the operation of the EB in Ireland. In this regard, it should be noted that the EB includes a ‘capital smoothing’ element over a four year period to seek to ensure that the operation of the EB does not discourage capital spending.

5. Options for Expenditure Rules

5.1 Bruegel Approach

In light of the important methodological issues that arise in relation to the current EU fiscal rules, particularly in relation to the measurement and forecasting of unobservable variables such as potential output and the output gap, it is worthwhile to review international research seeking to explore options for how ERs might be strengthened.

One potential alternative is offered by Bruegel. In a recent paper²⁴, the think-tank suggests some changes in the EU Fiscal Rules to respond to the following issues (also highlighted in the preceding section of this paper):

²³ It should be noted that using a single equation to model this relationship rather than developing and estimating a fully articulated model for the relationship between capital investment and ER potentially gives rise to the risk of ‘endogeneity’ (i.e. a correlation between the explanatory variable and the error term in the equation) potentially leading to a mis-specified relationship. This is a common issue in single equation modelling. In addition, one possible source of endogeneity in the equation estimated – reverse causation – was examined and ruled out. The estimate presented in this paper is consistent with and within the range of other studies of the relevant relationship (i.e. IMF (2015), Debrun et al. (2008))

²⁴ [Claeys, Darvas and Leandro; A proposal to revive the European Fiscal Framework; Brussels, 2016](#)

- Output gap forecasts are subject to frequent and sizeable revisions. This in turn may impact on the assessment of the stance of fiscal policy and EU recommendations to Member States.
- As a result of the difficulties arising from the estimation of the output gap, the estimates of the SBB are affected by measurement error and undergo major revisions.
- The presence of several flexibility clauses and their discretionary application make the system of fiscal rules less transparent.

The Bruegel expenditure rule option was chosen for inclusion in this paper on account of the fact that it was specifically developed to suggest ways in which the EU Fiscal Rules could be improved and strengthened. Based on these considerations, the Bruegel paper recommends some options for consideration summarised below.

1. Remove the rule concerning the SBB on account of the methodological issues and the significant revisions affecting the estimates of potential output and the output gap.
2. Focus on an expenditure rule. That is, a rule which would restrict the growth rate of an adjusted nominal aggregate of government expenditure. Under this approach debt interest, all unemployment-related expenditure and one-off temporary measures would be subtracted from nominal expenditure. Public investment would not be averaged over a four-year period, but treated using standard accounting principles namely, the investment cost would be spread over its lifetime. As the expenditure rule would be based on nominal expenditure, it would not rely on estimates of the GDP deflator and thus, unlike the EU expenditure rule, would not be affected by its forecasting error. In addition to more precise forecasts, the use of nominal expenditure would be preferred as it tends to be under government control.

Under the proposed expenditure rule recommended in the Bruegel paper, the expenditure growth benchmark (e) would be determined by Equation 3 below, where the medium-term growth rate of potential GDP (g) is added up to the ECBs inflation target π^* . The trade balance would also be considered in the estimation of the potential output.

$$(3) \quad e = g + \pi^*$$

3. Debt correction. Maximum expenditure growth would be reduced by 0.02 times the difference between the debt level in the previous year and the 60% target of GDP. This would achieve debt sustainability and provide a long-term anchor for fiscal policy.
4. An overrun correction should be implemented when actual expenditure growth exceeds the EB.
5. Similarly to the use of a discretionary revenue measure (DRM) under the EU EB, revenue measures would be allowed to offset expenditure measures.

Table 3 below identifies the key changes recommended by Bruegel to the operation of the EU Fiscal Rules currently in place.

Table 3: Comparison of rules EU & Bruegel

	EU	Bruegel
Structural budget	Yes	No
Expenditure aggregate (a)	Real	Nominal
Elements subtracted from a	Interest payments, non-discretionary unemployment-related expenditure and EU founded programmes.	Interest payments, all unemployment-related expenditure and one-off measures.
EB (e)	Medium-term potential GDP growth g (real)	Medium-term potential GDP growth g (real) + inflation target π^*
Revenue correction	Yes	Yes
Debt correction	No	Yes
Overspend correction	No	Yes

Source: Bruegel

In line with discussions at EU level, the Bruegel paper also argues that the design and operationalisation of the EU's fiscal framework is complex which complicates public communication and transparency in terms of the conduct of fiscal policy. It highlights that the elaborate set of fiscal constraints that make up the overall framework complicates effective monitoring, as well as national ownership and implementation of the framework.

The proposals from Bruegel summarised above are not presented on the basis that they are superior to those currently included in the current operationalisation of the EU Fiscal Rules. Rather they are useful in drawing attention to the type of options available for examination on how the Fiscal Rules might be strengthened and improved in light of experience in practice. Developments at EU level and in terms of the implementation of the Fiscal Rules for Ireland overtime highlight that this is an ongoing process.

5.2 Expenditure Rules in other countries

Israel (since 2014)

Israel have had a series of ERs since the first introduction in 2005. They have primarily limited the real growth of the central government expenditure to between 1.7 and 3 percent. In 2014 however, Israel altered their Expenditure Rule which focuses instead on the following formula:

$$(4) \text{ Israel Expenditure Rule} = 3\text{-year average of population growth rate} + 50 / (\text{the debt-to-GDP ratio in the last known year})$$

This approach is illustratively modelled in Appendix 2 for Ireland to highlight the implications this could have on the primary balance given historical fiscal figures. The benefit of this rule is that expenditure will primarily be linked to the growth in the population over time, with additional spending only allowed if the debt-to-GDP ratio reduces sufficiently. It is also very simple, transparent and easily explainable. The drawbacks of this approach is that it doesn't consider the structural position of the economy and is not linked to the longer-term economic growth of the economy.

Australia (since 2009)

The Australian Government set about introducing a strategy to get back to a budget surplus by restraining real growth in spending to 2 percent a year once the economy recovered to grow above trend. Once the budget returns to surplus, and while the economy is growing at or above trend, the government will maintain expenditure restraint by retaining a 2 percent annual cap on real spending growth, on average, until surpluses are at least 1 percent of GDP.

The approach of restraining expenditure growth to 2% is also modelled in Appendix 2 for Ireland to illustrate the impact this may have had on the primary balance. The benefit of this rule is that it is very simple, transparent and easily explainable. The drawbacks of this approach is that it doesn't consider the structural position of the economy, may not be linked to the longer-term economic growth of the economy and is more difficult to justify given it is quite an arbitrary figure.

Germany (since 1982)

Germany initially brought in an expenditure rule in 1982 under which expenditure cannot grow faster, on average, than revenue. Subsequently the rule was changed in 2008 to one under which expenditure growth could not exceed 1 percent on average annually.

The implications of the initial pre-2008 expenditure rule is modelled in Appendix 2 for Ireland. The benefit of this rule is that it is transparent, explainable and it is directly linked to the revenue base. The drawbacks of this approach is that it may be pro-cyclical and could lead to boom-bust cycles if revenues are volatile.

6. Fiscal Space

The concept of 'Fiscal Space' was expounded in a paper produced by IMF staff in the middle of the last decade. In particular, Heller (2005)²⁵ described fiscal space as "*[i]n its broadest sense ... the availability of budgetary room that allows a government to provide resources for a desired purpose without any prejudice to the sustainability of a government's financial position*". In the past couple of years, this has come to be defined in Ireland's case by the EB measure for allowable growth in public expenditure.

As discussed in section 2.2 above, the EB allows corrected expenditure, net of tax measures, to grow by an amount that is consistent with achieving the MTO. The MTO specifically sets a sustainable and stable long-term target which factors in aspects such as longer-term growth projections and ageing costs. Therefore, any growth in the 'Fiscal Space' as defined by the EB

²⁵ [Peter Heller; *Understanding Fiscal Space*; IMF, 2005.](#)

would be considered as not prejudicing the sustainability of a government's financial position once it is working towards achieving the MTO.

6.1 Estimated Expenditure and Revenue Growth 2003 -2017

This section analyses the growth in corrected expenditure as per the EB ²⁶ and announced tax measures since 2003. This will give an indication of the level of expenditure and revenue growth as is measured in the EB rule. Figure 2 details the split between corrected year-on-year expenditure growth and tax measures as announced in each of the Budgets from 2003 to 2017. For the calculation of corrected expenditure, the analysis uses the Government Finance Statistics database as published on the CSO website. The calculation subtracts debt interest expenditure and real-time estimates of cyclical unemployment from overall General Government Expenditure (GGE), along with replacing in year Gross Fixed Capital Formation with the 4-year average of Gross Fixed Capital Formation as per the EB methodology.

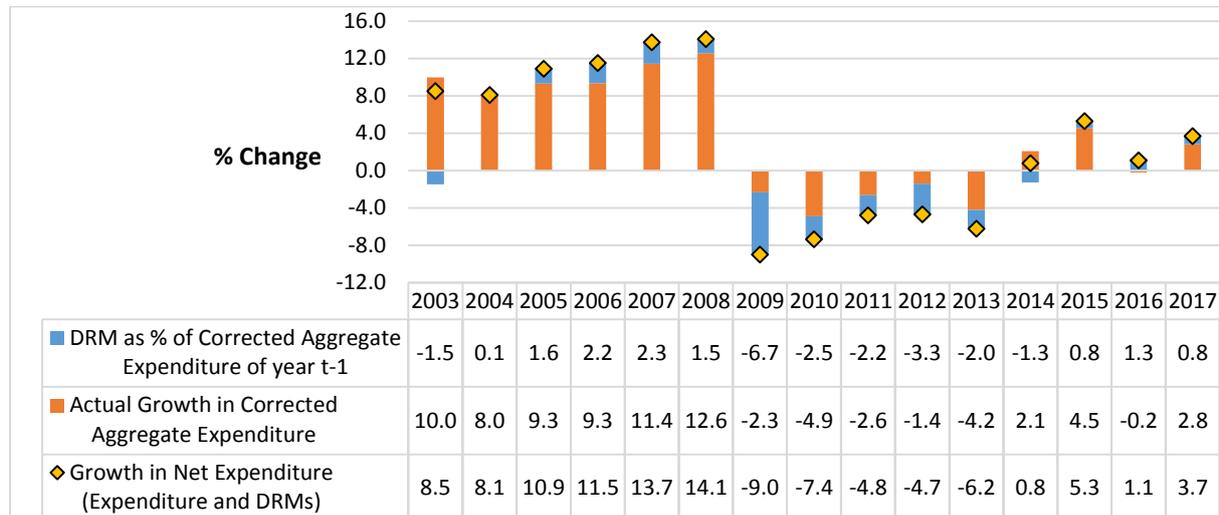
There are two significant differences however, the EU co-funded payments is not subtracted as there is no time series of these payments and 'other capital transfers' in the Government Finance Statistics have been excluded from the years 2008 to 2012. The reason for this is the banking sector received considerable capital transfers from GGE sources in the 2008-2012 period, which distort the underlying expenditure levels on a General Government basis.

The trend in the first six years comprised of rapid growth in net expenditure, which peaked in 2007, with 14.1% growth over the corrected expenditure levels in 2006. The trend shifted dramatically in 2009 when there was a year-on-year reduction in net expenditure of 9%, which was followed by another four years of consolidation. Finally, from 2014 onwards there has been the recovery period which has seen a more modest growth in net expenditure. The trends as experienced in this period highlight the pro-cyclical nature of fiscal policy given that the rapid growth in Government spending and tax reductions matched a positive period in

²⁶ Corrected Expenditure as measured by the EB is General Government Expenditure minus Interest Payments, EU co-funded payments and Cyclical Unemployment Payments. In addition, to incentivise growth friendly Capital Expenditure, the Gross Fixed Capital Formation in a specific year is replaced with the average of Gross Fixed Capital Formation over 4 years. This means that a large increase in Capital Expenditure in a particular year can be smoothed over the next 4 years, which has less of a negative impact on the fiscal space.

the economic cycle while the consolidation period matched the large downturn in the economic cycle.

Figure 2: Expenditure and Revenue Growth as measured by the EB 2003 - 2017



Source: Author's Calculations; Department of Finance Budget 2003 to 2016 measures; CSO Government Finance Statistics

The composition of expenditure and revenue in contributing to fiscal space in this period varied depending on whether net expenditure is increasing or decreasing. It has primarily been growth in corrected expenditure that has been driving fiscal space over the period altogether, but the growth that occurred was concentrated in the pre-crisis period. The contributions of expenditure and revenue to fiscal space in each of the periods is detailed in Table 4. In the two periods of fiscal growth, primary expenditure accounted for about 90% of all the fiscal space which would represent growth in both new measures and dealing with additional costs of demographics. During the consolidation period primary expenditure contributed 48% of the reduction in the period with announced Budget tax measures forming 52% of the fiscal space.

The fiscal space measurement for revenue measures is more straightforward than for expenditure measures. The discretionary revenue measures are a total of the gross costs of all the announced measures. During the rapid growth period, while there was considerable fiscal space used for reductions in personal taxes, these were often offset by increased yields on items such as tobacco, alcohol, mineral oils and the phasing out of tax credits.

In contrast, expenditure can grow irrespective of whether specific measures are taken and this will use fiscal space. Examples of this are inflation in the economy (e.g. capital investment production costs, pay and pension costs) and demographics (e.g. if the population increases, a constant pupil-teacher ratio will require more teachers; more social welfare claimants on demand led schemes; more healthcare workers to maintain same patient/staff ratio).

This is also borne out in the figures from the consolidation period in table 4 below, where there was a two-thirds to one-third split between expenditure and revenue respectively in terms of consolidation measures announced. However, when looking at this in terms of fiscal space it appears that revenue consolidation contributed more. This is because expenditure consolidation forms two purposes: (i) to offset the increasing costs of items such as inflation and demographics and (ii) to reduce expenditure levels. The calculation of the fiscal space will only capture part (ii) of the expenditure consolidation efforts.

Table 4: Expenditure and Revenue Split of Fiscal Space

	Rapid Growth Period	Consolidation Period	Recovery Period
	2003-2008	2009-2013	2014-2017
Expenditure	91%	48%	85%
Revenue	9%	52%	15%

Source: Author’s Calculations; Department of Finance Budget 2003 to 2016 measures; CSO Government Finance Statistics

7. Looking Backwards: Lessons from Expenditure Rules from Ireland’s Fiscal Crisis?

Following the introduction of the strengthened SGP across the EU in 2011, the goals of sustainability, stability and counter-cyclical fiscal policy became key parts of budgetary decision-making among the EU member states. In this context, drawing on the approach set out in Hagemann (2012) for IFAC and in an online post by Seamus Coffey²⁷, this section retrospectively maps the impact two ERs (i.e. the EB and the Bruegel expenditure rule) onto Ireland’s fiscal performance for the period 2003 – 2017. This permits a comparison between

²⁷ [Seamus Coffey’s blog post](#)

the actual evolution of public expenditure to that which would theoretically have occurred if expenditure policy had been under the two ERs.

This is not and cannot be interpreted as a counterfactual analysis and it does not present a potential alternative approach to the conduct of fiscal and expenditure policy over the period following the economic and fiscal collapse.²⁸ It is, however, intended to explore, using Ireland's fiscal performance over that period, some features of the operation of ERs that could be helpful for the future conduct of public expenditure policy.

The scale of the deterioration in Ireland's public finances from 2008 onwards, reflecting the collapse in tax revenues and bank recapitalisation needs were such that a major consolidation was required. This was in order to stabilise the public finances, reduce large budget deficits, seek to maintain the confidence of international markets up to November 2010, meet the requirements of the external assistance programme from November 2010 up to the point market access and regain market confidence in December 2013 when Ireland exited the programme.

The real-time reference rates were obtained from the European Commission's CIRCABC website. The year 2003 is the base for this analysis as the earliest real-time estimates of potential output available on the CIRCABC website are from 2002. The 10-year average reference rates are then calculated from the spring t-1 forecasts which gives the allowed growth in year t²⁹, this mirrors the forecasting cycle in which the EB operates under the Preventive Arm of the SGP. For the purposes of the scenarios, the Bruegel style expenditure rule will use the real-time potential growth projections from the CIRCABC website also. The CIRCABC website does not provide real-time estimates of the GDP deflator, so for this analysis the estimated GDP deflators at the spring 2016 forecasts for each year are used. This issue

²⁸ In particular, this static analytical approach which was also utilised in a paper commissioned by IFAC (i.e. Hagemann (2012)) does not seek to incorporate the dynamic relationship between fiscal policy decisions and the resulting macro-economic environment. Consequently, along with similar exercises, it is subject to potential endogeneity bias and as highlighted above should only be regarded as indicative. It should also be noted, that a full dynamic analysis of this issue using a macroeconomic model of the Irish economy would not be feasible on methodological grounds.

²⁹ Due to the earliest available data on the CIRCABC website being the autumn 2002 forecasts, the autumn forecasts are used to calculate the allowed expenditure growth in 2003.

does not arise for the Bruegel calculation as this uses the ECB inflation targets as their deflator to convert real growth into nominal growth.

7.1 Illustrative Results

The results from applying 10-year averages of the real-time potential growth projections are shown in Figure 3. It can be noted that the permitted fiscal space in the early years of the analysis, 2003 and 2004 estimated on the basis of either expenditure rule metric was similar to the actual fiscal space used. The discretionary tax measures introduced in those years either yielded extra revenues or were neutral in terms of their impact on fiscal space³⁰.

This picture changed substantially in the 2005-2008 period in which there was four consecutive years of net expenditure growth over 10%, while the application of an EB type expenditure rule would have limited this to around 8% or less in each of those years. These estimates are on the static assumption that the estimates of potential growth would have remained the same, despite different fiscal policy. Realistically, the fiscal multipliers from a differing fiscal policy would alter the levels of the potential output forecasts. As previously averted to similar static analyses have been produced for indicative purposes in an IFAC commissioned paper.³¹

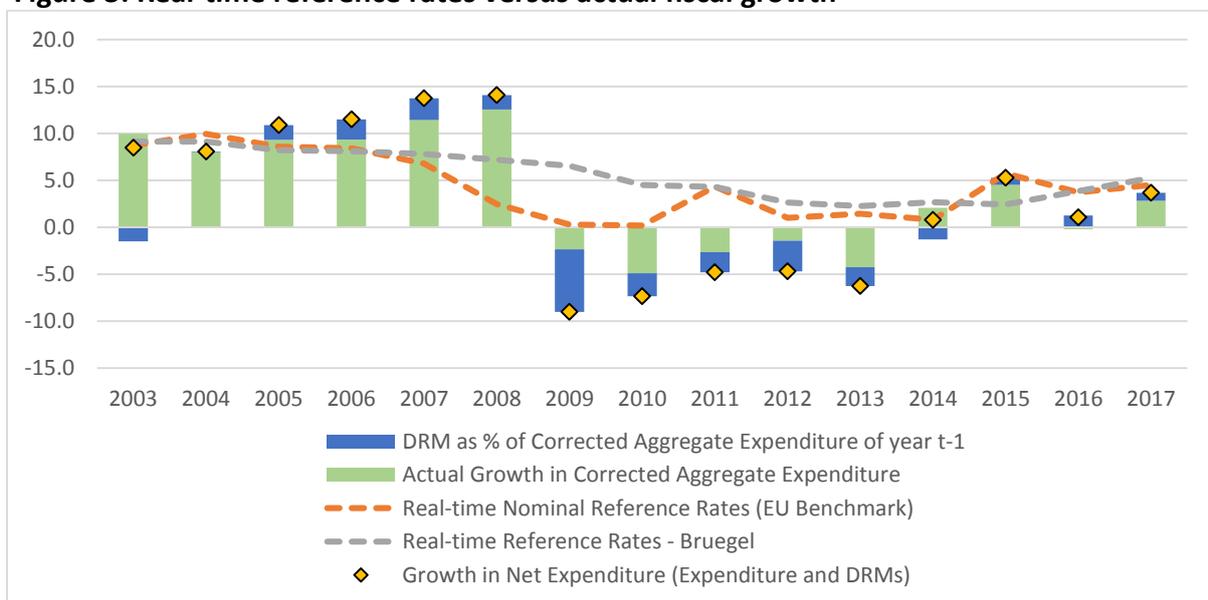
It is clear from the real-time estimates of potential output that while the economy was beginning to slow in this period, fiscal policy was becoming more expansionary. As mentioned earlier, Figure 3 represents indicative fiscal policy given the possible real-time information at the time. The levels of the estimated long-term potential growth for the 2005-2008 period is now projected as being significantly lower on account of negative growth performance during the economic crises. This would suggest – with the benefit of hindsight - that fiscal policy would have been further constrained had an EB style expenditure rule been followed.

³⁰ Generally there were rate reductions on direct taxes in these years which were fully offset by additional non-direct taxes. In particular, the rates of excise on items such as alcohol, cigarettes and fuel generally offset direct tax reductions.

³¹ [Hagemann, R., commissioned by the Irish Fiscal Advisory Council; *Fiscal Rules for Ireland*; Dublin, 2012](#) (Annex 2)

On the basis of a scenario in which the ER notionally applied over the period 2009-13, allowable public expenditure growth would likely have been in the low positives or flat. This reflects the 10-year average nature of the EB type calculation which would have continued to include periods of stronger economic growth. This highlights a possible weakness in the narrow implementation of ERs without reference to the actual or underlying budgetary position as expenditure growth would have been permitted notwithstanding that tax revenues would not be available to fund this expansion in spending. In particular circumstances, it may not be appropriate to utilise all of the fiscal space identified under the EB rule.

Figure 3: Real-time reference rates versus actual fiscal growth



Source: Author's Calculations; CIRCABC website; Department of Finance Budget 2003 to 2016 measures; CSO Government Finance Statistics

The Excessive Deficit Procedure (EDP) under the SGP obviously plays an important role in this context, in that once the 3% excessive deficit limit is breached a Member State is required to undertake a fiscal consolidation to bring the deficit within the 3% limit.

This hypothetical analysis might seem to suggest the counterintuitive conclusion that the constraint of an expenditure rule would have allowed Ireland to run a more counter-cyclical fiscal policy during the consolidation phase. However, this theoretical option could not operate in the current EU framework where a deficit greater than 3% would require a member

State to enter an Excessive Deficit Procedure (EDP). This highlights the benefit of remaining firmly within and consistent with the requirements of the Preventive Arm of the SGP, as EDP rules would limit the scope for counter-cyclical fiscal policy with requirements for more a rapid deficit correction than would arise under an expenditure rule.

8. Conclusion

Under the Preventive Arm of the SGP, the Fiscal Rules can facilitate the conduct of counter-cyclical fiscal policy in the case of economic shock, as well as maintaining and securing long-term sustainability of Ireland's public finances. Influential studies (IMF, (2015); Debrun et al, (2008); Hauptmeier et al, (2010)) have highlighted the positive effects that fiscal rules have on fiscal sustainability and stability. In particular, ERs seem to be effective in mitigating the pro-cyclical bias which often characterises government spending.

In Ireland's case, aligning the scope for expenditure growth to the economy's medium-term growth potential has played a crucial role in supporting the restoration and maintenance of stable public finances. If an effective expenditure rule been in place in Ireland in the early part of the last decade, it seem likely that the rule would have served the dual objectives of stabilising an over-heated economy and building greater fiscal capacity to deal with the financial crisis that impacted in 2008. The years following the financial crisis may then have not seen the same levels of consolidation that were necessary to regain control of the fiscal position. Therefore, limiting expenditure growth to the economy's medium-term growth rate can support the achievement of counter-cyclical fiscal policy in the case of economic shock as well as maintaining and securing long-term sustainability of Ireland's public finances.

Consideration is ongoing at EU level of how the fiscal rules might be simplified and improved addressing the complexity of the current framework. This would make them easier to implement and ensure greater certainty in terms of compliance when setting fiscal policy.

The continued recognition of the critical role of capital expenditure in supporting the development of the economy's long-term growth potential (e.g. through the capital smoothing under the EB rule) is also central to long-term economic prospects. Examination

of how public investment is treated is an important part of the continued evolution of ERs given the role of public investment in supporting potential output and research evidence that ERs may constrain public capital investment. Alternative approaches have been suggested by researchers, particularly with regard to the way public investment is accounted for (Bruegel, 2016) or by recommending the use of a golden rule (Blanchard and Giavazzi (2004)³²; Truger (2015)³³) which would exclude net public investment from any fiscal rule. In the case of the EU EB rule, the approach currently followed averages capital expenditure over a 4-year period (i.e. capital smoothing) and also includes a flexibility clauses for investment in certain circumstances.

³² [Blanchard and Giavazzi; *Improving the SGP through a proper accounting of public investment*; London, 2004.](#)

³³ [Truger, A; *Austerity, cyclical adjustment and the remaining leeway for expansionary fiscal policies within the current EU fiscal framework*; Berlin, 2015.](#)

Appendix 1

The analysis modelled in section 4 included the impacts of expenditure rule in the following countries between 1985 and 2014: Belgium, Canada, Denmark, Finland, France, Germany, Greece, Japan, Luxembourg, Netherlands, Poland, Sweden, Spain and the US. The details of these ER are contained in the table below, which is sourced from the IMF Fiscal Rules Dataset 1985 – 2014 which was published in 2015.

The ER detailed below can differ quite substantially especially in relation to coverage, legal basis and clauses for investment. This should be considered when looking at the analysis presented in section 4, as the EB and other ER might provoke different impacts on Government behaviour. The analysis is still useful as it shows how the Irish Government may react to the introduction of the ‘top-down’ ceiling on Governmental expenditure given past experiences in other countries.

	Year of implementation	Year of major subsequent change	Description of the rules	Enforcement	Coverage	Legal basis (highest norm)	Well-specified escape clause	Supporting procedures/institutions		Investment
			Key elements of fiscal rules	Outside Monitoring				Independent budget assessment	Independent monitoring	Exclude public investment
Belgium	1993	1998	<u>National rules: ER (1993-98)</u> : Real growth of primary expenditure of CG ought to be equal or be less than 0 percent.	Yes	CG	Coalition Agreement	No	Yes	No	No
Canada	1998	2006	<u>ER (1998-2005)</u> : In 1998, the debt repayment plan set out a “balanced budget or better” policy which, however, was not legislated rules at the federal level. A Contingency Reserve and an economic prudence factor are built into the federal budget and may be devoted to debt reduction if not needed. In 2006, the government abandoned the "balanced budget or better" rule with targets of C\$3 billion debt reduction, coupled with eliminating net general government debt by 2021 and federal debt by 2013/14 (later changed to 2011/12).	Yes	CG	Political commitment	No	Yes	Yes	No

Denmark	1994	2007, 2009, 2014	<p><u>National rules: ER (2012)</u> A fiscal rule on public expenditures has been introduced to strengthen Denmark's compliance with the SGP. It implies that real growth in public expenditures cannot exceed potential GDP growth which is a (rough) measure of structural development in the tax base. If growth in expenditures increases beyond potential GDP growth, it must be financed by specific discretionary measures, which increase revenues. The Budget Act which came into force in 2014 introduces expenditure ceilings. The ceilings set legally binding limits for expenditures in central government, municipalities and regions respectively. The expenditure ceilings are to be adopted in parliament and cover a continuous period of 4 years. Improved budget management and economic sanctions are supporting compliance with the expenditure ceilings.</p> <p><u>ER (since 2009)</u>: Target in Denmark's 2009 Convergence Program is that public consumption as a share of cyclically adjusted GDP should be reduced to 26.5 percent by 2015. There are no targets for the intermediate years. <u>ER (2007-08)</u>: The rule stipulates the target of public consumption as a percentage of cyclically adjusted GDP and real growth in public consumption. <u>ER (1994-2006)</u>: Real public consumption growth capped at 0.5 percent per year 1.0 percent during 2002-05).</p>	No	GG	Political commitment	No	No	No	No
Finland	2003	2007, 2011	<p>National rules as per coalition agreements: <u>ER (since 2003)</u>: The rule sets annual limits to government expenditure for the four-year terms of office of the government. Limits are set in real terms for primary non-cyclical expenditure (about 75 percent of total central government spending, about 37 percent of total general government spending).</p>	No	CG	Coalition Agreement	No	No	No	No
France	1998	2011	<p><u>ER (since 1998)</u>: Targeted increase of expenditure in real terms, or targeted increase of expenditure excluding interest payments and pensions in nominal terms. The stricter provision applies.</p>	Yes	CG	Statutory	No	No	Yes	No
Germany	1982	2008	<p><u>ER (since 1982)</u>: Expenditure cannot grow faster, on average, than revenue (until 2008 expenditure growth ceiling of annually 1 percent on average); rule applies to the CG and RG.</p>	No	GG	Political commitment	No	No	No	Yes

Greece	2011	2013	Under the "fiscal compact", the government commits to adopt a SBB rule (deficit not exceeding 0.5 percent of GDP) and automatic correction mechanism in its constitution or equivalent legislation by 2014. The organic budget law was amended in 2014 to transpose the fiscal compact into national law, including the requirement that the medium-term fiscal strategy set binding multi-year expenditure ceilings for lines ministries and the health sector.	-	GG	-	-	-	-	-
Japan	2006, 2010	2009, 2010	<u>ER (since 2011)</u> : The Fiscal Management Strategy in effect since 22 June 2010, introduced a Medium-term Fiscal Framework, including an "Overall Expenditure Limit" (the amount of the General Account Expenditure, excluding debt repayment and interest payment, should not exceed that of the previous fiscal year). Reconstruction-related expenditures shall be managed separately from other expenditures, accompanied with their financial resources (cutting other expenditures, non-tax revenues including sales of government's assets, and tax revenues by special taxes for reconstruction). <u>ER (2006-09)</u> : In 2006, the government set numerical targets (cabinet decision) by spending category (e.g., public investment, social security etc). The 2006 targets were intended to be valid through FY2011 and indeed were valid for FY2007 and FY2008 budgets. But the targets were abandoned for FY2009 due to the crisis.	No	CG	Political commitment	No	No	No	Yes
Luxembourg	1990	-	<u>ER (since 1990)</u> : In the course of the legislative period (per coalition agreement), public expenditure growth is maintained at a rate compatible with the medium-term economic growth prospects which is quantified. Since 2010, the target is to bring expenditure growth back to the medium-term growth prospects once the countercyclical response to the crisis has been phased out. Under the "fiscal compact" signed March 1, 2012 (ratified in March 2013), the government commits to adopt a SBB rule in its constitution or in durable legislation, as well as an automatic correction mechanism by 2014.	No	CG	Coalition Agreement	No	Yes	No	No

Netherlands	1994	-	<u>ER (since 1994)</u> : Real expenditure ceilings are fixed for total expenditure (covering CG, health care and social security; covers about 90 percent of GG expenditure) and sectoral expenditure for each year of government's four-year office term. Coverage of expenditure was changed in recent years: from 2007-10 interest payments were excluded; since 2009, expenditure is defined in net terms, i.e. gross expenditure minus non-tax revenues, from 2009-10 expenditure excluded unemployment and social assistance benefits. If overruns are forecast, the Minister of Finance proposes corrective action.	No	GG	Coalition Agreement	No	Yes	No	No
Poland	2011	2013	<u>National rules: ER (2011, 2013)</u> : Overall increase in CG discretionary spending and all newly enacted spending cannot exceed 1 pps in real terms (based on CPI inflation) (defined in the Public Finance Act as a temporary rule, but envisaged to be replaced by a permanent rule once the excessive deficit procedure has been abrogated). A permanent expenditure rule was passed by parliament in late 2013 and will take effect in 2015. The rule caps the growth of public expenditure at trend GDP growth (or below trend-GDP growth if debt is above pre-specified thresholds).	No	CG	Statutory	No	No	No	No
Spain	2011	-	<u>ER (since mid-2011)</u> : Nominal expenditure growth for central and local governments shall not exceed Spain's nominal medium-term GDP growth. Interest and non-discretionary expenditure on unemployment benefits are excluded.	No	CG	Statutory	No	No	No	No
Sweden	1997	-	<u>ER (since 1997)</u> : Nominal expenditure ceiling for CG and pension system set for a three-year period with the outer year added annually. Ceilings cannot be adjusted except for technical issues. A budgetary margin is used as a buffer. Interest expenditure is excluded from the ceiling. The independent Fiscal Policy Council was created in 2007. Under the "fiscal compact" signed March 1, 2012, the government commits to adopt a SBB rule in its constitution or in durable legislation, as well as an automatic correction mechanism.	No	CG	Coalition Agreement	No	No	No	No

United States	1990, 2011	2002, 2011	<p><u>ER (from 2011)</u>: In August 2011, Congress enacted discretionary spending caps, saving about \$900 billion over the next decade. As a result of the failure to adopt a medium-term comprehensive deficit reduction plan, additional spending cuts (the so-called sequester) came into effect in March 2013. These additional cuts, if not repealed by Congress, will produce savings of US\$1.2 trillion over a decade with one-half coming from defence spending and the other half from domestic programs, excluding Social Security, Medicaid, parts of Medicare, and certain other entitlement programs. A bipartisan budget agreement on December 26, 2013 partially replaced the sequester in fiscal years 2014 and 2015 with small mandatory savings and new revenue from non-tax measures.</p> <p><u>ER (1990-2002)</u>: Annual appropriations limit adopted under the Budget Enforcement Act (BEA) of 1990 for discretionary spending (allowed to lapse in at the end of FY 2002). The rule was not adhered to from 1998 onwards under the large budget surpluses.</p>	No	CG	Statutory	No	No	Yes	Yes
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Source: IMF Fiscal Affairs Department Fiscal Rules Dataset 1985-2014

Appendix 2: Illustrative implications for General Government Expenditure, Revenue and Deficit

Using the indicative expenditure growth levels highlighted in Figure 3, this section will model some theoretical illustrative scenarios for the Government Balances had EB and Bruegel style ER been in place. In addition to the points made above in relation to this analysis, there are some key assumption made for this *theoretical* analysis which are as follows:

1. The decision to limit fiscal growth in the years preceding the financial crisis would not have had an impact on the magnitude of the fiscal collapse. The analysis only alters the Government Balance by the limits imposed by the ER. There is no assumed changes to revenue growth on the back of a more restrictive fiscal policy in 2005 to 2008 or a more expansive fiscal policy in 2009-2013. These examples are purely illustrative. Similar static analyses have been used in an IFAC commissioned paper to provide an indication of the impacts that an expenditure rule may have had in Ireland in the build up to 2008 (Hagemann, 2012)³⁴.
2. As mentioned, this does not take into account the existence of an EDP when countries have deficits beyond 3% of GDP. The analysis will show that Ireland's deficit would have substantially exceeded 3% in 2009 causing us to enter the EDP at the same point as actually happened³⁵. The Capital Transfers to financial institutions would have ensured Ireland entered an EDP.

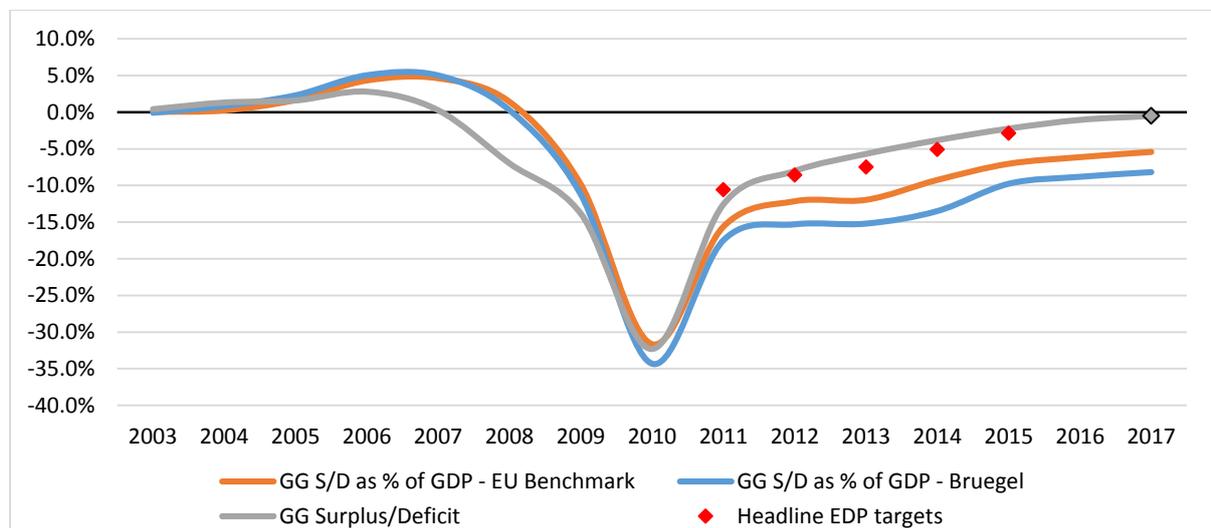
The illustrative results of applying these assumptions to historical levels of Government Balances using 2002 as the base for growth is represented in Figure 4 below. In the period 2003 to 2008 expenditure would likely have been more constrained under the Bruegel and EU EB style ER. The levels of total GGE would have considerably lower in 2008 had there been an expenditure rule in place during the rapid growth period of the last decade. The deficit in 2008 would have been reduced from the 7% outturn to 0.7% and 0.3% under the Bruegel and EU rules respectively.

³⁴[Hagemann, R., commissioned by the Irish Fiscal Advisory Council; *Fiscal Rules for Ireland*; Dublin, 2012](#)

³⁵ Ireland formally entered an Excessive Deficit Procedure in April 2009

From 2010 onwards, the scenario suggests that the strict application of the ER (in the absence of an EDP or similar procedure) would allow greater fiscal growth. The theory being that government consumption and investment would not have been as dramatically impacted by a crash and that counter-cyclical expansionary policy could be supported. The outcome however shows that Ireland's deficit would theoretically be considerably higher in 2015 if these counter-cyclical approaches were followed (it will be worthwhile to explore the impact of the stimulus in the 2010 to 2015 years to see if extra direct and indirect taxes could bridge this gap). As is evident in Figure 4, the reduction in expenditure following the economic crisis were necessary to achieve the EDP targets that became the fiscal measures for the 2010 to 2015 period.

Figure 4: Government Balance Scenarios versus Actual Government Balance



Source: Author's Calculations

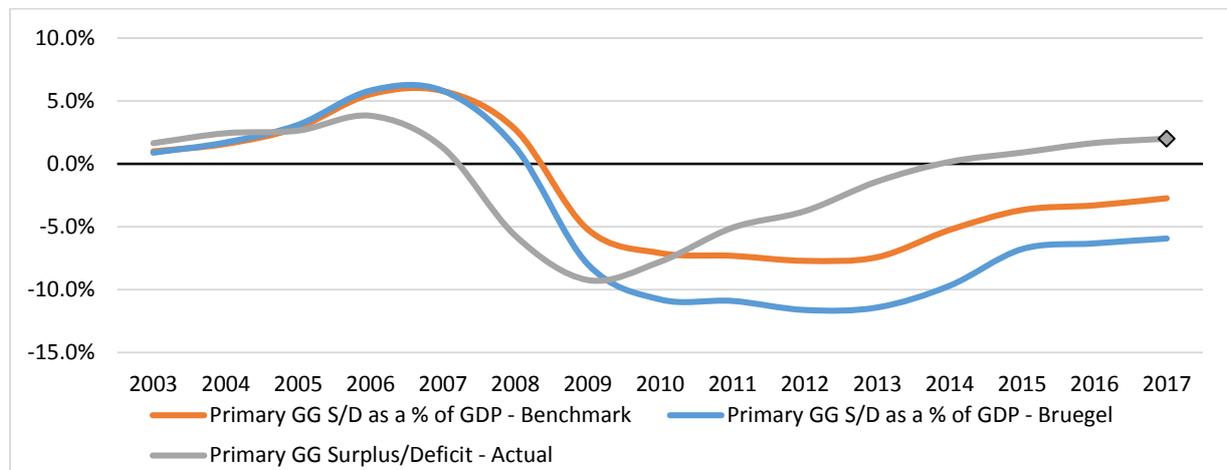
Focus on primary expenditure

This section looks at the indicative scenario for surpluses/deficits and General Government Expenditure once debt interest repayments and capital transfers are excluded. Typically, fiscal policy in the past has always been based around primary expenditure as this is directly controlled by Government. When considering the health of the finance in any state the costs of debt repayments are generally excluded while focus is given to the direct expenditure on services and investment. For the purposes of this analysis, capital transfers have also been excluded due to the large distortions caused by the recapitalisation of the banking system. For example, in 2010 the level of capital transfers were €37.1 billion (22% of GDP) despite the typical level of capital transfers generally being within the range of €1 to 2 billion in the years

preceding 2010. Similar to the caveats in the previous section, this theoretical analysis has not modelled the implications for GDP growth or revenue growth if different approaches for fiscal policy had been taken. The expenditure growth would be similar however given that real-time estimates for the medium-term potential growth are being used.

The illustrative analysis suggests that the primary deficit would have been worse in 2012/2013 if the Bruegel expenditure rule had been followed, while less worse under the EB style rule. Figure 5 represents the scenario more accurately as measured by the Bruegel rule given that one-off expenditure would be excluded (assuming that the bank recapitalisations would be treated as one-offs). The primary deficits would still be negative in the current year under both ER but this would have helped to sustain services and investment over the levels that actually occurred. This is at the core of the counter-cyclical fiscal policy proposals as suggested by the European Commission and the literature on the subject.

Figure 5: Real-time Primary Surplus/Deficit estimates versus actual primary deficit



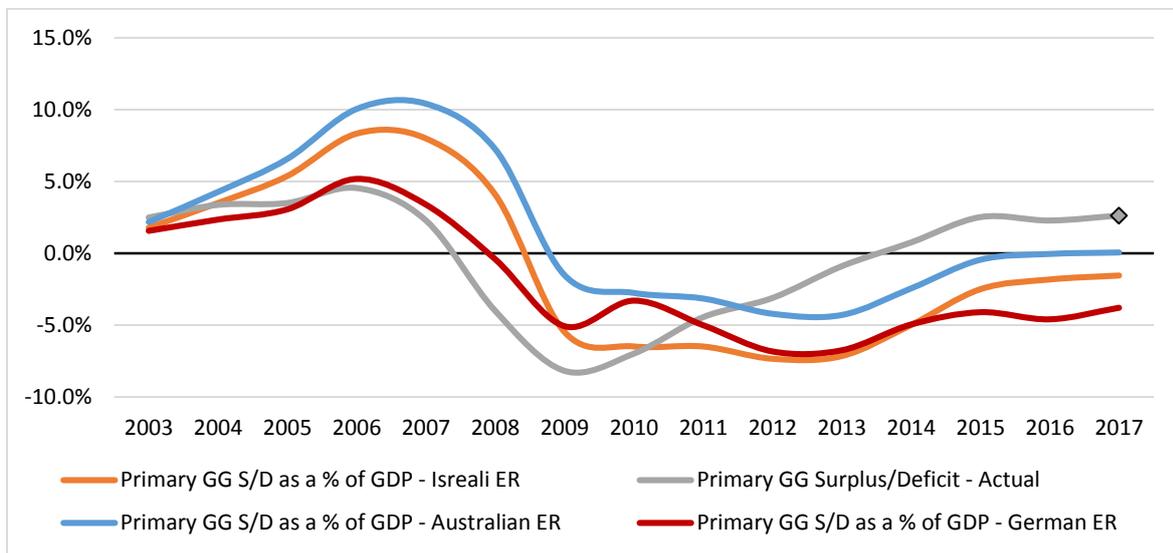
Source: Author's Calculations

The figures below details illustrative examples of the General Government Expenditure, General Government Revenues and the Primary Deficit had Ireland followed similar ER that are in place in selected countries³⁶. The results are similar to the analysis detailed in Figure 5, where it is evident that Ireland would likely have sustained higher primary surpluses in the period up to 2008 but the primary deficit would be greater at this point in time.

³⁶ The selected countries are Ireland, Australia and Germany. The details of their ER can be found in section 5.

The scenarios contained in Figures 5 and 6 suggest that the constraint of an expenditure rule would allow Ireland to run a more counter-cyclical fiscal policy with higher primary surpluses during times of sustained growth and higher primary deficits in times of low or negative growth. It is important to reiterate that these example do not operate in the current EU framework where a deficit of greater than 3% would require Ireland to enter an excessive deficit procedure. This procedure could be limiting for Ireland in operating an effective counter-cyclical fiscal policy as it may force a quicker deficit correction than would followed under an expenditure rule.

Figure 6: Real-time Primary Surplus/Deficit estimates versus actual deficit using selected ER



Source: Author's Calculations